

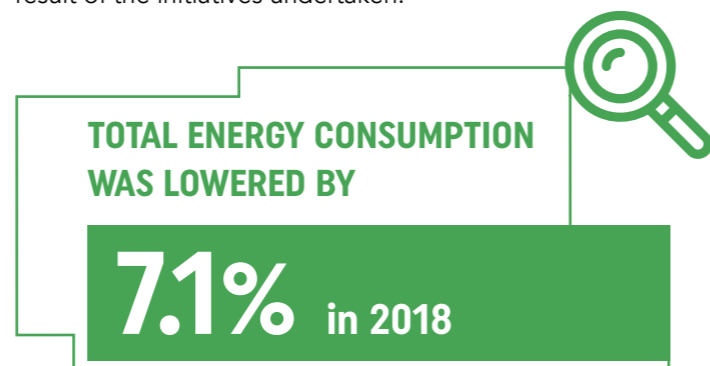
ENERGY EFFICIENCY AND CLIMATE CHANGE

MINDFUL OF THE NEGATIVE EFFECTS OF CLIMATE CHANGE AND GREENHOUSE GAS EMISSIONS, ENKA CONDUCTS ITS ACTIVITIES WITH EFFORTS AT MINIMISING NEGATIVE IMPACTS ON THE ENVIRONMENT AND CLIMATE.

Subsidiaries' energy and fuel consumption is regularly recorded and the carbon footprint and reduction amounts as a result of improvement works and measures undertaken have been regularly calculated since 2016.

In addition, as a global company with many activities and employees at different locations around the world, ENKA attaches importance to informing its employees about energy efficiency and climate change. Environmental training delivered by expert environmental engineers employed at ENKA Headquarters and projects regularly communicate ENKA's environmental policy, targets and expectations to its employees.

Taking 2017 energy consumption as reference point, total energy consumption was lowered by 7.1% in 2018 as a result of the initiatives undertaken.



ENERGY CONSUMPTION

Levels of fuel consumption, heating and cooling, and warm water consumption for 2016, 2017 and 2018 are given in terajoules (TJ) in the table below:

(TJ)	2016	2017	2018
Fuel Consumption	161,468	157,873	146,450
Electricity Consumption	858	881	893
Consumption for Heating and Cooling Purposes	11	15	16
Hot Water Consumption	492	461	482
TOTAL	162,829	159,230	147,841

Total energy consumption of ENKA Group companies and projects in 2018 reporting period was 147,841 TJs. As a result of the savings and efficiency initiatives undertaken by ENKA Group companies and projects in 2018, energy consumption was lowered by 11,389 TJs.



Some examples of the reduction projects undertaken in 2018 are given below:

ENKA Pazarlama aims to minimise environmental negative impacts at every point throughout the supply chain and lifecycle of the machinery it supplies and is fulfilling its emissions obligations. At ENKA Pazarlama, a rapid reduction trend in motor-sourced emissions has been achieved through the use of advanced technology, training for final users, experience with equipment and proper directions.

Analyses carried out by the ENKA Pazarlama logistics team for improvements in distribution and storage have shown that heavy transport vehicles used in distribution within Turkey generate multiple times the emissions generated by passenger cars and that through route and storage optimisation, the waste of resources can be prevented and reduced. By implementing this policy, ENKA Pazarlama is able to considerably lower costs and delivery times.

It has been calculated that by using multiple storage modelling and by shifting the centre of distribution mass eastwards with increased use of the storehouse in Mersin, the ENKA Pazarlama machinery domestic distribution route, which is 500,000 kilometres per annum, can be reduced by 31%, resulting in reductions of 102 tCO₂ in greenhouse gas emissions, approximately 150 days in delivery time and around TRY 1.5 million in transport and storage costs. The company's storage strategy has been updated to reflect the new modelling.

ENKA Pazarlama also investigates whether service providers who undertake overseas transport and domestic distribution act with environmental sensitivity during supplier selection and assessment phases.

ENKA Power's total electricity consumption has been reduced by 13% from 1,303,358 KWh in 2017 to 1,136,112 KWh in 2018.

ENKA TC has carried out seven projects to reduce its power consumption in 2018. The projects, which were completed in 2018, are expected to result in savings in energy worth approximately USD 300,000 per annum.

ENKA İnşaat ve Sanayi A.Ş. took the first steps towards offsetting its carbon emissions by supporting "Solar Forests", the first non-governmental organisation developed project in Turkey to be certified by Gold Standard VER in the field of solar energy, conducted by Aegean Forest Foundation. It has been certified that ENKA's support to the project has offset emissions equal to 611 tonnes of carbon dioxide.

The renewable electricity energy to be generated by the Photovoltaic Power Plant established as part of the project will meet the power needs of the pumps to be used to irrigate 30,000 olive trees and the income to be earned from the sale of surplus power to the state will be used to plant approximately 40,000 saplings a year.

At ENKA Invest, an energy efficiency project for replacing fluorescent lighting fixtures with higher efficiency and lower energy consuming LEDs is underway. Under the project, as of the end of 2018:

- The transition to LED of technical spaces is complete.
- The LED transition of car parks is complete.
- The LED transition of shared spaces is 80% complete.
- The LED transition of tenant spaces is 45% complete.

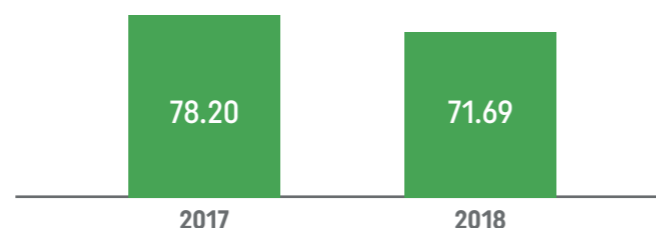
ENERGY INTENSITY

In calculating energy intensity in addition to greenhouse gas emissions, energy consumption resulting from all ENKA activities was used.

For calculating ENKA Group's energy intensity, all internal energy expenditure (fuel, power, heating, cooling, steam) of all subsidiaries and projects in the scope were included. As indicator of intensity, TJ energy expended per USD million of annual income¹³ was used.

The 2018 energy intensity of ENKA was calculated as 71.7 TJ per USD million annual income. ENKA's energy intensity has fallen by 8.3% compared to 2017.

Energy Intensity - TJ/million USD



GREENHOUSE GAS EMISSIONS

ENKA's carbon footprint calculations cover: ENKA Headquarters, ENKA Power Adapazarı, Gebze and İzmir plants, Çimtaş Steel, Cintas Pipe, ENKA Pazarlama, ENKA Foundation, ENKA Schools Kocaeli, ENKA Sports Club, ENKA TC, CCI, MKH and OMKH in Russia, the SCPX Pipeline Project in Georgia and the Kazan TAIF Business Centre Project.

Greenhouse gas emissions resulting directly from ENKA's activities are categorised as "Scope 1 – direct greenhouse gas emissions", while greenhouse emissions due to energy consumption from externally sourced electricity, heat and steam are categorised as "Scope 2 – indirect greenhouse emissions due to energy consumption". "Scope 3 – other indirect greenhouse gas emissions" category covers emissions resulting from the purchase of raw and intermediary materials, emissions from procured energy that are not covered by Scopes 1 and 2, disposal of waste (including wastewater), employee transport (busing), business travel (flights) delivery of sold or hired products to customers, fuel consumed by fuel consumed by sold goods and by branches.¹⁴

¹³ Only includes the turnover of companies covered by this report.

¹⁴ The methodologies used for calculating energy consumption and greenhouse gas emissions are the ISO 14064-1 and the GHG Protocol Corporate Accounting and Reporting Standards. For conversion factors IPCC, UNFCCC and DEFRA data were used.



IN 2018
WITHIN ENKA

1.38 million tCO₂e

GREENHOUSE GAS
WAS REDUCED

TAKING 2017 VALUES AS A POINT OF REFERENCE FOR ENKA'S CARBON FOOTPRINT, ANNUAL EMISSIONS WERE REDUCED BY 14% IN 2018 THROUGH WORK ON ENERGY AND RESOURCE EFFICIENCY AND EMISSIONS REDUCTION.

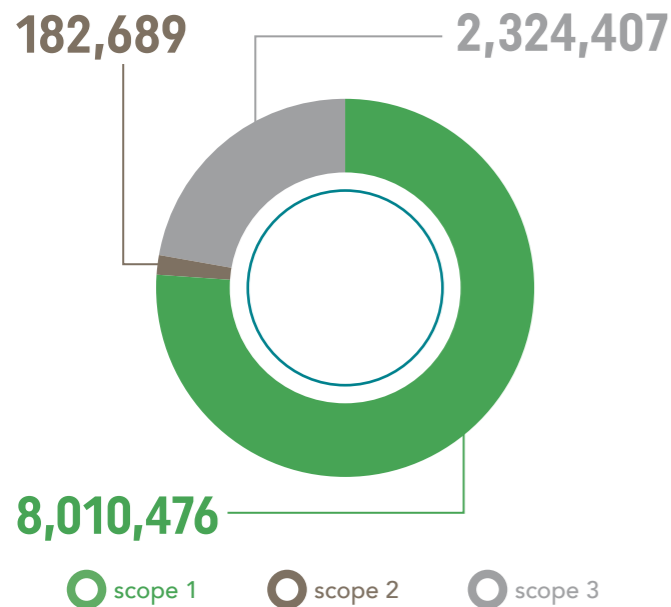
	2016 TOTAL (SCOPE 1 + SCOPE 2) (CO ₂ E TONNES)	2017 TOTAL (SCOPE 1 + SCOPE 2) (CO ₂ E TONNES)	2018 TOTAL (SCOPE 1 + SCOPE 2) (CO ₂ E TONNES)
ENKA Power	9,570,568	9,358,119	7,993,782
Cintas Pipe	5,747	5,910	7,698
City Center Investment BV	42,557	43,660	41,831
Çimtaş Steel	5,866	4,075	6,909
ENKA Headquarters	1,058	1,042	931
ENKA Pazarlama	640	1,239	1,553
ENKA TC	109,719	106,522	112,280
ENKA Foundation	2,236*	2,112*	2,086
ENKA Schools ¹⁵	866*	909*	277
Moskva Krasnye Holmy	16,668	15,821	15,255
Hotel Moskva Krasnye Holmy	9,606	8,918	7,812
Kashirskaya Plaza Project	3,236	8,707	N/A**
SCPX-Area 81 Field	4,477	2,774	N/A**
SCPX-CSG1 Field	5,376	5,132	444
SCPX-CSG-2 Field	7,734	9,702	1,203
TAIF Business Centre Project	N/A	N/A	1,104
Total	9,786,354*	9,574,642*	8,193,165

* Values have been revised for 2018.

** Project was completed

¹⁵ For the 2016 and 2017 reporting periods the term 'ENKA Schools' denoted Istanbul Schools, while for the 2018 reporting period it stands for Kocaeli Schools.

Scope 3 emissions in 2018 were at 2,324,407 tCO₂e. The Scope 1, Scope 2 and Scope 3 greenhouse gas emissions arising from ENKA operations for the 2018 reporting period are shown in the graph below:



Due to the differences among operations, greenhouse gas emissions intensity resulting from ENKA activities are calculated by area used (m²) and number of employees.

Emission Intensity (Scopes 1+2) by Area Used (m²)

COMPANY	INTENSITY	UNITS
ENKA Pazarlama	0.06	tonnes CO ₂ e/m ² /year
ENKA Power (Adapazarı, Gebze, İzmir plants)	13.98	tonnes CO ₂ e/m ² /year
Çimtaş Steel	0.14	tonnes CO ₂ e/m ² /year
Cimtas Pipe	0.14	tonnes CO ₂ e/m ² /year
ENKA TC	0.17	tonnes CO ₂ e/m ² /year
CCI	0.26	tonnes CO ₂ e/m ² /year
ENKA Schools Kocaeli	0.02	tonnes CO ₂ e/m ² /year

Emissions Intensity (Scopes 1+2) by Number of Employees)

COMPANY	INTENSITY (TCO ₂ E/EMPLOYEE)
ENKA Power	21,260.06
Cimtas Pipe	9.59
City Center Investment BV	337.35
Çimtaş Steel	8.67
ENKA Headquarters	0.09
ENKA Pazarlama	9.19
ENKA TC	282.82
ENKA Foundation İstinye Campus	20.25
ENKA Schools Kocaeli	2.80
Moskva Krasnye Holmy	142.57
Hotel Moskva Krasnye Holmy	27.41

AIR EMISSIONS

Air emissions resulting from ENKA Power natural gas cycle power plants are monitored using the Continuous Emissions Monitoring Systems (CEMS) in keeping with parameters established by legislation.

TYPE OF EMISSIONS*	2018
CO (tonnes/year)	261
NOx (tonnes/year)	4,501

*SO₂ and PM emissions are not subject to continuous measurement under the Directives on Industry Based Air Pollution Control.



WASTE MANAGEMENT

One of the important activities ENKA runs to minimise its environmental impact is the Waste Management System. At ENKA, waste is managed according to Waste Management Plans developed using the ISO 14001:2015 framework, employing the steps of the waste hierarchy and in accordance with local legislation.

The primary aim of waste management at ENKA is to eliminate waste at its source and where this is not possible, to prevent or reduce waste to the extent possible. For waste that forms despite these initiatives, recycling and reuse options are considered to minimise the impact.

At the TAIF Business Centre in Kazan, Tatarstan (RF), the use of plastic cups is no longer allowed and flasks are used instead to reduce waste. As of August, 150 kilograms of plastic waste was eliminated.

As part of ENKA's target of minimising the impact of waste on the environment, regular monitoring and measurement activities take place in order to ensure that all waste is separated and disposed by type and only licensed disposal firms are employed. Waste is disposed of using the default method of contracting disposal firms, in keeping with relevant legislation. In locations where the steps described above cannot be implemented due to the circumstances of the country of activity, waste is separated by type, amounts are recorded and disposal is carried out by certified and authorised organisations.

ENKA puts in maximum effort towards preventing leaks and spills and takes measures to prevent potential leaks from interacting with the soil and water.

Thanks to environmental training given to employees, the measures taken, environmental emergency and intervention plans, no Tier III leaks or spills occurred during the reporting year.

	TIER-I	TIER-II	TIER-III
Leak and Spill Amount	Less than 2 litres	Between 2 litres and 20 m ³	More than 20 m ³

TOTAL WASTE MASS BY TYPE AND METHOD OF DISPOSAL

The amount of waste that formed at ENKA Group companies and projects during 2018 is shown in the table below.

The data shown in the table below cover ENKA Headquarters, ENKA Power Adapazarı, Gebze and İzmir plants, Çimtaş Steel, Cimtas Pipe, ENKA Pazarlama, ENKA Foundation, ENKA Schools Kocaeli, ENKA Sports Club, ENKA TC, CCI, MKH and OMKH real estate businesses in Russia, ENKA İnşaat's TAIF Business Centre Project underway in Kazan, Russia and the SCPX Pipeline Project in Georgia.

TYPE OF WASTE	MASS IN KG	METHOD OF DISPOSAL
Metals	4,343,481	Recycling or reuse
Plastics	174,904	
Waste electrical or electronic materials	309	
Domestic Waste	493,783	
Paper	95,380	
Glass	21,480	
Diverse Construction Materials	12,917,000	
Batteries and accumulators	6,040	
Wood	1,951,910	
Hazardous waste	146,012	

Cimtas Pipe has lowered its waste paper amount by 60% between 2017 and 2018. This reduction was a result of both behavioural assessments and improvement activities. For behavioural assessments, approximately 2.5 hours/person/year of training on the main theme of Environment, Energy, Efficiency and Savings were delivered, 120 blue-green card practices were implemented, employees provided 700 items of feedback/suggestions on the environment and energy and action was taken, control was established and scoring was carried out through the monthly Environment-Energy Audits.

As part of improvement work, the IT department began informing departments of the amount of printing they carried out to raise awareness to prevent unnecessary printing, the use of double-side printing was increased, in automatic printing the use of entire sheets of paper was ensured and some paperless practices were implemented.