Company's business Agriculture Business
Oil and Fats Business
Meat Business
Sugar Business
Dairy Products Business

ENERGY EFFICIENCY AND ENERGY SAVING

With higher production in the Meat Business and Oil and Fats Business (+27 and 51 million kWh, respectively) in 2020, Rusagro increased electricity consumption by 13% (to 563 million kWh). At the same time, the consumption of heat energy did not increase and even showed a slight decline (by 0.5%), because 10.1 million out of 13.7 million GJ is used to cover the needs of the Sugar Business, which adjusted down the power requirements in 2020 due to the shorter processing season and the successful implementation of energy efficiency measures.

Breakdown of Rusagro's energy consumption by businesses in 2020, %





Breakdown of Rusagro's heat consumption by businesses in 2020, %





Heat consumption, mn GJ



The Sugar Business has the highest energy demand among the four main businesses of Rusagro – in 2020 it consumed 205 million kWh of electricity (36% of total consumption) and 10.1 million GJ of heat energy (74% of total consumption). Every year the Sugar Business develops and updates a 3-Year Energy Resources Utilisation Strategy to optimise energy consumption. Its core objective is to reduce the cost of consumption of purchased electricity and gas used for technological processes and for thermal generation needs. The following measures are taken to cut the cost of purchased electricity:

- installation of local best power air compressors, which during the repair season are used only to pack sugar;
- replacement of energy-intensive equipment and installation of energy efficient electric motors and LED lighting;
- installation of frequency-controlled motor drives, which, depending on the required performance, reduce power consumption as the frequency is decreased;

The consumption of energy resources in the Oil and Fats Business during the reporting period increased by 41% – up to 175 million kWh due to the expansion of the utilised production capacities, as well as growing output of finished products. The Energy Resources Management Strategy for the Oil and Fats Business envisages the following measures:

- Conducting energy audits of production sites, identifying unreasonable losses and developing measures to eliminate them;
- Using husk (a sunflower processing by-product) for burning in boiler houses;
- Modernisation of boiler equipment;

The consumption of electricity in **the Meat Business** in 2020 amounted to 168 million kWh (+19%), heat energy – 1.4 million GJ (+7%). The consumption was pushed up by three new pig farms reaching their full capacity, an increased production at the meat processing plant, including due to the expansion of refrigeration units. For the energy efficiency management, the Meat Business develops and annually revises the Energy Resources Utilisation Strategy focusing on the reduction of purchased electricity costs. The following key measures are taken for this purpose:

The consumption of electricity and heat in the Agriculture Business is insignificant and in 2020 amounted to 15 million kWh (-19%) and 1.2 thousand GJ (-38%), respectively. Energy is mainly used for drying, conditioning and cleaning of the harvested crop.

- year-round generation of own electricity and the connection of all electricity consumers to own generation, as well as the sale of excess generation – in 2020, the Sugar Business produced 177 million kWh of electricity;
- automation and rhythmicity of processes.

The following measures are taken to save gas:

- installation of a hot water boiler, replacement of high-capacity steam boilers;
- optimisation of heated premises;
- automation of boilers, operational testing;
- hydraulic method of descaling heat exchange equipment;
- high-quality regulation and control of technological processes;

condensate heat recovery.

- Increased condensate return, recovery of heat emitted into the atmosphere;
- Modernisation of lighting systems via use of LEDs and automatic lighting on/off systems;
- Replacement of oversized (overpowered) pumping equipment with energy efficient one;
- Gradual transition to the wholesale electricity purchase market;
- Implementation of the ISO50001 Energy Management System;
- Creation of in-house automated fiscal electricity metering system.
- housing sealing;
- purchase of electricity on the wholesale market;
- work during periods of low electricity tariffs;
- staff training for correct microclimate settings;
- replacement of gas heat generators with more efficient ones in terms of gas consumption;
- increasing the efficiency of refrigeration units.

The Business has no energy resources management strategy. The measures implemented include the transition to LED lighting and the replacement of old boilers with modern electrode boilers.