

ENVIRONMENT PROTECTION

Environmental Policy

OAO IDGC of Urals, being one of the largest distribution grid companies of Russia, is interested in environment safety and compliance of its operations with environmental regulations. Company's facilities (power lines, substations, production sites) have minor impacts on the environment. The Company's operations include such environmental impacts, as waste generation, physical effect, air contamination (minimal emissions); the Company has no wastewater discharges to surface water bodies.

OAO IDGC of Urals acceded to the Environmental Policy of the Energy Sector and took obligations to follow its statements in its operations. The focus of the Environmental Policy is to preserve a benevolent environment for current and future generations. Key directions of the Environmental Policy are:

- Compliance with domestic and international environmental legislation;
- Priority of prevention of adverse environmental impact over liquidation of adverse environmental consequences;
- Energy-saving and energy efficiency activities;
- Application of best-in-class affordable technologies and innovations, ensuring compliance with environmental requirements and minimization of adverse environmental impact;
- Preservation of biodiversity and rehabilitation of disturbed soils;
- Stage-by-stage decommissioning of PCB-bearing and oil-filled equipment and its replacement with environmentally-friendly one;
- Development and improvement of the Company's Environment Management System;
- Improvement of production environmental control system;
- Upgrading of environmental skills for maintenance and repairs teams;

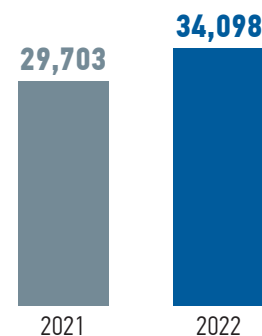
OAO IDGC of Urals has 192 facilities with an adverse impact on the environment, incl. 116 III category facilities and 76 IV category facilities. OAO IDGC of Urals has a license for collection, transportation, processing, utilization, deactivation, dumping of hazard Class I-IV waste (in terms of transportation of hazard Class I-IV waste)³⁰. The Company has 10 extraction licenses and extracts groundwater at 11 wells. In compliance with the 2018-2024 schedule on decommissioning and disposal of PCB-bearing equipment, we passed no PCB-bearing equipment for disposal during 2022. We have only 2,426 elements of static capacitors left on the "Mikhailovskaya" substation (out of 8,666 static capacitors) after passing 6,240 static capacitors for disposal in 2015-2019. Replacement of 2,426 elements of static capacitors is covered by the investment program, passing for disposal is scheduled in 2023-2024.

In 2022, the Company conducted activities to preserve biodiversity and land. 5,177 bird-protection devices were mounted on 6-35kV power lines in the Perm, Sverdlovsk and Chelyabinsk regions. The bird-protection devices were mounted on power lines located near water reservoirs, bird migration routes and nature reserves. During the reported period, we mounted such devices near the Donguzlovsky state biospheric reserve in the Chelyabinsk region. We also conducted reforestation activities near commissioned grid facilities of Permenergo's Central Electric Grids (total area – 1.6 ha). In 2022, the Company arranged a set of trainings for the employees: 64 directors and specialists underwent training on environment protection and ecological security, 80 employees were trained to process hazard Class I-IV waste.

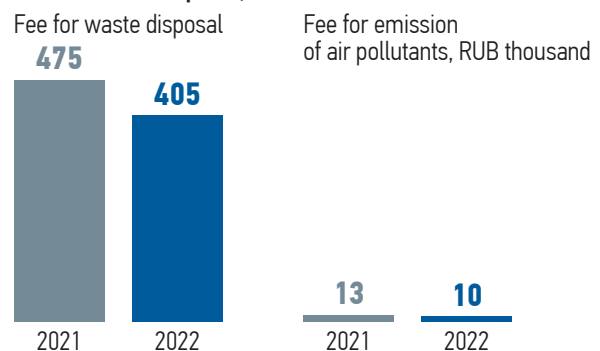
Environmental Costs

Increase of 2022 environmental costs, in comparison to 2021, was due to development of drafts of sanitary protection zones (30 sites), inventories, reforestation activities and increase in the number of mounted bird-protection devices. A slight decrease of "polluter-pays" charges in 2022 was due to recalculation of target and actual "polluter-pays" charges.

Environmental costs, RUB thousand



Fee for waste disposal, RUB thousand



Protection of air, water and land

Protection of air, water and land

The primary air contamination sources are motor vehicles (motor vehicle storage shed, open air or indoor car parks), machine tool use area, welding stations and workshops. All contamination sources have a minor negative impact on the environment. Under the environment control programs the Company conducts laboratory and instrumental surveys of stationary waste resources, controls the quality of air on the boundary of sanitary protection zones, and prepares survey protocols every year.

In 2022, the Company conducted laboratory survey of air, impact of physical factors on 108 sites. Survey protocols were received. Survey showed that emissions are within the limits. Our production sites do not produce over-the-limits noise, therefore, no noise barriers are required. The Company does not use purification equipment. The volume of air pollutant emissions in 2022 decreased by 12% due to the closure of woodwork units, paint shops, transport renewal and air contamination sources (after inventory procedures).

Protection and sustainable use of water resources

The Company concludes contracts on water supply and disposal on time, conducts administrative procedures, improves performance discipline in terms of energy saving, conducts laboratory surveys of quality of ground water, oversees compliance with license agreements.

All requirements of license agreements are complied with on time and in full. We conducted laboratory surveys of ground water quality. A 1% decrease of water consumption and wastewater disposal in 2022, in comparison to 2021, was influenced by water saving measures in office and production buildings.

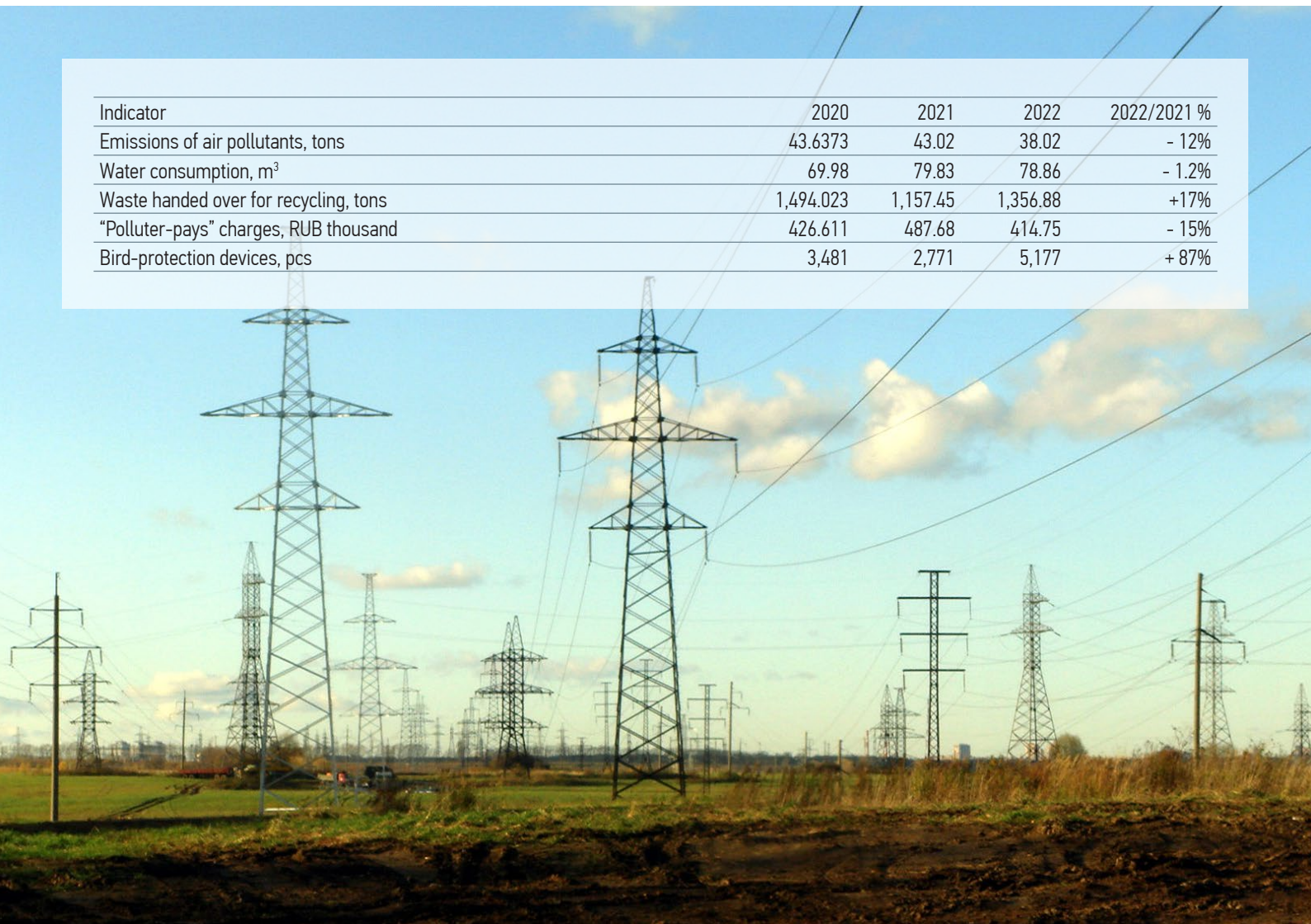
Conservation of land

Pursuant to the Regulations³¹, in compliance with the approved annual schedule, the Company conducts production environmental control. In 2022, all scheduled inspections were conducted, 213 sites in branches and production departments were inspected. 95% of activities to eliminate exposed violations were planned and conducted in 2022, the rest planned for production programs in future periods.

Wastes from the Company's operations are stored at specially equipped waste accumulation locations (containers, reservoirs, sites located on impervious surface), easily accessible for lifting devices and motor vehicles. Waste accumulation sites are marked and located in line with approved schemes. Memos on waste accumulation sites are placed on stands. Wastes are timely handled for utilization, decontamination, allocation under relevant contracts to prevent over-accumulation of waste on production sites. Employees conduct visual checks of waste accumulation locations and compliance with laws. In 2022, the Company arranged 2 sites for containers for solid municipal waste, 1 site for oil waste, 1 site for ferrous metals, arranged a waste paper accumulation site, acquired 102 containers for oily rags, solid municipal waste, factory waster, oil waste, 33 demercurization sets, 44 spill pans for oil waste, 5 canvas covers to protect wastes from precipitation, 1080 liters of Trans-neft decontaminant, 5,18 tons of absorbent to liquidate possible oil product splashes, 300 sorbing napkins. All the measures reduce adverse impact on land.

We conducted reforestation activities near commissioned grid facilities of Permenergo's Central Electric Grids (total area – 1.6 ha). We also arranged sanitation and beautification of territories near its buildings (branches, PDZ), substations, power masts and other constructions.

Indicator	2020	2021	2022	2022/2021 %
Emissions of air pollutants, tons	43.6373	43.02	38.02	- 12%
Water consumption, m ³	69.98	79.83	78.86	- 1.2%
Waste handed over for recycling, tons	1,494.023	1,157.45	1,356.88	+17%
"Polluter-pays" charges, RUB thousand	426.611	487.68	414.75	- 15%
Bird-protection devices, pcs	3,481	2,771	5,177	+ 87%





Energy consumption and energy-saving

The Company has the Energy-saving and Enhanced Energy Efficiency Program till 2025, approved by the Board of Directors³². The Program stipulates the list of target indicators based on the Federal Law³³ and decrees of regional tariff regulators.

Target indicator	2022 target value	2022 actual value
Electricity losses, million kWh	3,996.7	3,881.3
In-house load of substations, million kWh	67.1	75.9
Electricity consumption for economic needs, million kWh	65.5	71.4
Thermal power consumption for economic needs, GCal	42,009.7	47,855.7
Natural gas consumption for economic needs, thousand m ³	561.0	563.8
Hot water consumption for economic needs, thousand m ³	4.1	3.3
Cold water consumption for economic needs, thousand m ³	102.4	102.9
Gasoline consumption by vehicles and machinery, thousand liters	5,746.6	5,759.3
Diesel consumption by vehicles and machinery, thousand liters	5,849.6	6,466.2
Equipment with LED energy-saving lighting facilities, %	82.6	91.2

In 2022, almost all target indicators showed the increase of actual values against target ones, with mainly positive dynamics on the previous period. Reduction of electricity losses was mainly due to the conduct of the side activities and cancellation of the contract on the lease of OOO AES Invest's networks. An increase of in-house load of substations was impacted by a temperature factor – more severe autumn-winter conditions (when the plan was drafted, 2020 was taken as the base year, with average annual temperature higher by 1.5 °C in all areas of the Company's presence). Still, the indicator showed positive dynamics on 2021 (-2.7%) due to the effect from the target-oriented activities. The growth of consumption of resources for economic needs was also impacted by a temperature factor (compared to the base year), causing resource consumption to rise during the heating season. Still, the indicators showed positive dynamics on 2021 (-3.6%) due to the effect from the target-oriented and side activities.

Reduced consumption of natural resources was due to the execution of the target-oriented and side activities as well as repairs accompanied by water cut-offs. Increase of consumption of gasoline and diesel was due to changes in the list of works, increased connection-related work scope, delivery of materials to remote parts of the country and participation in rehabilitation of energy infrastructure, but the influence of the factors was reduced by the implemented activities.

Despite general reduction of consumption of natural resources, in comparison to 2021, the target values were not achieved due to the fact that 2020 was chosen to be the base year, being abnormally warm and having the longest period of remote work and significantly reduced volume of operations by transport and machinery. This resulted in reduced target values related to the consumption of resources in 2022-2025. Still, it should be noted that consumption of resources does not exceed values of the previous periods and have a downward trend.

A target indicator "Equipment with LED energy-saving lighting facilities" was included into Energy-saving program in 2017. In 2020 it totaled 82%, the target value was outperformed. Nevertheless, we continued our efforts, with the target totaling 91.2% in 2022. The majority of target-oriented and side activities of the Energy-saving Program was completed. We also performed unscheduled activities focusing on reduction of electricity losses and consumption of resources for economic needs.

65.3 RUB million

Total effect from
the Energy-saving Program
for 2022

Activities	MU	Actual effect in 2022		
		In MU	tfoe	RUB million
Reduction of electricity losses	Million kWh	12.9	1,542.7	38.2
Reduction of in-house load of substations	Million kWh	1.0	123.0	3.0
Reduction of consumption for economic needs	Million kWh	2.2	259.3	7.2
	Thousand GCal	1.5	219.6	2.5
	Thousand m ³ (water)	2.4		0.08
Reduction of fuel consumption	Thousand liters (gasoline)	155.9	176.5	6.0
	Thousand liters (diesel)	173.9	214.3	8.4
Total effect on target-oriented activities	Million kWh	16.0	1,925.0	48.4
	Thousand GCal	1.5	219.6	2.5
	Thousand m ³ (water)	2.4		0.08
	Thousand liters	329.7	390.8	14.4
Total effect on the Program (incl. side activities)	Total		2,535.4	65.3
	Million kWh	133.0	15,959.8	386.8
	Thousand GCal	2.5	359.0	4.0
	Thousand m ³ (gas)	4.4	5.0	0.02
Total effect on the Program (incl. side activities)	Thousand m ³ (water)	2.9		0.1
	Thousand liters	349.0	413.7	15.2
	Total		16,737.5	406.1

Total effect from target-oriented activities under the Energy-saving Program for 2022 totaled 16.0 million kWh, 1,536.9 GCal, 2.4 thousand m³ of water and 329.7 thousand liters of gasoline and diesel or RUB 65.3 million. Total effect from target-oriented activities of the Energy-saving Program, Reduction of Losses Program and other side activities in 2022 reached 16,737.5 tfoe or RUB 406.1 million in money terms.

Indicator	MU	2020	2021	2022	2022/ 2021, %
Consumption of fuel and energy resources for economic needs (office and production buildings)	Thousand tfoe	15,6	16,7	16,1	-3,6
	RUB million	345,8	380,6	389,7	2,4
Consumption of fuel by transport and machinery	Thousand tfoe	13,9	14,0	14,5	3,3

Consumption of energy resources in 2022

Resources	MU	2022 target value	2022 actual value	Variance, %
Nuclear energy		N.A.		
Thermal power	GCal	42,009.7	47,855.7	13.9
	RUB million	74.2	75.4	1.7
Electricity	Million kWh	4,062.2	3,952.7	-2.7
	RUB million	12,120.3	11,878.4	-2.0
Electromagnetic energy		N.A.		
Oil		N.A.		
gasoline	Thousand liters	5,746.6	5,759.3	0.2
	RUB million	233.5	219.5	-6.0
diesel	Thousand liters	5,849.6	6,466.2	10.5
	RUB million	253.8	283.7	11.8
Mazut		N.A.		
Natural gas	Thousand m ³	561.0	563.8	0.5
	RUB million	3.1	3.1	-2.1
Coal		N.A.		
Oil shales		N.A.		
Peat		N.A.		
Others		N.A.		

