



ENERGY SEGMENT SECURE HEAT AND POWER SUPPLY

OUR PRODUCTS

STABLE CAPACITY
provided by regularly
upgraded plants

**ELECTRICITY
AND HEAT**
supplied by co-
generation plants

**TURBINE
GENERATORS**
for nuclear, hydro and
thermal power plants

WHAT MAKES US DIFFERENT

96% of our heat
supply is generated
by co-generation CHPPs

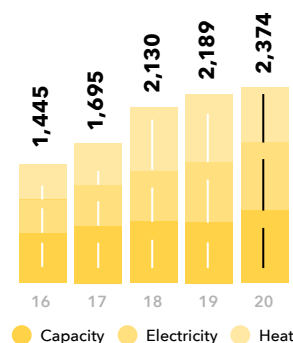
An increase in fuel
savings and lower
emissions of pollutants
and CO₂, when compared
with the use of boiler
houses

Most of fuel supplies
come from mines
in proximity

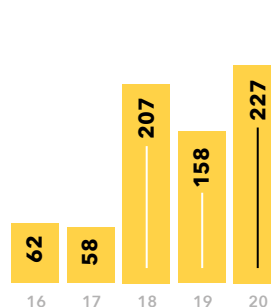
Ensuring fuel security
and stock optimisation

KEY INDICATORS

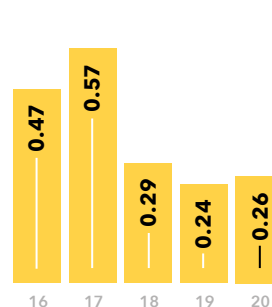
REVENUE (\$M)



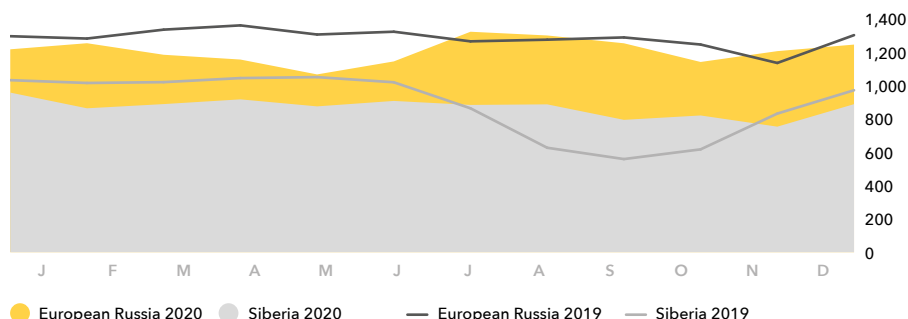
CAPEX (\$M)



LTIFR



PRICES IN THE RUSSIAN ELECTRICITY MARKET (RUB/MWH)



STRATEGIC PRIORITIES

Increasing co-generation of electricity and heat

Improving plant efficiency

Renovating heat networks to reduce heat losses and the number of accidents



RELIABILITY AND ENVIRONMENTAL FOCUS

Q: Uninterrupted supplies of electricity and heat to homes and hospitals are vital. How did you ensure that all of your power plants continued to operate reliably during the COVID-19 pandemic?

A: We developed our 'Ship' plan, ensuring measures were in place to safely isolate operating personnel at the plants (or on the nearby premises) in the event of a substantial increase in the number of infections leading to the region being placed in a state of emergency. Fortunately, so far we have not had to activate this plan. The stringent disinfection measures we have put in place as well as our protocols for keeping shift workers apart have been sufficient in containing the infection rate.

Q: What are the Energy Division's strategic goals?

A: Our key priority is to maintain an uninterrupted and high-quality supply of electricity and heat to all of our customers. Most of our plants operate within regions with extreme climates, where in summer it can be hotter than 35°C, and in winter the temperature often drops below -40°C. Therefore, we ensure regular upgrades of our equipment.

Another of our key objectives is the reduction of pollutant emissions. One way we are pursuing this is by further increasing the share of co-generated electricity and heat we produce, through the replacement of old boiler houses. The new, efficient CHPPs are equipped with electrostatic precipitators with efficiency levels of more than 99%, so will significantly reduce our air emissions within the next five years.

Q: In 2020, the DPM-2 programme was launched. What is its key objective?

A: COMMod or DPM-2 is a breath of fresh air for all of us. It creates opportunities for the large-scale modernisation of fixed assets in the energy sector, improving the efficiency and reliability of our operated facilities. In addition, we hope that the programme will act as a catalyst for domestic manufacturers: machine-engineering plants will receive new orders, since all participants in the programme are obliged to purchase locally manufactured equipment.

Upgrades will also make our generation much more environmentally friendly. For example, as part of the DPM-1 programme, we installed a boiler at our Abakan CHPP, which produces only 5 mg of solid particles per m³ of gas emitted. To put this into context, the EU standard is 20–30 mg per m³, meaning that we are able to outperform this by emitting five times less pollutants.

Oleg Petrov,
TECHNICAL DIRECTOR
OF ENERGY DIVISION



MARKET REVIEW

ELECTRICITY MARKET

2020 saw a year-on-year decrease in both the generation and consumption of electricity in Russia. This was mainly due to a general decline in production in all economic sectors caused by the outbreak of the COVID-19 pandemic and the global crisis that ensued, a decrease in electricity consumption by oil companies under the OPEC+ deal, and also higher ambient temperatures relative to 2019.

According to the System Operator of the Unified Energy System of Russia, there was a 3% year-on-year decrease in electricity generation in Russia in 2020, slowing to 1,063.7 TWh. In Siberia, demand for electricity softened by 1% year-on-year, to 209.4 TWh. In European Russia and the Urals, electricity consumption declined by 3%, to 783.7 TWh.

Thermal power plant (TPP) output in Siberia decreased by 12% (to 89 TWh). This was mainly due to a 9% year-on-year increase in electricity generation at Siberian hydropower plants (HPP) because of the abnormally high water level at the Angarsk HPP cascade. In the Far East, generation at Primorskaya GRES in 2020 amounted to 4.9 TWh.

The price of electricity in the competitive sector (day-ahead market, DAM) in Siberia was 3% lower compared to 2019 levels. This is explained by the reduction in price in European Russia and the Urals, and by the high capacity utilisation at hydroelectric power plants.

Market electricity prices in European Russia and the Urals decreased by 6% over the year. This can mainly be attributed to the following factors:

- A lower rate of electricity consumption due to a general decline in production in all economic sectors caused by the global coronavirus crisis
- Higher air temperatures, which led to a decrease in electricity consumption
- Increased electricity generation at HPPs and NPPs

In the Far East electricity is priced according to the tariffs set by the Federal Antimonopoly Service of Russia.

CAPACITY MARKET

In 2020, capacity sales in Siberia increased by 0.6% year-on-year to 43.2 GW. The competitive price for capacity sales in Siberia decreased by 2.1% year-on-year to 209,202 RUB/MW/month. This was mostly due to lower demand for capacity in 2020 when compared to 2019, during the competitive capacity take-off.

In 2020, capacity sales in European Russia and the Urals reached 147.4 GW, representing a 1% year-on-year increase. The competitive price for capacity sales in the reporting year rose by 2%, reaching 126,501 RUB/MW per month.

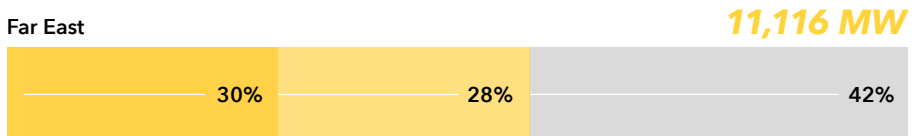
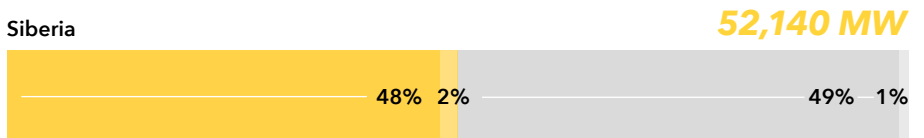
209.4 TWh

ELECTRICITY CONSUMPTION IN SIBERIA IN 2020

48%

OF ELECTRICITY IN SIBERIA WAS PRODUCED AT COAL-FIRED POWER PLANTS IN 2020

Installed capacity structure by plant types (MW) as of 31 December 2020



	European Russia and Urals	Siberia	Far East
● Coal-fired PPs	11,575	25,253	3,328
● Gas-fired PPs	118,680	1,285	3,170
● Nuclear PPs	29,355		
● Hydro PPs	19,993	25,302	4,618
● Renewables	2,545	300	

Sources: statistical data from Russian government agencies, SUEK estimates.

BUSINESS REVIEW 2020 RESULTS

SGC is one of the leading power producers in Russia, accounting for 6% of domestic electricity supply, including 20% of all electricity supplies to Siberia, and is the largest supplier of heat to the east of the Urals.

The company supplies heat and electricity to over 5.5 million people in the Sverdlovsk, Novosibirsk, Kemerovo, Altai and Krasnoyarsk regions, as well as Khakassia, Tyva and Primorye.

In 2020, SUEK acquired Krasnoyarskaya GRES-2 and Primorskaya GRES, which is the largest power plant in the Far East. Including these new plants, the company's total electric capacity now stands at 17.5 GW, while its heat capacity is 26,300 Gcal/h. The Group includes 26 coal-fired heat and power plants and one gas turbine power plant.

Most of the company's plants are co-generation, being able to generate heat and electricity at the same time. They consume coal mined from nearby deposits.

We supply heat to our consumers through our company-owned heat networks, spanning a total length of 11,000 km.

SUEK's ELSIB factory carries out the full cycle of development, manufacture and commissioning of generators and electric motors for hydroelectric, nuclear and thermal power plants.

+19%

INSTALLED CAPACITY

Our electricity sales in 2020 amounted to 68.2 TWh, representing a 24% year-on-year increase. Capacity sales totalled 14.7 GW, 47% higher than in 2019. This growth was caused by the expansion of SGC's operations to the Urals and the Far East.

Heat sales remained at the same level as in 2019, at 35.4 million Gcal, as the decline in levels of production at our traditional assets due to weather conditions was offset by the expanded area of operations. In Krasnoyarsk, Kansk, Zelenogorsk, Kemerovo, Belovo, Barnaul, Novosibirsk, Luchegorsk and Reftinsky, SGC gained new customers by partly as a result of replacing inefficient local boiler houses with CHPPs. In 2020, the company replaced boiler houses in Krasnoyarsk, Kemerovo, Novosibirsk, Barnaul and Abakan.

In addition, in the cities of Krasnoyarsk and Belovo, SGC purchased four heat supply organisations, while in Kemerovo, Kansk and Biysk municipal boiler houses were admitted under concession agreements. The ultimate goal of this expansion is to ensure that consumers are able to switch from boiler houses to co-generation CHPPs.

Capacity sales revenue rose by 14% to \$832m driven by revenue from new assets.

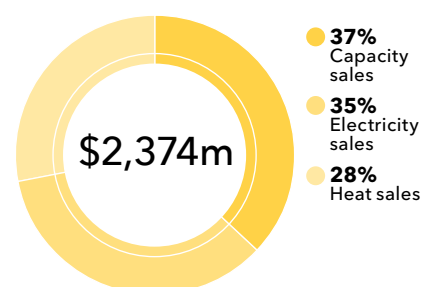
Despite the weaker rouble, **electricity sales** revenue increased by 17% to \$813m due to growing sales following the expansion of assets.

Heat sales revenue decreased by 8% year-on-year due to the depreciation of the rouble.

The **cash cost** of energy sold in 2020 totalled \$1,884m, up 14% year-on-year due to the business expansion.

The **Segment's EBITDA** amounted to \$750m, a 13% growth boosted by higher revenues.

Energy revenue by product



Operational highlights

	2020	2019	Change
Generation			
Electricity (TWh)	63.7	51.5	24%
Heat (MGcal)	43.7	43.5	0%
Sales			
Electricity (TWh)	68.2	55.2	24%
incl. reselling to the wholesale market	4.8	3.7	30%
Competitive market	54.7	45.2	21%
Regulated market	13.5	10.0	35%
Capacity (GW)	14.7	10.0	47%
Competitive market	11.4	8.0	43%
Regulated market	3.3	2.0	65%
Heat (MGcal)	35.4	35.3	0%

GENERATION

Thanks to the acquisition of new assets at the end of 2019 and in 2020, we were able to increase electricity generation in 2020 by 24% to 63.7 TWh.

Heat supply from all plants and boiler houses rose by 0.6%, to 43.7 million Gcal, because of the expanded area of operations, namely with new consumers in Krasnoyarsk, Kansk, Zelenogorsk, Kemerovo, Belovo, Barnaul, Novosibirsk, Luchegorsk and Reftinsky and the replacement of boiler houses with co-generation heat in Krasnoyarsk, Kemerovo, Novosibirsk, Barnaul and Abakan.

We maintained our focus on maximising co-generation, enabling us to reduce our fuel consumption and emissions per unit of energy. In 2020, we were able to combine the generation of 96% of heat and 32% of electricity.

HEAT SUPPLY

In 2020, the company increased investment into upgrades and repairs of its heat networks by 46% year-on-year in order to reduce heat losses and improve the reliability of our heat supply. In Krasnoyarsk and Kemerovo, investment into the reconstruction and repair of heat networks was 2.5 times higher year-on-year.

In 2020, the cities of Krasnoyarsk and Barnaul were included in heat supply price zones, meaning that they became part of the long-term tariff setting. The transition to this new settlement plan enables SUEK to make long-term investments in the modernisation and development of the cities' heat supply systems.

INVESTMENT PROJECTS

INCREASING CO-GENERATION AND IMPROVING ENVIRONMENTAL PERFORMANCE

To ensure stable heat supplies, decrease heat losses and improve environmental situation in the cities, the company launched the following key projects:

- Replacement of old standalone boiler houses and pipes in the cities of Krasnoyarsk, Kemerovo, Novosibirsk, Barnaul and Abakan
- Attracting new consumers, including major projects in Novosibirsk and Kemerovo
- Construction of heat networks in Belovo, Kemerovo region, to replace six boiler houses with heat supply from the Belovskaya GRES (to be completed in 2021)
- Upgrade of the heating equipment at Belovskaya GRES and Abakanskaya CHPP to replace the old boiler houses in Belovo and Chernogorsk
- Replacing the equipment of a boiler plant and generator at Nazarovskaya GRES
- Reconstruction of the Krasnoyarskaya GRES-2 ash dump

DPM-2 PROGRAMME

In 2020, the company began the first phase of its projects under the 'COMMod (DPM-2)' programme. In Krasnoyarsk, the company intends to improve the reliability of its heat and electricity supplies in a way that takes into consideration the city's growth potential and helps to improve 2020 environmental situation, so it has begun three key projects:

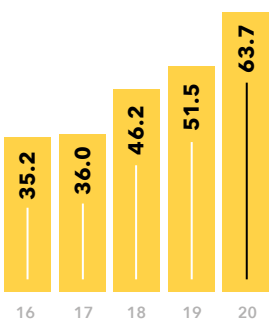
- The decommissioning of 160 MW of low-efficiency equipment at Krasnoyarskaya CHPP-1: five turbine generators and two boiler units commissioned in the 1950s
- Replacing these by commissioning two new, more efficient boilers and two connected turbine generators with a total capacity of 70 MW
- Additionally, to replace the equipment decommissioned at CHPP-1, building a new Power Unit No. 2 at Krasnoyarskaya CHPP-3 with a capacity of 185 MW

The project also includes the installation of modern gas cleaning equipment at Krasnoyarskaya CHPP-1 with a cleaning efficiency level of at least 99%, 14 modern electrostatic precipitators, and replacing low stacks with a new model 275 m high, in order to better disperse emissions. In 2020, the new stack was put into operation, connected to gas ducts; the company began the installation of four electrostatic precipitators, with one also being tested.

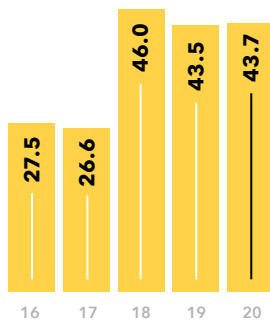
At Tom-Usinskaya GRES, we started a DPM project for the modernisation of two boilers at Power Unit 7, the replacement of the generator, the expansion of ash dump capacity and the construction of a cooling tower with a circulation pumping station to reduce water consumption and partially switch to recirculation water supply.

In 2020, the company began design and ground preparation for the construction and installation work at Krasnoyarskaya CHPP-3 and Tom-Usinskaya GRES.

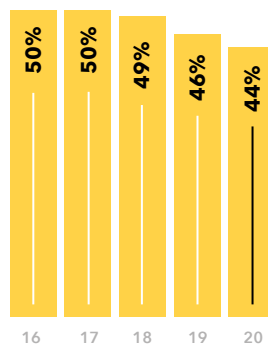
Electricity generation (TWh)



Heat generation (MGcal)

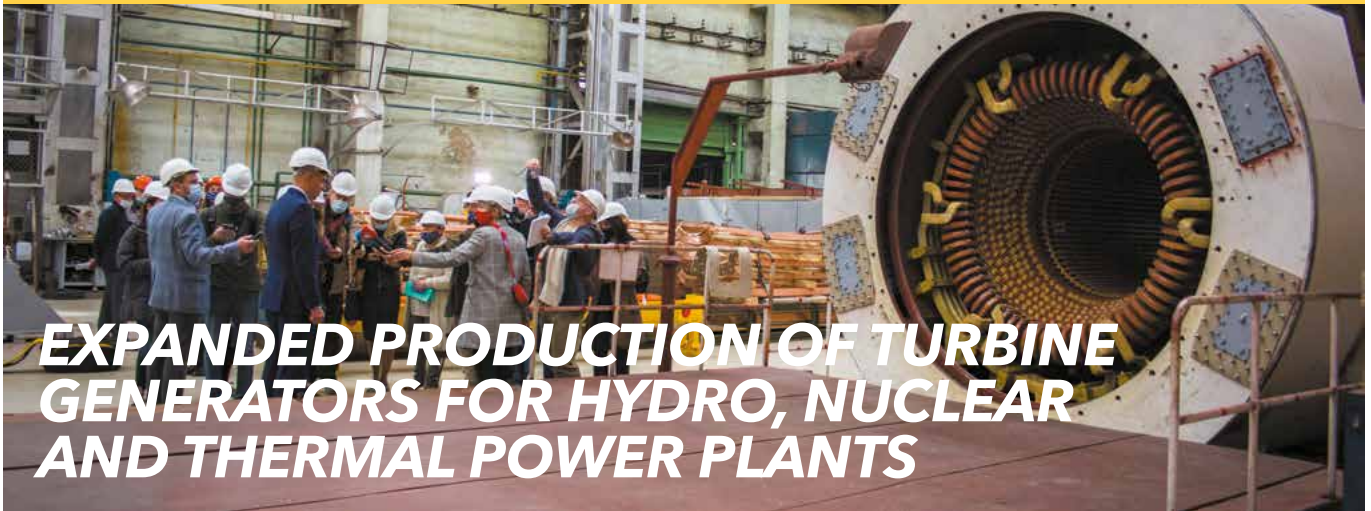


Installed capacity utilisation rate



+24%

ELECTRICITY GENERATION YEAR-ON-YEAR



EXPANDED PRODUCTION OF TURBINE GENERATORS FOR HYDRO, NUCLEAR AND THERMAL POWER PLANTS

ELSIB is the leader in the Russian market for the production of turbine generators from 60 to 130 MW, with a 60% market share. The company plans to increase its share in the market for more powerful turbine generators.

>\$100m

VALUE OF ORDERS FROM ENERGY COMPANIES IN 2020

202

PRODUCTS MANUFACTURED (INCL. HYDRO GENERATORS AND LARGE ELECTRICAL MACHINES)

\$40m

TO BE INVESTED IN PRODUCTION FACILITIES BY 2024

In 2020, our factory producing turbine generators for hydroelectric, nuclear and thermal power plants, ELSIB, increased the value of its orders from energy companies to over \$100m, with over 80% of orders outside the Group. Orders for 15 turbine generators, with the principal components being produced by the factory, account for around half of these. One of the factors behind such a substantial increase in orders is the new interest from companies participating in DPM-2. The factory also repairs turbines for SGC's CHPPs.

Since 2019, when the 'active' phase of the programme began, ELSIB has been receiving large orders for its main production items, turbine generators in the power segment from 60 to 130 MW.

Main destinations were as follows:

- Novo-Salavatskaya CHPP
- Permskaya CHPP-9
- Avtovskaya CHPP
- SUEK's Tom-Usinskaya GRES
- Irkutskaya CHPP-10

In addition to DPM-2, many plants are engaged in programmes for the replacement of equipment that has reached the end of its life. For example, ELSIB is now making turbine generators for the Yuzhno-Kuzbasskaya GRES and for thermal power plants at solid-waste disposal-and-recycling plants in the Moscow region, hydro generators for the Irkutskaya and Mainskaya HPPs and a hydro generator stator for the Bukhtaminskaya HPP (Kazakhstan).

In addition, the factory supplies electric motors for Rosatom's programmes, which are installed at power units in Russia and new NPP units under construction in India, Turkey and China.

In order to remain competitive, the company has committed to upgrading its production facilities almost continuously. As at the end of 2020, the factory had invested \$5m in production (an increase of \$1.5m year-on-year). In total, over the investment programme period from 2018 to 2024, the company plans to invest \$40m, with the bulk of the funds being invested in new lathes.

OUR PRIORITIES FOR 2021

We will continue to increase our supplies of co-generated heat and electricity by systematically upgrading our equipment and replacing standalone boiler houses:

- Construction of the heating mains from the Belovskaya GRES to replace old boiler houses in Belovo, and from the Abakanskaya CHPP to replace boiler houses in Chernogorsk

- Further replacement of boiler houses throughout Novosibirsk, Krasnoyarsk, Kemerovo and other cities

SUEK will also continue to negotiate with the authorities regarding transitioning to a modernisation programme for the heat supply facilities in the cities where the company operates, utilising long-term investment mechanisms provided for by the long-term heat tariff arrangement (Kemerovo). We will continue to deliver investment projects as part of the transition

to a long-term tariff, representing an almost six-fold increase in investment compared to 2018.

We will continue to upgrade capital equipment at our CHPPs, including under the DPM-2 programme, at the Krasnoyarsk power plants 1 and 3 and Tom-Usinskaya GRES.

We will further integrate our new assets, the Krasnoyarskaya GRES-2 and Primorskaya GRES.