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Inflation targeting to tighten tariff policy, but not to halt energy price growth in Russia

Russian electricity sector 2021 outlook

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The forecast has been prepared in line with the [General Principles of Socioeconomic Indicators Forecasting](#).

- **Surplus to no longer pressure Russian energy prices**, thus adding 0.3% to their annual growth in 2017-2020. Electricity consumption will gain a modest 0.1% per year across the country during this period on the back of stagnating household income: the recent years saw living standards directly affecting consumption, providing for half of its growth. However, as capacity supply agreements (CSA) expire and obsolete capacities decommissioning accelerates for the first time since the 2008 crisis, supply will start lagging behind demand.
- **Electricity prices to outpace inflation**, despite its targeting policy tightening. Price growth will be mainly fueled by new power plants that will be enjoying higher tariffs, adding, therefore, 3.5% to the price for industrial consumers each year starting 2017 through 2020, with the most pronounced contribution of 2.6% to this price hike is expected to come from nuclear plants. The inflation targeting policy is set to remain in place throughout the entire forecast period, limiting regulated tariff growth.
- **In 2017-2020, the generation sector should boast high profitability with declining debt burden**, contributed by finalization of investment obligations under the CSA program and reduction of surplus on the electricity market. Thermal generation proceeds under CSAs will begin to decline after 2020.
- **A restraining tariff policy would undermine transmission financials**. The policy of curbing network tariffs within the grid infrastructure has already been in place for five years and most of its potential has played out by now, with accumulated problems manifested by select distribution companies facing a deterioration in their financial standing, piling up consumer debts, and lost revenues related to preferential technological connection and termination of "last mile" agreements. In 2012-2016, grid investments fell 41% in real terms.

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Table 1. Russian electricity sector 2021 forecast

Indicators	Measurement unit	Actual data			Estimate	Forecast			
		2014	2015	2016	2017	2018	2019	2020	2021
Generation									
UPS of Russia installed capacity, incl.	kW mln	232.5	235.3	236.3	236.1	238.3	239.1	239.1	239.5
CHPPs	kW mln	158.4	160.2	160.2	158.4	159.4	158.1	156.9	155.2
HPPs, PSPs	kW mln	47.7	47.9	48.1	48.4	49.2	49.6	49.7	49.7
NPPs	kW mln	26.3	27.1	27.9	29.0	29.2	30.4	30.6	31.8
RESOPs (GPPs, WPPs, SPPs)	kW mln	0.01	0.1	0.1	0.3	0.5	0.9	1.9	2.9
Electricity generation by UPS of Russia	kWh bln	1,035	1,036	1,058	1,047	1,050	1,053	1,061	1,063
Electricity consumption by UPS of Russia	kWh bln	1,014	1,008	1,027	1,016	1,019	1,022	1,029	1,031
Electricity consumption dynamics in UPS of Russia	%, y-o-y	0.4%	-0.6%	1.8%	-1.1%	0.3%	0.3%	0.7%	0.2%
Heat generation	Gcal mln	1,322	1,244	1,273	1,235	1,229	1,222	1,226	1,230
Investments									
Installation of new capacities, modernization at UPS of Russia, incl.	kW mln	7.8	5.0	4.6	2.9	5.6	3.7	3.1	2.4
CHPPs	kW mln	5.5	3.9	3.1	1.3	3.3	1.7	0.8	0.2
HPPs, PSPs	kW mln	1.2	0.2	0.2	0.3	0.8	0.4	0.1	0.0
NPPs	kW mln	1.1	0.9	1.2	1.1	1.2	1.2	1.2	1.2
RESOPs (GPPs, WPPs, SPPs)	kW mln	0.0	0.06	0.02	0.2	0.3	0.4	1.0	0.9
Investments in generation in Russia	RUB bln	497	368	320	255	233	234	233	233
Investments in transmission in Russia	RUB bln	315	281	317	329	315	314	268	268
Prices									
Electricity price for Russian consumers (except households)	RUB / kWh (net of VAT)	2.4	2.6	2.8	3.0	3.2	3.3	3.5	3.7
Electricity price for Russian consumers (except households)	%, y-o-y	108.6%	105.7%	107.1%	109.0%	105.3%	105.1%	106.3%	103.4%
Electricity price for Russian households	RUB / kWh (incl. VAT)	2.7	2.8	3.0	3.2	3.4	3.6	3.8	4.0
Electricity price for Russian households	%, y-o-y	109.0%	105.1%	108.1%	106.3%	105.0%	108.0%	105.0%	105.0%
Wholesale electricity market price ("tomorrow" market) in the first pricing zone (European Russia and Urals)	RUB / MWh (net of VAT)	1,163	1,153	1,202	1,216	1,262	1,318	1,373	1,415
Wholesale electricity market price ("tomorrow" market) in the second pricing zone (Siberia)	RUB / MWh (net of VAT)	789	914	866	938	949	985	1,016	1,087

Source: ACRA

Despite slow growth, electricity demand is to outpace supply

In 2017-2021, electricity consumption in Russia should climb on average by +0.1% per year. Improving living standards provided half of new electricity demand between 2010 and 2015 and are likely to remain a key driver of electricity consumption growth in the medium term, although stagnating household income is expected to reduce this factor's impact. Last year's record-high growth in electricity consumption (up 1.8%) was caused by the climatic factor.

RESOP (renewable sources of power) is the energy of flowing water, blowing wind, solar light, geothermal energy of the Earth, the energy of sea tides. RESOP usually includes alternative energy sources only (no traditional large hydro plants).

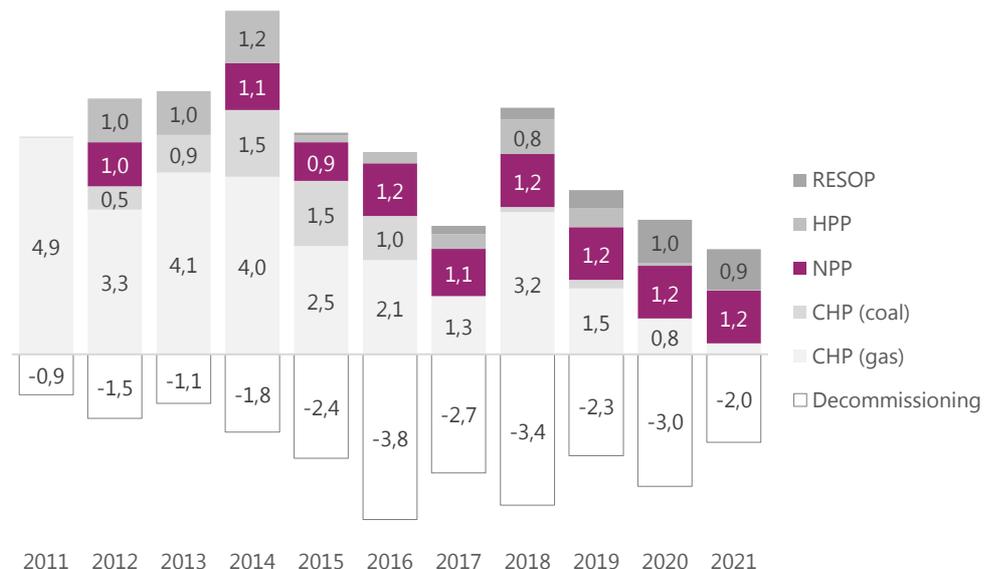
Nuclear power will dominate the sector in terms of new equipment commissioning, as the next 7-10 years will see more than 8 GW of new nuclear generating capacities put into operation. The current renewable power source (RESOP) sector support is the only program in the energy field aimed at incentivizing investor appeal, and investors are likely to show more interest. Be as it may, RESOP will hardly contribute more than 0.5% to Russian electricity production by 2021.

CSA (capacity supply agreement) is an obligation by an investor to build a new plant or to modernize an old one in exchange for an increased tariff for the following 10 years in order to payback the costs. The first CSAs were signed during RAO "UES of Russia" privatization. Subsequently, the scheme was spread onto the nuclear power, hydropower, and RESOP sectors.

By 2017, the thermal sector saw completion of up to 90% of CSA investments. New investments to the sector are related to regional programs (Far East, Kaliningrad, the Crimea), increased equipment decommissioning and modernization. A record-high CHPP number are facing the problem of extending equipment life: the peak of power plant commissioning in the Soviet Union took place in the 1970s, when thermal power capacities added 40 GW, with another 29 GW added in the 1980s. After 2020, revenues the generating companies get from payments on CSA will start plummeting, and a new program aimed at supporting thermal generation modernization may be introduced in replacement of CSAs.

The heat market will be a priority for the policy aimed at stimulating investments in the energy sector, but this policy will be constrained by strong social implications related to heating, which accounts for up to 50% of household utility bills.

Figure 1. In 2017-2021, nuclear capacities will make up over one third of newly commissioned power plants (new generating capacity commissioning forecast, GW)



Source: ACRA estimates

Electricity prices to outpace inflation

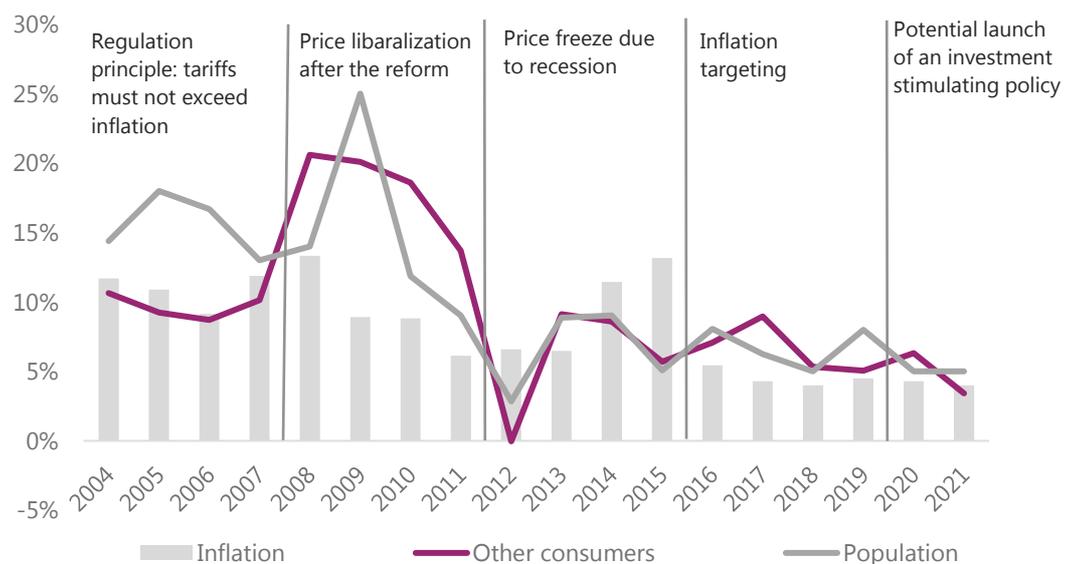
The policy aimed at containment of electricity prices has been in place for the past five years. It was caused by a dramatic increase in energy prices after the RAO "UES of Russia" reform, later on, in 2014, fueled by the economic recession. In 2012-2016, inflation ran into 51%, while electricity prices for households and other consumer groups climbed 40% and 34% respectively. Over the period, the industry faced two price freezes.

The year 2015 saw a new price containment factor emerge after a transition to active inflation targeting took place (although the inflation targeting policy had previously been officially announced, it was rather passively conducted until then). In the medium term, maintaining low inflation will remain a priority. With active inflation targeting in place, the policy with regard to regulated prices, which stand for up to a third of consumer price increases, will most likely be restrictive. This will affect directly regulated rates in the first place, i.e. those on gas and heat, as well as electricity transmission tariffs.

However, keeping electricity prices within the inflation rate (even in case of tariff regulation tightening) will hardly be possible in 2017-2020, as prices for industrial consumers will climb over the period by an average of 6.4%, pushed up among thither things by:

- Climbing fuel prices (+1.1 pps);
- An outstripping price growth on the wholesale electricity market (+0.3 pps), where demand will start outperforming supply in 2017-2018;
- Commissioning of new power plants, which would be allowed special tariffs to ensure their payback (+3.5 pps); this will primarily concern NPPs (+2.6 pps);
- Transmission tariff indexation (+1.5 pps).

Figure 2. Low inflation limits tariff policy flexibility



Source: ACRA estimates

See the ACRA March 28, 2017 Russian economy forecast titled ["Russian Economy: Recession Knocked Out. What Next?"](#)

Generation benefits from high interest rates

In 2016, EBITDA margin in the Russian electricity generation sector climbed to 24% (from 11-15% in 2008-2012) while debt burden in terms of the "debt/EBITDA" ratio declined from x2.0 in 2014 to x1.4 in 2016. High profitability and declining debt may remain the trends of 2017-2020, fueled by finalization of CSA commitments, an end to the period of growing surplus on the electricity market, and persistently high debt market interest rates, which CSA tariffs are pegged to.

Between 2017 and 2021, inflation in Russia is projected to reach 4.0-4.5%. However, the tight monetary policy and the inertia of inflationary expectations will likely keep long debt market rates and CSA yields above the 2012-2013 level, when inflation equaled 6.5%. In 2015-2016, additional revenues of generating companies from increased CSA charges, resulting in turn from rising interest rates, amounted to RUB 29 bln, while in the next five years (2017-2021) they are expected to reach RUB 99 bln.

CSA tariffs are on average sixfold those of other plants, with CSA payments forming $\frac{3}{4}$ of EBITDA in generation.

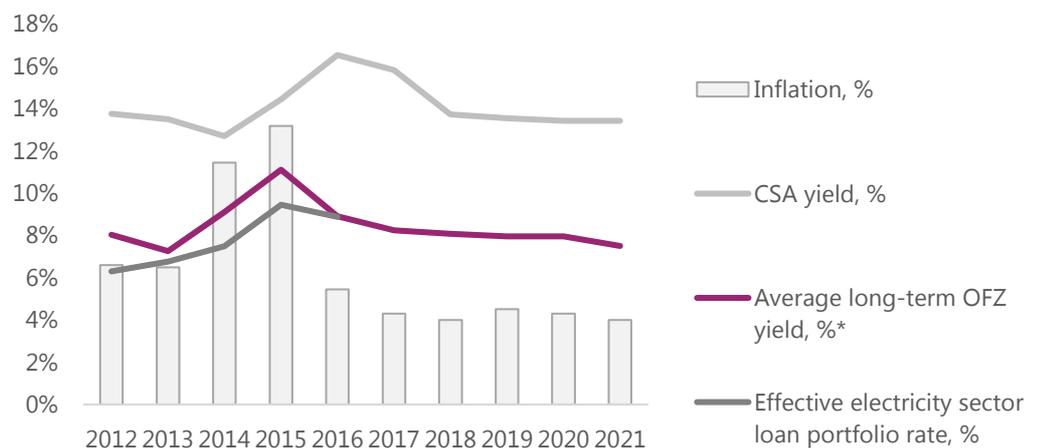
The tariff calculation is pegged to the previous year's yield of long-term government bonds.

Project paybacks with regard to CSA tariffs has been calculated for 15 years, although a plant is entitled to the tariff for only 10 years. To compensate for the revenues for the remaining five years, the plant is entitled to an increased tariff over the last four years.

After 2017, the yield for calculating CSA tariffs should average 14%. This is lower compared to 2016-2017 numbers, but by 2020, the total revenues from CSA payments is not expected to contract in thermal generation, as for the last four years of the ten-year period the CSA subject is allowed to charge a higher tariff. In 2020-2025, most of CSA payments will be completed, and generation sector profitability may return to 12-15%.

New nuclear power plants are also entitled to special CSA tariffs. Therefore, commissioning of new power units will be decisive for the final price growth in 2017-2021. By 2020-2021, the volume of CSA payments in nuclear generation may reach RUB 300 bln a year, which is above of what generating companies earn now under CSAs.

Figure 3. Debt market rates to exceed inflation by 3-4 pps in 2017-2021



Source: ACRA estimates

* As illiquid securities are excluded from the calculation, the average OFZ yield shown on the chart may differ from parameters used for CSA yield calculation.

Curbing transmission tariff growth to be cumbersome

A tight inflation targeting policy pegs medium-term transmission tariff indexation to the inflation target of 4%, and for industrial consumers even lower – 3%. However, pursuing such a policy in the years to come will be harder, and it will have a negative impact the grid's financial standing.

Factors limiting the potential for curbing transmission tariff growth:

Past practice

In 2012-2016, transmission tariffs in Russia fell 14% in real terms (adjusted for inflation), while unit costs of grid companies shed 19%, and investment shrank 41%. Transmission still boasts a growth potential, but implementing it without building up investments seems increasingly difficult.

Distribution financials waning

The average grid sector profitability rose in 2014-2016, although mainly supported by the backbone network (see Figure 4).

Lower cost management flexibility as a result of low inflation

Freeze in nominal wages and nominal contract terms amid high inflation significantly reduces costs in real terms. If inflation settles at 4-5% in 2017 and further on, there would be less grounds to further reduce expenses this way.

Transmission accumulates receivables

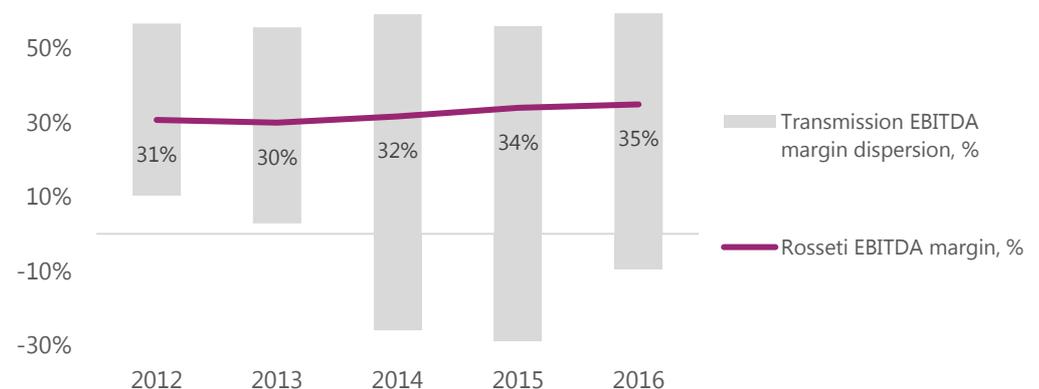
Unlike the wholesale market, retail consumers keep on failing on due payments, with arrears climbing from 7.8% of retail revenues in 2013 to 9.2% in 2016, being mostly concentrated in the North Caucasus, where electricity sales are carried out by transmission companies.

Revenues lost from termination of "last mile" agreements and preferential technological connection of individuals and SMEs

Most of "last mile" agreements are slated for termination in 2018.

The "last mile" agreement is a kind of cross-subsidization which charges large consumers connected directly to high voltage grids with an additional tariff for electricity transmission through distribution networks.

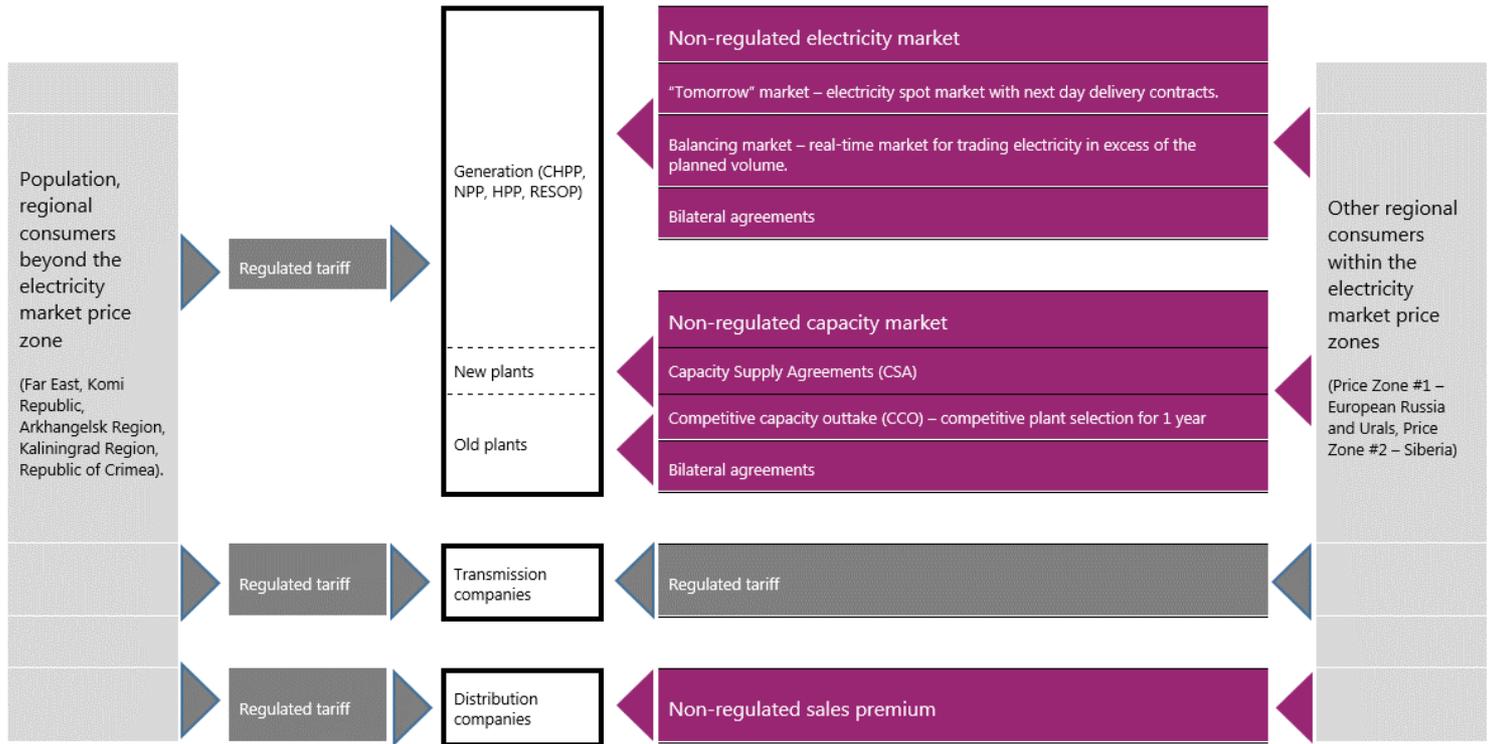
Figure 4. The grid sector sees its average financials improved by the backbone network



Source: company data

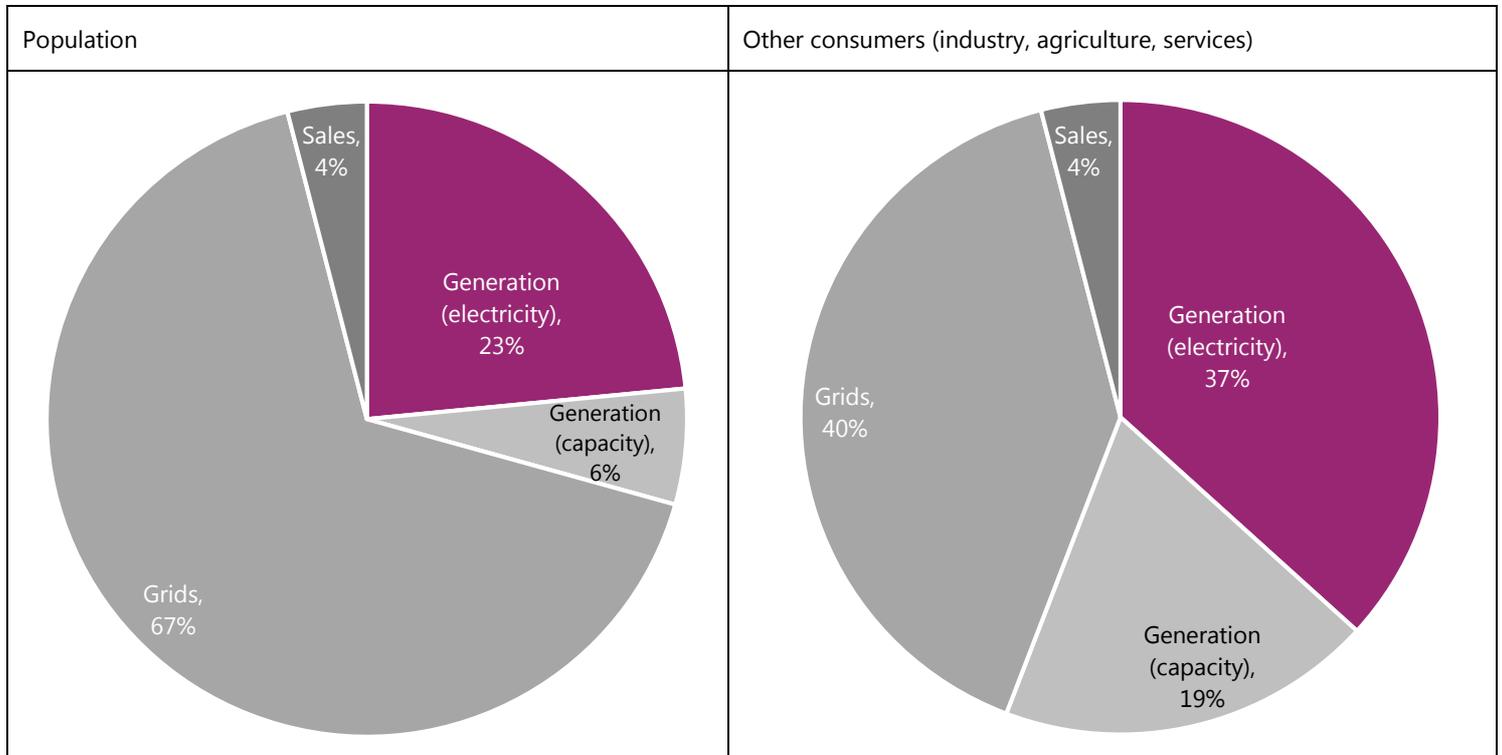
Appendix. Electricity tariff structure in Russia

Tariff setting scheme in Russia



Source: ACRA

Tariff setting scheme in Russia



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