RUSSIAN UTILITIES

Is There Any Place for Private Investors?

Sector MktCap	**$47.9bn**
12M Target MktCap	**$37.2bn**

Ticker	Current price ($)	12M TP ($)	Potential upside	Rating
Generation				
OGKB	0.01117	0.00450	-60%	SELL
EONR	0.077	0.101	31%	BUY
OGKE	0.0527	0.0244	-54%	SELL
TGKA	0.000174	0.000221	27%	HOLD
MSNG	0.0429	0.0490	14%	HOLD
TGKD	0.000113	0.000125	10%	HOLD
TGKDP	0.000148	0.000121	-18%	SELL
HYDR	0.0238	0.0181	-24%	SELL
IRGZ	0.514	0.569	11%	HOLD
KRSG	2.891	0.961	-67%	SELL
Grids				
FEES	0.00683	0.00471	-31%	SELL
MRKH	0.0641	0.0413	-36%	SELL
MRKHP	0.0409	0.0233	-43%	SELL
MRKC	0.0169	0.0200	19%	HOLD
MRKY	0.00164	0.00103	-37%	SELL
MRKK	0.848	0.796	-6%	SELL
MRKP	0.00547	0.00619	13%	HOLD
MRKZ	0.00213	0.00132	-38%	SELL
MRKS	0.00300	0.00100	-67%	SELL
MRKU	0.00653	0.00241	-63%	SELL
MRKV	0.00240	0.00159	-34%	SELL
MSRS	0.0478	0.0278	-42%	SELL
LSNG	0.2098	0.0596	-72%	SELL
LSNGP	0.5645	0.0694	-88%	SELL

Source: Bloomberg, Aton estimates

State interference and regulatory tightening have intensified this year, dispelling hopes that the initial crackdown on the utilities sector had been aimed at winning votes for the parliamentary and presidential elections. The government has been raising its direct and indirect ownership and introduced measures to curb end-user electricity price growth. These measures targeted all segments of the chain – generators, transmission and distribution grids, and supply.

Recent regulatory moves have been deeply flawed and we believe this year's grid company Regulatory Asset Base (RAB) "reload" has migrated towards the indexation method – i.e. to tariff-setting based not on the economic cost of invested capital but on the wishes of politicians. Generating companies have fared no better, and many plants have become loss-making after recent regulatory moves. Even capacity delivery contracts (DPM), the last more-or- less functioning mechanism introduced by the reformers to provide a return to shareholders, have come under attack. In a further blow, the government's most recent proposals envisage below-inflation growth rates for end-user electricity prices from 2016.

This blend of regulation and politics has become the sector's biggest problem. We now believe that the companies (with a few foreign-owned exceptions) should primarily be viewed as tools for politicians to achieve social, political and personal goals rather than businesses aimed at creating value for shareholders.

The government's electricity price fears are justified but its action is misguided. Prices for industry are approaching levels that could endanger manufacturers' competitiveness on global markets. But the government has acted against the end result – electricity price growth – with a devastating effect on utilities, while failing to address the causes of the rises. These include domestic gas price growth, monopolies on the gas and coal markets, excess generating capacity and structural problems.

A worsening macroeconomic backdrop is adding to pressure on generators, with our economics team's revised forecasts implying considerably slower GDP growth and a weaker rouble in the long term. We are correspondingly lowering our electricity demand forecasts, and expect further intensification of generators' capacity oversupply problems given largely unchanged commissioning estimates. Profits are set to suffer from the resulting pressure on old thermal capacity load factors and the increased lag of electricity prices behind gas tariff rises.

An unlikely move towards privatisation is the only visible potential driver. We incorporate the possibility of privatisation for selected MRSKs, and see MRSK Center, MRSK Center and Volga, and MRSK Volga as the most likely candidates. However this would mark a major change in the state's utilities strategy and is unlikely to happen within the current political establishment, in our view.

We are downgrading stocks across the sector after incorporating these developments and adopting a more conservative approach to regulation, markets and operating efficiency. This resulted in significant weakening of our company cash flow outlooks and material target price downgrades. Our only **BUY** rated stock remains E.On Russia; for the rest we assign six **HOLD** and 17 **SELL** ratings. We discontinue coverage of TGK-2, TGK-5, TGK-6, TGK-7, TGK-9, TGK-11, Kuzbassenergo, TGK-13 and TGK-14 due to lack of transparency and/or poor stock liquidity.

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Note: Prices as of close 7 Dec 2012 throughout the report

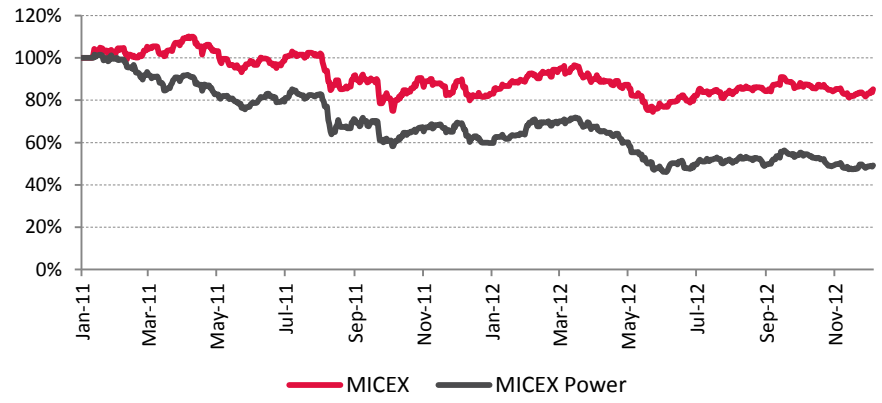
Executive Summary

Utility Stock Price Performance Lacklustre

Free fall in utility stock prices since Putin's Feb 2011 speech

In Feb 2011 then-Prime Minister Vladimir Putin urged the government and regulators to constrain growth in electricity prices. This triggered a massive reaction from market participants. Regulatory action followed as feared and, as we argue in this report, it has reshaped the whole regulatory landscape and the risks facing investors in the sector. More than a year-and-a-half since Putin's speech, utility stock prices have not recovered.

Figure 1: Utilities stock performance vs MICEX index



Source: Bloomberg

Regulatory Changes: Are They That Bad?

Tightening continues through and after the election period

The latest version of the current socio-economic forecast envisages an end-user electricity price growth rate of 10.5-13.5% in 2013-15, which is considerably below pre-tightening growth rates (the electricity price CAGR over 2009-11 amounted to 17.6%). For 2012 the government expects an end-user electricity price growth rate of just 3.5-6%. Notably, the forecast looks especially tight given it is based on annual gas tariff growth rates of 15%.

Figure 2: Electricity tariff growth rate targets approved by the government in Sep 2012

	2008	2009	2010	2011	2012E	2013E	2014E	2015E
End-user electricity price	**22.4%**	**19.3%**	**17.8%**	**13.5%**	**3.5-6%**	**12-13.5%**	**10.5-12.5%**	**11-13%**
Pre-tightening forecast (2010)				13-15%	11-13%	10-12%	n.a.	n.a.
Change				n.a.	-7.5 to -7 ppts	+1.5 to +2 ppts	n.a.	n.a.
Electricity grid tariff				13%	6% (11% from July)	10-11%	9.5-10%	9-10%
Gas tariff	25%	15.7%	27.4%	15.3%	7.5% (15% from July)	15%	15%	14.6-15%

Source: Ministry of Economic Development

Spring 2011 tariff revision

The regulatory tightening started in the months after Putin's Feb 2011 speech. Regulators have applied a number of measures to curb end-user electricity price growth, aimed at all segments of the electricity supply value chain – generators, transmission and distribution grids, and supply.

Figure 3: Regulatory tightening decisions implemented in 2011

Measure	Impact (RUBbn)
15% tariff growth rate cap for grids and supply companies	71
Exclusion of investment component from capacity prices in hydro and nuclear generation	17
No indexation of capacity prices in 2011	11
FSK tariff revision	10
Revision of tariffs for forced generators	8
Total	**117**

Source: FTS, Minenergo

Further tightening in 2012

Many investors and analysts (including us) hoped that regulatory tightening was primarily related to the elections period, and that there was quite a significant chance of the strategy being reversed after the parliamentary and presidential votes. But the tightening strategy has proved tenacious.

In late 2011 the regulatory bodies outlined the following further tightening measures which were implemented in 2012:

- A complete "reload" of grid companies' tariffs including, but not limited to, RAB-regulated tariffs.
- A change of the annual tariff indexation date from 1 Jan to 1 July (this affects grid tariffs and generators' regulated capacity tariffs for supply to the population).
- A reduction of generation companies' capacity payments, especially for hydro and "forced" generators, as well as for capacity supplied to the population.
- Adoption of new retail market rules.

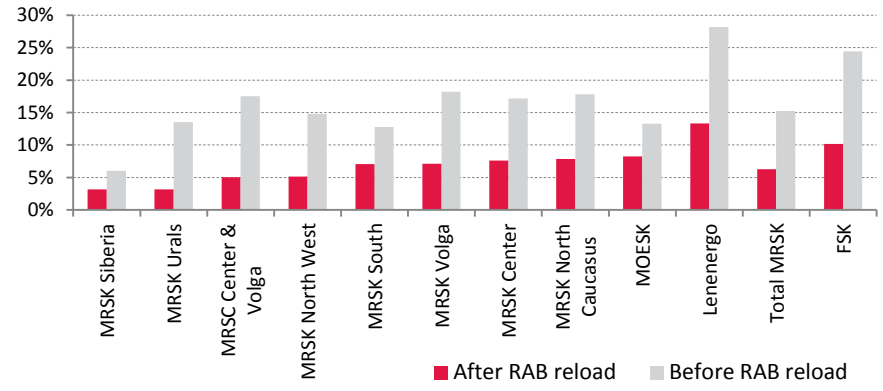
Changes to Grid Segment Regulation: RAB Reload a Disaster

In addition to the reduction of tariffs in May 2011, grid companies underwent another major revision of their tariffs in 1H12, coming into effect on 1 July and 1 Nov 2012.

Massive reversal of indexation method seen. Out of 54 MRSK regions that operated under the RAB regulatory method in 2011, 20 were switched to the long-term indexation regulation regime from 1 July 2012. Only nine of these regions managed to return to RAB regulation from 1 Nov 2012, using an option granted by the Federal Tariff Service (FTS).

Further sharp deterioration of tariff growth outlook. After the reload, grid tariffs have much lower expected growth rates than previously.

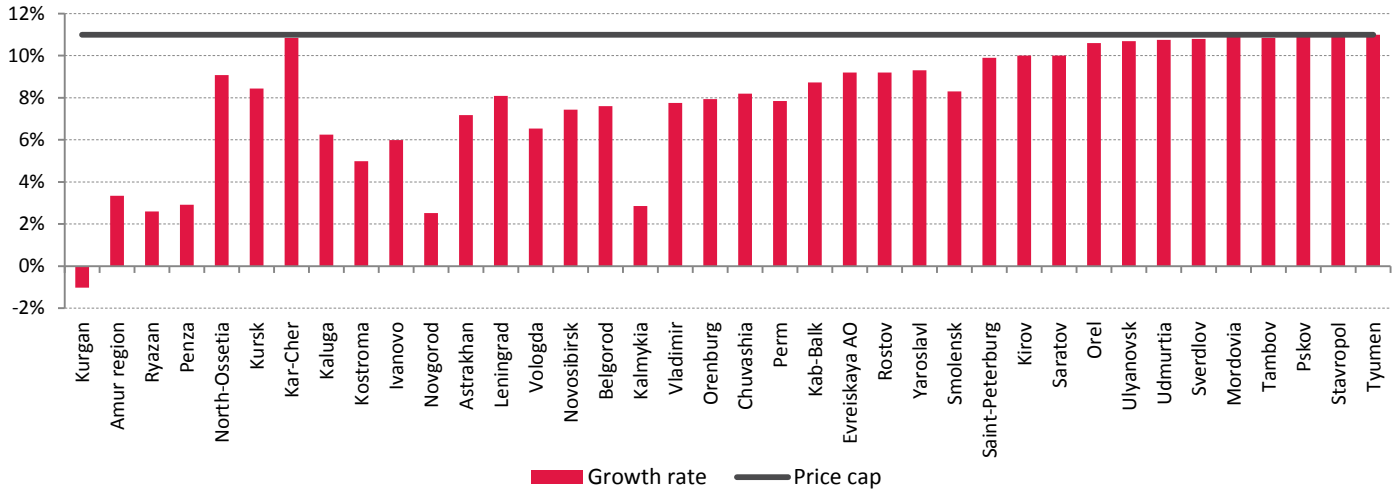
Figure 4: Regulated revenue CAGR over 2012-14 before and after RAB reload



Source: RECs, Company data, Aton estimates

Surprisingly, the revised grid tariff growth rates for 2012 in many regions came in far below the 11% threshold established by the government's socio-economic forecast. This means the regulators have applied an even stricter approach to grid company tariffs than the formal government requirement.

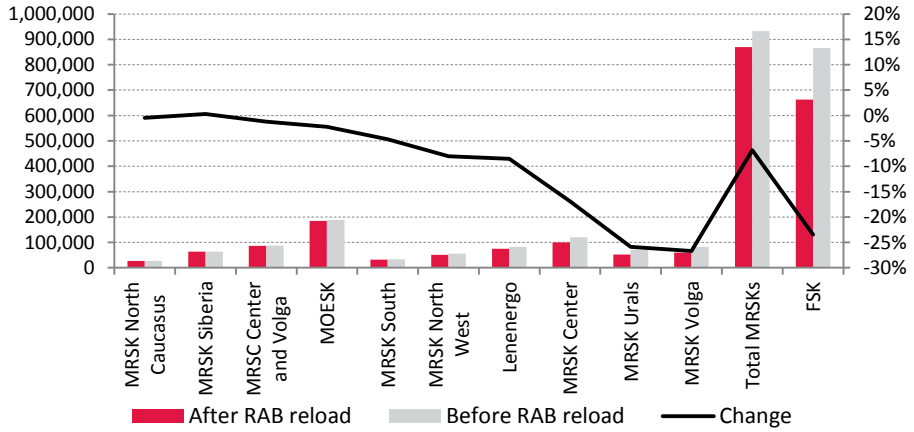
Figure 5: Average total grid tariff hike by region from 1 July 2012



Source: FTS

RAB values and rates of return slashed. We understand that the major amendment that triggered downward revision of grid tariffs was the reduction of initial RAB values and regulatory rates of return.

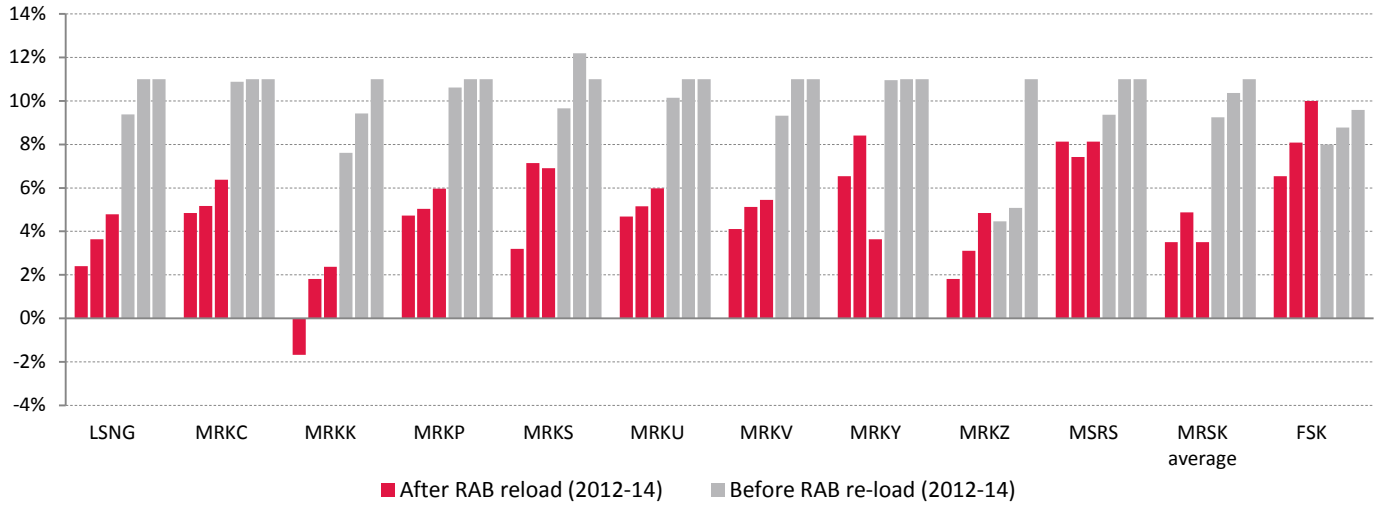
Figure 6: Net RAB value as of YE11 before and after RAB reload* (RUBmn)



* including regions regulated with the indexation method, for which we used our estimates of RAB values based on management guidance

Source: RECs, Company data, Aton estimates

Figure 7: Weighted average regulated rates of return on RAB before and after RAB reload



* including regions regulated with the indexation method, for which we used our estimates of RAB values based on management guidance

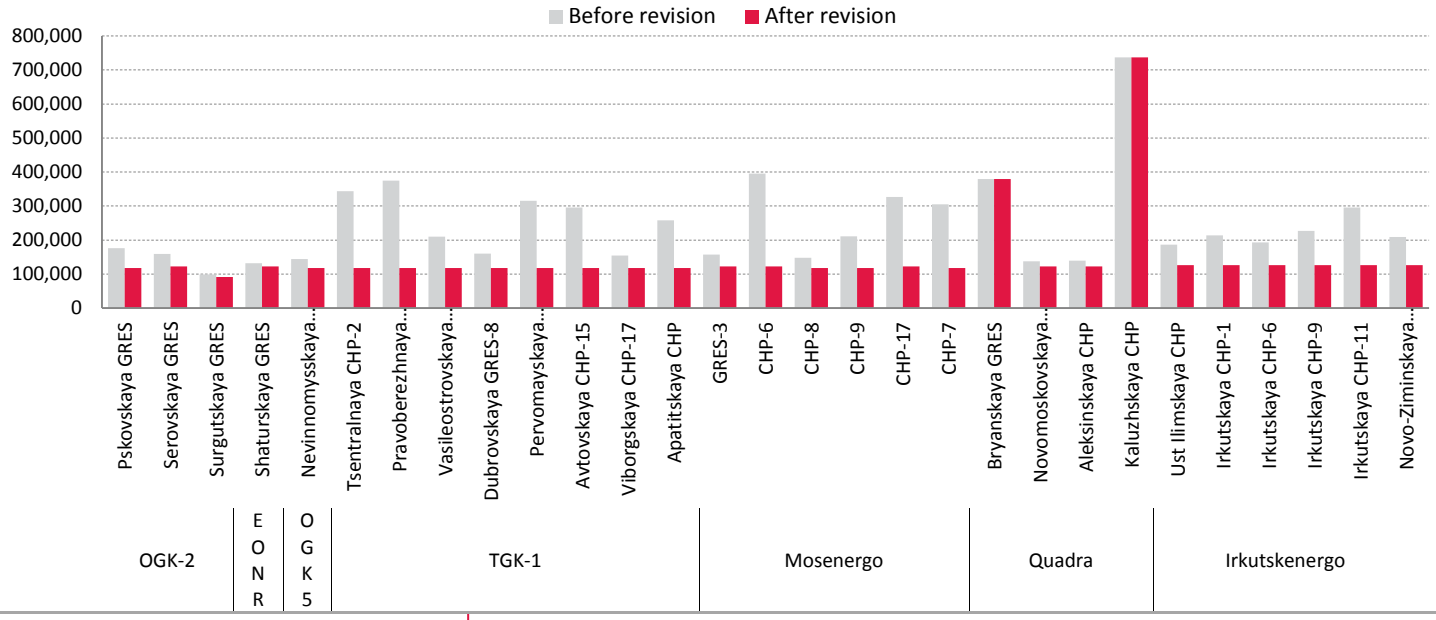
Source: REC decrees, Company data, Aton estimates

Generation Sector Tightening Unveiled: No Better Than Grids

After Putin's speech in Feb 2011 the regulators adopted a number of measures aimed at reducing the electricity price on the part of the electricity generators in 2011 and 2012. This significantly decreased generation company cash flows.

1) **Recalculated regulated capacity tariffs** for supply to the population and for hydro capacity, as well as capacity tariffs for forced generators. Notably, the regulators removed the investment component from regulated capacity tariffs for hydro and nuclear capacity from 1 June 2011, which amounted to RUB17.4bn. They also slashed capacity tariffs for forced generation from 1 Apr 2011 (to the price cap level in the majority of cases). The companies are now required to subsidise loss-making forced generators with earnings from profitable power plants.

Figure 8: Forced generator capacity tariffs revision in May 2011, RUB/MW per month



Source: FTS

Forced generation problems intensified in 2012 with changes to the procedure for obtaining forced generator status. This led to loss-making generators receiving no capacity payment at all.

Figure 9: Estimated losses due to non-payment for forced capacity in 2012

Company	RUBmn
TGK-1	267
Quadra	3,582

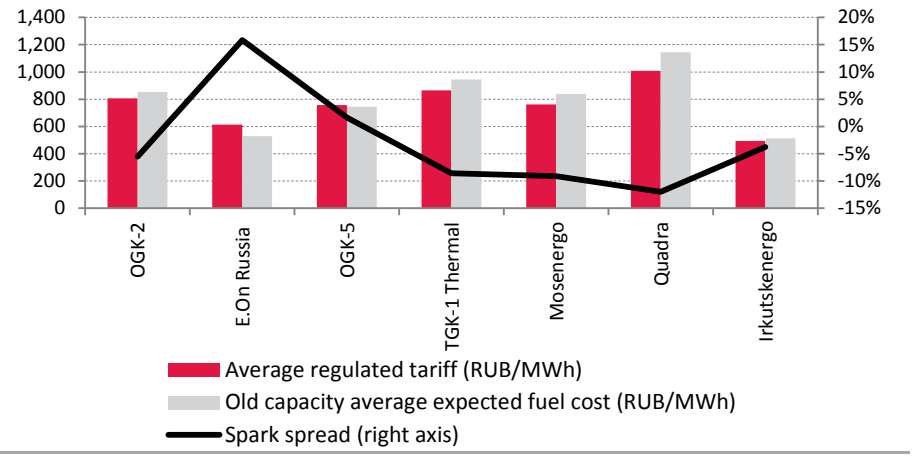
Source: Company data, FTS, Aton estimates

2) **Changes to day-ahead market rules** related to price-taking offers on volumes corresponding to a technical minimum. According to Minenergo, the unregulated price of electricity on the day-ahead market dropped 2-5% in 2011 due to the measure.

3) **Postponement of a capacity tariff hike**. In 1H12 capacity tariffs were frozen at the 2011 level, as happened with grid companies. Regulated capacity tariffs for supply to the population were unchanged even after 1 July.

4) **Tariffs for electricity supplied to the population were not indexed from 1 July 2012,** despite the gas tariff hike of 15%. This has led to a situation where gas-fired generators are required to bear losses for supplying electricity to the population. The situation is likely to continue into the foreseeable future.

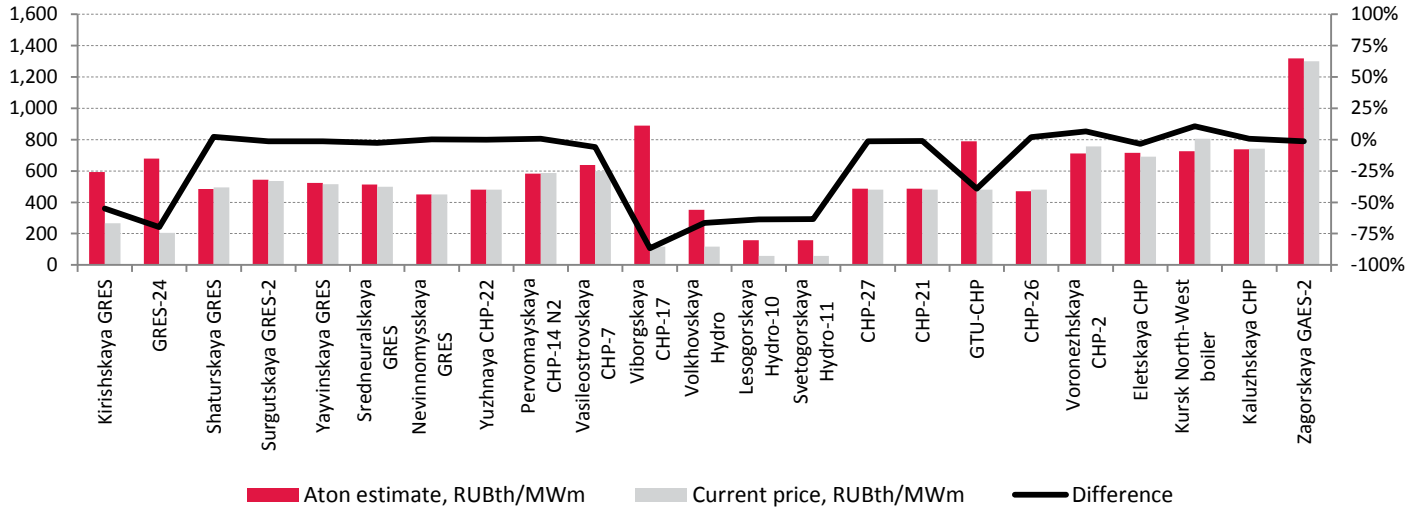
Figure 10: Regulated electricity tariff vs estimated fuel cost in 2012



Source: FTS, Company data, Aton estimates

5) **Tariffs for new capacity have been set below expectations**, raising the risk that the effective rate of return for some investment projects will be far below the regulated level.

Figure 11: Actual vs estimated capacity tariffs for new capacity in 2012 (RUBth/MW per month)



Source: Company data, FTS, Aton estimates

6) **Tariffs for Siberian hydro capacity are locked at a low level.** In Jan 2011 the FTS ordered that regulated capacity tariffs be applied to 100% of the capacity sales of six Siberian hydropower plants that year. These are now 34-84% below prices at the capacity auction (KOM) where the power plants would normally have sold their capacity. This move was initially seen as temporary but now looks likely to continue in the foreseeable future.

7) **Potential downward adjustments to capacity delivery agreement (DPM) tariffs.** In June 2012 Minenergo proposed changes to DPM methodology that threatened to shrink DPM payments for generation companies by around RUB27-54bn per year, or roughly 16-24%, from 2015. Fortunately for now, in Aug 2012 the Ministry of Economic Development opposed Minenergo's suggestions and ordered that further work be done on the methodology.

Figure 12: Estimated reduction of consumers' capacity payments if Minenergo's proposal is realised (RUBbn)

	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total DPM contracts revenue – current	66.4	94.6	118.6	173.1	220.7	229.9	227.9	224.4	217.6
Total DPM contracts revenue – proposed	66.4	92.9	113.2	145.7	177.3	175.4	174	170.9	165.2
Change	0	-1.7	-5.4	-27.4	-43.4	-53.5	-53.9	-53.5	-52.4

Source: Market Council

Is it that Bad?: Adequate Regulation Seems to be Mission Impossible

Our take from the recent changes to the regulatory landscape implemented by the government and its regulatory bodies and their announced plans for the future is that investors in the utilities sector should not count on seeing an adequate, incentive-oriented, market-based, western-style regulatory environment.

Predictability lacking. Over the past 20 months tariffs have been massively revised on two to four occasions for grids and up to three times for generators. This is not the kind of stable and predictable regulatory environment that investors in the utilities sector might hope for.

RAB regulation de-facto failed. The RAB reload resulted in extreme cuts to the major parameters that determine companies' fundamental values – initial RAB values and regulated rates of return. We believe that the regulatory methodology and parameters can no longer be trusted from an investor standpoint. In practice, the RAB regulatory approach has migrated towards indexation or cost-plus methods – i.e. where tariffs are determined not on the basis of invested capital and market-based cost of capital, but are set according to the whims of politicians.

Regulation of generation companies no better. As discussed above, the latest regulatory initiatives have left many power plants in a loss-making position, and the situation is likely to deteriorate further. Decision-makers have already indicated the direction of attack – prices of DPM contracts – which are becoming a substantial part of the end-user bill with the massive commissioning of new capacity and lagging demand growth.

Investor trust is largely ruined; recovery will take a long time. The regulatory efforts implemented by the political elite in the past few years have generally been a major disappointment for investors. We thus believe investors would now be extremely reluctant to seek to benefit from any positive changes in the regulatory landscape until they had been fully implemented. Moreover, we believe any such investors would first have to see a track record of government commitment to market-oriented reforms and attention to shareholder value.

No major positive regulatory changes expected in the current political cycle. Since the move from a market-oriented paradigm to increased state influence has continued over the four years since the break-up of RAO UES and the departure of the key reformer – Anatoly Chubais – and has even stepped up recently, we see no reason to believe the situation will improve any time soon.

Further Super-Tightening Plans for the Long Term Revealed

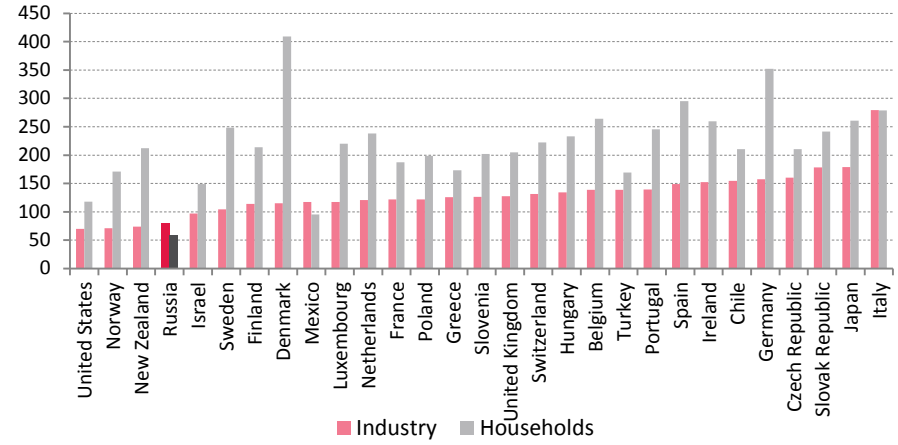
On 16 Nov 2012 *Vedomosti* reported highlights from the government's most recent proposals on the longer-term socio-economic forecast to 2030, which envisages a further sharp reduction in targeted electricity price growth rates to as low as 3.1% on average over 2016-30. This is 60 bpts below the corresponding inflation forecast of 3.7%. The forecast also envisages further pressure on utilities because it allows for a higher gas tariff growth rate of 4.2% on average over the same period.

Electricity Prices and Regulation: Are Government Efforts Justified?

Russian electricity prices reach levels in foreign countries

The government's key underlying fundamental concern appears to be rising electricity prices. In fact, end-user electricity prices for industry in Russia are already higher than in the US, Norway and New Zealand, which may endanger competitiveness on global markets. We therefore have to admit that the government has a reason for constraining growth in electricity prices.

Figure 13: End-user electricity prices in 2011 ($/MWh)



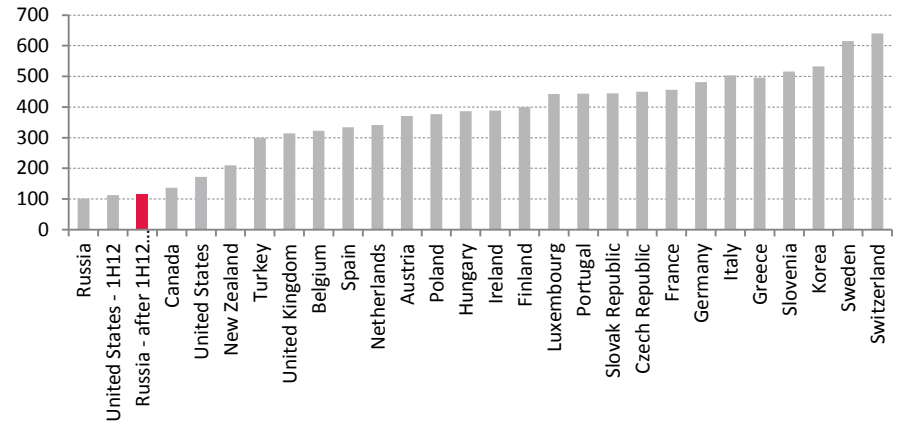
Source: IEA, APBE

Government intention understandable, but only power utilities are blamed

While we understand the government's intention to curb electricity price growth, the most important question for investors is how this is achieved. So far the government has taken action against the end result – electricity price growth – with a devastating effect on the profitability and viability of electricity companies, while failing to address major underlying factors such as:

1. **Fuel price hikes and monopolies on the fuel markets.** We estimate that the major contributor to end-user electricity price growth in Russia is rising fuel prices, primarily for gas. Russia now has a higher domestic gas price than the US. The key factor here is that the Russian gas tariff is regulated by the state while in the US the price is determined by a competitive market.

Figure 14: Natural gas price for industry in 2011 ($/mcm)



Source: IEA, APBE, FTS, US EIA, Bloomberg

2. **Excess capacity**. There is no longer a capacity deficit in Russia, and the gap between supply and demand is set to grow further, putting an unnecessary

burden on consumers. Plans for new capacity commissioning are made by the state's top decision-makers.

3. **Structural issues.** Russia's electricity system is centralised, while distributed generation might well be a better solution at the current state of technology, as it requires less capex and carries fewer operation and maintenance costs related to grid infrastructure.

Privatisation Prospects Still Unclear; State Involvement Escalating

Formal decisions envisage no privatisation of utilities soon

During initial discussions in 2011 the government viewed 2012-14 as the timeframe for utility company privatisation. However the official privatisation plan formally adopted by the government in May 2012 envisages the much more distant timing for privatisation of 2016, which also does not bode well for MRSK privatisation. Nevertheless in July 2012 new Energy Minister Alexander Novak told *Interfax* that the government is considering the privatisation of one "average" MRSK in 1Q13. However we believe such a move would have to be approved by President Putin, and he has never shown strong support for privatisation.

Igor Sechin's wish to retain power a possible reason for privatisation delay

A likely obstacle to the government's privatisation efforts appears to be the desire of Rosneftegas Chairman Igor Sechin to retain control over utilities even after his departure from government. In July 2012 Sechin proposed that Rosneftegas be given control over the four major utility companies – RusHydro, Inter RAO, FSK and MRSK Holding.

Putin formally supported the government, which increases the chance of MRSK privatisation, in our view

The government opposed Sechin's initiatives except in the case of Inter RAO, which it agreed would be acquired by Rosneftegas. At the end of Nov 2012 President Putin signed orders on the implementation of the government's plan for the utility sector. This involves financing of RusHydro's investment programme directly from the federal budget (not from Rosneftegas's balance sheet, which was Sechin's proposal) and consolidation of FSK and MRSK Holding on the basis of the latter (not as a Rosneftegas subsidiary as had been suggested by Sechin).

We believe that Putin's formal support for the government's initiatives somewhat increases the likelihood of the government implementing its other intentions, including privatisation of MRSKs.

State ownership in the sector grows in the meantime

The decisions taken and implemented so far envisage an increase of state ownership in the utilities sector, for instance via cash injections from the federal budget into the equity of state-controlled utilities, namely:

- RUB50bn for financing of RusHydro's investment programme in the Far East region in 2012
- RUB23bn for financing of MRSK Holding subsidiaries' investment projects in 2012-13
- RUB60bn for financing of FSK's investment programme in 2010-13

Corporate Governance Issues Associated with State Ownership Intensify

Besides generally weak financial performances we identify the following corporate governance issues, especially with regards to the state-controlled utilities:

- Doubtful capex and M&A decisions
    - RusHydro's investment projects in the Far East worth billions of dollars seem to be driven by top politicians' desire to provide attractive conditions for business development in the region, with RusHydro's shareholders bearing the risk.
    - RusHydro's foreign expansion plans, which are driven primarily by geopolitical rather than economic goals.
    - FSK management's strange call for higher capex, which would be value erosive since the 10% regulatory rate of return on new investments is below the company WACC of 13.3%.
    - Financing infrastructure for big events such as the APEC summit and Winter Olympics, with a big risk that the companies will not be able to pass investment costs on to electricity consumers.
    - The "Electricity bridge" project between European Russia and Siberia, which carries the same risk.
    - The acquisition of a sports club by RusHydro, which is not a core business.
- Cash extraction and value-redistribution by a major shareholder
    - Irkutskenergo and Krasnoyarsk HPP deals with Eurosibenergo, with signs of value extraction in favour of Eurosibenergo.
    - Financing of OGK-2's investment programme by Mosenergo, which highlights the significant risks of value redistribution across the Gazprom Energoholding-owned generation companies, namely from Mosenergo and TGK-1 to OGK-2.
- Other corporate governance issues include insufficient tariff lobbying, non-effective management motivation programmes and lack of management influence over such key stock drivers as regulated tariff growth rates and privatisation.

State ownership the major source of corporate governance risks. The ultimate cause of the sector's corporate governance problems and weak management efforts, in our view, is that the companies concerned are state-controlled. They thus lack an efficient owner who could monitor and motivate management and often have goals other than improving shareholder value.

Companies owned by foreign investors in a somewhat better position. Utilities controlled by foreign investors, namely E.On Russia and Enel OGK-5, generally have much better corporate governance standards and far greater independence from politicians than the state-controlled companies do.

What are Russian Utilities: Businesses or Political Tools?

State financing the strategy for the next few years at least

Regulatory failure, increased state involvement in the sector instead of privatisation and subjective case-by-case manipulation as the preferred policy tool lead us to conclude that politicians have chosen a path of state financing and increased state control as a development strategy for the utilities sector, at least in the short to medium term. The preferred strategy, of course, would be attracting private investors and promoting market-based pricing principles.

Clearly not an optimum decision for society, but perhaps for politicians?

We believe the state financing strategy leads to a higher cost of electricity supply for society in the longer term due to the lack of incentives for cost savings, capex misspending and overall inefficiency. This strategy may also result in lower reliability rates due to lack of management motivation and lower investment rates in the longer term. Nevertheless we see several reasons for politicians choosing the state-financing scenario:

1) **Ease.** It is the simplest and the most convenient way for bureaucrats to get things done. It is easier to order state-employed managers to build new assets than to create the conditions needed to attract private capital.
2) **Political spheres of influence.** Politicians often consider control over state-companies to be an important route to obtaining greater influence.
3) **Personal gain**.

Utilities a political tool, avoid if you can

We see a further worsening of the regulatory environment and deterioration of corporate governance standards as the major risks to fundamental equity value from increased state involvement. The companies may be required to shoulder a bigger social burden, chase geopolitical targets or pursue the personal political goals of top state officials.

We do not believe the Russian utilities sector will be allowed to fall apart. That outcome is unlikely because of the industry's crucial role in securing the functioning and development of the economy. We believe the sector will largely manage to replace its depleted asset base with the help of its cash flows, funds from the federal budget and state controlled companies (such as Rosneftegas), debt financing – including from state-owned banks – and probably some financing from naive private investors. Our view is that there is little chance of shareholder value being unlocked in this process. Most of the companies are likely to see negative or nearly zero free cash flows and practically no dividends over the next few years at least.

The only partial exceptions in this regard are companies controlled by foreign investors (E.ON Russia and Enel OGK-5), which may still wish to provide a return to shareholders and endeavour to do so.

Significant changes unlikely, and even then prospects ambiguous

We believe the situation could meaningfully improve only with a major change in the political establishment, which is rather unlikely in our view. Moreover, even if the political direction were to change at some point, we would not expect any free gifts to investors in the utilities sector given Russia's high end-user electricity prices and the respective underlying reasons as discussed in this report.

Grid Companies Valuation Update: Squeezed by Regulators

Incorporated latest tariff decisions and reloaded RAB parameters

We have incorporated the most recent tariff decisions for grid companies, which came into effect from July and Nov 2012. We also assume all MRSK branches will adopt RAB regulation by 2018.

Expect further tariff tightening in the long term

However we have decreased the base cap on total distribution tariff growth in each region from 10% to 7% from 2016, since we believe the government will further intensify efforts to curb growth in the end-user electricity price. We believe that our assumption remains on the optimistic side, because it is still some 200 bpts above our in-house long-term inflation estimate of 5.0%, and well above the proposed government growth target for the end-user price of 3.1%.

Assumed last-mile contracts and connection fee to be maintained

We now assume that the companies will keep all last-mile contracts indefinitely (our previous model envisaged them being gradually discontinued by 2016). We have also remodelled connection fee revenues, and now expect them to continue into the

foreseeable future (we previously assumed that connection fees would be abandoned from 2012). So our assumptions on these two issues are now more optimistic.

Tariff outlook gloomy, regulators overshooting

Our view on grid tariff growth rates has sharply deteriorated, mainly due to the incorporation of much lower reloaded regulatory parameters. Notably, our MRSK tariff growth rates expected in 2012-15 (a total tariff CAGR of 6.3%) are well below those envisaged by the government's socio-economic forecast approved in Sep 2012 (a mid-range CAGR of 8.9%). We believe this is solely due to overly strict tariff decisions adopted by regional regulators this year. We consider regulators for whatever reason to be 'overshooting', i.e. their actual decisions are even tighter than the targets set by the government.

Figure 15: Total effective distribution tariff growth rate forecast (RUB/MWh)

Company		2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	CAGR 2012-20
YoY growth rate forecast												
MRSK Center	Upd.	14%	4%	6%	8%	8%	6%	6%	2%	3%	6%	5.3%
	Prev.	10%	6%	10%	10%	10%	9%	5%	7%	7%	8%	8.1%
MRSK South	Upd.	9%	8%	10%	1%	8%	8%	7%	-1%	-1%	8%	5.2%
	Prev.	11%	6%	12%	10%	10%	10%	10%	10%	0%	3%	7.8%
MRSK North Caucasus	Upd.	13%	2%	6%	10%	9%	6%	6%	0%	2%	6%	5.2%
	Prev.	5%	5%	10%	11%	11%	11%	5%	8%	0%	0%	6.6%
MRSK Center & Volga	Upd.	18%	-6%	5%	9%	8%	7%	6%	-1%	0%	5%	3.7%
	Prev.	16%	6%	9%	9%	10%	10%	10%	9%	7%	-1%	7.5%
MRSK North-West	Upd.	14%	6%	2%	6%	7%	5%	6%	5%	5%	7%	5.6%
	Prev.	20%	6%	14%	14%	14%	13%	12%	0%	7%	-1%	8.5%
MRSK Siberia	Upd.	24%	2%	7%	9%	7%	5%	6%	7%	6%	5%	6.0%
	Prev.	32%	5%	8%	14%	12%	8%	3%	3%	2%	5%	6.6%
MRSK Urals	Upd.	11%	0%	8%	7%	5%	5%	6%	2%	1%	9%	4.7%
	Prev.	9%	6%	15%	13%	11%	11%	10%	8%	1%	-6%	7.4%
MRSK Volga	Upd.	19%	9%	3%	1%	8%	6%	6%	5%	5%	6%	5.5%
	Prev.	16%	6%	13%	13%	13%	10%	2%	10%	4%	-6%	6.9%
MOESK	Upd.	15%	-7%	10%	10%	10%	4%	7%	-3%	-5%	7%	3.4%
	Prev.	14%	6%	8%	10%	9%	7%	-5%	3%	2%	5%	4.9%
Lenenergo	Upd.	19%	10%	10%	10%	10%	10%	10%	8%	0%	10%	8.7%
	Prev.	17%	6%	10%	10%	10%	10%	10%	10%	10%	10%	9.6%
Kubanenergo	Upd.	13%	9%	5%	3%	8%	6%	7%	-2%	1%	7%	4.9%
	Prev.	30%	6%	10%	5%	7%	-4%	4%	14%	2%	5%	5.4%
MRSK total	**Upd.**	**16%**	**1%**	**7%**	**7%**	**8%**	**6%**	**7%**	**2%**	**1%**	**7%**	**5.0%**
	Prev.	16%	6%	11%	11%	11%	9%	5%	6%	3%	2%	7.0%
FSK	**Upd.**	**19%**	**4%**	**6%**	**11%**	**10%**	**7%**	**7%**	**7%**	**7%**	**7%**	**7.4%**
	Prev.	18%	7%	13%	11%	10%	10%	10%	10%	10%	10%	10.0%

Source: Company data, Aton estimates

A more cautious stance on controllable operating costs

We previously assumed that the grid companies would gradually reduce their controllable operating costs to the regulated level by 2015. However we now assume that the premium/discount of actual controllable expenses to regulated ones as seen in the last reported period (2011) will remain flat in the foreseeable future for a number of reasons. First, we do not expect management to go to much effort to boost operating efficiency due to both state ownership and inconsistent regulation. Second, benchmarks for controllable costs revised by the regulator in 2012 already incorporate significant efficiency gains (up to 3% annual cost savings) so we believe it would be difficult for companies to achieve greater economy.

Much weaker earnings growth outlook

We now forecast much slower EBITDA growth rates for grids primarily due to lower tariff growth outlook, and a more conservative stance on operating efficiency.

Figure 16: Forecast EBITDA from distribution activity (RUBmn)

Company		2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	CAGR 2012E-20E
MRSK Center	Upd.	14,142	13,424	15,174	17,514	20,824	23,713	26,823	24,938	24,098	26,876	7%
	Prev.	9,947	10,128	13,918	16,983	22,353	27,003	27,976	36,478	47,487	55,569	21%
MRSK South	Upd.	3,996	4,160	5,551	4,416	5,509	6,783	8,088	5,892	3,948	5,396	3%
	Prev.	2,898	2,951	3,941	3,538	4,648	6,541	8,374	12,903	14,771	15,188	20%
MRSK North Caucasus	Upd.	1,710	1,744	2,300	3,592	4,862	5,628	6,295	5,520	5,466	6,147	15%
	Prev.	1,936	1,499	2,777	3,838	5,628	7,183	7,680	9,289	9,279	8,919	18%
MRSK Center & Volga	Upd.	10,050	9,108	9,378	12,699	15,521	17,996	21,105	15,980	12,702	14,024	4%
	Prev.	9,685	8,738	10,792	12,813	15,644	20,237	24,948	33,871	42,925	38,630	17%
MRSK North-West	Upd.	3,551	3,766	2,979	3,336	4,487	5,020	6,058	6,102	6,754	8,172	10%
	Prev.	2,499	1,488	1,959	8,012	9,912	12,686	16,324	17,226	22,669	21,072	27%
MRSK Siberia	Upd.	2,615	744	1,999	5,525	7,043	7,694	9,032	11,319	12,774	13,202	20%
	Prev.	3,681	4,842	6,709	11,490	14,542	16,574	14,788	17,573	21,901	23,664	23%
MRSK Urals	Upd.	7,403	5,331	7,283	8,245	8,435	8,902	10,261	7,912	4,431	8,370	1%
	Prev.	6,218	5,509	7,940	11,767	15,385	20,663	24,817	32,887	36,295	26,216	17%
MRSK Volga	Upd.	5,414	7,561	6,742	4,380	6,253	7,329	8,609	8,984	9,468	11,325	9%
	Prev.	5,594	6,521	9,594	13,605	19,173	24,562	22,872	31,881	37,334	28,480	20%
MOESK	Upd.	27,288	22,953	29,117	36,175	43,171	44,006	50,075	41,547	29,270	34,709	3%
	Prev.	22,203	29,883	32,833	39,171	45,948	58,888	43,291	45,215	47,459	49,970	9%
Lenenergo	Upd.	3,623	5,329	7,056	8,842	11,213	14,238	17,727	20,621	18,930	23,337	23%
	Prev.	692	986	1,322	3,368	4,851	8,165	10,284	15,146	21,570	26,218	50%
Kubanenergo	Upd.	-783	1,846	2,324	2,637	4,423	5,220	6,588	3,932	2,482	3,612	n/a
	Prev.	2,764	4,783	6,653	7,044	7,100	2,492	1,630	6,822	6,907	7,044	11%
Total MRSK	**Upd.**	**79,009**	**75,967**	**89,903**	**107,363**	**131,740**	**146,529**	**170,661**	**152,747**	**130,324**	**155,171**	**8%**
	Prev.	68,116	77,330	98,436	131,631	165,183	204,993	202,984	259,291	308,595	300,970	18%
FSK	**Upd.**	**80,829**	**85,372**	**93,323**	**110,983**	**128,194**	**141,770**	**156,643**	**172,932**	**190,767**	**210,288**	**11%**
	Prev.	76,276	86,969	106,649	125,769	148,997	171,018	195,864	223,883	255,465	291,047	16%

Source: Company data, Aton estimates

We now expect lower effective rates of return on RAB for grid companies, and forecast that they will generally stay below the statutory level in the foreseeable future.

Figure 17: Effective rate of return forecast

Company	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
Effective return on RAB*										
MRSK Center	3.9%	3.6%	4.9%	6.4%	8.2%	9.5%	10.8%	8.8%	7.9%	9.2%
MRSK South	0.6%	2.5%	5.8%	2.8%	5.2%	8.1%	10.8%	4.9%	0.3%	3.7%
MRSK North Caucasus	-4.7%	-2.9%	-1.9%	1.5%	4.7%	6.5%	7.9%	5.8%	5.3%	6.3%
MRSK Center and	3.9%	2.7%	2.8%	5.6%	7.9%	9.7%	11.7%	7.1%	4.1%	4.9%
MRSK North-West	-0.4%	0.4%	-0.8%	-0.3%	1.3%	2.1%	3.6%	3.6%	4.4%	6.2%
MRSK Siberia	-5.0%	-7.4%	-6.2%	-1.6%	0.5%	1.5%	3.7%	8.3%	11.2%	12.3%
MRSK Urals	4.3%	1.3%	3.5%	4.5%	4.5%	4.8%	6.1%	3.3%	-0.9%	3.4%
MRSK Volga	2.7%	5.4%	4.1%	1.1%	3.2%	4.3%	5.2%	5.5%	5.7%	7.2%
MOESK	5.8%	4.6%	7.4%	10.5%	12.7%	12.1%	13.5%	9.8%	5.4%	6.7%
Lenenergo	-1.7%	0.1%	1.8%	3.8%	6.1%	8.8%	11.6%	13.8%	11.8%	15.5%
Kubanenergo	-11.9%	0.2%	1.4%	1.3%	5.3%	7.3%	11.1%	3.8%	-0.7%	2.8%
Total MRSK updated	**2.0%**	**2.1%**	**3.4%**	**4.9%**	**6.9%**	**7.9%**	**9.5%**	**8.0%**	**6.0%**	**7.7%**
Total MRSK previous	0.9%	1.6%	3.4%	6.8%	9.3%	12.3%	11.9%	15.1%	17.2%	16.1%
FSK updated	**5.4%**	**5.9%**	**5.5%**	**6.2%**	**6.8%**	**7.1%**	**7.6%**	**8.1%**	**8.6%**	**9.2%**
FSK previous	4.5%	5.0%	6.0%	6.6%	7.2%	8.4%	9.6%	11.0%	12.5%	14.3%

*we estimate the effective rate of return on RAB as realised EBITDA from distribution activity less depreciation of RAB and less income tax, divided by net RAB value

Source: Company data, Aton estimates

Capex forecast largely intact for MRSKs, moderately increased for FSK

Relative to our previous valuation, the total capex amount for MRSKs to 2020 has stayed almost intact, while FSK capex rises some 14% above our previous valuation.

Figure 18: MRSK total capex forecast (RUBbn)

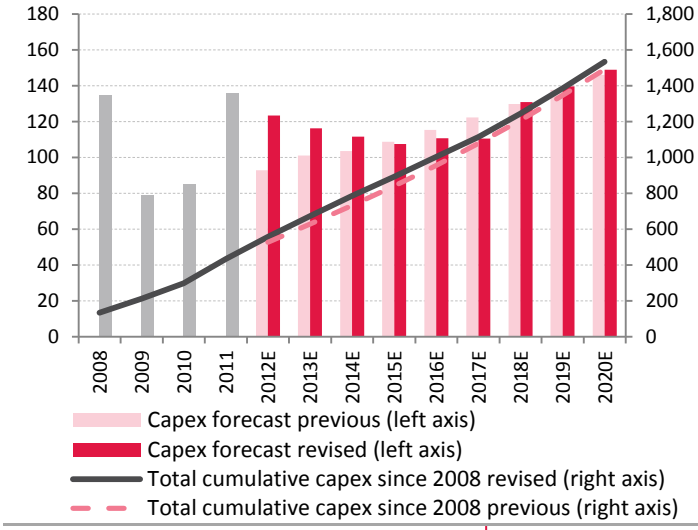
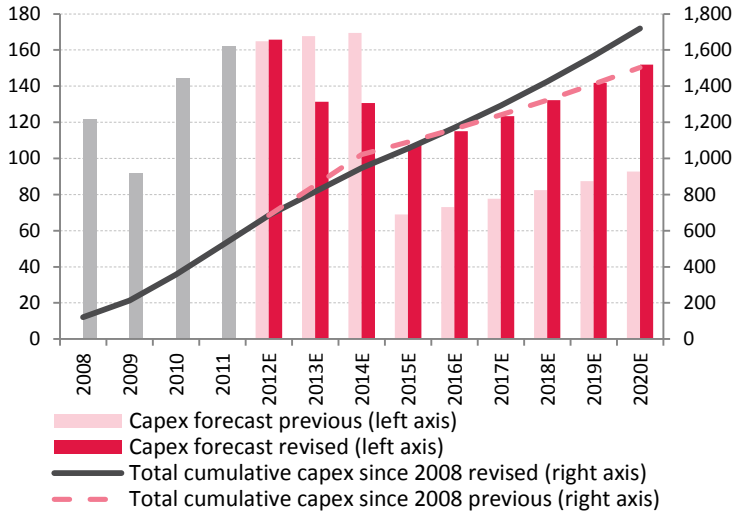


Figure 19: FSK capex forecast (RUBbn)



Source: Company data, Aton estimates

Post-prognosis assumptions more conservative, but more realistic now

We have set the rate of return on RAB for terminal value calculation at 10% for MRSKs and 9% at FSK, which is 100 bpts below the current regulatory rates of return. This is because the companies are unlikely to achieve full regulated rates of return due to flaws in RAB implementation and the lack of cost savings. We no longer add tariff smoothing, which has not been returned before 2020 to terminal value, unlike in previous valuations.

WACC lowered slightly after incorporating more conservative tariff outlook

We have lowered the regulatory risk premium from 2.0-4.9% to 1.0% since we have already incorporated tight regulatory decisions for grid companies, and believe that scope for further negative developments is limited. Our revised WACC assumptions are up to 340 bpts below the previous estimates, but they are still above the base regulatory rates of return of 11% (MRSK) and 10% (FSK).

Figure 20: Revised WACC calculation (abridged)

WACC component	FSK	MRSK Center	MRSK South	MRSK North Caucasus	MRSK Center and Volga	MRSK North-West	MRSK Siberia	MRSK Urals	MRSK Volga	MOESK	Lenenergo
Regulatory risk premium - updated	**1.0%**	**1.0%**	**1.0%**	**1.0%**	**1.0%**	**1.0%**	**1.0%**	**1.0%**	**1.0%**	**1.0%**	**1.0%**
Regulatory risk premium - previous	2.0%	3.0%	4.4%	4.8%	3.0%	4.9%	4.5%	2.6%	2.5%	2.0%	4.0%
Change (ppts)	-1.0	-2.0	-3.4	-3.8	-2.0	-3.9	-3.5	-1.6	-1.5	-1.0	-3.0
Liquidity - updated	**0.0%**	**3.0%**	**4.0%**	**4.0%**	**3.0%**	**4.0%**	**4.0%**	**4.0%**	**4.0%**	**3.0%**	**4.0%**
Liquidity - previous	0.0%	3.0%	3.5%	5.0%	2.5%	5.0%	5.0%	3.5%	3.5%	2.0%	4.0%
Change (ppts)	0.0	0.0	0.5	-1.0	0.5	-1.0	-1.0	0.5	0.5	1.0	0.0
WACC (excl. tax shield) - updated	**13.3%**	**15.7%**	**16.5%**	**16.7%**	**15.7%**	**16.4%**	**16.4%**	**16.4%**	**16.4%**	**15.5%**	**16.4%**
WACC (excl. tax shield) - previous	14.0%	17.1%	18.5%	20.0%	16.7%	19.8%	19.5%	17.1%	17.1%	15.5%	18.5%
Change (ppts)	-0.7	-1.4	-2.0	-3.3	-1.0	-3.4	-3.1	-0.7	-0.7	0.0	-2.1

Source: Aton estimates

Grid company valuations materially downgraded

Our full-DCF valuation, which incorporates regulatory parameters for each MRSK region and the assumptions discussed above, results in massive downgrades of company fair values (let us call this the base 'status-quo' scenario).

Figure 21: Updated target prices for base-case scenario

Company name	Ticker	12M TP new ($)	12M TP previous ($)	chg	Current price ($)	Potential Upside	Current EV/RAB YE11E	Fair EV/RAB YE11E (new)	Fair EV/RAB YE10E (previous)
MRSK Center	MRKC	0.0169	0.0326	-48%	0.0169	0%	0.43	0.40	0.43
MRSK South	MRKY	0.000851	0.000858	-1%	0.001643	-48%	0.57	0.52	0.42
MRSK North Caucasus	MRKK	0.796	4.999	-84%	0.848	-6%	0.04	0.01	0.31
MRSK Center and Volga	MRKP	0.00498	0.01030	-52%	0.00547	-9%	0.43	0.38	0.50
MRSK North-West	MRKZ	0.000976	0.004837	-80%	0.002131	-54%	0.22	0.14	0.27
MRSK Siberia	MRKS	0.00100	0.00726	-86%	0.00300	-67%	0.23	0.12	0.35
MRSK Urals	MRKU	0.00194	0.01252	-85%	0.00653	-70%	0.45	0.20	0.47
MRSK Volga	MRKV	0.00100	0.00768	-87%	0.00240	-58%	0.31	0.17	0.50
MOESK	MSRS	0.0278	0.0704	-60%	0.0478	-42%	0.64	0.44	0.70
Lenenergo (ord.)	LSNG	0.0596	0.2338	-75%	0.2098	-72%	0.36	0.24	0.23
Lenenergo (pref.)	LSNGP	0.0694	0.3935	-82%	0.5645	-88%			
FSK	FEES	0.00471	0.0134	-65%	0.00682	-31%	0.46	0.29	0.49

Source: Aton estimates

We Factor in a Chance of MRSK Privatisation

Based on recent events, namely President Putin's support for government initiatives for the utilities sector, we believe the probability of MRSK privatisation, for which government representatives indicated plans for 2013, is increasing. In order to reflect this, we have run a privatisation scenario for MRSKs, with the following changes to our valuation assumptions:

1) **Operating efficiency gains**. We assume controllable operating costs will be cut by 20% from the regulator-approved level by 2015.
2) **Lower capex.** We allow for a higher, 30% discount to Minenergo-approved investment programmes (vs a 20% discount in the base scenario), and reduce longer-term maintenance capex assumptions by roughly 30%.
3) **Lower WACC.** We reduce the corporate governance risk premium from 2% to 0.5%.
4) **Effective rates of return on RAB equal statutory** for terminal value calculation.

The privatisation scenario results in much higher company fair values than our base scenario.

Figure 22: Privatisation vs base-case scenario valuation

Company name	Ticker	TP in privatisation scenario	TP in base scenario	chg	Fair EV/RAB in privatisation scenario	Fair EV/RAB in base scenario	chg
MRSK Center	MRKC	0.0418	0.0169	147%	0.71	0.40	78%
MRSK South	MRKY	0.007970	0.000851	837%	0.82	0.52	58%
MRSK North Caucasus	MRKK	3.637	0.796	357%	0.32	0.01	2113%
MRSK Center and Volga	MRKP	0.01465	0.00498	194%	0.73	0.38	93%
MRSK North-West	MRKZ	0.007822	0.000976	702%	0.50	0.14	251%
MRSK Siberia	MRKS	0.00736	0.00100	635%	0.39	0.12	220%
MRSK Urals	MRKU	0.01138	0.00194	487%	0.59	0.20	192%
MRSK Volga	MRKV	0.00575	0.00100	475%	0.55	0.17	222%
MOESK	MSRS	0.0553	0.0278	99%	0.64	0.44	46%
Lenenergo (ord.)	LSNG	0.2667	0.0596	347%	0.37	0.24	52%
Lenenergo (pref.)	LSNGP	0.5710	0.0694	722%			

Source: Aton estimates

Final target prices do not reveal significant upsides

We incorporate the chance of privatisation by assuming a 50% probability that one MRSK is privatised, and see MRSK Center, MRSK Center and Volga and MRSK Volga as the most likely candidates (assigning each company a 25% individual likelihood of being privatised). We also note the lower chances of MRSK North West and MRSK Urals (10% probability each), and MRSK South (5% probability). Our final target prices for MRSKs are then calculated as weighted averages of the target prices in our base 'status quo' scenario and the privatisation scenario.

Since the government does not plan to surrender control of FSK to private shareholders, we do not run a privatisation scenario for the company.

Figure 23: Calculation of the final weighted-average target prices

Company	Ticker	TP in base scenario ($)	Weight	TP in privatisation scenario ($)	Weight	WA TP	Current price ($)	Upside	New rating	Old rating
MRSK Center	MRKC	0.0169	87.5%	0.0418	12.5%	0.0200	0.0169	19%	HOLD	BUY
MRSK South	MRKY	0.000851	97.5%	0.007970	2.5%	0.00103	0.001643	-37%	SELL	SELL
MRSK North Caucasus	MRKK	0.796	100.%	3.637	0.0%	0.796	0.848	-6%	SELL	BUY
MRSK Center & Volga	MRKP	0.00498	87.5%	0.01465	12.5%	0.00619	0.00547	13%	HOLD	BUY
MRSK North-West	MRKZ	0.000976	95.0%	0.007822	5.0%	0.00132	0.002131	-38%	SELL	BUY
MRSK Siberia	MRKS	0.00100	100%	0.00736	0.0%	0.00100	0.00300	-67%	SELL	BUY
MRSK Urals	MRKU	0.00194	95.0%	0.01138	5.0%	0.00241	0.00653	-63%	SELL	BUY
MRSK Volga	MRKV	0.00100	87.5%	0.00575	12.5%	0.00159	0.00240	-34%	SELL	BUY
MOESK	MSRS	0.0278	100%	0.0553	0.0%	0.0278	0.0478	-42%	SELL	BUY
Lenenergo (ord.)	LSNG	0.0596	100%	0.2667	0.0%	0.0596	0.2098	-72%	SELL	SELL
Lenenergo (pref.)	LSNGP	0.0694	100%	0.5710	0.0%	0.0694	0.5645	-88%	SELL	SELL
FSK	FEES	0.00471	100%	n/a	0.0%	0.00471	0.00682	-31%	SELL	BUY

Source: Aton estimates

No significant upsides evident; two HOLDs, the rest SELLs

We do not see significant upsides for MRSKs at present under the assumptions discussed in this report. We assign **HOLD** ratings to MRSK Center and MRSK Center and Volga, which are among the likely privatisation candidates, and **SELL** ratings to the rest of the MRSKs. We downgrade FSK from Buy to **SELL** based on its weakening fundamentals: lower tariff growth rates, higher capex and no chance of privatisation.

MRSK Holding valuation: consolidation of FSK incorporated, downgrade to SELL

We have incorporated our final privatisation-weighted target prices of MRSKs into our sum-of-the-parts valuation of MRSK Holding. We have also incorporated consolidation of FSK as a contribution of the state's stake in FSK into MRSK Holding's equity. For valuation purposes we assume the deal is conducted at the current market prices of both MRSK Holding and FSK.

Our valuation shows 36% and 43% downsides for MRSK Holding's ordinary and preferred shares, respectively, due to downsides seen for the majority of its subsidiaries as well as a 20% holding discount. We thus downgrade MRSK Holding's ordinary and preferred shares from Hold to **SELL**.

Figure 24: MRSK Holding SOTP valuation*

Subsidiary name	Ticker	Stake owned	Current EV/RAB 2011E	Fair EV/RAB 2011E	Market value of stake ($mn)	12M target value of stake ($mn)
MRSK Center	MRKC	50%	0.43	0.40	358	425
MRSK South	MRKY	52%	0.57	0.52	42	26
MRSK North Caucasus	MRKK	88%	0.04	0.01	80	75
MRSK Center and Volga	MRKP	50%	0.43	0.38	311	351
MRSK North-West	MRKZ	55%	0.22	0.14	113	70
MRSK Siberia	MRKS	57%	0.23	0.12	169	56
MRSK Urals	MRKU	52%	0.45	0.20	294	109
MRSK Volga	MRKV	68%	0.31	0.17	290	192
MOESK	MSRS	51%	0.64	0.44	1,185	690
Lenenergo	LSNG	59%	0.36	0.24	190	54
Tyumenenergo**	unlisted	100%	0.49	0.34	1,106	1,059
Tomsk DC	TORS	52%	0.31	0.50	38	51
Kubanenergo	KUBE	73%	1.36	-0.08	696	37
FSK	FEES	80%	0.46	0.29	6,924	4,783
Stakes in subsidiaries at current market/12M target value ($mn)					11,796	7,980
Net cash (9M12 unconsolidated RAS) adj. for additional issues ($mn)					444	444
Current market/12M target SOTP ($mn)					12,239	8,423
Current market/Fair premium/(discount) to SOTP					-14.4%	-20.0%
Current/12M Target MktCap ($mn)					10,471	6,739
12M TP (ord.) ($)						**0.0413**
Current price (ord.) ($)						0.0641
Upside/(downside) to 12M TP (ord.)						**-36%**
Fair disount of preferred shares						39%
12M TP (pref.) ($)						**0.0233**
Current price (pref) ($)						0.0409
Upside/(downside) to 12M TP (pref.)						**-43%**

* estimated after additional share issues of MRSK Holding and MRSKs planned for 2012-2013, including share issue of MRSK Holding intended for acquistion of FSK

** market value implied at average asset-based multiples of listed MRSKs

Source: Aton estimates

No visible triggers ahead except for privatisation

We believe privatisation remains the only strong driver for MRSK stocks. For MRSK Holding the privatisation effect should be relatively limited, since there are risks that shareholders would not receive the proceeds, which could instead be invested in doubtful projects (such as financing of the housing infrastructure fund).

We also believe it would be difficult to attract true private investors into the sector, especially if the government targets receiving sizable premiums to market valuations. Investor confidence in the consistency of the regulatory environment has largely vanished and the government's reputation in this regard is compromised.

The key factor that could potentially turn around the investment story of grid companies is a change in the general state policy towards the utilities sector from one of state control to promotion of market-based mechanisms. This is unlikely to happen in the near term, in our view.

Generation Companies Valuation: Negative Factors Intensify

While our general approach to the valuation of generation companies remains unchanged, the negative developments that we outlined in our initiation report on the generation sector ***Electricity Generation: Under Pressure*** dated 5 Feb 2011 – oversupply of capacity and the threat of consumers building their own power plants – have now materialised and even intensified.

Electricity demand growth deteriorating; forecast lowered

Our in-house macro view has changed considerably since our last valuation of generation companies. It now envisages that the long-term GDP growth rate will be 0.5 ppts lower. Meanwhile, a much weaker rouble will have a significant impact on dollar-denominated company cash flows and target prices.

Figure 25: Change in macro assumptions since last review of generation company valuations

	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
GDP growth updated, %	3.6%	3.0%	3.5%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
GDP growth previous, %	5.5%	5.0%	5.0%	5.0%	4.5%	4.5%	4.5%	4.5%	4.5%
GDP growth change, ppts	-1.9	-2.0	-1.5	-1.0	-0.5	-0.5	-0.5	-0.5	-0.5
RUB/$ updated, aop	32.5	34.8	35.2	35.0	35.0	35.0	35.0	35.0	35.0
RUB/$ previous, aop	28.5	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
RUB/$ change, aop %	14%	24%	26%	25%	25%	25%	25%	25%	25%

Source: Aton estimates

Electricity consumption has slowed considerably since the 2008-09 economic crisis, and now shows much lower YoY growth rates than the pre-crisis levels (electricity demand expanded at a CAGR of 2.3% in 1999-2008).

Our updated estimates for electricity demand based on the downgraded GDP outlook imply a CAGR of 1.5% over 2012-18 (down from 1.9%), which is 0.8 ppt below the latest Minenergo forecast of 2.3%.

Figure 26: Electricity consumption growth rates (YoY)

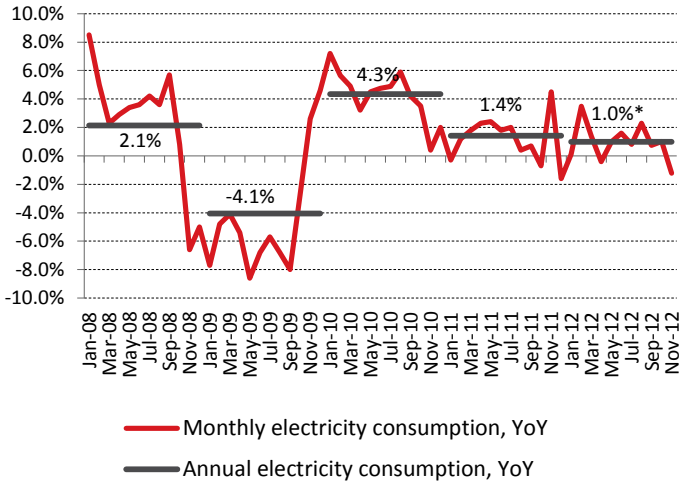
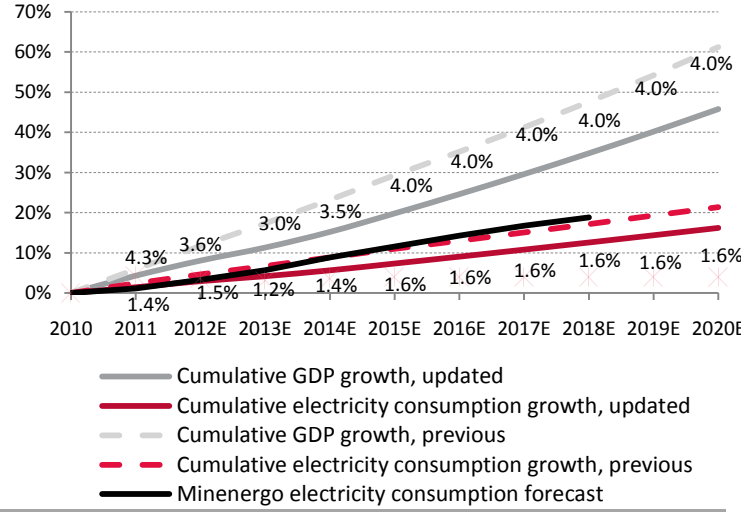


Figure 27: Electricity consumption and GDP forecast



* 2012 figure adjusted for additional day in Feb

Source: System Operator, Rosstat, Aton estimates

Massive electricity supply outlook remains intact

We have increased our total forecast for new capacity commissioning for 2007-20 by 10% to 46.5GW (from 42.3GW) on the basis of the most recent data from the companies and Minenergo. Relative to our previous estimates, the volumes of new additions have shifted forward by several years.

Figure 28: Capacity additions in European Russia and Urals (MW)

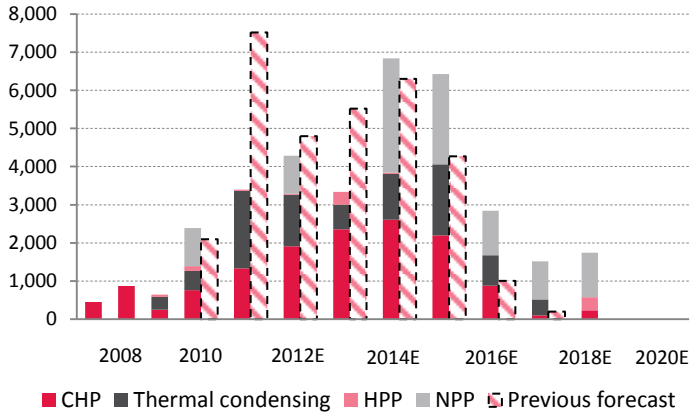
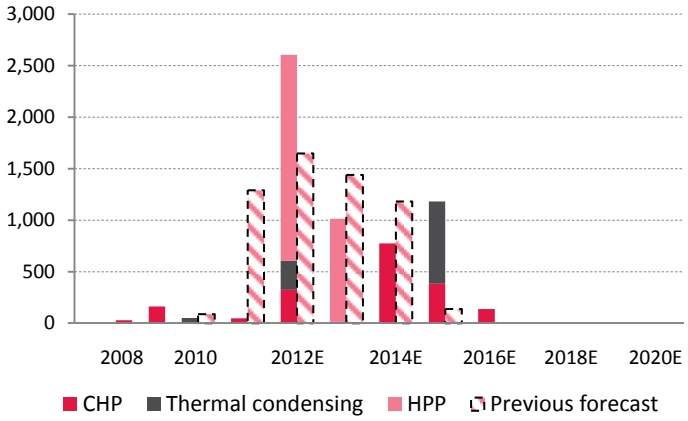


Figure 29: Capacity additions in Siberia (MW)



Source: Company data, Aton estimates

We have incorporated net decommissioning of around 9.3GW of existing capacity over 2012-20 based on company guidance and Minenergo data. This is only 4.2% of Russia's total installed capacity as of YE11 of 223GW.

As a result we forecast that net installed capacity in Russia will grow at a CAGR of 1.7% over 2011-18, 0.2 ppt above the average expected electricity demand growth rate of 1.5% over the same period, by our estimates.

Figure 30: Installed capacity in European Russia and Urals (GW)

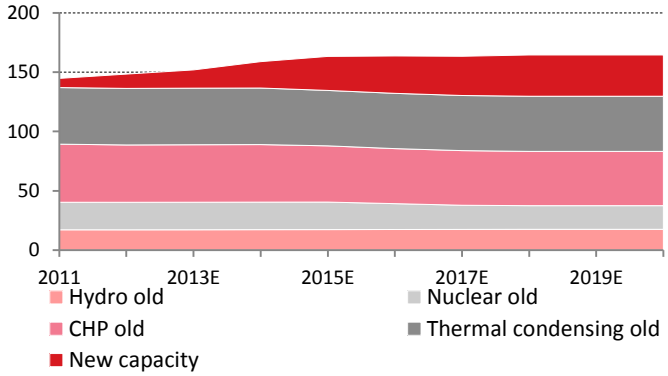
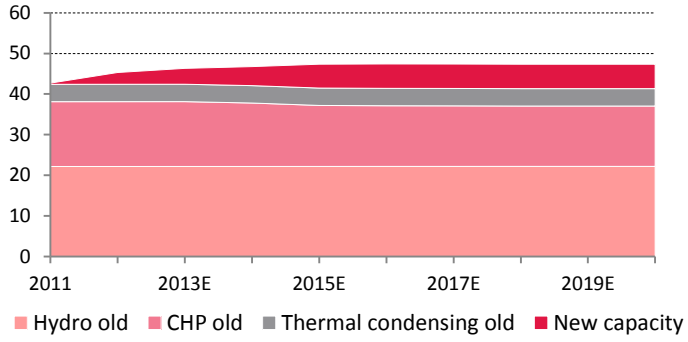


Figure 31: Installed capacity in Siberia (GW)



Source: Company data, Aton estimates

Unfavourable shifts in electricity demand-supply balance expected to intensify

Based on our view of demand and supply, we estimate that new capacity should essentially take load from older power plants, putting downward pressure on the production volumes of old plants. Our model shows that the share of new capacity in total production volumes will grow from 4% in 2011 to 27% in 2018. The effect is primarily explained by oversupply of capacity in the system and the fact that new capacity is much more efficient than old plants and generally gets preferential treatment from the System Operator in terms of receiving a bigger load. An exception from this negative trend is hydro power plants. These are virtually invulnerable to unfavourable shifts in the demand-supply balance due to their low-cost advantage.

Figure 32: Electricity production by capacity type in European Russia and Urals (TWh)

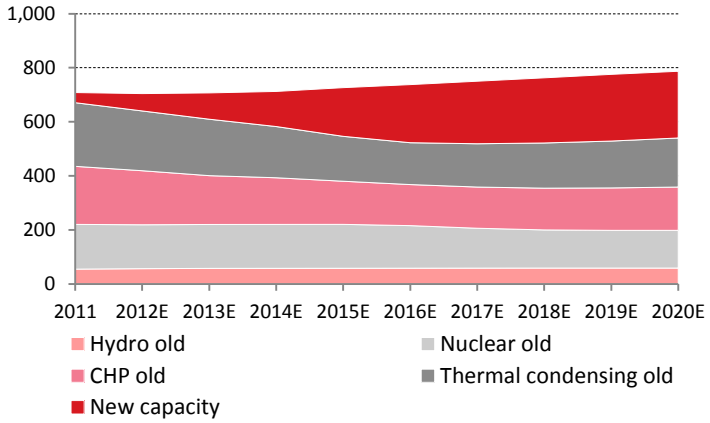
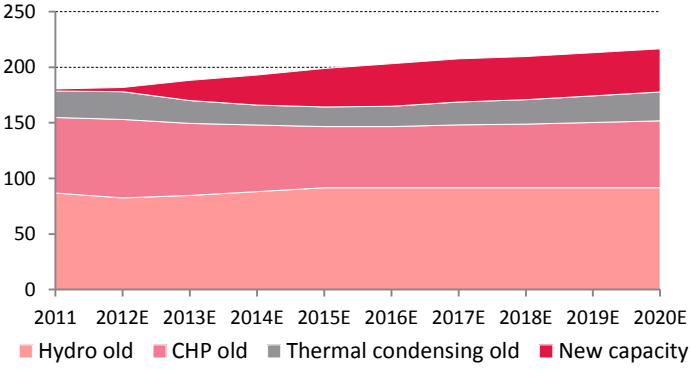


Figure 33: Electricity production by capacity type in Siberia (TWh)



* Does not include power plant operating on retail market

Source: Company data, Aton estimates

Figure 34: Average load factors by capacity type in European Russia and Urals (%)

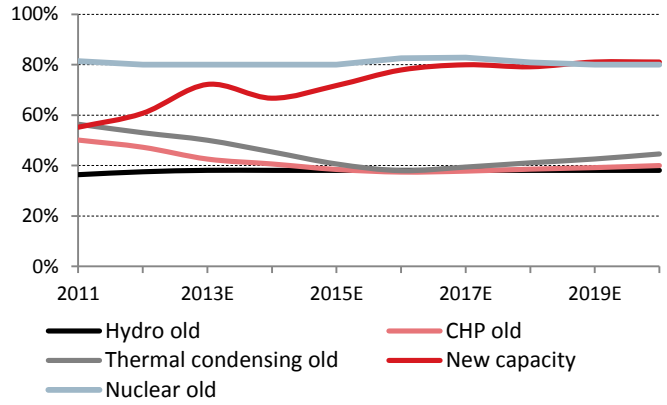
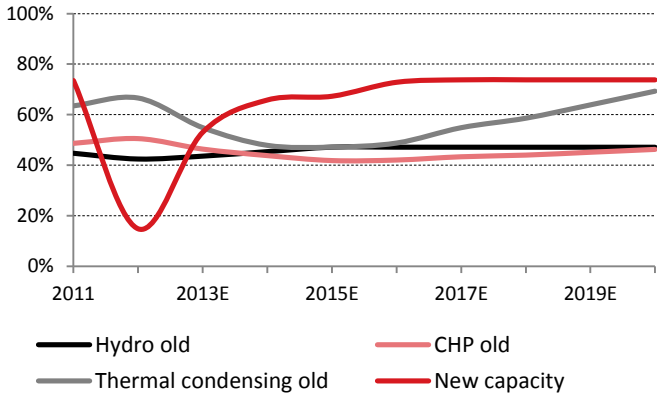


Figure 35: Average load factors by capacity type in Siberia (%)

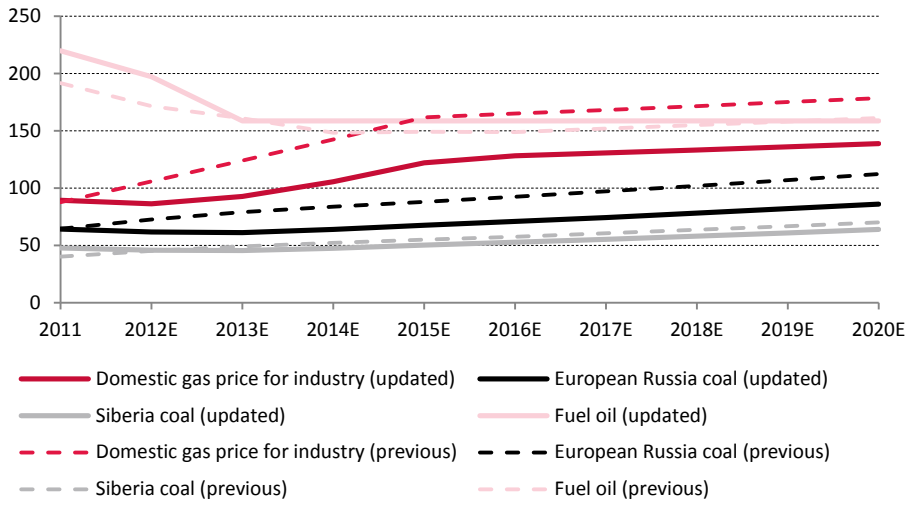


Source: Company data, Aton estimates

Fuel price outlook: lower gas price growth expected

We have adjusted our gas price forecast to account for the slowdown of tariff growth in 2012 and our higher oil price outlook. We continue to assume that the domestic gas price will rise at a rate of 15% per year in rouble terms from 2013 until it reaches netback parity level with exports. We expect this development to happen in 2016-17, in line with our latest oil and gas team view, with growth following at a 2% rate from 2018. The change in fuel prices in dollar terms vs our previous valuation is also heavily impacted by our much weaker rouble forecast.

Figure 36: Fuel price assumptions ($/tfe*)



*1 tfe = 7,000 kCal

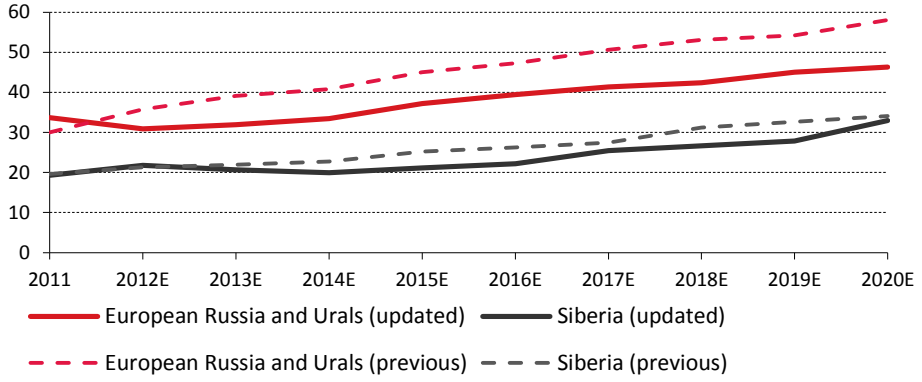
Source: FTS, Company data, Aton estimates

Electricity market outlook deteriorating further

We have applied a generally more conservative, although, we believe, more realistic outlook for electricity and capacity prices based on recent regulatory developments and our downgraded view on the electricity demand/supply balance.

For European Russia and the Urals our unrestricted estimates of the day-ahead market price remain generally intact in the long term in rouble terms (the lower dollar numbers are explained primarily by a weaker rouble). For Siberia, however, our updated forecast for unrestricted day-ahead market prices is now higher in rouble terms primarily due to a sharp hike in 2012 driven by regulator rulings on Rusal, which previously had reportedly manipulated the day-ahead market price by artificially keeping it low. In dollar terms this has been largely offset by weaker rouble assumptions.

Figure 37: Unrestricted equilibrium electricity price ($/MWh)



Source: Aton estimates

On top of the electricity forecast above we continue to apply a constraint related to the threat of big electricity users building their own power plants. We present the updated results in this report; for details on our calculation methodology see our initiation report ***Electricity Generation: Under Pressure*** released 15 Feb 2011.

Figure 38: Cost of electricity in European Russia and Urals ($/MWh)

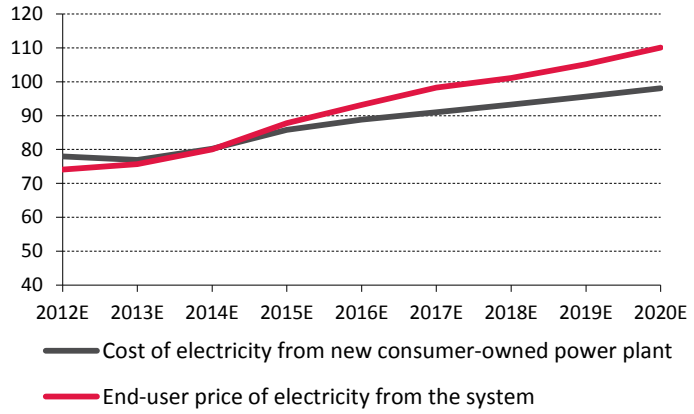
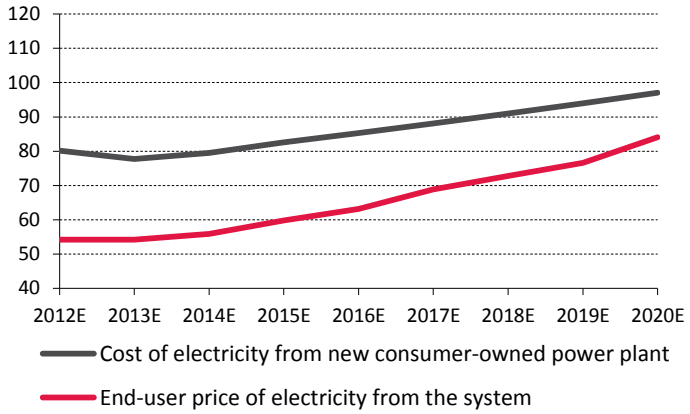


Figure 39: Cost of electricity in Siberia ($/MWh)



Source: Aton estimates

Our updated outlook shows that the cost of electricity from consumer-owned power plants will converge to the price of electricity from the system in European Russia and the Urals in 2014, becoming cheaper in 2015. This is one year later than our previous forecast. The delay is explained primarily by the regulatory tightening measures enacted in 2011-12, which led to lower growth in the end-user electricity price from the centralised system than we expected earlier. The situation is different in Siberia: on our estimates it will be more expensive for consumers to build their own power plants than to pay for electricity from the system until at least 2020.

We then derive the implied breakeven wholesale electricity price which equalises the cost of electricity from the system with the cost of own power plant electricity, and assume that the day-ahead market electricity price does not exceed that level.

Figure 40: Final wholesale electricity price forecast in European Russia and Urals ($/MWh)

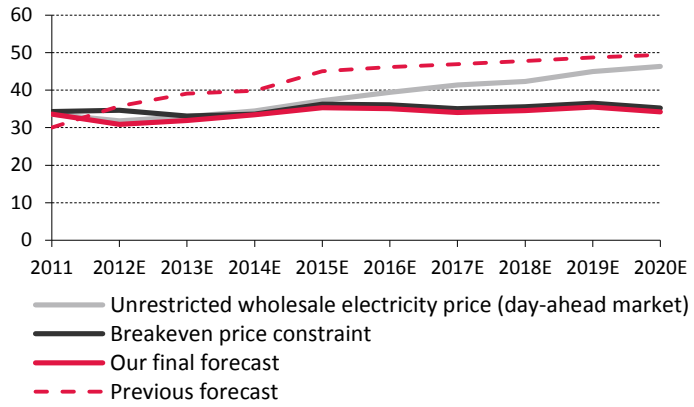
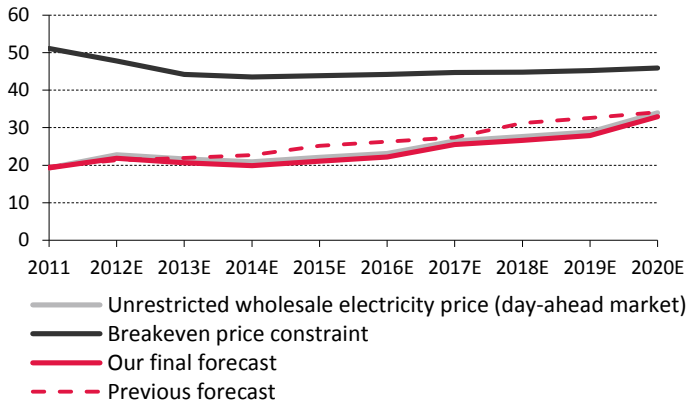


Figure 41: Final wholesale electricity price forecast in Siberia ($/MWh)

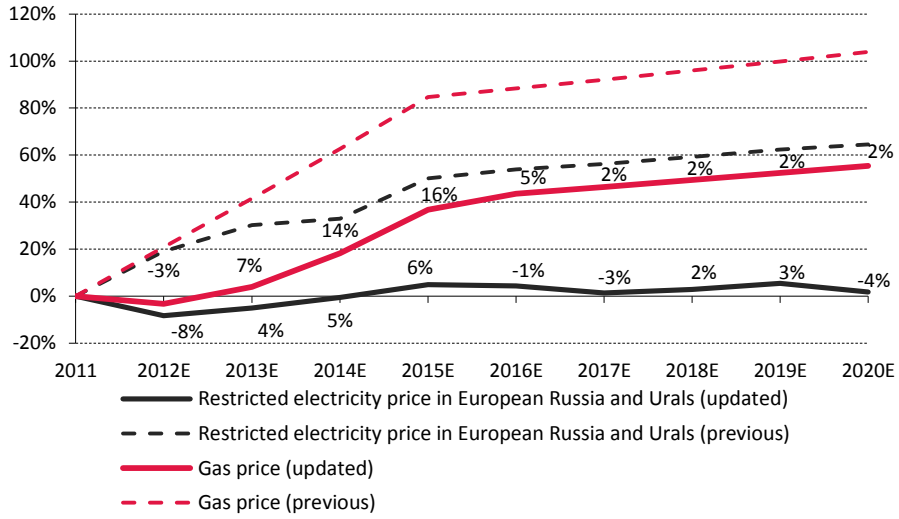


Source: Aton estimates

As the charts above show, we expect the day-ahead electricity price in European Russia and the Urals to virtually stop growing from 2015 due to competition from consumer-owned power plants. This would lead to further widening of the gap between the gas price and the spot electricity price growth rates, which would eradicate generators' margins on the electricity market.

For European Russia, our model results in the electricity price lagging behind fuel prices, a negative development for generation companies' margins on the liberalised market. This is primarily a consequence of capacity oversupply which we expect to intensify going forward, and competition from consumer-owned generation.

Figure 42: Final (restricted) forecast for the day-ahead electricity price in European Russia vs the gas price (dollar terms)



Source: Aton estimates

We also incorporate the 2011-12 regulatory tightening measures discussed above and make the following changes to our valuation methodology related to the electricity market:

- **No liberalisation of volumes supplied to the population,** since there is no indication from decision-makers that this may take place (previously we incorporated gradual liberalisation by 2015).
- **Loss-making supplies to the population**, since regulated electricity tariffs for supplies to the population have remained unchanged despite a gas tariff hike of 15% from 1 July 2012. We expect this trend to continue
- **Contracts with Rusal modelled in the foreseeable future.** We now assume that Irkutskenergo and Krasnoyarsk HPP's long-term contracts with Rusal will continue indefinitely (previously we assumed their cancellation from 2019) in order to stay on the conservative side. We also incorporate new long-term TGK-1 contracts with Rusal.

Electricity market earnings outlook appears even weaker now

The amendments to our outlook on the demand/supply relationship, fuel and electricity prices, regulatory tightening measures and other valuation assumptions discussed above result in an even greater deterioration of thermal generators' earnings from the electricity market than previously. Hydro capacity is still a clear winner on the electricity market (due to the absence of fuel costs). But while hydro earnings are expected to rise going forward, this is to a significantly lower extent than in our previous valuation.

Figure 43: EBITDA from the electricity market* per unit of installed capacity ($/kW)

Ticker	Company	Aton forecast	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
OGKB	OGK-2	Total (blended)	14	15	11	9	6	7	8	6	6	6	5
		Old capacity upd.	14	15	9	7	5	2	1	0	0	1	1
		Old capacity prev.	25	23	27	26	19	22	22	23	24	25	26
		New capacity	18	36	48	57	48	48	65	44	43	43	31
EONR	E.On Russia	Total (blended)	38	52	53	49	43	38	36	37	39	42	43
		Old capacity upd.	40	49	41	36	29	24	21	22	24	28	28
		Old capacity prev.	39	45	51	51	42	46	47	51	59	64	68
		New capacity	7	71	116	116	111	86	89	89	90	94	96
OGKE	OGK-5	Total (blended)	26	31	28	29	26	25	21	18	18	19	15
		Old capacity upd.	26	33	26	25	23	23	20	18	18	19	15
		Old capacity prev.	31	28	33	33	30	37	36	37	39	42	43
		New capacity	0	13	58	70	59	45	33	22	21	23	15
TGKA	TGK-1	Total (blended)	35	50	46	46	45	44	43	42	42	44	42
		Old capacity upd.	37	49	44	45	47	49	49	49	49	51	49
		Old capacity prev.	38	49	62	73	81	95	97	98	100	102	104
		New capacity	17	55	54	48	40	26	20	19	19	20	18
MSNG	Mosenergo	Total (blended)	18	28	16	17	9	6	4	2	2	2	1
		Old capacity upd.	12	22	12	11	4	1	1	1	1	1	1
		Old capacity prev.	17	17	13	9	3	2	3	3	2	2	1
		New capacity	65	59	44	52	29	21	15	4	4	5	2
TGKD	Quadra	Total (blended)	-3	0	2	3	1	-2	-2	-2	-2	-2	-2
		Old capacity upd.	-5	-3	-2	-2	-2	-3	-3	-3	-3	-3	-3
		Old capacity prev.	4	3	3	2	0	0	0	0	0	0	0
		New capacity	25	25	37	30	14	1	1	1	0	1	0
HYDR	Rushydro	Total (blended)	28	43	38	41	45	49	50	51	53	56	60
		Old capacity upd.	28	42	40	42	45	49	49	50	51	54	57
		Old capacity prev.	36	47	60	74	84	100	103	106	111	114	117
		New capacity	37	114	3	31	50	48	56	58	63	71	82
IRGZ	Irkutskenergo	Total (blended)	29	53	40	43	45	49	51	57	59	61	70
		Old capacity upd.	29	53	40	43	45	49	51	57	59	61	70
		Old capacity prev.	34	50	59	66	76	84	87	90	101	129	134
		New capacity	0	0	0	0	0	0	0	0	0	0	0
KRSG	Krasnoyarsk HPP	Total (blended)	20	25	17	18	21	24	24	24	24	24	24
		Old capacity upd.	20	25	17	18	21	24	24	24	24	24	24
		Old capacity prev.	39	37	40	42	45	50	50	51	55	57	103
		New capacity	0	0	0	0	0	0	0	0	0	0	0

*defined as electricity revenue less fuel costs and electricity purchased for resale

Source: Company data, Aton estimates

Capacity Market: A Target for Regulatory Tightening

We have incorporated the amended regulated capacity tariffs for supplies to the population for hydro capacity, forced and expensive generators in accordance with official regulatory decisions. We also have changed the assumption on Siberian hydros: we now expect them to sell their entire capacity at the regulated tariffs indefinitely (previously we assumed they would start to sell their capacity at KOM prices from 2013).

Capacity auction (KOM) prices: no surprises; price caps work just fine. In line with our initial prediction outlined more than two years ago in our 2 June 2010 report ***Russian Utilities: Generators Unappealing: Rebalance to Distribution***, the so-called 'unregulated' KOM prices for 2012 and 2013 have remained generally within the regulator-established price caps. We forecast them to grow with inflation, in line with our previous approach.

No significant fixed cost cuts incorporated now. We have become more cautious on the companies' operating efficiency. We now assume companies' fixed costs will grow at the full CPI rate going forward (previously half the CPI rate). This means that

the margins of companies' old capacity on the capacity market will stay almost flat rather than expand.

New capacity valuation

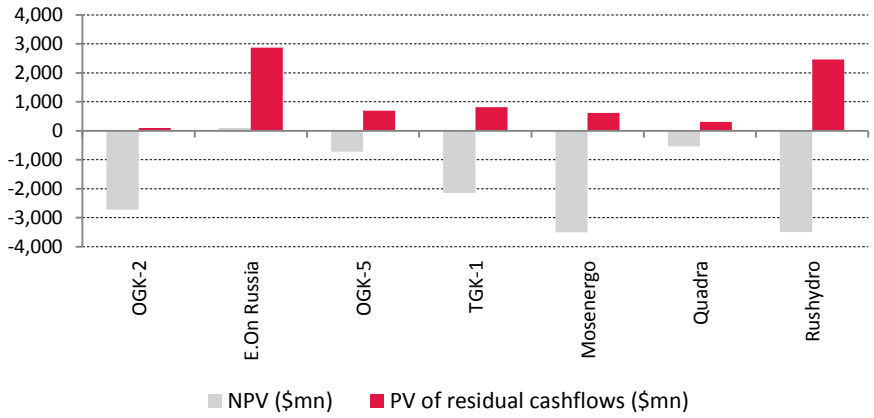
We continue to calculate cash flows individually for each of the 67 investment projects of companies under our coverage, in accordance with the official methodology for capacity delivery contracts (DPM). In line with the methodology, we have lowered the regulatory WACC for DPM projects by 50 bpts to 11.9% from 2012, based on the lower assumption for long-term government bond yields (6.5% vs 7.0% before).

The majority of investment projects appear to be value erosive for at least the following reasons:

- Lower regulatory rate of return (11.9%) vs company WACCs (13-17.1%).
- Longer actual construction time (three to five years) than provided for by the regulator (1.5-2.5 years).
- Actual construction costs higher than normative for some projects.
- Lower expected profit from the electricity market than estimated by the regulator.
- Actual capacity payments lower than those calculated according to the methodology.

For valuation purposes, however, it is remaining future cash flows that count rather than NPV at a project's inception (since in the DCF framework we take into account only future, not past cash flows). These appear to be positive for the majority of generation companies in our coverage universe. The more a company has invested to date, the higher the present value of remaining cash flows from investment projects.

Figure 44: New capacity investment project NPV and residual cash flows (2012 and beyond) by company ($mn)



Source: Company data, Aton estimates

Earnings from capacity market: new capacity the major driver

Combining the forecast for company earnings on the capacity market from old and new plants, we expect these to expand going forward, driven primarily by new capacity. Old capacity should see generally flat earnings from the capacity market going forward vs our previous expectation of growth. This is due to our more conservative stance on operating cost efficiency.

Figure 45: EBITDA from capacity market* ($/kW)

Ticker	Company	Type of capacity	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
OGKB	OGK-2	Old - updated	6	-1	4	10	10	11	12	12	13	14	14
		Old - previous	-2	12	12	15	17	20	22	24	26	29	31
		New	113	19	28	39	41	99	161	144	152	152	153
		Total (blended)	7	-1	5	11	12	21	28	29	31	32	32
EONR	E.On Russia	Old - updated	13	16	14	15	16	17	18	18	19	20	21
		Old - previous	7	16	17	19	22	25	27	29	32	34	37
		New	10	66	120	115	117	148	200	203	205	207	210
		Total (blended)	13	24	32	32	33	46	59	60	61	62	64
OGKE	OGK-5	Old - updated	14	12	10	10	11	11	12	13	13	14	15
		Old - previous	12	15	14	17	19	22	24	26	28	30	33
		New	0	19	112	108	110	113	116	119	122	125	128
		Total (blended)	14	12	19	19	19	20	21	22	23	24	25
TGKA	TGK-1	Old - updated	1	-3	-8	-7	-7	-7	-8	-9	-9	-9	-10
		Old - previous	-3	18	16	15	11	12	13	15	17	19	21
		New	16	64	104	92	94	98	100	106	110	112	115
		Total (blended)	2	5	9	14	15	15	15	17	18	18	18
MSN	Mosenergo	Old - updated	26	22	17	18	19	20	21	22	23	24	25
		Old - previous	17	19	21	21	20	21	23	26	28	30	33
		New	146	117	119	114	88	100	119	121	122	124	126
		Total (blended)	39	35	32	32	32	39	44	46	47	49	50
TGKD	Quadra	Old - updated	26	32	25	23	21	19	15	15	15	16	17
		Old - previous	25	24	27	23	18	15	17	19	21	23	25
		New	120	128	221	185	156	142	183	185	188	191	194
		Total (blended)	31	40	43	46	47	51	62	62	64	65	67
HYDR	Rushydro	Old - updated	20	1	-10	-10	-10	-10	-11	-11	-12	-12	-13
		Old - previous	31	27	6	13	16	18	20	22	24	26	29
		New	46	371	25	53	75	103	128	113	110	130	126
		Total (blended)	20	2	-8	-3	-1	3	5	4	4	6	5
IRGZ	Irkutskenergo	Old - updated	14	-1	-6	-6	-6	-6	-6	-7	-7	-7	-8
		Old - previous	3	2	1	16	18	22	23	25	27	49	53
		New	0	0	0	0	0	0	0	0	0	0	0
		Total (blended)	14	-1	-6	-6	-6	-6	-6	-7	-7	-7	-8
KRSG	Krasnoyarska HPP	Old - updated	10	-3	-2	-2	-2	-2	-2	-2	-2	-3	-3
		Old - previous	-5	-8	-8	-8	-8	-7	-8	-8	-8	-9	21
		New	0	0	0	0	0	0	0	0	0	0	0
		Total (blended)	10	-3	-2	-2	-2	-2	-2	-2	-2	-3	-3

* defined as capacity revenue less fixed cash costs (O&M) attributed to the electricity business

Source: Company data, Aton estimates

Adjustments to DPM price the major risk for capacity market earnings

As noted above, the regulators have become concerned with the impact of high capacity payments on the end-user price under DPM, and Minenergo has already tried to adjust the methodology in order to reduce DPM prices. We therefore see a sizable risk that DPM payments are lowered, threatening generation companies' earnings from the capacity market.

Heat business outlook: weak; no breakthroughs expected

We have seen no significant changes in the regulatory landscape for the heating business since our last valuation revision. RAB regulation in heat transmission remains largely a future long-term possibility, and given massive problems with RAB implementation in the electricity grid segment, we believe investors should not count on a breakthrough on the regulatory front at this stage.

Profitability outlook more conservative now

We forecast flat heating business EBITDA margins for those companies where they are positive, with a move to zero for companies that are currently loss-making in the heat business. In our previous valuation we assumed that the heating business would gradually improve its profitability and forecast that its EBITDA margins would converge to an average of 10% by 2015. This change has had a huge negative impact on the valuation of the heat businesses of co-generation companies such as Mosenergo, Quadra and TGK-1 (see Figure 49 for valuation results).

Figure 46: Old capacity heat production EBITDA margin

Company	Aton forecast	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
OGK-2	Updated	19.9%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
	Previous	5.3%	0.1%	2.6%	5.1%	7.5%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
	Change, ppts	14.6%	4.9%	2.4%	-0.1%	-2.5%	-5.0%	-5.0%	-5.0%	-5.0%	-5.0%	-5.0%
E.On Russia	Updated	32.2%	31.4%	31.4%	31.4%	31.4%	31.4%	31.4%	31.4%	31.4%	31.4%	31.4%
	Previous	27.4%	25.3%	21.4%	17.6%	13.8%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
	Change, ppts	4.8%	6.1%	10.0%	13.8%	17.6%	21.4%	21.4%	21.4%	21.4%	21.4%	21.4%
OGK-5	Updated	3.1%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%
	Previous	-24.7%	-25.3%	-16.4%	-7.6%	1.2%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
	Change, ppts	27.8%	28.8%	19.9%	11.1%	2.3%	-6.5%	-6.5%	-6.5%	-6.5%	-6.5%	-6.5%
TGK-1	Updated	6.5%	4.7%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
	Previous	5.2%	12.8%	12.1%	11.4%	10.7%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
	Change, ppts	1.3%	-8.1%	-9.1%	-8.4%	-7.7%	-7.0%	-7.0%	-7.0%	-7.0%	-7.0%	-7.0%
Mosenergo	Updated	-4.4%	0.0%	-2.0%	-1.5%	-1.0%	-0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
	Previous	-6.4%	2.5%	4.3%	6.2%	8.1%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
	Change, ppts	2.0%	-2.5%	-6.3%	-7.7%	-9.1%	-10.5%	-10.0%	-10.0%	-10.0%	-10.0%	-10.0%
Quadra	Updated	7.9%	3.6%	-6.4%	-4.8%	-3.2%	-1.6%	0.0%	0.0%	0.0%	0.0%	0.0%
	Previous	5.8%	9.8%	9.9%	9.9%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
	Change, ppts	2.1%	-6.2%	-16.3%	-14.7%	-13.2%	-11.6%	-10.0%	-10.0%	-10.0%	-10.0%	-10.0%
Rushydro*	Updated	3.8%	12.4%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%
	Previous	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Change, ppts	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Irkutskenergo	Updated	9.2%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%
	Previous	-7.1%	-2.2%	0.9%	3.9%	7.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
	Change, ppts	16.3%	7.9%	4.8%	1.8%	-1.3%	-4.3%	-4.3%	-4.3%	-4.3%	-4.3%	-4.3%
Average	Updated	9.8%	8.3%	5.4%	5.7%	6.0%	6.2%	6.5%	6.5%	6.5%	6.5%	6.5%
	Previous	0.8%	3.3%	5.0%	6.6%	8.3%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
	Change, ppts	9.0%	5.0%	0.5%	-1.0%	-2.4%	-3.8%	-3.5%	-3.5%	-3.5%	-3.5%	-3.5%

*RAO Far East heat segment

Source: Company data, Aton estimates

Generation companies' earnings profiles differ

Figure 47 shows our outlook for the generation companies' combined earnings from the electricity, capacity and heat markets. We see different earnings profiles across generation companies, with asset efficiency, regulatory issues, hydro capacity availability and new power plant commissioning schedules explaining the variations in earnings growth between companies.

We expect a general deterioration of old capacity profits over four to five years due to the capacity oversupply effect and competition from consumer-owned generation. However profits from new capacity will somewhat offset the decline in old capacity profitability and serve as the main earnings driver for the majority of generation companies. Hydro (RusHydro, Irkutskenergo and TGK-1) and efficient thermal generators (E.On Russia) have a generally more stable earnings outlook.

Figure 47: Generation companies' EBITDA forecast ($mn)

Company		2010	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
OGK-2	**Total EBITDA**	**384**	**259**	**285**	**376**	**335**	**554**	**711**	**710**	**735**	**758**	**753**
	per kW	*22*	*15*	*16*	*20*	*18*	*28*	*37*	*36*	*37*	*38*	*38*
	Old electricity capacity	349	248	231	305	268	229	219	218	228	248	270
	per kW	*20*	*14*	*13*	*17*	*15*	*13*	*13*	*13*	*13*	*14*	*16*
	Old heat capacity	21	5	5	5	6	6	7	7	7	7	7
	New capacity	14	6	49	66	61	318	486	486	500	503	475
	per kW	*131*	*55*	*76*	*96*	*89*	*148*	*226*	*189*	*194*	*195*	*184*
E.On Russia	**Total EBITDA**	**476**	**794**	**888**	**845**	**789**	**967**	**1,099**	**1,124**	**1,161**	**1,213**	**1,239**
	per kW	*52*	*77*	*86*	*82*	*76*	*87*	*99*	*101*	*104*	*109*	*111*
	Old electricity capacity	457	557	475	440	387	348	330	350	376	413	427
	per kW	*53*	*64*	*55*	*51*	*45*	*40*	*38*	*40*	*44*	*48*	*49*
	Old heat capacity	11	11	10	11	12	13	14	14	15	15	16
	New capacity	7	227	402	395	390	605	755	760	770	784	796
	per kW	*17*	*137*	*235*	*231*	*228*	*241*	*301*	*303*	*307*	*313*	*317*
OGK-5	**Total EBITDA**	**355**	**424**	**468**	**475**	**455**	**434**	**412**	**393**	**402**	**418**	**386**
	per kW	*40*	*44*	*49*	*49*	*47*	*47*	*44*	*42*	*43*	*45*	*41*
	Old electricity capacity	352	392	312	313	301	288	272	260	268	280	252
	per kW	*40*	*45*	*36*	*36*	*34*	*34*	*32*	*31*	*31*	*33*	*30*
	Old heat capacity	3	4	4	4	4	5	5	5	5	6	6
	New capacity	0	28	153	158	151	142	134	127	129	133	128
	per kW	*n/a*	*35*	*186*	*193*	*184*	*173*	*164*	*155*	*157*	*162*	*157*
TGK-1	**Total EBITDA**	**286**	**429**	**415**	**483**	**491**	**490**	**483**	**493**	**504**	**516**	**504**
	per kW	*46*	*63*	*61*	*66*	*67*	*67*	*66*	*67*	*69*	*70*	*69*
	Old electricity capacity	216	279	207	217	229	241	238	228	232	238	223
	per kW	*38*	*46*	*36*	*38*	*40*	*42*	*41*	*40*	*41*	*42*	*39*
	Old heat capacity	47	34	20	20	22	24	25	26	26	27	28
	New capacity	23	116	188	246	241	225	219	240	246	251	253
	per kW	*38*	*143*	*184*	*161*	*154*	*144*	*141*	*145*	*148*	*151*	*152*
Mosenergo	**Total EBITDA**	**652**	**832**	**605**	**622**	**552**	**645**	**716**	**692**	**708**	**730**	**738**
	per kW	*54*	*67*	*49*	*50*	*42*	*47*	*52*	*51*	*53*	*54*	*55*
	Old electricity capacity	403	466	307	304	239	213	225	230	244	256	269
	per kW	*38*	*44*	*29*	*29*	*23*	*21*	*22*	*23*	*24*	*25*	*26*
	Old heat capacity	-85	0	-43	-33	-24	-13	0	0	0	0	0
	New capacity	334	367	340	351	337	445	491	461	464	474	469
	per kW	*249*	*208*	*193*	*193*	*137*	*135*	*149*	*140*	*140*	*143*	*142*
Quadra	**Total EBITDA**	**143**	**170**	**127**	**166**	**181**	**208**	**247**	**248**	**252**	**259**	**262**
	per kW	*41*	*48*	*36*	*45*	*46*	*49*	*63*	*63*	*65*	*67*	*68*
	Old electricity capacity	72	93	74	67	60	51	34	33	34	38	39
	per kW	*22*	*29*	*23*	*21*	*19*	*16*	*12*	*12*	*12*	*14*	*14*
	Old heat capacity	44	22	-35	-28	-21	-12	0	0	0	0	0
	New capacity	26	54	88	127	142	169	213	215	218	221	224
	per kW	*156*	*174*	*281*	*238*	*186*	*155*	*195*	*197*	*200*	*202*	*205*
Rushydro	**Total EBITDA**	**2,144**	**2,300**	**1,523**	**1,875**	**2,178**	**2,484**	**2,629**	**2,662**	**2,763**	**2,996**	**3,121**
	per kW	*62*	*65*	*41*	*48*	*55*	*62*	*65*	*65*	*67*	*72*	*75*
	Old electricity capacity	1,644	1,520	1,051	1,146	1,241	1,379	1,381	1,395	1,420	1,493	1,575
	per kW	*48*	*43*	*30*	*33*	*35*	*39*	*39*	*39*	*40*	*42*	*44*
	Old heat capacity	32	129	30	29	31	33	34	36	37	39	41
	New capacity	7	39	71	334	544	710	858	869	940	1,092	1,127
	per kW	*82*	*485*	*28*	*85*	*125*	*152*	*183*	*171*	*173*	*201*	*208*
	Supply	188	303	96	91	87	87	81	87	91	96	103
	Government grants	273	310	275	275	275	275	275	275	275	275	275

Source: Company data, Aton estimates

Generation companies' EBITDA forecast cntd ($mn)

Company		2010	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
Irkutskenergo	**Total EBITDA**	**633**	**766**	**540**	**591**	**631**	**687**	**728**	**819**	**851**	**887**	**1,008**
	per kW	*49*	*59*	*42*	*46*	*49*	*53*	*56*	*63*	*66*	*68*	*78*
	Old electricity capacity	549	670	439	484	512	552	576	647	669	695	801
	per kW	*43*	*52*	*34*	*37*	*40*	*43*	*45*	*50*	*52*	*54*	*62*
	Old heat capacity	40	26	25	24	25	27	28	30	31	33	34
	New capacity	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	per kW	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*
	Supply	-27	-17	-7	-1	5	14	25	39	42	45	52
	Coal	71	87	84	84	88	94	99	104	109	115	121
Krasnoyarskaya HPP	**Total EBITDA**	**177**	**131**	**89**	**95**	**114**	**131**	**131**	**130**	**129**	**129**	**128**
	per kW	*30*	*22*	*15*	*16*	*19*	*22*	*22*	*22*	*22*	*21*	*21*
	Old electricity capacity	177	131	89	95	114	131	131	130	129	129	128
	per kW	*30*	*22*	*15*	*16*	*19*	*22*	*22*	*22*	*22*	*21*	*21*
	Old heat capacity	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	New capacity	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	per kW	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*

Source: Company data, Aton estimates

WACC increased due to regulatory risks and corporate governance issues

We have increased the base regulatory risk premium to 2% from 1% since we now see significant risks of further tariff tightening (such as revision of capacity tariffs, including DPM prices, and further curbs on the growth of regulated tariffs for the population) in addition to those measures currently priced into our valuation.

We have also increased the corporate governance risk premium by 100 bpts for Mosenergo and TGK-1 to account for the risk that they will have to implement OGK-2's NPV-negative investment projects, and have reduced it by 200 bpts for Irkutskenergo after assuming that the company's long-term contracts with Rusal will continue indefinitely.

Figure 48: Revised WACC assumptions

WACC component		OGK-2	E.On Russia	OGK-5	TGK-1	Mos-energo	Quadra	Rushydro	Irkutsk-energo	Krasno-yarskaya HPP
Base Russia COE	**Updated**	**12.5%**	**12.5%**	**12.5%**	**12.5%**	**12.5%**	**12.5%**	**12.5%**	**12.5%**	**12.5%**
	Previous	11.7%	11.7%	11.7%	11.7%	11.7%	11.7%	11.7%	11.7%	11.7%
	Change (ppts)	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Regulatory risk	**Updated**	**2.0%**	**2.0%**	**2.0%**	**2.0%**	**2.0%**	**2.0%**	**2.0%**	**2.0%**	**2.0%**
	Previous	1.0%	1.0%	1.0%	1.3%	1.0%	1.0%	1.5%	1.4%	1.5%
	Change (ppts)	1.0	1.0	1.0	0.7	1.0	1.0	0.5	0.6	0.5
Corporate	**Updated**	**2.0%**	**0.5%**	**0.5%**	**3.0%**	**3.0%**	**1.0%**	**2.0%**	**3.0%**	**3.0%**
governance	Previous	2.5%	0.5%	0.5%	2.0%	2.0%	1.0%	2.0%	5.0%	3.0%
	Change (ppts)	-0.5	-	-	1.0	1.0	-	-	-2.0	-
Liquidity	**Updated**	**1.0%**	**1.0%**	**3.0%**	**1.0%**	**1.0%**	**4.0%**	**0.0%**	**3.0%**	**4.0%**
	Previous	1.0%	1.0%	3.0%	2.0%	1.0%	2.5%	1.0%	3.5%	2.0%
	Change (ppts)	-	-	-	-1.0	-	1.5	-1.0	-0.5	2.0
Cost of equity	**Updated**	**17.5%**	**16.0%**	**18.0%**	**18.5%**	**18.5%**	**19.5%**	**16.5%**	**20.5%**	**21.5%**
	Previous	16.2%	14.2%	16.2%	17.0%	15.7%	16.2%	16.2%	21.6%	18.2%
	Change (ppts)	1.3	1.8	1.8	1.5	2.8	3.3	0.3	-1.1	3.3
Cost of debt	**Updated**	**8.0%**	**7.5%**	**7.5%**	**8.0%**	**8.0%**	**9.0%**	**8.0%**	**8.5%**	**8.5%**
	Previous	7.0%	7.0%	7.0%	7.0%	7.0%	8.0%	6.5%	8.0%	8.0%
	Change (ppts)	1.0	0.5	0.5	1.0	1.0	1.0	1.5	0.5	0.5
Target debt/assets	**Updated**	**30%**	**30%**	**30%**	**30%**	**30%**	**30%**	**30%**	**30%**	**30%**
	Previous	30%	30%	30%	30%	30%	30%	30%	30%	30%
	Change (ppts)	-	-	-	-	-	-	-	-	-
WACC	**Updated**	**14.2%**	**13.0%**	**14.4%**	**14.9%**	**14.9%**	**15.8%**	**13.5%**	**16.4%**	**17.1%**
	Previous	13.0%	11.6%	13.0%	13.6%	12.7%	13.3%	12.9%	17.0%	14.7%
	Change (ppts)	1.2	1.4	1.4	1.3	2.2	2.5	0.6	-0.6	2.4

Source: Aton estimates

Generation revised valuation: barely any upside

Our full-DCF company models, with separate valuations for old electricity capacity, heat businesses and each new investment project, result in significant reductions to company valuations. At current market prices, our only **BUY**-rated stock remains E.On Russia due to its efficient asset base, better corporate governance and advanced stage of investment programme realisation. We rate the remainder of the sector as **HOLD** and **SELL**, since we see no significant risk-adjusted upsides from the current price levels.

We discontinue coverage of TGK-2, TGK-5, TGK-6, TGK-7, TGK-9, TGK-11, Kuzbassenergo, TGK-13 and TGK-14 due to lack of transparency (the majority of these companies do not release consolidated IFRS accounts) and/or poor stock liquidity.

Figure 49: Generation companies' valuation summary

Company	Ticker		Fair EV ($mn)								
			Old capacity						PV of upcoming cash flows from new projects (2012+, $mn)	Total ($mn)	$/kW
			Electricity ($mn)	$/kW	Heat (incl. coal) ($mn)	$ th/ Gcal	Total ($mn)	$/kW			
OGK-2	OGKB	Upd	439	25	26	4	465	26	96	561	31
		Prev	1,746	201	16	7	1,761	203	184	1,945	224
E.ON Russia	EONR	Upd	1,836	213	89	49	1,925	223	2,874	4,799	466
		Prev	4,310	499	43	21	4,351	504	2,211	6,563	723
OGK-5	OGKE	Upd	890	101	31	5	921	105	694	1,615	169
		Prev	2,535	290	45	7	2,579	295	537	3,117	356
TGK-1	TGKA	Upd	948	157	20	1	968	161	819	1,787	261
		Prev	3,372	545	600	24	3,971	642	1,023	4,994	764
Mosenergo	MSNG	Upd	987	93	-256	-4	731	69	611	1,342	109
		Prev	1,302	123	1,654	28	2,955	279	2,028	4,982	418
Quadra	TGKD	Upd	183	57	-140	-6	42	13	309	351	99
		Prev	362	108	494	21	856	254	309	1,165	317
RusHydro	HYDR	Upd	3,608	103	-164	0	3,444	98	2,459	5,903	168
		Prev	18,401	724	0	0	18,394	724	-101	18,293	718
Irkutskenergo	IRGZ	Upd	2,039	158	595	29	2,633	204	0	2,633	204
		Prev	5,922	460	276	12	6,195	481	0	6,195	481
Krasnoyarskaya	KRSG	Upd	136	23	0	0	136	23	0	136	23
HPP		Prev	1,596	266	0	0	1,594	266	0	1,594	266

Source: Aton estimates

Figure 50: Generation companies' updated target prices

Company	Ticker	12M TP new ($)	12M TP old	chg	Current price ($)	Upside/ Downside	Rating new	Rating old
OGK-2	OGKB	0.00450	0.06330	-93%	0.01117	-60%	SELL	SELL
E.ON Russia	EONR	0.101	0.130	-23%	0.077	31%	BUY	BUY
OGK-5	OGKE	0.0244	0.0833	-71%	0.0527	-54%	SELL	SELL
TGK-1	TGKA	0.000221	0.001380	-84%	0.000174	27%	HOLD	BUY
Mosenergo	MSN	0.0490	0.1410	-65%	0.0429	14%	HOLD	BUY
Quadra	TGKD	0.000125	0.000727	-83%	0.000113	10%	HOLD	BUY
RusHydro	HYDR	0.0181	0.0823	-78%	0.0238	-24%	SELL	BUY
Irkutskenergo	IRGZ	0.569	1.420	-60%	0.514	11%	HOLD	BUY
Krasnoyarskaya HPP	KRSG	0.961	4.830	-80%	2.891	-67%	SELL	SELL

Source: Aton estimates

No significant triggers ahead. We see no significant stock drivers for generation companies in the next 12 months at a minimum.

No major positive regulatory changes expected. Despite its declared intention to attract private investors, the government generally seems committed to maintaining control over electricity prices at any cost, judging by regulatory tightening decisions implemented in 2011 and 2012 and proposals for the future. We therefore do not expect any breakthroughs on the regulatory front.

Short- to near-term earnings forecasts uninspiring. We do not expect major improvements in generation company earnings in the short to medium term due to regulatory tightening measures, a weak macro environment, and structural and corporate governance issues.

No Significant Dividends Expected in the Near Term

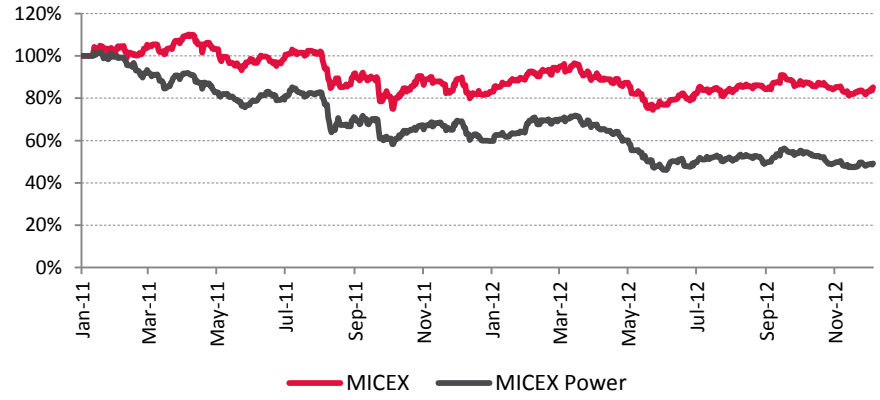
We generally do not expect to see significant dividends from Russian utilities in the next couple of years. The first reason for this is that the majority of companies will only turn free-cash-flow positive in 2015-16. Second, those companies that are free-cash-flow positive now or will become so in a year or two each have reasons for not distributing cash to shareholders. Third, payment of dividends is still relatively uncommon by utilities companies in Russia, and high payouts may create tangible risks to utility companies as regulated businesses. That said, we believe foreign-owned generators such as E.On Russia and Enel OGK-5 are more likely to start paying meaningful dividends than the other utilities in our coverage.

Utility Stock Price Performance Lacklustre

Utility Stock Prices in Freefall Since Putin's Feb 2011 Speech

In Feb 2011 then-Prime Minister Vladimir Putin urged the government and regulators to constrain growth in electricity prices. The speech triggered a massive market rerating as investors feared that regulatory action would hit utility company earnings and shareholder value. More than a year-and-a-half after Putin's comments, share prices have not recovered.

Figure 51: Utilities stock performance vs MICEX index



Source: Bloomberg

The anticipated action followed, and the regulatory landscape and level of investor risk in the utilities sector changed profoundly. Now that we can look back on developments, the initial sell-off in utility stocks immediately after Putin's Feb 2011 speech proved to be more than justified, as we argue below in this report.

Regulatory Changes: Are They That Bad?

Four Lost Years

Russia's electricity sector reforms started in 2003. By mid-2008 the team of reformers led by Anatoly Chubais had restructured the RAO UES monopoly along business lines – separating generation from transmission and distribution, launching the unregulated electricity market and creating a framework for the introduction of Regulatory Asset Base (RAB) regulation in the grid segment. Now, more than four years after the break-up of UES and Chubais's departure from the industry, these achievements appear to have represented the peak of the whole utilities reform process in Russia.

Little if any progress has been made since mid-2008, while the initial reform plan that envisaged privatisation, liberalisation and promotion of market-based pricing mechanisms has clearly been reversed. We now see increasing state involvement in the industry in terms of both regulatory control and ownership. A true market for capacity has not been created, RAB regulation has failed and tariff-setting in general does not cover the full economic costs of production (when accounting for cost of capital) for the majority of companies. Even capacity delivery contracts (DPM), the last of the reformers' mechanisms for providing a return to shareholders still more-or-less functioning, are under attack.

Regulatory Tightening Continues Through and After Elections

Government's socio-economic forecast pressures electricity growth rates

The latest version of the government's socio-economic forecast envisages end-user electricity price growth of 10.5-13.5% in 2013-15, which is considerably below pre-tightening growth rates (the electricity price CAGR amounted to 17.6% over 2009-11). For 2012 the government expects an end-user electricity price growth rate of just 3.5-6%.

Notably, the forecast looks especially low given that it is based on annual gas tariff growth rates of 15%.

Figure 52: Electricity tariff growth rate targets approved by the government in Sep 2012

	2008	2009	2010	2011	2012E	2013E	2014E	2015E
End-user electricity price	**22.4%**	**19.3%**	**17.8%**	**13.5%**	**3.5-6%**	**12-13.5%**	**10.5-12.5%**	**11-13%**
Pre-tightening forecast (2010)				13-15%	11-13%	10-12%	n.a.	n.a.
Change				n.a.	-7.5 to -7 ppts	+1.5 to +2 ppts	n.a.	n.a.
Electricity grid tariff				13%	6% (11% from July)	10-11%	9.5-10%	9-10%
Gas tariff	25%	15.7%	27.4%	15.3%	7.5% (15% from July)	15%	15%	14.6-15%

Source: Ministry of Economic Development

Spring 2011 tariff revision

Regulatory bodies applied a number of measures to curb end-user electricity price growth after Putin's Feb 2011 speech. These were aimed at all segments of the electricity supply value chain – generators, transmission and distribution grids, and supply.

Figure 53: Regulatory tightening decisions implemented in 2011 (RUBbn)

Measure	Impact (RUBbn)
15% tariff growth rate cap for grids and supply companies	71
Exclusion of investment component from capacity prices in hydro and nuclear generation	17
No indexation of capacity prices in 2011	11
FSK tariff revision	10
Revision of tariffs for forced generators	8
Total	**117**

Source: FTS, Minenergo

The worst repercussions of the May 2011 tariff revision have fallen on the grid companies (RUB81bn or 69% of the total effect). This was discussed in detail in our reports ***Electricity Distribution: RAB Implementation Flawed, Hopes Rest in Privatisation*** released 17 Nov 2011 and ***Federal Grid Company: Lower Risk than MRSKs, but Triggers are Lacking*** released 16 Jan 2012.

Further tightening in 2012

Many investors and analysts (including us) hoped that regulatory tightening was primarily related to the parliamentary and presidential elections, and that there was a significant chance of a reversal of the process later. But the tightening strategy has proved tenacious.

In late 2011 regulators outlined the following further tightening measures, which were implemented in 2012:

- A complete "reload" of grid companies' tariffs including, but not limited to, RAB-regulated tariffs.

- A change of the annual tariff indexation date from 1 Jan to 1 July (this affects grid tariffs and generators' regulated capacity tariffs for supply to the population).
- A reduction of generation companies' capacity payments, especially for hydro, "forced" and "expensive" generators, as well as for capacity supplied to the population.
- Adoption of new retail market rules.

Some of these measures were mostly justified in our view. These include changes to retail market rules aimed at eliminating obvious loopholes that brought bumper profits to the supply companies. However, decisions aimed at grid and generation companies have significantly compromised the integrity of the regulatory environment. This has resulted in a drastic deterioration both of individual company financial performance and the industry's general investment climate. We discuss the implementation of these regulatory measures in the grid and generation sectors in more detail below.

Grid Segment Regulation: RAB "Reload" a Disaster

In addition to the reduction of tariffs in May 2011, grid companies underwent another major revision of their tariffs in 1H12, coming into effect from 1 July 2012.

RAB "reload" declares goals and principles

In May-July 2012 the FTS and regional regulators (Regional Energy Commissions or RECs) disclosed reloaded tariffs for FSK (the Federal Grid Company) for 2012-14 and for MRSKs up to 2017.

The main purpose stated by regulators for the RAB reload was aligning tariff growth rates in each region with the government's socio-economic forecast. In order to facilitate this, the FTS introduced a number of changes to RAB methodology:

1) The way in which new investments are accounted for in RAB value was altered: they are now added to the RAB at the moment the assets are actually commissioned and start operating rather than when the company makes relevant prepayments to suppliers, which was the previous method applied.
2) Regulatory rates of return on the initial "old" RAB of MRSKs are now determined by RECs, rather than the FTS and range from 1% to 12% (11% from 2013) across regions. The FTS however maintained control over the regulatory rates of return for new investments for MRSKs and regulatory rates of return on both old RAB and new FSK investments.
3) The first long-term regulatory period for MRSKs has been prolonged to 1 July 2017, effectively expanding it to at least 6.5 years (for regions introducing RAB regulation from 2011) and up to 8.5 years (for regions introducing RAB regulation from 2009), allowing for a longer period of tariff smoothing should this be applied. For FSK the regulatory period was extended by half a year until 1 July 2015.
4) In addition to the above, strict criteria have been introduced for companies to remain eligible for RAB regulation, such as a requirement that they should have an investment programme approved by Minenergo until 1 July 2017 and an estimated net debt/RAB ratio of no less than 25% each year.

Notably, FTS representatives guided that significant revisions to the initial RAB values were not likely (they viewed them solely as a "last resort" measure), but this proved not to be the case (as discussed below).

Those few MRSK branches operating under the cost-plus and indexation methods also saw tariff revision in order to comply with the government's socio-economic forecast.

RAB "reload" implementation: massive reversal of indexation method

In practice, out of 54 MRSK regions that were operating under the RAB regulatory method in 2011, 34 regions managed to maintain this method, as did FSK. However as many as 20 regions were switched to the long-term indexation regulation regime from 1 July 2012 because they either failed to meet the escalated criteria for applying RAB regulation or reportedly failed to submit the necessary tariff requests on time (since the request should have included the long-term investment programme approved by local authorities and Minenergo). We recall that the indexation method does not even theoretically provide any return on invested capital to shareholders of grid companies.

For those regions operating under the indexation method, the FTS granted an option to return to RAB regulation from 1 Nov 2012. To our knowledge nine MRSK regions have managed to do this.

Figure 54: Regulatory methods applied before and after RAB reload

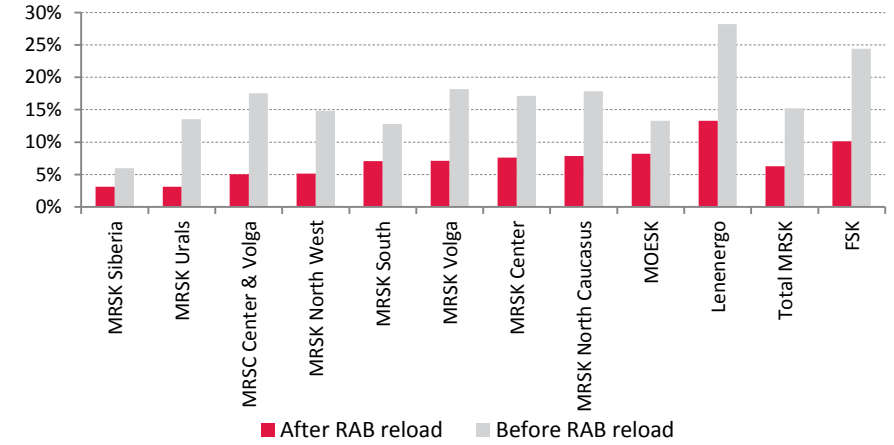
Company	Region	Before RAB reload 2011	After RAB reload		Company	Region	Before RAB reload	After RAB reload	
			1 Jul 12	1 Nov				1 Jul 12	1 Nov 12
MRSK Center	Belgorod	RAB	RAB	RAB	**MRSK Siberia**	Altai	RAB	C+	RAB
	Bryansk	RAB	C+	C+		Mountain Altai	RAB	C+	C+
	Voronezh	RAB	C+	RAB		Buryatia	C+	C+	C+
	Kostroma	RAB	RAB	RAB		Chita	RAB	C+	C+
	Kursk	RAB	RAB	RAB		Khakassia	RAB	C+	C+
	Lipetsk	RAB	C+	C+		Krasnoyarsk	RAB	C+	C+
	Orel	RAB	RAB	RAB		Kuzbassenergo	C+	C+	C+
	Smolensk	RAB	RAB	RAB		Omsk	RAB	C+	C+
	Tambov	RAB	RAB	RAB		Tuva	RAB	C+	C+
	Tver	RAB	C+	C+	**MRSK Urals**	Ekaterinburg	C+	C+	C+
	Yaroslavl	RAB	RAB	RAB		Perm	RAB	RAB	RAB
MRSK North	North Ossetia	RAB	RAB	RAB		Sverdlov	RAB	RAB	RAB
Caucasus	Kab-Balk	RAB	RAB	RAB		Chelyabinsk	RAB	C+	RAB
	Kar-Cher	RAB	RAB	RAB	**MRSK Volga**	Samara	RAB	C+	C+
	Dagestan	C+	C+	C+		Saratov	RAB	RAB	RAB
	Stavropol	RAB	RAB	RAB		Ulyanovsk	RAB	RAB	RAB
MRSK Center	Vladimir	RAB	RAB	RAB		Mordovia	RAB	RAB	RAB
Volga	Ivanovo	RAB	RAB	RAB		Orenburg	RAB	RAB	RAB
	Kaluga	RAB	RAB	RAB		Penza	RAB	RAB	RAB
	Kirov	RAB	RAB	RAB		Chuvashia	RAB	RAB	RAB
	Mari	RAB	C+	RAB	**MRSK South**	Astrakhan	RAB	RAB	RAB
	Nizhnovgorod	RAB	C+	RAB		Volgograd	C+	C+	C+
	Ryazan	RAB	RAB	RAB		Kalmykia	RAB	RAB	RAB
	Tula	RAB	C+	RAB		Rostov	RAB	RAB	RAB
	Udmurtia	RAB	RAB	RAB	**MOESK**	City of Moscow	RAB	C+	RAB
MRSK North-	Arhangelsk	C+	C+	C+		Moscow region	RAB	C+	RAB
West	Karelia	C+	C+	C+	**Lenenergo**	St. Petersburg	RAB	RAB	RAB
	Kola	C+	C+	C+		Leningrad region	RAB	RAB	RAB
	Novgorod	RAB	RAB	RAB	**Kubanenergo**		RAB	C+	RAB
	Pskov	RAB	RAB	RAB	**Tomsk DC**		RAB	RAB	RAB
	Komi	C+	C+	C+	**Tyumenenergo**		RAB	C+	C+
	Vologda	RAB	RAB	RAB					

Source: Company data, FTS

RAB reload results in further sharp deterioration of tariff growth outlook

However, the regulation method applied is not the biggest problem. That has arisen in the level of tariffs – since the reload tariffs have much lower expected growth rates than they did previously.

Figure 55: Regulated revenue CAGR over 2012-14 before and after RAB-reload

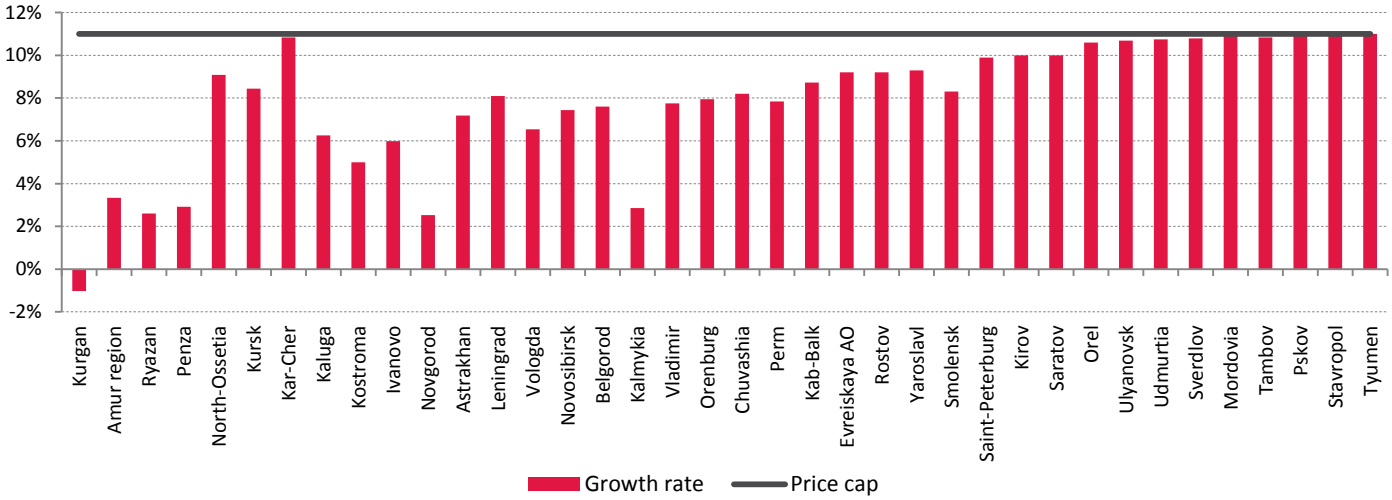


Source: RECs, Company data, Aton estimates

For FSK, the revised tariff growth rates appeared to be marginally below the lower range guided for earlier by the company (from a three-year schedule of 11-10-10% in 2012-14 to a 15-19% CAGR over the same period). The results also came in considerably below what we believe were the street expectations (a CAGR of around 12-15%) as well as our own forecast.

Surprisingly, the revised grid tariff growth rates for 2012 in many regions came in much lower than the 11% threshold established by the government's socio-economic forecast. This means the regulators have applied an even stricter approach to grid company tariffs than the formal government requirement.

Figure 56: Average total grid tariff hike by regions from 1 July 2012



Source: FTS

The major adjustments seem to be significantly reduced RAB values...

Besides the changes in RAB methodology announced by the regulator, we consider the major amendment that triggered a downward revision of tariffs to be the reduction of initial RAB values.

Figure 57: Initial net RAB value revision, RUBmn

Company	Region	Initial net RAB	Revised net RAB	Change	Company	Region	Initial net RAB	Revised net RAB	Change
FSK*		865,330	663,000	-23%	MRSK Siberia	Altai	9,984	9,430	-6%
MRSK Center	Belgorod	19,930	17,730	-11%		Mountain Altai	1,925	n/a	n/a
	Bryansk	5,989	n/a	n/a		Chita	6,302	n/a	n/a
	Voronezh	12,650	12,600	0%		Khakassia	4,313	n/a	n/a
	Kostroma	7,437	6,187	-17%		Krasnoyarsk	12,199	n/a	n/a
	Kursk	10,802	6,384	-41%		Omsk	10,500	n/a	n/a
	Lipetsk	10,030	n/a	n/a		Tuva	972	n/a	n/a
	Orel	6,407	4,207	-34%	MRSK Urals	Perm	21,012	16,599	-21%
	Smolensk	13,735	7,658	-44%		Sverdlov	20,779	11,710	-44%
	Tambov	5,515	3,245	-41%		Chelyabinsk	15,389	12,500	-19%
	Tver	14,366	n/a	n/a	MRSK Volga	Samara	20,269	n/a	n/a
	Yaroslavl	8,968	8,579	-4%		Saratov	19,465	14,504	-25%
MRSK South	Astrakhan	5,794	5,794	0%		Ulianovsk	5,187	3,145	-39%
	Kalmykia	1,729	1,729	0%		Mordovia	4,545	4,257	-6%
	Rostov	15,000	15,000	0%		Orenburg	16,066	8,575	-47%
MRSK Center	Vladimir	7,210	6,878	-5%		Penza	6,829	3,268	-52%
and Volga	Ivanovo	3,847	3,847	0%		Chuvashia	4,655	3,454	-26%
	Kaluga	9,818	9,462	-4%	MRSK North	North Ossetia	2,980	2,980	0%
	Kirov	5,498	4,943	-10%	Caucasus	Kab-Balk	3,341	3,341	0%
	Mari	4,047	n/a	n/a		Kar-Cher	2,693	2,693	0%
	NizhNovgor	31,094	n/a	n/a		Stavropol	7,386	7,386	0%
	Ryazan	5,713	5,713	0%	MOESK	City of Moscow	119,775	123,400	3%
	Tula	8,813	n/a	n/a		Moscow region	60,274	59,100	-2%
	Udmurtia	5,639	3,876	-31%	Lenenergo	St. Petersburg	53,290	48,359	-9%
MRSK North	Novgorod	5,463	5,463	0%		Leningrad	25,267	23,865	-6%
West	Pskov	6,494	5,845	-10%	MOESK	City of Moscow	119,775	123,400	3%
	Vologda	10,935	6,162	-44%		Moscow region	60,274	59,100	-2%
Tyumenenergo		92,778	n/a	n/a	Tomsk DC		5,421	n/a	n/a

*estimated net RAB value as of YE2011

Source: RECs, MRSK Holding, FSK, Aton estimates

… and regulatory rates of return as low as 1%

The statutory rates of return on the initial (old) RAB for MRSKs were dramatically cut from the common three-year schedule of 6-9-12% to as low as 1% in some cases. For FSK the regulated rates of return on RAB remained almost intact.

Figure 58: FSK regulatory rates of return change

	2010	2011	2012	2013	2014
Regulatory rates of return on new RAB	11%	11%	11%	10%	10%
Regulatory rates of return on old RAB – previous	3.9%	5.2%	6.5%	7.8%	9.1%
Regulatory rates of return on old RAB – revised	3.9%	5.2%	6.5%	7.8%	10.0%
Change	0 ppt	0 ppt	0 ppt	0 ppt	0.9 ppt

Source: FTS decrees

Figure 59: Regulatory rates of return on old RAB after revision, 2012-16

Company	Region	12	13	14	15	16	Company	Region	12	13	14	15	16
FSK		7%	8%	10%	10%	10%	MRSK Urals	Perm	1%	1%	1%	1%	1%
MRSK Center	Belgorod	12%	11%	11%	11%	11%		Sverdlov	9%	11%	11%	11%	11%
	Voronezh	1%	1%	1%	1%	1%		Chelyabinsk	1%	1%	1%	1%	1%
	Kostroma	3%	3%	3%	4%	6%	MRSK Volga	Saratov	1%	1%	1%	1%	1%
	Kursk	1%	1%	1%	1%	1%		Ulyanovsk	1%	1%	1%	1%	1%
	Lipetsk	12%	11%	11%	11%	11%		Mordovia	1%	1%	1%	1%	1%
	Orel	1%	1%	1%	1%	1%		Orenburg	1%	1%	1%	1%	11%
	Smolensk	3%	5%	10%	11%	11%		Penza	1%	1%	1%	1%	1%
	Tambov	1%	1%	1%	5%	11%		Chuvashia	1%	1%	1%	1%	1%
	Yaroslavl	1%	2%	2%	3%	4%	MRSK Siberia	Altai	1%	1%	1%	1%	1%
MRSK Center and	Vladimir	1%	1%	1%	1%	4%	MRSK North Caucasus	North Ossetia	1%	5%	6%	6%	9%
Volga	Ivanovo	1%	1%	1%	1%	1%		Kab-Balk	3%	3%	3%	6%	9%
	Kaluga	1%	1%	1%	1%	1%		Kar-Cher	6%	7%	6%	5%	5%
	Kirov	1%	1%	6%	6%	4%		Stavropol	1%	1%	1%	1%	1%
	Mari	12%	11%	11%	11%	11%	MOESK	City of Moscow	8%	6%	6%	6%	8%
	NizhNovgorod	1%	1%	1%	1%	4%		Moscow region	7%	8%	8%	8%	8%
	Ryazan	1%	1%	1%	1%	1%	Lenenergo	St Petersburg	1%	1%	1%	1%	1%
	Tula	12%	11%	11%	11%	11%		Leningrad region	1%	1%	1%	1%	1%
	Udmurtia	1%	1%	3%	3%	3%	Kubanenergo		1%	1%	1%	1%	1%
MRSK North-West	Novgorod	5%	5%	5%	5%	6%	MRSK South	Astrakhan	11%	11%	11%	11%	11%
	Pskov	1%	1%	1%	1%	1%		Kalmykia	9%	9%	9%	9%	10%
	Vologda	11%	11%	11%	11%	11%		Rostov	6%	6%	6%	6%	6%

Source: Company data, RECs, FTS

Further regulatory changes considered

Besides immediate sharp cuts to tariffs, the government and its regulatory bodies outlined plans to further "enhance" the regulatory regime for grid companies in the following manner:

1) **Taking account of the asset utilisation rate.** They plan to introduce an adjustment to regulated revenue corresponding to the utilisation rate of the distribution assets, i.e. under-loaded assets will receive a lower tariff vs the current scheme where assets are compensated for related economic costs in full. Many new assets constructed by MRSKs are under-loaded due to prospective electricity consumers failing to take a load (with some of these consumers going bankrupt or delaying construction of their electricity-consuming facilities). We consider it likely that in such situations MRSKs will be penalised through no fault on their part, and that their huge investments will see a much lower effective rate of return than the statutory rates declared by the regulators. This may be put into effect from 2014.
2) **Introduction of normative capex.** From 2013 the regulators plan to apply a normative costs-to-capex programme for companies, i.e. RAB value will be increased by the amount of normative rather than actual capex. Since normative capex may well be manipulated by the regulators, the companies are at risk of not receiving a return on part of their actual investments.
3) **Lower normative electricity loss rates.** Regulators plan to adopt a decreasing normative electricity loss rate. This means companies will have lower potential gains from efficiency improvements regarding electricity loss rates.

Generation Sector Tightening Unveiled: No Better than Grids

After Putin's speech in Feb 2011 the regulators adopted a number of measures aimed at reducing the electricity price on the generation side in 1H11 and 2012. The main measures relate to capacity prices which regulators effectively fully control, as well as some amendments to electricity market rules. This resulted in a considerable reduction of the unregulated electricity price.

Regulatory tightening started 1H11

In 1H11 the regulators adopted the following measures, which significantly decreased the cash flows of the generation companies.

8) **Recalculated regulated capacity tariffs** for supply to population and for hydro capacity, as well as capacity tariffs for "forced" generators**.**

The most notable change was the removal of the investment component from regulated capacity tariffs for hydro and nuclear capacity. This amounted to some RUB17.4bn effective from 1 June.

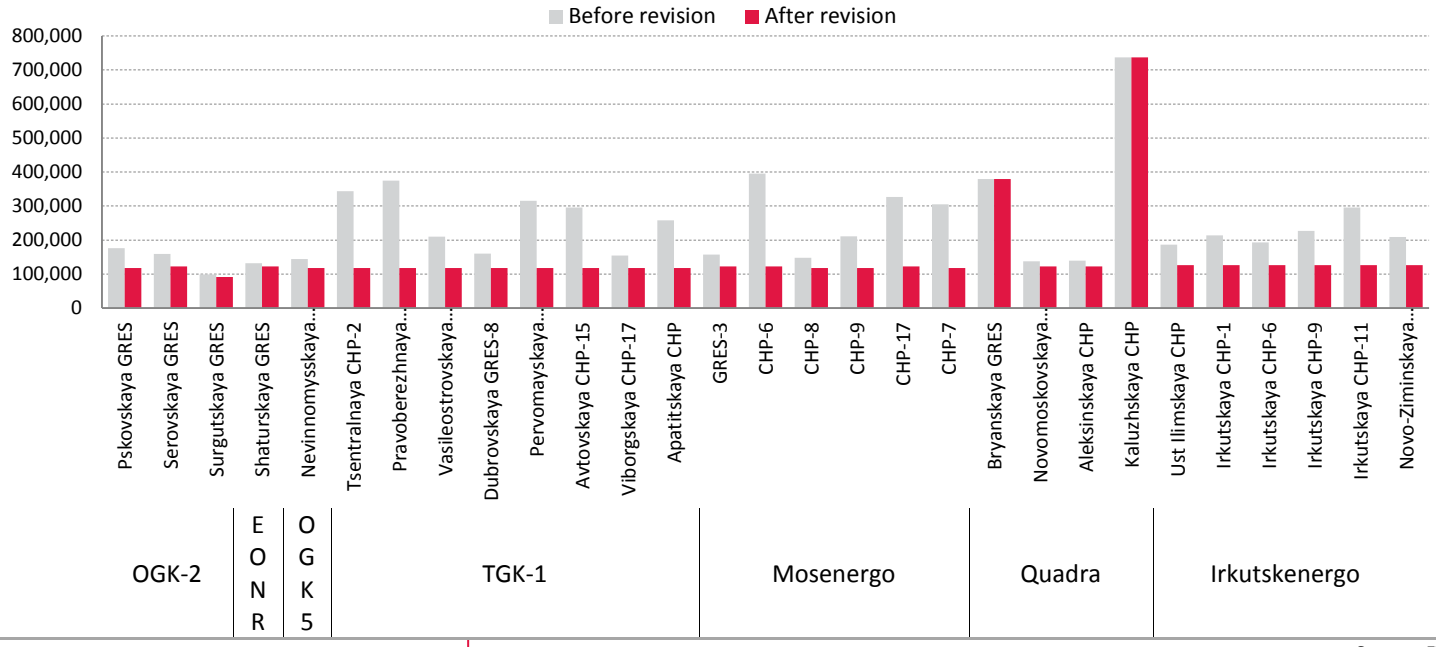
Another major adjustment was reduction of the regulated tariffs for forced generation from 1 Apr 2011. We recall that the forced generators are power plants that were not selected at capacity auction (KOM) but are needed for reasons such as heat supply. Forced generators are mainly power plants owned by TGKs.

According to Minenergo, the amendments to forced generators' capacity tariffs were implemented as follows:

- For "new" generation – set at the price cap level applied at KOM
- For "old" generation – set at a price that takes into account combined profit from electricity sales of all power plants owned by a certain generation company, but no less than the regulated tariff or price cap (i.e. if the entire company was deemed profitable then capacity tariffs for loss-making forced power plants were reduced to the price cap level).

As a result, tariffs for forced generators were slashed, leaving them far below operating costs on an individual power plant basis.

Figure 60: Forced generators' capacity tariffs revision in May 2011, RUB/MWmonth



Source: FTS

This regulatory change effectively implies a cross-subsidisation of loss-making forced generators (which after reduction of capacity tariffs cannot recoup the full cost of electricity production via electricity prices and the capacity payments they receive) by profitable power plants within a single generation company. One key issue is that forced generation cannot be shut down due to its importance for other reasons such as heat supply, as noted above. So since the introduction of this change in Apr 2011 the generation companies have in effect been obliged to incur losses on the part of forced generators and cannot shut them down. In order to address these issues some generation companies (primarily TGKs) spin off these loss-making power plants into separate legal entities and try to obtain a cost-covering tariff for them as a stand-alone businesses.

9) **Changes to day-ahead market rules** related to price-taking offers on volumes corresponding to a technical minimum. According to Minenergo, the unregulated price of electricity on the day-ahead market dropped 2-5% due to the measure.

Regulatory issues continue and escalate in 2012

As with developments for grid companies, regulatory tightening measures continued after the elections and intensified all the way through 2012. The major implemented and prospective initiatives are as follows:

1) **Postponement of a capacity tariff hike**. In 1H12 capacity tariffs were frozen at the 2011 level, as happened with grid companies. Regulated capacity tariffs for supply to the population were unchanged even after 1 July; only the KOM price has been indexed.

2) **Abandonment of forced generation status.** A major problem has arisen for owners of loss-making power plants in that they are now unable to obtain the forced generation status that allows at least a partial compensation of fixed costs related to the operation of these plants.

   In addition to the above-noted reduction of capacity tariffs to the price cap level for forced generators owned by "profitable" companies, making it pointless to

apply for forced generator status at all, the problem has escalated with changes to the KOM procedure for 2012. In particular, those power plants that failed to pass the capacity auction (due to high offer prices or for technical reasons) stopped receiving capacity payments and their owners were required to start applying for forced generation status. (In contrast, during the previous KOM for 2011 all the capacity that did not pass the capacity auction was automatically deemed as forced and received the relevant regulated tariff.) As a result, much capacity was left with no capacity payment at all. Much of that capacity still needs to operate due to, for instance, its importance as a heat supply source (some CHPs that did not pass KOM are the major heat sources for some cities), and the System Operator does not allow the shutdown of such power plants.

It is important to note that while the companies are having their applications for forced generator status processed, the relevant power plants do not receive capacity payments despite incurring normal operating costs. This results in significant losses for the generation companies on the part of de-facto unpaid forced generators.

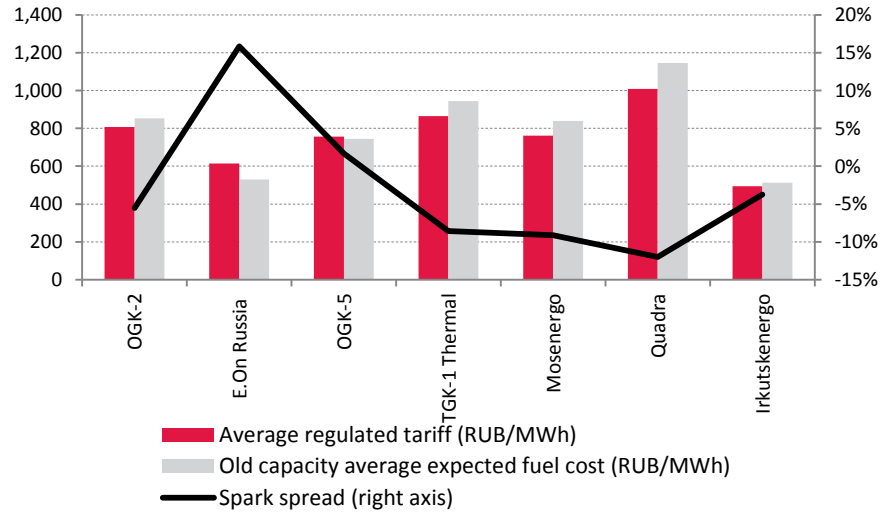
Figure 61: Estimated losses from non-payment of forced capacity in 2012

Company	RUBmn
TGK-1	267
Quadra	3,582

Source: Company data, FTS, Aton estimates

3) **Tariffs for electricity supplied to population not indexed from 1 July 2012.** Under the methodology, until 1 July 2012 generators supplied electricity to the population at a price corresponding to the cost of fuel burnt during electricity production. However from 1 July 2012 the situation changed: regulated electricity tariffs remained frozen while the gas tariff was hiked 15%. This has led to a situation where gas-fired generators – representing around 70% of all thermal capacity in Russia – are required to bear losses for supplying electricity to the population (which accounts for 15-20% of electricity demand).

Figure 62: Regulated tariff vs year-average estimated fuel cost in 2012



Source: FTS, Company data, Aton estimates

To our knowledge, regulators do not plan to compensate for this 15% gas price hike from 1 July 2012 (which could partially be done, for instance, via a corresponding tariff hike from 1 Jan 2013), and tariffs for electricity supplied to the population are likely to remain unchanged until 1 July 2013, when another

15% gas price hike is planned. This means that generators' losses on electricity supplied to the population are likely to continue into the foreseeable future.

4) **Tariffs for new capacity are far below expectations**.

Figure 63: Actual vs estimated capacity tariffs for new power units in 2012 (RUBth/MW per month)

Company	Station	Installed capacity (MW)	Aton estimate	Actual price	Diff
OGK-2	Kirishskaya GRES	500	593	267	-55%
	GRES-24	110	678	205	-70%
E.On Russia	Shaturskaya GRES	393	485	495	2%
	Surgutskaya GRES-2	794	545	536	-2%
	Yayvinskaya GRES	422	523	516	-1%
OGK-5	Sredneuralskaya GRES	410	513	500	-3%
	Nevinnomysskaya GRES	410	449	450	0%
TGK-1	Yuzhnaya CHP-22	425	480	480	0%
	Pervomayskaya CHP-14 N2	360	582	586	1%
	Vasileostrovskaya CHP-7 (1st unit)	50	638	599	-6%
	Viborgskaya CHP-17	23	888	118	-87%
	Volkhovskaya Hydro	3	352	118	-66%
	Lesogorskaya Hydro-10	6	158	58	-64%
	Svetogorskaya Hydro-11	7	158	58	-63%
Mosenergo	CHP-27	900	488	480	-1%
	CHP-21	425	486	480	-1%
	GTU-CHP	16	789	480	-39%
	CHP-26	420	471	480	2%
Quadra	Voronezhskaya CHP-2	115	711	757	6%
	Eletskaya CHP	52	716	692	-3%
	Kursk North-West boiler	115	727	804	11%
	Kaluzhskaya CHP	30	738	742	1%
Rushydro	Zagorskaya GAES-2	420	1,318	1,300	-1%

Source: Company data, FTS, Aton estimates

5) **Tariffs for Siberian hydro capacity are locked at a low level.** In Jan 2011 the FTS ordered that regulated capacity tariffs should be applied that year to 100% of the capacity sales of six hydropower plants in Siberia. These were some 34-84% below the KOM price in Siberia where the plants would normally have received most of their capacity payments. Initially this was largely seen as a temporary solution ahead of elections, but the situation now looks likely to continue into the foreseeable future, significantly limiting Siberian HPPs' profitability.

Figure 64: Regulated tariffs vs KOM prices for Siberian HPPs (RUB/MW per month)

Company ticker	Power plant	Regulated capacity tariff 2012	Capacity auction (KOM) price* for 2012	Difference (%)
HYDR	Sayano-Shushenskaya HPP	86,567	151,265	-43%
HYDR	Novosibirsk HPP	100,583	151,265	-34%
IRGZ	Ust-Ilimsk HPP	35,427	151,265	-77%
IRGZ	Bratsk HPP	36,779	151,265	-76%
IRGZ	Irkutsk HPP	37,404	151,265	-75%
KRSG	Krasnoyarsk HPP	23,564	151,265	-84%

*equals price cap for the Siberia pricing zone

Source: FTS

6) **Potential downward adjustments to capacity delivery agreement (DPM) tariffs.** In June 2012 Minenergo proposed a number of changes to DPM methodology. The document was widely criticised by the expert community and it became

evident that its sole purpose was reducing capacity payments for newly constructed power plants, which currently enjoy four to 10 times the level of payment (price cap) for old capacity. The key change proposed by Minenergo related to the coefficient that reflects the expected profit of new capacity from the electricity market (for details on DPM methodology see our 2 June 2010 report ***Russian Utilities: Generators Unappealing: Rebalance to Distribution***).

The Minenergo proposal is expected to have a huge impact on the generation companies: according to Market Council, DPM payments for generation companies could shrink by around RUB27bn-RUB54bn per year, or roughly 16-24%, from 2015.

Figure 65: Estimated reduction of consumers' capacity payments if Minenergo's proposal is realised (RUBbn)

	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total DPM contracts revenue – current	66.4	94.6	118.6	173.1	220.7	229.9	227.9	224.4	217.6
Total DPM contracts revenue – proposed	66.4	92.9	113.2	145.7	177.3	175.4	174	170.9	165.2
Change	0	-1.7	-5.4	-27.4	-43.4	-53.5	-53.9	-53.5	-52.4

Source: Market Council

Fortunately for now, in Aug 2012 the Ministry of Economic Development opposed Minenergo's suggestions and ordered that further work be done on the methodology. However the issue highlights the risk that further regulatory tightening measures are likely to be adopted for generators at some point, in our view.

Further Super-Tightening Plans for the Long Term Revealed

On 16 Nov 2012 *Vedomosti* reported highlights from the government's most recent proposals on the longer-term socio-economic forecast to 2030, which envisages a further sharp reduction in targeted electricity price growth rates. In particular, the newspaper reported that under the innovation scenario, which the Ministry of Economic Development insists on, the end-user electricity price in Russia will grow 3.1% on average over 2016-30, which is 60 bpts below the corresponding inflation forecast. The forecast also envisages further pressure on utilities because it allows for a higher gas tariff growth rate of 4.2% on average over the same period. This means the utilities will have to constantly employ significant cost-cutting initiatives to maintain the same profitability levels.

Is it That Bad?: Adequate Regulation Seems to be Mission Impossible

Our take from the recent changes to the regulatory landscape implemented by the government and its regulatory bodies and their announced plans for the future discussed above is that investors in the utilities sector should not count on seeing an adequate, incentive-oriented, market-based, western-style regulatory environment.

Predictability lacking

Action has been more evident than words – over the past 20 months tariffs have been massively revised on two to four occasions for grids and up to three times for generators. Some of these changes have had a critical effect on the companies' earnings profiles. This is not the kind of stable and predictable regulatory environment that investors in the utilities sector might hope for.

RAB regulation de-facto failed

The degree of the latest change to RAB parameters – namely cuts to initial RAB values of up to 40-50% coupled with a reduction in the regulatory rates of return on RAB from 6-12% to as low as 1% in some cases – lead us to conclude that we are not

witnessing the predictable and consistent long-term regulation that RAB was supposed to offer and that the regulatory methodology and parameters can no longer be trusted. In practice, the RAB regulatory approach has de-facto migrated towards indexation or cost-plus methods – i.e. where tariffs are determined not on the basis of invested capital, market-based cost of capital and cost-cutting efforts, but are instead set according to the wishes of politicians.

For instance, we recall that nine grids adopted RAB regulation in 2009, 18 were operating under RAB in 2010 and more than 60 in 2011. Following the May 2012 RAB reload it has become apparent that all those companies and their shareholders that counted on the government-outlined RAB methodology and initially announced RAB parameters are unlikely to receive the return on their investment that was expected at that time.

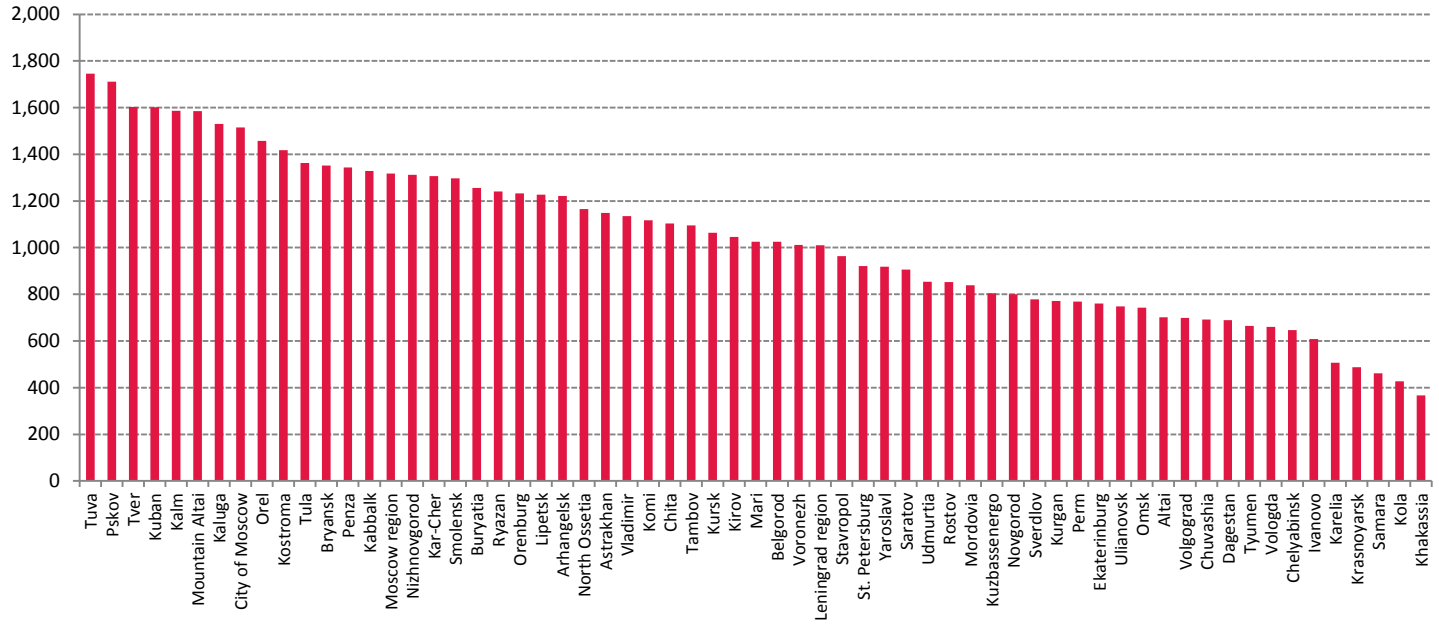
We also believe it is likely that some regions now operating under RAB may be switched back to an indexation regulatory regime if tariff growth rates under RAB methodology do not fit with the targets set by polititians. Since the indexation method provides no return on invested capital, shareholders of grid companies are exposed to significant risks.

A focus solely on tariff growth rates appears unjustified due to price differences

The decision-makers' focus on tariff growth rates seems to lack any economic justification in our view, because, for instance, it leads to further growing divergence of distribution tariff levels across regions. For example, a 10% growth for a region with a RUB400/MWh tariff translates into a RUB40/MWh incremental increase, while the same 10% growth rate for a region with a RUB/1,200MWh tariff translates into a RUB120/MWh increase. This approach thus completely fails to stimulate convergence and the harmonisation of the economic conditions that businesses face in different, but sometimes even neighbouring, regions of Russia.

The regulators should instead look at the fundamental reasons underlying the differences in tariff levels across regions and make structural changes to the regions' development schemes and composition of the grid.

Figure 66: Effective total distribution tariff in 2011 by region (RUB/MWh)



Source: Company data, Aton estimates

Regulation of generation companies no better

As discussed above, the latest regulatory initiatives have left many power plants in a loss-making position, and the situation is likely to deteriorate. The decision-makers have already indicated the direction of attack – prices of DPM contracts – which are becoming a substantial part of the end-user bill with massive commissioning of new capacity from 2010 onwards and lagging demand growth (for our electricity supply/demand analysis see the generation valuation section below in the report). We therefore conclude there are sizable risks of a decline in the effective rates of return for investors in the generation sector.

Regulators lack independence and are clearly skewed towards the consumer

We believe the major underlying problem behind regulatory failure is conceptual; that is, the regulators lack independence. The FTS is required to fit into the economics ministry's socio-economic forecast rather than to implement its own policy. Regulation in Russia is, in fact, tied to the country's politics, with regulatory bodies simply applying the top politicians' views regardless of any third-party opinion that could take into account the interests of all the parties involved – not only those of consumers and the state, but also those of the electricity companies and their shareholders.

Regulation in Russia has also been historically skewed towards the consumer (i.e. the dominant idea is to keep the electricity price low), and has so far shown little if any respect to investors and the shareholder value of the companies concerned.

For instance, since the start of the regulatory tightening trend in early 2011 we are unaware of a single development on the regulatory front that has potentially positive implications for utility company shareholders.

No commitment to market-oriented sector structure the ultimate problem

Lack of an independent regulator is, in turn, a consequence of the decision-makers' policy of increased state control over the economy (in terms of growing state ownership and escalated regulation) and their de-facto refusal to stimulate private investments. This has left no need for an independent regulator.

No positive regulatory changes expected in the current political cycle

Since the move from a market-oriented paradigm to increased state influence has continued in the four years since the break-up of UES and departure of the key reformer – Anatoly Chubais – from the industry and has even accelerated recently, we see no reason to believe the situation will improve any time soon.

Investor trust is largely destroyed; recovery will take a long time

The regulatory efforts implemented by the political elite in the past few years have generally been a major disappointment for investors. We thus believe investors would now be extremely reluctant to seek to benefit from any positive changes in the regulatory landscape until they had been fully implemented. Moreover, we believe any such investors would first have to witness the Russian government's commitment to market-oriented reforms and attention to shareholder value over a period of several years.

So investor returns, if any, will be shifted to the distant future in our view

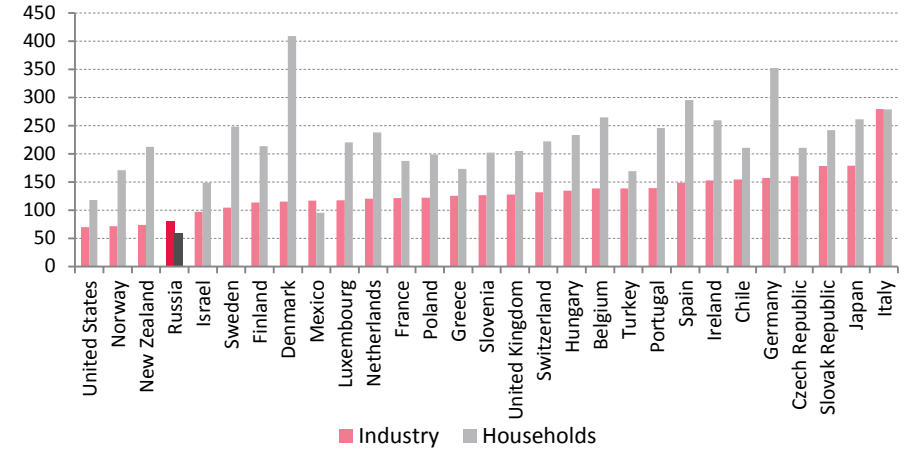
Given the inconsistent government policy and our forecast for the majority of companies to turn cash flow positive only in four to five years' time, we broadly see no fundamental reasons to expect strong share price performances.

Electricity Prices and Regulation: Are Government Efforts Justified?

Besides politics, the government's key underlying fundamental concern appears to be rising electricity prices. In fact, end-user electricity prices for Russian industry are already higher than in the US, Norway and New Zealand.

Moreover, the Russian electricity price is set to rise further with expected hikes in domestic gas prices, increases in grid companies' tariffs and the addition of new capacity under DPM.

Figure 67: End-user electricity prices in 2011 ($/MWh)



Source: IEA, APBE

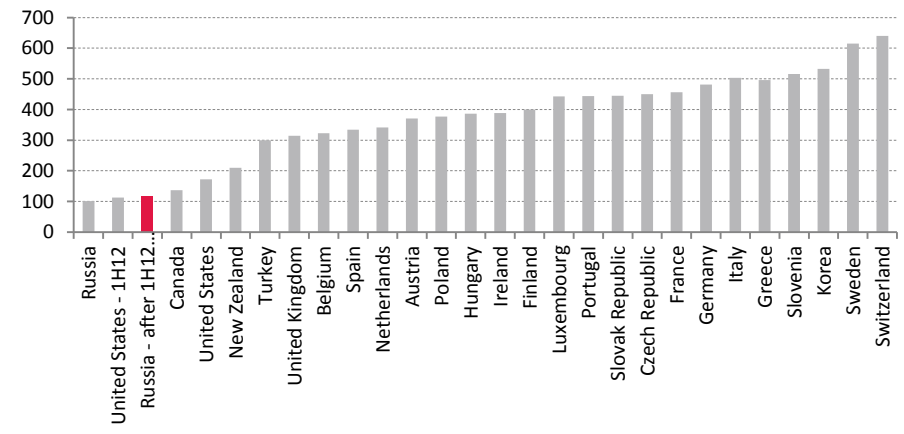
It thus appears that the government has cause to constrain growth in electricity prices, given that they are already approaching levels that could endanger the competitiveness of Russian industry on global markets.

Why are Russian Electricity Prices Rising?

We see several underlying reasons for high and growing electricity prices in Russia.

1. **Fuel price hikes and monopolies on the fuel markets.** We estimate that the major contributor to end-user electricity price growth in Russia is rising fuel prices, primarily for gas. Russia now has a higher domestic gas price than the US. The key factor here is that the Russian gas tariff is regulated by the state while US prices are determined by a competitive market.

Figure 68: Natural gas price for industry in 2011 ($/mcm)



Source: IEA, APBE, FTS, US EIA, Bloomberg

Russia's gas market is largely monopolised by Gazprom, which has strong lobbying power and special relationships with the country's political elites. The thermal coal market is also highly concentrated, with two companies – SUEK and Kuzbassrazresugol – controlling more than half of all domestic supply. This allows coal prices to be largely manipulated by suppliers (for instance, the coal price rose 11.2% YoY in 2011, 1.8x the inflation rate).

2. **Excess capacity.** Another key reason for higher electricity prices in Russia is excess generation capacity, which consumers are required to pay for. As we anticipated in our 15 Feb 2011 report *Electricity Generation: Under Pressure*, Russia has reached a point where there is no longer a deficit of generation capacity and there already appears to be an excess. Given current power plant commissioning plans and sluggish electricity demand growth, the gap between supply and demand for capacity is set to grow further (see the generation valuation section of this report below). The plans for new capacity commissioning are determined by the very top state decision-makers, not by the utility companies.

   Another related issue is inefficiencies in electricity grids, such as unused or underutilised assets and relatively high electricity loss rates.

3. **Structural issues.** The structure of the Russian utilities industry may also present a problem in itself. The sector has historically been based on a centralised power supply paradigm where the majority of electricity is generated at big power plants and then sent over transmission and distribution grids to consumers. Given Russia's extensive distances, this centralised system involves massive investment in construction and regular replacement of grid infrastructure. It also results in high grid operation and maintenance costs and substantial losses of electricity.

   In many cases the economies of scale associated with centralised power generation are more than offset by costs related to grid infrastructure and electricity losses in the transmission and distribution process. In contrast, the developed world often uses distributed generation, where electricity is produced near the point of its consumption. This helps minimise electricity losses in the grid and costs related to the construction and maintenance of grid infrastructure.

   The Russian power sector's structural inefficiencies are likely to persist as long as decisions regarding the location of generating units and investment in grids are made by a small group of state officials instead of the market-based mechanisms that dominate in developed countries.

Government Intentions Understandable, but Only Utilities have Suffered

While we understand the government's intention to curb electricity price growth, the key question for investors is how this is achieved. So far the government has taken action against the end result – electricity price growth – with a devastating effect on the profitability and viability of electricity companies, while failing to address the major underlying factors behind the rises. These are monopolies on the gas and coal markets, structural issues of excess capacity and a focus on centralised generation.

Privatisation Prospects Still Unclear; State Involvement Escalating

Government Faces Serious Constraints Imposed by Legacy Decision-Makers

New government looked liberal at first glance…

The key utilities decision-makers in the new government elected in May 2012 – Prime Minister Dmitry Medvedev, First Deputy Prime Minister Igor Shuvalov and Deputy Prime Minister in charge of energy sectors Arkady Dvorkovich – are widely considered to have generally liberal views. Shuvalov has been the main initiator and driver of privatisation efforts since mid-2011. Medvedev and Dvorkovich have also publicly stated several times their preference for privatisation and decreased state involvement in the economy.

…but actual decisions taken envisage no privatisation for utilities soon

During initial discussions in 2011 the government viewed 2012-14 as the timeframe for utility company privatisation. However the official privatisation plan formally adopted by the government in May 2012 envisages the much more distant timing for privatisation of 2016, probably due to pressure from other decision-makers.

Figure 69: Officially adopted privatisation plan for utilities

Company	Current state stake	Stake to be privatised	State ownership after privatisation	Date
FSK	79.55%	4.55%	75% + 1 share	before 2016
RusHydro	60.50%	60.50%	0%	before 2016
Inter RAO	14.79%	14.79%	0%	before 2016
TGK-5	25.10%	25.10%	0%	2012-13
RAO Far East	3.28%	3.28%	0%	2012-13

Source: Russian government

Igor Sechin's desire to maintain power a possible reason for privatisation delay

A likely obstacle to government privatisation efforts seems to be the desire of Igor Sechin, the former deputy prime minister in charge of the energy sector, to maintain control over utilities even after his departure from government. Sechin was elected chairman of Rosneftegas, the 100% state-owned holder of the state's stakes in Gazprom and Rosneft, during the last days of the Vladimir Putin's term as prime minister.

In May 2011 Putin issued an order adding RusHydro, FSK and MRSK Holding to Inter RAO on the strategic enterprises list. This move effectively means that any privatisation of these companies would need presidential approval.

In June 2012 President Putin established a presidential commission on the energy sector, with vast authority. It is widely considered that the initiator of the formation of the commission was Sechin, who was appointed its executive secretary.

In May 2012 President Putin signed an order on giving Rosneftegas the status of an investor in regards to the utility companies due for privatisation. In July 2012 during the first meeting of the presidential commission on the energy sector, Sechin proposed that Rosneftegas be given control over the four major utility companies – RusHydro, Inter RAO, FSK and MRSK Holding.

Putin formally supported the government

The government opposed Sechin's initiatives except in the case of Inter RAO, which it agreed would be acquired by Rosneftegas. After a series of long discussions among the relevant parties, at the end of Nov 2012 President Putin signed orders on implementation of the government's plan for the utility sector. This involves

financing of RusHydro's investment programme directly from the federal budget (not from Rosneftegas's balance sheet, which was Sechin's proposal) and consolidation of FSK and MRSK Holding on the basis of the latter (not as a Rosneftegas subsidiary as had been suggested by Sechin).

Likelihood of MRSK Privatisation Still Low, but Increasing

Weak signals on possibility of MRSK privatisation

There was much discussion on the potential privatisation of MRSKs in 2011. The talk died down with the decision to delay the privatisation of big utilities in May 2012, which did not bode well for the MRSK initiative. We note however that MRSKs technically cannot form part of the government's official privatisation list since the state does not hold stakes in distribution companies directly, but only via MRSK Holding.

Nevertheless in July 2012 the new Minister of Energy Alexander Novak told *Interfax* that the government is considering privatising one "average" MRSK in 1Q13.

Chances of MRSK privatisation are increasing, in our view

We believe that the latest events, namely President Putin's support for the government's initiatives, somewhat increase the chance of the state implementing its other plans, including privatisation of MRSKs. However President Putin has never shown strong support for privatisation efforts and the issue will ultimately be decided by him.

State Ownership in the Sector Growing in the Meantime

In practice, the decisions taken and implemented so far envisage an increase of state ownership in the utilities sector, for instance via cash injections from the federal budget into the equity of state-controlled utilities, namely:

- RUB50bn for financing of RusHydro's investment programme in the Far East regions in 2012
- RUB23bn for financing of MRSK Holding subsidiaries' investment projects in 2012-13
- RUB60bn for financing of FSK's investment programme in 2010-13

Grid Companies Continue to Underperform Regulatory Benchmarks

Realised rates of return on RAB below statutory levels for MRSKs

Effective rates of return on RAB for the majority of distribution companies remained at much lower levels in 2011 than the rates formally set by regulators.

The main reasons for weak MRSK results are lower returns than provided for by regulators, tariff smoothing and underperformance on controllable costs (such as salaries, O&M expenses etc). While the first two problems are usually caused by improper tariff-setting by the regulators, the costs issue is partially caused by lack of management effort.

Somewhat better performance of FSK

FSK showed a generally better performance than MRSKs in 2011. It demonstrated an effective rate of return on RAB of 5.4% which is generally in line with the regulatory rate of return of 5.5% by our estimates. Underperformance on controllable operating costs and revenue smoothing were largely offset by the actual revenue exceeding the regulated level and lower capex than assumed by the regulator in tariffs (i.e. provisions for return on RAB and depreciation on RAB in regulated revenue were based on higher expected capex than the actually implemented capex added to RAB value).

Figure 70: Breakdown of difference between effective and regulated rates of return on RAB in 2011*

Company	MRSK Center	MRSK South	MRSK North Caucasus	MRSK Center and Volga	MRSK North-West	MRSK Siberia	MRSK Urals	MRSK Volga	MOESK	Len-energo	Total MRSKs	FSK
Statutory rate of return on RAB	**9.2%**	**6.7%**	**0.1%**	**8.2%**	**-3.5%**	**4.7%**	**8.7%**	**6.1%**	**6.1%**	**6.1%**	**6.0%**	**5.5%**
Deviation in revenue	1.4%	-2.5%	-2.8%	0.3%	-3.1%	-16.6%	-6.6%	2.6%	-0.8%	-1.2%	-2.8%	0.8%
Deviation in controllable costs	0.1%	-2.0%	-0.9%	-2.5%	-2.7%	-1.4%	-2.9%	-3.7%	0.6%	0.8%	-1.3%	-0.9%
Deviation of losses	-0.1%	0.6%	-1.9%	2.4%	2.2%	2.5%	9.1%	1.2%	0.8%	0.4%	1.7%	-0.1%
Deviation in income tax	-0.2%	-0.4%	-1.0%	-0.6%	-0.1%	0.7%	0.1%	0.1%	-2.9%	-0.1%	-0.8%	-0.5%
Compensation of previous period missed/(excess) income	-0.7%	-0.5%	3.6%	2.1%	5.4%	1.7%	0.8%	-0.4%	-0.1%	0.4%	0.9%	0.0%
Deviation in other non-controllable costs (incl. FSK, TSO)	-1.0%	3.6%	1.9%	0.5%	3.0%	9.4%	-1.5%	2.6%	3.9%	1.0%	2.5%	-0.3%
Deviation in actual vs regulated capex	0.5%	0.3%	0.0%	0.4%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.1%	1.9%
Revenue smoothing	-5.3%	-5.4%	-3.5%	-6.7%	-1.7%	-5.9%	-3.4%	-5.9%	-1.9%	-9.0%	-4.3%	-0.9%
Effective rate of return on RAB	**3.9%**	**0.6%**	**-4.7%**	**3.9%**	**-0.4%**	**-5.0%**	**4.3%**	**2.7%**	**5.8%**	**-1.7%**	**2.0%**	**5.4%**

* includes both RAB-regulated regions and regions regulated with the indexation approach, for which we used our estimates for RAB values, based on management guidance

Source: Company data, FTS, Aton estimates

Missed income may continue, decreasing shareholder returns

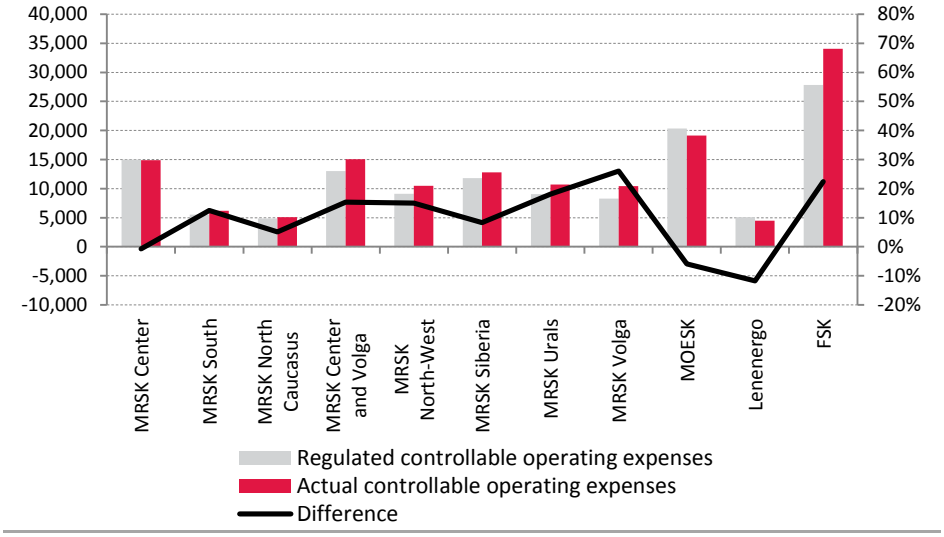
Lower than regulated revenue and higher than regulated non-controllable costs result in so called "missed" income that is usually caused by improper regulatory decisions. According to RAB methodology missed income should be compensated in later years. However, as we investigated in our 17 Nov 2011 report ***Electricity Distribution: RAB Implementation Flawed, Hopes Rest in Privatisation***, there are significant risks of the regulator not providing proper compensation for such missed income (some managers of MRSKs say that in practice only 60-70% of missed income

is properly compensated). Thus we anticipate that missed income may continue into the future, leading to a sustainable negative effect on shareholder returns.

Controllable expenses still generally above regulatory benchmarks

Grid companies still underperform in terms of controllable costs. We estimate that the actual controllable costs of MRSKs exceeded the regulatory benchmarks by 7% on average in 2011. Notably, MRSK Center, MOESK and Lenenergo managed to cut costs at below the regulatory level, which is a sign of better management efforts, in our view.

Figure 71: Actual vs regulatory controllable costs in 2011 (RUBmn)

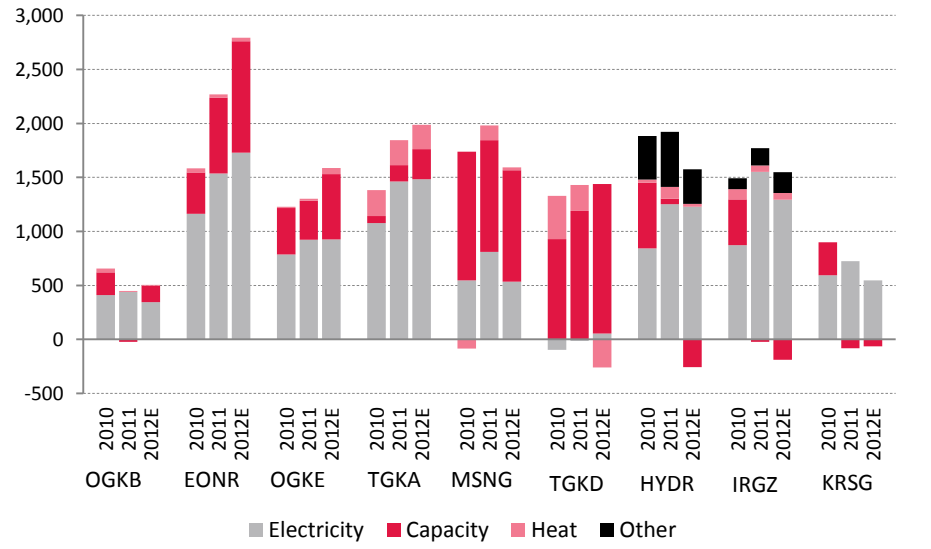


Source: Company data, REC decrees, Aton estimates

Generation Company Performances Vary

As we anticipated, generation companies generally demonstrate divergent earnings growth profiles based on differences in asset efficiency, regulatory issues and new capacity commissioning schedules.

Figure 72: Generation company EBITDA per installed capacity in 2010-12E (breakdown by market, RUB/kW)

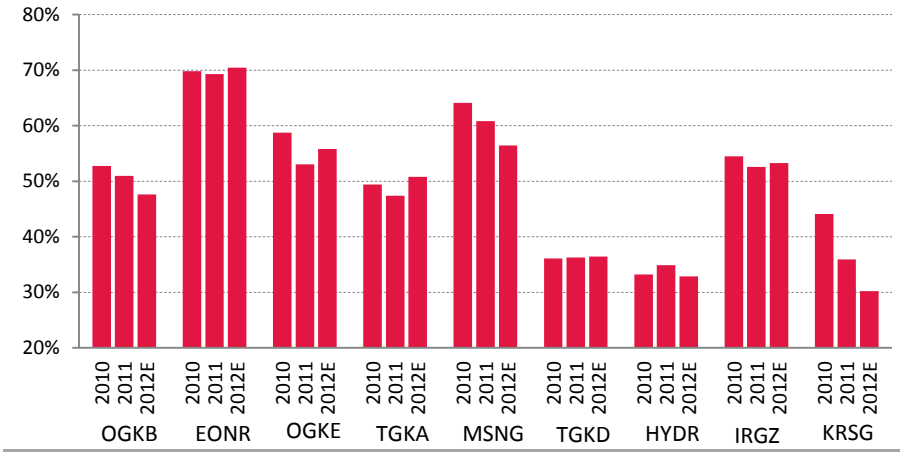


Source: Company data, Aton estimates

Electricity production load factors declining

There has been a general decline in the generators' load factors in 2011-12 due to growing oversupply of capacity in the system, which is somewhat offset by higher load factors of newly commissioned capacity for those companies that put new capacity into operation in the period (E.On Russia, OGK-5, TGK-1 and Quadra launched sizable new power units in 2012).

Figure 73: Average load factor by company (%)

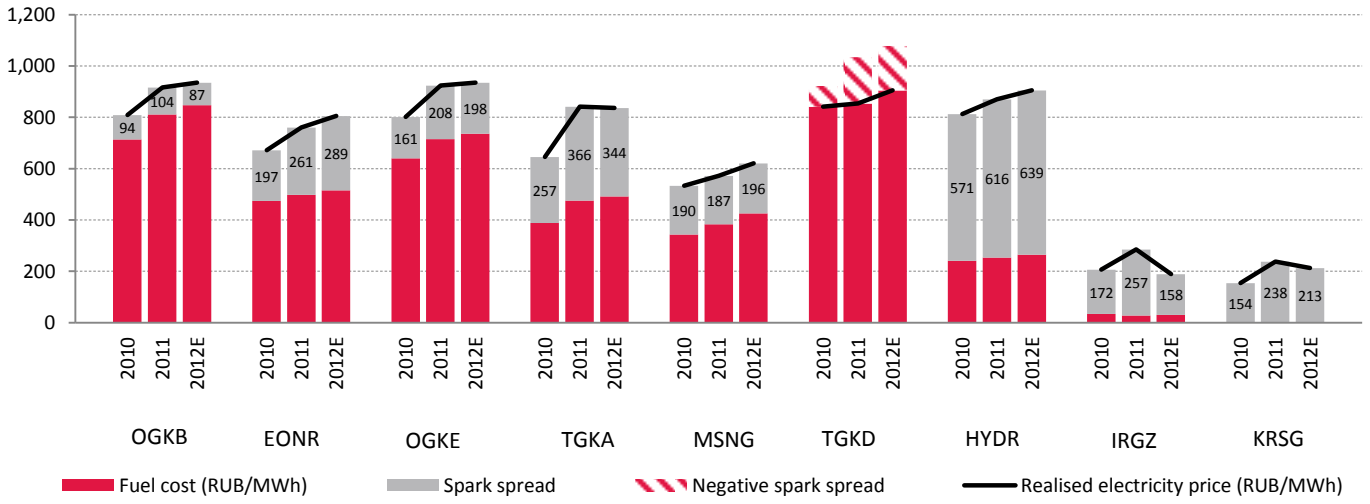


Source: Company data, Aton estimates

Electricity market profitability divergent

The majority of generation companies will see a deterioration of margins on the electricity market in 2012 except for those with efficient assets and a significant share of new capacity, which are E.ON Russia and Mosenergo; and hydro capacity such as RusHydro. This is primarily due to the capacity oversupply effect, which leads to the electricity price growing at a slower pace than fuel costs (as discussed in the generation valuation section of this report). Despite being hydros, Irkutskenergo and Krasnoyarsk HPP are exceptions here, because they sell the bulk of their electricity to Rusal at prices linked to aluminium prices on global markets.

Figure 74: Realised electricity price vs fuel costs (RUB/MWh)

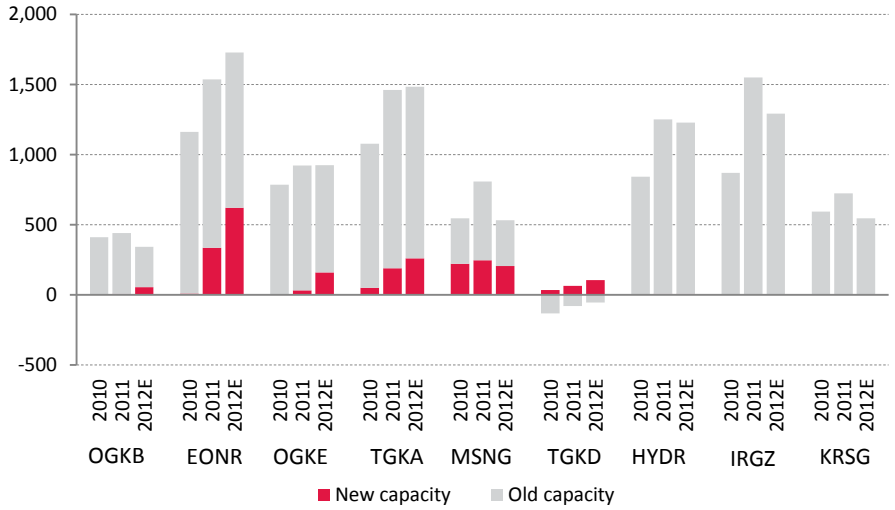


Source: Company data, Aton estimates

New capacity a significant contributor to electricity market earnings

A breakdown of company earnings from the electricity market (which we calculate as the difference between electricity revenue and fuel costs) into new and old capacity shows that for some generation companies the contribution to EBITDA of new capacity from the electricity market is already meaningful and expanding.

Figure 75: EBITDA from electricity market per installed capacity (RUB/kW)

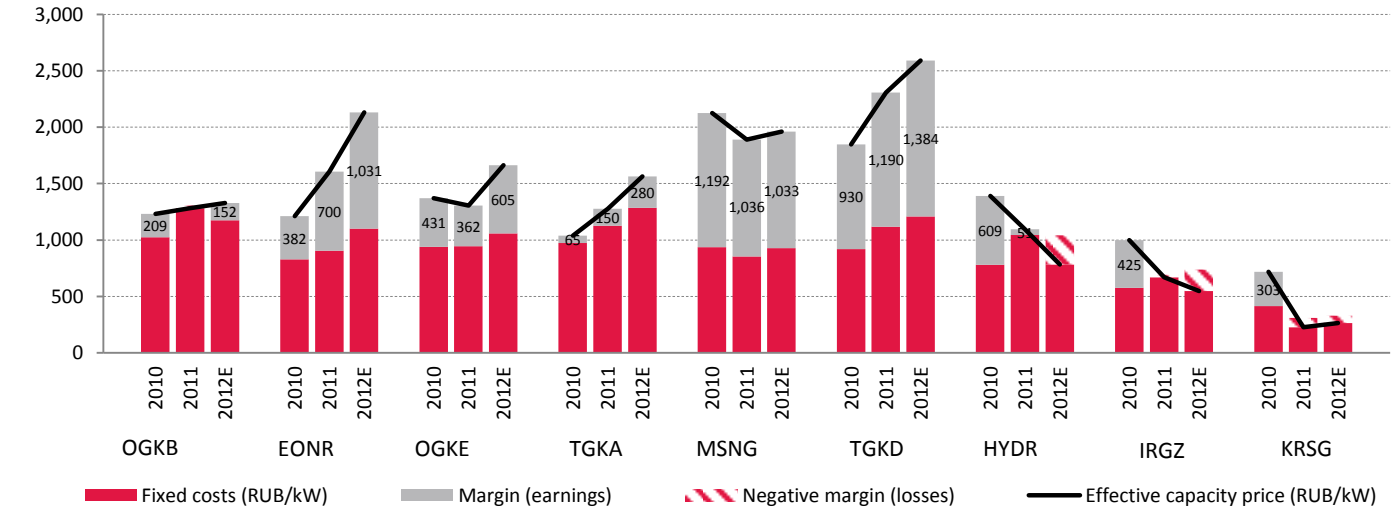


Source: Company data, Aton estimates

Capacity market earnings vary too

The main driver of generation companies' earnings from the capacity market (which we calculate as capacity revenue less fixed costs) is the new capacity constructed under capacity delivery agreements (DPMs), which receives a much higher capacity payment relative to old capacity. The capacity market earnings of RusHydro and hydro generators located in Siberia (Irkutskenergo and Krasnoyarsk HPP) have been heavily impacted by regulatory measures enacted in 2011 and 2012.

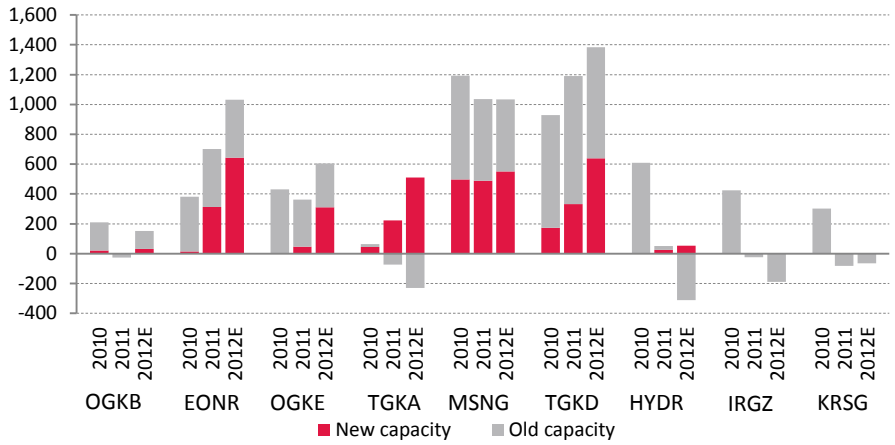
Figure 76: Realised capacity price and fixed costs per installed capacity (RUB/kW)



Source: Company data, Aton estimates

New capacity is becoming an increasingly important contributor to company EBITDA from the capacity market, and for some companies (E.On Russia, TGK-1) it has already become the main source of total earnings from the capacity market.

Figure 77: EBITDA from capacity market per installed capacity (RUB/kW)



Source: Company data, Aton estimates

Corporate Governance Issues Associated with State Ownership Intensify

Besides the poor financial performance discussed in the section above, we have identified the following corporate governance issues, especially in regards to the state-controlled utilities.

Doubtful Capex and M&A Decisions

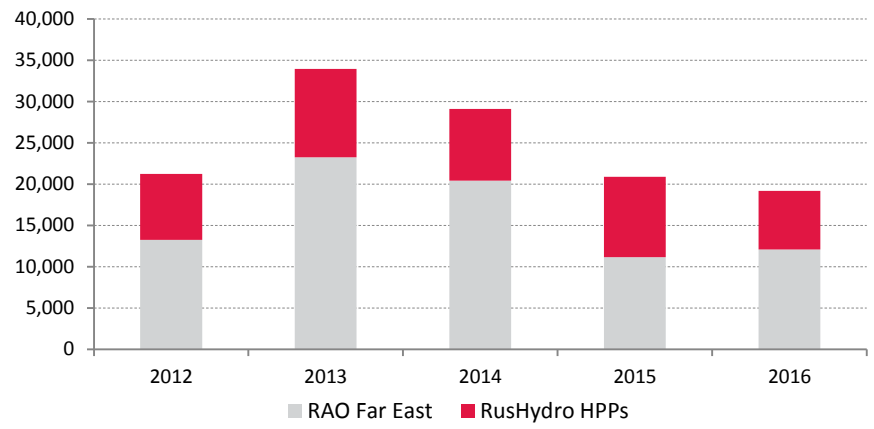
RusHydro's politically-driven investment projects in the Far East region

In 2011 RusHydro acquired RAO Far East Energy Systems, a thermal utility monopoly in the Far East of Russia.

The Far East regions do not have electricity markets, and the electricity companies in those regions are fully regulated by the state. Given the Far East regions have no mechanisms that provide a return on investments (such as DPM contracts which cover only power plants located in European Russia and Siberia), investment projects there are likely to be value erosive. Moreover, we understand that these projects are driven by top politicians, who have declared development of the Far East territories a top priority. We feel that RusHydro may be required to subsidise electricity consumers in the region in order to comply with the decision-makers' intentions to provide attractive conditions for business development there.

RusHydro plans to invest billions of dollars into these doubtful projects.

Figure 78: RusHydro's planned capex in Far East region (RUBmn)



Source: Company data, Minenergo, Aton estimates

RusHydro's foreign investment plans

In Sep 2012 RusHydro announced plans to construct four HPPs in the Kyrgyz Republic with a total installed capacity of 191MW. The estimated project cost is $410mn-$425mn. Notably, the project will be implemented via a 50/50 JV of RusHydro and Kyrgyz company Electric Power Stations. RusHydro will contribute cash while the Kyrgyz company will contribute land rights and undisclosed assets including intangibles.

We believe the project is has been initiated by top politicians rather than company management and so will be driven primarily by geopolitical rather than economic goals. We therefore see significant value erosion risks for RusHydro shareholders stemming from this project as well as any other potential projects that may arise.

FSK management's call for higher capex

In June 2012 FSK CEO Oleg Budargin, who is viewed as a likely candidate for the CEO position in the united grid company, told *Interfax* that FSK and MRSK Holding should

maintain the record-high level of capital expenditure seen in 2011 (roughly RUB160bn for FSK and RUB140bn for MRSK Holding) at least until 2017.

The company receives a statutory rate of 10% on new investments (and an effective rate of return that is even lower, on our estimates, due to various regulatory flaws) while we estimate company WACC at a much higher 13.3%. Therefore capex destroys shareholder value. A reasonable strategy aimed at enhancement of shareholder value would thus involve reduction rather than growth of capex, especially given Russia's unpredictable regulatory regime.

Financing infrastructure for big events such as APEC summit and Winter Olympics

Utility companies are engaged in investment projects related to political and social events such as the APEC summit in Vladivostok in Sep 2012 and the Winter Olympics in Sochi in 2014. Any payback from these investments looks doubtful, since there is a big risk that the demand for infrastructure will fall sharply after the events, and the companies will not be able to pass investment costs on to electricity consumers.

To our knowledge, Kubanenergo and FSK are the companies that have been directly engaged in the investment projects for the above events.

"Electricity bridge" project between European Russia and Siberia

Following Putin's request at the APEC summit, expert groups have proposed a project to increase transmission capacity between European Russia and Siberia which is worth a hefty RUB1.18trn ($38bn), *RBC daily* reported on 21 Nov. The project aims to cut electricity prices in European Russia by allowing transmission of cheaper electricity from Siberia. According to the newspaper, the developers of the project are counting on an investment from the federal budget of only RUB271bn (22% of the project's cost), while the rest is expected to be financed by utility companies including FSK and privately-held businesses such as E.On Russia, OGK-2 and TGK-13.

Since we consider it unlikely that the cost of the project will be allowed to be passed on to electricity consumers, we see a significant risk that the utility companies will be obliged to bear losses if the scheme is realised on the reported terms.

Acquisition of a sports club by RusHydro

In summer 2012 RusHydro reportedly reached an agreement to acquire a controlling stake in the Alania football club from North Ossetia's government. RusHydro CEO Evgeny Dod told *Interfax* on 18 July 2012 that the company sees the acquisition as a business move rather than sponsorship. On 25 Oct 2012 *Interfax* reported that RusHydro is also considering sponsorship of the Sokol hockey club.

Football and hockey clubs are not a core business for RusHydro, and our view is that the deals were likely driven by highly-placed officials rather than company management. While the direct impact on RusHydro's cash flows is likely to be marginal, the deals highlight the degree of influence that politicians have on the company's operations.

Cash Extraction and Value-Redistribution by a Major Shareholder

Irkutskenergo and Krasnoyarsk HPP deals with Eurosibenergo

There are also significant corporate governance issues in some utility companies owned by private shareholders. These involve the majority owner extracting value at the expense of minorities.

For instance, in the past two years Irkutskenergo and Krasnoyarsk HPP have engaged in the following transactions with their major shareholder, Eurosibenergo:

- Irkutskenergo acquired a 19.9% stake in Irkutsk Grid Company for RUB5.6bn in 2011. Given the government's ban on combining electricity generation and distribution businesses, the acquired asset appears clearly non-core.
- Irkutskenergo acquired AKME-Engineering, which designs nuclear reactors, and its research projects. The associated costs amounted to RUB1.4bn in 2011, and the research project is likely to require further financing with unclear prospects for monetisation.
- Irkutskenergo gave out loans of RUB3.1bn in 2011 and RUB1.8bn in 1H12 to entities affiliated with the major shareholder.
- Krasnoyarsk HPP has issued loans of RUB1.3bn to entities affiliated with the major shareholder.

In addition, Irkutskenergo increased capex from RUB1.1bn to RUB5.5bn in 1H12 despite the company having no obligations to commission new power plants (such as DPM contracts) or any other big investment projects.

Financing of OGK-2's investment programme by Mosenergo

Gazprom Energoholding, a controlling shareholder of OGK-2, Mosenergo and TGK-1 recently decided to transfer a project from OGK-2's obligatory investment programme (a 420MW unit at Cherepovetskaya GRES) to Mosenergo, essentially due to lack of funds on the balance sheet of OGK-2 to finance the project.

We therefore believe there is a risk that Mosenergo and TGK-1, being financially healthier in terms of cash flows, will take over other OGK-2 investment projects, which we would consider to be value erosive (see Figure 128 for our NPV estimates of OGK-2's investment projects). So there appear to be significant risks of value redistribution across the Gazprom Energoholding-owned generation companies, namely from Mosenergo and TGK-1 to OGK-2.

Insufficient Tariff Lobbying

As discussed in the regulation section above, the regulators have set grid company tariffs considerably below the previously established levels and market expectations.

We believe government intervention and an inconsistent regulation system weaken management's ability to fight for proper implementation of the established regulatory methodology. However we feel the outcome of tariff decisions could be much better for investors should management make greater efforts to protect shareholder value.

In this regard, we note the following statements of FSK CEO Oleg Budargin, which are indicative of the views of some state-owned company managers:

- On 24 May when commenting on the idea of an FSK and MRSK Holding consolidation, Budargin told Prime news agency that one of the key benefits of a united company would be the ability to keep tariff growth rates below inflation.
- He said that management believes tariff growth rates of "inflation plus something; 10-11% per year as maximum" are justified, *Interfax* reported on 20 Aug. He added that the company "will itself work to constrain tariff growth rates".

We consider such words to be indicative of management's reckless attitude towards shareholder value and their focus on political rather than economic goals.

No Proper Management Motivation Programmes in Place

Management stock options are deeply out-of-the-money or non-existent

To our knowledge, only FSK, RusHydro and MRSK Holding have adopted management stock option programmes, while none of the MRSKs or other generation companies have done so. However even the existing stock option programmes look ineffective since the options are currently deeply out-of-the-money.

Figure 79: Utility company management stock option programmes

	RusHydro 1st option programme	RusHydro 2nd option programme	FSK	MRSK Holding
Launch date	May 2007	Dec 2010	Feb 2011	Nov 2010
Nominal size $mn	181	159	184	59
Signed size $mn	terminated	103	n/a	43
Market price at inception, RUB/share	1.73	1.66	0.41	5.28
Average strike price, RUB/share	1.73	1.50	0.41	4.14
Current market price, RUB/share	0.74	0.74	0.21	1.98
Difference	-57%	-51%	-49%	-52%

Source: Company data, Bloomberg, Aton estimates

Key stock drivers largely out of management control

Another issue for Russian utilities is that the key decisions that impact company profitability and stock performance such as changes to the methodology of regulation, regulated tariff growth rates and privatisation are not controlled by management, and they actually have a limited influence over them. Therefore stock-based management motivation programmes may not bring much benefit to Russian utility companies.

Foreign-Owned Companies Much Safer in Corporate Governance Terms

State ownership the major source of corporate governance risks

The ultimate reason for the various corporate governance issues and weak management effort, in our opinion, is that the companies are state-controlled and thus lack an efficient owner who can monitor and properly motivate management. The Russian state, as practice shows, does not excel at **performing an active shareholder and supervisory function.** Another conflict of interest relates to the fact that the managers of state-controlled companies are in effect appointed by the government, which often has a different goal than shareholder value growth.

Companies owned by foreign investors in a better position

Utilities controlled by foreign investors, namely E.On Russia and Enel OGK-5, generally have much better corporate governance standards and far greater independence from politicians than the state-controlled companies do.

Below we summarise our corporate governance scores for Russian utility companies. For details on the methodology see our 9 July 2012 report ***Corporate Governance: Faulty Powers.***

Figure 80: Corporate governance scores

Company	Corporate governance score	Ownership structure & external influence	Financial Stakeholder rights	Transparency & disclosure	Board structure & effectiveness
Weighting		**30%**	**15%**	**20%**	**35%**
Russia average	**5.5**	**5.7**	**6.0**	**5.9**	**5.0**
Utilities sector average	**4.8**	**4.9**	**5.2**	**5.6**	**3.0**
E.On Russia	6.5	6.9	7.2	6.0	5.5
OGK-5	6.4	6.9	7.1	6.7	4.3
FSK	5.2	5.4	4.9	7.0	3.2
MRSK Center	5.2	4.6	5.9	6.7	3.6
TGK-1	5.2	5.6	5.6	5.9	3.1
RusHydro	5.1	5.3	4.6	6.2	4.0
Mosenergo	5.1	5.4	5.5	6.1	2.9
MRSK North-West	5.0	4.6	5.5	6.8	3.1
MRSK Center & Volga	4.9	4.6	5.6	6.0	3.0
Lenenergo	4.8	4.6	5.0	6.1	3.0
MRSK Siberia	4.8	4.0	5.8	6.0	3.0
MRSK Volga	4.8	4.8	5.3	5.8	3.0
MOESK	4.8	4.6	5.2	6.3	2.8
MRSK Holding	4.7	4.7	4.7	6.2	2.9
MRSK Urals	4.7	4.2	5.4	6.0	3.0
OGK-2	4.7	5.3	4.6	5.6	2.7
Quadra	4.7	3.9	5.4	6.2	3.1
MRSK South	4.5	4.3	5.2	5.3	3.0
Irkutskenergo	4.3	5.0	4.5	4.4	2.9
Krasnoyarskaya HPP	4.3	5.0	4.5	4.3	3.2
MRSK North Caucasus	4.1	4.5	4.5	4.9	1.8

Source: Aton estimates

State Financing Likely to Remain for at Least Several Years

Private investment could benefit all sector stakeholders…

In our 17 Nov 2011 report ***Electricity Distribution: RAB Implementation Flawed, Hopes Rest in Privatisation*** we argued that the decision-makers ultimately have to choose between two major strategies for resolving the key sector issue of high asset depreciation: private investment or state financing. We stressed that attracting private investment along with the implementation of market-based regulation would be a better solution for all the parties concerned. This includes consumers, the state and utility companies since it could lead to efficiency gains and lower electricity prices in the longer term while not requiring spending by the state.

…but decision-makers appear to have opted for state financing instead

Based on the following observations (also discussed above in the report) we conclude that the politicians have effectively chosen a path of state financing and increased state control as a development strategy for the utilities sector, at least in the short and medium term:

1) **Regulatory failure.** As already discussed, decision-makers in Russia have failed to provide a long-term, consistent and predictable regulatory environment for utility companies. Regulation of the electricity sector in Russia is largely skewed towards the consumer (i.e. the primary goal is to minimise electricity prices in the short term) at the expense of electricity providers.
2) **Increased state involvement in the sector instead of privatisation**. The policy-makers have decided to inject massive funds into the capital of utility companies from the federal budget and the balance sheets of state-controlled companies rather than attracting private investment.
3) **Ad-hoc, subjective manipulation is the preferred policy tool.** Russian decision-makers tend to apply a dictatorial management system to reach certain goals (be it lower electricity price or higher investment), rather than creating the conditions necessary for market forces to function.

These processes are interconnected: state injections decrease the need for the regulator to provide a favourable regulatory environment; case-by-case manipulation becomes the only policy tool if regulation fails to provide proper incentives for sector participants; and state financing is the only option if private investors refuse to finance capex because of inconsistent regulation.

Clearly Not the Best Decision for Society, but Perhaps for Politicians?

State financing a higher burden on society in the long term

We believe the state financing strategy results in a higher cost of electricity supply for society in the longer term due to the lack of incentives for cost savings, capex misspending and overall inefficiency. This strategy may also result in lower reliability rates due to lack of management motivation and lower investment rates in the longer term.

An easy and convenient way of getting things done

We see several reasons for politicians choosing the state-financing scenario:

1) **Ease.** It is the simplest and the most convenient way for bureaucrats to get things done. It is easier to order state-employed managers to build new assets than to create the conditions needed to attract private capital.
2) **Political spheres of influence.** Politicians often consider control over state-companies to be an important route to obtaining greater influence.

3) **Personal gain.** Managers of state-controlled corporations have greater scope to direct the respective business according to their own agendas

Utilities a Political Tool; Avoid if You Can

Greater state involvement means more risk to shareholder value

Increased state involvement brings the following major risks to the fundamental equity value of utility companies, in our view:

1) **A further worsening of the regulatory environment** since the regulators will not need to attract private investors.
2) **Deterioration of corporate governance standards** since management of the state-controlled companies do not have maximisation of shareholder value as a top priority and are heavily influenced by politicians.
    a. **Increased social burden.** The companies may become engaged in tariff-setting practices and investment projects that subsidise electricity consumers but destroy shareholder value.
    b. **Pursuing geopolitical goals**. The companies may be pushed by the government to invest abroad, often at an unjustifiably high cost.
    c. **Involvement in politics**. The companies may be seen by politicians as sources of enrichment and influence. They may become embroiled in value-erosive conflicts between rival groups in the political elite.

The sector will not be destroyed but there will be little value for investors

We do not believe the Russian utilities sector will be allowed to fall apart. That outcome is unlikely because of the industry's crucial role in securing the functioning and development of the economy.

We believe the sector will largely manage to replace its depleted asset base with the help of its cash flows, funds from the federal budget and state controlled companies (such as Rosneftegas), debt financing – including from state-owned banks – and probably some financing from naive private investors.

Our view is that there is little chance of shareholder value being unlocked in this process. Most of the companies are likely to see negative or nearly zero free cash flows and practically no dividends over the next few years at least.

No place for investors, except for foreign-owned companies

The above points lead us to believe that Russian utility companies should primarily be viewed as tools used by politicians to achieve political, social or personal goals rather than businesses aimed at creating value for shareholders.

The only partial exceptions in this regard are companies controlled by foreign investors (E.ON Russia and Enel OGK-5), which may still wish to provide a return to shareholders and endeavour to do so.

Significant changes unlikely, and even then prospects ambiguous

We believe the situation could meaningfully improve only with a major change in the political system, which is rather unlikely in our view. Moreover, even if the political establishment were to change at some point, we would not expect any free gifts to investors in the utilities sector given Russia's high end-user electricity prices and the respective underlying reasons as discussed above.

Fundamental value poor, but events-driven stock performance likely

We would advise investors seeking fundamental value to avoid investing in the Russian utilities sector where possible. This is because of the overwhelming risks to shareholder value related to increasingly high state involvement and the absence of any meaningful signs of potential changes in the state's strategy towards the sector.

However we would expect some stocks to demonstrate highly speculative price performances, driven largely by insider trading in anticipation of corporate events. In this regard, the utilities sector may present numerous opportunities for speculative investors.

Pricing in Regulatory Tightening

We have made the following key changes to our valuation of grid companies – MRSKs and FSK.

Incorporated latest tariff decisions and reloaded RAB parameters

We have incorporated tariff decisions for grid companies that came into effect from 1 July 2012, as well as the most recent tariff reviews for MRSK regions that returned to RAB regulation from 1 Nov (for details on RAB parameters, see the regulation section above). With few exceptions, the tariffs for MRSKs have been set until 2017, and until 2014 for FSK.

Assumed full transition to RAB by 2018

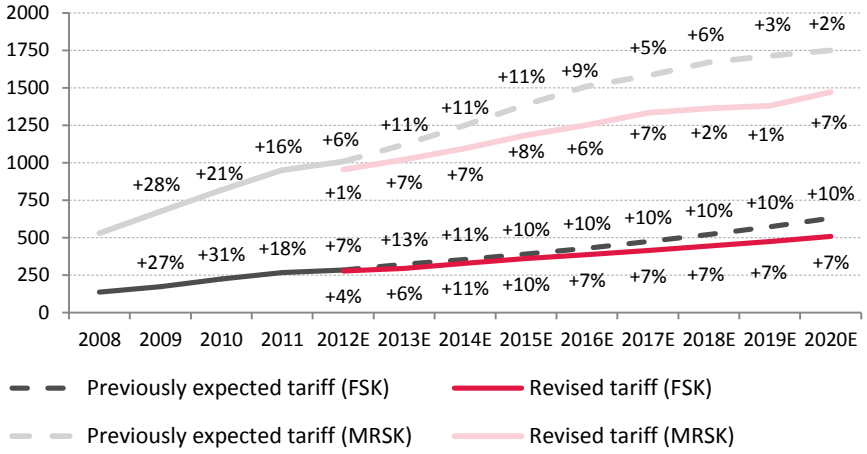
As discussed in the section on regulation above, 44 MRSK regions and FSK are now operating under the RAB approach, and we expect these grids to maintain RAB regulation going forward. For those 20 MRSK regional branches that are operating under long-term indexation or cost plus methods, we assume they will continue to operate under their current regulatory regime until the end of the existing long-term regulatory period (i.e. 2017), but will then adopt RAB regulation (i.e. from 2018).

Expect further tariff tightening in the long term

In line with the previous valuation approach we continue to apply a cap on tariff growth rates on top of the officially established levels (i.e. we assume the current tariffs will be revised downwards if they exceed the cap). However we have decreased the base cap on total distribution tariff growth (which includes the revenues of MRSK, FSK and TSOs) in each region of Russia from 10% to 7% from 2016, since we believe the government will further intensify its efforts to curb growth in the end-user electricity price. We allow for a higher cap of 15% in 2013-15 and 10% in 2016-20 for those regions that have a distribution tariff more than 20% below the Russian average, and of 20% in 2013-15 and 15% in 2016-20 for those regions that have a distribution tariff more than 40% below the average. An exception to our general approach is Lenenergo, to which we assign a 10% tariff growth rate cap for 2012-20, since the FTS has indicated that its tariff will exceed the statutory caps.

Our assumption of the base long-term distribution tariff cap of 7% is still some 200 bpts above the long-term inflation estimate of 5.0% provided by our economics team. Also according to the most recent economics ministry proposal, the end-user electricity tariff is targeted to grow at a 3.1% CAGR from 2016-30, which is far below our assumption for grid companies. So we believe our assumption of a 7% base cap on the distribution tariff growth rate is on the optimistic side.

Figure 81: Effective grid tariff forecast (RUB/MWh)



Source: Company data, Aton estimates

TSO tariff amended to match lower tariff growth forecast for MRSKs

We have taken company data on payments to TSOs included in MRSKs' distribution revenue where the data was available (by way of reminder, TSOs are smaller distribution grids that receive part of the total distribution revenue from MRSKs). In those regions where no data was available we have assumed that total TSO expense in rouble terms will grow by 3% in 2012 and 7% from 2013 on.

Accounting for missed income compensation

We still include compensation for expected missed income in regulated revenue, since this is stipulated under the current RAB methodology. However in practice the regulator does not provide sufficient compensation for missed income, so our approach in this regard is on the optimistic side.

We assume last mile contracts remain in place for the foreseeable future

In our previous valuation of distribution companies we accounted for the departure of large industrial consumers from MRSKs' customer bases by assuming that the electricity throughput of the MRSKs would gradually decline by an amount corresponding to such consumers by 2016.

In Mar 2012 *Vedomosti* reported than Minenergo planned to extend last mile contracts until 2016-17. We believe however that the contracts will remain in place as long as the government sets strict limits on distribution tariff growth rates. This is because should the last mile contracts be cancelled, the tariff for electricity consumers remaining in the MRSKs' customer bases would have to grow considerably (up to 50-100% in some regions) or the MRSKs would incur losses sufficient to damage the viability of their businesses.

We thus assume that the companies will retain the last mile contracts with larger industrial users that they had in 2011 going forward.

Tariff Outlook Gloomy, Regulators Overshooting

The changes in valuation assumptions discussed above resulted in a sharp deterioration of our tariff growth rates.

Notably, our MRSK tariff growth rates expected in 2012-15 (a total tariff CAGR of 6.3%) are well below those envisaged by the government's socio-economic forecast approved in Sep 2012 (a mid-range CAGR of 8.9%). We believe this is solely due to

overly strict tariff decisions adopted by regional regulators this year. We consider regulators for whatever reason to be 'overshooting', i.e. their actual decisions are even tighter than the targets set by the government.

Figure 82: Total effective distribution tariff forecast (RUB/MWh)

Company		2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	CAGR 2012-20
MRSK Center	Upd.	1,164	1,205	1,282	1,379	1,485	1,580	1,680	1,712	1,755	1,858	5.3%
	Prev.	1,132	1,205	1,325	1,456	1,601	1,745	1,837	1,973	2,115	2,290	8.1%
MRSK South	Upd.	835	900	985	990	1,072	1,156	1,242	1,235	1,219	1,317	5.2%
	Prev.	851	902	1,008	1,108	1,219	1,340	1,474	1,622	1,630	1,674	7.8%
MRSK North Caucasus	Upd.	981	1,002	1,060	1,170	1,273	1,355	1,430	1,427	1,461	1,548	5.2%
	Prev.	958	1,008	1,108	1,229	1,363	1,512	1,582	1,706	1,707	1,710	6.6%
MRSK Center and Volga	Upd.	1,165	1,098	1,150	1,260	1,359	1,453	1,546	1,535	1,538	1,620	3.7%
	Prev.	1,141	1,207	1,310	1,434	1,570	1,720	1,887	2,062	2,209	2,191	7.5%
MRSK North-West	Upd.	731	778	795	844	907	951	1,009	1,063	1,119	1,195	5.6%
	Prev.	770	818	934	1,061	1,207	1,366	1,526	1,530	1,631	1,611	8.5%
MRSK Siberia	Upd.	688	705	756	821	878	923	977	1,049	1,112	1,166	6.0%
	Prev.	737	772	837	951	1,063	1,150	1,181	1,215	1,243	1,305	6.6%
MRSK Urals	Upd.	736	733	790	846	891	934	990	1,015	1,022	1,117	4.7%
	Prev.	721	763	874	990	1,103	1,223	1,340	1,444	1,460	1,374	7.4%
MRSK Volga	Upd.	821	891	921	933	1,012	1,075	1,137	1,190	1,247	1,328	5.5%
	Prev.	797	843	950	1,070	1,210	1,337	1,364	1,499	1,552	1,453	6.9%
MOESK	Upd.	1,418	1,314	1,445	1,590	1,741	1,803	1,927	1,877	1,789	1,915	3.4%
	Prev.	1,396	1,480	1,598	1,757	1,922	2,065	1,954	2,005	2,040	2,139	4.9%
Lenenergo	Upd.	950	1,049	1,154	1,269	1,396	1,536	1,690	1,824	1,824	2,006	8.7%
	Prev.	934	991	1,090	1,199	1,319	1,450	1,596	1,755	1,931	2,124	9.6%
Kubanenergo	Upd.	1,601	1,752	1,838	1,887	2,030	2,149	2,299	2,264	2,296	2,457	4.9%
	Prev.	1,840	1,951	2,146	2,251	2,418	2,327	2,430	2,765	2,815	2,958	5.4%
MRSK total	**Upd.**	**981**	**991**	**1,060**	**1,137**	**1,228**	**1,299**	**1,385**	**1,409**	**1,423**	**1,521**	5.0%
	Prev.	950	1,009	1,120	1,249	1,387	1,510	1,580	1,670	1,713	1,748	7.0%
FSK	**Upd.**	**267**	**278**	**295**	**329**	**362**	**387**	**414**	**443**	**474**	**507**	7.4%
	Prev.	266	284	321	355	390	429	472	520	572	629	10.0%
YoY growth rate forecast												
MRSK Center	Upd.	14%	4%	6%	8%	8%	6%	6%	2%	3%	6%	5.3%
	Prev.	10%	6%	10%	10%	10%	9%	5%	7%	7%	8%	8.1%
MRSK South	Upd.	9%	8%	10%	1%	8%	8%	7%	-1%	-1%	8%	5.2%
	Prev.	11%	6%	12%	10%	10%	10%	10%	10%	0%	3%	7.8%
MRSK North Caucasus	Upd.	13%	2%	6%	10%	9%	6%	6%	0%	2%	6%	5.2%
	Prev.	5%	5%	10%	11%	11%	11%	5%	8%	0%	0%	6.6%
MRSK Center and Volga	Upd.	18%	-6%	5%	9%	8%	7%	6%	-1%	0%	5%	3.7%
	Prev.	16%	6%	9%	9%	10%	10%	10%	9%	7%	-1%	7.5%
MRSK North-West	Upd.	14%	6%	2%	6%	7%	5%	6%	5%	5%	7%	5.6%
	Prev.	20%	6%	14%	14%	14%	13%	12%	0%	7%	-1%	8.5%
MRSK Siberia	Upd.	24%	2%	7%	9%	7%	5%	6%	7%	6%	5%	6.0%
	Prev.	32%	5%	8%	14%	12%	8%	3%	3%	2%	5%	6.6%
MRSK Urals	Upd.	11%	0%	8%	7%	5%	5%	6%	2%	1%	9%	4.7%
	Prev.	9%	6%	15%	13%	11%	11%	10%	8%	1%	-6%	7.4%
MRSK Volga	Upd.	19%	9%	3%	1%	8%	6%	6%	5%	5%	6%	5.5%
	Prev.	16%	6%	13%	13%	13%	10%	2%	10%	4%	-6%	6.9%
MOESK	Upd.	15%	-7%	10%	10%	10%	4%	7%	-3%	-5%	7%	3.4%
	Prev.	14%	6%	8%	10%	9%	7%	-5%	3%	2%	5%	4.9%
Lenenergo	Upd.	19%	10%	10%	10%	10%	10%	10%	8%	0%	10%	8.7%
	Prev.	17%	6%	10%	10%	10%	10%	10%	10%	10%	10%	9.6%
Kubanenergo	Upd.	13%	9%	5%	3%	8%	6%	7%	-2%	1%	7%	4.9%
	Prev.	30%	6%	10%	5%	7%	-4%	4%	14%	2%	5%	5.4%
MRSK total	**Upd.**	**16%**	**1%**	**7%**	**7%**	**8%**	**6%**	**7%**	**2%**	**1%**	**7%**	**5.0%**
	Prev.	16%	6%	11%	11%	11%	9%	5%	6%	3%	2%	7.0%
FSK	**Upd.**	**19%**	**4%**	**6%**	**11%**	**10%**	**7%**	**7%**	**7%**	**7%**	**7%**	**7.4%**
	Prev.	18%	7%	13%	11%	10%	10%	10%	10%	10%	10%	10.0%

Source: Company data, Aton estimates

Figure 83: Electricity price growth forecast approved by government in Sep 2012

	2011	2012E	2013E	2014E	2015E
End-user electricity price growth (new forecast)	**13.5%**	**3.5-6%**	**12-13.5%**	**10.5-12.5%**	**11-13%**
Pre-tightening forecast	13-15%	11-13%	10-12%	n.a.	n.a.
Change	n.a.	-7.5 to -7 ppts	+1.5 to +2 ppt	n.a.	n.a.
Electricity grid tariff growth (new forecast)	13%	6% (11% from July)	10-11%	9.5-10%	9-10%

Source: MED Socio-Economic Forecast for 2013-15

A More Cautious Stance on Controllable Operating Costs

We previously assumed that the grid companies would gradually reduce their controllable operating costs to the regulated level by 2015. However we now assume that the premium/discount of actual controllable expenses to regulated ones as seen in the last reported period (2011) will remain flat in the foreseeable future for a number of reasons. First, we do not expect management to go to much effort to boost operating efficiency due to both state ownership and inconsistent regulation. Second, benchmarks for controllable costs revised by the regulator in 2012 already incorporate significant efficiency gains (up to 3% annual cost savings) so we believe it would be difficult for companies to achieve greater economy.

There are exceptions to that methodology, and for MRSK Siberia and Kubanenergo we forecast that the deviation between actual and regulated controllable expenses will be reduced by half because of the high base effect.

Connection Fee to Continue

We have remodelled connection fee revenues, and now expect that they will continue into the foreseeable future (we previously assumed that the connection fee would be abandoned from 2012).

Macroeconomic Assumptions Weakening Further

We have updated our macro assumptions with our latest in-house numbers. These now imply a slower GDP outlook, lower electricity demand growth and a weaker rouble in the long term.

Figure 84: Macro assumptions

	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
GDP growth updated, %	3.6%	3.0%	3.5%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
GDP growth previous, %	4.0%	4.2%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%
GDP growth change, ppts	-0.4	-1.2	-1.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Electricity consumption growth updated, %	1.5%	1.2%	1.4%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
Electricity consumption growth previous, %	1.6%	1.7%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%
Electricity consumption growth change, ppts	-0.1	-0.5	-0.4	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
CPI updated, Dec/Dec, %	6.5%	5.7%	5.2%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
CPI previous, Dec/Dec, %	6.6%	6.5%	5.5%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
CPI change, Dec/Dec, ppts	-0.1	-0.8	-0.3	0.0	0.0	0.0	0.0	0.0	0.0
RUB/$ updated, aop	32.5	34.8	35.2	35.0	35.0	35.0	35.0	35.0	35.0
RUB/$ previous, aop	30.9	30.6	30.6	30.6	30.6	30.6	30.6	30.6	30.6
RUB/$ change, aop %	5%	14%	15%	14%	14%	14%	14%	14%	14%

Source: Aton estimates

Much Weaker Earnings Growth Outlook

We now forecast much slower EBITDA growth rates, primarily due to the lower tariff growth outlook and a more conservative stance on operating efficiency.

Figure 85: Forecast EBITDA from distribution activity (RUBmn)

Company		2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	CAGR 2012E-20E
MRSK Center	Upd.	14,142	13,424	15,174	17,514	20,824	23,713	26,823	24,938	24,098	26,876	7%
	Prev.	9,947	10,128	13,918	16,983	22,353	27,003	27,976	36,478	47,487	55,569	21%
MRSK South	Upd.	3,996	4,160	5,551	4,416	5,509	6,783	8,088	5,892	3,948	5,396	3%
	Prev.	2,898	2,951	3,941	3,538	4,648	6,541	8,374	12,903	14,771	15,188	20%
MRSK North Caucasus	Upd.	1,710	1,744	2,300	3,592	4,862	5,628	6,295	5,520	5,466	6,147	15%
	Prev.	1,936	1,499	2,777	3,838	5,628	7,183	7,680	9,289	9,279	8,919	18%
MRSK Center & Volga	Upd.	10,050	9,108	9,378	12,699	15,521	17,996	21,105	15,980	12,702	14,024	4%
	Prev.	9,685	8,738	10,792	12,813	15,644	20,237	24,948	33,871	42,925	38,630	17%
MRSK North-West	Upd.	3,551	3,766	2,979	3,336	4,487	5,020	6,058	6,102	6,754	8,172	10%
	Prev.	2,499	1,488	1,959	8,012	9,912	12,686	16,324	17,226	22,669	21,072	27%
MRSK Siberia	Upd.	2,615	744	1,999	5,525	7,043	7,694	9,032	11,319	12,774	13,202	20%
	Prev.	3,681	4,842	6,709	11,490	14,542	16,574	14,788	17,573	21,901	23,664	23%
MRSK Urals	Upd.	7,403	5,331	7,283	8,245	8,435	8,902	10,261	7,912	4,431	8,370	1%
	Prev.	6,218	5,509	7,940	11,767	15,385	20,663	24,817	32,887	36,295	26,216	17%
MRSK Volga	Upd.	5,414	7,561	6,742	4,380	6,253	7,329	8,609	8,984	9,468	11,325	9%
	Prev.	5,594	6,521	9,594	13,605	19,173	24,562	22,872	31,881	37,334	28,480	20%
MOESK	Upd.	27,288	22,953	29,117	36,175	43,171	44,006	50,075	41,547	29,270	34,709	3%
	Prev.	22,203	29,883	32,833	39,171	45,948	58,888	43,291	45,215	47,459	49,970	9%
Lenenergo	Upd.	3,623	5,329	7,056	8,842	11,213	14,238	17,727	20,621	18,930	23,337	23%
	Prev.	692	986	1,322	3,368	4,851	8,165	10,284	15,146	21,570	26,218	50%
Kubanenergo	Upd.	-783	1,846	2,324	2,637	4,423	5,220	6,588	3,932	2,482	3,612	n/a
	Prev.	2,764	4,783	6,653	7,044	7,100	2,492	1,630	6,822	6,907	7,044	11%
Total MRSK	**Upd.**	**79,009**	**75,967**	**89,903**	**107,363**	**131,740**	**146,529**	**170,661**	**152,747**	**130,324**	**155,171**	**8%**
	Prev.	68,116	77,330	98,436	131,631	165,183	204,993	202,984	259,291	308,595	300,970	18%
FSK	**Upd.**	**80,829**	**85,372**	**93,323**	**110,983**	**128,194**	**141,770**	**156,643**	**172,932**	**190,767**	**210,288**	**11%**
	Prev.	76,276	86,969	106,649	125,769	148,997	171,018	195,864	223,883	255,465	291,047	16%
YoY growth rates												
MRSK Center	Upd.	33%	-5%	13%	15%	19%	14%	13%	-7%	-3%	12%	7%
	Prev.	5%	2%	37%	22%	32%	21%	4%	30%	30%	17%	21%
MRSK South	Upd.	15%	4%	33%	-20%	25%	23%	19%	-27%	-33%	37%	3%
	Prev.	-3%	2%	34%	-10%	31%	41%	28%	54%	14%	3%	20%
MRSK North Caucasus	Upd.	54%	2%	32%	56%	35%	16%	12%	-12%	-1%	12%	15%
	Prev.	50%	-23%	85%	38%	47%	28%	7%	21%	0%	-4%	18%
MRSK Center & Volga	Upd.	86%	-9%	3%	35%	22%	16%	17%	-24%	-21%	10%	4%
	Prev.	68%	-10%	24%	19%	22%	29%	23%	36%	27%	-10%	17%
MRSK North-West	Upd.	109%	6%	-21%	12%	35%	12%	21%	1%	11%	21%	10%
	Prev.	13%	-40%	32%	309%	24%	28%	29%	6%	32%	-7%	27%
MRSK Siberia	Upd.	n/a	-72%	169%	176%	27%	9%	17%	25%	13%	3%	20%
	Prev.	643%	32%	39%	71%	27%	14%	-11%	19%	25%	8%	23%
MRSK Urals	Upd.	-3%	-28%	37%	13%	2%	6%	15%	-23%	-44%	89%	1%
	Prev.	-19%	-11%	44%	48%	31%	34%	20%	33%	10%	-28%	17%
MRSK Volga	Upd.	23%	40%	-11%	-35%	43%	17%	17%	4%	5%	20%	9%
	Prev.	19%	17%	47%	42%	41%	28%	-7%	39%	17%	-24%	20%
MOESK	Upd.	22%	-16%	27%	24%	19%	2%	14%	-17%	-30%	19%	3%
	Prev.	27%	35%	10%	19%	17%	28%	-26%	4%	5%	5%	9%
Lenenergo	Upd.	14%	47%	32%	25%	27%	27%	25%	16%	-8%	23%	23%
	Prev.	-50%	43%	34%	155%	44%	68%	26%	47%	42%	22%	50%
Kubanenergo	Upd.	n/a	n/a	26%	13%	68%	18%	26%	-40%	-37%	46%	n/a
	Prev.	205%	73%	39%	6%	1%	-65%	-35%	318%	1%	2%	11%
Total MRSK	**Upd.**	**35%**	**-4%**	**18%**	**19%**	**23%**	**11%**	**16%**	**-10%**	**-15%**	**19%**	**8%**
	Prev.	32%	14%	27%	34%	25%	24%	-1%	28%	19%	-2%	18%
FSK	**Upd.**	**36%**	**6%**	**9%**	**19%**	**16%**	**11%**	**10%**	**10%**	**10%**	**10%**	**11%**
	Prev.	30%	14%	23%	18%	18%	15%	15%	14%	14%	14%	16%

Source: Company data, Aton estimates

We now expect lower effective rates of return on the RAB of grid companies and forecast that they will generally stay below the statutory level in the foreseeable future.

Figure 86: Effective and statutory rate of return forecast

Company	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
Effective return on RAB										
MRSK Center	3.9%	3.6%	4.9%	6.4%	8.2%	9.5%	10.8%	8.8%	7.9%	9.2%
MRSK South	0.6%	2.5%	5.8%	2.8%	5.2%	8.1%	10.8%	4.9%	0.3%	3.7%
MRSK North Caucasus	-4.7%	-2.9%	-1.9%	1.5%	4.7%	6.5%	7.9%	5.8%	5.3%	6.3%
MRSK Center and	3.9%	2.7%	2.8%	5.6%	7.9%	9.7%	11.7%	7.1%	4.1%	4.9%
MRSK North-West	-0.4%	0.4%	-0.8%	-0.3%	1.3%	2.1%	3.6%	3.6%	4.4%	6.2%
MRSK Siberia	-5.0%	-7.4%	-6.2%	-1.6%	0.5%	1.5%	3.7%	8.3%	11.2%	12.3%
MRSK Urals	4.3%	1.3%	3.5%	4.5%	4.5%	4.8%	6.1%	3.3%	-0.9%	3.4%
MRSK Volga	2.7%	5.4%	4.1%	1.1%	3.2%	4.3%	5.2%	5.5%	5.7%	7.2%
MOESK	5.8%	4.6%	7.4%	10.5%	12.7%	12.1%	13.5%	9.8%	5.4%	6.7%
Lenenergo	-1.7%	0.1%	1.8%	3.8%	6.1%	8.8%	11.6%	13.8%	11.8%	15.5%
Kubanenergo	-11.9%	0.2%	1.4%	1.3%	5.3%	7.3%	11.1%	3.8%	-0.7%	2.8%
Total MRSK updated	**2.0%**	**2.1%**	**3.4%**	**4.9%**	**6.9%**	**7.9%**	**9.5%**	**8.0%**	**6.0%**	**7.7%**
Total MRSK previous	0.9%	1.6%	3.4%	6.8%	9.3%	12.3%	11.9%	15.1%	17.2%	16.1%
FSK	**5.4%**	**5.9%**	**5.5%**	**6.2%**	**6.8%**	**7.1%**	**7.6%**	**8.1%**	**8.6%**	**9.2%**
FSK Previous	4.5%	5.0%	6.0%	6.6%	7.2%	8.4%	9.6%	11.0%	12.5%	14.3%
Statutory return on RAB										
MRSK Center	9.2%	5.0%	4.9%	6.0%	6.8%	8.3%	10.1%	11.0%	11.0%	11.0%
MRSK South	6.7%	6.3%	8.3%	3.1%	4.3%	5.9%	7.9%	11.0%	11.0%	11.0%
MRSK North Caucasus	0.1%	-1.7%	-1.5%	1.0%	4.1%	5.4%	8.0%	11.0%	11.0%	11.0%
MRSK Center and	8.2%	4.8%	5.1%	5.9%	6.4%	7.7%	11.0%	11.0%	11.0%	11.0%
MRSK North-West	-3.5%	1.8%	3.0%	4.7%	3.4%	4.1%	6.3%	11.0%	11.0%	11.0%
MRSK Siberia	4.7%	-3.2%	4.7%	7.9%	6.8%	0.3%	1.6%	11.0%	11.0%	11.0%
MRSK Urals	8.7%	4.4%	5.0%	5.7%	6.4%	6.3%	8.7%	11.0%	11.0%	11.0%
MRSK Volga	6.1%	1.4%	4.8%	5.5%	5.7%	7.7%	11.0%	11.0%	11.0%	11.0%
MOESK	6.1%	8.0%	6.9%	7.3%	8.0%	9.0%	11.0%	11.0%	11.0%	11.0%
Lenenergo	6.1%	2.1%	2.9%	3.7%	4.4%	5.1%	11.0%	11.0%	11.0%	11.0%
Kubanenergo	6.2%	2.0%	3.9%	5.9%	6.7%	7.0%	11.0%	11.0%	11.0%	11.0%
Total MRSK updated	**6.0%**	**4.1%**	**5.2%**	**5.9%**	**6.5%**	**7.1%**	**9.6%**	**11.0%**	**11.0%**	**11.0%**
Total MRSK previous	6.2%	9.5%	10.7%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%
FSK updated	**5.5%**	**6.5%**	**8.2%**	**10.0%**	**10.0%**	**10.0%**	**10.0%**	**10.0%**	**10.0%**	**10.0%**
FSK Previous	6.4%	8.0%	8.8%	9.6%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Difference (ppts)										
MRSK Center	-5.4	-1.4	0.1	0.4	1.4	1.2	0.7	-2.2	-3.2	-1.8
MRSK South	-6.1	-3.8	-2.5	-0.4	0.9	2.2	2.8	-6.1	-10.7	-7.3
MRSK North Caucasus	-4.8	-1.3	-0.4	0.4	0.6	1.1	0.0	-5.2	-5.7	-4.7
MRSK Center and	-4.2	-2.0	-2.3	-0.2	1.5	1.9	0.7	-3.9	-6.9	-6.1
MRSK North-West	3.1	-1.4	-3.8	-5.0	-2.1	-2.1	-2.7	-7.4	-6.6	-4.8
MRSK Siberia	-9.7	-4.2	-10.8	-9.5	-6.3	1.2	2.1	-2.7	0.2	1.3
MRSK Urals	-4.3	-3.0	-1.5	-1.2	-1.9	-1.5	-2.6	-7.7	-11.9	-7.6
MRSK Volga	-3.4	4.0	-0.8	-4.5	-2.5	-3.4	-5.8	-5.5	-5.3	-3.8
MOESK	-0.3	-3.4	0.5	3.1	4.6	3.1	2.5	-1.2	-5.7	-4.3
Lenenergo	-7.8	-2.0	-1.1	0.1	1.7	3.6	0.6	2.8	0.8	4.5
Kubanenergo	-18.1	-1.8	-2.5	-4.6	-1.4	0.3	0.1	-7.2	-11.7	-8.2
Total MRSK	**-4.0**	**-2.0**	**-1.8**	**-1.0**	**0.4**	**0.7**	**-0.1**	**-3.0**	**-5.0**	**-3.4**
Total MRSK previous	-5.3	7.9	-7.3	-4.2	-1.7	1.3	0.9	4.1	6.2	5.1
FSK	**-0.1**	**-0.6**	**-2.7**	**-3.8**	**-3.2**	**-2.9**	**-2.4**	**-1.9**	**-1.4**	**-0.8**
FSK Previous	-1.9	-3.0	-2.8	-3.0	-2.8	-1.6	-0.4	1.0	2.5	4.3

*we estimate the effective rate of return on RAB as realised EBITDA from distribution activity less depreciation of RAB and less income tax, divided by net RAB value

Source: Company data, Aton estimates

Capex Forecast Largely Intact for MRSKs, Moderately Increased for FSK

We base our capex forecast for distribution companies on the official investment programmes approved by Minenergo, which were provided to us by the companies concerned. We have applied a sizable 20% discount to Minenergo-approved programmes for MRSKs until 2017 in order to stay on the optimistic side. Relative to our previous valuation, total capex for MRSKs to 2020 has remained almost unchanged, although it has been somewhat redistributed to earlier years from later years.

For FSK we incorporate the official investment programme to 2014 (with no reductions) as we feel the company is likely to implement it in full. Notably, we incorporate a drop in annual capex spending of some 18% in 2015. We believe this is a somewhat optimistic assumption given that FSK managers have publicly stated their intention to keep the current high capex rates until 2017-20. Our revised forecast for FSK capex envisages an increase of some 14% vs our previous valuation.

Figure 87: MRSK total capex forecast (RUBbn)

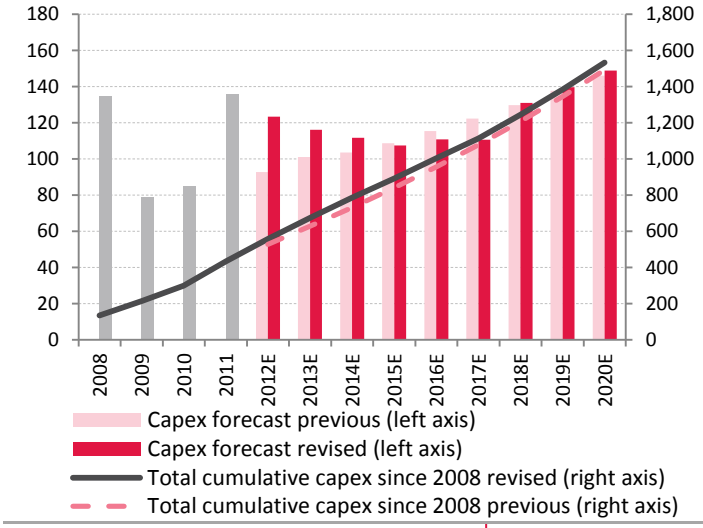
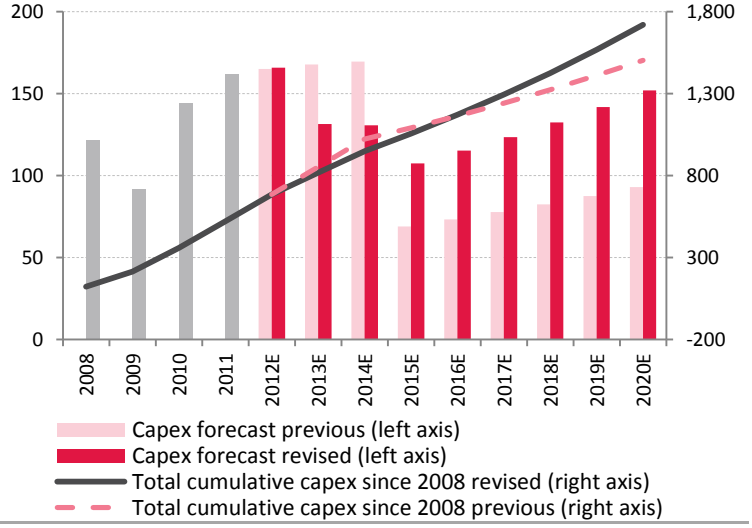


Figure 88: FSK capex forecast (RUBbn)



Source: Company data, Aton estimates

Post-Prognosis Assumptions More Conservative but More Realistic

Effective rate of return in post-prognosis period 100 bpts below regulated level

We have set the rate of return on RAB for terminal value calculation at 10% for MRSKs and 9% at FSK, which is 100 bpts below the current regulatory rates of return. We believe that due to flaws in RAB implementation and given the poor track record of the last few years the companies are unlikely to achieve the full regulated rates of return on RAB set by the regulator.

No compensation for tariff smoothing in terminal value

We no longer add to terminal value the tariff smoothing which has not been returned before 2020, unlike in previous valuations. So if the tariff growth based on currently set RAB parameters and expected capex does not fit into the cap, the excess amount is transferred to later years up to 2020, but no further.

Terminal growth assumptions intact

We also retain our zero terminal growth rates for grids in order to stay on the optimistic side. Within the RAB framework that we expect to be applied for all grids in the long term the higher growth in RAB results in a lower fair value as the regulatory rate of return of 10-11% is below the estimated WACC of 13.3-16.7%.

WACC Lowered After Incorporating a More Conservative Tariff Outlook

Regulatory risk

We have already incorporated unfavourable regulation for grid companies, so room for further negative news is limited. However a more negative scenario for grid companies is also possible – for instance, if the tariff growth cap was to be further pushed down from our current assumption of 7% to, say, an inflation level of 5-6% or even to below inflation. We apply a 1% regulatory risk premium in calculating WACC for grids.

Corporate governance risk

We apply a base corporate governance risk premium of 2% for companies directly or indirectly controlled by the state, which are all the MRSKs and FSK.

WACC generally reduced by up to 340 bpts

Our revised WACC assumptions now appear to be 0-340 bpts below the previous estimates, mainly due to a reduction of the regulatory risk premium since we have incorporated relatively harsh regulatory decisions in our valuation.

Figure 89: Revised WACC assumptions

WACC component	FSK	MRSK Center	MRSK South	MRSK North Caucasus	MRSK Center and Volga	MRSK North-West	MRSK Siberia	MRSK Urals	MRSK Volga	MOESK	Lenenergo
Base Russia COE - updated	**12.5%**	**12.5%**	**12.5%**	**12.5%**	**12.5%**	**12.5%**	**12.5%**	**12.5%**	**12.5%**	**12.5%**	**12.5%**
Base Russia COE - previous	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%
Change (ppts)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Regulatory risk premium - updated	**1.0%**	**1.0%**	**1.0%**	**1.0%**	**1.0%**	**1.0%**	**1.0%**	**1.0%**	**1.0%**	**1.0%**	**1.0%**
Regulatory risk premium - previous	2.0%	3.0%	4.4%	4.8%	3.0%	4.9%	4.5%	2.6%	2.5%	2.0%	4.0%
Change (ppts)	-1.0	-2.0	-3.4	-3.8	-2.0	-3.9	-3.5	-1.6	-1.5	-1.0	-3.0
Corporate governance - updated	**2.0%**	**2.0%**	**2.0%**	**2.0%**	**2.0%**	**2.0%**	**2.0%**	**2.0%**	**2.0%**	**2.0%**	**2.0%**
Corporate governance - previous	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Change (ppts)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Liquidity - updated	**0.0%**	**3.0%**	**4.0%**	**4.0%**	**3.0%**	**4.0%**	**4.0%**	**4.0%**	**4.0%**	**3.0%**	**4.0%**
Liquidity - previous	0.0%	3.0%	3.5%	5.0%	2.5%	5.0%	5.0%	3.5%	3.5%	2.0%	4.0%
Change (ppts)	0.0	0.0	0.5	-1.0	0.5	-1.0	-1.0	0.5	0.5	1.0	0.0
Cost of Equity -- updated	**15.5%**	**18.5%**	**19.5%**	**19.5%**	**18.5%**	**19.5%**	**19.5%**	**19.5%**	**19.5%**	**18.5%**	**19.5%**
Cost of Equity - previous	16.5%	20.5%	22.4%	24.3%	20.0%	24.4%	24.0%	20.6%	20.5%	18.5%	22.5%
Change (ppts)	-1.0	-2.0	-2.9	-4.8	-1.5	-4.9	-4.5	-1.1	-1.0	0.0	-3.0
Cost of debt - updated	**8.0%**	**9.0%**	**9.5%**	**10.0%**	**9.0%**	**9.0%**	**9.0%**	**9.0%**	**9.0%**	**8.5%**	**9.0%**
Cost of debt - previous	8.0%	9.0%	9.5%	10.0%	9.0%	9.0%	9.0%	9.0%	9.0%	8.5%	9.0%
Change (ppts)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Target debt/assets - updated	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%
Target debt/assets - previous	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%
Change (ppts)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WACC (excl. tax shield) - updated	**13.3%**	**15.7%**	**16.5%**	**16.7%**	**15.7%**	**16.4%**	**16.4%**	**16.4%**	**16.4%**	**15.5%**	**16.4%**
WACC (excl. tax shield) - previous	14.0%	17.1%	18.5%	20.0%	16.7%	19.8%	19.5%	17.1%	17.1%	15.5%	18.5%
Change (ppts)	-0.7	-1.4	-2.0	-3.3	-1.0	-3.4	-3.1	-0.7	-0.7	0.0	-2.1

Source: Aton estimates

Grid Company Valuations Materially Downgraded

Significant target price downgrades on regulatory tightening

Our full-DCF valuation, which incorporates regulatory parameters for each MRSK region and the assumptions discussed above, results in material downgrades of company fair values (let us call this a base 'status-quo' scenario). The major reasons for the downgrades are a significantly weaker outlook for tariff growth rates and a less optimistic approach to operating efficiency gains.

Figure 90: Updated target prices for base case scenario

Company name	Ticker	12M TP new ($)	12M TP previous ($)	chg	Current price ($)	Potential Upside	Current EV/RAB YE11E	Fair EV/RAB YE11E (new)	Fair EV/RAB YE10E (previous)
MRSK Center	MRKC	0.0169	0.0326	-48%	0.0169	0%	0.43	0.40	0.43
MRSK South	MRKY	0.000851	0.000858	-1%	0.001643	-48%	0.57	0.52	0.42
MRSK North Caucasus	MRKK	0.796	4.999	-84%	0.848	-6%	0.04	0.01	0.31
MRSK Center and Volga	MRKP	0.00498	0.01030	-52%	0.00547	-9%	0.43	0.38	0.50
MRSK North-West	MRKZ	0.000976	0.004837	-80%	0.002131	-54%	0.22	0.14	0.27
MRSK Siberia	MRKS	0.00100	0.00726	-86%	0.00300	-67%	0.23	0.12	0.35
MRSK Urals	MRKU	0.00194	0.01252	-85%	0.00653	-70%	0.45	0.20	0.47
MRSK Volga	MRKV	0.00100	0.00768	-87%	0.00240	-58%	0.31	0.17	0.50
MOESK	MSRS	0.0278	0.0704	-60%	0.0478	-42%	0.64	0.44	0.70
Lenenergo (ord.)	LSNG	0.0596	0.2338	-75%	0.2098	-72%	0.36	0.24	0.23
Lenenergo (pref.)	LSNGP	0.0694	0.3935	-82%	0.5645	-88%			
FSK	FEES	0.00471	0.0134	-65%	0.00682	-31%	0.46	0.29	0.49

Source: Aton estimates

Companies should be heavily discounted to their RAB values

Due to inconsistent regulation, we believe grid companies deserve big discounts to their RAB values. The major factors that warrant the discount are the difference between regulatory rates of return and company WACCs, expansion capex that erodes value (since the regulatory rate of return is below WACC), controllable operating costs exceeding the regulated level and various regulatory issues.

We Factor in a Chance of MRSK Privatisation

Based on recent events, namely President Putin's support for government initiatives for the utilities sector (recapitalisation of RusHydro from the Federal budget, consolidation of FSK and MRSK Holding) we believe there is now a greater likelihood of the government's other initiatives being implemented. In particular, we believe the probability of MRSK privatisation, for which government representatives indicated plans for 2013, is increasing.

In order to reflect the possibility of privatisation in our valuation, we have run a privatisation scenario for MRSKs, with the following changes to our valuation assumptions:

5) **Operating efficiency gains**. We assume controllable operating costs will be cut by 20% from the regulator-approved level by 2015, since private shareholders are likely to motivate management into making efficiency improvements.
6) **Lower capex.** We allow for a higher 30% discount to Minenergo-approved investment programmes (vs a 20% discount in the base scenario), and reduce longer-term maintenance capex assumptions by roughly 30%. We believe private investors will do their best to reduce capex, since it destroys shareholder value (the regulatory rate of return on investments of 10% is below MRSK WACCs of 15.5-16.7%).
7) **Lower WACC.** We expect implementation of better corporate governance practices by new private owners, and we reflect this through a reduction of the corporate governance component in company WACC calculations from 2% to 0.5% (the latter is in line with our estimate applied to foreign-controlled generation companies).
8) **Effective rates of return equal statutory levels** for terminal value calculation since we believe private investors will fight for better implementation of RAB regulation and eradication of regulatory flaws.

The privatisation scenario results in much higher fair valuations for the companies vs our base scenario.

Figure 91: Privatisation vs base case scenario valuation

Company name	Ticker	TP in privatisation scenario	TP in base scenario	chg	Fair EV/RAB in privatisation scenario	Fair EV/RAB in base scenario	chg
MRSK Center	MRKC	0.0418	0.0169	147%	0.71	0.40	78%
MRSK South	MRKY	0.007970	0.000851	837%	0.82	0.52	58%
MRSK North Caucasus	MRKK	3.637	0.796	357%	0.32	0.01	2113%
MRSK Center and Volga	MRKP	0.01465	0.00498	194%	0.73	0.38	93%
MRSK North-West	MRKZ	0.007822	0.000976	702%	0.50	0.14	251%
MRSK Siberia	MRKS	0.00736	0.00100	635%	0.39	0.12	220%
MRSK Urals	MRKU	0.01138	0.00194	487%	0.59	0.20	192%
MRSK Volga	MRKV	0.00575	0.00100	475%	0.55	0.17	222%
MOESK	MSRS	0.0553	0.0278	99%	0.64	0.44	46%
Lenenergo (ord.)	LSNG	0.2667	0.0596	347%	0.37	0.24	52%
Lenenergo (pref.)	LSNGP	0.5710	0.0694	722%			

Source: Aton estimates

Final Target Prices do not Show Significant Upside

Incorporating possible privatisation

We assume a 50% probability that one MRSK is privatised, with the following likelihood of each individual company being the "lucky" one. This is based on our judgement of government officials' statements that the likely privatisation candidate will be an "average" company without serious issues.

Figure 92: MRSK privatisation probability

Company	Ticker	Individual privatisation chance	Overall privatisation chance	Effective privatisation chance	Comments
MRSK Center	MRKC	25%	50%	12.5%	Likely candidate for privatisation
MRSK South	MRKY	5%	50%	2.5%	Less likely, close to North Caucasus regions and Sochi Olymic infrastructure construction sites. The large Volgograd region is not under RAB regulation.
MRSK North Caucasus	MRKK	0%	50%	0.0%	Problems with electricity loss rates; unlikely
MRSK Center and Volga	MRKP	25%	50%	12.5%	Likely candidate for privatisation
MRSK North-West	MRKZ	10%	50%	5.0%	Four of seven regions without RAB regulation; less likely
MRSK Siberia	MRKS	0%	50%	0.0%	Huge problems with the last mile issue; eight of nine regions without RAB regulation; unlikely
MRSK Urals	MRKU	10%	50%	5.0%	Strategic region; last mile issue; less likely
MRSK Volga	MRKV	25%	50%	12.5%	Likely candidate for privatisation
MOESK	MSRS	0%	50%	0.0%	Strategic region; unlikely
Lenenergo	LSNG	0%	50%	0.0%	Strategic region; unlikely
Kubanenergo	KUBE	0%	50%	0.0%	Constructing Sochi Olympic infrastructure; depressed fundamental value; unlikely
Tyumenenergo	n/a	0%	50%	0.0%	Not under RAB regulation; last mile issue; unlikely

Source: Aton estimates

Our final target prices for MRSKs are calculated as weighted averages of the target prices in our base 'status quo' scenario and the privatisation scenario.

Figure 93: Calculation of final weighted average target price

Company	Ticker	TP in base scenario ($)	Weight	TP in privatisation scenario ($)	Weight	WA TP	Current price ($)	Upside	New rating	Old rating
MRSK Center	MRKC	0.0169	87.5%	0.0418	12.5%	0.0200	0.0169	19%	HOLD	BUY
MRSK South	MRKY	0.000851	97.5%	0.007970	2.5%	0.00103	0.001643	-37%	SELL	SELL
MRSK North Caucasus	MRKK	0.796	100.%	3.637	0.0%	0.796	0.848	-6%	SELL	BUY
MRSK Center & Volga	MRKP	0.00498	87.5%	0.01465	12.5%	0.00619	0.00547	13%	HOLD	BUY
MRSK North-West	MRKZ	0.000976	95.0%	0.007822	5.0%	0.00132	0.002131	-38%	SELL	BUY
MRSK Siberia	MRKS	0.00100	100%	0.00736	0.0%	0.00100	0.00300	-67%	SELL	BUY
MRSK Urals	MRKU	0.00194	95.0%	0.01138	5.0%	0.00241	0.00653	-63%	SELL	BUY
MRSK Volga	MRKV	0.00100	87.5%	0.00575	12.5%	0.00159	0.00240	-34%	SELL	BUY
MOESK	MSRS	0.0278	100%	0.0553	0.0%	0.0278	0.0478	-42%	SELL	BUY
Lenenergo (ord.)	LSNG	0.0596	100%	0.2667	0.0%	0.0596	0.2098	-72%	SELL	SELL
Lenenergo (pref.)	LSNGP	0.0694	100%	0.5710	0.0%	0.0694	0.5645	-88%	SELL	SELL
FSK	FEES	0.00471	100%	n/a	0.0%	0.00471	0.00682	-31%	SELL	BUY

Source: Aton estimates

Since the government does not plan to surrender control of FSK to private shareholders, we have not run a privatisation scenario for this company.

No significant upsides evident; two HOLDs, rest SELLs

We do not see significant upsides for MRSKs at present under the assumptions discussed in the report. We assign **HOLD** ratings to MRSK Center and MRSK Center and Volga, which are among the likely privatisation candidates, and **SELL** ratings to the rest of the MRSKs.

We downgrade FSK from Buy to **SELL** based on its weakening fundamentals: lower tariff growth rates, higher capex, and no chance of privatisation and its associated efficiency gains.

MRSK Holding SOTP Valuation: Consolidation of FSK Incorporated

MRSK Holding valuation revised on updated target prices for MRSKs and FSK

We have incorporated our final target prices of MRSKs (which are weighted averages of the base and privatisation scenarios) into our sum-of-the-parts valuation of MRSK Holding.

We have also incorporated consolidation of FSK as a contribution of the state's stake in FSK into MRSK Holding's equity in accordance with the scheme approved by President Putin. For valuation purposes we assume the deal is conducted at the current market prices of both MRSK Holding and FSK.

We continue to apply a 20% holding discount to our sum of target values of MRSK Holding subsidiaries.

Figure 94: MRSK Holding SOTP valuation*

Subsidiary name	Ticker	Stake owned	Current EV/RAB 2011E	Fair EV/RAB 2011E	Market value of stake ($mn)	12M target value of stake ($mn)
MRSK Center	MRKC	50%	0.43	0.40	358	425
MRSK South	MRKY	52%	0.57	0.52	42	26
MRSK North Caucasus	MRKK	88%	0.04	0.01	80	75
MRSK Center and Volga	MRKP	50%	0.43	0.38	311	351
MRSK North-West	MRKZ	55%	0.22	0.14	113	70
MRSK Siberia	MRKS	57%	0.23	0.12	169	56
MRSK Urals	MRKU	52%	0.45	0.20	294	109
MRSK Volga	MRKV	68%	0.31	0.17	290	192
MOESK	MSRS	51%	0.64	0.44	1,185	690
Lenenergo	LSNG	59%	0.36	0.24	190	54
Tyumenenergo**	unlisted	100%	0.49	0.34	1,106	1,059
Tomsk DC	TORS	52%	0.31	0.50	38	51
Kubanenergo	KUBE	73%	1.36	-0.08	696	37
FSK	FEES	80%	0.46	0.29	6,924	4,783
Stakes in subsidiaries at current market/12M target value ($mn)					11,796	7,980
Net cash (9M12 unconsolidated RAS) adj. for additional issues ($mn)					444	444
Current market/12M target SOTP ($mn)					12,239	8,423
Current market/Fair premium/(discount) to SOTP					-14.4%	-20.0%
Current/12M Target MktCap ($mn)					10,471	6,739
12M TP (ord.) ($)						**0.0413**
Current price (ord.) ($)						0.0641
Upside/(downside) to 12M TP (ord.)						**-36%**
Fair disount of preferred shares						39%
12M TP (pref.) ($)						**0.0233**
Current price (pref) ($)						0.0409
Upside/(downside) to 12M TP (pref.)						**-43%**

* estimated after additional share issues of MRSK Holding and MRSKs planned for 2012-2013, including share issue of MRSK Holding intended for acquistion of FSK

** market value implied at average asset-based multiples of listed MRSKs

Source: Aton estimates

Downside for MRSK Holding shares evident; downgrade to SELL

Our valuation shows 36% and 43% downsides for MRSK Holding's ordinary and preferred shares respectively, primarily due to downsides seen for the majority of its subsidiaries. We thus downgrade MRSK Holding's ordinary and preferred shares from Hold to **SELL**.

No Visible Triggers Ahead except Potential Privatisation

Privatisation a major trigger for MRSKs, but FSK and MRSK Holding unaffected

We believe privatisation remains the only strong driver for MRSK stocks. For MRSK Holding the privatisation effect should be relatively limited, since there are risks that shareholders would not receive the proceeds, which could be invested in doubtful projects (such as financing of the housing infrastructure fund). There is no privatisation trigger for FSK since the government has never had plans to surrender control of the company to private shareholders.

We also believe it would be difficult to attract true private investors into the sector, especially if the government targets receiving sizable premiums to market valuations.

Investor confidence in the consistency of the regulatory environment has largely vanished and the government's reputation in this regard is compromised.

Details of consolidation terms a relative trigger for FSK and MRSK Holding

Announcement of the FSK and MRSK Holding consolidation terms could prove a relative trigger for these two stocks. However while various scenarios are possible, in the base case we would expect the deal to be done at market terms, which should have no significant impact on stock prices.

A change of government strategy could be a major trigger, but unlikely

The key factor that could potentially turn around the investment story of grid companies is a change in the general state policy towards the utilities sector from state control to promotion of market-based mechanisms, which is unlikely to happen in the near term, in our view. Unless that major paradigm shift happens, we see nothing that could have a significant positive impact on the fundamental value of grid companies and so boost their share prices.

Generation Company Valuations: Negative Factors Intensify

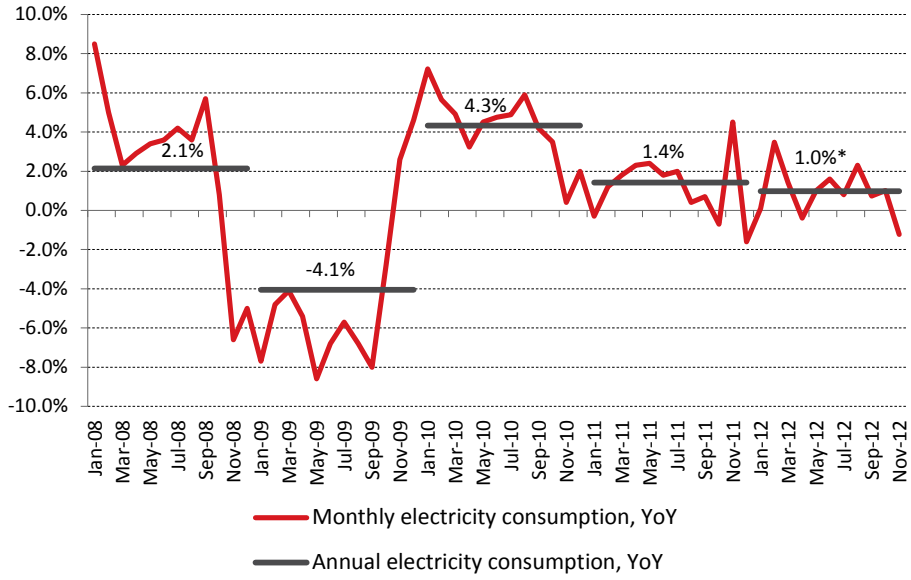
While our general methodology for valuing the generation companies remains unchanged, the major negative scenarios that were outlined in our initiation report on the generation sector: *Electricity Generation: Under Pressure* dated 5 Feb 2011 – oversupply of capacity and the threat of consumers building their own power plants – have materialised and even intensified.

Electricity Demand Growth Deteriorating

Recent electricity demand data shows considerable slowdown

Electricity consumption has considerably slowed, starting with the 2008-09 economic crisis, and now shows much lower YoY growth rates than pre-crisis levels (electricity demand expanded at a CAGR of 2.3% in 1999-2008).

Figure 95: Electricity consumption growth rates (YoY)



* 2012 figure adjusted for additional day in Feb

Source: System Operator

Macroeconomic outlook weakening

Our in-house macro view has changed considerably since our last valuation of generation companies. It now envisages a 0.5% lower GDP growth rate and a whopping 25% hit to the rouble in the longer term compared with previous expectations. Importantly, rouble depreciation has had a material impact on dollar-denominated company cash flows and target prices.

Figure 96: Change in macro assumptions since last review of generation company valuations

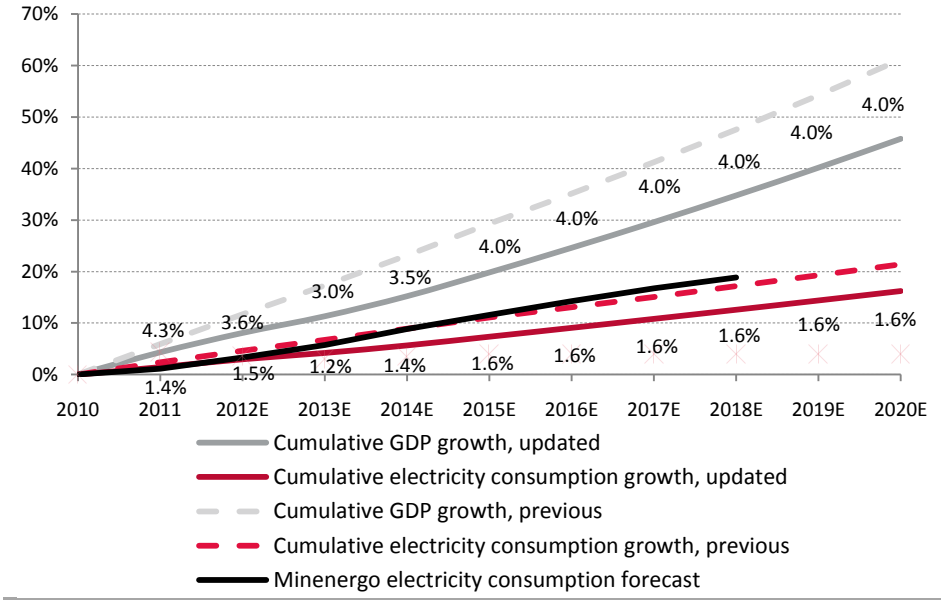
	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
GDP growth updated, %	3.6%	3.0%	3.5%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
GDP growth previous, %	5.5%	5.0%	5.0%	5.0%	4.5%	4.5%	4.5%	4.5%	4.5%
GDP growth change, ppts	-1.9	-2.0	-1.5	-1.0	-0.5	-0.5	-0.5	-0.5	-0.5
CPI updated, Dec/Dec, %	6.5%	5.7%	5.2%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
CPI previous, Dec/Dec, %	6.8%	6.5%	5.5%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
CPI change, Dec/Dec, ppts	-0.3	-0.8	-0.3	0.0	0.0	0.0	0.0	0.0	0.0
RUB/$ updated, aop	32.5	34.8	35.2	35.0	35.0	35.0	35.0	35.0	35.0
RUB/$ previous, aop	28.5	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
RUB/$ change, aop %	14%	24%	26%	25%	25%	25%	25%	25%	25%

Source: Aton estimates

Elecricity demand forecast revised down substantially

We have revised our forecast for electricity consumption growth in correspondence with the updated in-house outlook for GDP (we apply a power consumption to GDP sensitivity ratio of 0.4x derived from a regression on the historical annual data for 1996-2011). Our updated estimates imply an electricity demand CAGR of 1.5% over 2012-18, which is 0.8 ppts below the 2.3% envisaged over the same period in the latest Minenergo forecast released in Aug 2012.

Figure 97: Electricity consumption and GDP forecast



Source: Rosstat, Aton estimates

Siberia expected to see relatively higher demand growth than European Russia

On a regional perspective, we continue to assume electricity consumption will expand at a higher pace in Siberia (a 2012-20 CAGR of 1.8%) vs European Russia and the Urals (1.4%). This is based on Minenergo's demand forecast by area (which is higher in absolute terms, however).

Figure 98: Electricity consumption forecast in European Russia and Urals

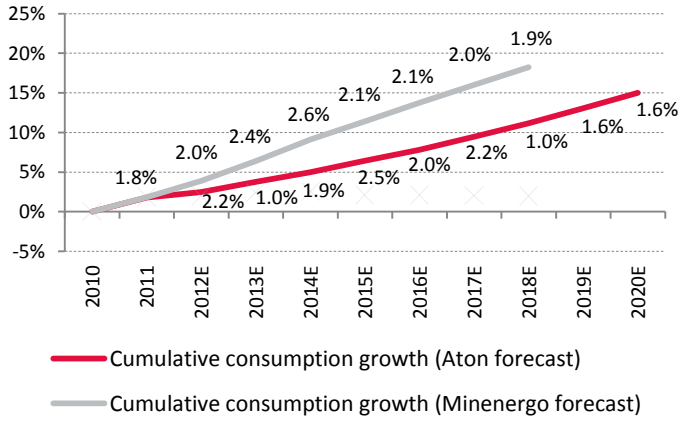
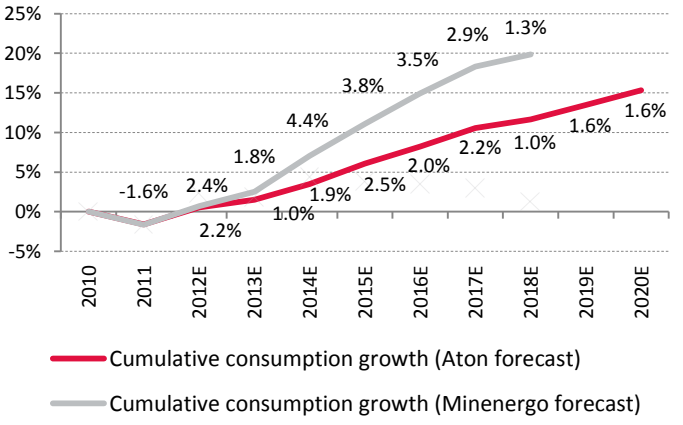


Figure 99: Electricity consumption forecast in Siberia



Source: Minenergo, Aton estimates

Massive Electricity Supply Outlook Remains Intact

Volumes of new capacity commissioning increased 10%

As President Vladimir Putin has repeatedly said that the planned volume of newly commissioned power plants should remain intact, the generation companies are keeping their investment programmes largely unchanged. Moreover, we have increased our total forecast for new capacity commissioning for 2007-20 by 10% to 46.5GW (from 42.3GW) on the basis of the most recent Minenergo programme released in Aug 2012 of which 38.7GW will be in European Russia and 6GW in Siberia. Around 28GW of this capacity is being constructed under capacity delivery agreements.

The massive commissioning of new capacity started in 2010 and has continued in 2011 and 2012. We have shifted forward the volumes of new additions by several years, based on actual commissioning dates as well as the most recent construction schedules provided to us by the companies and envisaged by Minenergo documents. We do not factor in the addition of any capacity other than that expected by the companies or Minenergo.

Figure 100: Capacity additions in European Russia and Urals (MW)

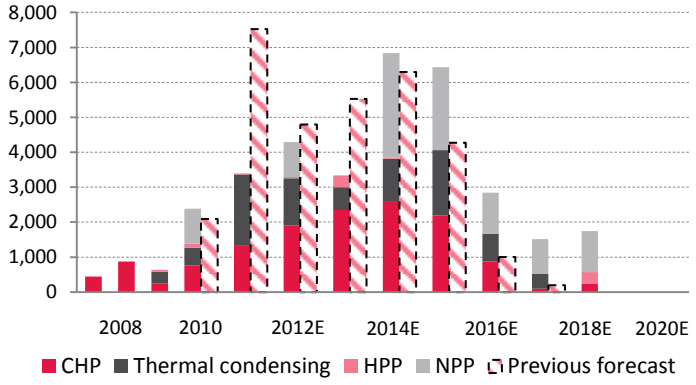
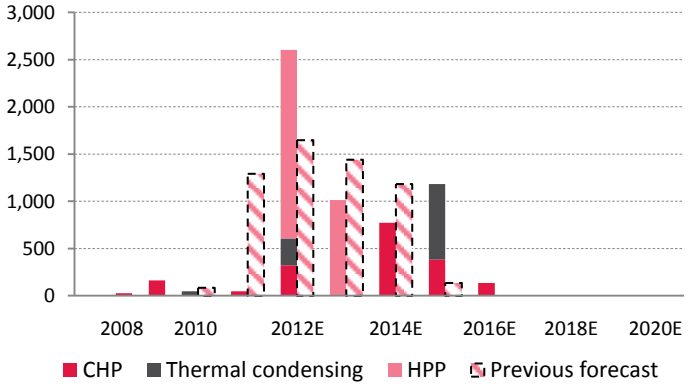


Figure 101: Capacity additions in Siberia (MW)

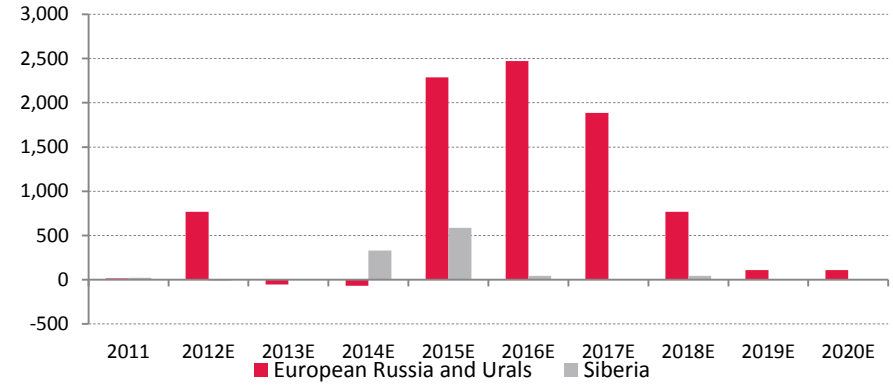


Source: Company data, Aton estimates

Capacity decommissioning remains low

We have incorporated net decommissioning of around 9.3GW of existing capacity over 2012-20 based on company guidance as well as data from Minenergo's official programme for electricity industry development released in Aug 2012. This is only 4.2% of Russia's total installed capacity as of YE11 of 223GW.

Figure 102: Expected capacity decommission less re-marking (MW)



Source: Minenero, Aton estimates

Capacity is set to grow

Based on the above numbers for capacity additions and decommissioning we forecast that installed capacity in Russia will grow at a CAGR of 1.7% over 2011-18, 0.2 ppts above the average electricity demand growth rate of 1.5% in the same period on our estimates. On a regional level, capacity will grow at a 1.9% CAGR in European Russia and the Urals (vs a 1.3% CAGR in corresponding electricity demand), and 1.4% in Siberia (vs a corresponding electricity demand CAGR of 1.8%).

Figure 103: Installed capacity in European Russia and Urals (GW)

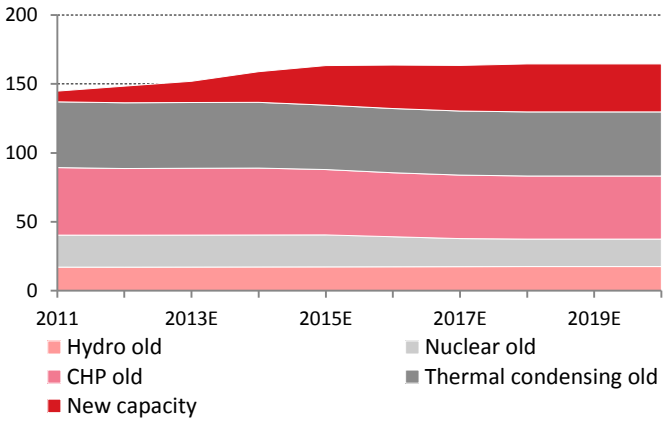
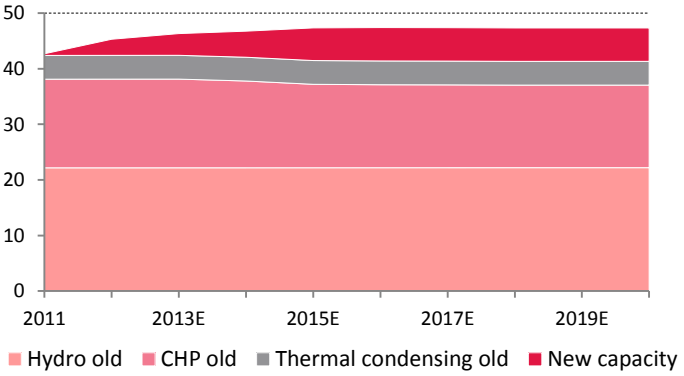


Figure 104: Installed capacity in Siberia (GW)



Source: Company data, Aton estimates

Figure 105: Installed capacity forecast for companies in our coverage (MW)

Ticker	Company	Type of capacity	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
OGKB	OGK-2	Old	17,747	17,707	17,707	17,707	17,327	17,327	17,327	17,327	17,327	17,327
		New	110	650	686	686	2,156	2,156	2,576	2,576	2,576	2,576
		Total	**17,857**	**18,357**	**18,393**	**18,393**	**19,483**	**19,483**	**19,903**	**19,903**	**19,903**	**19,903**
EONR	E.On Russia	Old	8,630	8,630	8,630	8,630	8,630	8,630	8,630	8,630	8,630	8,630
		New	1,659	1,709	1,709	1,709	2,509	2,509	2,509	2,509	2,509	2,509
		Total	**10,289**	**10,339**	**10,339**	**10,339**	**11,139**	**11,139**	**11,139**	**11,139**	**11,139**	**11,139**
OGKE	OGK-5	Old	8,756	8,781	8,781	8,781	8,476	8,476	8,501	8,526	8,526	8,526
		New	820	820	820	820	820	820	820	820	820	820
		Total	**9,576**	**9,601**	**9,601**	**9,601**	**9,296**	**9,296**	**9,321**	**9,346**	**9,346**	**9,346**
TGKA	TGK-1	Old	6,027	5,774	5,751	5,751	5,751	5,759	5,693	5,696	5,696	5,696
		New	810	1,021	1,531	1,560	1,560	1,560	1,660	1,660	1,660	1,660
		Total	**6,837**	**6,795**	**7,281**	**7,311**	**7,311**	**7,319**	**7,353**	**7,356**	**7,356**	**7,356**
MSNG	Mosenergo	Old	10,583	10,577	10,577	10,577	10,407	10,347	10,157	10,157	10,157	10,157
		New	1,761	1,761	1,823	2,463	3,303	3,303	3,303	3,303	3,303	3,303
		Total	**12,344**	**12,338**	**12,400**	**13,040**	**13,710**	**13,650**	**13,460**	**13,460**	**13,460**	**13,460**
TGKD	Quadra	Old	3,218	3,190	3,190	3,190	3,144	2,816	2,816	2,792	2,792	2,792
		New	312	312	532	762	1,092	1,092	1,092	1,092	1,092	1,092
		Total	**3,530**	**3,502**	**3,722**	**3,952**	**4,236**	**3,908**	**3,908**	**3,884**	**3,884**	**3,884**
HYDR	RusHydro	Old	35,092	35,115	35,202	35,419	35,664	35,752	35,825	35,909	35,909	35,909
		New	80	2,498	3,943	4,363	4,683	4,683	5,084	5,426	5,426	5,426
		Total	**35,172**	**37,613**	**39,145**	**39,782**	**40,347**	**40,435**	**40,909**	**41,335**	**41,335**	**41,335**
IRGZ	Irkutskenergo	Old	12,882	12,927	12,927	12,927	12,927	12,947	12,967	12,967	12,967	12,967
		New	0	0	0	0	0	0	0	0	0	0
		Total	**12,882**	**12,927**	**12,927**	**12,927**	**12,927**	**12,947**	**12,967**	**12,967**	**12,967**	**12,967**
KRSG	Krasnoyarskaya HPP	Old	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000
		New	0	0	0	0	0	0	0	0	0	0
		Total	**6,000**	**6,000**	**6,000**	**6,000**	**6,000**	**6,000**	**6,000**	**6,000**	**6,000**	**6,000**

Source: Company data, Aton estimates

Unfavourable Shifts in Electricity Demand Expected to Intensify

New capacity to take load from old plants

Based on the view of demand and supply discussed above, we estimate that the share of new capacity in total production volumes will grow from 4% in 2011 to 27% in 2018. This is primarily explained by capacity oversupply and is emphasised by the fact that new capacity is much more efficient than old capacity, and is likely to get preferential treatment from the System Operator in terms of receiving the maximum load possible.

Figure 106: Electricity production by capacity type in European Russia and Urals (TWh)

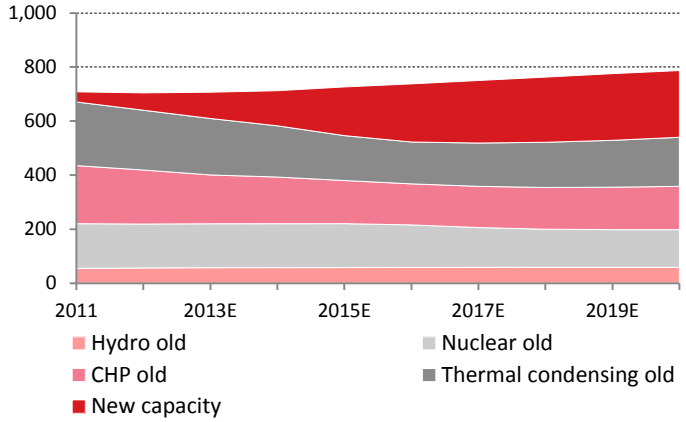
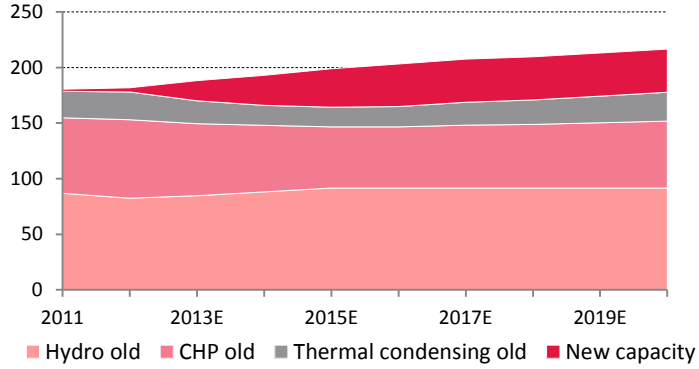


Figure 107: Electricity production by capacity type in Siberia (TWh)



* Does not include power plant operating on retail market

Source: Company data, Aton estimates

Our model shows that new capacity additions should outpace growth in electricity demand, placing downward pressure on the production volumes of old power plants. New hydro, nuclear and fuel-efficient thermal capacity should essentially take load from the older power plants.

Figure 108: Average load factors by capacity type in European Russia and Urals (%)

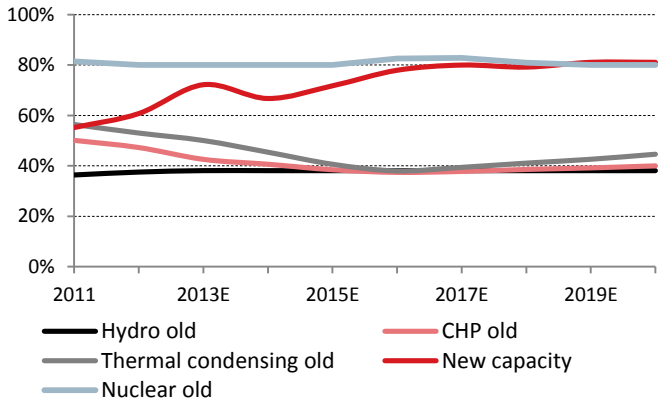
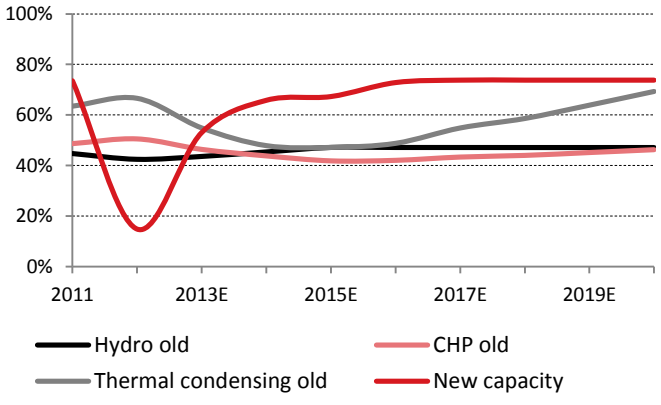


Figure 109: Average load factors by capacity type in Siberia (%)



Source: Company data, Aton estimates

We note that production volumes of less efficient condensing (electricity-only) generators such as OGK-2 and OGK-5 are most vulnerable to expected capacity oversupply. Co-generators such as TGK-1, Mosenergo, Quadra and Irkutskenergo are less sensitive since they are competitive in combined heat and power production mode. Hydro generators (owned by RusHydro, Krasnoyarsk GES, Irkutskenergo and

TGK-1) are virtually invulnerable to unfavourable shifts in the demand-supply balance.

Figure 110: Electricity production forecast (GWh)

Ticker	Company	Type of capacity	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
OGKB	OGK-2	Old	78,942	72,727	68,605	62,254	54,745	51,303	53,129	55,084	57,152	60,616
		New	819	3,848	4,967	5,092	11,270	15,604	17,442	18,732	18,732	18,732
		Total	79,761	76,575	73,572	67,347	66,015	66,907	70,571	73,815	75,884	79,348
EONR	E.On Russia	Old	55,397	51,166	48,472	45,337	42,449	41,206	44,072	46,967	49,801	52,418
		New	7,070	12,654	12,682	12,682	16,422	18,289	18,289	18,289	18,289	18,289
		Total	62,467	63,820	61,154	58,019	58,871	59,495	62,361	65,255	68,089	70,707
OGKE	OGK-5	Old	43,490	42,113	39,671	36,099	31,860	30,410	31,724	33,372	34,830	36,710
		New	1,000	4,800	5,926	5,926	5,926	5,926	5,926	5,926	5,926	5,926
		Total	44,490	46,913	45,597	42,025	37,787	36,337	37,650	39,298	40,756	42,636
TGKA	TGK-1	Old	24,256	23,921	23,122	22,632	21,949	21,631	21,541	21,711	21,860	22,058
		New	4,106	6,318	9,852	9,982	9,982	9,982	10,727	10,727	10,727	10,727
		Total	28,362	30,239	32,975	32,614	31,931	31,613	32,268	32,437	32,587	32,785
MSNG	Mosenergo	Old	56,056	50,898	48,401	46,212	42,468	40,676	40,371	41,052	41,706	42,574
		New	9,712	10,102	13,345	13,570	20,448	24,590	24,590	24,590	24,590	24,590
		Total	65,768	61,000	61,746	59,783	62,916	65,266	64,961	65,643	66,296	67,164
TGKD	Quadra	Old	10,256	9,270	8,815	8,416	8,261	7,399	7,481	7,542	7,663	7,822
		New	951	1,913	3,262	3,799	5,021	6,696	6,696	6,696	6,696	6,696
		Total	11,207	11,183	12,077	12,216	13,282	14,095	14,177	14,239	14,359	14,518
HYDR	RusHydro	Old	107,101	108,056	111,105	113,550	115,917	116,492	117,022	117,590	117,904	118,221
		New	276	276	12,733	20,076	20,812	21,933	21,933	23,338	24,127	24,127
		Total	107,377	108,332	123,838	133,626	136,729	138,425	138,954	140,928	142,031	142,348
IRGZ	Irkutskenergo	Old	59,328	60,337	60,391	59,766	59,328	59,451	59,858	60,039	60,337	60,637
		New	0	0	0	0	0	0	0	0	0	0
		Total	59,328	60,337	60,391	59,766	59,328	59,451	59,858	60,039	60,337	60,637
KRSG	Krasnoyarskaya	Old	18,891	15,868	15,075	16,638	18,200	18,200	18,200	18,200	18,200	18,200
		New	0	0	0	0	0	0	0	0	0	0
		Total	18,891	15,868	15,075	16,638	18,200	18,200	18,200	18,200	18,200	18,200

Source: Company data, Aton estimates

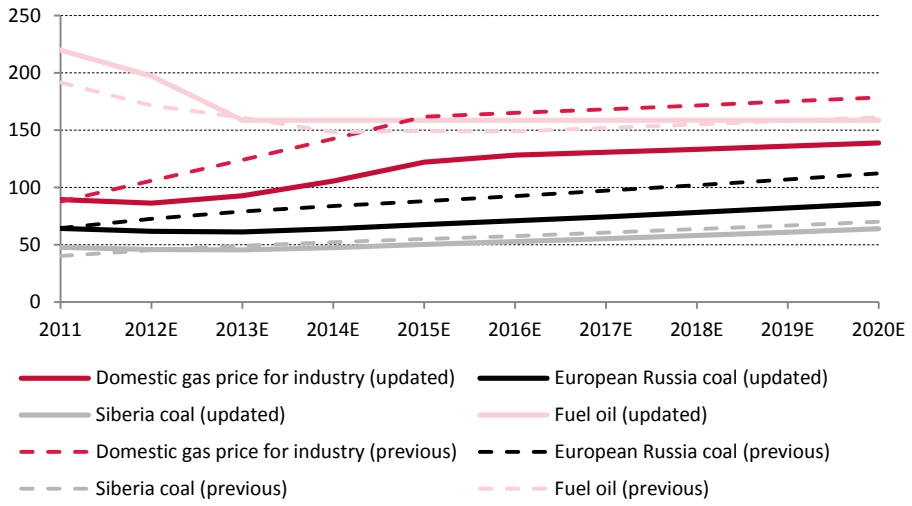
Fuel Price Outlook: Lower Gas Price Growth Expected

We have adjusted our price forecast for gas, which is the main fuel used in Russia, to account for the slowdown of tariff growth in 2012 and our higher oil price outlook. We continue to assume that the domestic gas price will grow at a 15% rate per year in rouble terms from 2013 until it reaches netback parity level with exports, which will happen in 2016-17, in line with our oil and gas team's view, and at a 2% rate from 2018.

While we believe gas prices are the major factor behind electricity price growth, the government still appears content with annual gas hikes of 15% (as envisaged by the latest socio-economic forecast for 2013-15 released by the Ministry of Economic Development in Sep 2012).

We continue to expect thermal coal prices to be linked to inflation, which we now forecast at lower levels.

Figure 111: Fuel price assumptions ($/tfe*)



*1 tfe = 7,000 kCal

Source: FTS, Company data, Aton estimates

Thoughts on Potential Changes to Market Model for Generators

The government recently announced plans to amend the current market model with the aim of creating incentives for further private investment into asset modernisation and new capacity construction, while at the same time keeping end-user electricity prices under control. Various decision-making bodies have revealed a number of potential directions for change, including:

1) Creation of a single-price model based primarily on the bilateral contracts between electricity producers and consumers (instead of the currently employed two-tier structure of electricity and capacity markets).
2) Extension of the capacity delivery contracts (DPM) framework to include additional modernisation and new-build projects.
3) Launching of long-term capacity auctions (KOM) three-to-four years ahead of the capacity delivery time (this was first proposed by the utility sector reformers, although it has never been implemented).

As of the date of this report, there is no clear guidance from the government and its various decision-making bodies on what is most likely to be implemented.

In this regard our view is that any serious changes to the current pricing principles are unlikely, since we believe the current system is close to the optimum solution for yielding relatively low electricity prices to consumers while creating the conditions for asset modernisation and development of generators, such as the DPM-framework. We acknowledge that there are still serious issues outstanding such as the requirement to pay for excess capacity and the non-efficient location of new power plants, but overall we believe the current system clearly favours consumers at the expense of generation company shareholders. Any significant changes would either lead to higher electricity prices for consumers or escalate risks for generators, which could lead to a deterioration rather than an improvement of incentives for them to invest.

Thus for valuation purposes we continue to value generators within the currently established market framework.

Electricity Market Outlook Deteriorating Further

We have applied a generally more conservative, although, we believe, more realistic outlook for electricity and capacity prices based on recent regulatory developments as well as our updated, further downgraded view on the electricity demand/supply balance.

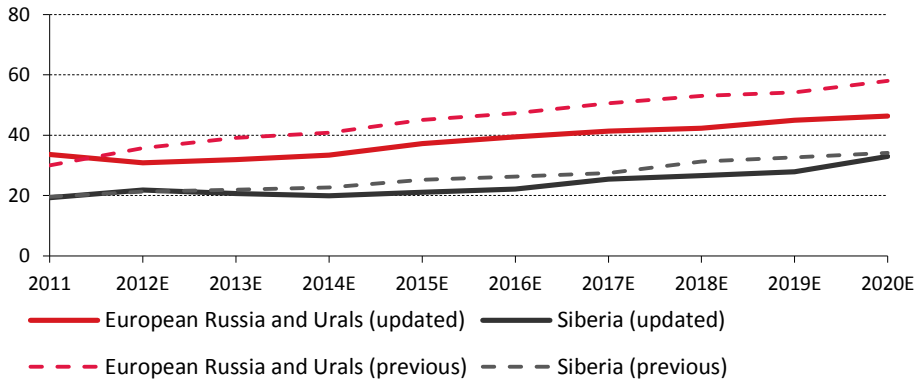
Day-ahead market prices forecast lowered

We continue to apply our in-house electricity market model to derive the forecast for day-ahead (spot) market prices.

For European Russia and the Urals our unrestricted estimates of the day-ahead market price remains generally intact vs our previous valuation in the long term in rouble terms (the lower dollar numbers on the chart below are explained by revised macro assumptions, which imply stronger rouble depreciation). The higher price in 2011 due to lower-than-expected new capacity commissioning volumes has been offset by a lower-than-expected gas tariff hike in 2012.

For Siberia, however, our forecast for unrestricted day-ahead market prices is now higher in rouble terms primarily due to a sharp hike of the price seen in 2012. This is driven by coal price growth as well as regulators' rulings with regards to Rusal, which previously had reportedly manipulated the day-ahead market price, artificially keeping it low. However this has been offset by rouble depreciation since our previous valuation, so that in dollar terms the forecast for the unrestricted day-ahead market price in Siberia is broadly intact from our previous valuation.

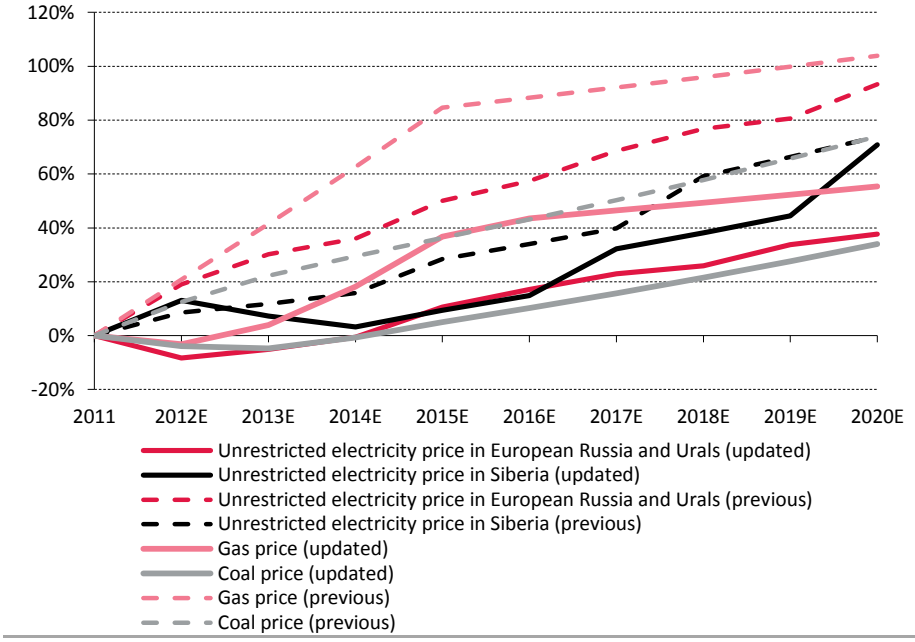
Figure 112: Unrestricted equilibrium electricity price ($/MWh)



Source: Aton estimates

Our model thus results in the electricity price lagging behind fuel prices, a negative development for generation companies' margins on the liberalised market. This is primarily a consequence of capacity oversupply, which we expect to intensify going forward.

Figure 113: Unrestricted wholesale electricity price vs fuel price growth



Source: Aton estimates

Commissioning of electricity consumers' own power plants

On top of the forecast above we continue to apply a constraint related to the threat of big electricity users building their own power plants. We calculate the breakeven level of the day-ahead market electricity price at which it becomes irrelevant for power consumers to continue consuming electricity from the system or construct their own generation facilities and disconnect from the centralised electricity system. We then assume that the day-ahead price will not exceed this breakeven level, because if it does consumers will start disconnecting from the system, demand will shrink and the day-ahead price will drop. Below we present our updated calculation results; for details on methodology see our initiation report ***Electricity Generation: Under Pressure*** released 15 Feb 2011.

The calculation incorporates the updated outlook for wholesale electricity and capacity prices, grid company tariffs and fuel prices.

Figure 114: Cost of electricity from new private power plant and unified system in European Russia and Urals ($/MWh)

	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
Cost of electricity from own new power	**76**	**83**	**78**	**77**	**80**	**86**	**89**	**91**	**93**	**96**	**98**
Fuel	19	22	21	22	24	28	29	30	30	31	32
Operating & maintenance	5	5	5	5	5	6	6	6	6	7	7
Tax	7	8	7	7	7	7	8	8	8	8	8
Cost of capital	45	48	45	43	44	45	46	47	48	50	51
End-user price of electricity from the system	**71**	**82**	**74**	**76**	**80**	**88**	**93**	**98**	**101**	**105**	**110**
Wholesale electricity price	29	34	31	32	33	37	39	41	42	45	46
Capacity payment	15	16	14	14	15	17	18	19	20	21	22
Transmission (FSK) tariff	6	8	7	7	8	9	10	10	11	12	13
Distribution (MRSK&TSO) tariff	17	20	18	18	19	21	22	23	23	23	24
Losses compensation	4	4	4	4	4	4	4	5	5	5	5

Source: Aton estimates

Figure 115: Cost of electricity from new private power plant and unified system in Siberia ($/MWh)

	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
Cost of electricity from own new power plant	**79**	**85**	**80**	**78**	**79**	**83**	**85**	**88**	**91**	**94**	**97**
Fuel	13	15	15	15	15	16	17	18	19	20	20
Operating & maintenance	8	9	8	8	9	9	10	10	11	11	12
Tax	8	9	8	8	8	8	8	8	9	9	9
Cost of capital	49	53	49	47	48	49	50	52	53	54	56
End-user price of electricity from the system	**45**	**53**	**54**	**54**	**56**	**60**	**63**	**69**	**73**	**77**	**84**
Wholesale electricity price	17	19	22	21	20	21	22	25	27	28	33
Capacity payment	10	11	11	12	13	14	15	15	16	17	18
Transmission (FSK) tariff	7	8	8	8	9	10	10	11	12	12	13
Distribution (MRSK&TSO) tariff	9	13	11	12	12	13	14	14	15	16	16
Losses compensation	2	3	3	3	2	2	3	3	3	3	4

Source: Aton estimates

Figure 116: Cost of electricity in European Russia and Urals ($/MWh)

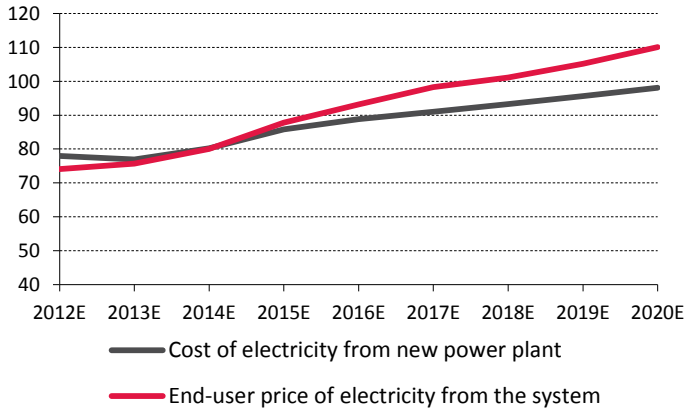
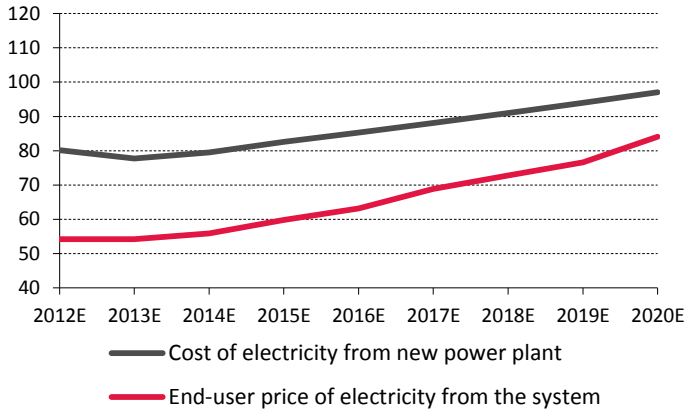


Figure 117: Cost of electricity in Siberia ($/MWh)



Source: Aton estimates

Our updated outlook shows that the own power plant cost of electricity converges to the price of electricity from the system in European Russia and the Urals in 2014, and becomes cheaper in 2015. This is one year later than our previous forecast. The delay is explained primarily by regulatory tightening measures enacted in 2011-12, which led to lower growth in the end-user electricity price from the centralised system than we expected earlier. The situation is different in Siberia: we estimate that it would be more expensive for consumers to build their own power plants than to pay for electricity from the system until at least 2020.

We then derive the implied breakeven wholesale electricity price which equalises the cost of electricity from the system with the cost of own power plant electricity, and assume that the day-ahead market electricity price does not exceed that level.

Figure 118: Breakeven wholesale electricity price calculation ($/MWh)

	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
European Russia & Urals											
Cost of electricity from own new power plant, less:	76	83	78	77	80	86	89	91	93	96	98
Capacity payment	15	16	14	14	15	17	18	19	20	21	22
FSK tariff	6	8	7	7	8	9	10	10	11	12	13
MRSK tariff	17	20	18	18	19	21	22	23	23	23	24
Loss compensation	4	4	4	4	4	4	4	5	5	5	5
Breakeven wholesale electricity price	**34**	**34**	**35**	**33**	**34**	**35**	**35**	**34**	**35**	**35**	**34**
Siberia											
Cost of electricity from own new power plant, less:	79	85	80	78	79	83	85	88	91	94	97
Capacity payment	10	11	11	12	13	14	15	15	16	17	18
FSK tariff	7	8	8	8	9	10	10	11	12	12	13
MRSK tariff	9	13	11	12	12	13	14	14	15	16	16
Loss compensation	2	3	3	3	2	2	3	3	3	3	4
Breakeven wholesale electricity price	**51**	**51**	**48**	**44**	**44**	**44**	**44**	**45**	**45**	**45**	**46**

Source: Aton estimates

Figure 119: Final wholesale electricity price forecast in European Russia and Urals ($/MWh)

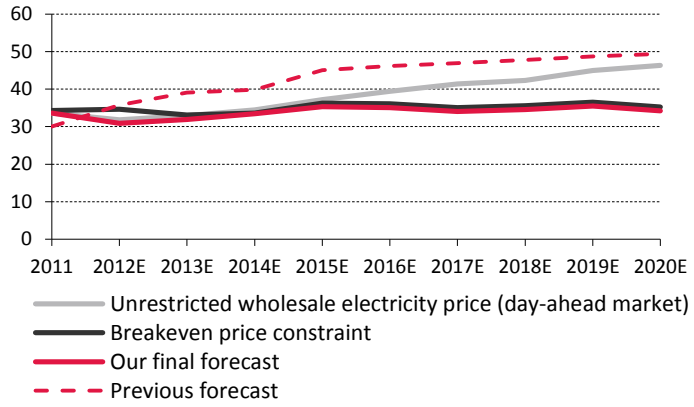
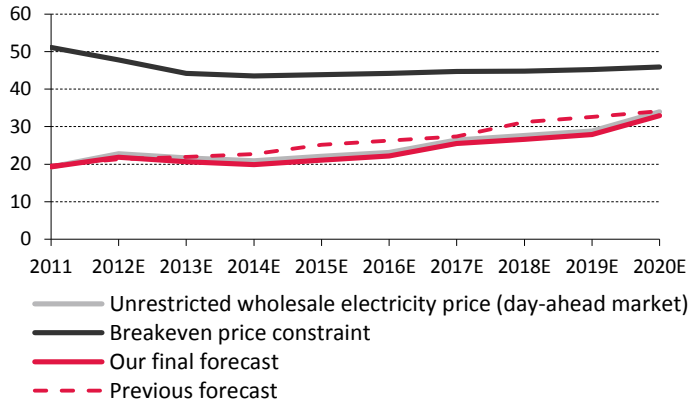


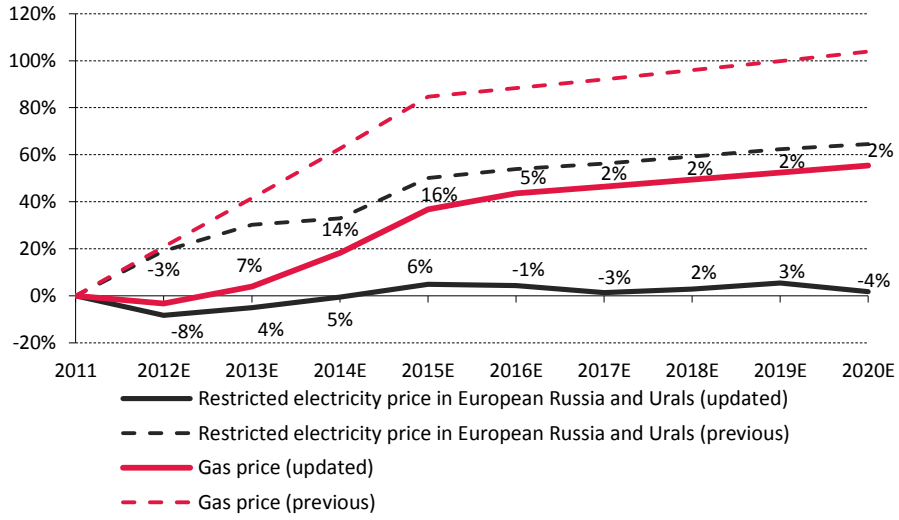
Figure 120: Final wholesale electricity price forecast in Siberia ($/MWh)



Source: Aton estimates

As the charts above show, we expect the day-ahead electricity price in European Russia and the Urals to virtually stop growing from 2015 due to competition from consumer-owned power plants. This would lead to further widening of the gap between the gas price and the spot electricity price, which would eradicate generators' margins on the electricity market. Notably, one of the key reasons for the significant reduction of our forecast in dollar terms relative to our previous valuation is a much weaker rouble (up to 25%) than expected before.

Figure 121: Final (restricted) forecast for the day-ahead electricity price in European Russia vs the gas price (dollar terms)



Source: Aton estimates

We also incorporate the regulatory tightening measures discussed in the regulation section above, and make the changes outlined below to our valuation methodology of the generation companies concerning the electricity market.

No liberalisation of volumes supplied to population

Previously we assumed that electricity supplies to the population would be gradually liberalised by 2015. We have stopped doing so since there has been no indication from decision-makers that this will take place.

Supplies to population become loss-making

To our knowledge, regulated electricity tariffs for supplies to the population have remained unchanged despite a gas tariff hike of 15% from 1 July 2012. This implies that the generators are now required to sell electricity to residential consumers at a price below fuel costs of production (see Figure 10 above). According to our discussions with company representatives, there are no plans to provide any compensation for these losses. For valuation purposes, we assume that the gap between the electricity tariff for supplies to the population and fuel costs estimated for 2012 will continue in the foreseeable future.

Contracts with Rusal modelled for foreseeable future

We incorporate new long-term contracts with Rusal for TGK-1. We also continue to model long-term contracts of Irkutskenergo and Krasnoyarsk HPP with Rusal, with one important change in order to be on the conservative side: we now assume the contracts will continue indefinitely (previously we assumed they would be cancelled from 2019). This is due to weak aluminium prices and the passive position of RusHydro (a big minority shareholder of Krasnoyarsk HPP and likely to take on the same role in Irkutskenergo), which lead us to believe it is too early to price in cancellation of the contracts at this stage.

Electricity market earnings outlook appears even weaker now

The amendments to our outlook on the demand/supply relationship, fuel and electricity prices, regulatory tightening measures and other valuation assumptions discussed above have resulted in significant changes to our view on company earnings in the electricity market.

We previously expected a sharp deterioration in thermal generators' earnings from the electricity market, and this is now expected to be more extreme. Hydro capacity is clearly a winner on the electricity market because it has no fuel costs. However our updated forecast shows considerably lower earnings for HPPs than before.

Figure 122: EBITDA from the electricity market* per unit of installed capacity ($/kW)

Ticker	Company	Aton forecast	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
OGKB	OGK-2	Total (blended)	14	15	11	9	6	7	8	6	6	6	5
		Old capacity upd.	14	15	9	7	5	2	1	0	0	1	1
		Old capacity prev.	25	23	27	26	19	22	22	23	24	25	26
		New capacity	18	36	48	57	48	48	65	44	43	43	31
EONR	E.On Russia	Total (blended)	38	52	53	49	43	38	36	37	39	42	43
		Old capacity upd.	40	49	41	36	29	24	21	22	24	28	28
		Old capacity prev.	39	45	51	51	42	46	47	51	59	64	68
		New capacity	7	71	116	116	111	86	89	89	90	94	96
OGKE	OGK-5	Total (blended)	26	31	28	29	26	25	21	18	18	19	15
		Old capacity upd.	26	33	26	25	23	23	20	18	18	19	15
		Old capacity prev.	31	28	33	33	30	37	36	37	39	42	43
		New capacity	0	13	58	70	59	45	33	22	21	23	15
TGKA	TGK-1	Total (blended)	35	50	46	46	45	44	43	42	42	44	42
		Old capacity upd.	37	49	44	45	47	49	49	49	49	51	49
		Old capacity prev.	38	49	62	73	81	95	97	98	100	102	104
		New capacity	17	55	54	48	40	26	20	19	19	20	18
MSNG	Mosenergo	Total (blended)	18	28	16	17	9	6	4	2	2	2	1
		Old capacity upd.	12	22	12	11	4	1	1	1	1	1	1
		Old capacity prev.	17	17	13	9	3	2	3	3	2	2	1
		New capacity	65	59	44	52	29	21	15	4	4	5	2
TGKD	Quadra	Total (blended)	-3	0	2	3	1	-2	-2	-2	-2	-2	-2
		Old capacity upd.	-5	-3	-2	-2	-2	-3	-3	-3	-3	-3	-3
		Old capacity prev.	4	3	3	2	0	0	0	0	0	0	0
		New capacity	25	25	37	30	14	1	1	1	0	1	0
HYDR	Rushydro	Total (blended)	28	43	38	41	45	49	50	51	53	56	60
		Old capacity upd.	28	42	40	42	45	49	49	50	51	54	57
		Old capacity prev.	36	47	60	74	84	100	103	106	111	114	117
		New capacity	37	114	3	31	50	48	56	58	63	71	82
IRGZ	Irkutskenergo	Total (blended)	29	53	40	43	45	49	51	57	59	61	70
		Old capacity upd.	29	53	40	43	45	49	51	57	59	61	70
		Old capacity prev.	34	50	59	66	76	84	87	90	101	129	134
		New capacity	0	0	0	0	0	0	0	0	0	0	0
KRSG	Krasnoyarskaya HPP	Total (blended)	20	25	17	18	21	24	24	24	24	24	24
		Old capacity upd.	20	25	17	18	21	24	24	24	24	24	24
		Old capacity prev.	39	37	40	42	45	50	50	51	55	57	103
		New capacity	0	0	0	0	0	0	0	0	0	0	0

*defined as electricity revenue less fuel costs and electricity purchased for resale

Source: Company data, Aton estimates

Capacity Market: A Target for Regulatory Tightening

The capacity market is de-facto fully regulated and as such has been the major mechanism for the government to impose regulatory tightening.

Regulatory tightening measures incorporated

We have incorporated the amended regulated capacity tariffs for supplies to the population and for "forced" and "expensive" generators discussed in the regulation section above, in accordance with official regulatory decisions. We have also changed our assumption for Siberian hydros: we now forecast they will indefinitely sell their entire capacity at the regulated tariffs, which are considerably below the capacity

auction (KOM) price (see Figure 64 above for details). We previously assumed they would start to sell their capacity at KOM prices from 2013.

KOM prices: no surprises; price caps work just fine

In line with our initial prediction outlined more than two years ago in our 2 June 2010 report ***Russian Utilities: Generators Unappealing: Rebalance to Distribution***, the so-called 'unregulated' KOM prices for 2012 and 2013 have remained generally within the regulator-established price caps even in price zones deemed "competitive" with no formal price caps imposed (with the Siberia free flow zone being the only exception).

Figure 123: Capacity auction (KOM) results

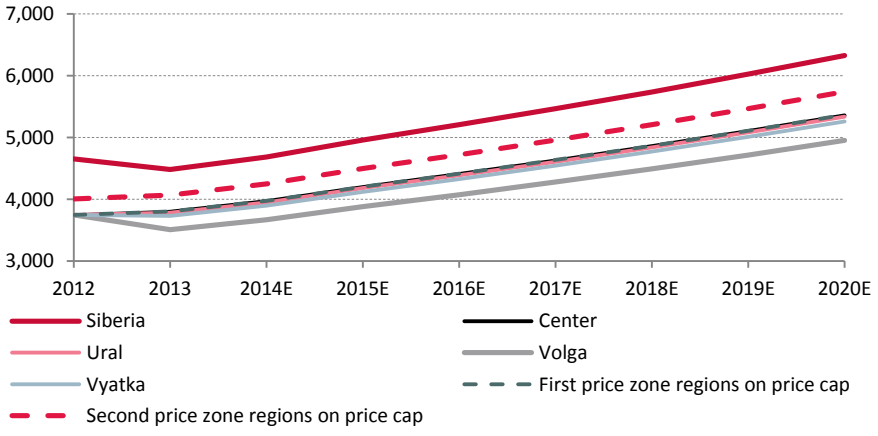
	2012 KOM results			2013 KOM results		
Free flow zone	KOM price	Price cap	Difference	KOM price	Price cap	Difference
Siberia	146,788	126,368	16%	156,000	136,757	14%
Center	118,100	118,125	0%	127,656	127,837	0%
Ural	118,118	118,125	0%	127,100	127,837	-1%
Volga	118,125	118,125	0%	117,999	127,837	-8%
Vyatka	118,125	118,125	0%	125,331	127,837	-2%
First price zone regions with price cap (Tyumen, Perm, Balakovo, Caucasus, Volgograd, Caspian, Rostov, Kuban, Makhachkala, Moscow, West, Kola)	118,125	118,125	0%	127,837	127,837	0%
Second price zone regions with price cap (South Kuzbass, Omsk, Chita, Buryatia, Altay)	126,368	126,368	0%	136,757	136,757	0%

Source: System Operator

Any illusions that the 'unregulated' KOM price would be considerably higher than the price caps in "competitive" free flow zones should now have vanished. In this regard there are two notable cases. First, in the 2011 capacity auction the KOM price in the Siberian free flow zone was initially RUB200,000/MW per month, or 58% above the respective price cap of RUB126,368/MW, and the government immediately reacted by introducing the price cap in that zone. Second, during the 2013 capacity auction the KOM price in the Volga free flow zone formed at RUB153,966/MW, or 20% above the respective price cap of RUB127,837/MW, and the Federal Antimonopoly Service immediately reacted by saying the price had been manipulated. The final Volga region KOM price was lowered to RUB117,999/MW.

We forecast capacity auction prices on the basis of the actual 2013 KOM results and index them with expected inflation, in line with our previous approach.

Figure 124: Capacity auction (KOM) price forecast ($/MW per month)



Source: System Operator, Aton estimates

No significant fixed cost cuts incorporated now

We have become more cautious about company operating efficiency. We now assume companies' fixed costs will grow at the full CPI rate going forward (previously we took half the CPI rate), meaning that the margins of companies' old capacity on the capacity market will stay flat rather than expand.

Figure 125: Old capacity's EBITDA from the capacity market* ($/kW)

Ticker	Company		2010	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
OGKB	OGK-2	Upd.	6	-1	4	10	10	11	12	12	13	14	14
		Prev.	-2	12	12	15	17	20	22	24	26	29	31
EONR	E.On Russia	Upd.	13	16	14	15	16	17	18	18	19	20	21
		Prev.	7	16	17	19	22	25	27	29	31	34	37
OGKE	OGK-5	Upd.	14	12	10	10	11	11	12	13	13	14	15
		Prev.	12	15	14	17	19	21	24	26	28	30	33
TGKA	TGK-1	Upd.	1	-3	-8	-7	-7	-7	-8	-9	-9	-9	-10
		Prev.	-3	17	16	15	11	12	13	15	17	19	21
MSNG	Mosenergo	Upd.	26	22	17	18	19	20	21	22	23	24	25
		Prev.	17	19	21	21	20	21	23	25	28	30	33
TGKD	Quadra	Upd.	26	32	25	23	21	19	15	15	15	16	17
		Prev.	25	24	26	23	18	15	17	19	21	23	25
HYDR	RusHydro	Upd.	20	1	-10	-10	-10	-10	-11	-11	-12	-12	-13
		Prev.	31	27	6	12	16	18	20	22	24	26	28
IRGZ	Irkutskenergo	Upd.	14	-1	-6	-6	-6	-6	-6	-7	-7	-7	-8
		Prev.	3	2	1	16	18	21	23	25	27	49	52
KRSG	Krasnoyarskaya HPP	Upd.	10	-3	-2	-2	-2	-2	-2	-2	-2	-3	-3
		Prev.	2	-5	-8	-8	-8	-8	-7	-8	-8	-8	-9

*defined as capacity revenue less fixed cash costs (O&M) attributed to the electricity business

Source: Company data, Aton estimates

New Capacity Valuation

Separate accounting for DPM projects in full accordance with official methodology

We continue to separately calculate cash flows for the 67 investment projects of the companies under our coverage for the following two reasons. First, each project has an individual capacity payment assigned by the regulator, and these capacity payments differ considerably from each other. Second, the DPM capacity payments last for a limited period of time, which is 10 years for thermal and 20 years for hydro capacity, after which new capacity is deemed old and receives a much lower capacity payment (i.e. a capped KOM price).

We base our calculations on the official methodology for projects implemented within the capacity delivery contract (DPM) framework (see our 15 Feb 2011 report ***Electricity Generation: Under Pressure*** for details on the methodology), with the following amendments.

Delayed new capacity commissioning dates

We have put back estimates of actual commissioning dates by half a year for DPM projects where we do not have enough information to be confident they will be completed on time (this relates to the majority of DPM projects).

Regulatory WACC for DPM projects revised down by 50 bpts to 11.9%

We reduce our estimate of long-term government bond yields used in the calculation of regulatory WACC for DPM projects to 6.5% from 7.0% starting from 2012, in order to bring it in line with the assumption used in the calculation of company WACCs. This reduced our regulatory rate of return estimate for DPM to 11.9% from 12.4%.

Notably, this is still higher than the estimates applied to RAB regulation for grid companies of 10% (FSK) and 11% (MRSKs).

Majority of investment projects are value erosive

In our initiation report on utility companies, we estimated that the majority of investment projects have negative NPV at their inception, and this is even more marked under our revised assumption in this update. In the initiation report we listed two core reasons for negative NPV: a lower regulatory rate of return (11.9%) vs actual company WACCs (13-17.4%) and a longer actual construction time (three to five years) than provided for by the regulator (1.5-2.5 years). In addition, we now see the following major factors that add to negative NPV under DPM:

1) **Actual construction costs higher than normative**.

Figure 126: Actual vs normative capex ($mn)

Company	Project name	Increase in capacity (MW)	Year of commissioning	Actual capex attributed to electricity ($mn)	Normative capex ($mn)	Actual vs normative
E.On Russia	Shaturskaya GRES	393	2010	475	413	15%
	Surgutskaya GRES-2	397	2011	453	471	-4%
	Surgutskaya GRES-2	397	2011	453	471	-4%
	Yayvinskaya GRES	422	2011	513	472	9%
OGK-5	Sredneuralskaya GRES	410	2011	433	459	-6%
	Nevinnomysskaya GRES	410	2011	504	374	34%
TGK-1	Yuzhnaya CHP-22	425	2010	354	446	-21%
	Pervomayskaya CHP-14 N2	180	2012	259	226	14%
	Pervomayskaya CHP-14 N1	180	2011	259	226	14%
Mosenergo	GTU_CHP	16	2009	37	24	51%
	CHP-26	420	2011	360	441	-18%
Quadra	Voronezhskaya CHP-2	115	2010	101	176	-42%
	Eletskaya CHP	52	2009	36	79	-54%
	Kursk North-West boiler	115	2011	104	176	-41%
	Kaluzhskaya CHP	30	2011	44	46	-4%

Source: Company data, Aton estimates

2) **Expected profit from the electricity market below expectations**
Due to our significantly downgraded outlook on electricity market prices, and given the unchanged parameters employed in calculation of DPM capacity prices, we believe the latter project higher profits than will actually be realised. This means the projects' IRR will be lower than the statutory rate of return provided by the regulator.

3) **Actual capacity payments lower than calculated under official methodology**
We have discovered that in many cases the set capacity tariffs are far below those calculated in accordance with the officially established methodology. Unfortunately the regulator (the Market Council in this case) does not disclose the calculations or size of capacity payments for DPM projects, and the companies are also very reluctant to do so. This makes the whole process opaque and unauditable. We believe that in many cases low capacity payments are not justified and are actually another tool at the regulator's disposal to curb growth of end-user electricity prices.

Figure 127: Actual vs expected new capacity tariffs ($/MW per month)

Company	Station	Project Installed capacity (MW)	Aton estimate	Current price	Difference
OGK-2	Kirishskaya GRES	500	18,232	8,219	-55%
	GRES-24	110	20,861	6,298	-70%
E.On Russia	Shaturskaya GRES	393	14,912	15,227	2%
	Surgutskaya GRES-2	794	16,748	16,496	-2%
	Yayvinskaya GRES	422	16,075	15,861	-1%
OGK-5	Sredneuralskaya GRES	410	15,790	15,376	-3%
	Nevinnomysskaya GRES	410	13,822	13,839	0%
TGK-1	Yuzhnaya CHP-22	425	14,773	14,754	0%
	Pervomayskaya CHP-14 N2	360	17,911	18,026	1%
	Vasileostrovskaya CHP-7	50	19,610	18,431	-6%
	Viborgskaya CHP-17	23	27,315	3,633	-87%
	Volkhovskaya Hydro	3	10,816	3,633	-66%
	Lesogorskaya Hydro-10	6	4,870	1,776	-64%
	Svetogorskaya Hydro-11	7	4,845	1,776	-63%
Mosenergo	CHP-27	900	14,997	14,772	-1%
	CHP-21	425	14,946	14,772	-1%
	GTU-CHP	16	24,261	14,772	-39%
	CHP-26	420	14,480	14,772	2%
Quadra	Voronezhskaya CHP-2	115	21,862	23,274	6%
	Eletskaya CHP	52	22,018	21,266	-3%
	Kursk North-West boiler	115	22,342	24,735	11%
	Kaluzhskaya CHP	30	22,685	22,824	1%
Rushydro	Zagorskaya GAES-2	420	40,535	39,979	-1%

Figure 128: Investment project summary

Ticker	Company name	Project name	DPM (+ or -)	Moderni-zation or New (M or N)	Expected commissioni ng date	Electric capacity addition (MW)	Heat capacity addition (Gcal/h)	Main fuel	Fuel burn rates electricity (gfe/kWh)	Fuel burn rates heat (tfe/Gcal)	Actual capex (electricity) ($mn)	Normative capex (electricity) (RUBmn)	Normative capex (electricity) ($mn)	Capacity payment * ($/kW month)	NPV at inception** ($mn)	PV of residual cash flows *** ($mn)
OGKB	OGK-2	Stavropolskaya GRES	+	N	May-17	420	n/a	Gas	229	n/a	462	13,417	426	16	-237	-213
OGKB	OGK-2	Troitskaya GRES	+	N	May-15	660	n/a	Coal	292	n/a	1,220	41,091	1,304	33	-571	233
OGKB	OGK-2	Serovskaya GRES	+	N	May-15	420	n/a	Gas	229	n/a	565	16,135	512	17	-489	-43
OGKB	OGK-2	GRES-24	+	M	Jun-10	110	n/a	Gas	280	n/a	112	5,294	168	29	-190	5
OGKB	OGK-2	Ryazanskaya GRES	+	M	May-15	60	n/a	Gas	220	n/a	111	2,888	92	37	-31	-15
OGKB	OGK-2	Novocherkasskaya GRES	+	M	Jul-13	36	n/a	Coal	290	n/a	25	2,069	66	10	-6	-5
OGKB	OGK-2	Novocherkasskaya GRES	+	M	May-15	330	n/a	Coal	329	n/a	654	17,445	554	29	-478	14
OGKB	OGK-2	Kirishskaya GRES	+	M	Apr-12	540	n/a	Gas	222	n/a	536	18,866	599	8	-717	121
EONR	E.On Russia	Shaturskaya GRES	+	N	Nov-10	393	n/a	Gas	220	n/a	475	13,003	413	16	-340	338
EONR	E.On Russia	Surgutskaya GRES-2	+	N	Jul-11	397	n/a	Gas	222	n/a	453	14,844	471	17	14	663
EONR	E.On Russia	Surgutskaya GRES-2	+	N	Jul-11	397	n/a	Gas	222	n/a	453	14,844	471	17	14	663
EONR	E.On Russia	Yayvinskaya GRES	+	N	Sep-11	422	n/a	Gas	220	n/a	513	14,883	472	16	-230	512
EONR	E.On Russia	Berezovskaya GRES	+	N	May-15	800	430	Coal	322	145	998	51,142	1,624	44	591	631
EONR	E.On Russia	Berezovskaya GRES	+	N	Jan-12	50	n/a	Coal	290	n/a	8	3,474	110	5	25	35
EONR	E.On Russia	Berezovskaya GRES	+	N	Dec-10	50	n/a	Coal	290	n/a	7	3,474	110	4	24	31
OGKE	OGK-5	Sredneuralskaya GRES	+	N	Nov-11	410	200	Gas	235	146	433	14,450	459	15	-285	444
OGKE	OGK-5	Nevinnomysskaya GRES	+	N	Aug-11	410	n/a	Gas	235	n/a	504	11,796	374	13	-441	250
TGKA	TGK-1	Tsentralnaya CHP-2	+	N	Jan-17	100	120	Gas	220	140	259	4,813	153	22	-254	-196
TGKA	TGK-1	Yuzhnaya CHP-22	+	N	Dec-10	425	290	Gas	244	125	354	14,061	446	15	-307	344
TGKA	TGK-1	Pravobereghnaya CHP-5 N2	+	N	Jan-13	450	156	Gas	259	145	415	14,888	473	13	-539	164
TGKA	TGK-1	Pervomayskaya CHP-14 N2	+	N	Jan-12	180	119	Gas	251	125	259	7,129	226	19	-321	164
TGKA	TGK-1	Pervomayskaya CHP-14 N1	+	N	Mar-11	180	119	Gas	251	125	259	7,129	226	18	-294	171
TGKA	TGK-1	Vasileostrovskaya CHP-7	+	M	Sep-09	50	100	Gas	307	143	46	2,406	76	12	-38	46
TGKA	TGK-1	Viborgskaya CHP-17	-	M	Jun-09	23	168	Gas	281	124	32	1,107	35	5	-71	1
TGKA	TGK-1	Volkhovskaya Hydro	-	M	Jan-09	12	n/a	Hydro	n/a	n/a	13	n/a	n/a	13	-46	7

*in the first year of new capacity commissioning
**discounted to common valuation date, 5 Dec 2012
***from 2012 onwards

Source: Company data, Aton estimates

Investment project summary cntd

Ticker	Company name	Project name	DPM (+ or -)	Modernization or New (M or N)	Expected commissioning date	Electric capacity addition (MW)	Heat capacity addition (Gcal/h)	Main fuel	Fuel burn rates electricity (gfe/kWh)	Fuel burn rates heat (tfe/Gcal)	Actual capex (electricity) ($mn)	Normative capex (electricity) (RUBmn)	Normative capex (electricity) ($mn)	Capacity payment * ($/kW month)	NPV at inception** ($mn)	PV of residual cash flows *** ($mn)
TGKA	TGK-1	Lesogorskaya Hydro-10	+	M	Jan-10	30	n/a	Hydro	n/a	n/a	21	n/a	n/a	3	-47	20
TGKA	TGK-1	Lesogorskaya Hydro-10	+	M	Jul-11	30	n/a	Hydro	n/a	n/a	21	n/a	n/a	2	-37	20
TGKA	TGK-1	Lesogorskaya Hydro-10	+	M	Jan-13	30	n/a	Hydro	n/a	n/a	21	n/a	n/a	2	-26	8
TGKA	TGK-1	Lesogorskaya Hydro-10	+	M	Jan-14	30	n/a	Hydro	n/a	n/a	21	n/a	n/a	2	-19	-2
TGKA	TGK-1	Svetogorskaya Hydro-11	+	M	Jul-09	31	n/a	Hydro	n/a	n/a	21	n/a	n/a	3	-52	21
TGKA	TGK-1	Svetogorskaya Hydro-11	+	M	Jul-10	31	n/a	Hydro	n/a	n/a	21	n/a	n/a	3	-41	21
TGKA	TGK-1	Svetogorskaya Hydro-11	+	M	Jan-12	31	n/a	Hydro	n/a	n/a	21	n/a	n/a	2	-32	21
TGKA	TGK-1	Svetogorskaya Hydro-11	+	M	Apr-13	31	n/a	Hydro	n/a	n/a	21	n/a	n/a	2	-23	8
MSNG	Mosenergo	Cherepovetskaya GRES	+	N	May-15	420	n/a	Gas	236	n/a	526	15,896	505	17	-291	-213
MSNG	Mosenergo	CHP-27	+	N	Nov-07	450	300	Gas	223	151	473	14,888	473	16	-578	340
MSNG	Mosenergo	CHP-27	+	N	Dec-08	450	300	Gas	223	151	473	14,888	473	15	-618	359
MSNG	Mosenergo	CHP-21	+	N	Jun-08	425	300	Gas	246	142	446	14,061	446	16	-629	304
MSNG	Mosenergo	GTU-CHP	+	N	Oct-09	16	32	Gas	220	140	37	770	24	21	-45	13
MSNG	Mosenergo	CHP-12	+	N	Dec-14	220	n/a	Gas	220	n/a	273	8,713	277	18	-154	-68
MSNG	Mosenergo	CHP-9	+	M	Jun-13	62	n/a	Gas	220	n/a	84	2,960	94	26	-48	41
MSNG	Mosenergo	CHP-20	+	N	Nov-15	420	n/a	Gas	223	n/a	573	13,896	441	15	-407	-284
MSNG	Mosenergo	CHP-26	+	N	Jun-11	420	220	Gas	223	146	360	13,896	441	15	-454	338
MSNG	Mosenergo	CHP-16	+	N	Dec-14	420	n/a	Gas	223	n/a	484	13,896	441	15	-277	-219
TGKD	Quadra	Voronezhskaya CHP-2	+	N	Oct-10	115	90	Gas	250	140	101	5,535	176	30	-45	145
TGKD	Quadra	Eletskaya CHP	+	N	Jul-09	52	45	Gas	210	145	36	2,503	79	22	2	62
TGKD	Quadra	Kursk Northw-West boiler	+	N	Jul-11	115	80	Gas	250	140	104	5,535	176	26	-45	154
TGKD	Quadra	Livenskaya CHP	+	N	Jan-13	30	25	Gas	250	140	44	1,444	46	25	-48	19
TGKD	Quadra	Novomoskovskaya GRES	+	N	Jan-13	190	130	Gas	250	140	176	7,525	239	20	-92	86
TGKD	Quadra	Dyagilevskaya CHP	+	N	Jun-14	115	n/a	Gas	250	n/a	150	5,535	176	22	-83	-28
TGKD	Quadra	Kaluzhskaya CHP	+	N	Aug-11	30	n/a	Gas	250	n/a	44	1,444	46	23	-48	31
TGKD	Quadra	Aleksinskaya CHP	+	N	Sep-14	115	n/a	Gas	250	n/a	150	5,535	176	22	-58	-49
TGKD	Quadra	Voronezhskaya CHP-1	+	N	Sep-15	223	n/a	Gas	250	n/a	207	8,832	280	18	-71	-71
TGKD	Quadra	Kurskaya CHP-1	+	N	Dec-15	107	n/a	Gas	250	n/a	120	5,150	163	22	-39	-39

*in the first year of new capacity commissioning
**discounted to common valuation date, 5 Dec 2012
***from 2012 onwards

Source: Company data, Aton estimates

Investment project summary cntd

Ticker	Company name	Project name	DPM (+ or -)	Moderni-zation or New (M or N)	Expected commissioni ng date	Electric capacity addition(MW)	Heat capacity addition(Gcal/h)	Main fuel	Fuel burn rates electricity (gfe/kWh)	Fuel burn rates heat (tfe/Gcal)	Actual capex (electricity) ($mn)	Normative capex (electricity) (RUBmn)	Normative capex (electricity) ($mn)	Capacity payment * ($/kW month)	NPV at inception** ($mn)	PV of residual cash flows *** ($mn)
HYDR	Rushydro	Zaramagskie HPP	+	N	Sep-09	15	n/a	Hydro	n/a	n/a	21	n/a	n/a	17	28	52
HYDR	Rushydro	Kashkhatau HPP	+	N	Dec-10	65	n/a	Hydro	n/a	n/a	121	n/a	n/a	80	111	376
HYDR	Rushydro	Boguchanskaya HPP	-	N	Dec-12	999	n/a	Hydro	n/a	n/a	814	n/a	n/a	5	-373	411
HYDR	Rushydro	Boguchanskaya HPP	-	N	Dec-12	999	n/a	Hydro	n/a	n/a	814	n/a	n/a	5	-212	410
HYDR	Rushydro	Boguchanskaya HPP	-	N	Dec-13	999	n/a	Hydro	n/a	n/a	814	n/a	n/a	5	-190	268
HYDR	Rushydro	Ust-Srednekanskaya HPP	-	N	Dec-13	169	n/a	Hydro	n/a	n/a	401	n/a	n/a	33	-285	167
HYDR	Rushydro	Ust-Srednekanskaya HPP	-	N	Dec-17	401	n/a	Hydro	n/a	n/a	465	n/a	n/a	11	-158	-81
HYDR	Rushydro	Gotsatlinskaya HPP	+	N	Dec-13	100	n/a	Hydro	n/a	n/a	310	n/a	n/a	42	-197	98
HYDR	Rushydro	Zaramagskie HPP	+	N	Dec-18	342	n/a	Hydro	n/a	n/a	958	n/a	n/a	41	-556	-40
HYDR	Rushydro	Zelenchukskaya HPP	+	N	Dec-13	140	n/a	Hydro	n/a	n/a	286	n/a	n/a	27	-74	-5
HYDR	Rushydro	Small HPP	-	N	Dec-13	37	n/a	Hydro	n/a	n/a	145	n/a	n/a	54	-33	-15
HYDR	Rushydro	Nizhne-Bureyskaya HPP	-	N	Dec-15	320	n/a	Hydro	n/a	n/a	965	n/a	n/a	42	-208	-161
HYDR	Rushydro	Zagorskaya GAES-2 N1	+	N	Dec-12	420	n/a	GAES	n/a	n/a	964	n/a	n/a	41	-609	551
HYDR	Rushydro	Zagorskaya GAES-2 N2	+	N	Dec-14	420	n/a	GAES	n/a	n/a	1,174	n/a	n/a	50	-735	425

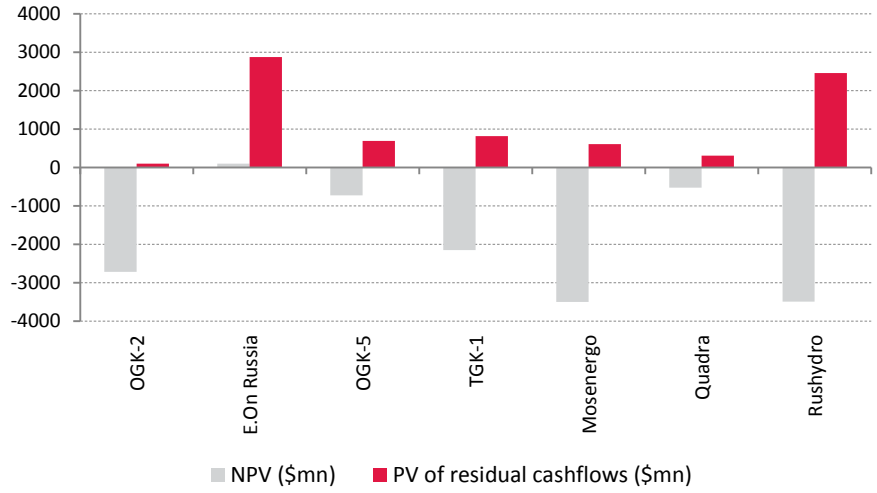
*in the first year of new capacity commissioning
**discounted to common valuation date, 5 Dec 2012
***from 2012 onwards

Source: Company data, Aton estimates

Current status of investment projects decisive for valuations

For valuation purposes, remaining future cash flows are what matters rather than NPV at a project's inception (since our DCF framework takes into account only future, not past cash flows). So the more a company has invested already, the higher the present value of remaining cash flows from investment projects.

Figure 129: Projects' NPV and residual cash flows by company, 2012 and beyond ($mn)



Source: Company data, Aton estimates

Adjustments to DPM price the major risk

As discussed in the regulation section above, regulators have become concerned with the impact on the end-user price of high capacity payments under DPM. This problem is growing every year with the commissioning of new capacity. Minenergo has already tried to adjust the methodology in order to reduce DPM prices, and we would not rule out that the major regulators will focus on DPM payments when attempting to reduce the generators' portion of the end-user price.

New capacity the major driver of company earnings from capacity market

Combining the forecasts for company earnings on the capacity market from old and new capacity, we expect total company earnings from the capacity market to expand going forward.

Figure 130: EBITDA from capacity market* ($/kW)

Ticker	Company	Type of capacity	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
OGKB	OGK-2	Old	6	-1	4	10	10	11	12	12	13	14	14
		New	113	19	28	39	41	99	161	144	152	152	153
		Total (blended)	7	-1	5	11	12	21	28	29	31	32	32
EONR	E.On Russia	Old	13	16	14	15	16	17	18	18	19	20	21
		New	10	66	120	115	117	148	200	203	205	207	210
		Total (blended)	13	24	32	32	33	46	59	60	61	62	64
OGKE	OGK-5	Old	14	12	10	10	11	11	12	13	13	14	15
		New	0	19	112	108	110	113	116	119	122	125	128
		Total (blended)	14	12	19	19	19	20	21	22	23	24	25
TGKA	TGK-1	Old	1	-3	-8	-7	-7	-7	-8	-9	-9	-9	-10
		New	16	64	104	92	94	98	100	106	110	112	115
		Total (blended)	2	5	9	14	15	15	15	17	18	18	18
MSNG	Mosenergo	Old	26	22	17	18	19	20	21	22	23	24	25
		New	146	117	119	114	88	100	119	121	122	124	126
		Total (blended)	39	35	32	32	32	39	44	46	47	49	50
TGKD	Quadra	Old	26	32	25	23	21	19	15	15	15	16	17
		New	120	128	221	185	156	142	183	185	188	191	194
		Total (blended)	31	40	43	46	47	51	62	62	64	65	67
HYDR	Rushydro	Old	20	1	-10	-10	-10	-10	-11	-11	-12	-12	-13
		New	46	371	25	53	75	103	128	113	110	130	126
		Total (blended)	20	2	-8	-3	-1	3	5	4	4	6	5
IRGZ	Irkutskenergo	Old	14	-1	-6	-6	-6	-6	-6	-7	-7	-7	-8
		New	0	0	0	0	0	0	0	0	0	0	0
		Total (blended)	14	-1	-6	-6	-6	-6	-6	-7	-7	-7	-8
KRSG	Krasnoyarskaya HPP	Old	10	-3	-2	-2	-2	-2	-2	-2	-2	-3	-3
		New	0	0	0	0	0	0	0	0	0	0	0
		Total (blended)	10	-3	-2	-2	-2	-2	-2	-2	-2	-3	-3

* defined as capacity revenue less fixed cash costs (O&M) attributed to the electricity business

Source: Company data, Aton estimates

Heat Business Outlook: Weak, No Breakthroughs Expected

No major breakthroughs in regulation expected

We have not seen any significant changes in the regulatory landscape for the heating business since our last valuation revision. RAB regulation in heat transmission is unlikely to happen in the next few years, and given massive problems with RAB implementation in the electricity grid segment, we believe investors should not count on a breakthrough on the regulatory front at this stage.

Heat demand zero growth rate view maintained

We maintain a forecast of flat heat demand for all companies. This is based on the actual data and our view that there is material heat savings potential in the Russian economy.

Profitability outlook more conservative now

In our previous valuation we assumed that the heat business would gradually improve its profitability and forecast that its EBITDA margins would converge to an average of 10% by 2015. We now apply a more conservative view and forecast flat heating business EBITDA margins for those companies where they are positive, moving to zero for companies that are currently loss-making in the heat business. This change has had a huge negative impact on the valuation of the heat businesses of co-generation companies, such as Mosenergo, Quadra, and TGK-1 (see Figure 136 for valuation results).

Figure 131: Old capacity heat production EBITDA margin

Company	Aton forecast	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
OGK-2	Updated	19.9%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
	Previous	5.3%	0.1%	2.6%	5.1%	7.5%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
	Change, ppts	14.6%	4.9%	2.4%	-0.1%	-2.5%	-5.0%	-5.0%	-5.0%	-5.0%	-5.0%	-5.0%
E.On Russia	Updated	32.2%	31.4%	31.4%	31.4%	31.4%	31.4%	31.4%	31.4%	31.4%	31.4%	31.4%
	Previous	27.4%	25.3%	21.4%	17.6%	13.8%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
	Change, ppts	4.8%	6.1%	10.0%	13.8%	17.6%	21.4%	21.4%	21.4%	21.4%	21.4%	21.4%
OGK-5	Updated	3.1%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%
	Previous	-24.7%	-25.3%	-16.4%	-7.6%	1.2%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
	Change, ppts	27.8%	28.8%	19.9%	11.1%	2.3%	-6.5%	-6.5%	-6.5%	-6.5%	-6.5%	-6.5%
TGK-1	Updated	6.5%	4.7%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
	Previous	5.2%	12.8%	12.1%	11.4%	10.7%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
	Change, ppts	1.3%	-8.1%	-9.1%	-8.4%	-7.7%	-7.0%	-7.0%	-7.0%	-7.0%	-7.0%	-7.0%
Mosenergo	Updated	-4.4%	0.0%	-2.0%	-1.5%	-1.0%	-0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
	Previous	-6.4%	2.5%	4.3%	6.2%	8.1%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
	Change, ppts	2.0%	-2.5%	-6.3%	-7.7%	-9.1%	-10.5%	-10.0%	-10.0%	-10.0%	-10.0%	-10.0%
Quadra	Updated	7.9%	3.6%	-6.4%	-4.8%	-3.2%	-1.6%	0.0%	0.0%	0.0%	0.0%	0.0%
	Previous	5.8%	9.8%	9.9%	9.9%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
	Change, ppts	2.1%	-6.2%	-16.3%	-14.7%	-13.2%	-11.6%	-10.0%	-10.0%	-10.0%	-10.0%	-10.0%
Rushydro*	Updated	3.8%	12.4%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%
	Previous	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Change, ppts	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Irkutskenergo	Updated	9.2%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%
	Previous	-7.1%	-2.2%	0.9%	3.9%	7.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
	Change, ppts	16.3%	7.9%	4.8%	1.8%	-1.3%	-4.3%	-4.3%	-4.3%	-4.3%	-4.3%	-4.3%
Average	Updated	9.8%	8.3%	5.4%	5.7%	6.0%	6.2%	6.5%	6.5%	6.5%	6.5%	6.5%
	Previous	0.8%	3.3%	5.0%	6.6%	8.3%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
	Change, ppts	9.0%	5.0%	0.5%	-1.0%	-2.4%	-3.8%	-3.5%	-3.5%	-3.5%	-3.5%	-3.5%

*RAO Far East heat segment

Source: Company data, Aton estimates

Figure 132: Old capacity EBITDA from heat business ($/Gcal)

Company	Aton forecast	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
OGK-2	New	3.5	0.8	0.8	0.8	0.9	1.0	1.0	1.0	1.1	1.1	1.1
	Previous	0.7	0.0	0.4	0.9	1.6	2.4	2.5	2.6	2.6	2.7	2.8
	Change	2.9	0.8	0.4	-0.1	-0.7	-1.4	-1.5	-1.5	-1.6	-1.6	-1.7
E.On Russia	New	5.6	6.0	5.7	6.0	6.6	7.4	7.8	8.0	8.2	8.5	8.7
	Previous	4.9	4.9	4.6	4.1	3.4	2.6	2.7	2.8	2.9	2.9	3.0
	Change	0.8	1.1	1.1	1.9	3.2	4.8	5.1	5.2	5.4	5.5	5.7
OGK-5	New	0.4	0.6	0.5	0.6	0.6	0.7	0.8	0.8	0.8	0.8	0.8
	Previous	-3.3	-3.8	-3.1	-1.8	0.3	3.5	3.5	3.6	3.7	3.8	3.9
	Change	3.8	4.4	3.7	2.4	0.3	-2.7	-2.8	-2.8	-2.9	-3.0	-3.0
TGK-1	New	1.7	1.4	0.9	0.9	0.9	1.0	1.1	1.1	1.1	1.2	1.2
	Previous	1.4	3.9	4.1	4.2	4.2	4.2	4.3	4.4	4.5	4.6	4.7
	Change	0.4	-2.5	-3.2	-3.3	-3.3	-3.2	-3.2	-3.3	-3.4	-3.5	-3.5
Mosenergo	New	-1.3	0.0	-0.7	-0.6	-0.4	-0.2	0.0	0.0	0.0	0.0	0.0
	Previous	-1.9	0.9	1.8	3.0	4.3	5.9	6.1	6.3	6.5	6.7	6.9
	Change	0.5	-0.9	-2.5	-3.5	-4.7	-6.2	-6.1	-6.3	-6.5	-6.7	-6.9
Quadra	New	1.8	1.0	-1.6	-1.3	-1.0	-0.6	0.0	0.0	0.0	0.0	0.0
	Previous	1.4	2.7	3.1	3.5	3.9	4.3	4.4	4.5	4.6	4.7	4.9
	Change	0.5	-1.6	-4.7	-4.8	-4.8	-4.9	-4.4	-4.5	-4.6	-4.7	-4.9
Rushydro*	New	1.4	5.4	1.2	1.2	1.3	1.4	1.4	1.5	1.6	1.6	1.7
	Previous	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Change	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Irkutskenergo	New	1.8	1.3	1.2	1.2	1.3	1.3	1.4	1.5	1.5	1.6	1.7
	Previous	-1.1	-0.4	0.2	0.9	1.7	2.6	2.7	2.8	2.9	3.0	3.1
	Change	2.9	1.7	1.0	0.3	-0.4	-1.3	-1.3	-1.3	-1.4	-1.4	-1.4

*RAO Far East segment

Source: Company data, Aton estimates

Generation Earnings Outlook

Earnings profiles differ

Combining forecasts for company earnings from the electricity, capacity and heat markets, our outlook for overall company profits appears below. We expect different earnings profiles across the generation companies, with the efficiency of old assets, regulatory issues, hydro capacity availability and new power plant commissioning schedules explaining the deviation between earnings growth paths across companies.

We expect a general trend of deterioration of old capacity profitability in a four-to-five-year timeframe due to the capacity oversupply effect and competition from consumer-owned generation. However profits from new capacity will somewhat offset the decline in old capacity profitability and serve as the main earnings driver for the majority of generation companies. Hydro (RusHydro, Irkutskenergo, TGK-1) and efficient thermal generators such as E.On Russia generally have a much more stable earnings outlook.

Figure 133: EBITDA forecast ($mn)

Company		2010	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
OGK-2	**Total EBITDA**	**384**	**259**	**285**	**376**	**335**	**554**	**711**	**710**	**735**	**758**	**753**
	per kW	*22*	*15*	*16*	*20*	*18*	*28*	*37*	*36*	*37*	*38*	*38*
	Old electricity capacity	349	248	231	305	268	229	219	218	228	248	270
	per kW	*20*	*14*	*13*	*17*	*15*	*13*	*13*	*13*	*13*	*14*	*16*
	Old heat capacity	21	5	5	5	6	6	7	7	7	7	7
	New capacity	14	6	49	66	61	318	486	486	500	503	475
	per kW	*131*	*55*	*76*	*96*	*89*	*148*	*226*	*189*	*194*	*195*	*184*
E.On Russia	**Total EBITDA**	**476**	**794**	**888**	**845**	**789**	**967**	**1,099**	**1,124**	**1,161**	**1,213**	**1,239**
	per kW	*52*	*77*	*86*	*82*	*76*	*87*	*99*	*101*	*104*	*109*	*111*
	Old electricity capacity	457	557	475	440	387	348	330	350	376	413	427
	per kW	*53*	*64*	*55*	*51*	*45*	*40*	*38*	*40*	*44*	*48*	*49*
	Old heat capacity	11	11	10	11	12	13	14	14	15	15	16
	New capacity	7	227	402	395	390	605	755	760	770	784	796
	per kW	*17*	*137*	*235*	*231*	*228*	*241*	*301*	*303*	*307*	*313*	*317*
OGK-5	**Total EBITDA**	**355**	**424**	**468**	**475**	**455**	**434**	**412**	**393**	**402**	**418**	**386**
	per kW	*40*	*44*	*49*	*49*	*47*	*47*	*44*	*42*	*43*	*45*	*41*
	Old electricity capacity	352	392	312	313	301	288	272	260	268	280	252
	per kW	*40*	*45*	*36*	*36*	*34*	*34*	*32*	*31*	*31*	*33*	*30*
	Old heat capacity	3	4	4	4	4	5	5	5	5	6	6
	New capacity	0	28	153	158	151	142	134	127	129	133	128
	per kW	*n/a*	*35*	*186*	*193*	*184*	*173*	*164*	*155*	*157*	*162*	*157*
TGK-1	**Total EBITDA**	**286**	**429**	**415**	**483**	**491**	**490**	**483**	**493**	**504**	**516**	**504**
	per kW	*46*	*63*	*61*	*66*	*67*	*67*	*66*	*67*	*69*	*70*	*69*
	Old electricity capacity	216	279	207	217	229	241	238	228	232	238	223
	per kW	*38*	*46*	*36*	*38*	*40*	*42*	*41*	*40*	*41*	*42*	*39*
	Old heat capacity	47	34	20	20	22	24	25	26	26	27	28
	New capacity	23	116	188	246	241	225	219	240	246	251	253
	per kW	*38*	*143*	*184*	*161*	*154*	*144*	*141*	*145*	*148*	*151*	*152*
Mosenergo	**Total EBITDA**	**652**	**832**	**605**	**622**	**552**	**645**	**716**	**692**	**708**	**730**	**738**
	per kW	*54*	*67*	*49*	*50*	*42*	*47*	*52*	*51*	*53*	*54*	*55*
	Old electricity capacity	403	466	307	304	239	213	225	230	244	256	269
	per kW	*38*	*44*	*29*	*29*	*23*	*21*	*22*	*23*	*24*	*25*	*26*
	Old heat capacity	-85	0	-43	-33	-24	-13	0	0	0	0	0
	New capacity	334	367	340	351	337	445	491	461	464	474	469
	per kW	*249*	*208*	*193*	*193*	*137*	*135*	*149*	*140*	*140*	*143*	*142*

Source: Company data, Aton estimates

Figure 134: EBITDA forecast ($mn)

Company		2010	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
Quadra	**Total EBITDA**	**143**	**170**	**127**	**166**	**181**	**208**	**247**	**248**	**252**	**259**	**262**
	per kW	*41*	*48*	*36*	*45*	*46*	*49*	*63*	*63*	*65*	*67*	*68*
	Old electricity capacity	72	93	74	67	60	51	34	33	34	38	39
	per kW	*22*	*29*	*23*	*21*	*19*	*16*	*12*	*12*	*12*	*14*	*14*
	Old heat capacity	44	22	-35	-28	-21	-12	0	0	0	0	0
	New capacity	26	54	88	127	142	169	213	215	218	221	224
	per kW	*156*	*174*	*281*	*238*	*186*	*155*	*195*	*197*	*200*	*202*	*205*
Rushydro	**Total EBITDA**	**2,144**	**2,300**	**1,523**	**1,875**	**2,178**	**2,484**	**2,629**	**2,662**	**2,763**	**2,996**	**3,121**
	per kW	*62*	*65*	*41*	*48*	*55*	*62*	*65*	*65*	*67*	*72*	*75*
	Old electricity capacity	1,644	1,520	1,051	1,146	1,241	1,379	1,381	1,395	1,420	1,493	1,575
	per kW	*48*	*43*	*30*	*33*	*35*	*39*	*39*	*39*	*40*	*42*	*44*
	Old heat capacity	32	129	30	29	31	33	34	36	37	39	41
	New capacity	7	39	71	334	544	710	858	869	940	1,092	1,127
	per kW	*82*	*485*	*28*	*85*	*125*	*152*	*183*	*171*	*173*	*201*	*208*
	Supply	188	303	96	91	87	87	81	87	91	96	103
	Government grants	273	310	275	275	275	275	275	275	275	275	275
Irkutskenergo	**Total EBITDA**	**633**	**766**	**540**	**591**	**631**	**687**	**728**	**819**	**851**	**887**	**1,008**
	per kW	*49*	*59*	*42*	*46*	*49*	*53*	*56*	*63*	*66*	*68*	*78*
	Old electricity capacity	549	670	439	484	512	552	576	647	669	695	801
	per kW	*43*	*52*	*34*	*37*	*40*	*43*	*45*	*50*	*52*	*54*	*62*
	Old heat capacity	40	26	25	24	25	27	28	30	31	33	34
	New capacity	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	per kW	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*
	Supply	-27	-17	-7	-1	5	14	25	39	42	45	52
	Coal	71	87	84	84	88	94	99	104	109	115	121
Krasnoyarskaya HPP	**Total EBITDA**	**177**	**131**	**89**	**95**	**114**	**131**	**131**	**130**	**129**	**129**	**128**
	per kW	*30*	*22*	*15*	*16*	*19*	*22*	*22*	*22*	*22*	*21*	*21*
	Old electricity capacity	177	131	89	95	114	131	131	130	129	129	128
	per kW	*30*	*22*	*15*	*16*	*19*	*22*	*22*	*22*	*22*	*21*	*21*
	Old heat capacity	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	New capacity	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	per kW	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*

Source: Company data, Aton estimates

WACC Calculation for Generation Companies

Regulatory risk increased 100 bpts

We see significant risks of further tariff tightening (such as the revision of capacity tariffs, including DPM prices, and further curbing of the growth of regulated tariffs for the population), which were not included in our previous valuation. We are therefore increasing our higher base regulatory risk premium for generation companies to 2% from 1%.

Corporate governance risk premium adjusted on company-specific issues

We apply a base corporate governance risk premium of 2% for companies directly or indirectly controlled by the state. We reduce this premium for companies controlled by private strategic investors to 0.5% (foreign-owned E.ON Russia, Enel OGK-5) and 1.0% (Quadra). We have also increased the corporate governance risk premium by 100 bpts for Mosenergo and TGK-1 to account for the risk that they will have to implement OGK-2's NPV-negative investment projects. For Eurosibenergo subsidiaries Irkutskenergo and Krasnoyarsk GES we also apply the higher 3% corporate governance risk premium to account for the evident risks of Eurosibenergo extracting value from its subsidiaries via doubtful acquisitions and other practices discussed in the section on corporate governance above (this is in addition to the long-term contracts with Rusal, which we have incorporated in our valuation).

Figure 135: Revised WACC assumptions

WACC component		OGK-2	E.On Russia	OGK-5	TGK-1	Mos-energo	Quadra	Rushydro	Irkutsk-energo	Krasno-yarskaya HPP
Base Russia COE	**Updated**	**12.5%**	**12.5%**	**12.5%**	**12.5%**	**12.5%**	**12.5%**	**12.5%**	**12.5%**	**12.5%**
	Previous	11.7%	11.7%	11.7%	11.7%	11.7%	11.7%	11.7%	11.7%	11.7%
	Change (ppts)	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Regulatory risk	**Updated**	**2.0%**	**2.0%**	**2.0%**	**2.0%**	**2.0%**	**2.0%**	**2.0%**	**2.0%**	**2.0%**
	Previous	1.0%	1.0%	1.0%	1.3%	1.0%	1.0%	1.5%	1.4%	1.5%
	Change (ppts)	1.0	1.0	1.0	0.7	1.0	1.0	0.5	0.6	0.5
Corporate	**Updated**	**2.0%**	**0.5%**	**0.5%**	**3.0%**	**3.0%**	**1.0%**	**2.0%**	**3.0%**	**3.0%**
governance	Previous	2.5%	0.5%	0.5%	2.0%	2.0%	1.0%	2.0%	5.0%	3.0%
	Change (ppts)	-0.5	-	-	1.0	1.0	-	-	-2.0	-
Liquidity	**Updated**	**1.0%**	**1.0%**	**3.0%**	**1.0%**	**1.0%**	**4.0%**	**0.0%**	**3.0%**	**4.0%**
	Previous	1.0%	1.0%	3.0%	2.0%	1.0%	2.5%	1.0%	3.5%	2.0%
	Change (ppts)	-	-	-	-1.0	-	1.5	-1.0	-0.5	2.0
Cost of equity	**Updated**	**17.5%**	**16.0%**	**18.0%**	**18.5%**	**18.5%**	**19.5%**	**16.5%**	**20.5%**	**21.5%**
	Previous	16.2%	14.2%	16.2%	17.0%	15.7%	16.2%	16.2%	21.6%	18.2%
	Change (ppts)	1.3	1.8	1.8	1.5	2.8	3.3	0.3	-1.1	3.3
Cost of debt	**Updated**	**8.0%**	**7.5%**	**7.5%**	**8.0%**	**8.0%**	**9.0%**	**8.0%**	**8.5%**	**8.5%**
	Previous	7.0%	7.0%	7.0%	7.0%	7.0%	8.0%	6.5%	8.0%	8.0%
	Change (ppts)	1.0	0.5	0.5	1.0	1.0	1.0	1.5	0.5	0.5
Target debt/assets	**Updated**	**30%**	**30%**	**30%**	**30%**	**30%**	**30%**	**30%**	**30%**	**30%**
	Previous	30%	30%	30%	30%	30%	30%	30%	30%	30%
	Change (ppts)	-	-	-	-	-	-	-	-	-
WACC	**Updated**	**14.2%**	**13.0%**	**14.4%**	**14.9%**	**14.9%**	**15.8%**	**13.5%**	**16.4%**	**17.1%**
	Previous	13.0%	11.6%	13.0%	13.6%	12.7%	13.3%	12.9%	17.0%	14.7%
	Change (ppts)	1.2	1.4	1.4	1.3	2.2	2.5	0.6	-0.6	2.4

Source: Aton estimates

Terminal growth assumptions intact

We maintain a uniform terminal growth rate for generation companies of 2%, which roughly corresponds to our view on long-term global dollar inflation.

Generation Valuation Results: Barely Any Upside

Massive reductions of target prices across the board

Our full DCF company models with separate valuations for old electricity capacity, the heat business and each new investment project result in significant reductions in company valuations. This is based on a generally more conservative approach as well as on the regulatory tightening measures applied by decision-makers over the past 1.5 years.

At current market prices, our only **BUY**-rated stock remains E.On Russia (the former OGK-4) due to its efficient asset base, better corporate governance and advanced stage of investment programme realisation. We rate the remainder of the sector as **HOLD** and **SELL**, since we see no significant risk-adjusted upsides from the current price levels.

Figure 136: Generation companies' valuation summary

Company	Ticker		Fair EV ($mn)								
			Old capacity						PV of upcoming cash flows from new projects (2012+, $mn)	Total ($mn)	$/kW
			Electricity ($mn)	$/kW	Heat (incl. coal) ($mn)	$ th/ Gcal	Total ($mn)	$/kW			
OGK-2	OGKB	Upd	439	25	26	4	465	26	96	561	31
		Prev	1,746	201	16	7	1,761	203	184	1,945	224
OGK-4	EONR	Upd	1,836	213	89	49	1,925	223	2,874	4,799	466
		Prev	4,310	499	43	21	4,351	504	2,211	6,563	723
OGK-5	OGKE	Upd	890	101	31	5	921	105	694	1,615	169
		Prev	2,535	290	45	7	2,579	295	537	3,117	356
TGK-1	TGKA	Upd	948	157	20	1	968	161	819	1,787	261
		Prev	3,372	545	600	24	3,971	642	1,023	4,994	764
Mosenergo	MSNG	Upd	987	93	-256	-4	731	69	611	1,342	109
		Prev	1,302	123	1,654	28	2,955	279	2,028	4,982	418
Quadra	TGKD	Upd	183	57	-140	-6	42	13	309	351	99
		Prev	362	108	494	21	856	254	309	1,165	317
RusHydro	HYDR	Upd	3,608	103	-164	0	3,444	98	2,459	5,903	168
		Prev	18,401	724	0	0	18,394	724	-101	18,293	718
Irkutskenergo	IRGZ	Upd	2,039	158	595	29	2,633	204	0	2,633	204
		Prev	5,922	460	276	12	6,195	481	0	6,195	481
Krasnoyarskaya	KRSG	Upd	136	23	0	0	136	23	0	136	23
HPP		Prev	1,596	266	0	0	1,594	266	0	1,594	266

Source: Aton estimates

Figure 137: Generation companies' updated target prices

Company	Ticker	12M TP new ($)	12M TP old	chg	Current price ($)	Upside/ Downside	Rating new	Rating old
OGK-2	OGKB	0.00450	0.06330	-93%	0.01117	-60%	SELL	SELL
E.ON Russia	EONR	0.101	0.130	-23%	0.077	31%	BUY	BUY
OGK-5	OGKE	0.0244	0.0833	-71%	0.0527	-54%	SELL	SELL
TGK-1	TGKA	0.000221	0.001380	-84%	0.000174	27%	HOLD	BUY
Mosenergo	MSN	0.0490	0.1410	-65%	0.0429	14%	HOLD	BUY
Quadra	TGKD	0.000125	0.000727	-83%	0.000113	10%	HOLD	BUY
RusHydro	HYDR	0.0181	0.0823	-78%	0.0238	-24%	SELL	BUY
Irkutskenergo	IRGZ	0.569	1.420	-60%	0.514	11%	HOLD	BUY
Krasnoyarskaya HPP	KRSG	0.961	4.830	-80%	2.891	-67%	SELL	SELL

Source: Aton estimates

Cessation of coverage

We discontinue coverage of TGK-2, TGK-5, TGK-6, TGK-7, TGK-9, TGK-11, Kuzbassenergo, TGK-13 and TGK-14 due to lack of transparency (the majority of these companies do not release consolidated IFRS accounts) and/or poor stock liquidity.

No Significant Triggers Ahead

We see no significant stock drivers for generation companies at least in the next 12 months.

No major positive regulatory changes expected

Despite declared intentions to attract private investors, the government seems committed to maintaining control over electricity prices at any cost, judging by the regulatory tightening decisions implemented in 2011 and 2012 and proposals for the future. We therefore do not expect any breakthroughs on the regulatory front.

Short- to near-term earnings forecast uninspiring

We do not expect major improvements to generation company earnings in the short to medium term due to the weak macro environment as well as structural, regulatory and corporate governance issues.

Dividend perspectives generally unclear

As argued in the next section, dividends remain largely elusive for the utilites sector in general and generation companies in particular.

Dividends: Slim Pickings in the Near Term

Utilities are associated with dividends, but not in Russia

Stable predictable cash flows and dividends are a key investment theme for shareholders in utility sectors around the world. This generally does not apply in Russia, where the companies concerned often lack visibility over cash flows and have barely paid any dividends to date. With few exceptions, the 2010-11 payout ratios of Russian utilities did not exceed 10%, and dividend yields were no more than 2%.

The majority of stocks that do have meaningful dividend yields (preferred shares of MRSK Holding, Lenenergo and Quadra, and ordinary shares of Krasnoyarsk HPP) are relatively illiquid, making investment risky. The only notable exception is E.On Russia, which started paying dividends in 2012 (for 2011) and has decent liquidity. However its dividend yield of 2.7% is hardly impressive, in our view.

Figure 138: Utility companies' dividend summary 2010-12E

Company	Ticker	Dividend per share (RUB)			Dividend yield			Dividend payout*		
		2010	2011	2012E	2010	2011	2012E	2010	2011	2012E
Generation										
OGK-2	OGKB	0.0049	0.001	0.0007	0.3%	0.1%	0.2%	3%	4%	4%
E.On Russia	EONR	-	0.0579	0.072	-	2.7%	2.9%		24%	24%
OGK-5	OGKE	-	-	-	-	-	-	-	-	-
TGK-1	TGKA	0.000047	0.000049	0.000048	0.2%	0.5%	0.8%	4%	4%	4%
Mosenergo	MSNG	0.02	0.03	0.0158	0.6%	1.8%	1.1%	10%	12%	12%
Quadra ord.	TGKD	-	-	-	-	-	-	-	-	-
Quadra pref.	TGKDP	0.0003	0.0002	0.0001	3.2%	3.5%	1.4%	3%	1%	1%
Rushydro	HYDR	0.0068	0.0079	0.003	0.4%	0.8%	0.4%	11%	8%	8%
Irkutskenergo	IRGZ	-	0.1234	0.0842	-	0.8%	0.5%	6%	4%	4%
Krasnoyarskaya HPP	KRSG	-	5.1137	3.3029	-	5.2%	3.5%	-	63%	63%
Grids										
MRSK Center	MRKC	0.0145	0.01	0.0076	1.1%	1.6%	1.4%	13%	7%	7%
MRSK South	MRKY	-	-	-	-	-	-	-	-	-
MRSK North Caucasus	MRKK	-	-	-	-	-	-	-	-	-
MRSC Center & Volga	MRKP	0.0013	0.0028	0.0018	0.4%	1.9%	1.1%	14%	8%	8%
MRSK Urals	MRKU	0.0028	0.0028	0.0012	0.8%	1.4%	0.6%	7%	7%	7%
MRSK Siberia	MRKS	-	-	-	-	-	-	-	-	-
MRSK North West	MRKZ	-	-	-	-	-	-	-	-	-
MRSK Volga	MRKV	-	0.0011	0.0018	-	1.2%	2.5%	-	12%	12%
Lenenergo ord.	LSNG	-	-	-	-	-	-	-	-	-
Lenenergo pref.	LSNGP	4.0804	1.5198	2.8687	11.4%	6.9%	14.6%	23%	20%	20%
MOESK	MSRS	0.0246	0.025	0.0184	1.5%	1.6%	1.3%	7%	6%	6%
MRSK Holding ord.	MRKH	-	-	-	-	-	-	-	-	-
MRSK Holding pref.	MRKHP	0.05	0.07	0.0639	1.5%	5.1%	4.8%	0%	0%	0%
FSK	FEES	0.0021	-	-	0.6%	-	-	10%	-	-

*based on IFRS net income

Source: Bloomberg, Company data, Aton estimates

Free cash flows generally volatile, and negative for many until 2015-16

We estimate that the majority of utility companies will turn cash flow positive by 2015-16. Of those that are expected to do so sooner we note the following:

- **E.On Russia** will decrease free cash flow in the next few years as it needs cash for its next investment projects at Berezovskaya GRES. While we believe E.On is likely to continue paying dividends, we would not expect the payouts to grow considerably.

- **Enel OGK-5** may start paying out dividends next year (for 2012), but it has planned massive modernisation capex for Reftinskaya GRES which we have only partially incorporated in our valuation.
- **TGK-1** will see significant positive cash flows from 2013, but there is a risk that it will use cash for financing OGK-2 investment projects.
- **Irkutskenergo** may pay out dividends as its sister company Krasnoyarsk HPP did in 2012 (for 2011). However there is a significant risk that the major shareholder – Eurosibenergo – will extract cash from the company in other ways (for instance, Irkutskenergo may give out loans or acquire assets from Eurosibenergo affiliates; see corporate governance section above).

Figure 139: Free cash flow forecast ($mn)

	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
Generation										
OGK-2	-602	-52	-309	-467	-331	315	351	359	369	350
E.On Russia	276	212	116	183	613	735	749	768	800	816
OGK-5	-232	238	256	253	246	223	199	197	202	169
TGK-1	-310	4	233	284	286	283	284	290	296	285
Mosenergo	-29	5	-177	-173	354	381	373	377	388	388
Quadra	-182	-156	-50	-30	68	149	154	155	159	160
Rushydro	-989	-1,881	-1,517	-489	-123	493	1,500	1,555	1,795	2,079
Irkutskenergo	411	164	251	245	281	328	390	414	436	518
Krasnoyarskaya HPP	84	9	13	24	33	26	24	22	20	18
Grids										
MRSK Center	-80	-100	49	47	114	143	183	201	157	189
MRSK South	-15	66	103	54	54	63	65	93	45	69
MRSK North Caucasus	-11	-157	-65	-22	30	44	57	-22	-31	-25
MRSK Center & Volga	-111	20	50	76	131	152	187	73	-22	-18
MRSK Urals	-27	-67	3	10	29	38	61	8	-82	-14
MRSK Siberia	39	-141	-91	-19	106	112	142	24	44	40
MRSK North West	-25	-85	-23	-13	21	22	31	1	7	29
MRSK Volga	-23	-90	-12	-64	-24	-85	113	33	33	62
Lenenergo	-61	-241	-146	-64	36	143	225	326	280	358
MOESK	-74	-69	-89	85	324	548	645	431	119	181
FEES	-3,264	-2,887	-1,505	-1,064	152	274	406	555	723	911

Source: Aton estimates

Other reasons for dividend non-payment

Besides free cash flows, we see the following reasons why utilities in Russia may be reluctant to significantly increase dividend payouts:

1) **Dividends are still not properly understood by Russian politicians**. Despite some government initiatives (such as an increase in dividends paid by state-owned companies), large payouts are still widely considered by top decision-makers to be a sign of extreme wealth and wellbeing in a company. This leaves some companies afraid to boost payouts.

2) **Risk of attracting more regulation**. If the companies are seen as being wealthy, decision-makers may decide to implement further tightening measures in order to protect struggling electricity consumers and cut utility companies' "super-profits".

3) **Majority shareholders can find "safer" ways of extracting cash**, such as subsidising, lending or entering questionable M&A deals or investment projects with affiliated companies (some examples are discussed in the corporate governance section above). In developed countries such practices are seen as extremely risky in terms of their potential impact on minority shareholder value, and carry potential legal issues. However some major shareholders in Russia

could view this as a better way to withdraw cash from a business than resorting to dividends.

4) **State-owned companies may prefer to use cash for political projects** such as foreign expansion or investing in schemes that are needed for social reasons (see section on corporate governance above). While this is unlikely to enhance shareholder value, managers of state-controlled corporations may use such social projects to gain political points in the eyes of the key decision-makers, who are in effect their employers.

No significant dividends expected in the near term

We thus generally would not expect significant dividends from utilities over the next few years at least. There may be a few exceptions, such as foreign-owned generators E.On Russia and Enel OGK-5.

Grid Portfolio Valuation and Ratings

Company name	MRSK Center	MRSK South	MRSK North Caucasus	MRSK Center and Volga	MRSK North West	MRSK Siberia	MRSK Urals	MRSK Volga	MOESK	Lenenergo	Average MRSKs	MRSKs total	Federal Grid Company	MRSK Holding	Grids total
Ticker	MRKC	MRKY	MRKK	MRKP	MRKZ	MRKS	MRKU	MRKV	MSRS	LSNG			FEES	MRKH	
Current ord. share price ($)	0.0169	0.00164	0.848	0.00547	0.00213	0.00300	0.00653	0.00240	0.0478	0.2098			0.00682	0.0641	
Current pref share price ($)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.5645			n/a	0.0409	
MktCap* ($mn)	713	82	91	616	204	295	571	428	2,328	354	568	5,682	8,681	10,471	24,834
As % of portfolio total	12.5%	1.4%	1.6%	10.8%	3.6%	5.2%	10.0%	7.5%	41.0%	6.2%	10.0%	100.0%			
EV* ($mn)	1,331	564	32	1,149	353	453	788	586	3,688	838	978	9,783	9,437	16,262	35,482
Ordinary shares															
12M TP ($ per share)*	0.0200	0.00103	0.796	0.00619	0.00132	0.00100	0.00241	0.00159	0.0278	0.0596			0.00471	0.0413	
Potential upside (%)	19%	-37%	-6%	13%	-38%	-67%	-63%	-34%	-42%	-72%	-33%	-32%	-31%	-36%	-33%
Rating	HOLD	SELL	SELL	HOLD	SELL	SELL	SELL	SELL	SELL	SELL			SELL	SELL	
12M Target MktCap ($mn)	846	51	85	697	126	98	211	284	1,355	92	385	3,846	5,998	6,735	16,578
Shares outstanding* (ord., mn)	42,218	49,811	107	112,698	95,786	98,282	87,430	178,578	48,707	1,435			1,272,813	161,988	
Shares outstanding (pref, mn)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	93			n/a	2,075	
3M performance (ord.) (%)	-16%	-1%	-16%	-3%	-8%	-1%	18%	-5%	20%	5%	-1%		-4%	-5%	
12M performance (ord.) (%)	-24%	-36%	-56%	0%	-28%	-33%	-6%	-25%	-6%	-40%	-25%		-24%	-17%	
YtD performance (ord.) (%)	-16%	-22%	-48%	14%	-18%	-19%	8%	-22%	-10%	-31%	-16%		-23%	-13%	
Free float* (%)	17.7%	28.7%	8.9%	20.7%	19.1%	5.6%	18.0%	21.3%	11.6%	9.4%	16.1%	14.8%	20.4%	10.4%	14.9%
Free float* ($mn)	126	23	8	127	39	17	103	91	270	33	84	838	1,771	1,093	3,702
Ave. 3M daily volume ($mn)	0.12	0.03	0.07	0.09	0.02	0.02	0.17	0.03	0.13	0.03	0.07	0.71	18.38	19.97	39.07
Size of grid YE11 ('000 grid units)	1,461	527	370	924	744	1,391	665	800	1,459	373	871	8,714	1,167	10,438	20,319
Distribution volume 2011 (GWh)	56,667	27,172	12,680	54,299	40,243	72,448	76,926	57,623	75,470	29,914	50,344	503,443	503,948	1,107,519	2,114,910
Electricity losses in grid 2011 (%)	9.9%	9.5%	22.1%	9.0%	6.4%	9.0%	8.1%	6.8%	10.3%	10.6%	10.2%		4.3%	8.8%	
Grid length YE11 (km)	376,898	157,846	104,051	251,930	168,869	257,657	123,471	214,670	128,759	54,896	183,905	1,839,047	126,000	2,099,622	4,064,669
Current EV/RAB YE11*	0.43	0.57	0.04	0.43	0.22	0.23	0.45	0.31	0.64	0.36	0.37		0.46	0.34	
Fair EV/RAB YE11	0.40	0.52	0.01	0.38	0.14	0.12	0.20	0.17	0.44	0.24	0.26		0.29	0.25	

* Estimated after additional share issues planned for 2012-13 by MRSK Holding, FSK, MRSK North Caucasus, MRSK Siberia and Lenenergo

Company name	MRSK Center	MRSK South	MRSK North Caucasus	MRSK Center and Volga	MRSK North West	MRSK Siberia	MRSK Urals	MRSK Volga	MOESK	Lenenergo	Average MRSKs	MRSKs total	Federal Grid Company	MRSK Holding	Grids total
Revenue ($mn)															
2009	1,554	599	314	1,492	783	1,259	1,426	929	2,704	769	1,183	11,829	2,654	14,347	28,829
2010	1,996	725	392	1,799	871	1,443	1,774	1,303	3,680	996	1,498	14,979	3,631	18,342	36,952
2011	2,349	829	442	2,198	1,047	1,780	1,992	1,634	4,402	1,161	1,783	17,833	4,672	21,928	44,434
2012E	2,227	801	414	1,904	1,020	1,672	1,822	1,625	3,747	1,152	1,639	16,385	4,456	20,223	41,065
2013E	2,240	808	439	1,887	987	1,694	1,856	1,589	3,767	1,196	1,646	16,463	4,470	20,299	41,233
2014E	2,412	815	471	2,069	1,050	1,841	1,991	1,614	3,967	1,258	1,749	17,487	4,989	21,592	44,069
EBITDA ($mn)															
2009	346	89	25	183	102	119	265	172	964	230	249	2,495	1,205	4,134	7,834
2010	420	122	60	204	77	42	312	153	1,252	254	290	2,895	1,951	5,485	10,332
2011	539	180	63	361	149	140	296	191	1,546	253	372	3,718	2,750	6,871	13,338
2012E	469	151	58	302	143	71	208	240	1,224	279	314	3,144	2,625	6,159	11,929
2013E	491	168	91	291	112	105	253	201	1,272	322	331	3,306	2,682	6,417	12,404
2014E	555	134	118	383	123	207	279	132	1,359	337	363	3,627	3,153	7,223	14,003
Net income ($mn)															
2009	102	-31	-18	22	3	-22	105	53	336	51	60	600	801	1,415	2,816
2010	161	-6	19	34	-12	-101	109	33	588	55	88	879	837	1,712	3,428
2011	206	36	2	139	30	-1	119	57	710	24	132	1,322	1,343	2,311	4,976
2012E	141	13	-2	81	23	-59	45	84	471	41	84	839	1,161	1,906	3,905
2013E	142	33	15	68	-9	-41	74	41	491	71	88	885	1,123	1,870	3,877
2014E	166	6	31	128	-10	24	84	-32	511	66	97	973	1,377	2,129	4,479
RAB, net ($mn) *															
2010	3,208	1,118	855	2,582	1,653	2,171	1,796	1,886	5,988	2,370	2,363	23,626	21,064	49,068	93,757
2011	3,106	992	840	2,681	1,581	1,979	1,762	1,864	5,726	2,331	2,286	22,864	20,593	47,594	91,051
2012E	2,986	960	933	2,624	1,562	1,766	1,796	1,878	5,539	2,288	2,233	22,331	22,982	49,458	94,771
2013E	2,938	907	889	2,480	1,476	1,575	1,740	1,841	5,381	2,212	2,144	21,439	24,373	50,006	95,819
2014E	3,147	929	903	2,541	1,487	1,493	1,806	1,925	5,811	2,308	2,235	22,349	27,239	53,995	103,583
Effective rate of return on RAB (%) **															
2010	1.3%	0.8%	-6.1%	-0.7%	-2.5%	-8.2%	3.1%	1.0%	4.1%	-2.6%	-1.0%		2.9%		
2011	3.9%	0.6%	-4.7%	3.9%	-0.4%	-5.0%	4.3%	2.7%	5.8%	-1.7%	0.9%		5.4%		
2012E	3.6%	2.5%	-2.9%	2.7%	0.4%	-7.4%	1.3%	5.4%	4.6%	0.1%	1.0%		5.9%		
2013E	4.9%	5.8%	-1.9%	2.8%	-0.8%	-6.2%	3.5%	4.1%	7.4%	1.8%	2.1%		5.5%		
2014E	6.4%	2.8%	1.5%	5.6%	-0.3%	-1.6%	4.5%	1.1%	10.5%	3.8%	3.4%		6.2%		

* includes our estimates for regions which have not introduced RAB yet

** We estimated rate of return on RAB as realised EBITDA from distribution activity less depreciation of RAB less income tax divided by net RAB value

Company name	MRSK Center	MRSK South	MRSK North Caucasus	MRSK Center and Volga	MRSK North West	MRSK Siberia	MRSK Urals	MRSK Volga	MOESK	Lenenergo	Average MRSKs	MRSKs total	Federal Grid Company	MRSK Holding	Grids total
Total distribution tariff ($/MWh)															
2009	27.7	18.0	25.6	28.3	19.0	12.8	18.5	16.8	33.2	21.4	22.1		5.4	12.1	
2010	33.8	25.2	28.7	32.4	21.1	18.3	21.8	22.6	40.5	26.3	27.1		7.4	15.2	
2011	39.6	28.4	33.4	39.6	24.9	23.4	25.0	27.9	48.2	32.3	32.3		9.1	18.2	
2012E	37.0	27.7	30.8	33.8	23.9	21.7	22.5	27.4	40.4	32.3	29.7		8.5	16.6	
2013E	36.8	28.3	30.5	33.1	22.8	21.7	22.7	26.5	41.5	33.2	29.7		8.5	16.5	
2014E	39.2	28.1	33.2	35.8	24.0	23.3	24.0	26.5	45.2	36.1	31.5		9.3	17.6	
Total distribution tariff growth (YoY, %)															
2009	-3%	33%	-4%	9%	-5%	-10%	14%	-10%	16%	1%	4%		-1%	n/a	
2010	22%	40%	12%	14%	12%	43%	18%	35%	22%	23%	22%		37%	25%	
2011	17%	13%	16%	22%	18%	28%	15%	23%	19%	23%	19%		23%	20%	
2012E	-6%	-3%	-8%	-15%	-4%	-7%	-10%	-2%	-16%	0%	-8%		-6%	-9%	
2013E	-1%	2%	-1%	-2%	-4%	0%	1%	-3%	3%	3%	0%		-1%	0%	
2014E	6%	-1%	9%	8%	5%	7%	6%	0%	9%	9%	6%		10%	6%	
EV/EBITDA (x)															
2009	3.8	6.4	1.3	6.3	3.5	3.8	3.0	3.4	3.8	3.7	3.9	3.9	7.8	3.9	4.5
2010	3.2	4.6	0.5	5.6	4.6	10.7	2.5	3.8	2.9	3.3	4.2	3.4	4.8	3.0	3.4
2011	2.5	3.1	0.5	3.2	2.4	3.2	2.7	3.1	2.4	3.3	2.6	2.6	3.4	2.4	2.7
2012E	2.8	3.7	0.5	3.8	2.5	6.4	3.8	2.4	3.0	3.0	3.2	3.1	3.6	2.6	3.0
2013E	2.7	3.4	0.4	4.0	3.1	4.3	3.1	2.9	2.9	2.6	2.9	3.0	3.5	2.5	2.9
2014E	2.4	4.2	0.3	3.0	2.9	2.2	2.8	4.5	2.7	2.5	2.7	2.7	3.0	2.3	2.5
P/E (x)															
2009	7.0	neg	neg	28.7	78.2	neg	5.5	8.0	6.9	6.9	20.2	9.5	10.8	7.4	8.8
2010	4.4	neg	4.7	18.1	neg	neg	5.3	13.0	4.0	6.4	8.0	6.5	10.4	6.1	7.2
2011	3.5	2.3	44.2	4.4	6.9	neg	4.8	7.5	3.3	14.6	10.2	4.3	6.5	4.5	5.0
2012E	5.0	6.4	neg	7.6	8.9	neg	12.7	5.1	4.9	8.5	7.4	6.8	7.5	5.5	6.4
2013E	5.0	2.5	5.9	9.1	neg	neg	7.7	10.4	4.7	5.0	6.3	6.4	7.7	5.6	6.4
2014E	4.3	13.9	3.0	4.8	neg	12.3	6.8	neg	4.6	5.3	6.9	5.8	6.3	4.9	5.5
EV/Grid size YE11 ($/grid unit)	911	1,070	86	1,243	475	326	1,184	733	2,528	2,248	1,080	1,123	8,084	1,558	1,746
EV/Grid length YE11 ($/km)	3,531	3,572	307	4,560	2,091	1,760	6,380	2,732	28,645	15,269	6,885	5,319	74,900	7,745	8,729
EV/Distribution volume ($/MWh), 2011	23.5	20.7	2.5	21.2	8.8	6.3	10.2	10.2	48.9	28.0	18.0	19.4	18.7	14.7	16.8

Portfolio Valuation and Ratings

Generation

Company name	OGK-2	E.On Russia	Enel OGK-5	TGK-1	Mosenergo	Quadra	RusHydro	Irkutskenergo	Krasnoyarsk HPP	Portfolio total
Ticker	OGKB	EONR	OGKE	TGKA	MSNG	TGKD	HYDR	IRGZ	KRSG	
Current ord. share price ($)	0.01117	0.077	0.0527	0.000174	0.0429	0.000113	0.0238	0.514	2.891	
Current pref share price ($)	n/a	n/a	n/a	n/a	n/a	0.000148	n/a	n/a	n/a	
MktCap ($mn)	1,407	4,857	1,865	671	1,707	227	8,766	2,451	1,131	23,082
As % of portfolio total	6.1%	21.0%	8.1%	2.9%	7.4%	1.0%	38.0%	10.6%	4.9%	100%
EV ($mn)	1,484	4,073	2,736	1,734	1,390	371	9,772	2,835	927	24,892
Ordinary shares										
12M TP ($ per ord. share)	0.00450	0.101	0.0244	0.000221	0.0490	0.000125	0.0181	0.569	0.961	
Potential upside (%)	-60%	31%	-54%	27%	14%	10%	-24%	11%	-67%	
Rating	SELL	BUY	SELL	HOLD	HOLD	HOLD	SELL	HOLD	SELL	
12M target MktCap ($mn)	567	6,346	864	852	1,948	248	6,661	2,710	376	20,573
Shares outstanding (ord., mn)	125,995	63,049	35,372	3,854,341	39,749	1,912,506	367,638	4,767	391	
Shares outstanding (pref, mn)	n/a	n/a	n/a	n/a	n/a	75,273	n/a	n/a	n/a	
3M performance (ord.) (%)	-20%	-15%	-11%	-11%	10%	-25%	-10%	7%	-3%	
12M performance (ord.) (%)	-57%	6%	-18%	-39%	-27%	-54%	-25%	0%	-31%	
YtD performance (ord.) (%)	-53%	10%	-11%	-39%	-18%	-48%	-21%	4%	-10%	
Free float (%)	17%	18%	13%	22%	15%	24%	32%	6%	7%	
Free float ($mn)	246	860	242	150	253	55	2,773	157	76	4,813
Ave. 3M daily volume ($mn)	0.99	1.19	0.14	0.49	1.03	0.04	17.47	0.12	0.02	
Installed electric capacity (MW)										
2009	n/a	8,630	8,747	6,347	11,924	3,420	n/a	12,868	6,000	57,935
2010	17,857	9,123	8,772	6,278	11,924	3,523	34,512	12,875	6,000	110,864
2011	17,857	10,289	9,576	6,837	12,344	3,530	35,172	12,882	6,000	114,487
2012E	18,357	10,339	9,601	6,795	12,338	3,502	37,613	12,927	6,000	117,472
2013E	18,393	10,339	9,601	7,281	12,400	3,722	39,145	12,927	6,000	119,807
2014E	18,393	10,339	9,601	7,311	13,040	3,952	39,782	12,927	6,000	121,344
Electricity generation (GWh)										
2009	n/a	53,948	41,339	26,761	61,747	10,674	n/a	56,798	23,184	274,450
2010	82,473	55,791	45,118	27,162	66,937	11,146	100,504	61,420	23,195	473,747
2011	79,761	62,467	44,490	28,362	65,768	11,207	107,377	59,328	18,891	477,652
2012E	76,575	63,820	46,913	30,239	61,000	11,183	108,332	60,337	15,868	474,267
2013E	73,572	61,154	45,597	32,975	61,746	12,077	123,838	60,391	15,075	486,425
2014E	67,347	58,019	42,025	32,614	59,783	12,216	133,626	59,766	16,638	482,033
Installed heat capacity (Gcal/h), 2011	4,463	2,126	2,611	26,053	35,085	15,498	17,081	12,928	n/a	115,846
Heat generation (th Gcal), 2011	6,527	2,126	6,815	25,640	66,480	23,870	31,302	23,276	n/a	186,035

Company name	OGK-2	E.On Russia	Enel OGK-5	TGK-1	Mosenergo	Quadra	RusHydro	Irkutskenergo	Krasnoyarsk HPP	Portfolio total
Revenue ($mn)										
2009	n/a	1,284	1,310	1,303	3,548	997	n/a	1,667	272	10,380
2010	3,177	1,657	1,731	1,663	4,785	1,171	7,961	2,110	259	24,515
2011	3,569	2,249	2,045	2,050	5,482	1,369	9,388	2,551	195	28,897
2012E	3,241	2,325	2,064	1,992	5,012	1,282	8,408	2,380	151	26,855
2013E	3,263	2,301	2,080	2,187	5,217	1,417	8,826	2,426	156	27,872
2014E	3,316	2,330	2,100	2,330	5,534	1,576	9,534	2,552	177	29,451
EBITDA ($mn)										
2009	n/a	273	253	212	503	166	n/a	334	148	1,890
2010	384	476	355	286	652	143	2,144	633	177	5,249
2011	259	794	424	429	832	170	2,300	766	131	6,106
2012E	285	888	468	415	605	127	1,523	540	89	4,940
2013E	376	845	475	483	622	166	1,875	591	95	5,529
2014E	335	789	455	491	552	181	2,178	631	114	5,726
Net income ($mn)										
2009	n/a	172	106	105	106	83	n/a	160	116	848
2010	179	329	178	135	272	23	757	331	141	2,345
2011	48	510	197	147	344	52	1,054	471	109	2,932
2012E	62	573	219	130	165	17	426	285	63	1,941
2013E	140	551	232	175	208	35	582	339	66	2,327
2014E	95	511	223	181	165	33	637	379	78	2,302
Achieved electricity price (incl. capacity payment, $/MWh)										
2009	n/a	22.9	28.6	22.6	30.6	44.1	n/a	15.3	9.1	
2010	37.3	28.7	35.4	31.9	39.2	51.4	46.6	17.1	11.2	
2011	43.0	34.9	40.2	38.7	43.1	51.0	51.4	29.0	10.6	
2012E	40.5	35.5	38.4	36.2	40.3	50.2	45.6	26.5	9.7	
2013E	42.4	36.6	39.6	38.4	41.8	52.9	44.0	27.2	10.6	
2014E	46.6	38.9	42.8	41.1	44.4	57.7	45.2	29.0	11.0	
Achieved electricity price growth (YoY, %)										
2010	n/a	25%	24%	41%	28%	17%	n/a	12%	23%	
2011	15%	22%	14%	22%	10%	-1%	10%	69%	-5%	
2012E	-6%	2%	-4%	-7%	-6%	-2%	-11%	-9%	-8%	
2013E	5%	3%	3%	6%	4%	5%	-4%	3%	9%	
2014E	10%	6%	8%	7%	6%	9%	3%	7%	3%	

Company name	OGK-2	E.On Russia	Enel OGK-5	TGK-1	Mosenergo	Quadra	RusHydro	Irkutskenergo	Krasnoyarsk HPP	Portfolio total
EV/EBITDA (x)										
2009	n/a	14.9	10.8	8.2	2.8	2.2	n/a	8.5	6.3	13.2
2010	3.9	8.6	7.7	6.1	2.1	2.6	4.6	4.5	5.2	4.7
2011	5.7	5.1	6.5	4.0	1.7	2.2	4.2	3.7	7.1	4.1
2012E	5.2	4.6	5.8	4.2	2.3	2.9	6.4	5.2	10.4	5.0
2013E	3.9	4.8	5.8	3.6	2.2	2.2	5.2	4.8	9.8	4.5
2014E	4.4	5.2	6.0	3.5	2.5	2.1	4.5	4.5	8.1	4.3
P/E (x)										
2009	n/a	28.2	17.6	6.4	16.2	2.7	n/a	15.4	9.7	27.2
2010	7.9	14.8	10.5	5.0	6.3	9.8	11.6	7.4	8.0	9.8
2011	29.5	9.5	9.5	4.6	5.0	4.4	8.3	5.2	10.4	7.9
2012E	22.6	8.5	8.5	5.1	10.4	13.3	20.6	8.6	17.8	11.9
2013E	10.1	8.8	8.1	3.8	8.2	6.4	15.1	7.2	17.2	9.9
2014E	14.8	9.5	8.4	3.7	10.3	6.9	13.8	6.5	14.6	10.0
Current EV/Capacity ($/kW)										
2011	83	396	286	254	113	105	278	220	154	217
2012E	81	394	285	255	113	106	260	219	154	212
2013E	81	394	285	238	112	100	250	219	154	208
2014E	81	394	285	237	107	94	246	219	154	205
Fair EV/Capacity ($/kW)										
2011	31	466	169	261	109	99	168	204	23	167
2012E	31	464	168	263	109	100	157	204	23	163
2013E	30	464	168	245	108	94	151	204	23	160
2014E	30	464	168	244	103	89	148	204	23	158
Current EV/Electricity production ($/MWh)										
2011	19	65	61	61	21	33	91	48	49	52
2012E	19	64	58	57	23	33	90	47	58	52
2013E	20	67	60	53	23	31	79	47	61	51
2014E	22	70	65	53	23	30	73	47	56	52
Fair EV/Electricity production ($/MWh)										
2011	7	77	36	63	20	31	55	44	7	40
2012E	7	75	34	59	22	31	54	44	9	40
2013E	8	78	35	54	22	29	48	44	9	39
2014E	8	83	38	55	22	29	44	44	8	40

COMPANY PAGES

FEDERAL GRID COMPANY (FSK)

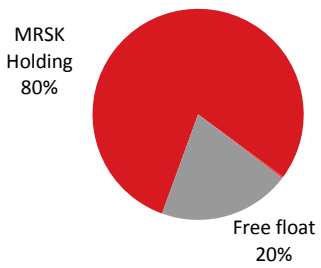
SELL
12M Target Price* ($) **0.00471**

Bloomberg code	FEES RX
Reuters code	FEES.MM
Current price, ord. ($)	0.00682
Potential upside to 12M TP	-31%
Dividend yield, ord. ($)	0.0%
Exp. total return over 12M (%)	-31%

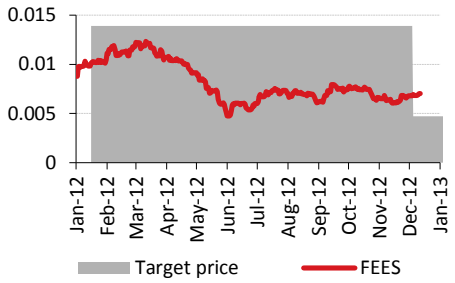
Share data

No. of ord. shares (mn)*	1,272,813
No. of pref. shares (mn)	0
Ave 3M daily t/o, ord. ($mn)	18.4
Free float (%)*	20%
Market cap ($mn)*	8,681
Enterprise value ($mn)*	9,437

Shareholder structure**



12M price performance ($)



Source: Company data, Bloomberg, Aton estimates

*estimated after additional share issues planned for 2012-13

**estimated after consolidation with MRSK Holding

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BULL POINTS

- Excellent stock liquidity: one of the most liquid stocks in the Russian utilities universe
- Relatively low regulatory risks

BEAR POINTS

- Huge capex plans
- Corporate governance unlikely to improve anytime soon
- Privatisation is not a trigger but rather presents stock overhang risk
- No strong drivers in next 12M

STOCK DRIVERS

- Clarity on terms of consolidation with MRSK Holding (1Q13)
- Publication of FY12 IFRS results (Apr-May 2013)
- Clarity on prolongation of RAB regulatory period to 2017 and respective tariffs (may appear in 1Q13)

Valuation ratios

	2009	2010	2011	2012E	2013E	2014E	2015E
EV/EBITDA adj.	7.8	4.8	3.4	3.6	3.5	3.0	2.6
P/E adj.	10.8	10.4	6.5	7.5	7.7	6.3	5.2
EV/Transmission revenue	3.7	2.6	2.1	2.2	2.2	1.9	1.7
P/BV	0.3	0.3	0.3	0.3	0.3	0.3	0.3
EV/RAB	0.44	0.45	0.46	0.41	0.39	0.35	0.32
EV/Grid size ($/grid unit)	9,613	8,800	8,084	7,521	7,207	6,951	6,809
EV/Grid length ($/th. km)	78	75	75	n/a	n/a	n/a	n/a
EV/Transmission volume ($/MWh)	20.2	19.4	18.7	18.5	18.2	18.0	17.7

Financial metrics

	2009	2010	2011	2012E	2013E	2014E	2014E
RoA	2.2%	2.8%	4.6%	3.8%	3.6%	4.1%	4.7%
RoE	3.0%	2.9%	4.8%	4.2%	4.1%	4.7%	5.3%
EBITDA/RAB	5.6%	9.3%	13.4%	11.4%	11.0%	11.6%	12.5%
FCFF/RAB	-9.5%	-13.8%	-14.5%	-12.2%	-6.0%	-3.9%	0.5%
Net debt/EBITDA	-2.2	-0.1	1.0	2.1	2.6	2.8	2.6
Net debt/Assets	-0.1	0.0	0.1	0.2	0.2	0.2	0.2
Interest coverage ratio	18.2	74.2	754.5	372.0	251.3	230.6	245.5

Operational data

	2009	2010	2011	2012E	2013E	2014E	2014E
Size of grid ('000) grid units	982	1,072	1,167	1,255	1,310	1,358	1,386
Transmission volume (TWh)	466	486	504	512	518	525	533
Electricity losses in grid (%)	4.5%	4.4%	4.3%	4.2%	4.1%	4.0%	4.0%
Avg transmission tariff ($/MWh)	5.4	7.4	9.1	8.5	8.5	9.3	10.3
Growth rate	-0.6%	36.6%	22.8%	-6.0%	-0.8%	10.2%	10.6%

Assets description, 2011

Region	Grid length (km)	Transformer capacity (MVA)	Grid size ('000 units)	Through-put (TWh)	Loss rate (%)	RAB 2011 ($mn)
Russia	126,000	323,000	1,167	504	4.3%	20,593
Total	**126,000**	**323,000**	**1,167**	**504**	**4.3%**	**20,593**

Source: Company data, Aton estimates

Income statement ($mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Revenue	**2,654**	**3,631**	**4,672**	**4,456**	**4,470**	**4,989**	**5,602**	**6,087**	**6,614**
Electricity transmission	2,528	3,602	4,585	4,372	4,387	4,903	5,511	5,991	6,513
Connection fees	96	20	74	71	71	74	78	82	86
Other	30	9	13	13	12	13	14	14	15
Cost of sales	**-2,140**	**-2,834**	**-3,226**	**-3,201**	**-3,242**	**-3,433**	**-3,698**	**-3,942**	**-4,201**
Purchased power to cover losses	-381	-424	-392	-374	-366	-378	-406	-433	-462
D&A	-557	-1,023	-1,159	-1,233	-1,318	-1,456	-1,610	-1,750	-1,900
Other operating expenses (recurring)	-1,203	-1,388	-1,675	-1,595	-1,558	-1,599	-1,682	-1,759	-1,840
Other operating income (recurring)	135	131	145	138	135	140	148	156	163
EBITDA	**1,205**	**1,951**	**2,750**	**2,625**	**2,682**	**3,153**	**3,663**	**4,051**	**4,476**
EBIT	**649**	**928**	**1,592**	**1,393**	**1,364**	**1,697**	**2,053**	**2,301**	**2,576**
Net finance income/(expense)	327	143	126	58	39	24	24	23	23
EBT	**975**	**1,072**	**1,717**	**1,451**	**1,403**	**1,721**	**2,076**	**2,324**	**2,599**
Net income	**801**	**837**	**1,343**	**1,161**	**1,123**	**1,377**	**1,661**	**1,859**	**2,079**

Margins

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
EBITDA margin	45.4%	53.7%	58.9%	58.9%	60.0%	63.2%	65.4%	66.5%	67.7%
EBIT margin	24.4%	25.6%	34.1%	31.3%	30.5%	34.0%	36.6%	37.8%	38.9%
Net margin	30.2%	23.0%	28.8%	26.0%	25.1%	27.6%	29.7%	30.5%	31.4%

YoY growth rates

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Transmission revenue	-5.1%	42.5%	27.3%	-4.6%	0.3%	11.8%	12.4%	8.7%	8.7%
EBITDA	9.2%	61.9%	41.0%	-4.5%	2.1%	17.6%	16.2%	10.6%	10.5%
Net income	93.7%	4.5%	60.6%	-13.6%	-3.3%	22.6%	20.6%	11.9%	11.8%

Balance sheet ($mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Fixed assets	24,647	28,133	30,676	33,475	34,495	38,052	40,298	42,675	45,178
LT investments	3,393	3,660	2,665	2,554	2,411	2,452	2,452	2,452	2,452
Non-cash working capital	-1,346	-434	-197	-68	64	226	252	274	298
Equity	26,417	28,650	27,870	27,926	27,538	29,394	31,055	32,914	34,993
Minority interest	52	31	25	24	22	23	23	23	23
Net debt/(cash)	-2,613	-127	2,633	5,505	7,044	8,906	9,517	10,057	10,506
Other LT liabilities/(assets), net	2,839	2,804	2,616	2,507	2,366	2,406	2,406	2,406	2,406
RAB, net	21,411	21,064	20,593	22,982	24,373	27,239	29,306	31,204	33,036

Cash flow statement ($mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Operating cash flow before change in non-cash WC	**1,188**	**1,638**	**2,204**	**2,260**	**2,347**	**2,825**	**3,247**	**3,586**	**3,956**
Operating cash flow	**1,045**	**1,736**	**2,064**	**2,139**	**2,219**	**2,664**	**3,221**	**3,564**	**3,932**
Net capex	-3,007	-4,653	-4,774	-5,274	-4,189	-4,430	-3,856	-4,127	-4,403
Acquisitions/divestments	0	0	0	0	0	0	0	0	0
Investing cash flow	**-1,074**	**-4,168**	**-3,874**	**-5,214**	**-4,145**	**-4,398**	**-3,824**	**-4,095**	**-4,371**
Equity raised/bought back	1,328	367	69	97	83	0	0	0	0
Change in debt	-661	1,411	2,282	2,232	1,966	1,714	571	714	286
Interest expense	-70	-24	-155	-4	-5	-7	-8	-9	-9
Financing cash flow	**596**	**1,754**	**2,117**	**2,325**	**2,044**	**1,707**	**563**	**705**	**276**

Source: Company data, Aton estimates

DCF valuation ($mn)

	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
EBIT	**1,393**	**1,364**	**1,697**	**2,053**	**2,301**	**2,576**	**2,882**	**3,222**	**3,601**
Tax on EBIT*	-290	-281	-344	-415	-465	-520	-581	-649	-725
After tax EBIT	**1,103**	**1,083**	**1,352**	**1,638**	**1,836**	**2,056**	**2,301**	**2,573**	**2,876**
Depreciation	1,233	1,318	1,456	1,610	1,750	1,900	2,059	2,228	2,408
Capex	**-5,097**	**-3,775**	**-3,712**	**-3,069**	**-3,290**	**-3,526**	**-3,779**	**-4,051**	**-4,342**
Change in WC	-125	-131	-160	-26	-22	-24	-26	-28	-30
FCFF	**-2,887**	**-1,505**	**-1,064**	**152**	**274**	**406**	**555**	**723**	**911**
Discounted FCFF	-2,861	-1,316	-821	104	165	215	260	299	332

*equals to actual tax paid

WACC composition

Equity market risk	12.5%
Company-specific risk	3.0%
Regulatory risk	1.0%
Corporate governance	2.0%
Liquidity	0.0%
Cost of equity	**15.5%**
Cost of debt	8.0%
Target D/(D+E)	30.0%
WACC	**13.3%**

Fair value calculation

			Ordinary
Terminal EV/RAB	0.15	TP per share ($)	0.00408
Terminal value	26,245	**12M TP ($)**	**0.00471**
NPV of cash flow	-3,624	Current price ($)	0.00682
NPV of terminal value	9,573	**Potential upside to 12M TP**	**-31%**
Fair EV	**5,949**	Dividend yield	0%
net debt (-) or plus cash (+) 2011*	-2,494	**Expected total return over 12M**	**-31%**
long-term investments	1,763	Current EV/RAB 2011E	0.46
minority interest (-)	-25	Fair EV/RAB 2011E	0.29
Fair MktCap	**5,193**		

*estimated after additional share issues planned for 2012-13

12M TP		Terminal growth				
		-2.0%	-1.0%	0.0%	1.0%	2.0%
WACC	11.3%	0.00799	0.00791	0.00779	0.00761	0.00737
	12.3%	0.00641	0.00628	0.00611	0.00588	0.00558
	13.3%	0.00507	0.00491	**0.00471**	0.00446	0.00414
	14.3%	0.00393	0.00376	0.00354	0.00328	0.00295
	15.3%	0.00295	0.00277	0.00255	0.00229	0.00197

Fair EV/RAB		Terminal growth				
		-2.0%	-1.0%	0.0%	1.0%	2.0%
WACC	11.3%	0.47	0.47	0.46	0.45	0.44
	12.3%	0.38	0.38	0.37	0.35	0.34
	13.3%	0.31	0.30	**0.29**	0.28	0.26
	14.3%	0.25	0.24	0.22	0.21	0.19
	15.3%	0.19	0.18	0.17	0.16	0.14

Note: We calculate the terminal value using the following formula:
Terminal value = RAB YE20E * (RR - g) * (1 + g) / (WACC - g), where:
RR - regulatory rate of return, g - terminal growth rate (growth in RAB)
As the regulatory rate of return is below the estimated WACC,
the higher growth in RAB results in a lower fair value.
Our base case valuation assumes a zero terminal growth rate.

Source: Aton estimates

MRSK HOLDING

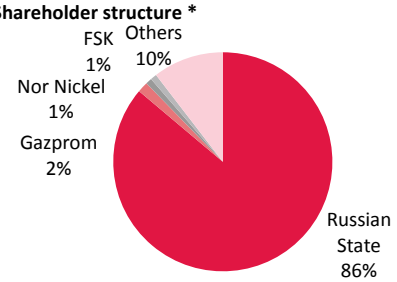
SELL

12M Target Price* ($)	**0.0413**
12M Target Price* (prefs)	**0.0233**

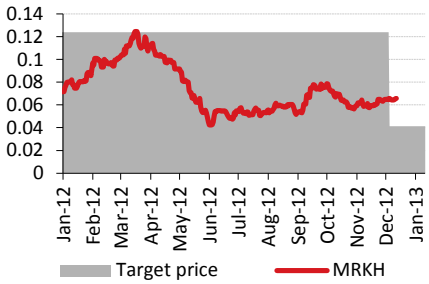
Bloomberg code	MRKH RX
Reuters code	MRKH.MM
Current price, ord. ($)	0.0641
Current price, pref. ($)	0.0409
Potential upside to 12M TP, ord	-36%
Potential upside to 12M TP, pref.	-43%
Dividend yield, ord. ($)	0%
Dividend yield, pref. ($)	5%
Exp. total return over 12M, ord. (%)	-36%
Exp. total return over 12M, pref.(%)	-38%

Share data	
No. of ord. shares (mn)*	161,988
No. of pref. shares (mn)	2,075
Ave 3M Daily t/o, ord ($mn)	19.97
Ave 3M Daily t/o, pref ($mn)	0.19
Free float (%)*	10%
MktCap ($mn)*	10,471
Enterprise value ($mn)*	16,262

Shareholder structure *



12M price performance ($)



Source: Company data, Bloomberg, Aton estimates

*estimated after additional share issues planned for 2012-13, including additional issue to be paid for by the state with its stake in FSK

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BULL POINTS

- The biggest company by MktCap and the most liquid stock in the electricity distribution universe
- Diversified exposure to the entire electricity distribution sector

BEAR POINTS

- As a holding, does not add value to the individual MRSKs
- Risk that cash proceeds from MRSKs' privatisation might not be distributed to minority shareholders

STOCK DRIVERS

- Clarity on terms of consolidation with FSK (1Q13)
- Announcement of MRSKs' privatisation (possibly in 2013) and scheme for distributing cash proceeds from privatisation among MRSK Holding's shareholders

Valuation ratios

	2009	2010	2011	2012E	2013E	2014E	2015E
EV/EBITDA adj	3.9	3.0	2.4	2.6	2.5	2.3	1.9
P/E adj	7.4	6.1	4.5	5.5	5.6	4.9	3.9
EV/Distribution revenue	1.3	1.0	0.8	0.9	0.9	0.8	0.7
P/B	0.3	0.3	0.3	0.3	0.3	0.3	0.2
EV/RAB	n/a	0.33	0.34	0.33	0.33	0.30	0.29
EV/Grid size ($/grid unit)	1,680	1,613	1,558	1,501	1,464	1,435	1,411
EV/Grid length ($/km)	8,211	7,745	7,745	n/a	n/a	n/a	n/a
EV/Distribution volume ($/MWh)	15.2	14.9	14.7	14.5	14.3	14.1	13.9

Financial metrics

	2009	2010	2011	2012E	2013E	2014E	2015E
RoA	4.7%	5.6%	6.9%	5.4%	5.3%	5.5%	6.4%
RoE	4.3%	4.7%	6.4%	5.2%	5.1%	5.4%	6.4%
EBITDA/RAB	n/a	11.2%	14.4%	12.5%	12.8%	13.4%	n/a
FCFF/RAB	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Net debt/EBITDA	0.3	0.7	1.0	2.0	2.3	2.5	2.2
Net debt/Assets	0.0	0.1	0.1	0.2	0.2	0.3	0.3
Interest coverage ratio	3.8	8.0	12.9	4.8	4.2	4.1	4.6

Operational data

	2009	2010	2011	2012E	2013E	2014E	2015E
Size of grid ('000 grid units)	9,683	10,083	10,438	10,831	11,106	11,329	11,525
Distribution volume (TWh)	1,070	1,095	1,108	1,125	1,139	1,155	1,174
Electricity losses in grid (%)	8.8%	8.8%	8.8%	8.8%	8.8%	8.8%	8.8%
Total distribution tariff ($/MWh)	12.1	15.2	18.2	16.6	16.5	17.6	19.1
growth rate	n/a	24.9%	19.9%	-8.9%	-0.2%	6.3%	8.7%

Assets description (2011)

Main subsidiaries	Grid length (km)	Transformer capacity (MVA)	Grid size, ('000) units	Distrib. volume (TWh)	Loss rate (%)	RAB ($mn)
FSK	126,000	323,000	1,167	504	4.3%	20,593
MRSK Center	376,898	46,145	1,461	57	9.9%	3,106
MRSK South	157,846	23,177	527	27	9.5%	992
MRSK North Caucasus	104,051	13,259	370	13	22.1%	840
MRSK Center and Volga	251,930	39,578	924	54	9.0%	2,681
MRSK North-West	168,869	60,291	744	40	6.4%	1,581
MRSK Siberia	257,657	45,510	1,391	72	9.0%	1,979
MRSK Urals	123,471	33,503	665	77	8.1%	1,762
MRSK Volga	214,670	34,138	800	58	6.8%	1,864
MOESK	128,759	69,371	1,459	75	10.3%	5,726
Lenenergo	54,896	20,740	373	30	10.6%	2,331
Kubanenergo	89,040	12,654	330	16	12.9%	677
Tyumenenergo	45,535	25,611	207	71	2.6%	3,700
Total	**2,099,622**	**746,977**	**10,438**	**1,108**	**8.8%**	**47,594**

Source: Company data, Aton estimates

Income statement ($mn)*

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Revenue	**14,347**	**18,342**	**21,928**	**20,223**	**20,299**	**21,592**	**23,639**	**25,282**	**27,285**
Distribution revenue	13,000	16,611	20,142	18,639	18,828	20,301	22,419	24,089	26,084
Connection fees	1,028	1,433	1,438	1,250	1,140	945	854	810	799
Other	318	299	348	334	331	345	365	383	402
Cost of sales	**-12,275**	**-15,596**	**-18,273**	**-17,258**	**-17,257**	**-18,070**	**-19,275**	**-20,456**	**-21,669**
Payments to TGOs	-2,025	-2,862	-3,777	-3,281	-3,270	-3,448	-3,712	-3,982	-4,249
Purchased electricity to cover losses in grid	-2,696	-3,754	-3,826	-3,529	-3,514	-3,689	-3,936	-4,199	-4,479
Operation and maintenance expenses	-5,726	-6,441	-7,672	-7,460	-7,302	-7,443	-7,779	-8,095	-8,413
D&A	-1,827	-2,538	-2,998	-2,988	-3,171	-3,489	-3,848	-4,181	-4,528
Other operating income/(expense)	235	201	217	207	203	211	223	234	246
EBITDA	**4,134**	**5,485**	**6,871**	**6,159**	**6,417**	**7,223**	**8,436**	**9,242**	**10,391**
EBIT	**2,307**	**2,947**	**3,872**	**3,171**	**3,246**	**3,734**	**4,587**	**5,060**	**5,863**
Net finance expense	-212	-145	-95	-585	-705	-867	-944	-935	-826
EBT	**2,095**	**2,802**	**3,778**	**2,586**	**2,541**	**2,866**	**3,643**	**4,126**	**5,037**
Net income	**1,415**	**1,712**	**2,311**	**1,906**	**1,870**	**2,129**	**2,690**	**3,042**	**3,680**

Margins

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
EBITDA margin	28.8%	29.9%	31.3%	30.5%	31.6%	33.5%	35.7%	36.6%	38.1%
EBIT margin	16.1%	16.1%	17.7%	15.7%	16.0%	17.3%	19.4%	20.0%	21.5%
Net margin	9.9%	9.3%	10.5%	9.4%	9.2%	9.9%	11.4%	12.0%	13.5%

YoY growth rates

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Distribution revenue	-5.4%	27.8%	21.3%	-7.5%	1.0%	7.8%	10.4%	7.4%	8.3%
EBITDA	4.9%	32.7%	25.3%	-10.4%	4.2%	12.6%	16.8%	9.6%	12.4%
Net income	25.5%	21.0%	35.0%	-17.5%	-1.9%	13.9%	26.3%	13.1%	21.0%

Balance sheet ($mn)*

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Fixed assets	43,303	48,046	52,165	56,164	57,468	62,666	65,841	69,060	72,215
LT investments	3,635	4,019	3,011	2,885	2,723	2,770	2,770	2,770	2,770
Non-cash working capital	-2,239	-2,866	-2,724	-1,117	-40	1,162	1,270	1,362	1,472
Equity	33,242	36,347	36,155	36,586	36,441	39,207	41,897	44,940	48,620
Minority interest	5,005	5,322	5,526	5,453	5,306	5,562	5,786	6,045	6,394
Net debt/(cash)	1,218	3,589	6,926	12,210	14,927	18,292	18,661	18,671	17,906
Other LT liabilities/(assets), net	5,234	3,941	3,844	3,683	3,476	3,536	3,536	3,536	3,536
RAB, net **	49,962	49,068	47,594	49,458	50,006	53,995	56,673	59,236	61,636

**includes estimates for regions which have not switched to RAB yet

Cash flow statement ($mn)*

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Operating cash flow before change in non-cash WC	**3,756**	**4,810**	**6,120**	**5,642**	**5,909**	**6,650**	**7,707**	**8,417**	**9,383**
Operating cash flow	**3,609**	**4,762**	**5,745**	**4,098**	**4,872**	**5,453**	**7,599**	**8,325**	**9,274**
Net capex	-4,780	-7,137	-9,440	-9,372	-7,733	-7,678	-7,024	-7,400	-7,683
Acquisitions/divestments	-174	-425	-319	0	0	0	0	0	0
Investing cash flow	**-2,947**	**-6,925**	**-8,389**	**-9,297**	**-7,676**	**-7,633**	**-6,979**	**-7,355**	**-7,638**
Equity raised/bought back	1,412	572	439	100	85	0	0	0	0
Change in debt	-474	1,314	4,113	3,537	3,736	3,125	571	516	-1,681
Interest expense	-740	-544	-633	-660	-762	-912	-989	-979	-871
Financing cash flow	**188**	**1,322**	**3,777**	**2,976**	**3,059**	**2,213**	**-417**	**-463**	**-2,552**

*financial statements include consolidated FSK results

Source: Company data, Aton estimates

MRSK Holding SOTP valuation *

Subsidiary name	Ticker	Stake owned	Current EV/RAB 2011E	Fair EV/RAB 2011E	Market value of stake ($mn)	12M target value of stake ($mn)
MRSK Center	MRKC	50%	0.43	0.40	358	425
MRSK South	MRKY	52%	0.57	0.52	42	26
MRSK North Caucasus	MRKK	88%	0.04	0.01	80	75
MRSK Center and Volga	MRKP	50%	0.43	0.38	311	351
MRSK North West	MRKZ	55%	0.22	0.14	113	70
MRSK Siberia	MRKS	57%	0.23	0.12	169	56
MRSK Urals	MRKU	52%	0.45	0.20	294	109
MRSK Volga	MRKV	68%	0.31	0.17	290	192
MOESK	MSRS	51%	0.64	0.44	1,185	690
Lenenergo	LSNG	59%	0.36	0.24	190	54
Tyumenenergo **	unlisted	100%	0.49	0.34	1,106	1,059
Tomsk DC	TORS	52%	0.31	0.50	38	51
Kubanenergo	KUBE	73%	1.36	-0.08	696	37
FSK	FEES	80%	0.46	0.29	6,924	4,783
Stakes in MRSKs at current market/12M target value ($mn)					11,796	7,980
Net cash (9M12 unconsolidated RAS) adj. for additional issues ($mn)					444	444
Current market/12M target SOTP ($mn)					12,239	8,423
Current market/fair premium/(discount) to SOTP					-14.4%	-20.0%
Current/12M target MktCap ($mn)					10,471	6,739
12M TP (ord.) ($)						**0.0413**
Current price (ord.) ($)						0.0641
Upside to 12M TP (ord.)						**-36%**
Fair discount of preferred shares						39%
12M TP (pref.) ($)						**0.0233**
Current price (pref) ($)						0.0409
Upside to 12M TP (pref.)						**-43%**

* estimated after additional share issues of MRSK Holding and MRSKs planned for 2012-13, including additional share issue of MRSK Holding intended for contribution of the state's stake in FSK.

** market value implied at average asset-based multiples of listed MRSKs

Source: Company data, Aton estimates

MRSK CENTER

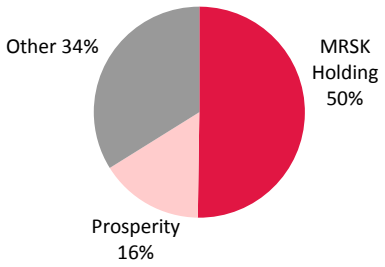
HOLD
12M Target price* ($) **0.0200**

Bloomberg code	MRKC RX
Reuters code	MRKC.MM
Current price, ord. ($)	0.0169
Upside to 12M TP, ord.	19%
Dividend yield, ord. ($)	1%
Exp. total return over 12M, ord. (%)	20%

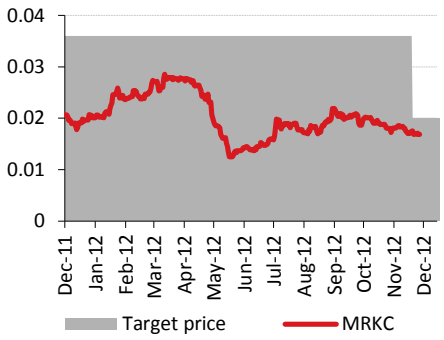
Share data

No. of ord. shares (mn)	42,218
No. of pref. shares (mn)	0
Ave 3M daily t/o, ord. ($mn)	0.12
Free float (%)	18%
MktCap ($mn)	713
Enterprise value ($mn)	1,331

Shareholder structure



12M price performance ($)



Source: Company data, Bloomberg, Aton estimates

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* TP here is the weighted average of privatisation and base case scenarios; all other data corresponds to base case scenario

BULL POINTS

- A likely candidate for privatisation
- Above-average effective rate of return on RAB

BEAR POINTS

- Three regions have no RAB regulation as a result of "RAB-reload"
- A dispute with NLMK in Lipetsk region over the 'last mile' issue

STOCK DRIVERS

- Announcement of the company's privatisation (may occur in 2013)
- Publication of FY12 IFRS financials (Apr-May 2013)
- Transition of Bryansk and Lipetsk branches to RAB regulation (may happen in 2013)

Valuation ratios

	2009	2010	2011	2012E	2013E	2014E	2015E
EV/EBITDA adj	3.8	3.2	2.5	2.8	2.7	2.4	2.0
P/E adj	7.0	4.4	3.5	5.0	5.0	4.3	3.3
EV/Distribution revenue	0.9	0.7	0.6	0.6	0.6	0.6	0.5
P/BV	0.8	0.6	0.6	0.6	0.5	0.5	0.4
EV/RAB	n/a	0.41	0.43	0.45	0.45	0.42	0.40
EV/Grid size ($/grid unit)	1,026	968	911	884	868	850	832
EV/Grid length ($/km)	3,594	3,531	3,531	n/a	n/a	n/a	n/a
EV/Distribution volume ($/MWh)	25.1	23.8	23.5	23.1	22.9	22.5	22.2

Financial metrics

	2009	2010	2011	2012E	2013E	2014E	2015E
RoA	13.4%	14.1%	15.6%	10.6%	10.7%	11.1%	12.9%
RoE	10.8%	14.6%	17.2%	11.0%	10.5%	10.8%	12.4%
EBITDA/RAB	n/a	13.1%	17.4%	15.7%	16.7%	17.6%	19.7%
FCFF/RAB	2.5%	-2.1%	-2.3%	-3.2%	1.6%	1.5%	3.4%
Net debt/EBITDA	1.2	1.3	1.1	1.6	1.4	1.3	1.0
Net debt/Assets	0.2	0.2	0.3	0.3	0.3	0.3	0.2
Interest coverage ratio	3.2	5.1	6.6	4.0	3.9	4.2	5.5

Operational data

	2009	2010	2011	2012E	2013E	2014E	2015E
Size of grid ('000 grid units)	1,297	1,376	1,461	1,506	1,533	1,565	1,600
Distribution volume (GWh)	53,129	56,035	56,667	57,517	58,207	59,022	59,966
Electricity losses in grid (%)	10.1%	10.0%	9.9%	9.8%	9.8%	9.7%	9.6%
Total distribution tariff ($/MWh)	27.7	33.8	39.6	37.0	36.8	39.2	39.2
Growth rate	-2.8%	21.7%	17.3%	-6.4%	-0.6%	6.4%	0.0%

Assets description (2011)

Region	Grid length (km)	Transformer capacity (MVA)	Grid size ('000 units)	Distrib. volume (GWh)	Loss rate (%)	RAB ($mn)
Belgorod	42,937	5,452	216	10,829	7.6%	715
Bryansk	25,488	3,059	84	3,686	5.8%	152
Voronezh	50,653	6,029	172	7,719	9.4%	401
Kostroma	24,984	3,128	104	2,431	14.7%	207
Kursk	34,323	4,716	147	5,291	8.4%	200
Lipetsk	30,477	3,619	108	6,923	8.9%	326
Orel	27,791	2,514	87	2,076	12.7%	129
Smolensk	39,917	4,847	154	3,385	17.3%	244
Tambov	28,166	3,386	99	2,851	7.8%	116
Tver	46,344	5,521	169	4,567	16.9%	362
Yaroslavl	25,820	3,874	121	6,909	7.6%	255
Total	**376,898**	**46,145**	**1,461**	**56,667**	**9.9%**	**3,106**

Source: Company data, Aton estimates

Income statement ($mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Revenue	**1,554**	**1,996**	**2,349**	**2,227**	**2,240**	**2,412**	**2,650**	**2,861**	**3,087**
Distribution revenue	1,474	1,892	2,244	2,131	2,144	2,313	2,545	2,750	2,972
of which attributed to MRSK	761	914	1,129	1,062	1,071	1,149	1,275	1,383	1,500
Connection fees	52	74	62	55	54	56	60	63	66
Other	28	31	43	41	41	43	45	48	50
Cost of sales	**-1,376**	**-1,769**	**-2,056**	**-2,023**	**-2,032**	**-2,172**	**-2,351**	**-2,519**	**-2,700**
Payments to TGOs	-252	-311	-382	-355	-355	-376	-405	-433	-463
FSK services	-247	-363	-437	-427	-433	-489	-549	-596	-648
Purchased electricity to cover losses in grid	-213	-304	-297	-287	-285	-298	-317	-338	-361
Operation and maintenance expenses	-518	-627	-727	-721	-706	-726	-758	-788	-820
D&A	-146	-165	-214	-234	-253	-284	-323	-364	-408
Other operating income/(expense)	23	28	32	31	31	32	34	36	38
EBITDA	**346**	**420**	**539**	**469**	**491**	**555**	**656**	**741**	**833**
EBIT	**200**	**255**	**325**	**235**	**239**	**272**	**333**	**377**	**425**
Net finance expense	-67	-53	-51	-58	-61	-64	-61	-55	-42
EBT	**133**	**202**	**275**	**177**	**177**	**207**	**272**	**323**	**383**
Net income	**102**	**161**	**206**	**141**	**142**	**166**	**218**	**258**	**306**

Margins

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
EBITDA margin	22.3%	21.0%	23.0%	21.0%	21.9%	23.0%	24.7%	25.9%	27.0%
EBIT margin	12.9%	12.8%	13.9%	10.6%	10.6%	11.3%	12.6%	13.2%	13.8%
Net margin	6.6%	8.1%	8.8%	6.3%	6.3%	6.9%	8.2%	9.0%	9.9%

YoY growth rates

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Distribution revenue	-8.8%	28.4%	18.6%	-5.0%	0.6%	7.8%	10.1%	8.1%	8.1%
EBITDA	-3.2%	21.3%	28.5%	-13.1%	4.8%	13.0%	18.1%	13.1%	12.4%
Net income	4.9%	57.3%	28.1%	-31.4%	0.2%	17.1%	31.3%	18.6%	18.6%

Balance sheet ($mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Fixed assets	1,477	1,735	1,961	2,125	2,135	2,329	2,484	2,644	2,798
LT investments	27	25	17	16	15	15	15	15	15
Non-cash working capital	-17	42	20	63	81	109	119	129	139
Equity	944	1,104	1,198	1,285	1,351	1,541	1,758	2,016	2,322
Minority interest	0	0	0	0	0	0	1	1	1
Net debt/(cash)	429	529	604	732	704	733	680	591	450
Other LT liabilities/(assets), net	113	169	195	187	176	179	179	179	179
RAB, net*		3,208	3,106	2,986	2,938	3,147	3,322	3,510	3,722

*Includes estimates for regions which have not switched to RAB yet

Cash flow statement ($mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Operating cash flow before change in non-cash WC	**322**	**401**	**506**	**433**	**456**	**514**	**601**	**677**	**757**
Operating cash flow	**289**	**336**	**488**	**388**	**433**	**487**	**591**	**667**	**747**
Net capex	-205	-383	-533	-488	-385	-440	-478	-524	-563
Acquisitions/divestments	0	0	0	0	0	0	0	0	0
Investing cash flow	**-205**	**-382**	**-529**	**-488**	**-385**	**-440**	**-478**	**-524**	**-563**
Equity raised/bought back	0	0	0	0	0	0	0	0	0
Change in debt	22	101	194	92	0	0	-86	-47	-229
Interest expense	-69	-50	-51	-58	-61	-64	-61	-55	-42
Financing cash flow	**-46**	**51**	**123**	**34**	**-61**	**-64**	**-146**	**-101**	**-271**

Source: Company data, Aton estimates

DCF valuation ($mn)

	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
EBIT	**235**	**239**	**272**	**333**	**377**	**425**	**330**	**266**	**303**
Tax on EBIT	-35	-35	-41	-54	-65	-77	-61	-50	-59
After tax EBIT	**200**	**203**	**230**	**278**	**313**	**348**	**269**	**216**	**244**
Depreciation	234	253	284	323	364	408	453	496	543
Capex	**-488**	**-385**	**-440**	**-478**	**-524**	**-563**	**-515**	**-550**	**-587**
Change in WC	-45	-23	-27	-10	-9	-10	-5	-6	-11
FCFF	**-100**	**49**	**47**	**114**	**143**	**183**	**201**	**157**	**189**
Discounted FCFF	-99	42	35	73	79	88	83	56	58

WACC composition

Equity market risk	12.5%
Company-specific risk	6.0%
Regulatory risk	1.0%
Corporate governance	2.0%
Liquidity	3.0%
Cost of equity	**18.5%**
Cost of debt	9.0%
Target D/(D+E)	30.0%
WACC	**15.7%**

Fair value calculation*

			Ordinary
Terminal EV/RAB	0.70	TP per share ($)	0.0145
Terminal value	2,646	**12M TP ($)**	**0.0169**
NPV of cash flow	414	Current price ($)	0.0169
NPV of terminal value	815	**Potential upside to 12M TP**	**0%**
Fair EV	**1,229**	Dividend yield	1%
Net debt (-) or plus cash (+) 2011	-618	**Expected total return over 12M**	**2%**
Minority interest (-)	0	Current EV/RAB 2011E	0.43
Fair MktCap	**611**	Fair EV/RAB 2011E	0.40

* base case scenario (no privatisation)

Regions fair value calculation

	NPV of cash flows	NPV of TV	Fair EV	Fair EV/RAB YE11
Fair EV	**414**	**815**	**1,229**	**0.40**
Belgorod	103	240	343	0.48
Bryansk	1	40	41	0.27
Voronezh	70	77	147	0.37
Kostroma	43	51	94	0.45
Kursk	22	27	48	0.24
Lipetsk	-63	104	42	0.13
Orel	14	39	53	0.41
Smolensk	56	71	127	0.52
Tambov	15	30	45	0.39
Tver	22	75	96	0.27
Yaroslavl	99	62	161	0.63
Unallocated	33	0	33	

12M TP		Terminal growth				
		-2.0%	-1.0%	0.0%	1.0%	2.0%
WACC	13.7%	0.0259	0.0255	0.0251	0.0245	0.0238
	14.7%	0.0216	0.0212	0.0207	0.0201	0.0193
	15.7%	0.0179	0.0175	**0.0169**	0.0163	0.0155
	16.7%	0.0147	0.0142	0.0137	0.0130	0.0122
	17.7%	0.0118	0.0113	0.0108	0.0101	0.0093

Fair EV/RAB		Terminal growth				
		-2.0%	-1.0%	0.0%	1.0%	2.0%
WACC	13.7%	0.50	0.50	0.49	0.49	0.48
	14.7%	0.45	0.45	0.44	0.43	0.42
	15.7%	0.41	0.40	**0.40**	0.39	0.38
	16.7%	0.37	0.36	0.36	0.35	0.34
	17.7%	0.33	0.33	0.32	0.32	0.31

Note: We calculate the terminal value using the following formula:
Terminal value = RAB YE20E * (RR - g) * (1 + g) / (WACC - g), where:
RR - regulatory rate of return, g - terminal growth rate (growth in RAB)
As the regulatory rate of return is below the estimated WACC,
the higher growth in RAB results in a lower fair value.
Our base case valuation assumes a zero terminal growth rate.

Source: Aton estimates

MRSK SOUTH

SELL

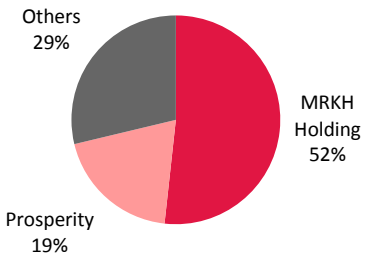
12M Target price* ($) 0.00103

Bloomberg code	MRKY RX
Reuters code	MRKY.MM
Current price, ord. ($)	0.00164
Upside to 12M TP, ord	-37%
Div. yield, ord. ($)	0%
Exp. total return over 12M, ord. (%)	-37%

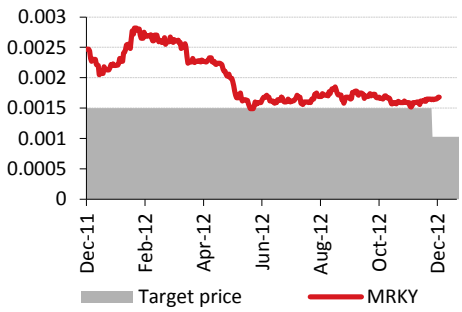
Share data

No. of ord. shares (mn)	49,811
No. of pref. shares (mn)	0
Ave 3M daily t/o, ord. ($mn)	0.030
Free float (%)	29%
MktCap ($mn)	82
Enterprise value ($mn)	564

Shareholder structure



12M price performance ($)



Source: Company data, Bloomberg, Aton estimates

*TP here is the weighted average of privatisation and base case scenarios; all other data corresponds to base case scenario

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BULL POINTS

- Due to low fair EV and high leverage, equity value is sensitive to changes in assumptions; may outperform if sector rallies
- Small chance of privatisation

BEAR POINTS

- 35% of assets not yet switched to RAB regulation (Volgograd region)
- Major tariff smoothing as required tariff growth exceeds expected ceiling
- Significant consumption volume of 'last mile' customers
- Major debt burden

STOCK DRIVERS

- Announcement of the company's privatisation (may occur in 2013)
- Publication of FY12 IFRS financials (Apr-May 2013)
- Transition of Volgograd region to RAB regulation (may take place in 2013-14)

Valuation ratios

	2009	2010	2011	2012E	2013E	2014E	2015E
EV/EBITDA adj	6.4	4.6	3.1	3.7	3.4	4.2	3.4
P/E adj	neg	neg	2.3	6.4	2.5	13.9	3.1
EV/Distribution revenue	1.1	0.8	0.7	0.7	0.7	0.7	0.6
P/B	0.1	0.2	0.2	0.2	0.2	0.2	0.1
EV/RAB	n/a	0.50	0.57	0.59	0.62	0.61	0.61
EV/Grid size ($/grid unit)	1,050	1,047	1,070	1,042	1,023	998	978
EV/Grid length ($/km)	3,552	3,572	3,572	n/a	n/a	n/a	n/a
EV/Distribution volume ($/MWh)	19.1	20.5	20.7	20.4	20.2	19.9	19.6

Financial metrics

	2009	2010	2011	2012E	2013E	2014E	2015E
RoA	2.2%	4.9%	9.4%	6.0%	8.6%	4.3%	6.9%
RoE	-4.7%	-1.2%	6.9%	2.5%	6.5%	1.1%	4.8%
EBITDA/RAB	n/a	10.9%	18.2%	15.7%	18.5%	14.5%	17.9%
FCFF/RAB	-3.5%	9.1%	-1.3%	6.7%	11.1%	5.9%	5.8%
Net debt/EBITDA	4.4	3.7	2.6	2.9	2.1	2.5	1.9
Net debt/Assets	0.3	0.4	0.4	0.4	0.4	0.3	0.3
Interest coverage ratio	0.4	0.9	2.1	1.3	2.0	1.2	2.0

Operational data

	2009	2010	2011	2012E	2013E	2014E	2015E
Size of grid ('000 grid units)	537	539	527	541	551	565	577
Distribution volume (GWh)	29,451	27,442	27,172	27,580	27,911	28,302	28,754
Electricity losses in grid (%)	8.4%	9.3%	9.5%	9.4%	9.3%	9.2%	9.1%
Total distribution tariff ($/MWh)	18.0	25.2	28.4	27.7	28.3	28.1	28.1
growth rate	32.8%	40.1%	12.7%	-2.6%	2.3%	-0.6%	0.0%

Assets description (2011)

Region	Grid length (km)	Transformer capacity (MVA)	Grid size ('000 units)	Distrib. volume (GWh)	Loss rate (%)	RAB ($mn)
Astrakhan	20,892	2,856	76	3,209	17.2%	186
Volgograd	45,214	8,356	164	11,044	7.3%	348
Kalm	19,072	1,414	50	376	20.4%	25
Rostov	72,668	10,551	237	12,544	8.8%	433
Total	**157,846**	**23,177**	**527**	**27,172**	**9.5%**	**992**

Source: Company data, Aton estimates

Income statement ($mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Revenue	**599**	**725**	**829**	**801**	**808**	**815**	**900**	**985**	**1,075**
Distribution revenue	530	691	772	763	790	796	881	965	1,053
of which attributed to MRSK	281	358	398	384	410	383	426	474	523
Connection fees	28	10	50	31	11	12	12	13	14
Other	42	24	7	7	7	7	7	8	8
Cost of sales	**-575**	**-675**	**-723**	**-736**	**-727**	**-774**	**-835**	**-891**	**-953**
Payments to TGOs	-30	-33	-41	-57	-57	-60	-65	-71	-77
FSK services	-122	-166	-190	-184	-187	-211	-237	-258	-280
Purchased electricity to cover losses in grid	-97	-134	-143	-138	-137	-143	-152	-162	-173
Operation and maintenance expenses	-262	-270	-274	-271	-259	-267	-279	-291	-304
D&A	-65	-72	-75	-86	-87	-93	-102	-110	-120
Other operating income/(expense)	0	0	0	0	0	0	0	0	0
EBITDA	**89**	**122**	**180**	**151**	**168**	**134**	**167**	**204**	**242**
EBIT	**24**	**50**	**106**	**65**	**81**	**41**	**65**	**94**	**122**
Net finance expense	-55	-57	-50	-49	-40	-34	-32	-28	-25
EBT	**-31**	**-6**	**55**	**16**	**41**	**7**	**33**	**66**	**97**
Net income	**-31**	**-6**	**36**	**13**	**33**	**6**	**27**	**53**	**78**

Margins

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
EBITDA margin	14.8%	16.8%	21.8%	18.8%	20.8%	16.5%	18.5%	20.7%	22.5%
EBIT margin	4.0%	6.9%	12.8%	8.1%	10.1%	5.1%	7.3%	9.5%	11.3%
Net margin	neg	neg	4.3%	1.6%	4.1%	0.7%	3.0%	5.3%	7.2%

YoY growth rates

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Distribution revenue	22.1%	30.5%	11.6%	-1.1%	3.6%	0.8%	10.6%	9.6%	9.2%
EBITDA	-30.6%	37.5%	47.9%	-16.3%	11.4%	-20.0%	24.1%	22.1%	18.6%
Net income	1273.6%	-79.2%	-651.6%	-64.3%	158.0%	-82.1%	351.5%	97.5%	47.8%

Balance sheet ($mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Fixed assets	892	872	899	884	833	870	871	885	919
LT investments	15	15	13	12	12	12	12	12	12
Non-cash working capital	159	110	139	107	72	37	41	44	48
Equity	668	545	514	505	509	524	550	603	680
Minority interest	0	0	0	0	0	0	0	0	0
Net debt/(cash)	390	453	472	435	349	335	313	278	238
Other LT liabilities/(assets), net	9	-1	66	63	60	61	61	61	61
RAB, net *		1,118	992	960	907	929	930	949	993

*Includes estimates for Volgograd, which has not switched to RAB yet

Cash flow statement ($mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Operating cash flow before change in non-cash WC	**89**	**122**	**178**	**148**	**160**	**133**	**160**	**191**	**222**
Operating cash flow	**53**	**170**	**139**	**175**	**189**	**169**	**157**	**187**	**218**
Net capex	-92	-68	-136	-109	-86	-115	-103	-124	-153
Acquisitions/divestments	0	0	0	0	0	0	0	0	0
Investing cash flow	**-91**	**-67**	**-137**	**-109**	**-86**	**-115**	**-103**	**-124**	**-153**
Equity raised/bought back	0	0	0	0	0	0	0	0	0
Change in debt	108	30	90	0	-115	0	-43	-34	-40
Interest expense	-44	-57	-58	-49	-40	-34	-32	-28	-25
Financing cash flow	**64**	**-27**	**30**	**-49**	**-155**	**-34**	**-75**	**-63**	**-65**

Source: Company data, Aton estimates

DCF valuation ($mn)

	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
EBIT	**65**	**81**	**41**	**65**	**94**	**122**	**51**	**-10**	**26**
Tax on EBIT	-3	-8	-1	-7	-13	-19	-6	5	-3
After tax EBIT	**62**	**73**	**40**	**59**	**81**	**103**	**45**	**-4**	**23**
Depreciation	86	87	93	102	110	120	128	134	140
Capex	**-109**	**-86**	**-115**	**-103**	**-124**	**-153**	**-80**	**-85**	**-90**
Change in WC	28	29	36	-4	-4	-4	-1	0	-5
FCFF	**66**	**103**	**54**	**54**	**63**	**65**	**93**	**45**	**69**
Discounted FCFF	66	88	39	34	34	30	37	15	20

WACC composition

Equity market risk	12.5%
Company-specific risk	7.0%
Regulatory risk	1.0%
Corporate governance	2.0%
Liquidity	4.0%
Cost of equity	**19.5%**
Cost of debt	9.5%
Target D/(D+E)	30.0%
WACC	**16.5%**

Fair value calculation*

			Ordinary
Terminal EV/RAB	0.73	TP per share ($)	0.00071
Terminal value	533	**12M TP ($)**	**0.00085**
NPV of cash flow	362	Current price ($)	0.00164
NPV of terminal value	155	**Potential upside to 12M TP**	**-48%**
Fair EV	**517**	Dividend yield	0%
net debt (-) or plus cash (+) 2011	-482	**Expected total return over 12M**	**-48%**
minority interest (-)	0	Current EV/RAB 2011E	0.57
Fair MktCap	**35**	Fair EV/RAB 2011E	0.52

* base case scenario (no privatisation)

Regions fair value calculation

	NPV of cash flows	NPV of TV	Fair EV	Fair EV/RAB YE11
Fair EV	**362**	**155**	**517**	**0.52**
Astrakhan	120	29	149	0.80
Volgograd	138	38	176	0.51
Kalm	-8	2	-6	-0.25
Rostov	109	86	195	0.45
Unallocated	4	0	4	

12M TP		Terminal growth				
		-2.0%	-1.0%	0.0%	1.0%	2.0%
WACC	14.5%	0.00258	0.00251	0.00242	0.00231	0.00216
	15.5%	0.00176	0.00169	0.00159	0.00147	0.00132
	16.5%	0.00103	0.00095	**0.00085**	0.00073	0.00058
	17.5%	0.00038	0.00029	0.00019	0.00007	-0.00007
	18.5%	-0.00022	-0.00030	-0.00040	-0.00052	-0.00065

Fair EV/RAB		Terminal growth				
		-2.0%	-1.0%	0.0%	1.0%	2.0%
WACC	14.5%	0.60	0.59	0.59	0.58	0.58
	15.5%	0.56	0.56	0.55	0.55	0.54
	16.5%	0.53	0.53	**0.52**	0.52	0.51
	17.5%	0.50	0.50	0.49	0.49	0.48
	18.5%	0.48	0.47	0.47	0.46	0.46

Note: We calculate the terminal value using the following formula:
Terminal value = RAB YE20E * (RR - g) * (1 + g) / (WACC - g), where:
RR - regulatory rate of return, g - terminal growth rate (growth in RAB)
As the regulatory rate of return is below the estimated WACC,
the higher growth in RAB results in a lower fair value.
Our base case valuation assumes a zero terminal growth rate.

Source: Aton estimates

MRSK NORTH CAUCASUS

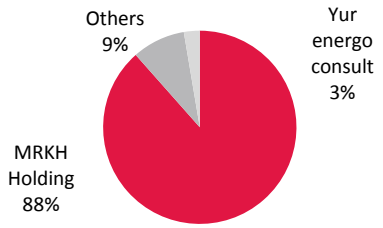
SELL
12M Target Price* ($) **0.796**

Bloomberg code	MRKK RX
Reuters code	MRKK.MM
Current price, ord. ($)	0.848
Upside to 12M TP, ord	-6%
Dividend yield, ord. ($)	0%
Exp. total return over 12M, ord. (%)	-6%

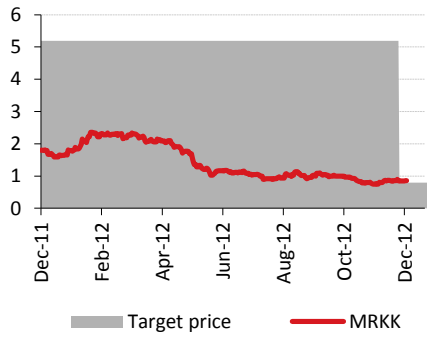
Share data

No. of ord. shares (mn)**	107
No. of pref. shares (mn)	0
Ave 3M daily t/o, ord. ($mn)	0.07
Free float (%)**	9%
MktCap ($mn)**	91
Enterprise value ($mn)**	32

Shareholder structure**



12M price performance ($)



Source: Company data, Bloomberg, Aton estimates

*TP here is the weighted average of privatisation and base case scenarios; all other data corresponds to base case scenario

**estimated after additional share issues planned for 2012-13

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BULL POINTS

- No significant 'last mile' issues

BEAR POINTS

- Lossmaking Dagestan region
- 35% of assets not yet switched to RAB regulation (Dagestan region)
- Significant tariff smoothing required as tariff growth exceeds expected ceiling
- Value-erosive additional equity issues planned
- Privatisation is unlikely

STOCK DRIVERS

- Electricity loss reduction followed by transition to RAB in Dagestan region (may take place in 2013-14)
- Publication of FY12 IFRS financials (Apr-May 2013)

Valuation ratios

	2009	2010	2011	2012E	2013E	2014E	2015E
EV/EBITDA adj.	1.3	0.5	0.5	0.5	0.4	0.3	0.2
P/E adj.	neg	4.7	44.2	neg	5.9	3.0	1.9
EV/Distribution revenue	0.1	0.1	0.1	0.1	0.1	0.1	0.1
P/BV	0.4	0.4	0.5	0.3	0.3	0.2	0.2
EV/RAB	n/a	0.04	0.04	0.03	0.04	0.04	0.04
EV/Grid size ($/grid unit)	82	80	86	83	83	83	82
EV/Grid length ($/km)	298	307	307	n/a	n/a	n/a	n/a
EV/Distribution volume ($/MWh)	2.7	2.6	2.5	2.5	2.5	2.4	2.4

Financial metrics

	2009	2010	2011	2012E	2013E	2014E	2015E
RoA	neg	11.3%	9.0%	2.7%	7.1%	9.6%	12.6%
RoE	neg	8.6%	1.0%	neg	4.6%	8.3%	11.7%
EBITDA/RAB	n/a	7.0%	7.5%	6.2%	10.2%	13.1%	n/a
FCFF/RAB	0.4%	-1.9%	-1.2%	-16.3%	-7.1%	-2.5%	3.3%
Net debt/EBITDA	1.4	1.3	1.6	3.2	2.1	2.0	1.5
Net debt/Assets	0.1	0.2	0.3	0.4	0.3	0.4	0.3
Interest coverage ratio	-16.3	6.1	2.7	0.8	2.0	2.8	3.5

Operational data

	2009	2010	2011	2012E	2013E	2014E	2015E
Size of grid ('000 grid units)	387	400	370	383	386	387	389
Distribution volume (GWh)	11,736	12,252	12,680	12,870	13,025	13,207	13,418
Electricity losses in grid (%)	20.3%	20.0%	22.1%	20.4%	18.8%	17.4%	16.1%
Total distribution tariff ($/MWh)	25.6	28.7	33.4	30.8	30.5	33.2	25.6
Growth rate	-4.2%	12.1%	16.3%	-7.8%	-1.1%	9.1%	95.8%

Assets description (2011)

Region	Grid length (km)	Transformer capacity (MVA)	Grid size, ('000 units)	Distrib. volume (GWh)	Loss rate (%)	RAB ($mn)
North Ossetia	6,357	1,534	29	1,527	10.2%	99
Kabbalk	10,026	1,400	38	1,201	17.3%	111
Kar-Cher	6,330	1,132	31	1,030	17.4%	93
Dagestan	33,438	3,151	102	3,202	38.5%	296
Stavropol	47,900	6,043	169	5,719	14.2%	241
Total	**104,051**	**13,259**	**370**	**12,680**	**22.1%**	**840**

Source: Company data, Aton estimates

Income statement ($mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Revenue	**314**	**392**	**442**	**414**	**439**	**471**	**515**	**552**	**588**
Distribution revenue	300	352	423	396	397	439	488	528	566
of which attributed to MRSK	165	214	277	267	275	316	363	394	422
Connection fees	9	28	4	4	29	18	12	8	6
Other	5	13	14	14	14	14	15	16	16
Cost of sales	**-329**	**-357**	**-413**	**-401**	**-401**	**-412**	**-430**	**-455**	**-482**
Payments to TGOs	-3	-3	-2	0	0	0	0	0	0
FSK services	-39	-31	-27	-24	-25	-27	-31	-33	-36
Purchased electricity to cover losses in grid	-93	-103	-118	-105	-97	-95	-95	-101	-108
Operation and maintenance expenses	-152	-195	-233	-226	-227	-231	-240	-249	-258
D&A	-42	-24	-34	-45	-52	-58	-65	-72	-80
Other operating income/(expense)	-2	0	0	0	0	0	0	0	0
EBITDA	**25**	**60**	**63**	**58**	**91**	**118**	**150**	**169**	**187**
EBIT	**-17**	**36**	**29**	**13**	**39**	**60**	**85**	**97**	**107**
Net finance expense	-1	-5	-10	-16	-19	-22	-24	-23	-20
EBT	**-18**	**31**	**19**	**-3**	**19**	**38**	**61**	**74**	**87**
Net income	**-18**	**19**	**2**	**-2**	**15**	**31**	**49**	**59**	**69**

Margins

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
EBITDA margin	7.9%	15.3%	14.2%	14.1%	20.7%	25.1%	29.2%	30.7%	31.7%
EBIT margin	neg	9.2%	6.6%	3.1%	8.8%	12.7%	16.5%	17.6%	18.2%
Net margin	neg	4.9%	0.5%	neg	3.5%	6.5%	9.5%	10.8%	11.8%

YoY growth rates

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Distribution revenue	-5.3%	17.1%	20.4%	-6.4%	0.1%	10.7%	11.2%	8.1%	7.2%
EBITDA	-396.8%	141.0%	4.5%	-7.2%	56.1%	30.2%	27.1%	12.6%	10.3%
Net income	15.0%	-205.4%	-89.3%	-214.7%	-749.1%	99.7%	59.8%	21.5%	17.0%

Balance sheet ($mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Fixed assets	227	270	427	548	562	600	632	662	690
LT investments	0	0	0	0	0	0	0	0	0
Non-cash working capital	-12	6	-147	-114	-56	-10	2	9	14
Equity	208	224	200	262	334	370	419	479	548
Minority interest	0	0	0	0	0	0	0	0	0
Net debt/(cash)	34	76	98	188	188	236	230	209	172
Other LT liabilities/(assets), net	-27	-23	-18	-17	-16	-16	-16	-16	-16
RAB, net *		855	840	933	889	903	907	917	931

*Includes estimates for Dagestan, which has not switched to RAB yet

Cash flow statement ($mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Operating cash flow before change in non-cash WC	**25**	**46**	**57**	**59**	**87**	**111**	**138**	**154**	**169**
Operating cash flow	**52**	**52**	**208**	**32**	**34**	**64**	**127**	**147**	**164**
Net capex	-48	-71	-207	-189	-99	-86	-97	-103	-107
Acquisitions/divestments	0	0	0	0	0	0	0	0	0
Investing cash flow	**-68**	**-98**	**-239**	**-189**	**-99**	**-86**	**-97**	**-103**	**-107**
Equity raised/bought back	0	0	0	76	73	0	0	0	0
Change in debt	0	16	37	89	14	43	0	-26	-29
Interest expense	-1	0	-1	-16	-19	-22	-24	-23	-20
Financing cash flow	**-1**	**16**	**36**	**149**	**68**	**21**	**-24**	**-48**	**-49**

Source: Company data, Aton estimates

DCF valuation ($mn)

	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
EBIT	**13**	**39**	**60**	**85**	**97**	**107**	**74**	**59**	**65**
Tax on EBIT	1	-4	-8	-12	-15	-17	-11	-7	-7
After tax EBIT	**13**	**35**	**52**	**73**	**82**	**89**	**63**	**52**	**58**
Depreciation	45	52	58	65	72	80	90	102	116
Capex	**-189**	**-99**	**-86**	**-97**	**-103**	**-107**	**-173**	**-184**	**-197**
Change in WC	-27	-53	-47	-11	-7	-5	-2	-2	-2
FCFF	**-157**	**-65**	**-22**	**30**	**44**	**57**	**-22**	**-31**	**-25**
Discounted FCFF	-156	-55	-16	18	24	26	-9	-11	-7

WACC composition

Equity market risk	12.5%
Company-specific risk	7.0%
Regulatory risk	1.0%
Corporate governance	2.0%
Liquidity	4.0%
Cost of equity	**19.5%**
Cost of debt	10.0%
Target D/(D+E)	30.0%
WACC	**16.7%**

Fair value calculation*

			Ordinary
Terminal EV/RAB	0.72	TP per share ($)	0.666
Terminal value	688	**12M TP ($)**	**0.796**
NPV of cash flow	-185	Current price ($)	0.848
NPV of terminal value	198	**Potential upside to 12M TP**	**-6%**
Fair EV	**12**	Dividend yield	0%
Net debt (-) or net cash (+) 2011*	59	**Expected total return over 12M**	**-6%**
Minority interest (-)	0	Current EV/RAB 2011E	0.04
Fair MktCap*	**71**	Fair EV/RAB 2011E	0.01

*base case scenario (no privatisation), estimated after additional share issues planned for 2012-13

Regions fair value calculation

	NPV of cash flows	NPV of TV	Fair EV	Fair EV/RAB YE11
Fair EV	**-185**	**198**	**12**	**0.01**
North Ossetia	-35	28	-7	-0.07
Kabbalk	-6	31	25	0.22
Kar-Cher	3	29	32	0.35
Dagestan	-138	52	-86	-0.29
Stavropol	-12	58	46	0.19
Unallocated	3	0	3	

12M TP		Terminal growth				
		-2.0%	-1.0%	0.0%	1.0%	2.0%
WACC	14.7%	1.546	1.502	1.447	1.377	1.289
	15.7%	1.204	1.156	1.096	1.023	0.934
	16.7%	0.907	0.857	**0.796**	0.723	0.635
	17.7%	0.649	0.598	0.538	0.466	0.381
	18.7%	0.422	0.372	0.313	0.244	0.162

Fair EV/RAB		Terminal growth				
		-2.0%	-1.0%	0.0%	1.0%	2.0%
WACC	14.7%	0.10	0.09	0.09	0.08	0.07
	15.7%	0.06	0.05	0.05	0.04	0.03
	16.7%	0.03	0.02	**0.01**	0.01	0.00
	17.7%	0.00	-0.01	-0.01	-0.02	-0.03
	18.7%	-0.03	-0.03	-0.04	-0.04	-0.05

Note: We calculate the terminal value using the following formula:
Terminal value = RAB YE20E * (RR - g) * (1 + g) / (WACC - g), where:
RR - regulatory rate of return, g - terminal growth rate (growth in RAB)
As the regulatory rate of return is below the estimated WACC,
the higher growth in RAB results in a lower fair value.
Our base case valuation assumes a zero terminal growth rate.

Source: Aton estimates

MRSK CENTER and VOLGA

HOLD
12M Target Price* ($) **0.00619**

BULL POINTS
- A likely candidate for privatisation
- Completely switched to RAB in 2011

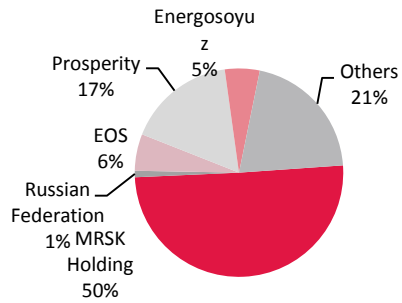
BEAR POINTS
- Significant consumption volume of 'last mile' customers

STOCK DRIVERS
- Announcement of the company's privatisation (may occur in 2013)
- Publication of FY12 IFRS financials (Apr-May 2013)

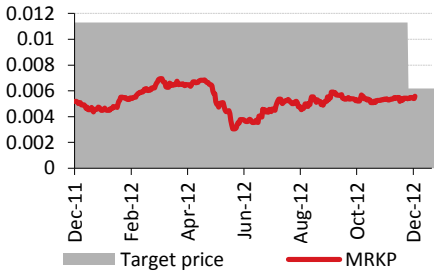
Bloomberg code	MRKP RX
Reuters code	MRKP.MM
Current price, ord. ($)	0.00547
Upside to 12M TP, ord	13%
Dividend yield, ord. ($)	1%
Exp. total return over 12M, ord. (%)	14%

Share data	
No. of ord. shares (mn)	112,698
No. of pref. shares (mn)	0
Ave 3M daily t/o, ord. ($mn)	0.09
Free float (%)	21%
MktCap ($mn)	616
Enterprise value ($mn)	1,149

Shareholder structure



12M price performance ($)



Source: Company data, Bloomberg, Aton estimates

*TP here is the weighted average of privatisation and base case scenarios; all other data corresponds to base case scenario

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Valuation ratios

	2009	2010	2011	2012E	2013E	2014E	2015E
EV/EBITDA adj.	6.3	5.6	3.2	3.8	4.0	3.0	2.5
P/E adj.	28.7	18.1	4.4	7.6	9.1	4.8	3.4
EV/Distribution revenue	0.8	0.7	0.5	0.6	0.6	0.6	0.5
P/BV	0.7	0.7	0.6	0.6	0.6	0.5	0.4
EV/RAB	n/a	0.44	0.43	0.44	0.46	0.45	0.44
EV/Grid size ($/grid unit)	1,257	1,241	1,243	1,206	1,188	1,161	1,128
EV/Grid length ($/km)	4,450	4,560	4,560	n/a	n/a	n/a	n/a
EV/Distribution volume ($/MWh)	22.6	21.2	21.2	20.8	20.6	20.3	20.0

Financial metrics

	2009	2010	2011	2012E	2013E	2014E	2015E
RoA	4.4%	5.3%	11.3%	7.8%	7.2%	10.6%	13.0%
RoE	2.3%	3.6%	13.5%	7.6%	6.3%	10.5%	13.0%
EBITDA/RAB	n/a	7.9%	13.5%	11.5%	11.7%	15.1%	18.0%
FCFF/RAB	-0.5%	-1.7%	-3.8%	0.7%	2.0%	3.0%	5.1%
Net debt/EBITDA	1.8	2.0	1.4	1.7	1.7	1.3	0.9
Net debt/Assets	0.2	0.3	0.3	0.3	0.3	0.2	0.2
Interest coverage ratio	2.1	2.3	5.5	3.0	2.6	3.6	4.9

Operational data

	2009	2010	2011	2012E	2013E	2014E	2015E
Size of grid ('000 grid units)	914	926	924	952	967	990	1,019
Distribution volume (GWh)	50,889	54,100	54,299	55,113	55,775	56,556	57,461
Electricity losses in grid (%)	9.4%	9.1%	9.0%	8.9%	8.9%	8.8%	8.8%
Total distribution tariff ($/MWh)	28.3	32.4	39.6	33.8	33.1	35.8	35.8
Growth rate	8.9%	14.5%	22.4%	-14.8%	-2.1%	8.3%	0.0%

Assets description (2011)

Region	Grid length (km)	Transformer capacity (MVA)	Grid size ('000 units)	Distrib. volume (GWh)	Loss rate (%)	RAB ($mn)
Vladimir	20,686	4,124	78	5,788	10.0%	238
Ivanovo	14,224	3,027	59	3,220	4.1%	120
Kaluga	25,940	3,579	96	3,770	17.0%	338
Kirov	37,348	4,464	124	5,117	7.3%	160
Mari	11,880	1,667	44	2,535	7.5%	81
Nizhnovgorod	57,197	8,491	218	16,608	10.0%	1013
Ryazan	29,829	4,324	95	4,235	6.3%	181
Tula	30,507	5,213	113	5,577	10.8%	407
Udmurtia	24,320	4,688	97	7,449	5.1%	145
Total	**251,930**	**39,578**	**924**	**54,299**	**9.0%**	**2,681**

Source: Company data, Aton estimates

Income statement ($mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Revenue	**1,492**	**1,799**	**2,198**	**1,904**	**1,887**	**2,069**	**2,278**	**2,473**	**2,673**
Distribution revenue	1,439	1,752	2,152	1,860	1,844	2,024	2,231	2,423	2,620
of which attributed to MRSK	607	734	968	873	856	962	1,071	1,166	1,279
Connection fees	37	31	28	27	26	27	29	30	32
Other	15	16	18	17	17	18	19	20	21
Cost of sales	**-1,430**	**-1,717**	**-1,990**	**-1,763**	**-1,760**	**-1,862**	**-2,005**	**-2,147**	**-2,279**
Payments to TGOs	-309	-337	-446	-425	-422	-441	-476	-519	-545
FSK services	-209	-304	-334	-326	-330	-373	-419	-456	-496
Purchased electricity to cover losses in grid	-314	-377	-404	-236	-236	-248	-264	-282	-301
Operation and maintenance expenses	-479	-579	-661	-624	-616	-633	-661	-686	-713
D&A	-118	-120	-145	-152	-155	-167	-185	-204	-225
Other operating income/(expense)	3	2	9	8	8	8	9	9	10
EBITDA	**183**	**204**	**361**	**302**	**291**	**383**	**467**	**539**	**629**
EBIT	**65**	**84**	**216**	**150**	**136**	**216**	**282**	**335**	**404**
Net finance expense	-30	-34	-35	-48	-51	-56	-54	-43	-26
EBT	**35**	**50**	**181**	**101**	**85**	**159**	**228**	**292**	**377**
Net income	**22**	**34**	**139**	**81**	**68**	**128**	**182**	**233**	**302**

Margins

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
EBITDA margin	12.3%	11.3%	16.4%	15.8%	15.4%	18.5%	20.5%	21.8%	23.5%
EBIT margin	4.4%	4.7%	9.8%	7.9%	7.2%	10.4%	12.4%	13.5%	15.1%
Net margin	1.4%	1.9%	6.3%	4.3%	3.6%	6.2%	8.0%	9.4%	11.3%

YoY growth rates

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Distribution revenue	0.0%	21.7%	22.8%	-13.6%	-0.9%	9.8%	10.2%	8.6%	8.2%
EBITDA	-16.9%	11.3%	77.2%	-16.5%	-3.6%	31.7%	21.9%	15.4%	16.7%
Net income	-65.3%	58.6%	307.5%	-41.6%	-16.6%	88.6%	42.9%	28.1%	29.2%

Balance sheet ($mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Fixed assets	1,340	1,482	1,701	1,707	1,649	1,747	1,844	1,960	2,092
LT investments	17	18	17	16	15	15	15	15	15
Non-cash working capital	26	-25	-2	26	55	94	103	111	120
Equity	923	944	1,029	1,064	1,071	1,217	1,399	1,633	1,934
Minority interest	0	0	0	0	0	0	0	1	1
Net debt/(cash)	338	406	521	526	498	486	410	301	141
Other LT liabilities/(assets), net	121	126	166	159	150	152	152	152	152
RAB, net		2,582	2,681	2,624	2,480	2,541	2,590	2,668	2,774

Cash flow statement ($mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Operating cash flow before change in non-cash WC	**168**	**197**	**327**	**281**	**274**	**351**	**421**	**480**	**553**
Operating cash flow	**119**	**232**	**332**	**252**	**243**	**313**	**412**	**472**	**544**
Net capex	-134	-267	-435	-232	-194	-237	-282	-320	-358
Acquisitions/divestments	0	0	1	0	0	0	0	0	0
Investing cash flow	**-133**	**-266**	**-514**	**-231**	**-192**	**-234**	**-279**	**-317**	**-355**
Equity raised/bought back	0	0	0	0	0	0	0	0	0
Change in debt	57	102	257	0	0	0	-51	-200	-171
Interest expense	-40	-51	-45	-50	-53	-59	-57	-46	-29
Financing cash flow	**12**	**49**	**207**	**-50**	**-53**	**-59**	**-108**	**-246**	**-201**

Source: Company data, Aton estimates

DCF valuation ($mn)

	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
EBIT	**150**	**136**	**216**	**282**	**335**	**404**	**235**	**119**	**132**
Tax on EBIT	-20	-17	-32	-46	-58	-75	-43	-20	-23
After tax EBIT	**129**	**119**	**184**	**237**	**277**	**328**	**192**	**99**	**110**
Depreciation	152	155	167	185	204	225	248	272	298
Capex	**-232**	**-194**	**-237**	**-282**	**-320**	**-358**	**-366**	**-391**	**-417**
Change in WC	-29	-31	-38	-9	-9	-9	-1	-2	-9
FCFF	**20**	**50**	**76**	**131**	**152**	**187**	**73**	**-22**	**-18**
Discounted FCFF	20	42	57	84	84	89	30	-8	-5

WACC composition

Equity market risk	12.5%
Company-specific risk	6.0%
Regulatory risk	1.0%
Corporate governance	2.0%
Liquidity	3.0%
Cost of equity	**18.5%**
Cost of debt	9.0%
Target D/(D+E)	30.0%
WACC	**15.7%**

Fair value calculation*

			Ordinary
Terminal EV/RAB	0.70	TP per share ($)	0.00424
Terminal value	2,008	**12M TP ($)**	**0.00498**
NPV of cash flow	393	Current price ($)	0.00547
NPV of terminal value	618	**Potential upside to 12M TP**	**-9%**
Fair EV	**1,011**	Dividend yield	1%
net debt (-) or plus cash (+) 2011	-532	**Expected total return over 12M**	**-8%**
minority interest (-)	0	Current EV/RAB 2011E	0.43
Fair MktCap	**478**	Fair EV/RAB 2011E	0.38

* base case scenario (no privatisation)

Regions fair value calculation

	NPV of cash flows	NPV of TV	Fair EV	Fair EV/RAB YE11
Fair EV	**393**	**618**	**1,011**	**0.38**
Vladimir	0	64	64	0.27
Ivanovo	23	15	39	0.32
Kaluga	1	70	71	0.21
Kirov	-60	45	-15	-0.09
Mari	-5	26	21	0.26
Nizhnovgorod	227	219	446	0.44
Ryazan	63	39	102	0.57
Tula	185	92	277	0.68
Udmurtia	-53	48	-5	-0.04
Unallocated	11	0	11	

12M TP		Terminal growth				
		-2.0%	-1.0%	0.0%	1.0%	2.0%
WACC	13.7%	0.00739	0.00730	0.00717	0.00701	0.00680
	14.7%	0.00625	0.00614	0.00599	0.00581	0.00558
	15.7%	0.00526	0.00513	**0.00498**	0.00479	0.00455
	16.7%	0.00438	0.00425	0.00410	0.00391	0.00368
	17.7%	0.00362	0.00348	0.00333	0.00314	0.00292

Fair EV/RAB		Terminal growth				
		13.7%	14.7%	15.7%	16.7%	17.7%
WACC	-2.0%	0.47	0.46	0.46	0.45	0.45
	-1.0%	0.42	0.42	0.41	0.41	0.40
	0.0%	0.39	0.38	**0.38**	0.37	0.36
	1.0%	0.35	0.35	0.34	0.34	0.33
	2.0%	0.33	0.32	0.32	0.31	0.30

Note: We calculate the terminal value using the following formula:
Terminal value = RAB YE20E * (RR - g) * (1 + g) / (WACC - g), where:
RR - regulatory rate of return, g - terminal growth rate (growth in RAB)
As the regulatory rate of return is below the estimated WACC,
the higher growth in RAB results in a lower fair value.
Our base case valuation assumes a zero terminal growth rate.

Source: Aton estimates

MRSK NORTH WEST

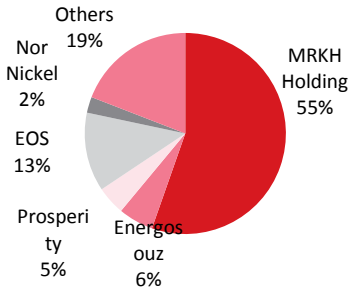
SELL
12M Target Price* ($) **0.00132**

Bloomberg code	MRKZ RX
Reuters code	MRKZ.MM
Current price, ord. ($)	0.00213
Upside to 12M TP, ord	-38%
Div. yield, ord. ($)	0%
Exp. total return over 12M, ord. (%)	-38%

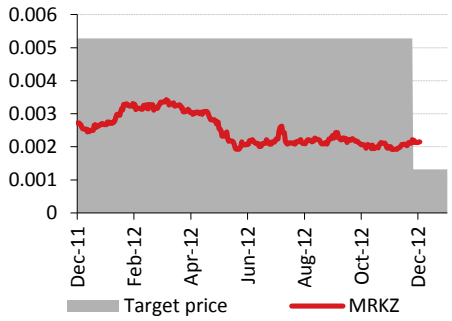
Share data

No. of ord. shares (mn)	95,786
No. of pref. shares (mn)	0
Ave 3M daily t/o, ord. ($mn)	0.02
Free float (%)	19%
MktCap ($mn)	204
Enterprise value ($mn)	353

Shareholder structure



12M price performance ($)



Source: Company data, Bloomberg, Aton estimates

*TP here is the weighted average of privatisation and base case scenarios; all other data corresponds to base case scenario

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BULL POINTS

- Some chance of privatisation

BEAR POINTS

- 62% of assets not yet switched to RAB regulation
- Significant consumption volume of 'last mile' customers

STOCK DRIVERS

- Announcement of the company's privatisation (may occur in 2013)
- Transition of remaining assets to RAB regulation (may take place in 2013-14)
- Publication of FY12 IFRS financials (Apr-May 2013)

Valuation ratios

	2009	2010	2011	2012E	2013E	2014E	2015E
EV/EBITDA adj	3.5	4.6	2.4	2.5	3.1	2.9	2.2
P/E adj	78.2	neg	6.9	8.9	neg	neg	23.6
EV/Distribution revenue	0.5	0.4	0.4	0.4	0.4	0.4	0.3
P/B	0.3	0.3	0.3	0.3	0.3	0.3	0.3
EV/RAB	n/a	0.21	0.22	0.23	0.24	0.24	0.24
EV/Grid size ($/grid unit)	556	518	475	455	448	442	436
EV/Grid length ($/km)	2,086	2,091	2,091	n/a	n/a	n/a	n/a
EV/Distribution volume ($/MWh)	9.1	9.0	8.8	8.6	8.5	8.4	8.3

Financial metrics

	2009	2010	2011	2012E	2013E	2014E	2015E
RoA	2.5%	-0.8%	5.2%	4.3%	0.9%	1.2%	3.6%
RoE	0.4%	-1.7%	4.4%	3.4%	-1.4%	-1.6%	1.4%
EBITDA/RAB	n/a	4.6%	9.4%	9.1%	7.6%	8.2%	n/a
FCFF/RAB	1.4%	1.6%	-1.5%	-5.3%	-1.5%	-0.9%	1.4%
Net debt/EBITDA	1.4	1.5	1.0	1.7	2.4	2.5	2.0
Net debt/Assets	0.1	0.1	0.1	0.2	0.3	0.3	0.3
Interest coverage ratio	1.5	-0.6	4.6	2.8	0.4	0.5	1.4

Operational data

	2009	2010	2011	2012E	2013E	2014E	2015E
Size of grid ('000 grid units)	635	682	744	777	789	799	810
Distribution volume (GWh)	38,948	39,157	40,243	40,847	41,337	41,916	42,587
Electricity losses in grid (%)	7.1%	7.2%	6.4%	6.4%	6.4%	6.4%	6.4%
Total distribution tariff ($/MWh)	19.0	21.1	24.9	23.9	22.8	24.0	19.0
Growth rate	-5.1%	11.6%	17.7%	-3.9%	-4.5%	4.9%	94.9%

Assets description (2011)

Region	Grid length (km)	Transformer capacity (MVA)	Grid size, ('000) units	Distrib. volume (GWh)	Loss rate (%)	RAB ($mn)
Arhangelsk	25,556	8,599	106	3,452	11.5%	188
Karelia	10,950	3,545	56	7,272	3.9%	185
Kola	5,229	5,495	52	10,670	3.1%	186
Novgorod	22,084	7,224	93	3,401	9.8%	177
Pskov	45,562	14,458	157	1,659	14.1%	215
Komi	20,886	8,396	138	5,170	10.3%	417
Vologda	38,602	12,574	142	8,619	4.7%	213
Total	**168,869**	**60,291**	**744**	**40,243**	**6.4%**	**1,581**

Source: Company data, Aton estimates

Income statement ($mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Revenue	**783**	**871**	**1,047**	**1,020**	**987**	**1,050**	**1,151**	**1,226**	**1,319**
Distribution revenue	738	828	1,002	977	944	1,005	1,104	1,176	1,267
of which attributed to MRSK	400	415	548	535	498	513	561	590	634
Connection fees	16	22	30	29	29	30	31	33	35
Other	29	21	15	15	14	15	16	17	18
Cost of sales	**-760**	**-881**	**-996**	**-976**	**-979**	**-1,038**	**-1,114**	**-1,182**	**-1,255**
Payments to TGOs	-59	-42	-51	-49	-49	-51	-55	-59	-63
FSK services	-167	-234	-278	-272	-277	-312	-350	-380	-413
Purchased electricity to cover losses in grid	-112	-138	-124	-121	-121	-128	-137	-147	-156
Operation and maintenance expenses	-344	-383	-445	-436	-429	-436	-451	-466	-481
D&A	-77	-85	-98	-99	-103	-111	-120	-130	-141
Other operating income/(expense)	2	2	0	0	0	0	0	0	0
EBITDA	**102**	**77**	**149**	**143**	**112**	**123**	**158**	**174**	**205**
EBIT	**25**	**-8**	**51**	**44**	**9**	**12**	**37**	**44**	**64**
Net finance expense	-21	-4	-4	-16	-20	-25	-27	-28	-28
EBT	**4**	**-12**	**47**	**29**	**-11**	**-13**	**11**	**16**	**36**
Net income	**3**	**-12**	**30**	**23**	**-9**	**-10**	**9**	**13**	**29**

Margins

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
EBITDA margin	13.1%	8.8%	14.2%	14.0%	11.4%	11.7%	13.7%	14.2%	15.6%
EBIT margin	3.2%	neg	4.9%	4.3%	0.9%	1.1%	3.3%	3.6%	4.9%
Net margin	0.3%	neg	2.8%	2.2%	neg	neg	0.8%	1.1%	2.2%

YoY growth rates

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Distribution revenue	-12.9%	12.2%	21.0%	-2.5%	-3.3%	6.4%	9.8%	6.5%	7.7%
EBITDA	-30.7%	-24.9%	94.0%	-4.1%	-21.4%	9.1%	28.5%	10.6%	17.9%
Net income	-93.3%	-552.9%	-351.6%	-23.2%	-138.4%	15.8%	-185.0%	52.4%	117.6%

Balance sheet ($mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Fixed assets	898	895	918	980	938	958	968	984	1,006
LT investments	3	5	4	4	3	3	3	3	3
Non-cash working capital	43	4	-17	3	23	47	52	55	59
Equity	698	683	671	665	619	619	628	641	670
Minority interest	0	0	0	0	0	0	0	0	0
Net debt/(cash)	139	116	146	237	266	308	314	320	317
Other LT liabilities/(assets), net	107	107	89	85	80	82	82	82	82
RAB, net *		1,653	1,581	1,562	1,476	1,487	1,477	1,476	1,486

*Includes estimates for regions which have not switched to RAB yet

Cash flow statement ($mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Operating cash flow before change in non-cash WC	**97**	**79**	**124**	**137**	**115**	**125**	**155**	**171**	**198**
Operating cash flow	**100**	**119**	**133**	**117**	**94**	**102**	**151**	**168**	**194**
Net capex	-78	-91	-165	-203	-117	-115	-130	-146	-163
Acquisitions/divestments	0	0	0	0	0	0	0	0	0
Investing cash flow	**-78**	**-90**	**-165**	**-203**	**-117**	**-115**	**-130**	**-146**	**-163**
Equity raised/bought back	0	0	0	0	0	0	0	0	0
Change in debt	1	-1	52	62	26	31	9	14	0
Interest expense	-23	-17	-11	-16	-20	-25	-27	-28	-28
Financing cash flow	**-22**	**-19**	**42**	**46**	**6**	**7**	**-18**	**-13**	**-28**

Source: Company data, Aton estimates

DCF valuation ($mn)

	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
EBIT	**44**	**9**	**12**	**37**	**44**	**64**	**54**	**59**	**86**
Tax on EBIT	-6	2	3	-2	-3	-7	-5	-6	-11
After tax EBIT	**38**	**11**	**15**	**35**	**41**	**57**	**49**	**54**	**75**
Depreciation	99	103	111	120	130	141	154	169	185
Capex	**-203**	**-117**	**-115**	**-130**	**-146**	**-163**	**-199**	**-212**	**-226**
Change in WC	-20	-21	-24	-4	-3	-4	-4	-4	-6
FCFF	**-85**	**-23**	**-13**	**21**	**22**	**31**	**1**	**7**	**29**
Discounted FCFF	-84	-19	-10	13	12	15	0	2	8

WACC composition

Equity market risk	12.5%
Company-specific risk	7.0%
Regulatory risk	1.0%
Corporate governance	2.0%
Liquidity	4.0%
Cost of equity	**19.5%**
Cost of debt	9.0%
Target D/(D+E)	30.0%
WACC	**16.4%**

Fair value calculation*

			Ordinary
Terminal EV/RAB	0.73	TP per share ($)	0.00082
Terminal value	990	**12M TP ($)**	**0.00098**
NPV of cash flow	-63	Current price ($)	0.00213
NPV of terminal value	290	**Potential upside to 12M TP**	**-54%**
Fair EV	**227**	Dividend yield	0%
net debt (-) or plus cash (+) 2011	-149	**Expected total return over 12M**	**-54%**
minority interest (-)	0	Current EV/RAB 2011E	0.22
Fair MktCap	**78**	Fair EV/RAB 2011E	0.14

* base case scenario (no privatisation)

Regions fair value calculation

	NPV of cash flows	NPV of TV	Fair EV	Fair EV/RAB YE11
Fair EV	**-63**	**290**	**227**	**0.14**
Arkhangelsk	-85	11	-74	-0.39
Karelia	38	32	70	0.38
Kola	3	27	30	0.16
Novgorod	17	51	68	0.38
Pskov	-7	44	37	0.17
Komi	-42	68	26	0.06
Vologda	7	57	64	0.30
Unallocated	6	0	6	

12M TP		Terminal growth				
		-2.0%	-1.0%	0.0%	1.0%	2.0%
WACC	14.4%	0.00226	0.00219	0.00211	0.00200	0.00186
	15.4%	0.00167	0.00159	0.00150	0.00138	0.00124
	16.4%	0.00115	0.00107	**0.00098**	0.00086	0.00072
	17.4%	0.00070	0.00062	0.00052	0.00041	0.00027
	18.4%	0.00030	0.00022	0.00013	0.00002	-0.00011

Fair EV/RAB		Terminal growth				
		-2.0%	-1.0%	0.0%	1.0%	2.0%
WACC	14.4%	0.21	0.21	0.20	0.20	0.19
	15.4%	0.18	0.18	0.17	0.17	0.16
	16.4%	0.15	0.15	**0.14**	0.14	0.13
	17.4%	0.13	0.13	0.12	0.11	0.11
	18.4%	0.11	0.11	0.10	0.10	0.09

Note: We calculate the terminal value using the following formula:
Terminal value = RAB YE20E * (RR - g) * (1 + g) / (WACC - g), where:
RR - regulatory rate of return, g - terminal growth rate (growth in RAB)
As the regulatory rate of return is below the estimated WACC,
the higher growth in RAB results in a lower fair value.
Our base case valuation assumes a zero terminal growth rate.

Source: Aton estimates

MRSK SIBERIA

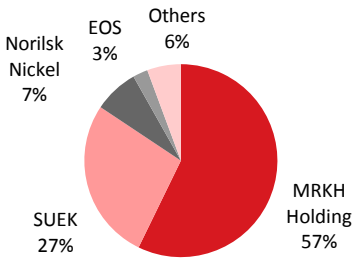
SELL
12M Target Price* ($) **0.00100**

Bloomberg code	MRKS RX
Reuters code	MRKS.MM
Current price, ord. ($)	0.00300
Potential upside to 12M TP, ord	-67%
Dividend yield, ord. ($)	0%
Exp. total return over 12M, ord. (%)	-67%

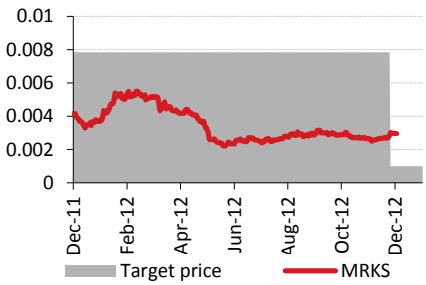
Share data

No. of ord. shares (mn)**	98,282
No. of pref. shares (mn)	0
Ave 3M daily t/o, ord. ($mn)	0.02
Free float (%)**	6%
MktCap ($mn)**	295
Enterprise value ($mn)	453

Shareholder structure**



12M price performance ($)



Source: Company data, Bloomberg
Aton estimates

*TP here is the weighted average of privatisation and base case scenarios; all other data corresponds to base case scenario

**estimated after additional share issues planned for 2012-13

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BULL POINTS

- Positive resolution of 'last mile' issue with Rusal may help re-rate the stock

BEAR POINTS

- Practically no assets under RAB regulation
- Significant tariff smoothing as required tariff growth exceeds the expected ceiling
- Major 'last mile' issue
- Privatisation unlikely due to regulatory issues

STOCK DRIVERS

- Resolution of 'last mile' issue in Krasnoyarsk region (possibly in 2013)
- Transition of remaining assets to RAB (may take place in 2013-14)
- Publication of FY12 IFRS financials (Apr-May 2013)

Valuation ratios

	2009	2010	2011	2012E	2013E	2014E	2015E
EV/EBITDA adj.	3.8	10.7	3.2	6.4	4.3	2.2	1.8
P/E adj.	neg	neg	neg	neg	neg	12.3	5.6
EV/Distribution revenue	0.4	0.3	0.3	0.3	0.3	0.3	0.2
P/BV	0.3	0.4	0.4	0.4	0.5	0.4	0.4
EV/RAB	n/a	0.21	0.23	0.26	0.29	0.30	0.33
EV/Grid size ($/grid unit)	334	329	326	326	327	329	330
EV/Grid length ($/km)	1,848	1,760	1,760	n/a	n/a	n/a	n/a
EV/Distribution volume ($/MWh)	4.9	6.1	6.3	6.2	6.1	6.0	5.9

Financial metrics

	2009	2010	2011	2012E	2013E	2014E	2015E
RoA	0.6%	-6.4%	1.2%	-5.1%	-2.0%	5.8%	8.9%
RoE	neg	neg	neg	neg	neg	3.7%	7.4%
EBITDA/RAB	n/a	1.9%	7.1%	4.0%	6.7%	13.8%	18.3%
FCFF/RAB	3.3%	-10.2%	12.1%	-51.3%	-38.1%	-8.8%	53.1%
Net debt/EBITDA	1.8	6.5	1.2	4.5	3.9	2.3	1.6
Net debt/Assets	0.2	0.2	0.2	0.3	0.4	0.4	0.3
Interest coverage ratio	0.2	-3.0	0.7	-2.6	-0.7	1.8	2.7

Operational data

	2009	2010	2011	2012E	2013E	2014E	2015E
Size of grid ('000 grid units)	1,358	1,377	1,391	1,390	1,386	1,380	1,375
Distribution volume (GWh)	92,182	74,258	72,448	73,535	74,417	75,459	76,666
Electricity losses in grid (%)	7.5%	9.4%	9.0%	8.9%	8.9%	8.9%	8.9%
Total distribution tariff ($/MWh)	12.8	18.3	23.4	21.7	21.7	23.3	23.3
Growth rate	-9.9%	42.8%	27.8%	-7.4%	0.2%	7.4%	0.0%

Assets description (2011)

Region	Grid length (km)	Transformer capacity (MVA)	Grid size ('000 units)	Distrib. volume (GWh)	Loss rate (%)	RAB ($mn)
Altai	54,875	1,373	252	7,199	9.6%	293
Mountain Altai	6,950	1,598	30	438	19.1%	66
Buryatia	24,005	6,173	130	2,978	17.1%	213
Chita	34,600	7,916	197	2,869	20.6%	178
Khakassia	9,755	2,509	69	11,204	3.5%	137
Krasnoyarsk	48,636	10,299	284	16,226	12.9%	353
Kuzbassenergo	30,466	4,759	174	23,183	4.4%	412
Omsk	42,357	10,019	225	7,981	8.7%	301
Tuva	6,013	864	31	369	42.8%	27
Total	**257,657**	**45,510**	**1,391**	**72,448**	**9.0%**	**1,979**

Source: Company data, Aton estimates

Income statement ($mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Revenue	**1,259**	**1,443**	**1,780**	**1,672**	**1,694**	**1,841**	**2,009**	**2,143**	**2,303**
Distribution revenue	1,182	1,360	1,696	1,594	1,616	1,760	1,923	2,053	2,209
of which attributed to MRSK	487	494	629	573	590	698	760	800	860
Connection fees	45	38	53	49	48	50	53	56	59
Other	32	45	31	30	29	31	32	34	36
Cost of sales	**-1,266**	**-1,524**	**-1,781**	**-1,742**	**-1,729**	**-1,783**	**-1,913**	**-2,036**	**-2,167**
Payments to TGOs	-202	-283	-415	-387	-387	-409	-440	-471	-504
FSK services	-315	-359	-437	-425	-431	-433	-487	-530	-576
Purchased electricity to cover losses in grid	-178	-223	-215	-209	-209	-221	-236	-252	-269
Operation and maintenance expenses	-459	-539	-586	-593	-575	-586	-606	-630	-654
D&A	-112	-118	-127	-127	-128	-134	-144	-153	-163
Other operating income/(expense)	14	4	14	13	13	14	14	15	16
EBITDA	**119**	**42**	**140**	**71**	**105**	**207**	**254**	**275**	**316**
EBIT	**7**	**-76**	**13**	**-56**	**-23**	**72**	**110**	**122**	**153**
Net finance expense	-29	-24	-14	-21	-31	-41	-41	-34	-26
EBT	**-22**	**-101**	**-2**	**-77**	**-54**	**31**	**69**	**87**	**127**
Net income	**-22**	**-101**	**-1**	**-59**	**-41**	**24**	**53**	**67**	**97**

Margins

	2009	2010E	2011	2012E	2013E	2014E	2015E	2016E	2017E
EBITDA margin	9.4%	2.9%	7.8%	4.3%	6.2%	11.2%	12.6%	12.8%	13.7%
EBIT margin	0.6%	neg	0.7%	neg	neg	3.9%	5.5%	5.7%	6.6%
Net margin	neg	neg	neg	neg	neg	1.3%	2.6%	3.1%	4.2%

YoY growth rates

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Distribution revenue	-14.2%	15.0%	24.7%	-6.0%	1.4%	8.9%	9.3%	6.7%	7.6%
EBITDA	-35.9%	-64.5%	230.9%	-49.0%	47.8%	96.5%	22.8%	8.4%	14.9%
Net income	-164.5%	352.7%	-98.6%	3988.2%	-30.6%	-158.6%	119.0%	26.4%	45.6%

Balance sheet ($mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Fixed assets	1,180	1,180	1,225	1,186	1,110	1,109	1,092	1,078	1,056
LT investments	23	27	22	22	20	21	21	21	21
Non-cash working capital	0	-42	-209	-115	-21	83	90	96	104
Equity	864	781	777	687	623	658	710	777	874
Minority interest	0	0	0	-3	-4	-3	-1	2	7
Net debt/(cash)	216	273	171	321	408	475	410	333	216
Other LT liabilities/(assets), net	123	110	91	87	82	84	84	84	84
RAB, net *		2,171	1,979	1,766	1,575	1,493	1,385	1,282	1,178

* Includes estimates for regions which have not switched to RAB yet

Cash flow statement ($mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Operating cash flow before change in non-cash WC	**118**	**34**	**134**	**87**	**116**	**200**	**240**	**257**	**290**
Operating cash flow	**123**	**80**	**253**	**-2**	**27**	**96**	**233**	**251**	**283**
Net capex	-113	-122	-220	-139	-118	-115	-127	-140	-141
Acquisitions/divestments	0	0	0	0	0	0	0	0	0
Investing cash flow	**-112**	**-121**	**-218**	**-139**	**-118**	**-115**	**-127**	**-140**	**-141**
Equity raised/bought back	0	0	59	0	15	0	0	0	0
Change in debt	23	68	-71	129	112	63	-63	-80	-114
Interest expense	-30	-22	-15	-21	-31	-41	-41	-34	-26
Financing cash flow	**-11**	**46**	**-27**	**108**	**96**	**22**	**-104**	**-114**	**-140**

Source: Company data, Aton estimates

DCF valuation ($mn)

	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
EBIT	**-56**	**-23**	**72**	**110**	**122**	**153**	**205**	**226**	**217**
Tax on EBIT	15	11	-6	-14	-17	-25	-37	-41	-40
After tax EBIT	**-41**	**-12**	**66**	**96**	**104**	**127**	**168**	**185**	**177**
Depreciation	127	128	134	144	153	163	179	202	227
Capex	**-139**	**-118**	**-115**	**-127**	**-140**	**-141**	**-314**	**-334**	**-357**
Change in WC	-89	-89	-105	-7	-6	-7	-9	-9	-8
FCFF	**-141**	**-91**	**-19**	**106**	**112**	**142**	**24**	**44**	**40**
Discounted FCFF	-140	-77	-14	66	60	66	10	15	12

WACC composition

Equity market risk	12.5%
Company-specific risk	7.0%
Regulatory risk	1.0%
Corporate governance	2.0%
Liquidity	4.0%
Cost of equity	**19.5%**
Cost of debt	9.0%
Target D/(D+E)	30.0%
WACC	**16.4%**

Fair value calculation*

			Ordinary
Terminal EV/RAB	0.73	TP per share ($)	0.00084
Terminal value	828	**12M TP ($)**	**0.00100**
NPV of cash flow	-2	Current price ($)	0.00300
NPV of terminal value	243	**Potential upside to 12M TP**	**-67%**
Fair EV	**241**	Dividend yield	0%
Net debt (-) or plus cash (+) 2011*	-158	**Expected total return over 12M**	**-67%**
Minority interest (-)	0	Current EV/RAB 2011E	0.23
Fair MktCap*	**82**	Fair EV/RAB 2011E	0.12

* base case scenario (no privatisation), estimated after additional share issues planned for 2012-13

Regions fair value calculation

	NPV of cash flows	NPV of TV	Fair EV	Fair EV/RAB YE11
Fair EV	**-2**	**243**	**241**	**0.12**
Altai	-2	38	35	0.12
Mountain Altai	-7	13	6	0.09
Buryatia	3	24	27	0.13
Chita	134	-2	131	0.74
Khakassia	-32	25	-7	-0.05
Krasnoyarsk	-27	32	5	0.01
Kuzbassenergo	-126	78	-48	-0.12
Omsk	32	34	66	0.22
Tuva	7	2	9	0.35
Unallocated	16	0	16	

12M TP		Terminal growth				
		-2.0%	-1.0%	0.0%	1.0%	2.0%
WACC	14.4%	0.00221	0.00215	0.00209	0.00200	0.00189
	15.4%	0.00164	0.00158	0.00151	0.00141	0.00130
	16.4%	0.00114	0.00108	**0.00100**	0.00091	0.00079
	17.4%	0.00070	0.00064	0.00056	0.00046	0.00035
	18.4%	0.00030	0.00024	0.00016	0.00007	-0.00003

Fair EV/RAB		Terminal growth				
		-2.0%	-1.0%	0.0%	1.0%	2.0%
WACC	14.4%	0.17	0.17	0.17	0.16	0.16
	15.4%	0.15	0.15	0.14	0.14	0.13
	16.4%	0.13	0.12	**0.12**	0.12	0.11
	17.4%	0.11	0.11	0.10	0.10	0.09
	18.4%	0.09	0.09	0.09	0.08	0.08

Note: We calculate the terminal value using the following formula:
Terminal value = RAB YE20E * (RR - g) * (1 + g) / (WACC - g), where:
RR - regulatory rate of return, g - terminal growth rate (growth in RAB)
As the regulatory rate of return is below the estimated WACC,
the higher growth in RAB results in a lower fair value.
Our base case valuation assumes a zero terminal growth rate.

Source: Aton estimates

MRSK URALS

SELL

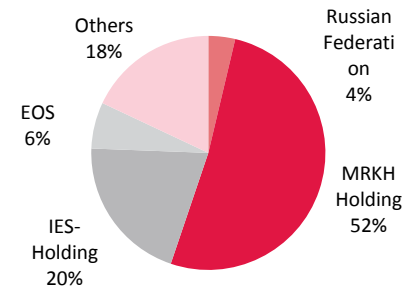
12M Target Price* ($) 0.00241

Bloomberg code	MRKU RX
Reuters code	MRKU.MM
Current price, ord. ($)	0.00653
Upside to 12M TP, ord.	-63%
Dividend yield, ord. ($)	1%
Exp. total return over 12M, ord. (%)	-63%

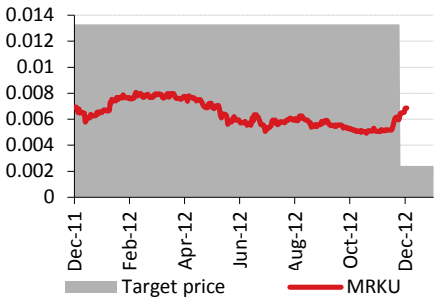
Share data

No. of ord. shares (mn)	87,430
No. of pref. shares (mn)	0
Ave 3M daily t/o, ord. ($mn)	0.17
Free float (%)	18%
MktCap ($mn)	571
Enterprise value ($mn)	788

Shareholder structure



12M price performance ($)



Source: Company data, Bloomberg, Aton estimates

*TP here is the weighted average of privatisation and base case scenarios; all other data corresponds to base case scenario

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BULL POINTS

- No significant tariff smoothing
- Some chances of privatisation

BEAR POINTS

- 22% of assets not yet switched to RAB regulation
- Significant consumption volume of 'last mile' customers

STOCK DRIVERS

- Announcement of the company's privatisation (may occur in 2013)
- Publication of FY12 IFRS financials (Apr-May 2013)
- Transition of Yekaterinburg DC to RAB (could take place in 2013-14)

Valuation ratios

	2009	2010	2011	2012E	2013E	2014E	2015E
EV/EBITDA adj.	3.0	2.5	2.7	3.8	3.1	2.8	2.7
P/E adj.	5.5	5.3	4.8	12.7	7.7	6.8	7.1
EV/Distribution revenue	0.6	0.5	0.4	0.4	0.4	0.4	0.4
P/BV	0.5	0.4	0.4	0.4	0.4	0.4	0.4
EV/RAB	n/a	0.44	0.45	0.44	0.45	0.44	0.43
EV/Grid size ($/grid unit)	1,356	1,210	1,184	1,152	1,128	1,106	1,084
EV/Grid length ($/km)	6,454	6,380	6,380	n/a	n/a	n/a	n/a
EV/Distribution volume ($/MWh)	10.6	10.2	10.2	10.1	10.0	9.8	9.7

Financial metrics

	2009	2010	2011	2012E	2013E	2014E	2015E
RoA	9.8%	10.9%	8.9%	3.7%	6.1%	6.7%	6.1%
RoE	8.7%	8.5%	9.2%	3.4%	5.7%	5.9%	5.4%
EBITDA/RAB	n/a	17.4%	16.8%	11.6%	14.5%	15.5%	15.6%
FCFF/RAB	6.0%	2.7%	-1.4%	-3.6%	0.1%	0.6%	1.6%
Net debt/EBITDA	0.8	0.6	0.7	1.2	1.0	0.9	0.8
Net debt/Assets	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Interest coverage ratio	5.2	10.5	14.8	4.3	5.5	5.3	5.0

Operational data

	2009	2010	2011	2012E	2013E	2014E	2015E
Size of grid ('000 grid units)	581	651	665	684	698	712	727
Distribution volume (GWh)	74,159	77,245	76,926	78,080	79,017	80,123	81,405
Electricity losses in grid (%)	8.7%	8.4%	8.1%	8.1%	8.1%	8.1%	8.1%
Total distribution tariff ($/MWh)	18.5	21.8	25.0	22.5	22.7	24.0	24.0
Growth rate	14.3%	18.3%	14.7%	-10.0%	0.7%	5.9%	0.0%

Assets description (2011)

Region	Grid length (km)	Transformer capacity (MVA)	Grid size ('000 units)	Distrib. volume (GWh)	Loss rate (%)	RAB ($mn)
Yekaterinburg	4,178	5,068	55	5,349	10.6%	393
Perm	44,230	10,480	234	17,672	11.3%	519
Sverdlov	36,655	9,182	177	33,668	5.8%	382
Chelyabinsk	38,408	8,773	199	20,237	8.4%	468
Total	**123,471**	**33,503**	**665**	**76,926**	**8.1%**	**1,762**

Source: Company data, Aton estimates

Income statement ($mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Revenue	**1,426**	**1,774**	**1,992**	**1,822**	**1,856**	**1,991**	**2,141**	**2,280**	**2,453**
Distribution revenue	1,369	1,687	1,926	1,760	1,794	1,926	2,072	2,208	2,378
of which attributed to MRSK	533	597	679	604	640	677	704	736	794
Connection fees	39	66	50	48	47	49	52	54	57
Other	18	21	16	15	15	16	17	18	18
Cost of sales	**-1,271**	**-1,583**	**-1,839**	**-1,758**	**-1,750**	**-1,868**	**-2,024**	**-2,162**	**-2,309**
Payments to TGOs	-290	-346	-483	-409	-401	-420	-450	-480	-513
FSK services	-264	-360	-452	-442	-448	-507	-572	-622	-677
Purchased electricity to cover losses in grid	-282	-383	-312	-304	-305	-323	-347	-370	-395
Operation and maintenance expenses	-329	-368	-450	-460	-450	-463	-485	-504	-524
D&A	-106	-125	-141	-143	-146	-156	-170	-185	-201
Other operating income/(expense)	4	-3	1	1	1	1	1	1	1
EBITDA	**265**	**312**	**296**	**208**	**253**	**279**	**289**	**304**	**346**
EBIT	**159**	**187**	**154**	**65**	**107**	**124**	**118**	**119**	**145**
Net finance expense	-27	-8	1	-7	-11	-15	-15	-14	-14
EBT	**132**	**179**	**155**	**58**	**96**	**109**	**103**	**105**	**131**
Net income	**105**	**109**	**119**	**45**	**74**	**84**	**80**	**81**	**101**

Margins

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
EBITDA margin	18.6%	17.6%	14.8%	11.4%	13.6%	14.0%	13.5%	13.4%	14.1%
EBIT margin	11.2%	10.6%	7.7%	3.6%	5.8%	6.2%	5.5%	5.2%	5.9%
Net margin	7.3%	6.1%	6.0%	2.5%	4.0%	4.2%	3.7%	3.6%	4.1%

YoY growth rates

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Distribution revenue	-0.2%	23.2%	14.2%	-8.7%	1.9%	7.4%	7.6%	6.5%	7.7%
EBITDA	20.8%	17.6%	-5.3%	-29.7%	21.5%	10.6%	3.3%	5.5%	13.6%
Net income	49.5%	3.7%	9.8%	-62.2%	64.5%	13.3%	-4.8%	1.4%	25.2%

Balance sheet ($mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Fixed assets	1,538	1,588	1,649	1,671	1,631	1,716	1,779	1,833	1,884
LT investments	22	31	37	35	33	34	34	34	34
Non-cash working capital	-1	17	0	27	55	90	96	103	110
Equity	1,206	1,271	1,293	1,307	1,306	1,412	1,492	1,573	1,675
Minority interest	22	25	26	27	28	32	34	37	41
Net debt/(cash)	209	180	210	250	244	253	239	216	169
Other LT liabilities/(assets), net	122	159	156	149	141	143	143	143	143
RAB, net*		1,796	1,762	1,796	1,740	1,806	1,847	1,889	1,933

* Includes estimates for regions which have not switched to RAB yet

Cash flow statement ($mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Operating cash flow before change in non-cash WC	**253**	**294**	**275**	**196**	**234**	**258**	**268**	**284**	**320**
Operating cash flow	**220**	**271**	**253**	**169**	**204**	**223**	**262**	**277**	**312**
Net capex	-104	-173	-269	-236	-201	-213	-233	-240	-251
Acquisitions/divestments	0	0	0	25	0	0	0	0	0
Investing cash flow	**-103**	**-172**	**-269**	**-212**	**-201**	**-213**	**-233**	**-240**	**-251**
Equity raised/bought back	0	0	0	0	0	0	0	0	0
Change in debt	-55	-23	23	31	0	0	0	0	0
Interest expense	-39	-20	-14	-7	-11	-15	-15	-14	-14
Financing cash flow	**-93**	**-44**	**-1**	**24**	**-11**	**-15**	**-15**	**-14**	**-14**

Source: Company data, Aton estimates

DCF valuation ($mn)

	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
EBIT	**65**	**107**	**124**	**118**	**119**	**145**	**65**	**-49**	**49**
Tax on EBIT	-12	-19	-22	-21	-21	-26	-10	12	-7
After tax EBIT	**54**	**88**	**102**	**98**	**98**	**119**	**55**	**-36**	**42**
Depreciation	143	146	156	170	185	201	216	233	251
Capex	**-236**	**-201**	**-213**	**-233**	**-240**	**-251**	**-259**	**-276**	**-294**
Change in WC	-27	-30	-34	-6	-6	-8	-5	-3	-13
FCFF	**-67**	**3**	**10**	**29**	**38**	**61**	**8**	**-82**	**-14**
Discounted FCFF	-66	2	8	18	20	28	3	-28	-4

WACC Composition

Equity market risk	12.5%
Company-specific risk	7.0%
Regulatory risk	1.0%
Corporate governance	2.0%
Liquidity	4.0%
Cost of equity	**19.5%**
Cost of debt	9.0%
Target D/(D+E)	30.0%
WACC	**16.4%**

Fair value calculation*

			Ordinary
Terminal EV/RAB	0.73	TP per share ($)	0.00165
Terminal value	1,272	**12M TP ($)**	**0.00194**
NPV of cash flow	-19	Current price ($)	0.00653
NPV of terminal value	373	**Potential upside to 12M TP**	**-70%**
Fair EV	**354**	Dividend yield	1%
Net debt (-) or plus cash (+) 2011	-190	**Expected total return over 12M**	**-70%**
Minority interest (-)	-27	Current EV/RAB 2011E	0.45
Fair MktCap	**144**	Fair EV/RAB 2011E	0.20

* base case scenario (no privatisation)

Regions fair value calculation

	NPV of cash flows	NPV of TV	Fair EV	Fair EV/RAB YE11
Fair EV	**-19**	**373**	**354**	**0.20**
Yekaterinburg	-12	82	70	0.18
Perm	32	98	131	0.25
Sverdlov	-70	109	39	0.10
Chelyabinsk	24	84	108	0.23
Unallocated	7	0	7	

12M TP		Terminal growth				
		-2.0%	-1.0%	0.0%	1.0%	2.0%
WACC	14.4%	0.00369	0.00360	0.00348	0.00333	0.00313
	15.4%	0.00288	0.00278	0.00265	0.00249	0.00229
	16.4%	0.00218	0.00207	**0.00194**	0.00177	0.00158
	17.4%	0.00157	0.00146	0.00132	0.00116	0.00097
	18.4%	0.00104	0.00092	0.00079	0.00064	0.00045

Fair EV/RAB		Terminal growth				
		-2.0%	-1.0%	0.0%	1.0%	2.0%
WACC	14.4%	0.28	0.27	0.27	0.26	0.25
	15.4%	0.24	0.24	0.23	0.22	0.22
	16.4%	0.21	0.21	**0.20**	0.19	0.19
	17.4%	0.19	0.18	0.18	0.17	0.16
	18.4%	0.16	0.16	0.15	0.15	0.14

Note: We calculate the terminal value using the following formula:
Terminal value = RAB YE20E * (RR - g) * (1 + g) / (WACC - g), where:
RR - regulatory rate of return, g - terminal growth rate (growth in RAB)
As the regulatory rate of return is below the estimated WACC,
the higher growth in RAB results in a lower fair value.
Our base case valuation assumes a zero terminal growth rate.

Source: Aton estimates

MRSK VOLGA

SELL

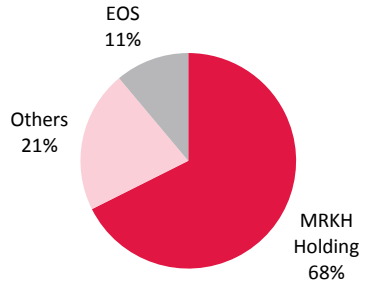
12M Target Price* ($) **0.00159**

Bloomberg code	MRKV RX
Reuters code	MRKV.MM
Current price, ord. ($)	0.00240
Upside to 12M TP, ord	-34%
Div. yield, ord. ($)	2%
Exp. total return over 12M, ord. (%)	-31%

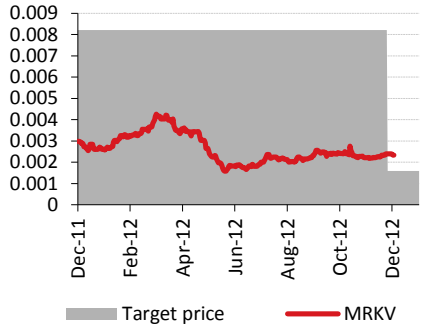
Share data

No. of ord. shares (mn)	178,578
No. of pref. shares (mn)	0
Ave 3M daily t/o, ord. ($mn)	0.03
Free float (%)	21%
MktCap ($mn)	428
Enterprise value ($mn)	586

Shareholder structure



12M price performance ($)



Source: Company data, Bloomberg, Aton estimates

*TP here is the weighted average of privatisation and base case scenarios; all other data corresponds to base case scenario

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BULL POINTS

- A likely candidate for privatisation
- No significant 'last mile' issues

BEAR POINTS

- 34% of assets not under RAB regulation (Samara region)

STOCK DRIVERS

- Announcement of the company's privatisation (may occur in 2013)
- Transition of Samara region to RAB regulation (may occur in 2013-14)
- Publication of FY12 IFRS financials (Apr-May 2013)

Valuation ratios

	2009	2010	2011	2012E	2013E	2014E	2015E
EV/EBITDA adj	3.4	3.8	3.1	2.4	2.9	4.5	3.1
P/E adj	8.0	13.0	7.5	5.1	10.4	-13.3	-61.0
EV/Distribution revenue	0.7	0.5	0.4	0.4	0.4	0.4	0.3
P/B	0.6	0.6	0.6	0.5	0.6	0.6	0.6
EV/RAB	n/a	0.31	0.31	0.31	0.32	0.30	0.29
EV/Grid size ($/grid unit)	763	760	733	695	678	664	647
EV/Grid length ($/km)	2,735	2,732	2,732	n/a	n/a	n/a	n/a
EV/Distribution volume ($/MWh)	11.0	10.4	10.2	10.0	9.9	9.8	9.6

Financial metrics

	2009	2010	2011	2012E	2013E	2014E	2015E
RoA	8.6%	6.4%	7.8%	10.7%	6.3%	-0.7%	2.3%
RoE	7.6%	4.6%	7.8%	10.8%	5.3%	-4.2%	-0.9%
EBITDA/RAB	n/a	8.1%	10.2%	12.8%	10.9%	6.8%	9.3%
FCFF/RAB	3.3%	3.2%	-1.1%	-4.6%	-0.7%	-3.3%	-1.2%
Net debt/EBITDA	1.0	0.8	0.8	1.0	1.3	2.8	2.3
Net debt/Assets	0.2	0.1	0.2	0.2	0.2	0.3	0.3
Interest coverage ratio	5.2	6.6	8.9	8.5	3.6	-0.3	0.8

Operational data

	2009	2010	2011	2012E	2013E	2014E	2015E
Size of grid ('000) grid units	768	772	800	844	865	883	906
Distribution volume (GWh)	53,356	56,368	57,623	58,487	59,189	60,018	60,978
Electricity losses in grid (%)	7.4%	6.9%	6.8%	6.8%	6.8%	6.8%	6.8%
Total distribution tariff ($/MWh)	16.8	22.6	27.9	27.4	26.5	26.5	26.5
growth rate	-10.4%	34.5%	23.4%	-1.9%	-3.4%	0.1%	0.0%

Assets description (2011)

Region	Grid length (km)	Transformer capacity (MVA)	Grid size ('000 units)	Distrib. volume (GWh)	Loss rate (%)	RAB ($mn)
Samara	29,184	7,332	110	20,200	4.5%	627
Saratov	51,289	8,935	186	9,426	8.8%	479
Ulyanovsk	21,755	3,354	77	4,609	10.1%	106
Mordovia	18,428	1,942	63	2,333	10.3%	133
Orenburg	41,709	5,561	177	12,783	6.5%	294
Penza	31,810	3,948	117	3,775	9.4%	114
Chuvashia	20,495	3,066	70	4,498	5.8%	111
Total	**214,670**	**34,138**	**800**	**57,623**	**6.8%**	**1,864**

Source: Company data, Aton estimates

Income statement ($mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Revenue	**929**	**1,303**	**1,634**	**1,625**	**1,589**	**1,614**	**1,788**	**1,928**	**2,073**
Distribution revenue	898	1,276	1,609	1,603	1,567	1,591	1,763	1,902	2,046
of which attributed to MRSK	459	501	636	662	619	565	643	698	751
Connection fees	15	12	11	9	9	9	9	10	10
Other	16	15	14	14	14	14	15	16	17
Cost of sales	**-845**	**-1,241**	**-1,558**	**-1,509**	**-1,520**	**-1,626**	**-1,761**	**-1,890**	**-2,015**
Payments to TGOs	-64	-182	-190	-177	-177	-187	-202	-216	-231
FSK services	-193	-273	-341	-332	-337	-381	-428	-464	-505
Purchased electricity to cover losses in grid	-182	-320	-442	-431	-433	-457	-491	-524	-559
Operation and maintenance expenses	-317	-373	-473	-448	-444	-460	-484	-510	-527
D&A	-89	-93	-111	-120	-129	-141	-156	-176	-193
Other operating income/(expense)	-1	-1	3	3	3	3	3	3	4
EBITDA	**172**	**153**	**191**	**240**	**201**	**132**	**186**	**217**	**254**
EBIT	**83**	**61**	**80**	**119**	**72**	**-9**	**30**	**42**	**62**
Net finance expense	-16	-9	-9	-14	-20	-31	-39	-48	-52
EBT	**67**	**52**	**71**	**105**	**51**	**-40**	**-9**	**-6**	**10**
Net income	**53**	**33**	**57**	**84**	**41**	**-32**	**-7**	**-5**	**8**

Margins

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
EBITDA margin	18.5%	11.8%	11.7%	14.7%	12.6%	8.2%	10.4%	11.3%	12.3%
EBIT margin	8.9%	4.7%	4.9%	7.3%	4.5%	-0.6%	1.7%	2.2%	3.0%
Net margin	5.8%	2.5%	3.5%	5.2%	2.6%	-2.0%	-0.4%	-0.3%	0.4%

YoY growth rates

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Distribution revenue	-18.3%	42.1%	26.1%	-0.4%	-2.2%	1.5%	10.8%	7.9%	7.5%
EBITDA	-26.2%	-10.8%	24.5%	25.5%	-16.2%	-34.4%	41.5%	16.7%	17.0%
Net income	-37.2%	-38.2%	72.8%	47.6%	-51.1%	-178.2%	-78.2%	-30.8%	-269.0%

Balance sheet ($mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Fixed assets	841	881	974	1,086	1,064	1,111	1,159	1,281	1,222
LT investments	0	0	0	0	0	0	0	0	0
Non-cash working capital	59	0	-26	5	38	73	80	87	93
Equity	699	712	729	780	776	757	750	745	754
Minority interest	0	0	0	0	0	0	0	0	0
Net debt/(cash)	167	125	155	249	267	367	430	563	502
Other LT liabilities/(assets), net	33	44	65	62	58	59	59	59	59
RAB, net*		1,886	1,864	1,878	1,841	1,925	1,994	2,131	2,160

* Includes estimates for regions which have not switched to RAB yet

Cash flow statement ($mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Operating cash flow before change in non-cash WC	**161**	**136**	**173**	**219**	**190**	**140**	**188**	**219**	**252**
Operating cash flow	**129**	**199**	**217**	**187**	**157**	**105**	**181**	**212**	**246**
Net capex	-69	-137	-244	-277	-170	-169	-205	-297	-133
Acquisitions/divestments	0	0	0	0	0	0	0	0	0
Investing cash flow	**-67**	**-137**	**-244**	**-277**	**-170**	**-169**	**-205**	**-297**	**-133**
Equity raised/bought back	0	0	0	0	0	0	0	0	0
Change in debt	-23	-17	56	46	52	105	63	134	-49
Interest expense	-21	-11	-10	-14	-20	-31	-39	-48	-52
Financing cash flow	**-45**	**-27**	**46**	**32**	**32**	**74**	**24**	**87**	**-100**

Source: Company data, Aton estimates

DCF valuation ($mn)

	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
EBIT	**119**	**72**	**-9**	**30**	**42**	**62**	**59**	**55**	**89**
Tax on EBIT	-21	-10	8	2	1	-2	-2	-1	-8
After tax EBIT	**98**	**61**	**-1**	**32**	**43**	**60**	**57**	**54**	**82**
Depreciation	120	129	141	156	176	193	207	225	244
Capex	**-277**	**-170**	**-169**	**-205**	**-297**	**-133**	**-224**	**-239**	**-255**
Change in WC	-31	-33	-35	-7	-6	-7	-6	-6	-9
FCFF	**-90**	**-12**	**-64**	**-24**	**-85**	**113**	**33**	**33**	**62**
Discounted FCFF	-89	-11	-47	-15	-46	52	13	11	18

WACC composition

Equity market risk	12.5%
Company-specific risk	7.0%
Regulatory risk	1.0%
Corporate governance	2.0%
Liquidity	4.0%
Cost of equity	**19.5%**
Cost of debt	9.0%
Target D/(D+E)	30.0%
WACC	**16.4%**

Fair value calculation*

			Ordinary
Terminal EV/RAB	0.73	TP per share ($)	0.00088
Terminal value	1,459	**12M TP ($)**	**0.00100**
NPV of cash flow	-113	Current price ($)	0.00240
NPV of terminal value	428	**Potential upside to 12M TP**	**-58%**
Fair EV	**315**	Dividend yield	2%
net debt (-) or plus cash (+) 2011	-158	**Expected total return over 12M**	**-56%**
minority interest (-)	0	Current EV/RAB 2011E	0.31
Fair MktCap	**157**	Fair EV/RAB 2011E	0.17

* base case scenario (no privatisation)

Regions fair value calculation

	NPV of cash flows	NPV of TV	Fair EV	Fair EV/RAB YE11
Fair EV	**-113**	**428**	**315**	**0.17**
Samara	119	109	229	0.36
Saratov	-98	119	22	0.04
Ulyanovsk	-21	29	7	0.07
Mordovia	-36	26	-10	-0.07
Orenburg	-68	85	17	0.06
Penza	-26	35	8	0.07
Chuvashia	11	25	35	0.32
Unallocated	7	0	7	

12M TP		Terminal growth				
		-2.0%	-1.0%	0.0%	1.0%	2.0%
WACC	14.4%	0.00200	0.00195	0.00188	0.00180	0.00169
	15.4%	0.00154	0.00148	0.00141	0.00132	0.00120
	16.4%	0.00114	0.00107	**0.00100**	0.00091	0.00080
	17.4%	0.00079	0.00072	0.00065	0.00056	0.00045
	18.4%	0.00048	0.00042	0.00034	0.00026	0.00015

Fair EV/RAB		Terminal growth				
		-2.0%	-1.0%	0.0%	1.0%	2.0%
WACC	14.4%	0.25	0.25	0.24	0.24	0.23
	15.4%	0.21	0.21	0.20	0.20	0.19
	16.4%	0.18	0.18	**0.17**	0.16	0.15
	17.4%	0.15	0.15	0.14	0.13	0.12
	18.4%	0.13	0.12	0.12	0.11	0.10

Note: We calculate the terminal value using the following formula:
Terminal value = RAB YE20E * (RR - g) * (1 + g) / (WACC - g), where:
RR - regulatory rate of return, g - terminal growth rate (growth in RAB)
As the regulatory rate of return is below the estimated WACC,
the higher growth in RAB results in a lower fair value.
Our base case valuation assumes a zero terminal growth rate.

Source: Aton estimates

MOESK

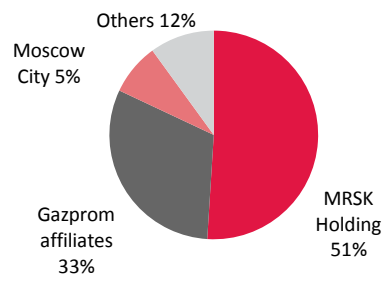
SELL
12M Target Price* ($) 0.0278

Bloomberg code	MSRS RX
Reuters code	MSRS.MM
Current price, ord. ($)	0.0478
Upside to 12M TP, ord.	-42%
Dividend yield, ord. ($)	1%
Exp. total return over 12M, ord. (%)	-41%

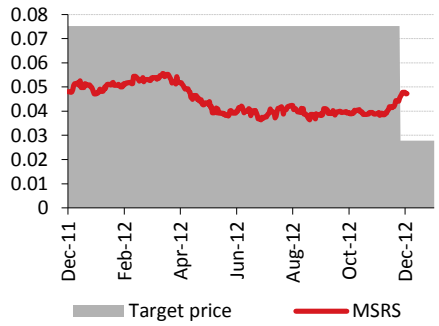
Share data

No. of ord. shares (mn)	48,707
No. of pref. shares (mn)	0
Ave 3M daily t/o, ord. ($mn)	0.13
Free float (%)	12%
MktCap ($mn)	2,328
Enterprise value ($mn)	3,688

Shareholder structure



12M price performance ($)



Source: Company data, Bloomberg, Aton estimates

*TP here is the weighted average of privatisation and base case scenarios; all other data corresponds to base case scenario

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BULL POINTS
- Completely switched to RAB
- No significant tariff smoothing
- No 'last mile' issue

BEAR POINTS
- Little chance of privatisation due to strategic location (Moscow)

STOCK DRIVERS
- Publication of FY12 IFRS financials (Apr-May 2013)

Valuation ratios

	2009	2010	2011	2012E	2013E	2014E	2015E
EV/EBITDA adj.	3.8	2.9	2.4	3.0	2.9	2.7	2.4
P/E adj.	6.9	4.0	3.3	4.9	4.7	4.6	4.0
EV/Distribution revenue	1.6	1.2	1.0	1.2	1.1	1.0	0.9
P/BV	0.8	0.7	0.6	0.6	0.5	0.5	0.4
EV/RAB	n/a	0.62	0.64	0.67	0.69	0.63	0.60
EV/Grid size ($/grid unit)	2,700	2,636	2,528	2,426	2,327	2,234	2,175
EV/Grid length ($/km)	28,981	28,645	28,645	n/a	n/a	n/a	n/a
EV/Distribution volume ($/MWh)	51.8	49.7	48.9	48.1	47.6	46.9	46.2

Financial metrics

	2009	2010	2011	2012E	2013E	2014E	2015E
RoA	13.0%	16.0%	17.7%	11.6%	11.7%	11.4%	12.0%
RoE	11.4%	16.9%	18.7%	11.5%	11.3%	10.4%	10.6%
Effective rate of return on RAB	n/a	20.9%	27.0%	22.1%	23.6%	23.4%	24.5%
FCFF/RAB	8.7%	6.8%	-1.2%	-1.2%	-1.6%	1.5%	5.3%
Net debt/EBITDA	1.5	1.0	0.9	1.2	1.2	1.2	0.9
Net debt/Assets	0.3	0.2	0.2	0.2	0.2	0.2	0.2
Interest coverage ratio	3.0	10.5	17.5	8.7	7.1	5.8	6.7

Operational data

	2009	2010	2011	2012E	2013E	2014E	2015E
Size of grid ('000 grid units)	1,366	1,399	1,459	1,520	1,585	1,651	1,696
Distribution volume (GWh)	71,145	74,208	75,470	76,602	77,521	78,607	79,864
Electricity losses in grid (%)	11.3%	11.2%	10.3%	10.3%	10.3%	10.3%	10.3%
Total distribution tariff ($/MWh)	33.2	40.5	48.2	40.4	41.5	45.2	45.2
Growth rate	16.3%	22.1%	19.1%	-16.2%	2.8%	8.7%	0.0%

Assets description (2011)

Region	Grid length (km)	Transformer capacity (MVA)	Grid size ('000 units)	Distrib. volume (GWh)	Loss rate (%)	RAB ($mn)
City of Moscow	66,474	41,387	951	38,417	10.2%	3956
Moscow region	62,285	27,984	508	37,053	10.5%	1771
Total	**128,759**	**69,371**	**1,459**	**75,470**	**10.3%**	**5,726**

Source: Company data, Aton estimates

Income statement ($mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Revenue	**2,704**	**3,680**	**4,402**	**3,747**	**3,767**	**3,967**	**4,322**	**4,492**	**4,833**
Distribution revenue	2,360	3,005	3,640	3,095	3,219	3,550	3,973	4,181	4,539
of which attributed to MRSK	1,446	1,555	1,799	1,566	1,685	1,899	2,176	2,251	2,466
Connection fees	316	658	680	574	471	337	264	222	200
Other	28	17	81	78	77	80	85	89	93
Cost of sales	**-2,080**	**-2,915**	**-3,465**	**-3,117**	**-3,089**	**-3,232**	**-3,500**	**-3,726**	**-3,955**
Payments to TGOs	-392	-718	-1,023	-730	-729	-772	-830	-888	-951
FSK services	-188	-283	-375	-367	-371	-420	-474	-516	-562
Purchased electricity to cover losses in grid	-334	-449	-444	-433	-434	-459	-493	-526	-561
Operation and maintenance expenses	-843	-1,026	-1,061	-1,039	-1,005	-1,004	-1,064	-1,109	-1,150
D&A	-322	-439	-563	-549	-549	-578	-639	-687	-732
Other operating income/(expense)	17	48	47	45	45	47	49	52	54
EBITDA	**964**	**1,252**	**1,546**	**1,224**	**1,272**	**1,359**	**1,510**	**1,504**	**1,664**
EBIT	**641**	**813**	**983**	**674**	**723**	**781**	**871**	**817**	**932**
Net finance expense	-205	-74	-57	-82	-106	-139	-134	-108	-65
EBT	**436**	**739**	**927**	**592**	**617**	**642**	**737**	**710**	**867**
Net income	**336**	**588**	**710**	**471**	**491**	**511**	**587**	**565**	**690**

Margins

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
EBITDA margin	35.6%	34.0%	35.1%	32.7%	33.8%	34.3%	34.9%	33.5%	34.4%
EBIT margin	23.7%	22.1%	22.3%	18.0%	19.2%	19.7%	20.2%	18.2%	19.3%
Net margin	12.4%	16.0%	16.1%	12.6%	13.0%	12.9%	13.6%	12.6%	14.3%

YoY growth rates

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Distribution revenue	13.6%	27.3%	21.1%	-15.0%	4.0%	10.3%	11.9%	5.2%	8.6%
EBITDA	26.4%	29.9%	23.5%	-20.9%	3.9%	6.8%	11.1%	-0.4%	10.6%
Net income	20.4%	75.1%	20.8%	-33.6%	4.2%	4.1%	14.8%	-3.7%	22.1%

Balance sheet ($mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Fixed assets	6,011	6,244	6,405	6,550	6,641	7,273	7,550	7,612	7,685
LT investments	0	21	17	17	16	16	16	16	16
Non-cash working capital	-1,377	-1,300	-1,034	-798	-539	-496	-373	-308	-267
Equity	2,941	3,468	3,803	4,100	4,350	4,939	5,526	6,091	6,781
Minority interest	13	13	15	16	18	20	23	26	29
Net debt/(cash)	1,422	1,220	1,316	1,407	1,520	1,600	1,410	969	390
Other LT liabilities/(assets), net	257	265	255	244	230	234	234	234	234
RAB, net		5,988	5,726	5,539	5,381	5,811	6,153	6,421	6,670

Cash flow statement ($mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Operating cash flow before change in non-cash WC	**835**	**1,087**	**1,397**	**1,105**	**1,149**	**1,230**	**1,363**	**1,362**	**1,490**
Operating cash flow	**1,019**	**1,021**	**1,003**	**906**	**929**	**1,178**	**1,240**	**1,298**	**1,450**
Net capex	-545	-625	-1,013	-976	-1,018	-1,093	-915	-750	-804
Acquisitions/divestments	0	-4	0	0	0	0	0	0	0
Investing cash flow	**-541**	**-627**	**-1,013**	**-976**	**-1,018**	**-1,093**	**-915**	**-749**	**-804**
Equity raised/bought back	0	0	0	0	0	0	0	0	0
Change in debt	-369	-314	186	37	201	57	-197	-429	-571
Interest expense	-141	-118	-99	-82	-107	-139	-134	-108	-66
Financing cash flow	**-511**	**-447**	**46**	**-45**	**95**	**-82**	**-331**	**-536**	**-637**

Source: Company data, Aton estimates

DCF valuation ($mn)

	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
EBIT	**674**	**723**	**781**	**871**	**817**	**932**	**637**	**237**	**343**
Tax on EBIT	-118	-123	-128	-147	-142	-173	-121	-42	-63
After tax EBIT	**556**	**600**	**653**	**724**	**675**	**759**	**516**	**195**	**280**
Depreciation	549	549	578	639	687	732	779	830	885
Capex	**-976**	**-1,018**	**-1,093**	**-915**	**-750**	**-804**	**-861**	**-918**	**-979**
Change in WC	-199	-220	-52	-123	-64	-41	-4	12	-4
FCFF	**-69**	**-89**	**85**	**324**	**548**	**645**	**431**	**119**	**181**
Discounted FCFF	-69	-77	63	208	305	311	180	43	57

WACC Decomposition

Equity market risk	12.5%
Company-specific risk	6.0%
Regulatory risk	1.0%
Corporate governance	2.0%
Liquidity	3.0%
Cost of equity	**18.5%**
Cost of debt	8.5%
Target D/(D+E)	30.0%
WACC	**15.5%**

Fair value calculation*

			Ordinary
Terminal EV/RAB	0.77	TP per share ($)	0.0239
Terminal value	4,815	**12M TP ($)**	**0.0278**
NPV of cash flow	1,021	Current price ($)	0.0478
NPV of terminal value	1,503	**Potential upside to 12M TP**	**-42%**
Fair EV	**2,525**	Dividend yield	1%
Net debt (-) or plus cash (+) 2011	-1,345	**Expected total return over 12M**	**-41%**
Minority interest (-)	-15	Current EV/RAB 2011E	0.64
Fair MktCap	**1,165**	Fair EV/RAB 2010E	0.44

* base case scenario (no privatisation)

Regions fair value calculation

	NPV of cash flows	NPV of TV	Fair EV	Fair EV/RAB YE11
Fair EV	**1,021**	**1,503**	**2,525**	**0.44**
City of Moscow	1,337	978	2,315	0.59
Moscow region	-599	525	-74	-0.04
Unallocated	284	0	284	

12M TP		Terminal growth				
		-2.0%	-1.0%	0.0%	1.0%	2.0%
WACC	13.5%	0.0424	0.0419	0.0413	0.0404	0.0393
	14.5%	0.0354	0.0348	0.0340	0.0331	0.0318
	15.5%	0.0293	0.0287	**0.0278**	0.0268	0.0255
	16.5%	0.0240	0.0232	0.0224	0.0213	0.0201
	17.5%	0.0192	0.0185	0.0176	0.0166	0.0153

Fair EV/RAB		Terminal growth				
		-2.0%	-1.0%	0.0%	1.0%	2.0%
WACC	13.5%	0.55	0.55	0.54	0.54	0.53
	14.5%	0.50	0.49	0.49	0.48	0.47
	15.5%	0.45	0.45	**0.44**	0.43	0.42
	16.5%	0.41	0.41	0.40	0.39	0.38
	17.5%	0.38	0.37	0.37	0.36	0.35

Note: We calculate the terminal value using the following formula:
Terminal value = RAB YE20E * (RR - g) * (1 + g) / (WACC - g), where:
RR - regulatory rate of return, g - terminal growth rate (growth in RAB)
As the regulatory rate of return is below the estimated WACC,
the higher growth in RAB results in a lower fair value.
Our base case valuation assumes a zero terminal growth rate.

Source: Aton estimates

LENENERGO

SELL

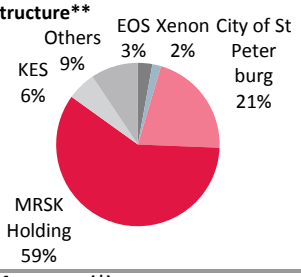
12M Target Price* ($)	**0.0596**
12M Target Price* (pref.)	**0.0694**

Bloomberg code	LSNG RU
Reuters code	LSNG.MM
Current price, ord. ($)	0.2098
Current price, pref. ($)	0.5645
Potential upside to 12M TP, ord	-72%
Potential upside to 12M TP, pref.	-88%
Dividend yield, ord. ($)	0%
Dividend yield, pref. ($)	15%
Exp. total return over 12M, ord. (%)	-72%
Exp. total return over 12M, pref.(%)	-73%

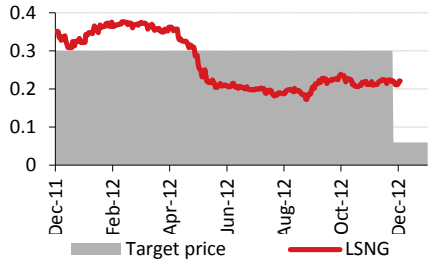
Share data

No. of ord. shares (mn)**	1,435
No. of pref. shares (mn)	93
Ave 3M Daily t/o, ord ($mn)	0.03
Ave 3M Daily t/o, pref ($mn)	0.02
Free float (%)**	9%
MktCap ($mn)**	354
Enterprise value ($mn)**	838

Shareholder structure**



12M price performance ($)



Source: Company data, Bloomberg, Aton estimates

*TP here is the weighted average of privatisation and base case scenarios; all other data corresponds to base case scenario

**estimated after additional share issues planned for 2012-13

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BULL POINTS

- Completely switched to RAB
- No meaningful 'last mile' issue
- Due to low fair EV and high leverage, equity value is very sensitive to changes in assumptions - may outperform if sector rallies

BEAR POINTS

- Significant tariff smoothing due as required tariff growth exceeds the expected ceiling
- High debt burden
- Dependence on connection fee, which has been significantly reduced since 2011
- Privatisation unlikely due to strategic location (St Petersburg)

STOCK DRIVERS

- Publication of FY12 IFRS financials (Apr-May 2013)

Valuation ratios

	2009	2010	2011	2012E	2013E	2014E	2015E
EV/EBITDA adj.	3.7	3.3	3.3	3.0	2.6	2.5	2.2
P/E adj.	6.9	6.4	14.6	8.5	5.0	5.3	3.9
EV/Distribution revenue	1.4	1.1	0.9	0.9	0.8	0.7	0.7
P/BV	0.2	0.2	0.3	0.3	0.2	0.2	0.2
EV/RAB	n/a	0.35	0.36	0.37	0.38	0.36	0.36
EV/Grid size ($/grid unit)	2,563	2,379	2,248	2,145	2,077	2,029	1,986
EV/Grid length ($/km)	15,604	15,269	15,269	n/a	n/a	n/a	n/a
EV/Distribution volume ($/MWh)	29.5	28.0	28.0	27.6	27.3	26.9	26.5

Financial metrics

	2009	2010	2011	2012E	2013E	2014E	2015E
RoA	4.5%	4.4%	3.7%	5.2%	6.5%	6.2%	7.1%
RoE	3.4%	3.4%	1.8%	3.0%	4.7%	4.0%	5.2%
EBITDA/RAB	n/a	10.7%	10.8%	12.2%	14.5%	14.6%	16.4%
FCFF/RAB	-0.1%	0.5%	-2.4%	-10.2%	-6.5%	-2.8%	1.5%
Net debt/EBITDA	1.8	1.9	2.5	3.0	2.9	3.3	3.0
Net debt/Assets	0.2	0.2	0.3	0.4	0.4	0.4	0.4
Interest coverage ratio	2.7	2.0	1.5	1.8	2.2	1.9	2.1

Operational data

	2009	2010	2011	2012E	2013E	2014E	2015E
Size of grid ('000 grid units)	327	352	373	391	404	413	422
Distribution volume (GWh)	28,429	29,909	29,914	30,363	30,727	31,157	31,656
Electricity losses in grid (%)	10.3%	10.7%	10.6%	10.6%	10.6%	10.6%	10.6%
Total distribution tariff ($/MWh)	21.4	26.3	32.3	32.3	33.2	36.1	36.1
Growth rate	0.5%	22.7%	23.0%	-0.2%	2.8%	8.7%	0.0%

Assets description (2011)

Region	Grid length (km)	Transformer capacity (MVA)	Grid size, ('000) units	Distrib. volume (GWh)	Loss rate (%)	RAB ($mn)
St. Petersburg	18,514	13,340	209	18,962	11.0%	1660
Leningrad region	36,382	7,400	164	10,952	10.0%	671
Total	**54,896**	**20,740**	**373**	**29,914**	**10.6%**	**2,331**

Source: Company data, Aton estimates

Income statement ($mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Revenue	**769**	**996**	**1,161**	**1,152**	**1,196**	**1,258**	**1,375**	**1,511**	**1,671**
Distribution revenue	609	786	967	980	1,019	1,124	1,263	1,411	1,577
of which attributed to MRSK	256	251	320	352	388	442	519	612	718
Connection fees	137	190	169	148	153	109	86	72	65
Other	24	19	25	24	24	25	26	27	29
Cost of sales	**-667**	**-892**	**-1,076**	**-1,030**	**-1,030**	**-1,082**	**-1,159**	**-1,229**	**-1,303**
Payments to TGOs	-123	-180	-271	-252	-252	-267	-287	-307	-329
FSK services	-107	-162	-193	-197	-201	-227	-254	-276	-300
Purchased electricity to cover losses in grid	-123	-193	-182	-178	-178	-189	-202	-216	-230
Operation and maintenance expenses	-187	-207	-262	-245	-243	-239	-243	-247	-253
D&A	-127	-150	-168	-157	-156	-161	-172	-182	-191
Other operating income/(expense)	0	0	0	0	0	0	0	0	0
EBITDA	**230**	**254**	**253**	**279**	**322**	**337**	**388**	**464**	**559**
EBIT	**102**	**104**	**85**	**122**	**165**	**176**	**216**	**282**	**368**
Net finance expense	-38	-31	-54	-70	-76	-92	-102	-104	-97
EBT	**65**	**73**	**31**	**52**	**89**	**84**	**114**	**178**	**271**
Net income	**51**	**55**	**24**	**41**	**71**	**66**	**90**	**141**	**214**

Margins

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
EBITDA margin	29.8%	25.5%	21.8%	24.2%	26.9%	26.8%	28.2%	30.7%	33.4%
EBIT margin	13.3%	10.4%	7.3%	10.6%	13.8%	14.0%	15.7%	18.7%	22.0%
Net margin	6.7%	5.5%	2.1%	3.6%	5.9%	5.3%	6.5%	9.4%	12.8%

YoY growth rates

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Distribution revenue	0.5%	29.1%	23.0%	1.3%	4.0%	10.3%	12.4%	11.8%	11.8%
EBITDA	0.2%	10.5%	-0.4%	10.5%	15.2%	4.8%	15.2%	19.6%	20.3%
Net income	-27.9%	6.9%	-55.8%	70.6%	71.0%	-6.6%	35.9%	57.1%	51.8%

Balance sheet ($mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Fixed assets	2,448	2,763	2,585	2,745	2,779	2,977	3,116	3,213	3,302
LT investments	17	1	1	1	1	1	1	1	1
Non-cash working capital	-349	-447	-551	-419	-259	-162	-122	-98	-82
Equity	1,515	1,639	1,320	1,402	1,514	1,634	1,745	1,905	2,135
Minority interest	1	1	1	1	2	3	4	5	7
Net debt/(cash)	417	493	630	843	929	1,102	1,168	1,129	1,001
Other LT liabilities/(assets), net	184	184	84	80	76	77	77	77	77
RAB, net		2,370	2,331	2,288	2,212	2,308	2,361	2,414	2,450

Cash flow statement ($mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Operating cash flow before change in non-cash WC	**213**	**197**	**219**	**269**	**304**	**320**	**366**	**429**	**505**
Operating cash flow	**195**	**168**	**313**	**155**	**165**	**219**	**326**	**404**	**489**
Net capex	-199	-195	-401	-397	-311	-284	-289	-261	-264
Acquisitions/divestments	-1	22	-4	0	0	0	0	0	0
Investing cash flow	**-198**	**-170**	**-403**	**-397**	**-311**	**-284**	**-289**	**-261**	**-264**
Equity raised/bought back	0	0	0	63	86	0	0	0	0
Change in debt	49	-19	365	31	144	148	69	-29	-129
Interest expense	-31	-42	-47	-70	-76	-92	-102	-104	-97
Financing cash flow	**13**	**-71**	**305**	**24**	**154**	**56**	**-34**	**-133**	**-226**

Source: Company data, Aton estimates

DCF valuation ($mn)

	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
EBIT	**122**	**165**	**176**	**216**	**282**	**368**	**440**	**383**	**501**
Tax on EBIT	-10	-18	-17	-23	-36	-54	-72	-65	-93
After tax EBIT	**111**	**148**	**159**	**193**	**247**	**314**	**368**	**318**	**408**
Depreciation	157	156	161	172	182	191	200	208	216
Capex	**-397**	**-311**	**-284**	**-289**	**-261**	**-264**	**-233**	**-246**	**-260**
Change in WC	-113	-139	-101	-40	-25	-15	-9	1	-5
FCFF	**-241**	**-146**	**-64**	**36**	**143**	**225**	**326**	**280**	**358**
Discounted FCFF	-239	-124	-47	23	77	104	130	96	105

WACC composition

Equity market risk	12.5%
Company-specific risk	7.0%
Regulatory risk	1.0%
Corporate governance	2.0%
Liquidity	4.0%
Cost of equity	**19.5%**
Cost of debt	9.0%
Target D/(D+E)	30.0%
WACC	**16.4%**

Fair value calculation*

			Common	Pref.
Terminal EV/RAB	0.73	TP per share ($)	0.0499	0.1222
Terminal value	1,509	**12M TP ($)**	**0.0596**	**0.0694**
NPV of cash flow	125	Current price ($)	0.2098	0.5645
NPV of terminal value	443	**Potential upside to 12M TP**	**-72%**	**-88%**
Fair EV	**568**	Dividend yield	0%	15%
Net debt (-) or plus cash (+) 2011*	-484	**Expected total return over 12M**	**-72%**	**-73%**
Minority interest (-)	-1	Current EV/RAB 2011E	0.36	
Fair MktCap*	**83**	Fair EV/RAB 2011E	0.24	

*base case scenario (no privatisation), estimated after additional share issues planned for 2012-13

Regions fair value calculation

	NPV of cash flows	NPV of TV	Fair EV	Fair EV/RAB YE11
Fair EV	**125**	**443**	**568**	**0.24**
St. Petersburg	28	351	379	0.23
Leningrad region	92	92	183	0.27
Unallocated	5	0	5	

12M TP		Terminal growth				
		-2.0%	-1.0%	0.0%	1.0%	2.0%
WACC	14.4%	0.2076	0.2017	0.1943	0.1848	0.1728
	15.4%	0.1374	0.1308	0.1227	0.1127	0.1003
	16.4%	0.0749	0.0680	**0.0596**	0.0494	0.0371
	17.4%	0.0190	0.0120	0.0036	-0.0065	-0.0184
	18.4%	-0.0313	-0.0383	-0.0466	-0.0563	-0.0678

Fair EV/RAB		Terminal growth				
		-2.0%	-1.0%	0.0%	1.0%	2.0%
WACC	14.4%	0.33	0.33	0.33	0.32	0.31
	15.4%	0.29	0.29	0.28	0.28	0.27
	16.4%	0.25	0.25	**0.24**	0.24	0.23
	17.4%	0.22	0.21	0.21	0.20	0.20
	18.4%	0.19	0.19	0.18	0.17	0.17

Note: We calculate the terminal value using the following formula:
Terminal value = RAB YE20E * (RR - g) * (1 + g) / (WACC - g), where:
RR - regulatory rate of return, g - terminal growth rate (growth in RAB)
As the regulatory rate of return is below the estimated WACC,
the higher growth in RAB results in a lower fair value.
Our base case valuation assumes a zero terminal growth rate.

Source: Aton estimates

OGK-2

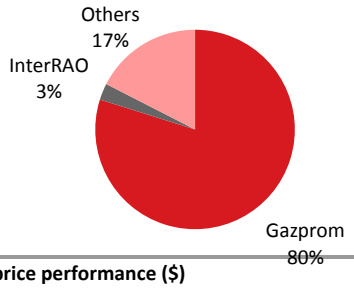
SELL
Target price 12M* ($) 0.00450

Bloomberg code	OGKB RX
Reuters code	OGK2.MM
Current price, ord. ($)	0.01117
Upside to 12M TP, ord.	-60%
Dividend yield, ord. ($)	0%
Exp. total return over 12M, ord. (%)	-60%

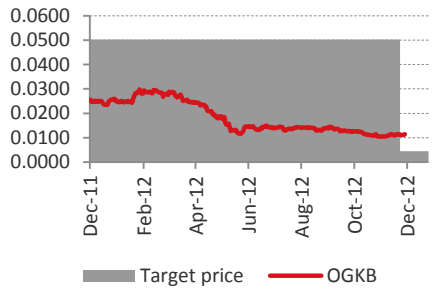
Share data*

No. of ord. shares*	125,995
No. of pref. shares	n/a
Ave 3M daily t/o, ord. ($mn)	0.99
Free float (%)*	17%
Market cap ($mn)*	1,407
Enterprise value ($mn)*	1,484

Shareholder structure*



12M price performance ($)



Source: Company data, Bloomberg, Aton estimates

*estimated after additional share issues planned for 2012-13

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BULL POINTS

- Owns a coal-fired power plant in Urals region (Troitskaya GRES), which benefits from rising gas prices

BEAR POINTS

- Below-average asset quality
- Quasi-state ownership brings corporate governance concerns

STOCK DRIVERS

- FY12 IFRS results release (Apr-May 2013)

Valuation ratios

	2010	2011	2012E	2013E	2014E	2015E
EV/EBITDA adj	3.9	5.7	5.2	3.9	4.4	2.7
P/E adj	7.9	29.5	22.6	10.1	14.8	6.3
P/BV	0.5	0.5	0.5	0.4	0.4	0.4
EV/Electric capacity ($/kW)	83	83	81	81	81	76
Fair EV/Capacity ($/kW)	31	31	31	30	30	29
EV/Electricity production ($/MWh)	18	19	19	20	22	22

Financial metrics

	2010	2011	2012E	2013E	2014E	2015E
RoA	7.7%	3.5%	3.7%	5.5%	4.1%	7.0%
RoE	6.3%	1.9%	2.0%	4.2%	2.7%	6.0%
EBITDA/Capacity ($/kW)	21	15	16	20	18	28
FCFF/Capacity ($/kW)	-3	-34	-3	-17	-25	-17
Net debt/EBITDA	0.8	3.9	1.7	1.4	3.2	2.7
Net debt/Assets	0.1	0.3	0.1	0.1	0.2	0.3
Interest coverage ratio	4.7	1.1	1.0	2.3	1.4	2.5

Operational data

	2010	2011	2012E	2013E	2014E	2015E
Installed electric capacity (MW)	17,857	17,857	18,357	18,393	18,393	19,483
of which new capacity (MW)	110	110	650	686	686	2,156
Electricity generation (GWh)	82,473	79,761	76,575	73,572	67,347	66,015
Electricity load factor (%)	53%	51%	48%	46%	42%	39%
Purchased electricity (GWh)	2,858	4,376	4,376	4,376	4,376	4,376
Own electricity sales (GWh)	77,756	75,321	72,417	69,563	63,679	62,408
of which from new capacity	279	793	3,726	4,804	4,921	10,769
Capacity sales (GW*months)	215	202	205	208	208	214
of which from new capacity	1	1	5	8	8	18
Installed heat capacity (Gcal/h)	4,463	4,463	4,463	4,463	4,463	4,463
Heat generation (th. Gcal)	6,735	6,527	6,527	6,527	6,527	6,527
Heat sales (th. Gcal)	6,046	6,424	6,424	6,424	6,424	6,424
Average electricity price ($/MWh)	37	43	40	42	47	54
Average heat price ($/Gcal)	18	17	16	16	17	19

Assets description (2011)

Name	Fuel mix (%)			Installed electric capacity (MW)	Electricity production (GWh)	Capacity sales (GW months)	Installed heat capacity (th. Gcal)	Heat production (th. Gcal)
	gas	coal	other					
Pskovskaya GRES	100%	0%	0%	430	1,933	5	121	90
Serovskaya GRES	31%	69%	0%	526	3,244	5	220	107
Stavropolskaya GRES	100%	0%	0%	2,400	11,379	28	145	73
Surgutskaya GRES	100%	0%	0%	3,280	23,768	37	958	1,630
Troitskaya GRES	0%	97%	3%	2,059	4,263	19	315	510
Cherepovetskaya GRES	83%	17%	0%	630	3,185	7	39	109
GRES-24	100%	0%	0%	420	1,861	5	0	0
Kirishskaya GRES	99%	0%	1%	2,100	5,640	25	1,234	2,603
Krasnoyarskaya GRES-2	0%	100%	0%	1,250	5,894	15	1,176	1,088
Novocherkasskaya GRES	57%	43%	0%	2,112	10,913	25	75	85
Ryazanskaya GRES	67%	33%	0%	2,650	7,655	31	180	230

Income statement (IFRS, $mn)

	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Revenue	**3,177**	**3,569**	**3,241**	**3,263**	**3,316**	**3,791**	**4,113**	**4,343**
Electricity & capacity revenue	3,004	3,427	3,110	3,132	3,174	3,634	3,949	4,174
Heat revenue	107	110	101	101	112	125	131	135
Other	66	32	31	30	30	32	33	34
Cost of sales	**-2,899**	**-3,424**	**-3,073**	**-3,002**	**-3,102**	**-3,392**	**-3,594**	**-3,844**
Fuel costs	-1,894	-2,157	-1,960	-1,979	-2,024	-2,160	-2,232	-2,404
Purchased electricity for resale	-211	-298	-279	-289	-313	-348	-361	-367
D&A	-105	-125	-126	-126	-130	-164	-202	-222
Fixed cash costs	-690	-844	-708	-609	-634	-720	-798	-851
Other operating income/(expense)	1	-11	-10	-10	-10	-10	-11	-11
EBITDA (total)	**384**	**259**	**285**	**376**	**335**	**554**	**711**	**710**
EBITDA (old capacity)	**369**	**253**	**235**	**309**	**273**	**235**	**224**	**223**
EBITDA (new capacity)	**14**	**6**	**49**	**66**	**61**	**318**	**486**	**486**
EBIT	**279**	**134**	**159**	**250**	**205**	**389**	**509**	**488**
Net finance expense	-33	-61	-81	-75	-86	-111	-119	-102
EBT	**246**	**74**	**78**	**175**	**119**	**278**	**390**	**386**
Income tax charge	-67	-26	-16	-35	-24	-56	-78	-77
Minority interest	0	0	0	0	0	0	0	0
Net income	**179**	**48**	**62**	**140**	**95**	**222**	**312**	**309**

Margins

	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
EBITDA margin	12.1%	7.3%	8.8%	11.5%	10.1%	14.6%	17.3%	16.4%
EBIT margin	8.8%	3.8%	4.9%	7.7%	6.2%	10.3%	12.4%	11.2%
Net margin	5.6%	1.3%	1.9%	4.3%	2.9%	5.9%	7.6%	7.1%

YoY growth rates

	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Electricity & capacity revenue	24.3%	14.1%	-9.3%	0.7%	1.4%	14.5%	8.7%	5.7%
Heat revenue	13.7%	2.6%	-7.7%	0.0%	10.2%	12.2%	5.1%	2.9%
Total revenue	25.6%	12.3%	-9.2%	0.7%	1.6%	14.3%	8.5%	5.6%
EBITDA	19.2%	-32.3%	9.7%	32.2%	-11.0%	65.4%	28.5%	-0.1%
Net income	18.1%	-73.3%	30.5%	124.6%	-32.2%	134.0%	40.3%	-1.0%

Balance sheet (IFRS, $mn)

	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Fixed assets	3,074	3,348	3,445	3,786	4,536	5,217	5,295	5,324
LT investments	0	0	0	0	0	0	0	0
Non-cash working capital	241	390	310	256	209	171	185	195
Equity	2,851	2,562	3,110	3,353	3,506	3,728	4,040	4,349
Minority interest	0	0	0	0	0	0	0	0
Net debt/(cash)	321	1,007	482	535	1,083	1,503	1,284	1,015
Other LT liabilities/(assets), net	143	170	163	154	156	156	156	156

Cash flow statement (IFRS, $mn)

	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Operating cash flow before change in non-cash WC	**334**	**237**	**269**	**341**	**311**	**498**	**633**	**633**
Operating cash flow	**342**	**9**	**335**	**379**	**362**	**536**	**619**	**623**
Net capex	-376	-587	-371	-672	-812	-845	-280	-251
Acquisitions/divestments	0	0	0	0	0	0	0	0
Investing cash flow	**-271**	**-585**	**-371**	**-672**	**-812**	**-845**	**-280**	**-251**
Equity raised/bought back	0	-139	615	287	0	0	0	0
Change in debt	20	592	0	0	284	343	-143	-286
Interest expense	-34	-57	-81	-75	-86	-111	-119	-102
Financing cash flow	**8**	**383**	**534**	**212**	**198**	**231**	**-262**	**-388**
Net cash flow	**79**	**-193**	**498**	**-82**	**-251**	**-78**	**76**	**-17**

Source: Company data, Aton estimates

DCF valuation ($mn)

	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
EBIT	**159**	**250**	**205**	**389**	**509**	**488**	**495**	**507**	**490**
Tax on EBIT	-32	-50	-41	-78	-102	-98	-99	-101	-98
After tax EBIT	**127**	**200**	**164**	**311**	**407**	**390**	**396**	**406**	**392**
Depreciation	126	126	130	164	202	222	240	251	262
Capex	**-371**	**-672**	**-812**	**-845**	**-280**	**-251**	**-266**	**-278**	**-295**
Change in NWC	66	37	51	38	-14	-10	-11	-9	-10
FCFF	**-52**	**-309**	**-467**	**-331**	**315**	**351**	**359**	**369**	**350**
Discounted FCFF	-52	-268	-355	-221	183	179	161	145	120

WACC composition

Equity market risk	12.5%
Regulatory risk	2.0%
Company-specific risk	3.0%
Corporate governance	2.0%
Liquidity	1.0%
Cost of equity	**17.5%**
Cost of debt	**8.0%**
Target D/(D+E)	30.0%
WACC	**14.2%**
Terminal growth	2.0%

12M target price sensitivity to terminal growth rate and WACC

WACC	Terminal growth				
	0.0%	1.0%	2.0%	3.0%	4.0%
12%	0.0060	0.0060	0.0061	0.0061	0.0062
13%	0.0052	0.0052	0.0052	0.0053	0.0054
14%	0.0044	0.0045	0.0045	0.0045	0.0046
15%	0.0038	0.0038	0.0038	0.0038	0.0039
16%	0.0031	0.0032	0.0032	0.0032	0.0033

Fair EV/Capacity sensitivity to terminal growth rate and WACC

WACC	Terminal growth				
	0.0%	1.0%	2.0%	3.0%	4.0%
12%	40	40	41	41	42
13%	35	36	36	36	37
14%	31	31	31	32	32
15%	27	27	27	28	28
16%	23	23	24	24	24

Fair value calculation

Terminal value of old capacity	136		
Terminal value of new capacity	1,810	TP per share ($)*	0.00384
Total terminal value	1,946	**12M TP ($)***	**0.00450**
NPV of cash flows	-106	Current price ($)	0.01117
NPV of terminal value	667	**Potential upside to 12M TP**	**-60%**
Fair EV	**561**	Dividend yield	0.2%
Net debt (-) or plus cash (+) 2011*	-77	**Expected 12M total return**	**-60%**
Minority interest (-)	0	Current EV/Capacity 2011	83
Fair MktCap*	**484**	Fair EV/Capacity 2011	31

*adjusted for additional share issues planned for 2012-13

Fair EV ($mn)

Branch	Existing assets				New projects	Total	$/kW
	Electricity	Heat	Total	$/kW			
Pskovskaya GRES	12	1	12	29	0	12	29
Serovskaya GRES	-51	0	-51	-97	-43	-94	-178
Stavropolskaya GRES	43	0	43	18	-213	-170	-71
Surgutskaya GRES	250	5	255	78	0	255	78
Troitskaya GRES	-156	1	-155	-75	233	78	38
GRES-24	63	0	63	99	5	68	107
Kirishskaya GRES	46	22	68	162	121	189	450
Krasnoyarskaya GRES-2	244	-5	238	113	0	238	113
Novocherkasskaya GRES	-62	0	-62	-49	9	-52	-42
Ryazanskaya GRES	32	2	34	16	-15	19	9
Cherepovetskaya GRES	19	1	19	7	0	19	7
OGK-2 total	**439**	**26**	**465**	**26**	**96**	**561**	**31**

Investment projects summary

Project name	Electric capacity addition	Heat capacity addition	Main Fuel	Initial Capex ($mn)	NPV ($mn)	PV of remaining cash flows 2012+ ($mn)
Serovskaya GRES	420	0	Gas	630	-489	-43
Stavropolskaya GRES	420	0	Gas	523	-237	-213
Troitskaya GRES	660	0	Coal	1,309	-571	233
Kirishskaya GRES	540	0	Coal	589	-717	121
GRES-24	110	0	Coal	117	-190	5
Ryazanskaya GRES	60	0	Coal	115	-31	-15
Novocherkasskaya GRES	36	0	Coal	26	-6	-5
Novocherkasskaya GRES	330	0	Coal	678	-478	14

Source: Aton estimates

E.On Russia

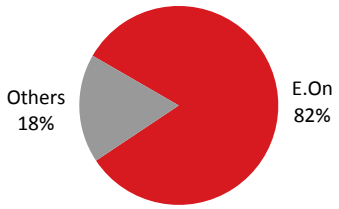
BUY
Target price 12M ($) 0.101

Bloomberg code	EONR RX
Reuters code	OGK4.MM
Current price, ord. ($)	0.077
Upside to 12M TP, ord.	31%
Dividend yield, ord. ($)	3%
Exp. total return over 12M, ord. (%)	34%

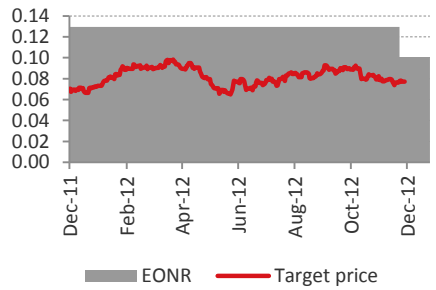
Share data

No. of ord. shares	63,049
No. of pref. shares	n/a
Ave 3M daily t/o, ord. ($mn)	1.19
Free float (%)	18%
Market cap ($mn)	4,857
Enterprise value ($mn)	4,073

Shareholder structure



12M price performance ($)



Source: Company data, Bloomberg, Aton estimates

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BULL POINTS

- Excellent asset quality
- Strong corporate governance associated with major foreign ownership (E.On)
- Significant positive present value of upcoming cash flows from investment projects
- The company pays dividends

BEAR POINTS

- None

STOCK DRIVERS

- FY12 IFRS results release (expected in Mar-Apr 2013)
- Decision on payment of FY12 dividends (June 2013)

Valuation ratios

	2009	2010	2011	2012E	2013E	2014E	2015E
EV/EBITDA adj	14.9	8.6	5.1	4.6	4.8	5.2	4.2
P/E adj	28.2	14.8	9.5	8.5	8.8	9.5	7.6
P/BV	1.7	1.6	1.4	1.3	1.2	1.0	0.9
EV/Electric capacity ($/kW)	472	446	396	394	394	394	366
Fair EV/Capacity ($/kW)	556	526	466	464	464	464	431
EV/Electricity production ($/MWh)	75	73	65	64	67	70	69

Financial metrics

	2009	2010	2011	2012E	2013E	2014E	2015E
RoA	6.9%	12.5%	17.5%	17.9%	15.9%	13.0%	14.4%
RoE	6.2%	10.6%	15.1%	15.1%	13.4%	10.9%	12.0%
EBITDA/Capacity ($/kW)	32	52	77	86	82	76	87
FCFF/Capacity ($/kW)	-52	-52	-46	20	11	18	55
Net debt/EBITDA	-2.1	-1.0	-1.0	-1.1	-1.2	-1.6	-1.9
Net debt/Assets	-0.3	-0.2	-0.3	-0.3	-0.3	-0.3	-0.5
Interest coverage ratio	66.0	124.5	32.2	n/a	n/a	n/a	n/a

Operational data

	2009	2010	2011	2012E	2013E	2014E	2015E
Installed electric capacity (MW)	8,630	9,123	10,289	10,339	10,339	10,339	11,139
of which new capacity (MW)	0	443	1,659	1,709	1,709	1,709	2,509
Electricity generation (GWh)	53,948	55,791	62,467	63,820	61,154	58,019	58,871
Electricity load factor (%)	71%	70%	69%	70%	68%	64%	60%
Purchased electricity (GWh)	1,717	1,627	2,033	2,033	2,033	2,033	2,033
Own electricity sales (GWh)	52,008	53,952	60,529	61,808	59,241	56,209	56,878
of which from new capacity	0	279	6,833	12,228	12,254	12,254	15,753
Capacity sales (GW*months)	106	105	111	120	120	120	126
of which from new capacity	0	0	10	20	20	20	25
Installed heat capacity (Gcal/h)	2,179	2,179	2,126	2,126	2,126	2,126	2,556
Heat generation (th. Gcal)	2,353	2,394	2,126	2,126	2,126	2,126	2,691
Heat sales (th. Gcal)	2,066	2,019	1,809	1,809	1,809	1,809	2,374
Average electricity price ($/MWh)	23	29	35	35	37	39	44
Average heat price ($/Gcal)	14	18	19	18	19	21	30

Assets description (2011)

Name	Fuel mix (%)			Installed electric capacity (MW)	Electricity production (GWh)	Capacity sales (GW months)	Installed heat capacity (th. Gcal)	Heat production (th. Gcal)
	gas	coal	other					
Surgutskaya GRES-2	100%	0%	0%	5,597	38,829	56	840	863
Smolenskaya GRES	98%	2%	0%	630	1,809	7	66	66
Shaturskaya GRES	91%	6%	3%	1,493	5,893	17	344	403
Yayvinskaya GRES	94%	6%	0%	1,025	4,854	7	69	100
Berezovskaya GRES	0%	100%	0%	1,544	11,082	17	807	694

Source: Company data, Aton estimates

Income statement (IFRS, $mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Revenue	**1,284**	**1,657**	**2,249**	**2,325**	**2,301**	**2,330**	**2,716**	**2,945**	**3,077**
Electricity & capacity revenue	1,231	1,596	2,185	2,265	2,240	2,265	2,618	2,828	2,958
Heat revenue	30	35	34	33	34	38	70	88	89
Other	23	26	29	27	27	27	28	29	30
Cost of sales	**-1,103**	**-1,271**	**-1,639**	**-1,628**	**-1,631**	**-1,709**	**-1,938**	**-2,055**	**-2,171**
Fuel costs	-717	-863	-1,047	-999	-1,025	-1,096	-1,231	-1,280	-1,364
Purchased electricity for resale	-44	-39	-57	-56	-57	-58	-63	-66	-70
D&A	-74	-77	-176	-183	-167	-160	-180	-201	-209
Fixed cash costs	-268	-292	-359	-390	-382	-395	-463	-507	-528
Other operating income/(expense)	19	12	8	8	8	8	8	9	9
EBITDA (total)	**273**	**476**	**794**	**888**	**845**	**789**	**967**	**1,099**	**1,124**
EBITDA (old capacity)	**273**	**468**	**567**	**486**	**451**	**399**	**362**	**345**	**364**
EBITDA (new capacity)	**0**	**7**	**227**	**402**	**395**	**390**	**605**	**755**	**760**
EBIT	**199**	**399**	**618**	**705**	**678**	**629**	**787**	**898**	**915**
Net finance expense	26	12	18	11	10	10	10	10	10
EBT	**225**	**411**	**637**	**716**	**688**	**639**	**797**	**908**	**926**
Income tax charge	-53	-82	-127	-143	-138	-128	-159	-182	-185
Minority interest	0	0	0	0	0	0	0	0	0
Net income	**172**	**329**	**510**	**573**	**551**	**511**	**638**	**727**	**740**

Margins

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
EBITDA margin	21.3%	28.7%	35.3%	38.2%	36.7%	33.8%	35.6%	37.3%	36.5%
EBIT margin	15.5%	24.1%	27.5%	30.3%	29.5%	27.0%	29.0%	30.5%	29.8%
Net margin	13.4%	19.8%	22.7%	24.6%	23.9%	21.9%	23.5%	24.7%	24.1%

YoY growth rates

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Electricity & capacity revenue	-12.6%	29.7%	36.9%	3.6%	-1.1%	1.1%	15.6%	8.0%	4.6%
Heat revenue	0.6%	19.2%	-2.7%	-3.8%	3.9%	10.3%	84.6%	25.1%	1.6%
Total revenue	-11.7%	29.1%	35.7%	3.4%	-1.0%	1.3%	16.6%	8.4%	4.5%
EBITDA	14.1%	74.2%	66.9%	11.8%	-4.8%	-6.7%	22.6%	13.7%	2.2%
Net income	-3.5%	91.0%	55.0%	12.4%	-3.9%	-7.2%	24.7%	13.9%	1.9%

Balance sheet (IFRS, $mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Fixed assets	2,154	2,626	2,721	2,920	3,156	3,517	3,502	3,475	3,452
LT investments	2	2	1	1	1	1	1	1	1
Non-cash working capital	134	73	34	60	74	91	122	133	138
Equity	2,787	3,089	3,369	3,783	4,109	4,693	5,331	6,058	6,798
Minority interest	0	1	0	0	0	0	0	0	0
Net debt/(cash)	-582	-478	-767	-949	-1,016	-1,226	-1,847	-2,590	-3,348
Other LT liabilities/(assets), net	86	90	154	147	139	141	141	141	141

Cash flow statement (IFRS, $mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Operating cash flow before change in non-cash WC	**167**	**415**	**725**	**745**	**708**	**661**	**808**	**918**	**939**
Operating cash flow	**56**	**428**	**775**	**716**	**690**	**645**	**777**	**908**	**933**
Net capex	-562	-555	-444	-507	-576	-464	-166	-174	-186
Acquisitions/divestments	0	0	0	0	0	0	0	0	0
Investing cash flow	**-63**	**-442**	**-420**	**-496**	**-566**	**-454**	**-156**	**-164**	**-176**
Equity raised/bought back	0	0	0	0	0	0	0	0	0
Change in debt	0	0	0	0	0	0	0	0	0
Interest expense	0	0	0	0	0	0	0	0	0
Financing cash flow	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Net cash flow	**-7**	**-14**	**355**	**221**	**124**	**191**	**621**	**743**	**757**

Source: Company data, Aton estimates

DCF valuation ($mn)

	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
EBIT	**705**	**678**	**629**	**787**	**898**	**915**	**944**	**988**	**1,006**
Tax on EBIT	-141	-136	-126	-157	-180	-183	-189	-198	-201
After tax EBIT	**564**	**543**	**503**	**630**	**718**	**732**	**756**	**791**	**805**
Depreciation	183	167	160	180	201	209	216	224	233
Capex	**-507**	**-576**	**-464**	**-166**	**-174**	**-186**	**-197**	**-207**	**-214**
Change in NWC	-28	-18	-16	-31	-10	-6	-7	-8	-7
FCFF	**212**	**116**	**183**	**613**	**735**	**749**	**768**	**800**	**816**
Discounted FCFF	210	102	142	421	447	403	365	337	304

WACC composition

Equity market risk	12.5%
Regulatory risk	2.0%
Company-specific risk	1.5%
Corporate governance	0.5%
Liquidity	1.0%
Cost of equity	**16.0%**
Cost of debt	**7.5%**
Target D/(D+E)	30.0%
WACC	**13.0%**

Terminal growth	2.0%

12M target price sensitivity to terminal growth rate and WACC

WACC	Terminal growth				
	0.0%	1.0%	2.0%	3.0%	4.0%
11%	0.111	0.112	0.114	0.117	0.120
12%	0.104	0.105	0.107	0.109	0.111
13%	0.098	0.099	0.101	0.102	0.104
14%	0.093	0.094	0.095	0.096	0.098
15%	0.088	0.089	0.090	0.091	0.092

Fair EV/Capacity sensitivity to terminal growth rate and WACC

WACC	Terminal growth				
	0.0%	1.0%	2.0%	3.0%	4.0%
11%	519	528	539	553	571
12%	485	492	500	511	524
13%	454	460	466	474	484
14%	427	431	437	443	450
15%	402	406	410	415	421

Fair value calculation

Terminal value of old capacity	1,984		
Terminal value of new capacity	3,560	TP per share ($)	0.089
Total terminal value	5,544	**12M TP ($)**	**0.101**
NPV of cash flows	2,733	Current price ($)	0.077
NPV of terminal value	2,066	**Potential upside to 12M TP**	**31%**
Fair EV	**4,799**	Dividend yield	3%
Net debt (-) or plus cash (+) 2011	784	**Expected 12M total return**	**34%**
Minority interest (-)	0	Current EV/Capacity 2011	396
Fair MktCap	**5,583**	Fair EV/Capacity 2011	466

Fair EV ($mn)

Branch	Existing assets				New projects	Total	$/kW
	Electricity	Heat	Total	$/kW			
Shaturskaya GRES	71	31	103	18	338	441	79
Smolenskaya GRES	59	6	65	104	0	65	104
Surgutskaya GRES-2	931	36	967	648	1,326	2,293	1,536
Yayvinskaya GRES	54	7	61	59	512	573	559
Berezovskaya GRES	721	8	729	472	698	1,427	924
E.ON Russia total	**1,836**	**89**	**1,925**	**223**	**2,874**	**4,799**	**466**

Investment projects summary

Project name	Electric capacity addition	Heat capacity addition	Main Fuel	Initial Capex ($mn)	NPV ($mn)	PV of remaining cash flows 2012+ ($mn)
Surgutskaya GRES-2 (#1)	397	0	Gas	470	14	663
Surgutskaya GRES-2 (#2)	397	0	Gas	470	14	663
Shaturskaya GRES	393	0	Gas	493	-340	338
Yayvinskaya GRES	422	0	Gas	532	-230	512
Berezovskaya GRES (#1)	800	430	Coal	1,219	591	631
Berezovskaya GRES (#2)	50	0	Coal	9	25	35
Berezovskaya GRES (#3)	50	0	Coal	7	24	31

Source: Aton estimates

Enel OGK-5

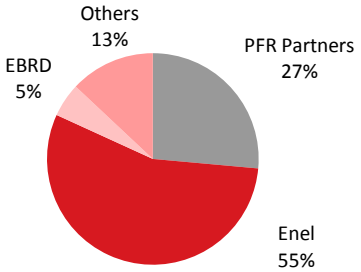
SELL
Target price 12M ($) 0.0244

Bloomberg code	OGKE RX
Reuters code	OGKE.MM
Current price, ord. ($)	0.0527
Upside to 12M TP, ord.	-54%
Dividend yield, ord. ($)	0%
Exp. total return over 12M, ord. (%)	-54%

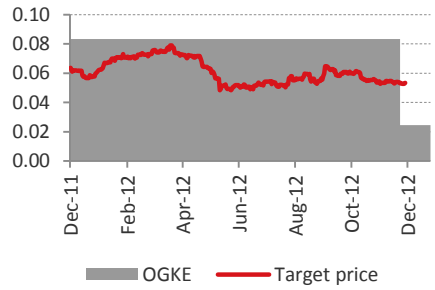
Share data

No. of ord. shares	35,372
No. of pref. shares	n/a
Ave 3M daily t/o, ord. ($mn)	0.14
Free float (%)	13%
Market cap ($mn)	1,865
Enterprise value ($mn)	2,736

Shareholder structure



12M price performance ($)



Source: Company data, Bloomberg, Aton estimates

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BULL POINTS

- Owns a coal-fired power plant in Urals region (Reftinskaya GRES), which benefits from rising gas prices
- Better than average corporate governance associated with major foreign ownership (Enel)
- Significant positive present value of upcoming cash flows from investment projects
- Mandatory investment programme complete, may start paying dividends

BEAR POINTS

- Major modernisation programme planned for old power plants without DPM contracts, which is likely to be value erosive

STOCK DRIVERS

- FY12 IFRS results release (expected in Mar-Apr 2013)
- Decision on payment of FY12 dividends (June 2013)

Valuation ratios

	2009	2010	2011	2012E	2013E	2014E	2015E
EV/EBITDA adj	10.8	7.7	6.5	5.8	5.8	6.0	6.3
P/E adj	17.6	10.5	9.5	8.5	8.1	8.4	8.8
P/BV	0.9	0.9	0.9	0.8	0.8	0.7	0.6
EV/Electric capacity ($/kW)	313	312	286	285	285	285	294
Fair EV/Capacity ($/kW)	185	184	169	168	168	168	174
EV/Electricity production ($/MWh)	66	61	61	58	60	65	72

Financial metrics

	2009	2010	2011	2012E	2013E	2014E	2015E
RoA	5.9%	8.5%	9.0%	9.4%	10.6%	9.6%	8.8%
RoE	5.2%	8.3%	9.0%	9.5%	9.7%	8.4%	7.4%
EBITDA/Capacity ($/kW)	29	40	44	49	49	47	47
FCFF/Capacity ($/kW)	-40	-8	-24	25	27	26	26
Net debt/EBITDA	2.3	1.9	2.0	1.3	0.8	0.4	-0.2
Net debt/Assets	0.2	0.2	0.3	0.2	0.1	0.1	0.0
Interest coverage ratio	4.2	6.5	5.4	4.7	5.7	7.8	14.3

Operational data

	2009	2010	2011	2012E	2013E	2014E	2015E
Installed electric capacity (MW)	8,747	8,772	9,576	9,601	9,601	9,601	9,296
of which new capacity (MW)	0	0	820	820	820	820	820
Electricity generation (GWh)	41,339	45,118	44,490	46,913	45,597	42,025	37,787
Electricity load factor (%)	54%	59%	53%	56%	54%	50%	46%
Purchased electricity (GWh)	3,609	3,227	5,426	5,426	5,426	5,426	5,426
Own electricity sales (GWh)	39,112	42,830	42,435	44,792	43,553	40,143	36,100
of which from new capacity	0	0	968	4,647	5,737	5,737	5,737
Capacity sales (GW*months)	103	104	99	106	106	106	102
of which from new capacity	0	0	2	10	10	10	10
Installed heat capacity (Gcal/h)	2,412	2,412	2,611	2,611	2,611	2,611	2,611
Heat generation (th. Gcal)	7,960	6,532	6,815	7,143	7,143	7,143	7,143
Heat sales (th. Gcal)	6,766	6,501	6,782	7,110	7,110	7,110	7,110
Average electricity price ($/MWh)	29	35	40	38	40	43	47
Average heat price ($/Gcal)	12	14	17	18	19	20	23

Assets description (2011)

Name	Fuel mix (%)			Installed electric capacity (MW)	Electricity production (GWh)	Capacity sales (GW months)	Installed heat capacity (th. Gcal)	Heat production (th. Gcal)
	gas	coal	other					
Konakovskaya GRES	100%	0%	0%	2,500	9,408	29	120	218
Nevinnomysskaya GRES	100%	0%	0%	1,675	6,180	15	749	1,911
Reftinskaya GRES	0%	100%	0%	3,800	21,144	40	350	445
Sredneuralskaya GRES	100%	0%	0%	1,601	7,758	12	1,392	4,241

Source: Company data, Aton estimates

Income statement (IFRS, $mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Revenue	**1,310**	**1,731**	**2,045**	**2,064**	**2,080**	**2,100**	**2,115**	**2,127**	**2,193**
Electricity & capacity revenue	1,222	1,630	1,924	1,930	1,942	1,949	1,946	1,950	2,012
Heat revenue	83	94	115	127	132	145	163	170	174
Other	5	8	6	6	6	6	6	6	7
Cost of sales	**-1,145**	**-1,476**	**-1,753**	**-1,750**	**-1,757**	**-1,804**	**-1,849**	**-1,890**	**-1,981**
Fuel costs	-723	-974	-1,118	-1,101	-1,110	-1,125	-1,129	-1,146	-1,213
Purchased electricity for resale	-63	-103	-164	-151	-156	-169	-188	-193	-194
D&A	-84	-92	-113	-137	-135	-141	-150	-155	-161
Fixed cash costs	-275	-308	-357	-362	-356	-369	-383	-395	-414
Other operating income/(expense)	5	8	19	18	17	18	19	19	20
EBITDA (total)	**253**	**355**	**424**	**468**	**475**	**455**	**434**	**412**	**393**
EBITDA (old capacity)	**253**	**355**	**396**	**316**	**317**	**305**	**293**	**277**	**265**
EBITDA (new capacity)	**0**	**0**	**28**	**153**	**158**	**151**	**142**	**134**	**127**
EBIT	**169**	**262**	**311**	**332**	**340**	**314**	**285**	**256**	**232**
Net finance expense	-30	-41	-62	-58	-50	-36	-19	-4	0
EBT	**139**	**221**	**249**	**273**	**289**	**279**	**266**	**252**	**232**
Income tax charge	-34	-44	-52	-55	-58	-56	-53	-50	-46
Minority interest	0	1	0	0	0	0	0	0	0
Net income	**106**	**178**	**197**	**219**	**232**	**223**	**213**	**202**	**186**

Margins

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
EBITDA margin	19.3%	20.5%	20.7%	22.7%	22.8%	21.7%	20.5%	19.4%	17.9%
EBIT margin	12.9%	15.2%	15.2%	16.1%	16.3%	15.0%	13.5%	12.1%	10.6%
Net margin	8.1%	10.3%	9.6%	10.6%	11.1%	10.6%	10.1%	9.5%	8.5%

YoY growth rates

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Electricity & capacity revenue	-25.1%	33.4%	18.1%	0.3%	0.6%	0.4%	-0.1%	0.2%	3.2%
Heat revenue	1.9%	13.6%	21.9%	11.3%	3.8%	10.0%	12.1%	4.5%	2.3%
Total revenue	-24.0%	32.2%	18.1%	0.9%	0.8%	1.0%	0.7%	0.5%	3.1%
EBITDA	17.0%	40.2%	19.6%	10.4%	1.4%	-4.2%	-4.6%	-5.3%	-4.6%
Net income	30.7%	68.2%	10.9%	10.9%	5.9%	-3.7%	-4.4%	-5.4%	-7.9%

Balance sheet (IFRS, $mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Fixed assets	2,610	2,915	3,163	3,053	2,895	2,946	2,934	2,916	2,900
LT investments	0	0	0	0	0	0	0	0	0
Non-cash working capital	131	99	108	107	103	101	95	96	99
Equity	2,019	2,131	2,178	2,299	2,396	2,661	2,874	3,076	3,262
Minority interest	2	1	1	0	0	0	0	0	0
Net debt/(cash)	576	663	852	631	384	165	-66	-285	-484
Other LT liabilities/(assets), net	143	219	240	230	217	220	220	220	220

Cash flow statement (IFRS, $mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Operating cash flow before change in non-cash WC	**232**	**326**	**396**	**414**	**417**	**400**	**381**	**361**	**346**
Operating cash flow	**215**	**417**	**394**	**410**	**415**	**403**	**387**	**361**	**343**
Net capex	-542	-465	-589	-160	-149	-143	-137	-137	-144
Acquisitions/divestments	0	0	0	0	0	0	0	0	0
Investing cash flow	**-539**	**-463**	**-587**	**-160**	**-149**	**-143**	**-137**	**-137**	**-144**
Equity raised/bought back	0	0	0	0	0	0	0	0	0
Change in debt	353	101	369	0	-345	-199	-257	-119	0
Interest expense	-13	-36	-66	-58	-50	-36	-19	-4	0
Financing cash flow	**340**	**67**	**303**	**-58**	**-395**	**-234**	**-276**	**-124**	**0**
Net cash flow	**16**	**21**	**109**	**192**	**-129**	**26**	**-26**	**100**	**199**

Source: Company data, Aton estimates

DCF valuation ($mn)

	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
EBIT	**332**	**340**	**314**	**285**	**256**	**232**	**236**	**245**	**206**
Tax on EBIT	-66	-68	-63	-57	-51	-46	-47	-49	-41
After tax EBIT	**265**	**272**	**251**	**228**	**205**	**186**	**189**	**196**	**165**
Depreciation	137	135	141	150	155	161	167	173	180
Capex	**-160**	**-149**	**-143**	**-137**	**-137**	**-144**	**-153**	**-162**	**-172**
Change in NWC	-3	-2	4	6	-1	-3	-5	-5	-4
FCFF	**238**	**256**	**253**	**246**	**223**	**199**	**197**	**202**	**169**
Discounted FCFF	236	222	192	163	129	100	87	78	57

WACC composition

Equity market risk	12.5%
Regulatory risk	2.0%
Company-specific risk	3.5%
Corporate governance	0.5%
Liquidity	3.0%
Cost of equity	**18.0%**
Cost of debt	**7.5%**
Target D/(D+E)	30.0%
WACC	**14.4%**

Terminal growth	2.0%

12M target price sensitivity to terminal growth rate and WACC

WACC	Terminal growth				
	0.0%	1.0%	2.0%	3.0%	4.0%
12%	0.0284	0.0292	0.0301	0.0313	0.0327
13%	0.0257	0.0263	0.0271	0.0280	0.0291
14%	0.0233	0.0238	0.0244	0.0251	0.0260
15%	0.0212	0.0216	0.0221	0.0226	0.0233
16%	0.0192	0.0196	0.0200	0.0204	0.0210

Fair EV/Capacity sensitivity to terminal growth rate and WACC

WACC	Terminal growth				
	0.0%	1.0%	2.0%	3.0%	4.0%
12%	180	183	186	190	194
13%	172	174	177	179	183
14%	165	166	169	170	173
15%	158	159	161	163	165
16%	152	153	154	156	157

Fair value calculation

Terminal value of old capacity	644		
Terminal value of new capacity	396	TP per share ($)	0.0207
Total terminal value	1,039	**12M TP ($)**	**0.0244**
NPV of cash flows	1,264	Current price ($)	0.0527
NPV of terminal value	351	**Potential upside to 12M TP**	**-54%**
Fair EV	**1,615**	Dividend yield	0%
Net debt (-) or plus cash (+) 2011	-871	**Expected 12M total return**	**-54%**
Minority interest (-)	-11	Current EV/Capacity 2011	286
Fair MktCap	**733**	Fair EV/Capacity 2011	169

Fair EV ($mn)

Branch	Existing assets				New projects	Total	$/kW
	Electricity	Heat	Total	$/kW			
Konakovskaya GRES	114	1	115	46	0	115	46
Nevinnomysskaya GRES	65	11	76	45	250	326	194
Reftinskaya GRES	622	-2	621	163	0	621	163
Sredneuralskaya GRES	89	21	110	68	444	554	346
OGK-5 total	**890**	**31**	**921**	**105**	**694**	**1,615**	**169**

Investment projects summary

Project name	Electric capacity addition	Heat capacity addition	Main Fuel	Initial Capex ($mn)	NPV ($mn)	PV of remaining cash flows 2012+ ($mn)
Nevinnomysskaya GRES	410	200	Gas	529	-285	444
Sredneuralskaya GRES	410	0	Gas	529	-441	250

Source: Aton estimates

TGK-1

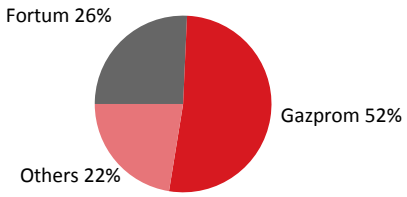
HOLD
Target price 12M ($) 0.000221

Bloomberg code	TGKA RX
Reuters code	TGKA.MM
Current price, ord. ($)	0.000174
Upside to 12M TP, ord.	27%
Dividend yield, ord. ($)	1%
Exp. total return over 12M, ord. (%)	28%

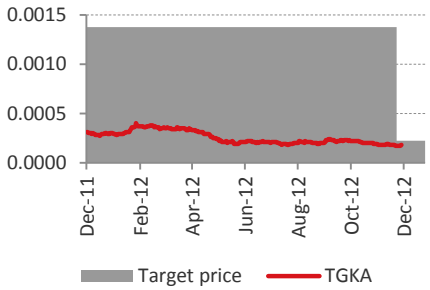
Share data

No. of ord. shares	3,854,341
No. of pref. shares	n/a
Ave 3M daily t/o, ord. ($mn)	0.49
Free float (%)	22%
Market cap ($mn)	671
Enterprise value ($mn)	1,734

Shareholder structure



12M price performance ($)



Source: Company data, Bloomberg, Aton estimates

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BULL POINTS

- Over 50% of electricity is produced by hydro capacity; benefits from gas price growth
- Less vulnerable to unfavourable developments in supply/demand relationship
- Significant positive present value of upcoming cash flows from investment projects

BEAR POINTS

- Quasi-state ownership brings corporate governance concerns
- May finance OGK-2's NPV-negative investment projects
- Lossmaking heat generation

STOCK DRIVERS

- FY12 IFRS results release (expected in Apr-May 2013)
- Changes to heat business regulation (may be announced in 2013)

Valuation ratios

	2009	2010	2011	2012E	2013E	2014E	2015E
EV/EBITDA adj	8.2	6.1	4.0	4.2	3.6	3.5	3.5
P/E adj	6.4	5.0	4.6	5.1	3.8	3.7	3.6
P/BV	0.3	0.3	0.3	0.3	0.3	0.2	0.2
EV/Electric capacity ($/kW)	273	276	254	255	238	237	237
Fair EV/Capacity ($/kW)	282	285	261	263	245	244	244
EV/Electricity production ($/MWh)	65	64	61	57	53	53	54

Financial metrics

	2009	2010	2011	2012E	2013E	2014E	2015E
RoA	4.2%	5.1%	6.7%	5.9%	7.7%	7.6%	7.4%
RoE	4.6%	5.5%	6.1%	5.4%	7.1%	6.7%	6.4%
EBITDA/Capacity ($/kW)	33	45	63	61	66	67	67
FCFF/Capacity ($/kW)	-56	-40	-45	1	32	39	39
Net debt/EBITDA	2.2	2.6	2.4	2.5	1.7	1.2	0.7
Net debt/Assets	0.2	0.2	0.3	0.3	0.2	0.2	0.1
Interest coverage ratio	13.1	6.6	9.8	14.0	14.2	13.3	28.1

Operational data

	2009	2010	2011	2012E	2013E	2014E	2015E
Installed electric capacity (MW)	6,347	6,278	6,837	6,795	7,281	7,311	7,311
of which new capacity (MW)	116	601	810	1,021	1,531	1,560	1,560
Electricity generation (GWh)	26,761	27,162	28,362	30,239	32,975	32,614	31,931
Electricity load factor (%)	48%	49%	47%	51%	52%	51%	50%
Purchased electricity (GWh)	6,313	3,484	5,382	5,382	5,382	5,382	5,382
Own electricity sales (GWh)	24,732	24,935	26,404	28,374	31,184	30,879	30,273
of which from new capacity	291	838	4,106	6,318	9,852	9,982	9,982
Capacity sales (GW*months)	72	74	59	61	67	68	68
of which from new capacity	1	2	7	12	17	18	18
Installed heat capacity (Gcal/h)	14,707	14,368	14,616	14,735	14,891	14,891	14,891
Heat generation (th. Gcal)	26,821	28,759	26,053	25,393	25,700	25,700	25,700
Heat sales (th. Gcal)	25,409	27,706	25,640	24,997	25,305	25,305	25,305
Average electricity price ($/MWh)	23	32	39	36	38	41	44
Average heat price ($/Gcal)	22	27	31	30	30	32	36

Assets description (2011)

Name	Fuel mix (%)			Installed electric capacity (MW)	Electricity production (GWh)	Capacity sales (GW months)	Installed heat capacity (th. Gcal)	Heat production (th. Gcal)
	gas	coal	other					
Thermal	96%	4%	1%	3,914	16,310	36	13,505	23,873
Hydro	n/a	n/a	n/a	2,912	12,023	23	0	0
Murmansk CHP	0%	0%	100%	12	30	0	1,111	2,179

Source: Company data, Aton estimates

Income statement (IFRS, $mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Revenue	**1,303**	**1,663**	**2,050**	**1,992**	**2,187**	**2,330**	**2,500**	**2,568**	**2,662**
Electricity & capacity revenue	703	905	1,231	1,222	1,405	1,489	1,580	1,608	1,666
Heat revenue	568	736	798	750	763	821	899	938	974
Other	32	22	21	20	19	20	20	21	22
Cost of sales	**-1,178**	**-1,489**	**-1,785**	**-1,749**	**-1,885**	**-2,030**	**-2,213**	**-2,294**	**-2,386**
Fuel costs	-494	-713	-847	-820	-932	-1,032	-1,156	-1,197	-1,244
Purchased electricity for resale	-149	-168	-202	-188	-192	-204	-219	-224	-224
D&A	-88	-111	-164	-172	-182	-191	-203	-209	-217
Fixed cash costs	-447	-497	-572	-569	-580	-603	-635	-664	-701
Other operating income/(expense)	0	0	0	0	0	0	0	0	0
EBITDA (total)	**212**	**286**	**429**	**415**	**483**	**491**	**490**	**483**	**493**
EBITDA (old capacity)	**208**	**263**	**313**	**227**	**237**	**250**	**265**	**263**	**253**
EBITDA (new capacity)	**5**	**23**	**116**	**188**	**246**	**241**	**225**	**219**	**240**
EBIT	**124**	**174**	**265**	**243**	**301**	**300**	**287**	**274**	**277**
Net finance expense	9	-7	-58	-75	-77	-69	-50	-27	-8
EBT	**134**	**167**	**206**	**167**	**224**	**231**	**237**	**247**	**269**
Income tax charge	-29	-35	-54	-32	-42	-43	-43	-45	-50
Minority interest	0	3	-6	-5	-7	-7	-7	-7	-8
Net income	**105**	**135**	**147**	**130**	**175**	**181**	**186**	**194**	**211**

Margins

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
EBITDA margin	16.3%	17.2%	20.9%	20.8%	22.1%	21.1%	19.6%	18.8%	18.5%
EBIT margin	9.6%	10.5%	12.9%	12.2%	13.8%	12.9%	11.5%	10.7%	10.4%
Net margin	8.1%	8.1%	7.2%	6.6%	8.0%	7.8%	7.4%	7.6%	7.9%

YoY growth rates

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Electricity & capacity revenue	-1.5%	28.7%	36.0%	-0.7%	15.0%	6.0%	6.1%	1.8%	3.6%
Heat revenue	-4.5%	29.6%	8.5%	-6.0%	1.7%	7.6%	9.5%	4.4%	3.8%
Total revenue	-3.6%	27.6%	23.3%	-2.8%	9.8%	6.6%	7.3%	2.7%	3.7%
EBITDA	52.3%	34.5%	50.2%	-3.2%	16.4%	1.6%	-0.3%	-1.4%	2.2%
Net income	233.1%	28.5%	8.7%	-11.1%	34.3%	3.3%	2.8%	4.3%	8.6%

Balance sheet (IFRS, $mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Fixed assets	2,809	3,249	3,748	3,792	3,590	3,621	3,582	3,515	3,448
LT investments	1	8	3	3	3	3	3	3	3
Non-cash working capital	53	123	177	153	141	130	112	116	120
Equity	2,264	2,452	2,394	2,425	2,467	2,698	2,891	3,093	3,312
Minority interest	0	-3	237	227	214	218	218	218	218
Net debt/(cash)	458	752	1,040	1,049	821	601	351	86	-195
Other LT liabilities/(assets), net	141	179	257	246	233	236	236	236	236

Cash flow statement (IFRS, $mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Operating cash flow before change in non-cash WC	**194**	**271**	**399**	**383**	**441**	**448**	**446**	**437**	**443**
Operating cash flow	**108**	**203**	**308**	**401**	**444**	**461**	**464**	**434**	**439**
Net capex	-458	-431	-579	-380	-194	-161	-164	-142	-150
Acquisitions/divestments	3	18	0	0	0	0	0	0	0
Investing cash flow	**-439**	**-414**	**-579**	**-380**	**-194**	**-161**	**-164**	**-142**	**-150**
Equity raised/bought back	0	0	0	0	0	0	0	0	0
Change in debt	330	272	353	154	-144	-199	-286	-286	-196
Interest expense	-41	-66	-74	-75	-77	-69	-50	-27	-8
Financing cash flow	**289**	**200**	**272**	**79**	**-221**	**-268**	**-336**	**-313**	**-204**
Net cash flow	**-43**	**-11**	**2**	**100**	**30**	**33**	**-36**	**-21**	**85**

Source: Company data, Aton estimates

DCF valuation ($mn)

	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
EBIT	**243**	**301**	**300**	**287**	**274**	**277**	**281**	**287**	**269**
Tax on EBIT	-49	-60	-60	-57	-55	-55	-56	-57	-54
After tax EBIT	**194**	**241**	**240**	**229**	**219**	**221**	**225**	**230**	**215**
Depreciation	172	182	191	203	209	217	223	229	236
Capex	**-380**	**-194**	**-161**	**-164**	**-142**	**-150**	**-154**	**-159**	**-163**
Change in NWC	18	3	13	18	-3	-4	-3	-4	-3
FCFF	**4**	**233**	**284**	**286**	**283**	**284**	**290**	**296**	**285**
Discounted FCFF	4	200	213	187	161	140	125	111	93

WACC composition

Equity market risk	12.5%
Regulatory risk	2.0%
Company-specific risk	4.0%
Corporate governance	3.0%
Liquidity	1.0%
Cost of equity	**18.5%**
Cost of debt	**8.0%**
Target D/(D+E)	30.0%
WACC	**14.9%**

Terminal growth	2.0%

12M target price sensitivity to terminal growth rate and WACC

WACC	Terminal growth				
	0.0%	1.0%	2.0%	3.0%	4.0%
13%	0.00027	0.00028	0.00029	0.00031	0.00032
14%	0.00024	0.00025	0.00025	0.00027	0.00028
15%	0.00021	0.00021	0.00022	0.00023	0.00024
16%	0.00018	0.00019	0.00019	0.00020	0.00021
17%	0.00016	0.00016	0.00016	0.00017	0.00018

Fair EV/Capacity sensitivity to terminal growth rate and WACC

WACC	Terminal growth				
	0.0%	1.0%	2.0%	3.0%	4.0%
13%	286	290	296	302	310
14%	270	273	277	282	288
15%	255	258	261	265	270
16%	242	244	247	250	254
17%	230	232	234	237	240

Fair value calculation

Terminal value of old capacity	864		
Terminal value of new capacity	824	TP per share ($)	0.000188
Total terminal value	1,689	**12M TP ($)**	**0.000221**
NPV of cash flows	1,236	Current price ($)	0.000174
NPV of terminal value	551	**Potential upside to 12M TP**	**27%**
Fair EV	**1,787**	Dividend yield	1%
Net debt (-) or plus cash (+) 2011	-1,063	**Expected 12M total return**	**28%**
Minority interest (-)	0	Current EV/Capacity 2011	254
Fair MktCap	**724**	Fair EV/Capacity 2011	261

Fair EV ($mn)

Branch	Existing assets				New projects	Total	$/kW
	Electricity	Heat	Total	$/kW			
Thermal	-318	-81	-399	-139	695	297	76
Hydro	1,269	0	1,269	453	124	1,393	478
Murmansk CHP	-4	101	98	8,145	0	98	8,145
TGK-1 total	**948**	**20**	**968**	**161**	**819**	**1,787**	**261**

Investment projects summary

Project name	Electric capacity addition	Heat capacity addition	Main Fuel	Initial Capex ($mn)	NPV ($mn)	PV of remaining cash flows 2012+ ($mn)
Tsentralnaya CHP	100	120	Gas	315	-254	-196
Yuzhnaya CHP	425	290	Gas	431	-307	344
Pravobereghnaya CHP	450	156	Gas	504	-539	164
Pervomayskaya CHP (#1)	180	119	Gas	314	-321	164
Pervomayskaya CHP (#2)	180	119	Gas	314	-294	171
Vasileostrovskaya CHP	50	100	Gas	56	-38	46
Viborgskaya CHP	23	168	Gas	38	-71	1
Volkhovskaya Hydro	12	0	Hydro	22	-46	7
Lesogorskaya Hydro (#1)	30	0	Hydro	38	-47	20
Lesogorskaya Hydro (#2)	30	0	Hydro	36	-37	20
Lesogorskaya Hydro (#3)	30	0	Hydro	34	-26	8
Lesogorskaya Hydro (#4)	30	0	Hydro	34	-19	-2
Svetogorskaya Hydro (#1)	31	0	Hydro	34	-52	21
Svetogorskaya Hydro (#2)	31	0	Hydro	36	-41	21
Svetogorskaya Hydro (#3)	31	0	Hydro	34	-32	21
Svetogorskaya Hydro (#4)	31	0	Hydro	33	-23	8

Source: Aton estimates

MOSENERGO

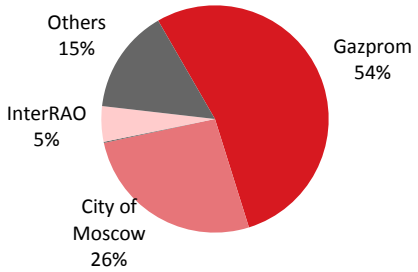
HOLD
Target price 12M ($) 0.0490

Bloomberg code	MSNG RX
Reuters code	MSNG.MM
Current price, ord. ($)	0.0429
Upside to 12M TP, ord.	14%
Dividend yield, ord. ($)	1%
Exp. total return over 12M, ord. (%)	15%

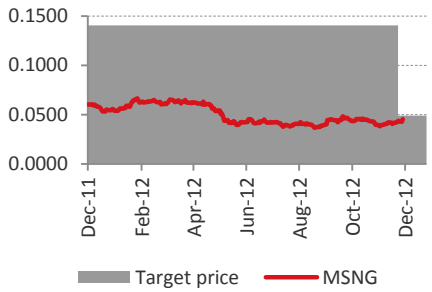
Share data

No. of ord. shares	39,749
No. of pref. shares	n/a
Ave 3M daily t/o, ord. ($mn)	1.03
Free float (%)	15%
Market cap ($mn)	1,707
Enterprise value ($mn)	1,390

Shareholder structure



12M price performance ($)



Source: Company data, Bloomberg, Aton estimates

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BULL POINTS

- Above-average asset quality
- Significant present value of upcoming cash flows from investment projects
- The largest TGK by market capitalisation and free float

BEAR POINTS

- Quasi-state ownership brings corporate governance concerns
- Finances OGK-2's negative NPV investment project at Cherepovetskaya GRES; this practice may be extended to other OGK-2 projects as well
- Lossmaking heat generation business

STOCK DRIVERS

- FY12 IFRS results release (expected in Apr-May 2013)
- Changes to heat business regulation (may be announced in 2013); acquisition of MOEK, a large heat producer in Moscow region (potentially in 2013)

Valuation ratios

	2009	2010	2011	2012E	2013E	2014E	2015E
EV/EBITDA adj	2.8	2.1	1.7	2.3	2.2	2.5	2.2
P/E adj	16.2	6.3	5.0	10.4	8.2	10.3	7.4
P/BV	0.3	0.3	0.3	0.3	0.3	0.3	0.3
EV/Electric capacity ($/kW)	117	117	113	113	112	107	101
Fair EV/Capacity ($/kW)	113	113	109	109	108	103	98
EV/Electricity production ($/MWh)	23	21	21	23	23	23	22

Financial metrics

	2009	2010	2011	2012E	2013E	2014E	2015E
RoA	1.8%	3.2%	5.2%	3.0%	4.0%	3.2%	4.2%
RoE	1.7%	4.3%	5.5%	2.7%	3.5%	2.6%	3.6%
EBITDA/Capacity ($/kW)	42	55	67	49	50	42	47
FCFF/Capacity ($/kW)	5	6	28	0	-14	-13	26
Net debt/EBITDA	0.3	-0.5	-0.4	-0.5	-0.1	0.2	-0.3
Net debt/Assets	0.0	-0.1	-0.1	0.0	0.0	0.0	0.0
Interest coverage ratio	3.6	149.9	274.9	15.1	10.7	5.8	8.1

Operational data

	2009	2010	2011	2012E	2013E	2014E	2015E
Installed electric capacity (MW)	11,924	11,924	12,344	12,338	12,400	13,040	13,710
of which new capacity (MW)	1,341	1,341	1,761	1,761	1,823	2,463	3,303
Electricity generation (GWh)	61,747	66,937	65,768	61,000	61,746	59,783	62,916
Electricity load factor (%)	59%	64%	61%	56%	57%	52%	52%
Purchased electricity (GWh)	6,474	6,235	10,772	10,772	10,772	10,772	10,772
Own electricity sales (GWh)	56,913	60,026	59,297	55,083	56,000	54,270	57,595
of which from new capacity	9,571	9,666	9,402	9,780	12,918	13,137	19,795
Capacity sales (GW*months)	141	143	127	130	130	130	139
of which from new capacity	15	16	18	20	21	21	32
Installed heat capacity (Gcal/h)	34,865	34,865	35,085	35,085	35,085	35,085	35,085
Heat generation (th. Gcal)	65,205	69,878	66,480	67,300	67,300	67,300	67,300
Heat sales (th. Gcal)	60,247	65,471	61,644	62,406	62,406	62,406	62,406
Average electricity price ($/MWh)	31	39	43	40	42	44	50
Average heat price ($/Gcal)	25	31	38	36	37	41	46

Assets description (2011)

Name	Fuel mix (%)			Installed electric capacity (MW)	Electricity production (GWh)	Capacity sales (GW months)	Installed heat capacity (th. Gcal)	Heat production (th. Gcal)
	gas	coal	other					
Mosenergo	98%	1%	1%	12,344	65,768	127	35,085	66,480

Source: Company data, Aton estimates

Income statement (IFRS, $mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Revenue	**3,548**	**4,785**	**5,482**	**5,012**	**5,217**	**5,534**	**6,358**	**6,809**	**6,942**
Electricity & capacity revenue	1,939	2,597	3,018	2,653	2,789	2,889	3,422	3,716	3,749
Heat revenue	1,497	2,052	2,366	2,267	2,339	2,554	2,841	2,994	3,091
Other	112	136	97	92	89	92	95	99	102
Cost of sales	**-3,328**	**-4,459**	**-5,018**	**-4,722**	**-4,863**	**-5,222**	**-5,959**	**-6,371**	**-6,536**
Fuel costs	-1,620	-2,318	-2,683	-2,512	-2,709	-3,021	-3,574	-3,821	-3,887
Purchased electricity for resale	-163	-234	-369	-340	-350	-367	-407	-428	-437
D&A	-369	-402	-444	-385	-338	-311	-320	-354	-364
Fixed cash costs	-1,176	-1,505	-1,522	-1,485	-1,466	-1,523	-1,657	-1,769	-1,848
Other operating income/(expense)	-86	-76	-75	-71	-69	-71	-74	-76	-79
EBITDA (total)	**503**	**652**	**832**	**605**	**622**	**552**	**645**	**716**	**692**
EBITDA (old capacity)	**220**	**318**	**465**	**264**	**271**	**215**	**200**	**225**	**230**
EBITDA (new capacity)	**284**	**334**	**367**	**340**	**351**	**337**	**445**	**491**	**461**
EBIT	**134**	**250**	**388**	**219**	**284**	**242**	**325**	**361**	**327**
Net finance expense	8	95	42	-14	-24	-35	-36	-18	0
EBT	**143**	**346**	**430**	**206**	**260**	**206**	**290**	**343**	**327**
Income tax charge	-37	-73	-86	-41	-52	-41	-58	-69	-65
Minority interest	0	0	0	0	0	0	0	0	0
Net income	**106**	**272**	**344**	**165**	**208**	**165**	**232**	**275**	**262**

Margins

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
EBITDA margin	14.2%	13.6%	15.2%	12.1%	11.9%	10.0%	10.2%	10.5%	10.0%
EBIT margin	3.8%	5.2%	7.1%	4.4%	5.4%	4.4%	5.1%	5.3%	4.7%
Net margin	3.0%	5.7%	6.3%	3.3%	4.0%	3.0%	3.6%	4.0%	3.8%

YoY growth rates

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Electricity & capacity revenue	-9.0%	33.9%	16.2%	-12.1%	5.1%	3.6%	18.4%	8.6%	0.9%
Heat revenue	-0.9%	37.1%	15.3%	-4.2%	3.2%	9.2%	11.2%	5.4%	3.2%
Total revenue	-7.0%	34.9%	14.6%	-8.6%	4.1%	6.1%	14.9%	7.1%	2.0%
EBITDA	16.5%	29.7%	27.5%	-27.3%	2.9%	-11.3%	16.9%	10.9%	-3.3%
Net income	-20.7%	158.0%	26.4%	-52.2%	26.3%	-20.6%	40.5%	18.6%	-4.6%

Balance sheet (IFRS, $mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Fixed assets	6,538	6,346	6,112	6,094	6,180	6,710	6,665	6,552	6,435
LT investments	34	29	25	24	22	23	23	23	23
Non-cash working capital	333	367	536	442	383	335	286	306	312
Equity	6,075	6,300	6,213	6,113	5,972	6,241	6,472	6,747	7,009
Minority interest	0	0	0	0	0	0	0	0	0
Net debt/(cash)	170	-354	-310	-291	-83	118	-207	-574	-947
Other LT liabilities/(assets), net	660	797	770	738	696	708	708	708	708

Cash flow statement (IFRS, $mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Operating cash flow before change in non-cash WC	**436**	**577**	**737**	**564**	**570**	**511**	**588**	**647**	**626**
Operating cash flow	**390**	**709**	**535**	**638**	**605**	**566**	**636**	**627**	**620**
Net capex	-365	-218	-582	-631	-777	-732	-275	-242	-247
Acquisitions/divestments	105	472	47	0	0	0	0	0	0
Investing cash flow	**-245**	**255**	**-509**	**-631**	**-777**	**-732**	**-275**	**-242**	**-247**
Equity raised/bought back	1	0	0	0	0	0	0	0	0
Change in debt	-93	-61	-67	0	0	0	0	-445	0
Interest expense	-76	-58	-55	-14	-24	-35	-36	-18	0
Financing cash flow	**-168**	**-135**	**-148**	**-14**	**-24**	**-35**	**-36**	**-463**	**0**
Net cash flow	**-23**	**829**	**-122**	**-6**	**-196**	**-202**	**325**	**-78**	**373**

Source: Company data, Aton estimates

DCF valuation ($mn)

	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
EBIT	**219**	**284**	**242**	**325**	**361**	**327**	**334**	**345**	**342**
Tax on EBIT	-44	-57	-48	-65	-72	-65	-67	-69	-68
After tax EBIT	**175**	**227**	**193**	**260**	**289**	**262**	**267**	**276**	**274**
Depreciation	385	338	311	320	354	364	374	384	395
Capex	**-631**	**-777**	**-732**	**-275**	**-242**	**-247**	**-255**	**-262**	**-271**
Change in NWC	74	34	55	48	-20	-6	-10	-10	-10
FCFF	**5**	**-177**	**-173**	**354**	**381**	**373**	**377**	**388**	**388**
Discounted FCFF	4	-152	-130	231	217	185	162	146	127

WACC composition

Equity market risk	12.5%
Regulatory risk	2.0%
Company-specific risk	4.0%
Corporate governance	3.0%
Liquidity	1.0%
Cost of equity	**18.5%**
Cost of debt	**8.0%**
Target D/(D+E)	30.0%
WACC	**14.9%**

Terminal growth	2.0%

12M target price sensitivity to terminal growth rate and WACC

WACC	Terminal growth				
	0.0%	1.0%	2.0%	3.0%	4.0%
13%	0.054	0.055	0.055	0.056	0.057
14%	0.051	0.052	0.052	0.053	0.053
15%	0.048	0.049	0.049	0.050	0.050
16%	0.046	0.046	0.046	0.047	0.047
17%	0.043	0.043	0.044	0.044	0.044

Fair EV/Capacity sensitivity to terminal growth rate and WACC

WACC	Terminal growth				
	0.0%	1.0%	2.0%	3.0%	4.0%
13%	123	124	126	128	131
14%	114	116	117	119	121
15%	107	108	109	110	112
16%	100	100	101	102	104
17%	93	94	94	95	96

Fair value calculation

Terminal value of old capacity	526		
Terminal value of new capacity	1,166	TP per share ($)	0.0417
Total terminal value	1,692	**12M TP ($)**	**0.0490**
NPV of cash flows	790	Current price ($)	0.0429
NPV of terminal value	552	**Potential upside to 12M TP**	**14%**
Fair EV	**1,342**	Dividend yield	1%
Net debt (-) or plus cash (+) 2011	317	**Expected 12M total return**	**15%**
Minority interest (-)	0	Current EV/Capacity 2011	113
Fair MktCap	**1,659**	Fair EV/Capacity 2011	109

Fair EV ($mn)

Branch	Existing assets				New projects	Total	$/kW
	Electricity	Heat	Total	$/kW			
Mosenergo total	987	-256	731	69	611	1342	109

Investment projects summary

Project name	Electric capacity addition	Heat capacity addition	Main Fuel	Initial Capex ($mn)	NPV ($mn)	PV of remaining cash flows 2012+ ($mn)
CHP-27 (#1)	450	300	Gas	575	-578	340
CHP-27 (#2)	450	300	Gas	575	-618	359
CHP-21	425	300	Gas	543	-629	304
GTU-CHP	16	32	Gas	45	-45	13
CHP-12	220	0	Gas	283	-154	-68
CHP-9	62	0	Gas	87	-48	41
CHP-20	420	0	Gas	592	-407	-284
CHP-26	420	220	Gas	438	-454	338
CHP-16	420	0	Gas	500	-277	-219
Cherepovetskaya GRES	420	0	Gas	609	-291	-213

Source: Aton estimates

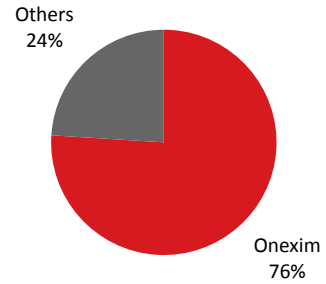
QUADRA

HOLD
Target price 12M ($) 0.000125
Target price 12M (prefs) 0.000121

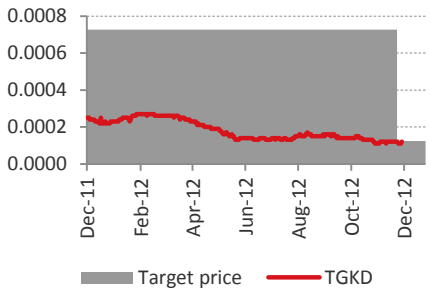
Bloomberg code	TGKD RX
Reuters code	TGKD.MM
Current price, ord. ($)	0.000113
Current price, pref. ($)	0.000148
Upside to 12M TP, ord.	10%
Upside to 12M TP, pref.	-18%
Dividend yield, ord. ($)	0%
Dividend yield, pref. ($)	1%
Exp. total return over 12M, ord. (%)	10%
Exp. total return over 12M, pref. (%)	-16%

Share data	
No. of ord. shares	1,912,506
No. of pref. shares	75,273
Ave 3M daily t/o, ord. ($mn)	0.04
Free float (%)	24%
Market cap ($mn)	227
Enterprise value ($mn)	371

Shareholder structure



12M price performance ($)



Source: Company data, Bloomberg, Aton estimates

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BULL POINTS

- Better than average corporate governance associated with private owner (Onexim)
- Significant present value of upcoming cash flows from investment projects

BEAR POINTS

- Below-average asset quality
- Lossmaking heat generation business

STOCK DRIVERS

- FY12 IFRS results release (expected in Apr-May 2013)
- Changes to heat business regulation (may be announced in 2013)

Valuation ratios

	2009	2010	2011	2012E	2013E	2014E	2015E
EV/EBITDA adj	2.2	2.6	2.2	2.9	2.2	2.1	1.8
P/E adj	2.7	9.8	4.4	13.3	6.4	6.9	5.2
P/BV	0.2	0.2	0.2	0.2	0.3	0.2	0.2
EV/Electric capacity ($/kW)	109	105	105	106	100	94	88
Fair EV/Capacity ($/kW)	103	100	99	100	94	89	83
EV/Electricity production ($/MWh)	35	33	33	33	31	30	28

Financial metrics

	2009	2010	2011	2012E	2013E	2014E	2015E
RoA	11.3%	3.1%	6.5%	2.7%	5.2%	5.4%	6.4%
RoE	9.0%	2.4%	5.6%	1.9%	3.9%	3.5%	4.4%
EBITDA/Capacity ($/kW)	49	41	48	36	45	46	49
FCFF/Capacity ($/kW)	-3	-4	-52	-45	-13	-8	16
Net debt/EBITDA	-0.4	-0.2	0.8	2.3	2.1	2.3	1.8
Net debt/Assets	-0.1	0.0	0.2	0.3	0.3	0.3	0.3
Interest coverage ratio	5.5	5.8	15.7	1.8	1.9	1.2	1.5

Operational data

	2009	2010	2011	2012E	2013E	2014E	2015E
Installed electric capacity (MW)	3,420	3,523	3,530	3,502	3,722	3,952	4,236
of which new capacity (MW)	52	167	312	312	532	762	1,092
Electricity generation (GWh)	10,674	11,146	11,207	11,183	12,077	12,216	13,282
Electricity load factor (%)	36%	36%	36%	36%	37%	35%	36%
Purchased electricity (GWh)	1,943	2,011	4,173	4,173	4,173	4,173	4,173
Own electricity sales (GWh)	9,003	9,398	9,480	9,588	10,515	10,702	11,755
of which from new capacity	156	443	921	1,852	3,158	3,678	4,861
Capacity sales (GW*months)	39	39	35	36	38	39	41
of which from new capacity	0	1	2	4	6	7	9
Installed heat capacity (Gcal/h)	17,022	16,878	15,498	15,498	15,653	15,653	15,653
Heat generation (th. Gcal)	25,607	26,306	23,870	24,247	24,552	24,552	24,552
Heat sales (th. Gcal)	23,058	24,167	21,773	22,150	22,456	22,456	22,456
Average electricity price ($/MWh)	44	51	51	50	53	58	64
Average heat price ($/Gcal)	21	23	30	26	27	31	35

Assets description (2011)

Name	Fuel mix (%)			Installed electric capacity (MW)	Electricity production (GWh)	Capacity sales (GW months)	Installed heat capacity (th. Gcal)	Heat production (th. Gcal)
	gas	coal	other					
Thermal	99%	1%	1%	3,530	11,207	35	15,498	23,870

Source: Company data, Aton estimates

Income statement (IFRS, $mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Revenue	**997**	**1,171**	**1,369**	**1,282**	**1,417**	**1,576**	**1,832**	**1,982**	**2,025**
Electricity & capacity revenue	482	587	696	691	777	859	1,013	1,110	1,130
Heat revenue	490	558	645	566	615	692	793	845	867
Other	24	25	27	26	25	25	26	27	28
Cost of sales	**-859**	**-1,112**	**-1,268**	**-1,223**	**-1,324**	**-1,473**	**-1,714**	**-1,836**	**-1,879**
Fuel costs	-469	-640	-718	-692	-769	-875	-1,048	-1,123	-1,149
Purchased electricity for resale	-83	-100	-144	-145	-155	-176	-204	-214	-218
D&A	-50	-108	-96	-93	-98	-104	-116	-128	-131
Fixed cash costs	-256	-263	-309	-293	-302	-318	-346	-371	-381
Other operating income/(expense)	-21	-24	-27	-26	-25	-26	-27	-28	-29
EBITDA (total)	**166**	**143**	**170**	**127**	**166**	**181**	**208**	**247**	**248**
EBITDA (old capacity)	**160**	**117**	**116**	**39**	**39**	**39**	**39**	**34**	**33**
EBITDA (new capacity)	**6**	**26**	**54**	**88**	**127**	**142**	**169**	**213**	**215**
EBIT	**116**	**35**	**74**	**33**	**68**	**77**	**91**	**119**	**117**
Net finance expense	-12	-4	-3	-12	-24	-36	-37	-32	-26
EBT	**104**	**30**	**71**	**21**	**44**	**41**	**54**	**87**	**92**
Income tax charge	-21	-7	-18	-4	-9	-8	-11	-17	-18
Minority interest	0	0	0	0	0	0	0	0	0
Net income	**83**	**23**	**52**	**17**	**35**	**33**	**43**	**69**	**73**

Margins

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
EBITDA margin	16.7%	12.2%	12.4%	9.9%	11.7%	11.5%	11.3%	12.4%	12.2%
EBIT margin	11.7%	3.0%	5.4%	2.6%	4.8%	4.9%	5.0%	6.0%	5.8%
Net margin	8.4%	2.0%	3.8%	1.3%	2.5%	2.1%	2.4%	3.5%	3.6%

YoY growth rates

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Electricity & capacity revenue	-19.9%	21.6%	18.7%	-0.8%	12.5%	10.5%	17.9%	9.6%	1.8%
Heat revenue	-9.3%	13.9%	15.5%	-12.3%	8.6%	12.6%	14.6%	6.5%	2.6%
Total revenue	-15.2%	17.5%	16.9%	-6.3%	10.5%	11.2%	16.3%	8.2%	2.2%
EBITDA	21.5%	-14.0%	18.9%	-25.4%	30.8%	9.1%	14.9%	18.7%	0.6%
Net income	-550.2%	-72.0%	124.4%	-67.4%	107.5%	-6.2%	30.8%	59.5%	5.9%

Balance sheet (IFRS, $mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Fixed assets	742	886	925	1,086	1,134	1,260	1,281	1,220	1,158
LT investments	0	0	0	0	0	0	0	0	0
Non-cash working capital	143	78	155	125	111	98	82	89	91
Equity	929	987	941	918	901	950	993	1,063	1,136
Minority interest	0	0	0	0	0	0	0	0	0
Net debt/(cash)	-60	-32	141	295	345	411	372	248	115
Other LT liabilities/(assets), net	16	10	-1	-1	-1	-1	-1	-1	-1

Cash flow statement (IFRS, $mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Operating cash flow before change in non-cash WC	**141**	**133**	**154**	**123**	**157**	**173**	**197**	**229**	**230**
Operating cash flow	**110**	**159**	**28**	**147**	**165**	**186**	**213**	**223**	**228**
Net capex	-122	-177	-208	-300	-210	-210	-137	-67	-69
Acquisitions/divestments	0	0	0	0	0	0	0	0	0
Investing cash flow	**4**	**-152**	**-206**	**-300**	**-210**	**-210**	**-137**	**-67**	**-69**
Equity raised/bought back	0	0	0	0	0	0	0	0	0
Change in debt	-144	24	74	154	86	57	-29	-86	-57
Interest expense	-17	-8	-8	-12	-24	-36	-37	-32	-26
Financing cash flow	**-166**	**16**	**65**	**142**	**63**	**21**	**-66**	**-118**	**-83**
Net cash flow	**-53**	**23**	**-113**	**-12**	**18**	**-2**	**10**	**38**	**76**

Source: Company data, Aton estimates

DCF valuation ($mn)

	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
EBIT	**33**	**68**	**77**	**91**	**119**	**117**	**119**	**123**	**123**
Tax on EBIT	-7	-14	-15	-18	-24	-23	-24	-25	-25
After tax EBIT	**27**	**54**	**62**	**73**	**95**	**94**	**95**	**98**	**98**
Depreciation	93	98	104	116	128	131	134	136	139
Capex	**-300**	**-210**	**-210**	**-137**	**-67**	**-69**	**-71**	**-73**	**-75**
Change in NWC	24	8	14	16	-7	-2	-2	-3	-3
FCFF	**-156**	**-50**	**-30**	**68**	**149**	**154**	**155**	**159**	**160**
Discounted FCFF	-155	-42	-22	44	82	73	64	56	49

WACC composition

Equity market risk	12.5%
Regulatory risk	2.0%
Company-specific risk	5.0%
Corporate governance	1.0%
Liquidity	4.0%
Cost of equity	**19.5%**
Cost of debt	**9.0%**
Target D/(D+E)	30.0%
WACC	**15.8%**

Terminal growth	2.0%

12M target price sensitivity to terminal growth rate and WACC

WACC	Terminal growth				
	0.0%	1.0%	2.0%	3.0%	4.0%
14%	0.00016	0.00016	0.00016	0.00016	0.00016
15%	0.00014	0.00014	0.00014	0.00014	0.00014
16%	0.00013	0.00013	0.00012	0.00012	0.00012
17%	0.00011	0.00011	0.00011	0.00011	0.00011
18%	0.00009	0.00009	0.00009	0.00009	0.00009

Fair EV/Capacity sensitivity to terminal growth rate and WACC

WACC	Terminal growth				
	0.0%	1.0%	2.0%	3.0%	4.0%
14%	118	118	118	117	117
15%	109	108	108	108	108
16%	100	100	99	99	99
17%	92	91	91	91	91
18%	84	84	84	83	83

Fair value calculation

Terminal value of old capacity	-32		
Terminal value of new capacity	694	TP per share ($)	0.000108
Total terminal value	662	**12M TP ($)**	**0.000125**
NPV of cash flows	149	Current price ($)	0.000113
NPV of terminal value	202	**Potential upside to 12M TP**	**10%**
Fair EV	**351**	Dividend yield	0%
Net debt (-) or plus cash (+) 2011	-144	**Expected 12M total return**	**10%**
Minority interest (-)	0	Current EV/Capacity 2011	105
Fair MktCap	**207**	Fair EV/Capacity 2011	99

Fair EV ($mn)

Branch	Existing assets				New projects	Total	$/kW
	Electricity	Heat	Total	$/kW			
Quadra Total	183	-140	42	13	309	351	99

Investment projects summary

Project name	Electric capacity addition	Heat capacity addition	Main Fuel	Initial Capex ($mn)	NPV ($mn)	PV of remaining cash flows 2012+ ($mn)
Voronezhskaya CHP	115	90	Gas	123	-45	145
Eletskaya CHP	52	45	Gas	44	2	62
Kursk	115	80	Gas	127	-45	154
Livenskaya CHP	30	25	Gas	53	-48	19
Novomoskovskaya GRES	190	130	Gas	213	-92	86
Dyagilevskaya CHP	115	0	Gas	155	-83	-28
Kaluzhskaya CHP	30	0	Gas	46	-48	31
Aleksinskaya CHP	115	0	Gas	155	-58	-49
Voronezhskaya CHP-1	223	0	Gas	214	-71	-71
Kurskaya CHP-1	107	0	Gas	124	-39	-39

Source: Aton estimates

RUSHYDRO

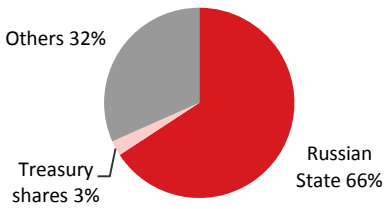
SELL
Target price 12M ($)* 0.0181

Bloomberg code	HYDR RX
Reuters code	HYDR.MM
Current price, ord. ($)	0.0238
Upside to 12M TP, ord.	-24%
Dividend yield, ord. ($)	0%
Exp. total return over 12M, ord. (%)	-24%

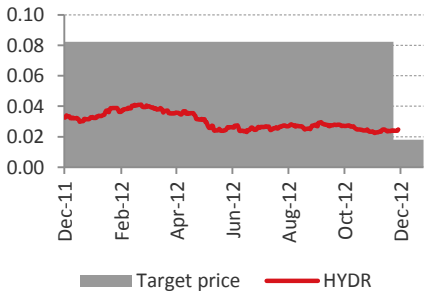
Share data

No. of ord. shares*	367,638
No. of pref. shares	n/a
Ave 3M daily t/o, ord. ($mn)	17.47
Free float (%)*	32%
Market cap ($mn)*	8,766
Enterprise value ($mn)*	9,772

Shareholder structure*



12M price performance ($)



Source: Company data, Aton estimates, Bloomberg

*expected after additional share issue planned for 2012-13 aimed at facilitating contribution of RUB50bn from the state

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BULL POINTS

- Primarily a hydro generation company; benefits from gas price growth
- Invulnerable to unfavourable developments in supply/demand relationship
- Privatisation plans announced by the government

BEAR POINTS

- State ownership brings corporate governance concerns
- Lossmaking Far East business, which will require massive further investment as directed by the state

STOCK DRIVERS

- Release of FY12 IFRS results (expected in Apr-May 2013)
- Clarification of privatisation plans (may come in 2013)
- Announcement of acquisition terms relating to 40% stake in Irkutskenergo and deal with Eurosibenergo (likely in 2013)

Valuation ratios

	2010	2011	2012E	2013E	2014E	2015E
EV/EBITDA adj	4.6	4.2	6.4	5.2	4.5	3.9
P/E adj	11.6	8.3	20.6	15.1	13.8	12.7
P/BV	0.5	0.6	0.5	0.5	0.5	0.5
EV/Electric capacity ($/kW)	283	278	260	250	246	242
Fair EV/Capacity ($/kW)	171	168	157	151	148	146
EV/Electricity production ($/MWh)	97	91	90	79	73	71

Financial metrics

	2010	2011	2012E	2013E	2014E	2015E
RoA	7.8%	8.1%	3.7%	4.6%	4.8%	5.1%
RoE	4.5%	6.8%	2.6%	3.6%	3.7%	3.9%
EBITDA/Capacity ($/kW)	62	65	41	48	55	62
FCFF/Capacity ($/kW)	216	258	-50	-39	-12	-3
Net debt/EBITDA	0.5	0.9	1.4	2.0	2.1	2.0
Net debt/Assets	0.1	0.1	0.1	0.2	0.2	0.2
Interest coverage ratio	2.3	1.5	0.0	0.0	0.0	0.0

Operational data

	2010	2011	2012E	2013E	2014E	2015E
Installed electric capacity (MW)	34,512	35,172	37,613	39,145	39,782	40,347
of which new capacity (MW)	80	80	2,498	3,943	4,363	4,683
Electricity generation (GWh)	100,504	107,377	108,332	123,838	133,626	136,729
Electricity load factor (%)	33%	35%	33%	36%	38%	39%
Purchased electricity (GWh)	42,037	43,158	43,737	44,093	44,666	45,342
Own electricity sales (GWh)	93,428	100,465	101,290	116,531	126,140	129,162
of which from new capacity	101	272	272	12,545	19,779	20,504
Capacity sales (GW*months)	204	223	235	268	289	295
of which from new capacity	0	1	1	30	47	52
Installed heat capacity (Gcal/h)	16,756	17,081	17,081	17,118	17,543	17,703
Heat generation (th. Gcal)	30,513	31,302	31,302	31,302	31,302	31,302
Heat sales (th. Gcal)	23,462	23,976	23,976	23,976	23,976	23,976
Average electricity price ($/MWh)	47	51	46	44	45	49
Average heat price ($/Gcal)	36	44	38	37	39	42

Assets description (2011)

Name	Fuel mix (%)			Installed electric capacity (MW)	Electricity production (GWh)	Capacity sales (GW months)	Installed heat capacity (th. Gcal)	Heat production (th. Gcal)
	gas	coal	other					
European zone	n/a	n/a	n/a	12,839	40,543	147	n/a	n/a
Siberia	n/a	n/a	n/a	7,176	21,504	23	n/a	n/a
Isolated	n/a	n/a	n/a	4,364	12,548	40	n/a	n/a
GAES	n/a	n/a	n/a	1,200	1,764	13	n/a	n/a
RAO Far East	24%	69%	7%	9,032	30,367	0	17,081	31,302
Foreign assets	n/a	n/a	n/a	561	651	0	n/a	n/a

Income statement (IFRS, $mn)

	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Revenue	**7,961**	**9,388**	**8,408**	**8,826**	**9,534**	**10,438**	**11,008**	**11,449**
Electricity & capacity revenue	6,313	7,387	6,614	7,069	7,719	8,531	9,030	9,405
Heat revenue	839	1,044	906	887	930	998	1,046	1,090
Other	810	957	887	870	885	910	932	955
Cost of sales	**-6,303**	**-7,646**	**-7,562**	**-7,760**	**-8,338**	**-9,128**	**-9,629**	**-10,092**
Fuel costs	-1,238	-1,536	-1,464	-1,433	-1,506	-1,625	-1,706	-1,779
Purchased electricity for resale	-1,036	-1,131	-1,149	-1,193	-1,245	-1,370	-1,422	-1,490
D&A	-485	-559	-678	-809	-982	-1,174	-1,251	-1,305
Fixed cash costs (incl.	-3,544	-4,421	-4,271	-4,325	-4,605	-4,959	-5,249	-5,517
Other operating income/(expense)	0	0	0	0	0	0	0	0
EBITDA (total)	**2,144**	**2,300**	**1,523**	**1,875**	**2,178**	**2,484**	**2,629**	**2,662**
EBITDA (old capacity)	**1,676**	**1,649**	**1,081**	**1,175**	**1,271**	**1,412**	**1,415**	**1,431**
EBITDA (new capacity)	**7**	**39**	**71**	**334**	**544**	**710**	**858**	**869**
EBITDA (supply, government grants)	**461**	**613**	**372**	**366**	**363**	**362**	**357**	**362**
EBIT	**1,659**	**1,742**	**845**	**1,066**	**1,196**	**1,310**	**1,378**	**1,357**
Net finance expense	-181	-67	-283	-299	-355	-397	-405	-353
EBT	**1,180**	**1,472**	**562**	**767**	**840**	**914**	**974**	**1,004**
Income tax charge	-381	-406	-112	-153	-168	-183	-195	-201
Minority interest & discontinued operations	-41	-12	-23	-32	-35	-38	-40	-42
Net income	**757**	**1,054**	**426**	**582**	**637**	**693**	**738**	**762**

Margins

	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
EBITDA margin	26.9%	24.5%	18.1%	21.2%	22.8%	23.8%	23.9%	23.3%
EBIT margin	20.8%	18.6%	10.1%	12.1%	12.5%	12.6%	12.5%	11.9%
Net margin	9.5%	11.2%	5.1%	6.6%	6.7%	6.6%	6.7%	6.7%

YoY growth rates

	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Electricity & capacity revenue	n/a	17.0%	-10.5%	6.9%	9.2%	10.5%	5.8%	4.1%
Heat revenue	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total revenue	n/a	17.9%	-10.4%	5.0%	8.0%	9.5%	5.5%	4.0%
EBITDA	n/a	7.3%	-33.8%	23.1%	16.1%	14.1%	5.8%	1.2%
Net income	n/a	39.1%	-59.5%	36.5%	9.5%	8.7%	6.6%	3.1%

Balance sheet (IFRS, $mn)

	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Fixed assets	17,012	17,661	19,142	20,039	21,511	22,356	22,935	22,497
LT investments	1,371	1,659	1,590	1,501	1,526	1,526	1,526	1,526
Non-cash working capital	598	-739	-452	-82	242	568	599	623
Equity	16,734	15,483	16,666	16,298	17,219	17,912	18,650	19,412
Minority interest	971	844	831	816	865	903	943	985
Net debt/(cash)	984	2,073	2,152	3,748	4,590	5,030	4,861	3,644
Other LT liabilities/(assets), net	292	181	631	596	606	606	606	606

Cash flow statement (IFRS, $mn)

	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Operating cash flow before change in non-cash WC	**1,608**	**1,877**	**1,411**	**1,722**	**2,010**	**2,302**	**2,435**	**2,461**
Operating cash flow	**1,190**	**1,842**	**1,146**	**1,369**	**1,686**	**1,976**	**2,404**	**2,437**
Net capex	-2,313	-2,773	-2,971	-2,826	-2,104	-2,019	-1,830	-867
Acquisitions/divestments	-900	-106	400	0	0	0	0	0
Investing cash flow	**-2,964**	**-2,755**	**-2,546**	**-2,804**	**-2,081**	**-1,997**	**-1,808**	**-844**
Equity raised/bought back	225	229	1,538	0	0	0	0	0
Change in debt	506	1,296	0	862	625	343	-143	-1,143
Interest expense	-214	-238	-308	-322	-378	-419	-427	-376
Financing cash flow	**441**	**1,197**	**1,230**	**540**	**247**	**-76**	**-570**	**-1,518**
Net cash flow	**-1,332**	**285**	**-171**	**-894**	**-148**	**-97**	**26**	**74**

Source: Company data, Aton estimates

DCF valuation ($mn)

	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
EBIT	**845**	**1,066**	**1,196**	**1,310**	**1,378**	**1,357**	**1,423**	**1,621**	**1,716**
Tax on EBIT	-169	-213	-239	-262	-276	-271	-285	-324	-343
After tax EBIT	**676**	**853**	**957**	**1,048**	**1,103**	**1,086**	**1,138**	**1,297**	**1,372**
Depreciation	678	809	982	1,174	1,251	1,305	1,340	1,375	1,405
Capex	**-2,971**	**-2,826**	**-2,104**	**-2,019**	**-1,830**	**-867**	**-894**	**-840**	**-668**
Change in NWC	-265	-353	-323	-326	-31	-24	-30	-36	-30
FCFF	**-1,881**	**-1,517**	**-489**	**-123**	**493**	**1,500**	**1,555**	**1,795**	**2,079**
Discounted FCFF	-1,865	-1,325	-376	-83	294	790	722	734	749

WACC composition

Equity market risk	12.5%
Regulatory risk	2.0%
Company-specific risk	2.0%
Corporate governance	2.0%
Liquidity	0.0%
Cost of equity	**16.5%**
Cost of debt	**8.0%**
Target D/(D+E)	30.0%
WACC	**13.5%**
Terminal growth	2.0%

Fair value calculation

Terminal value of old capacity	10,784		
Terminal value of new capacity	6,592	TP per share ($)*	0.0156
Total terminal value	17,376	**12M TP ($)***	**0.0181**
NPV of cash flows	-358	Current price ($)	0.0238
NPV of terminal value	6,262	**Potential upside to 12M TP**	**-24%**
Fair EV	**5,903**	Dividend yield	0.4%
Net debt (-) or plus cash (+) 2011 adj*	-119	**Expected 12M total return**	**-24%**
Minority interest (-)	-887	Current EV/Capacity 2011	278
LT investments (incl. treasury shares)	846		
Fair MktCap	**5,743**	Fair EV/Capacity 2011	168

* expected after additional share issue planned for 2012-13 and sale of DRSK

12M target price sensitivity to terminal growth rate and WACC

WACC	Terminal growth				
	0.0%	1.0%	2.0%	3.0%	4.0%
11%	0.0220	0.0235	0.0253	0.0275	0.0303
12%	0.0188	0.0200	0.0214	0.0231	0.0252
13%	0.0161	0.0170	0.0181	0.0194	0.0210
14%	0.0137	0.0145	0.0154	0.0164	0.0176
15%	0.0116	0.0123	0.0130	0.0138	0.0148

Fair EV/Capacity sensitivity to terminal growth rate and WACC

WACC	Terminal growth				
	0.0%	1.0%	2.0%	3.0%	4.0%
11%	203	216	232	252	277
12%	174	185	197	212	231
13%	150	158	168	180	194
14%	128	135	143	152	163
15%	110	115	122	129	138

Fair EV ($mn)

Branch	Existing assets				New projects	Total	$/kW
	Electricity	Heat	Total	$/kW			
European zone	5,149	0	5,149	401	467	5617	437
Siberia	326	0	326	45	1,090	1416	197
Isolated	-459	0	-459	-105	977	518	119
GAES	-765	0	-765	-638	-75	-840	-700
Supply	195	0	195	n/a	0	195	n/a
RAO Far East	-655	-164	-820	-91	0	-820	-91
Foreign assets	-183	0	-183	-327	0	-183	-327
RusHydro total	**3,608**	**-164**	**3,444**	**98**	**2,459**	**5,903**	**168**

Investment projects summary

Project name	Electric capacity addition	Heat capacity addition	Main Fuel	Initial Capex ($mn)	NPV ($mn)	PV of remaining cash flows 2012+ ($mn)
Zaramagskie HPP (#1)	15	0	HPP	22	28	52
Kashkhatau HPP	65	0	HPP	176	111	376
Boguchanskaya HPP (#1)	999	0	HPP	505	-373	411
Boguchanskaya HPP (#2)	999	0	HPP	437	-212	410
Boguchanskaya HPP (#3)	999	0	HPP	506	-190	268
Ust-Srednekanskaya HPP (#1)	169	0	HPP	414	-285	167
Ust-Srednekanskaya HPP (#2)	401	0	HPP	480	-158	-81
Gotsatlinskaya HPP	100	0	HPP	320	-197	98
Zaramagskie HPP (#2)	342	0	HPP	955	-556	-40
Zelenchukskaya HPP	140	0	HPP	296	-74	-5
Small HPP (#2)	37	0	HPP	150	-33	-15
Nizhne-Bureyskaya HPP	320	0	HPP	998	-208	-161
Zagorskaya GAES-2 (#1)	420	0	HAPP	996	-609	551
Zagorskaya GAES-2 (#2)	420	0	HAPP	1,213	-735	425

Source: Aton estimates

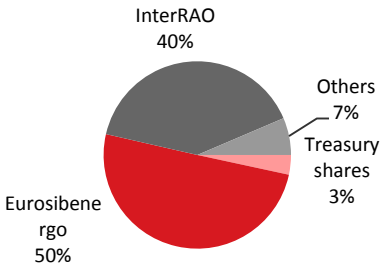
IRKUTSKENERGO

HOLD
Target price 12M ($) 0.569

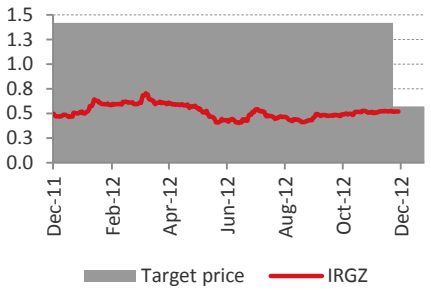
Bloomberg code	IRGZ RX
Reuters code	IRGZ.MM
Current price, ord. ($)	0.514
Upside to 12M TP, ord.	11%
Dividend yield, ord. ($)	0%
Exp. total return over 12M, ord. (%)	11%

Share data	
No. of ord. shares	4,767
No. of pref. shares	n/a
Ave 3M daily t/o, ord. ($mn)	0.12
Free float (%)	6%
Market cap ($mn)	2,451
Enterprise value ($mn)	2,835

Shareholder structure



12M price performance ($)



Source: Company data, Bloomberg, Aton estimates

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BULL POINTS

- Over 80% of electricity is produced by hydro capacity, which benefits from coal price growth
- Largely invulnerable to unfavourable developments in supply/demand relationship

BEAR POINTS

- Entered long-term contracts with Rusal at steep discounts to market prices
- Risk of value extraction by major shareholder (Eurosibenergo)

STOCK DRIVERS

- Release of FY12 IFRS financials (expected in Apr-May 2013)
- Announcement of a deal between RusHydro and Eurosibenergo (may happen in 2013)

Valuation ratios

	2009	2010	2011	2012E	2013E	2014E	2015E
EV/EBITDA adj	8.5	4.5	3.7	5.2	4.8	4.5	4.1
P/E adj	15.4	7.4	5.2	8.6	7.2	6.5	5.8
P/BV	1.7	1.3	1.6	1.4	1.2	1.0	0.9
EV/Electric capacity ($/kW)	220	220	220	219	219	219	219
Fair EV/Capacity ($/kW)	205	204	204	204	204	204	204
EV/Electricity production ($/MWh)	50	46	48	47	47	47	48

Financial metrics

	2009	2010	2011	2012E	2013E	2014E	2015E
RoA	9.8%	17.9%	27.5%	16.0%	18.4%	18.1%	17.2%
RoE	11.0%	18.0%	30.2%	16.1%	16.9%	15.7%	15.0%
EBITDA/Capacity ($/kW)	26	49	59	42	46	49	53
FCFF/Capacity ($/kW)	16	25	32	13	19	19	22
Net debt/EBITDA	1.9	0.6	0.5	0.4	0.0	-0.4	-0.8
Net debt/Assets	0.3	0.2	0.2	0.1	0.0	-0.1	-0.3
Interest coverage ratio	3.6	6.7	19.0	12.1	19.1	60.5	n/a

Operational data

	2009	2010	2011	2012E	2013E	2014E	2015E
Installed electric capacity (MW)	12,868	12,875	12,882	12,927	12,927	12,927	12,927
of which new capacity (MW)	0	0	0	0	0	0	0
Electricity generation (GWh)	56,798	61,420	59,328	60,337	60,391	59,766	59,328
Electricity load factor (%)	50%	54%	53%	53%	53%	53%	52%
Purchased electricity (GWh)	22,944	27,291	6,658	6,658	6,658	6,658	6,658
Own electricity sales (GWh)	54,222	58,813	56,797	57,763	57,974	57,447	57,077
of which from new capacity	0	0	0	0	0	0	0
Capacity sales (GW*months)	148	151	139	140	140	140	140
of which from new capacity	0	0	0	0	0	0	0
Installed heat capacity (Gcal/h)	13,358	13,657	12,928	12,928	12,928	12,928	12,928
Heat generation (th. Gcal)	25,426	26,635	23,276	23,276	23,276	23,276	23,276
Heat sales (th. Gcal)	22,357	22,514	20,248	20,248	20,248	20,248	20,248
Average electricity price ($/MWh)	15	17	29	26	27	29	31
Average heat price ($/Gcal)	16	20	23	22	21	22	24

Assets description (2011)

Name	Fuel mix (%)			Installed electric capacity (MW)	Electricity production (GWh)	Capacity sales (GW months)	Installed heat capacity (th. Gcal)	Heat production (th. Gcal)
	gas	coal	other					
Thermal	0%	100%	0%	3,879	12,848	39	12,928	23,276
Hydro	n/a	n/a	n/a	9,002	46,481	100	n/a	n/a

Source: Company data, Aton estimates

Income statement (IFRS, $mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Revenue	**1,667**	**2,110**	**2,551**	**2,380**	**2,426**	**2,552**	**2,731**	**2,897**	**3,166**
Electricity & capacity revenue	1,183	1,475	1,842	1,706	1,759	1,859	1,999	2,128	2,359
Heat revenue	367	447	464	439	434	451	476	500	525
Other	116	188	245	235	233	243	256	269	283
Cost of sales	**-1,295**	**-1,597**	**-1,785**	**-1,870**	**-1,857**	**-1,943**	**-2,065**	**-2,194**	**-2,376**
Fuel costs	-187	-133	-105	-103	-88	-83	-81	-87	-98
Purchased electricity for resale	-387	-342	-428	-509	-501	-503	-545	-584	-667
D&A	-85	-148	-153	-154	-146	-149	-155	-166	-177
Fixed cash costs	-636	-974	-1,099	-1,103	-1,123	-1,208	-1,284	-1,357	-1,435
Other operating income/(expense)	-123	-28	-153	-125	-123	-128	-135	-141	-148
EBITDA (total)	**334**	**633**	**766**	**540**	**591**	**631**	**687**	**728**	**819**
EBITDA (old capacity)	**263**	**589**	**696**	**464**	**508**	**537**	**579**	**604**	**676**
EBITDA (coal)	**6**	**71**	**87**	**84**	**84**	**88**	**94**	**99**	**104**
EBITDA (supply)	**65**	**-27**	**-17**	**-7**	**-1**	**5**	**14**	**25**	**39**
EBIT	**249**	**485**	**613**	**386**	**445**	**481**	**532**	**562**	**642**
Net finance expense	-44	-58	-23	-29	-22	-7	0	0	0
EBT	**205**	**427**	**589**	**357**	**424**	**474**	**532**	**562**	**642**
Income tax charge	-45	-96	-118	-71	-85	-95	-106	-112	-128
Minority interest	0	0	0	0	0	0	0	0	0
Net income	**160**	**331**	**471**	**285**	**339**	**379**	**426**	**450**	**514**

Margins

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
EBITDA margin	20.0%	30.0%	30.0%	22.7%	24.4%	24.7%	25.2%	25.1%	25.9%
EBIT margin	14.9%	23.0%	24.0%	16.2%	18.4%	18.9%	19.5%	19.4%	20.3%
Net margin	9.6%	15.7%	18.5%	12.0%	14.0%	14.9%	15.6%	15.5%	16.2%

YoY growth rates

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Electricity & capacity revenue	-14.1%	24.7%	24.9%	-7.4%	3.1%	5.7%	7.5%	6.5%	10.9%
Heat revenue	-7.7%	21.5%	4.0%	-5.5%	-1.2%	4.0%	5.6%	4.9%	4.9%
Total revenue	-11.6%	26.6%	20.9%	-6.7%	1.9%	5.2%	7.0%	6.1%	9.3%
EBITDA	14.9%	89.4%	21.0%	-29.5%	9.5%	6.7%	8.9%	6.0%	12.5%
Net income	5.8%	107.3%	42.6%	-39.5%	18.7%	11.9%	12.3%	5.6%	14.2%

Balance sheet (IFRS, $mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Fixed assets	1,824	1,840	1,787	1,832	1,844	1,993	2,110	2,224	2,335
LT investments	510	620	258	247	233	237	237	237	237
Non-cash working capital	52	86	83	99	81	107	134	142	155
Equity	1,445	1,834	1,559	1,770	2,002	2,418	2,843	3,293	3,807
Minority interest	0	0	0	0	0	0	0	0	0
Net debt/(cash)	637	371	375	224	-17	-258	-540	-868	-1,258
Other LT liabilities/(assets), net	304	341	193	185	175	178	178	178	178

Cash flow statement (IFRS, $mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Operating cash flow before change in non-cash WC	**296**	**507**	**632**	**469**	**506**	**536**	**580**	**615**	**691**
Operating cash flow	**329**	**452**	**662**	**448**	**519**	**512**	**553**	**607**	**678**
Net capex	-107	-145	-263	-279	-263	-265	-272	-280	-288
Acquisitions/divestments	-362	0	-20	0	0	0	0	0	0
Investing cash flow	**-435**	**-110**	**-587**	**-278**	**-263**	**-265**	**-272**	**-279**	**-288**
Equity raised/bought back	-54	0	-1	0	0	0	0	0	0
Change in debt	220	-235	-10	0	-187	-184	0	0	0
Interest expense	-61	-76	-45	-29	-22	-8	0	0	0
Financing cash flow	**99**	**-344**	**-91**	**-29**	**-209**	**-192**	**0**	**0**	**0**
Net cash flow	**-7**	**-2**	**-17**	**141**	**47**	**55**	**281**	**328**	**390**

Source: Company data, Aton estimates

DCF valuation ($mn)

	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
EBIT	**386**	**445**	**481**	**532**	**562**	**642**	**661**	**686**	**794**
Tax on EBIT	-77	-89	-96	-106	-112	-128	-132	-137	-159
After tax EBIT	**309**	**356**	**385**	**426**	**449**	**513**	**529**	**549**	**635**
Depreciation	154	146	149	155	166	177	189	201	213
Capex	**-279**	**-263**	**-265**	**-272**	**-280**	**-288**	**-296**	**-305**	**-314**
Change in NWC	-20	13	-24	-27	-8	-13	-8	-9	-17
FCFF	**164**	**251**	**245**	**281**	**328**	**390**	**414**	**436**	**518**
Discounted FCFF	162	214	179	176	177	180	165	149	152

WACC composition

Equity market risk	12.5%
Regulatory risk	2.0%
Company-specific risk	6.0%
Corporate governance	3.0%
Liquidity	3.0%
Cost of equity	**20.5%**
Cost of debt	**8.5%**
Target D/(D+E)	30.0%
WACC	**16.4%**

Terminal growth	2.0%

Fair value calculation

Terminal value of old capacity	3,060		
Terminal value of new capacity	613	TP per share ($)	0.472
Total terminal value	3,673	**12M TP ($)**	**0.569**
NPV of cash flows	1,555	Current price ($)	0.514
NPV of terminal value	1,078	**Potential upside to 12M TP**	**11%**
Fair EV	**2,633**	Dividend yield	0.5%
Net debt (-) or plus cash (+) 2011	-384	**Expected 12M total return**	**11%**
Minority interest (-)	0	Current EV/Capacity 2011	220
Fair MktCap	**2,249**	Fair EV/Capacity 2011	204

12M target price sensitivity to terminal growth rate and WACC

WACC \ Terminal growth	0.0%	1.0%	2.0%	3.0%	4.0%
14%	0.92	0.95	0.98	1.01	1.06
15%	0.86	0.88	0.91	0.94	0.97
16%	0.81	0.83	0.57	0.87	0.90
17%	0.76	0.78	0.80	0.82	0.84
18%	0.72	0.74	0.75	0.77	0.78

Fair EV/Capacity sensitivity to terminal growth rate and WACC

WACC \ Terminal growth	0.0%	1.0%	2.0%	3.0%	4.0%
14%	224	232	241	252	265
15%	207	214	221	230	240
16%	193	198	204	212	220
17%	180	185	190	196	202
18%	169	173	177	182	187

Fair EV ($mn)

Branch	Existing assets				Coal	Total	$/kW
	Electricity	Heat	Total	$/kW			
Thermal	153	36	189	49	0	189	49
Hydro	1,780	0	1,780	198	0	1,780	198
Supply	106	0	106	n/a	0	106	n/a
Coal	0	0	0	n/a	559	559	n/a
Irkutskenergo total	**2,039**	**36**	**2,075**	**161**	**559**	**2,633**	**204**

Source: Aton estimates

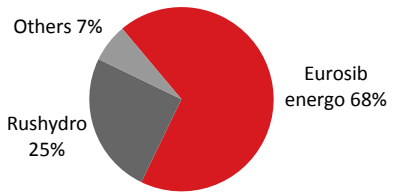
KRASNOYARSK HPP

SELL
Target price 12M ($) 0.961

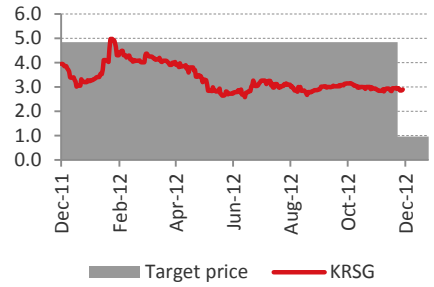
Bloomberg code	KRSG RX
Reuters code	KRSG.MM
Current price, ord. ($)	2.891
Upside to 12M TP, ord.	-67%
Dividend yield, ord. ($)	4%
Exp. total return over 12M, ord. (%)	-63%

Share data	
No. of ord. shares	391
No. of pref. shares	n/a
Ave 3M daily t/o, ord. ($mn)	0.02
Free float (%)	7%
Market cap ($mn)	1,131
Enterprise value ($mn)	927

Shareholder structure



12M price performance ($)



Source: Company data, Bloomberg, Aton estimates

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BULL POINTS

- 100%-hydro generation company, benefits from coal price growth
- Invulnerable to unfavourable developments in supply/demand relationship

BEAR POINTS

- Entered long-term contracts with Rusal at steep discounts to market prices
- Risks of value extraction by major shareholder (Eurosibenergo)

STOCK DRIVERS

- Release of FY12 IFRS financials (expected in Apr-May 2013)

Valuation ratios

	2009	2010	2011	2012E	2013E	2014E	2015E
EV/EBITDA adj	6.3	5.2	7.1	10.4	9.8	8.1	7.1
P/E adj	9.7	8.0	10.4	17.8	17.2	14.6	13.0
P/BV	1.9	1.5	1.3	1.3	1.3	1.2	1.1
EV/Electric capacity ($/kW)	154	154	154	154	154	154	154
Fair EV/Capacity ($/kW)	23	23	23	23	23	23	23
EV/Electricity production ($/MWh)	40	40	49	58	61	56	51

Financial metrics

	2009	2010	2011	2012E	2013E	2014E	2015E
RoA	23.1%	22.6%	14.0%	8.5%	8.7%	9.4%	9.7%
RoE	19.9%	19.2%	12.9%	7.3%	7.4%	7.9%	8.2%
EBITDA/Capacity ($/kW)	25	30	22	15	16	19	22
FCFF/Capacity ($/kW)	12	20	14	1	2	4	6
Net debt/EBITDA	0.0	-0.7	-1.5	-2.3	-2.2	-2.1	-2.1
Net debt/Assets	0.0	-0.3	-0.4	-0.4	-0.4	-0.4	-0.4
Interest coverage ratio	54	1,945	n/a	n/a	n/a	n/a	n/a

Operational data

	2009	2010	2011	2012E	2013E	2014E	2015E
Installed electric capacity (MW)	6,000	6,000	6,000	6,000	6,000	6,000	6,000
of which new capacity (MW)	0	0	0	0	0	0	0
Electricity generation (GWh)	23,184	23,195	18,891	15,868	15,075	16,638	18,200
Electricity load factor (%)	44%	44%	36%	30%	29%	32%	35%
Purchased electricity (GWh)	6,714	0	0	0	0	0	0
Own electricity sales (GWh)	23,133	23,123	18,267	15,344	14,577	16,088	17,599
of which from new capacity	0	0	0	0	0	0	0
Capacity sales (GW*months)	28	66	65	65	65	65	65
of which from new capacity	0	0	0	0	0	0	0
Installed heat capacity (Gcal/h)	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Heat generation (th. Gcal)	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Heat sales (th. Gcal)	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Average electricity price ($/MWh)	9	11	11	10	11	11	11
Average heat price ($/Gcal)	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Assets description (2011)

Name	Fuel mix (%)			Installed electric capacity (MW)	Electricity production (GWh)	Capacity sales (GW months)	Installed heat capacity (th. Gcal)	Heat production (th. Gcal)
	gas	coal	other					
Krasnoyarsk HPP	n/a	n/a	n/a	6,000	18,891	65	n/a	n/a

Source: Company data, Aton estimates

Income statement (RAS, $mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Revenue	**272**	**259**	**195**	**151**	**156**	**177**	**198**	**201**	**204**
Electricity & capacity revenue*	272	259	194	149	155	176	197	200	202
Heat revenue	0	0	0	0	0	0	0	0	0
Other	0	0	1	1	1	1	1	1	1
Cost of sales	**-133**	**-107**	**-63**	**-76**	**-79**	**-85**	**-94**	**-100**	**-106**
Fuel costs	0	0	0	0	0	0	0	0	0
Purchased electricity for resale	-82	0	0	0	0	0	0	0	0
D&A	-10	-11	-13	-15	-18	-22	-27	-30	-32
Fixed cash costs	-40	-95	-50	-62	-61	-63	-67	-70	-74
Other operating income/(expense)	-2	13	-14	0	0	0	0	0	0
EBITDA (total)	**148**	**177**	**131**	**89**	**95**	**114**	**131**	**131**	**130**
EBITDA (old capacity)	**148**	**177**	**131**	**89**	**95**	**114**	**131**	**131**	**130**
EBITDA (new capacity)	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**
EBIT	**138**	**166**	**118**	**74**	**77**	**92**	**104**	**101**	**98**
Net finance expense	8	10	21	5	5	5	5	5	5
EBT	**145**	**176**	**139**	**79**	**82**	**97**	**109**	**106**	**102**
Income tax charge	-29	-35	-31	-16	-16	-19	-22	-21	-20
Minority interest	0	0	0	0	0	0	0	0	0
Net income	**116**	**141**	**109**	**63**	**66**	**78**	**87**	**84**	**82**

* netted with purchased electricity corresponding to own electricity sales

Margins

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
EBITDA margin	54.3%	68.4%	67.2%	59.1%	60.9%	64.3%	66.2%	65.0%	63.8%
EBIT margin	50.6%	64.1%	60.5%	49.4%	49.6%	52.0%	52.5%	50.2%	48.0%
Net margin	42.7%	54.3%	55.7%	42.2%	42.1%	43.7%	43.9%	42.1%	40.2%

YoY growth rates

	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Electricity & capacity revenue	-4.8%	-25.1%	-23.0%	3.5%	14.0%	11.6%	1.4%	1.4%
Heat revenue	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total revenue	-4.8%	-24.7%	-22.9%	3.4%	14.0%	11.5%	1.4%	1.4%
EBITDA	20.0%	-26.1%	-32.2%	6.7%	20.4%	14.8%	-0.4%	-0.5%
Net income	21.0%	-22.7%	-41.6%	3.3%	18.3%	12.0%	-2.8%	-3.0%

Balance sheet (RAS, $mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Fixed assets	434	454	490	528	549	612	666	720	774
LT investments	95	114	113	108	102	104	104	104	104
Non-cash working capital	39	36	31	21	17	14	9	9	9
Equity	585	732	842	868	884	977	1,064	1,148	1,230
Minority interest	0	0	0	0	0	0	0	0	0
Net debt/(cash)	-5	-117	-199	-203	-208	-239	-277	-307	-335
Other LT liabilities/(assets), net	-12	-12	-9	-9	-8	-8	-8	-8	-8

Cash flow statement (RAS, $mn)

	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Operating cash flow before change in non-cash WC	**119**	**142**	**101**	**73**	**78**	**95**	**109**	**109**	**109**
Operating cash flow	**87**	**146**	**103**	**82**	**81**	**98**	**114**	**109**	**109**
Net capex	-15	-29	-24	-75	-70	-75	-82	-84	-86
Acquisitions/divestments	0	-60	-90	0	0	0	0	0	0
Investing cash flow	**-12**	**-87**	**-108**	**-70**	**-65**	**-70**	**-77**	**-79**	**-81**
Equity raised/bought back	0	0	0	0	0	0	0	0	0
Change in debt	-70	-8	0	0	0	0	0	0	0
Interest expense	-4	0	0	0	0	0	0	0	0
Financing cash flow	**-74**	**-8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Net cash flow	**2**	**52**	**-4**	**13**	**16**	**28**	**37**	**30**	**28**

Source: Company data, Aton estimates

DCF valuation ($mn)

	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
EBIT	**74**	**77**	**92**	**104**	**101**	**98**	**94**	**91**	**88**
Tax on EBIT	-15	-15	-18	-21	-20	-20	-19	-18	-18
After tax EBIT	**59**	**62**	**74**	**83**	**81**	**78**	**76**	**73**	**70**
Depreciation	15	18	22	27	30	32	35	38	40
Capex	**-75**	**-70**	**-75**	**-82**	**-84**	**-86**	**-88**	**-90**	**-93**
Change in NWC	9	3	3	5	0	0	0	0	0
FCFF	**9**	**13**	**24**	**33**	**26**	**24**	**22**	**20**	**18**
Discounted FCFF	9	11	17	21	14	11	9	7	5

WACC composition

Equity market risk	12.5%
Regulatory risk	2.0%
Company-specific risk	7.0%
Corporate governance	3.0%
Liquidity	4.0%
Cost of equity	**21.5%**
Cost of debt	**8.5%**
Target D/(D+E)	30.0%
WACC	**17.1%**

Terminal growth	2.0%

Fair value calculation

Terminal value of old capacity	120		
Terminal value of new capacity	0	TP per share ($)	0.868
Total terminal value	120	**12M TP ($)**	**0.961**
NPV of cash flows	102	Current price ($)	2.891
NPV of terminal value	34	**Potential upside to 12M TP**	**-67%**
Fair EV	**136**	Dividend yield	4%
Net debt (-) or plus cash (+) 2011	204	**Expected 12M total return**	**-63%**
Minority interest (-)	0	Current EV/Capacity 2011	154
Fair MktCap	**339**	Fair EV/Capacity 2011	23

12M target price sensitivity to terminal growth rate and WACC

WACC \ Terminal growth	0.0%	1.0%	2.0%	3.0%	4.0%
15%	0.99	1.00	1.01	1.03	1.04
16%	0.97	0.98	0.99	1.00	1.01
17%	0.95	0.95	0.96	0.97	0.98
18%	0.93	0.93	0.94	0.95	0.95
19%	0.91	0.91	0.92	0.92	0.93

Fair EV/Capacity sensitivity to terminal growth rate and WACC

WACC \ Terminal growth	0.0%	1.0%	2.0%	3.0%	4.0%
15%	24	25	25	26	27
16%	23	23	24	25	25
17%	22	22	23	23	24
18%	21	21	21	22	22
19%	20	20	20	21	21

Fair EV ($mn)

Branch	Existing assets				New projects	Total	$/kW
	Electricity	Heat	Total	$/kW			
Krasnoyarsk HPP	136	0	136	23	0	136	23

Source: Aton estimates

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