

# Energy efficiency

We are committed to energy efficiency, seeking to reduce energy losses in all areas of our business, particularly in the Distribution Area. We are looking for innovative solutions enabling effective energy management, which translates into the development of our Group.

As a large company, we are subject to an energy audit obligation under the Energy Efficiency Act of 20 May 2016. The purpose of the introduced procedure is to provide information about potential energy savings in the company and to make calculations about the proposed projects aimed at improving energy efficiency.

In 2017, Enea Wytwarzanie audited the Koziernice Power Plant and Białystok Combined Heat and Power Plant. The audit was also carried out at the Połaniec Power Plant. This research has shown that many of the projects implemented can make a real contribution to the reduction of electricity consumption.

## Actions started in 2017 to reduce energy consumption

Koziernice Power Plant:

- Modernisation of cooling water pumps in 500MW units
- Modernisation of flue gas fans in the boiler of unit no. 10
- Implementation of the Operators Assessment Module, which is to provide an automatic and objective assessment of the performance of power units by unit operators, thus enabling a systematic improvement of technical and economic indexes of units

Białystok Combined Heat and Power Plant:

- Renovation of the TZ-1 turbine set

Połaniec Power Plant:

- Modernisation of steam pipelines
- Modernisation of unit transformers
- Modernisation of the defrosting room for wagons

## Minimising energy loss in distribution processes

One of the priorities in the area of energy efficiency is measures aimed at reducing the losses of electricity generated in the process of its distribution. Enea Operator implements the 'Distribution Strategy of the Enea Capital Group - Initiative: Implementation of Comprehensive Measures to Reduce the Balance Sheet Difference' and the 'Programme for Reducing the Balance Sheet Difference at Enea Operator Sp. z o.o.'.



121,3 tys. km

linii dystrybucyjnych wraz z przyłączami

In 2017, the company recorded a lower level of electricity consumption than in 2016, which is a result of, inter alia, expenditure incurred on new investments and modernisation of the network, connection of new sources of electricity and operation and maintenance activities. Thanks to the modernisation of the grid, changes in cross-sections and the configuration of the grid make it possible to reduce the losses of transmitted electricity. This has a significant positive impact on the environment as it reduces the consumption of electricity related to energy losses in the distribution process.

## White certificates

In addition, some of the Group's companies have received white certificates, which confirm the energy savings achieved by the company as a result of the use of investments improving energy efficiency. They were awarded to Enea Oświetlenie for modernising road lighting to save energy and Enea Elektrownia Połaniec for replacing the lighting used for its own purposes.

Total electricity consumption in 2017 [ MWh ]<sup>8</sup>

Name of company	2016	2017
Enea SA	2045.22	2339.48
Enea Centrum sp. z o.o. <sup>9</sup>	0.55	0.81
Enea Wytwarzanie sp. z o.o. <sup>10</sup>	1167478.00	1272207.00
Przedsiębiorstwo Energetyki Ciepłej sp. z o.o. w Obornikach	671.43	780.61
Enea Ciepło Serwis sp. z o.o.	70.90	24.50
Enea Ciepło sp. z o.o.	5158.70	5074.19
Miejska Energetyka Ciepła Piła sp. z o.o. <sup>11</sup>	4361.90	5657.10

Name of company	2016	2017
Enea Operator sp. z o.o. <sup>12</sup>	the company's own needs: 39794.00 losses in the company's network: 1322306.00	the company's own needs: 40075.00 losses in the company's network: 1249860.00
Enea Oświetlenie sp. z o.o.	194.23 (including 21.04 from own photovoltaic installation)	176.94 (including 18.85 from own photovoltaic installation)
Enea Elektrownia Połaniec SA	The company did not belong to the Enea Group.	864800.31
Enea Bioenergia sp. z o.o. <sup>13</sup>	The company did not belong to the Enea Group.	22.32
Enea Pomiary sp. z o.o.	162.30	188.04
Enea Serwis sp. z o.o. <sup>14</sup>	591.59	472.33
Enea Logistyka sp. z o.o.	525.89	650.89
Enea Trading sp. z o.o. <sup>15</sup>	no data	11.87

<sup>8)</sup> For some companies, the value of total electricity consumption does not include administrative properties, which are settled on a flat-rate basis in rent for all utilities.

<sup>9)</sup> Only part of the electricity consumption is included in the table. The remaining quantity is included in lease rentals.

<sup>10)</sup> The increase in electricity consumption in relation to 2016 is related to the acceptance for operation of unit B11 at the Kozienice Power Plant, which since March 2017 has been in operation for a period of three years. consumed energy for its own needs and commissioned flue gas desulphurisation installations for coal-fired boilers K7 and K8 in the Białystok Combined Heat and Power Plant.

<sup>11)</sup> In 2017, 87.2% of the energy consumed was covered from own production - high-efficiency cogeneration.

<sup>12)</sup> In 2017, a lower level of electricity consumption resulted from activities carried out at Enea Operator, i.e. including expenditures incurred both on new investments and on network modernisation, connection of new sources of electricity and operation and maintenance activities.

<sup>13)</sup> The value of energy consumption includes only office rooms. Equipment, installations and adjacent premises are recorded by Enea Elektrownia Połaniec as their owner.

<sup>14)</sup> Lower energy consumption compared to 2016 was caused by milder winter, lower consumption of electricity for heating with storage heaters.

<sup>15)</sup> All office space used by Enea Trading in 2016 was leased by the company (from Enea SA, Enea Wytwarzanie sp. z o.o. and Enea Serwis sp. z o.o.). Therefore, all mining costs were recognised as a fixed fee at the monthly rent paid. It was not possible to clearly identify the water and electricity consumption of the company. In 2017, energy consumption includes only the office located in Połaniec, the rest of the offices were leased by the company and their operating costs were recognized as a fixed fee in the amount of monthly rent paid.