

Joint Report



on Occupational Health, Safety,
and Environment (OHSE)

Contents

1. Introduction to the ORLEN Unipetrol Group	3
2. Important milestones of the ORLEN Unipetrol Group in 2023	3
3. The role of employees	3
4. Public communication	4
5. Integrated management system policy and integrated management systems	4
6. Responsible Business in Chemistry programme – Responsible Care	5
7. Compliance with environmental protection laws	5
8. Integrated pollution prevention and control	6
9. Overview of valid integrated operating permits	7
10. Emissions into the environment	7
10.1 Wastewater discharge	7
10.2 Waste Management	10
10.3 Air protection	11
10.4 CO ₂ emissions and allowance trading	13
10.5 Other greenhouse gases	14
11. Management of primary sources of raw materials and energy	14
12. Environmental investments	17
13. Environmental operating costs	18
14. Total environmental protection costs	19
15. Remediation of old environmental burdens	20
16. Chemical safety	23
17. Occupational health and safety, process safety and fire protection	24
18. Prevention, personal protective equipment	25
19. Quality of the work environment	25
20. Healthcare and prevention	25
21. Major accident prevention	25
22. Major accidents	27
23. TRINS transport information and accident system	27

1. Introduction to the ORLEN Unipetrol Group

The Group specialises in refining and petrochemical production and sales in the Czech Republic and the Central European region. The Group companies mainly produce and sell refinery products, chemical and petrochemical products, polymers and specialty chemicals. The Group also operates its own transport services and funds its own research and development. ORLEN Unipetrol is the leading refining and petrochemical group in the Czech Republic and a major actor in Central and Eastern Europe. The Group focuses on three strategic business segments:

- ▷ oil refining and wholesale of refinery products
- ▷ petrochemical and agrochemical production
- ▷ retail sale of motor fuels

ORLEN Unipetrol is the 100% owner of the following companies:

- ▷ ORLEN Unipetrol RPA – a producer of and trader in refinery, petrochemical and agrochemical products, the largest oil processor in the Czech Republic for a wide range of products with a total annual capacity of 8.7 million tonnes. ORLEN Unipetrol RPA includes the network of ORLEN petrol stations, Polymer Institute Brno and, from 1 November 2023, Kolín Complex Section – originally incorporated into PARAMO.
- ▷ ORLEN Unipetrol Doprava – a professional railway carrier not only for chemical and petrochemical products, including related services.
- ▷ PARAMO – the largest producer of asphalt, asphalt products and process oils, and which also operates a fuel terminal.
- ▷ Spolana – a member of the ORLEN Unipetrol Group since 2016, a producer of polyvinyl chloride, caprolactam, sulphuric acid and ammonium sulphate.

The following refinery and petrochemical products are the flagship products of the ORLEN Unipetrol Group:

- ▷ Refinery products: motor petrol, diesel fuel, light fuel oil, aviation fuel, LPG, asphalts, naphtha, lubricating and fuel oils.
- ▷ Petrochemical products: ethylene, propylene, C4 fraction, benzene, high density polyethylene, polypropylene, PVC, DCPD.
- ▷ Agrochemical products: ammonia, highly conductive carbon black, caprolactam, sulphuric acid, oleum and ammonium sulphate.

2. Important milestones of the ORLEN Unipetrol Group in 2023

The following events can be considered the most important events of 2023 for the ORLEN Unipetrol Group in terms of occupational health, safety & environmental protection:

- ▷ As of 1 November 2023, Kolín Complex Section – originally incorporated into PARAMO - was incorporated into ORLEN Unipetrol RPA (Logistics Unit).
- ▷ Since March 2023, SPOLANA s.r.o. has been able to declare the properties of its products and their environmental impact through an EPD (Environmental Product Declaration).

3. The role of employees

In the ORLEN Unipetrol Group companies, employees are considered to be key players in environmental protection, occupational health and safety and fire protection activities. The individual companies have therefore implemented an effective training system for all employees. Employee training and education are part of the management systems in place and are subject to regular review, evaluation and supplementation in the companies in accordance with the ISO 9001, 14001, 45001 and 50001 standards.

All employees are actively and constantly involved in the creation and application of occupational health, safety and environmental protection.

Proper training does not only apply to the companies' own employees, but also to employees of external companies operating at the production sites. Obligations related to occupational health, safety, environmental protection and fire protection are part of the contracts signed with individual contractors.

Employees are further trained through becoming familiar with policies, operating regulations, and organisational and management standards in environmental protection, health and safety, fire protection, the environmental aspects of their activities, and with the goals and programmes defined for their workplaces.

The active role of employees is also supported by the implemented IDEA platform, through which the Group's employees are motivated to submit their own suggestions to help meet and improve ORLEN Unipetrol Group goals, including in environmental protection and occupational health and safety.

4. Public communication

To communicate with the public, the ORLEN Unipetrol Group primarily uses the following:

- ▷ Compliance with corporate social responsibility (CSR) principles by the ORLEN Unipetrol Group companies towards cities and municipalities in the surrounding areas.
- ▷ Informing about the company's environmental impact in the surrounding areas through the participation of representatives of the ORLEN Unipetrol Group management in public meetings of the councils of neighbouring municipalities.
- ▷ Regular meetings with the mayors of the municipalities in the vicinity of the production plants, during which the participants are informed about all activities, including environmental protection and information on the occurrence of non-standard operating situations.
- ▷ Operating the Green Line of the Most and Kralupy nad Vltavou Ecological Centres and internal communication sources (print, intranet and email communication).
- ▷ Online connection of the Police of the Czech Republic and the City Police in Litvínov and Most to the company warning system at Chempark Záluží.
- ▷ Sending emergency text messages via the Most and Litvínov city information channel.
- ▷ Operation warning and alert signalling and sound systems at production sites and in the surroundings areas.
- ▷ Sharing information with the public through the Most and Kralupy nad Vltavou Ecological Centres.
- ▷ Cross-border cooperation with Saxony through a joint working group and through the Most Ecological Centre.
- ▷ Internet and social media: Facebook, X (Twitter), Instagram, LinkedIn and YouTube.
- ▷ Interactive and educational programmes for primary and secondary school students, such as A Journey to the Secrets of Oil.

5. Integrated management system policy and integrated management systems

The integrated management system policy is established around the basic values of the ORLEN Unipetrol Group and the ORLEN Group, namely **Responsibility - Development - People - Energy - Reliability**. In line with the strategic focus of the Group companies, the policy includes commitments in occupational health and safety, environmental protection, quality, energy management, ethical standards and property protection.

The integrated management system policy is published on the websites of the individual companies.

The management systems in place are an important factor in environmental protection, product quality, occupational safety and health protection, fire protection and major accident prevention. ORLEN Unipetrol Group companies have implemented and certified their quality management systems (QMS), environmental management systems (EMS) and health and safety management systems (HSMS) as a guarantee of their systematic approach towards customers and their needs, product and service quality, environmental protection and occupational health and safety. Most companies have implemented and certified their own energy management systems (EnMS), by which these companies declare their commitment to energy consumption optimisation while at the same time also meeting the legislative requirements of the Energy Management Act.

The aforementioned management systems are certified according to the ISO 9001, ISO 14001, ISO 45001 and ISO 50001 international standards.

In May and June 2022, a recertification audit of the QMS, EMS, HSMS and EnMS management systems was conducted by ORLEN Unipetrol, ORLEN Unipetrol RPA (incl. the ORLEN Unipetrol RPA s.r.o. - BENZINA, registered branch and Polymer Institute Brno), ORLEN Unipetrol Doprava and Petrotrans. The LRQA Czech Republic s.r.o. certification organisation confirmed compliance with the system standards and issued a certificate for the next three-year period to all the above companies.

PARAMO underwent a surveillance audit by LRQA Česká republika s.r.o. covering all three systems – EMS, HSMS and QMS - in May 2023.

The second QMS, EMS, SMS and EnMS surveillance audit took place at SPOLANA s.r.o. from 30 May to 2 June 2023. The audits were conducted by the LLRQA Česká republika s.r.o. certification company (as a result of the implementation of a single certification company for the entire ORLEN Unipetrol capital group).

ORLEN Unipetrol RPA has a certified system of sustainability in the production of motor fuels with bio-based components (ISCC). The last audit, which verified compliance with the system requirements, was conducted in November 2023 by TÜV SÜD Czech, s.r.o. The company has also had a certified sustainability system for the production of monomers and plastics from sustainable raw materials (ISCC PLUS) since November 2021. The system was recertified in October 2023.

ORLEN Unipetrol Doprava has implemented the Safety and Quality Assessment System for Logistics Service Providers (SQAS). The system was successfully recertified in October 2021 (with validity to 2024).

ORLEN Unipetrol Group certified/verified management systems in 2023

Company	ISO 9001	ISO 14001	ISO 45001	ISO 50001	SQAS	RC	ISCC	ISCC PLUS
ORLEN Unipetrol	●	●	●	●		●		
ORLEN Unipetrol RPA (incl. ORLEN Unipetrol RPA s.r.o. - BENZINA, registered branch)	●	●	●	●		●	●	●
ORLEN Unipetrol RPA – PIB registered branch	●			●				
ORLEN Unipetrol Doprava	●	●	●	●	●	●		
PARAMO*	●	●	●					
Spolana	●	●	●	●		●		

*Since 1 November 2023, Kolín Complex Section – originally incorporated into PARAMO - has been incorporated into ORLEN Unipetrol RPA. For the purposes of the annual report, data for 2023 are reported for the whole of PARAMO together.

Certificates are published on the websites of the individual companies.

6. Responsible Business in Chemistry programme – Responsible Care

The Responsible Care (RC) programme is a voluntary, globally accepted initiative by the chemical industry aimed at supporting its sustainable development by increasing the safety of its operating facilities and product transport, and by improving the protection of human health and the environment. The RC programme is a long-term strategy coordinated by the International Council of Chemical Associations (ICCA) and the European Chemical Industry Council (CEFIC) in Europe. The RC programme's contribution to sustainable development was recognised at the World Summit in Johannesburg with the United Nations Environment Programme award.

The national version of the RC programme is the Responsible Business in Chemistry programme officially launched by the Minister of Industry and Trade and the President of the Association of the Chemical Industry of the Czech Republic (SCHP ČR) in October 1994. The programme has met the requirements of the Responsible Care Global Charter since 2008.

The ORLEN Unipetrol Group, which includes ORLEN Unipetrol a.s., ORLEN Unipetrol RPA s.r.o., incl. ORLEN Unipetrol RPA s.r.o. - BENZINA, registered branch and ORLEN Unipetrol Doprava s.r.o., successfully defended its right to use the Responsible Care programme logo in 2021. The three companies have the right to use the Responsible Care programme logo until 2025, when they will once again go through the public defence system.

PARAMO is no longer a member of the Czech Chemical Industry Association and therefore does not use the authorisation, although it continues to comply with the principles.

Spolana defended its right to use the RC programme logo for the tenth time in 2022. It successfully defended its right to use the RC programme logo for another five years, i.e. until October 2027, in 2022.

7. Compliance with environmental protection laws

In 2023, it was found that two conditions set out for air protection under the integrated permit for the "Ethylene Unit" facility were breached at ORLEN Unipetrol RPA. An inspection revealed that the operator had not met the deadline for putting the FC-101 equipment, a device for separating solid pollutants, into permanent operation, and there was also a breach of the operating rules, as the operator had not complied with the stipulated time to replace the internal liner of the FC-101 cyclone set out in the operating rules. Another inspection found a breach of one water-protection condition stipulated in the integrated permit for the "Energy Services Unit" facility, namely that a sample of the wastewater discharged from outlet No. 1.C on 22 March 2022 exceeded the pH indicator limit value (6.5–8.5), as the measured value was 8.9.

The operating conditions and emission limits set out in the integrated permits for all other ORLEN Unipetrol RPA facilities were complied with in 2023.

In 2023, SPOLANA proceeded in accordance with legislation, while emission limits were exceeded. In the case of the non-compliance with the HCl emission limit at the exhaust from the waste substances thermal treatment unit (WTT), the reason was a non-standard regime for the splitting of exhaust gases to the combustion furnaces due to a clogged anti-ignition fuse, which was subsequently cleaned. In the case of the non-compliance with the VCM emission limit in wastewater from vinyl chloride production, the cause was identified as the decomposition of an unknown substance in the technological equipment. The remedial measure consisted of repeated flushing of the technology, boiling of the equipment and stabilisation of production.

All the activities of ORLEN Unipetrol Doprava, PARAMO and Spolana, except for the VCM installation and the related WTT equipment, were carried out in full compliance with environmental protection legislation in 2023.

8. Integrated pollution prevention and control

The obligations of selected industrial enterprises in integrated pollution prevention and control (IPPC) are regulated by Act No. 76/2002, as amended. All ORLEN Unipetrol RPA production units, including the refineries in Litvínov and Kralupy nad Vltavou, are subject to the IPPC Act and have valid integrated permits issued by the regional authorities of the Ústí nad Labem and Central Bohemian Regions. These permits are updated on an ongoing basis in response to the requirements of amended legislation and compliance with deadlines, the implementation of investment projects, changes in technological equipment and/or changes in the substances used. A total of 12 changes to integrated permits were issued for ORLEN Unipetrol RPA facilities in 2023. The changes included, but were not limited to, the following:

- ▷ extension of the Kralupy Refinery permit for the discharge of wastewater to 31 December 2027, and the abandonment of sorting certain wastes
- ▷ modification of the conditions of the Kralupy Refinery integrated permit in connection with the planned Flue Gas Heat Recovery and Extension of Bottling on Track 48 investment projects
- ▷ modification of the conditions of the Litvínov Refinery integrated permit in connection with the planned Reconstruction of the Asphalt Filling Station and Disposal of the Decommissioned Claus 2 Technology project
- ▷ modification of the conditions of the Litvínov Refinery integrated permit in connection with the planned Cold Asphalt project
- ▷ issuance of a permit for the operation of a new production unit for the preparation of dust-free mixtures of additives for plastics
- ▷ extension of the permit for wastewater discharge from the Chempark Záluží site
- ▷ increase in the maximum permitted level at the New Venus Ash Dump
- ▷ approval of the operation of a new hydrogen bottling station
- ▷ modification of equipment descriptions or the wording of integrated permit conditions, approval of updated versions of operating rules for air-polluting sources, and operator emergency plans

ORLEN Unipetrol RPA and SPOLANA were involved, through a technical working group established by the Ministry of Industry and Trade of the Czech Republic, in the preparation of a document on the best available techniques for large-volume inorganic chemicals.

Valid integrated permits have been issued for all technologies operated by PARAMO. The Pardubice Profit Centre obtained a joint integrated permit for energy operations, asphalt operations, fuel operations and oil operations issued by the Regional Authority of the Pardubice Region. During 2023, the IP was updated three times (compliance of emission limits with the BAT assessment, abandonment of separate waste concentration, replacement of the existing K2 boiler with a K5 boiler, ETBE storage and distribution). The Kolín Profit Centre obtained one integrated permit issued by the Regional Authority of the Central Bohemian Region. In 2023, the IP was updated twice (change of owner of the Kolín Profit Centre site).

Spolana has obtained a total of four integrated permits for the operation of the facility. The Regional Authority issued eight changes to the integrated permits (IPs) in 2023. The changes concerned the approval of updated emergency plans, the modification of binding conditions for the period of termination of operation, the approval of Supplements to already approved Basic Reports, the approval of the updated project for the termination of operation of amalgam electrolysis, and the harmonising of selected conditions with the actual situation. In 2022 and 2023, Spolana applied for further changes to the integrated permits, yet some procedures were not completed in 2023.

9. Overview of valid integrated operating permits

Production unit	Integrated permit – (issued by)
ORLEN Unipetrol RPA	
Production of polypropylene and polyethylene	Regional Authority of the Ústí nad Labem Region
Ethylene Unit	Regional Authority of the Ústí nad Labem Region
Ammonia production	Regional Authority of the Ústí nad Labem Region
Production plant – Gasification of mazut	Regional Authority of the Ústí nad Labem Region
Energy Services Unit	Regional Authority of the Ústí nad Labem Region
Dicyclopentadiene production	Regional Authority of the Ústí nad Labem Region
Litvínov Refinery	Regional Authority of the Ústí nad Labem Region
Kralupy nad Vltavou Refinery	Regional Authority of the Central Bohemian Region
Heat and Power Plant T600	Regional Authority of the Ústí nad Labem Region
PARAMO	
Refinery operation, Pardubice Profit Centre	Regional Authority of the Pardubice Region
Kolín Profit Centre	Regional Authority of the Central Bohemian Region
Spolana	
Energy and toxic waste landfill (TWL)	Regional Authority of the Central Bohemian Region
Chlorine and sodium hydroxide production using amalgam electrolysis	Regional Authority of the Central Bohemian Region
Polyvinyl chloride (PVC) production	Regional Authority of the Central Bohemian Region
Caprolactam and sulphuric acid production	Regional Authority of the Central Bohemian Region

10. Emissions into the environment

Pollutant emissions into the environment have stabilised over the last five years thanks to extensive environmental investments made in the previous decade. The individual emissions into various environment components are described in the following chapters.

10.1 Wastewater discharge

At ORLEN Unipetrol RPA, the quantity of discharged wastewater corresponds to the long-term average and is partly affected by precipitation. The concentration of pollutants in wastewater has been stable for a long time and their quantities are directly proportional to the quantity of wastewater discharged. In terms of the amount of water and the content of pollutants in it, the 2023 values did not deviate significantly from the values of recent years.

The Kralupy Refinery underwent an extensive renovation of the wastewater treatment plant from 2013 to 2015. The treatment plant completed a two-year trial operation in 2016 and 2017, and permanent operation began on 1 January 2018. In 2019, the validity of the existing limits for wastewater discharge was extended until 31 December 2023. The years 2022 and 2023 were reassessed according to the results from the ORLEN Unipetrol RPA s.r.o. accredited laboratory. All limits and conditions for the operation of the WWTP were also met in 2023.

The amount of discharged pollution at Spolana is stable, with the exception of mercury, the discharged amount of which has decreased substantially since the shutdown of amalgam electrolysis in 2017. At the final point of treated wastewater discharge into the Elbe bearing the designation K10, the "p" limits of the following indicators were exceeded in 2023, however the permissible numbers of samples non-compliant with the "p" limit were not exceeded, and the "m" limits were not exceeded. The 1,2-dichloroethane indicator (two out of five possible exceedances), the ammonium N-NH_4^+ indicator (1/5), the RAS dissolved inorganic salt indicator (1/5).

Paramo – the rate of transmitted wastewater pollution has not changed significantly over the years. The AOX indicators increased slightly at the Pardubice Profit Centre due to a change in the operating mode of the HMGWP system and the intensive production of oxidised asphalts combined with a lower ratio of dilution water due to lower atmospheric precipitation. Wastewater pollution at the Kolín Profit Centre (to the Hluboký potok stream) is steady.

The wastewater pollution indicators for the BENZINA registered branch cannot be listed as the monitored parameters are inconsistent in the petrol station network and thus cannot be reported in the overview. In the overall evaluation of the individual petrol stations, the monitored parameters were not exceeded in terms of the "m" value.

The pollution contained in the ORLEN Unipetrol Doprava wastewater is directly proportional to the number of treated facilities containing harmful substances.

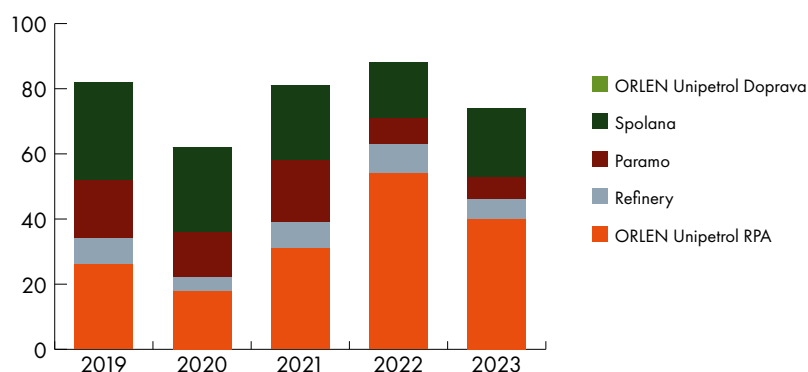
Pollution discharged in wastewater in the group – selected indicators (t/year)¹⁾

Company	Indicator	2019	2020	2021	2022	2023
ORLEN Unipetrol RPA	BOD ₅	26	18	31	54	40
Refinery²⁾	BOD ₅	8	4	8	9	6
PARAMO*	BOD ₅	18	14	19	8	7
Spolana	BOD ₅	30	26	23	17	21
ORLEN Unipetrol Doprava	BOD ₅	0	0	0	0	0
ORLEN Unipetrol Group	BOD ₅	82	62	81	88	74

¹⁾ BENZINA is not monitored globally. No representative data can be assessed.

²⁾ Only the Kralupy site; there is no direct discharge in Litvínov.

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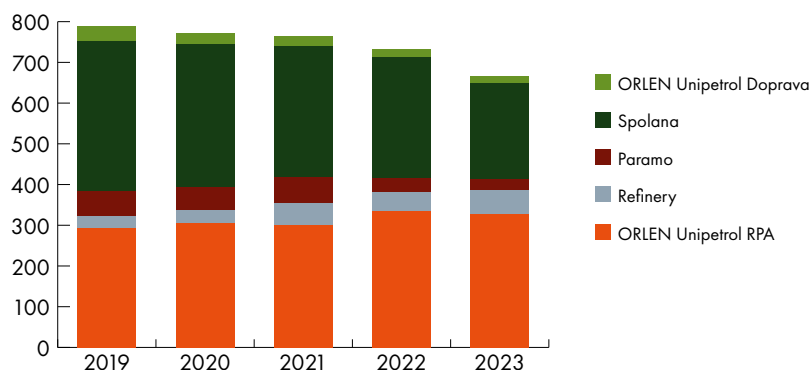


Company	Indicator	2019	2020	2021	2022	2023
ORLEN Unipetrol RPA	COD _{Cr}	293	305	301	334	327
Refinery²⁾	COD _{Cr}	29	31	52	48	59
PARAMO*	COD _{Cr}	61	57	65	34	28
Spolana	COD _{Cr}	370	352	321	296	235
ORLEN Unipetrol Doprava	COD _{Cr}	36	26	25	21	17
ORLEN Unipetrol Group	COD _{Cr}	789	771	764	733	666

¹⁾ BENZINA is not monitored globally. No representative data can be assessed.

²⁾ Only the Kralupy site; there is no direct discharge in Litvínov.

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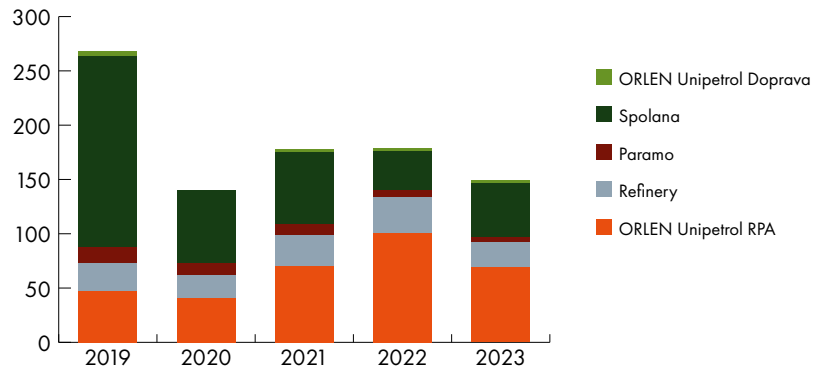


Company	Indicator	2019	2020	2021	2022	2023
ORLEN Unipetrol RPA	SS	47	41	70	101	69
Refinery²⁾	SS	26	21	29	33	23
PARAMO*	SS	14	11	10	6	5
Spolana	SS	176	63	66	36	49
ORLEN Unipetrol Doprava	SS	5	4	3	3	3
ORLEN Unipetrol Group	SS	268	140	178	179	149

¹⁾ BENZINA is not monitored globally. No representative data can be assessed.

²⁾ Only the Kralupy site; there is no direct discharge in Litvínov.

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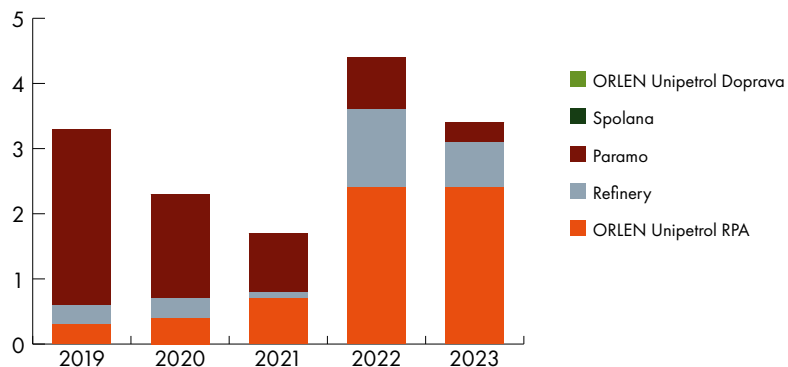


Company	Indicator	2019	2020	2021	2022	2023
ORLEN Unipetrol RPA	oil products	0.3	0.4	0.7	2.4	2.4
Refinery²⁾	oil products	0.3	0.3	0.1	1.2	0.7
PARAMO*	oil products	2.7	1.6	0.9	0.8	0.3
Spolana	oil products	-	-	-	-	-
ORLEN Unipetrol Doprava	oil products	0	0	0	0	0
ORLEN Unipetrol Group	oil products	3.3	2.3	1.7	4.4	3.4

¹⁾ BENZINA is not monitored globally. No representative data can be assessed.

²⁾ Only the Kralupy site; there is no direct discharge in Litvínov.

*Since 1 November 2023, Kolín Complex Section – originally incorporated into PARAMO - has been incorporated into ORLEN Unipetrol RPA. For the purposes of the annual report, data for 2023 are reported for the whole of PARAMO together.



10.2 Waste Management

The amount of waste generated at ORLEN Unipetrol RPA in 2023, including the Litvínov Refinery, was higher than in previous years. The total amount of waste from the operation of the refineries was mainly influenced by the temporary need to transfer waste sulphide lyes from Litvínov Refinery as part of waste management, and the production of soil as hazardous waste originating from investment activities. The increase in the amount of waste at ORLEN Unipetrol RPA reflected the cleaning of equipment associated with wastewater treatment, which takes place in multi-year periods.

At PARAMO, there was a decrease in waste generation due to the activities of contractors involved in the shutdown of production units at the Kolin Profit Centre who became waste generators. The standard amount of waste was generated at the Pardubice Profit Centre.

The decrease in the generation of hazardous waste by ORLEN Unipetrol Doprava is related to reduced capacity utilisation at the steaming station in Litvínov. The reduction in the generation of other waste was associated with waste prevention, and no decommissioned railway vehicles were disposed of.

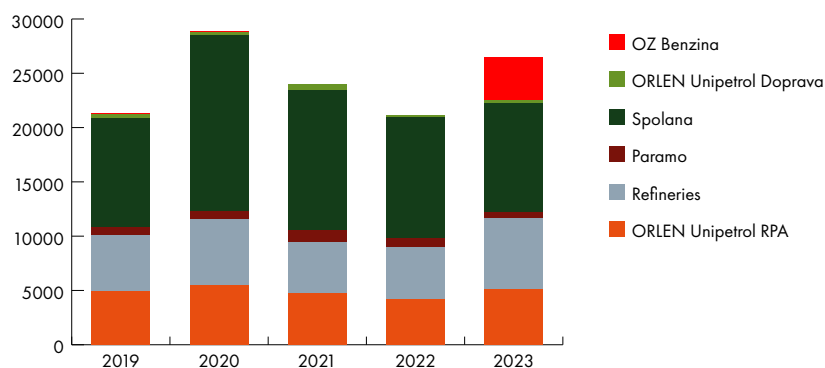
The increase in the generation of hazardous waste at Spolana over the last few years is related to the decommissioning, sanitation and gradual dismantling of selected technological units of the former amalgam electrolysis plant - hazardous waste generation was low in 2023. The fluctuations in the generation of other wastes are related to the intermittent disposal of metal waste, while a significant proportion of other waste is made up of the almost constant production of sludge from the wastewater treatment process every year.

A new waste management system is being gradually implemented at the BENZINA registered branch, where the company will become a generator of waste from the operation of individual petrol stations. The company is currently a generator of municipal waste, including its sortable components, and hazardous waste from customers. The petrol station lessee, as an independent business entity, is the originator of the remaining waste generation.

Waste generation in the Group (t/year) – total

Company	2019	2020	2021	2022	2023
ORLEN Unipetrol RPA	4 896	5 439	4 786	4 207	5 141
Refinery	5 180	6 092	4 671	4 712	6 458
PARAMO*	788	796	1 087	829	627
Spolana	9 997	16 152	12 854	11 147	9 997
ORLEN Unipetrol Doprava	387	362	564	213	353.29
BENZINA registered branch	16	18	35	40	3 868
ORLEN Unipetrol Group	21 264	28 859	23 997	21 145	26 444

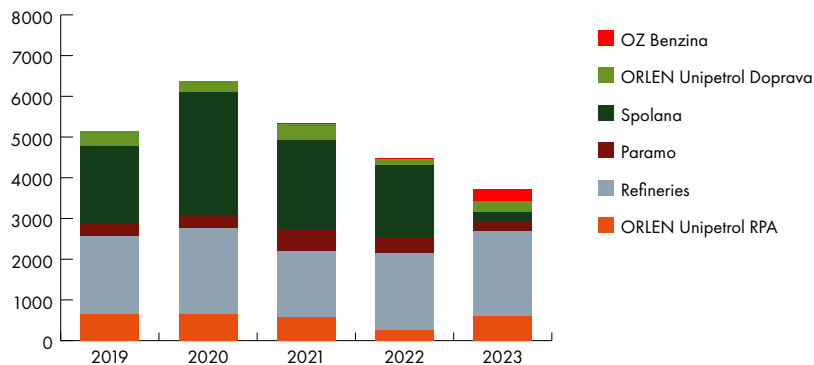
*Since 1 November 2023, Kolin Complex Section – originally incorporated into PARAMO - has been incorporated into ORLEN Unipetrol RPA. For the purposes of the annual report, data for 2023 are reported for the whole of PARAMO together.



Waste generation in the Group (t/year) – hazardous waste only

Company	2019	2020	2021	2022	2023
ORLEN Unipetrol RPA	651	651	584	269	595
Refinery	1 915	2 109	1 608	1 871	2 104
PARAMO*	297	316	533	412	219
Spolana	1 907	3 020	2 205	1 763	238
ORLEN Unipetrol Doprava	372	269	375	129	263.32
BENZINA registered branch	10	2	30	25	308
ORLEN Unipetrol Group	5 152	6 367	5 335	4 469	3 727

*Since 1 November 2023, Kolín Complex Section – originally incorporated into PARAMO - has been incorporated into ORLEN Unipetrol RPA. For the purposes of the annual report, data for 2023 are reported for the whole of PARAMO together.



10.3 Air protection

In 2023, emissions of all pollutants stabilised at ORLEN Unipetrol RPA and the refineries, with minor fluctuations caused by changing operating conditions. The slight increase in solid pollutants was caused by the more frequent operation of the bypass at the T700 heating plant.

At PARAMO, both natural gas and heating oil (TOT-R2M) were burned at the Pardubice Profit Centre boiler facilities. The slight increase in SO₂ and NO_x emissions is also related to the introduction of combustion of this heating oil. Kolín Profit Centre now generates practically no air pollution - caused by the introduction of air pollution combustion sources into the cold reserve at the decommissioned Kolín Profit Centre site in 2023.

As a result of the termination of the operation of coal-fired boilers at Spolana in December 2019, emissions of SO₂ and solid substances from the company's energy generation were already significantly reduced in the past, while NO_x emissions are also decreasing. The higher emissions of solids in 2021 were caused by the penetration of substances through the terminal equipment. There were no significant fluctuations in emission levels in 2023.

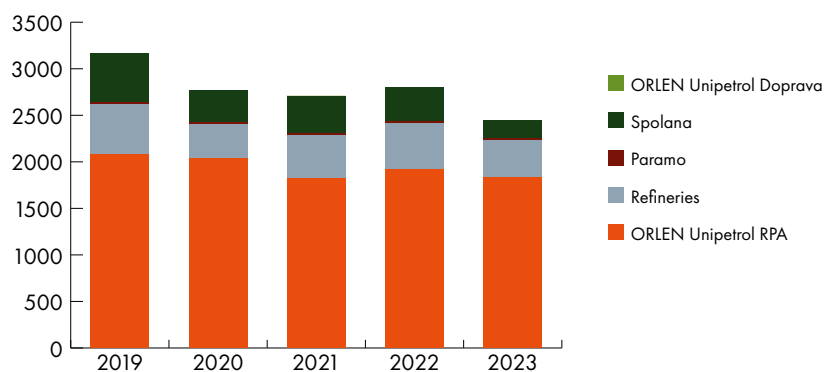
The amount of VOCs from the cleaning and steaming station for road and rail tankers at ORLEN Unipetrol Doprava was similar to the previous two years in 2023.

BENZINA registered branch continued to introduce new pumps equipped with an automatic Stage II petrol vapour recovery control system (VRSM).

Air pollution in the Group (t/year)

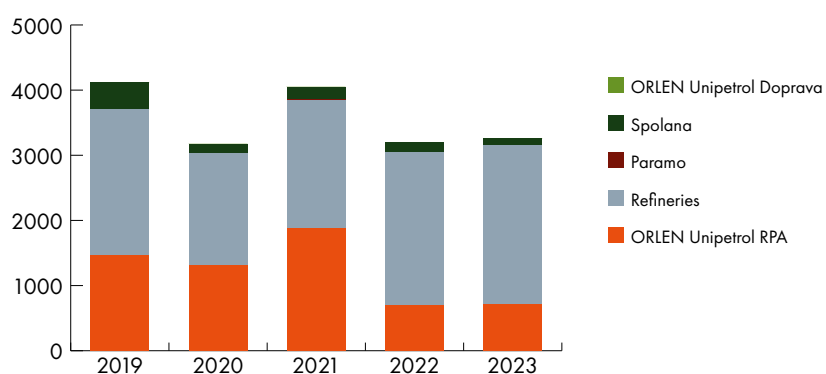
Company	Indicator	2019	2020	2021	2022	2023
ORLEN Unipetrol RPA	NO _x	2 077	2 039	1 820	1 917	1 830
Refinery	NO _x	540	365	465	502	407
PARAMO*	NO _x	28	24	20	19	21
Spolana	NO _x	523	335	404	360	191
ORLEN Unipetrol Doprava	NO _x	0	0	0	0	0
ORLEN Unipetrol Group	NO _x	3 168	2 763	2 709	2 798	2 449

*Since 1 November 2023, Kolín Complex Section – originally incorporated into PARAMO - has been incorporated into ORLEN Unipetrol RPA. For the purposes of the annual report, data for 2023 are reported for the whole of PARAMO together.



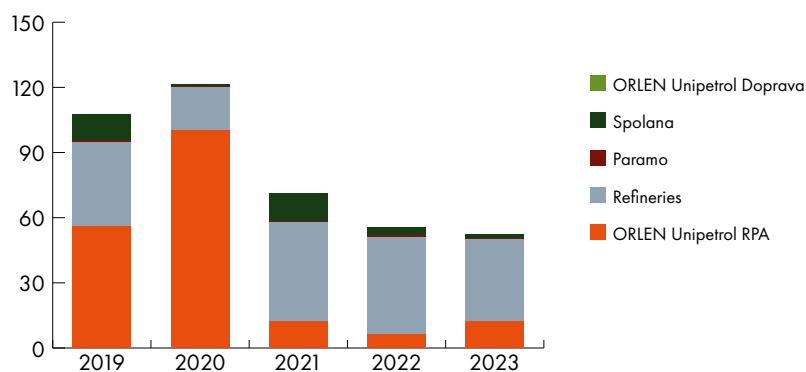
Company	Indicator	2019	2020	2021	2022	2023
ORLEN Unipetrol RPA	SO ₂	1 470	1 317	1 876	702	714
Refinery	SO ₂	2 236	1 707	1 974	2 347	2 442
PARAMO*	SO ₂	0.03	1.1	0.9	0.35	3.09
Spolana	SO ₂	416	148	198	146	105
ORLEN Unipetrol Doprava	SO ₂	0	0	0	0	0
ORLEN Unipetrol Group	SO ₂	4 122	3 073	4 021	3 195	3 264

*Since 1 November 2023, Kolín Complex Section – originally incorporated into PARAMO - has been incorporated into ORLEN Unipetrol RPA. For the purposes of the annual report, data for 2023 are reported for the whole of PARAMO together.



Company	Indicator	2019	2020	2021	2022	2023
ORLEN Unipetrol RPA	Solid compounds	56	100	12	6	12
Refinery	Solid compounds	39	20	46	45	38
PARAMO*	Solid compounds	0.5	0.4	0.3	0.7	0.439
Spolana	Solid compounds	12	1	13	4	2
ORLEN Unipetrol Doprava	Solid compounds	0	0	0	0	0
ORLEN Unipetrol Group	Solid compounds	107.5	121.4	72.3	55.7	52.5

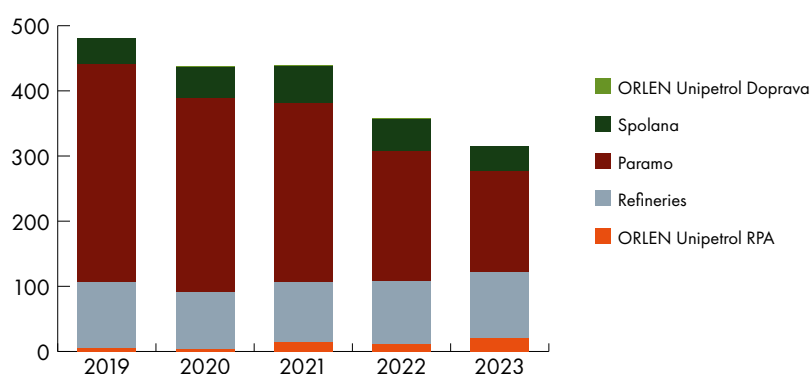
*Since 1 November 2023, Kolín Complex Section – originally incorporated into PARAMO - has been incorporated into ORLEN Unipetrol RPA. For the purposes of the annual report, data for 2023 are reported for the whole of PARAMO together.



Company	Indicator	2019	2020	2021	2022	2023
ORLEN Unipetrol RPA	VOC	5	4	14	11	21
Refinery	VOC	101	87	93	97	100
PARAMO*	VOC ¹⁾	335	297	274	199	156
Spolana	VOC ¹⁾	39	49	57	50	37
ORLEN Unipetrol Doprava	VOC	1.1	1	0.8	0.7	0.8
ORLEN Unipetrol Group	VOC	481	438	439	357	315

¹⁾90% are fugitive emissions reported only based on solvent purchases in the relevant calendar year.

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10.4 CO₂ emissions and allowance trading

The regulation of carbon dioxide emissions according to the EU Emissions Trading System (EU ETS).

The fourth trading period (2021-2030) is divided into two phases. For the first phase (2021-2025), the initial allocation of free allowances was carried out based on decisions taken by the Ministry of the Environment that may be revised from time to time based on actual production levels according to the Allocation Level Adjustment Statements. The initial allocation for the second phase (2026-2030) will be carried out in 2024.

Initial allocation of free allowances to ORLEN Unipetrol Group companies for the 2021–2025 period, actual CO₂ emissions 2021–2025

Initial allocation of free allowances (thousand units) real emissions (kt/year)	ORLEN Unipetrol RPA Petrochemicals and Agrochemicals	ORLEN Unipetrol RPA Litvínov Refinery and Kralupy Refinery ¹⁾	PARAMO *	Spolana	ORLEN Unipetrol Group
Total allocation for the 2021–2025 period	4 581¹⁾	3 449	158	272	8 460
2021: real CO ₂ emissions	3 326	917	40	82	4 365
2022: real CO ₂ emissions	3 277	875	27	71	4 250
2023: real CO ₂ emissions	3 039	922	24	46	4 031

¹⁾ORLEN Unipetrol RPA and Česká rafinářská merged in 2017. The refineries operated as a registered branch of the Refinery until 31 December 2018.

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The emissions calculation for 2023 shows that the allocated annual allowance amount at ORLEN Unipetrol RPA, including the refinery units, covers approximately 45% of annual emissions. The deficit of allowances for 2023 is addressed via ORLEN S.A., which handles emission allowance trading within the ORLEN UNIPETROL Group. Applications for the free allocation of allowances for the fourth EU ETS trading period were independently verified and submitted to the ministry in 2019. The free allowances were allocated after the relevant benchmarks and correction factors were updated over the course of 2021, and their amount was further adjusted according to the outputs from the verification of the activity level reports for facilities in 2019-2023. Audits of operating data were carried out for 2020-2023 for the purpose of submitting an application for indirect cost compensation due to the pass-through of emissions costs into electricity prices.

Compared to previous years, Paramo saw a slight decrease in CO₂ emissions in 2023 due to the discontinued operation of the Kolín Profit Centre's production units, which were a source of CO₂ emissions.

Since 2020, Spolana has reduced CO₂ emissions due to the termination of operation of coal-fired boilers and, in 2023, CO₂ emissions were reduced due to production plant shutdowns.

10.5 Other greenhouse gases

All Group companies operate their production facilities in accordance with ozone layer protection requirements and in accordance with applicable international agreements. Refrigerants have already been replaced by more environmentally friendly media in previous years.

11. Management of primary sources of raw materials and energy

To conserve primary raw material and energy sources, the ORLEN Unipetrol Group follows sustainable development principles and focuses its basic strategy on innovative methods leading to the optimisation of energy and material inputs while promoting continuous improvement of environmental performance and increased energy efficiency. The Group companies, whose energy management systems have been successfully certified in accordance with ISO 50001, have committed to complying with these principles as part of the Integrated Management System Policy.

ORLEN Unipetrol RPA has prepared a strategy for reducing greenhouse gas emissions as part of the Decarbonisation programme. As part of the ORLEN corporate group, ORLEN Unipetrol has committed to achieving the carbon neutrality goals by 2050. One important step is the continuous reduction of energy losses. A key activity for reducing energy losses is the "Increased Reliability and Efficiency of Vapour Condensate Systems" programme. As part of this programme, steam leaks at all production sites are continuously monitored and their elimination promptly initiated. Energy leakage monitoring includes replacing non-functioning condensate drainers, repairing steam leaks and replacing damaged or adding missing insulation. Leaks through piping valves are also monitored as part of the programme. The Group has been placing increasingly more emphasis on introducing energy-efficient and innovative solutions to optimise energy utilisation. The vast majority of these activities are carried out in the form of investment projects. At the same time, the area of digitalisation is taking off and will also contribute to optimising energy utilisation.

The New Boiler Facility in the Ethylene Unit project was completed and the facility was commissioned in 2021. The new boiler facility enables stable operation of the Ethylene Unit in compliance with legislation. 2021 also saw the completion of the second implementation phase for the CombustionONE system for combustion control on pyrolysis furnaces, followed by the launch of the third phase on the remaining furnaces, i.e. BA-101 – BA-105, currently under way. The installation will be completed in mid-2024. Furthermore, the installation of CombustionONE on the CCR unit furnace was completed in 2022 and, after successful commissioning, other furnaces at Litvínov and Kralupy Refineries will be considered. Another furnace where CombustionONE will be installed is the vacuum distillation unit furnace, which will be completely modernised. In addition to the installation of the combustion optimisation system, the distillation column will be replaced with a new one, and the overall modernisation of this unit will help increase its energy efficiency.

Also in 2023, preparatory work continued on the New Energy Source project at Chempark Záluží – a new steam-gas heating plant that will mean a shift away from coal and a transition to gas which, in combination with the latest technologies, will significantly reduce emissions and their discharge into the air (especially CO₂ emissions). As part of this project, a study was carried out to select and define the most appropriate solution from both the

technical and economic perspectives. A tender for the implementation of the project is currently under way. In addition to the new steam-gas heating plant, the construction of solar energy sources is also being considered, both in the production areas and at the petrol stations. State-of-the-art energy sources such as SMRs and geothermal sources are also being considered, yet are still in the phase of ideas for future development. The main goal of these activities is to fulfil the company's carbon neutrality and maximum energy efficiency strategy.

Another equally important project in terms of emissions reduction, which is being coordinated by the Energy Department, is the installation of an electrolyser powered by renewable electricity sources, which will be used by ORLEN Unipetrol RPA to start the production of green hydrogen (RFNBO hydrogen). In the future, this hydrogen should also be supplied to petrol stations, where it will be used as a future fuel for cars. In 2023, hydrogen stations had already been built at two ORLEN petrol stations, specifically in Záluží next to the Litvínov site, and at the Barrandov petrol station.

Advanced process control (APC) continues to be developed. The installation of an APC system at the T700 heating plant is under way. It will significantly contribute to the optimisation of operation and to savings of primary raw materials, especially brown coal. The APC system at the T700 will focus on the combustion process and its optimisation. As an extension of the APC system, projects are under way to implement PWO, which will connect APC systems and thus allow for further optimisation improvements.

ORLEN Unipetrol RPA uses the Visual MESA tool for optimal energy consumption and utilisation. This system enables the optimal use of all energy sources across the entire Chempark Záluží site, starting with energy generation at the T700 and its consumption at all production units, i.e. the refinery, petrochemical and agrochemical units. The Visual MESA tool is used to optimise energy utilisation on a daily basis. The fact that the created model evaluates all technologies in operation as a whole and seeks to optimise the entire site continues to be a significant benefit. It also enables the identification of more ideas for optimisation.

Within the units, great emphasis is placed on optimal capacity utilisation with a positive contribution to the energy efficiency of production. Projects aimed at increasing the reliability of the facilities continue in this area.

In terms of innovative projects, the search for, preparation and implementation of projects for the use of low-energy/waste heat continues. The largest project implemented in this area is the Utilisation of Flue Gas Heat at Kralupy Refinery. The design documentation preparation (BDEP phase) for this project was completed in 2022, and the connection points implemented during a refinery shutdown. In 2023, the project moved to the final implementation phase, which is currently under way and will be completed by the end of 2025, when this unique unit will be put into operation. Another project is The Use of Medium-Pressure Steam at the Ethylene Unit, which aims at reducing energy losses during steam reduction by injection reduction. This project is now on hold due to the reduced volume of steam, which is being considered for the future turbine. During the stoppage, which will take place at the petrochemical plant in 2025, there will be a planned check of steam measurement for reduction and other activities that should help move the project forward. As part of Energy Efficiency, the replacement of conventional reduction valves with rotary ones is being considered, as well as the use of heat from flue gases and other heat sources. The examined activities in waste heat utilisation include, for example, an investigation into the use of the ORC (Organic Rankine Cycle) to generate electricity from waste heat. In cooperation with an external company, research is under way to install an ORC unit on an ethylene unit, which will help us decide on the suitability of installing these technologies that achieve full performance and thus enable the use of waste heat from large streams. In the event of positive outcomes, it is planned that the projects will be further developed into the implementation phase, not only at ORLEN Unipetrol RPA but throughout the ORLEN group, where regular workshops are being held for the sharing of information and experience.

An important part of energy efficiency is the installation of new and efficient devices that have the potential to save electricity.

The BENZINA, registered branch focuses primarily on water, electricity and gas consumption at petrol stations. Energy consumption has been regularly monitored since 2017. IoT meters have been gradually installed to monitor the consumption of individual media (electricity, water, gas) at selected petrol stations (Energy Management System) since 2018. The idea behind the project is to obtain accurate data on the consumption of individual media and to use these data for the regular evaluation of energy consumption at petrol stations through online monitoring. Data obtained in this manner will be used to compare and evaluate opportunities for reducing consumption. The installation of IoT meters to monitor energy consumption at petrol stations continued in 2023. Energy management efforts include a task manager for evaluating and monitoring deviations in energy consumption, successfully launched on a pilot basis. Electricity use at petrol stations is also optimised through the implementation of low-energy appliances and technologies (LEDs). The implementation of PV systems at petrol stations (the company's own pilot project in cooperation with ORLEN Unipetrol RPA representatives) began in 2023.

An authorised Facility Management employee carries out regular monitoring of energy consumption (electricity, water, heat and gas) at the Polymer Institute Brno registered branch. Secondary meters (mainly water meters) have been installed to make individual consumption monitoring more accurate and to detect, address and verify any differences better and faster. In addition, the gradual reduction in electricity consumption is continuing through the replacement of old with new low-energy lighting (LEDs). In 2023, electricity savings of 31.5 MWh were achieved compared to 2022. Water consumption was reduced to a historic low of 7 380m³ in 2023. Heat consumption dropped by 1 045 GJ in 2023 compared to 2019, reflecting the savings resulting from the preceding modification of the heating system and heat recuperation in the hall. The largest savings were achieved in natural gas, where consumption was 1 355 m³ lower than in 2022 thanks to the removal of some heaters and the optimisation of the entire heating system setup.

In terms of energy performance improvement, Paramo has long been implementing projects that contribute to reducing steam consumption for heating products and pumping lines (using heat from its own steam produced at the asphalt incinerator, and electric heaters for occasional use at the pumping route). The lengths of the steam pipeline routes have been optimised (reducing pipeline heat losses) and thermal insulation has been installed on selected tanks. Great attention is also paid to insulation as part of the Zero Tolerance for Steam Leaks and Missing or Damaged Insulation or Malfunctioning Condensing Units project. New feed pumps have been installed at Paramo to reduce electricity consumption. The renovation of the HV and LV substations to improve the reliability and safety of electricity distribution at the company was initiated and completed. In addition, the programme for replacing discharge lighting with LEDs with significant potential for electricity savings continues. An equally important element is heat saving through optimising technological processes, which is in accordance with the Pardubice site revitalisation programme already under way.

Spolana has implemented and successfully defended the EnMS system, a group of ISO 50 000 standards. To reduce the energy intensity of thermal energy generation, a project for the direct injection of EDC into the cracking furnace was implemented after the installation of a moisture analyser. A new gas boiler with a total nominal output of about 70 t/h of medium-pressure steam is now in operation. A major upgrade to sulphuric acid production, increasing energy and material efficiency and economy, is a strategic goal in the company's energy management, with the aim being to complete the work in 2026. Significant water-saving projects have been initiated, using waste heat to power and stabilise other production processes, as well as a project to optimise the use of air in the oxychlorination process with a significant reduction in specific power consumption in the production of vinyl chloride monomer. The preparation of the key initiation documentation for the PVC Upgrade project aiming to bring significant savings in heat generated from natural gas and electricity has begun. The preparation and collection of supporting documents for a major upgrade of the wastewater treatment plant with significant

impact on optimising energy consumption as well as on utilising the potential of waste heat from the treated water for heat recovery using a heat pump was launched at the same time. The key project is the modernisation of demineralised-water production using membrane technology and the minimisation of media losses in underground distribution systems. At the Kaprolactam plant, partial revitalisation of insulation on steam and condensate pipes was carried out as part of the insulation renewal programme, although such revitalisation is carried out continuously as part of maintenance. All accessible condensate drains were diagnosed, and defective pieces subsequently repaired/replaced, as standard practice. A service test of the pumping of sulphur from railway tankers using condensate drainers is being carried out at the sulphuric acid plant. The findings will be applied in a feasibility study with implementation in the next period. As part of the strategic declaration on CO₂e emissions savings Spolana has implemented and maintains a decarbonisation action plan.

In energy management, ORLEN Unipetrol Doprava focuses mainly on optimising the consumption of fuel, electricity and process and heating steam.

Since 2017, the company has invested hundreds of millions of koruna in the modernisation of its locomotive fleet. As of 31 December 2023, it had seven Siemens Vectron MS multi-system locomotives in its fleet. The renewal of the locomotive fleet has resulted in fuel and electricity savings. Vectron locomotives also help reduce emissions. The locomotives are equipped with electricity meters that also enable energy recovery measurement. In total, 28.52% more MWh of electricity was recovered by locomotives in 2023 than in the previous year.

The renewal of the rolling stock continues, and in the future it will be strengthened by another four Siemens Vectron MS locomotives. ORLEN Unipetrol Doprava thus wants to strengthen its market competitiveness by focusing on modern, energy-efficient Vectron electric locomotives, minimising the energy intensity of transport and reducing emissions – the decarbonisation of the rolling stock.

Furthermore, technological equipment is continuously modified and technological procedures continuously updated. Sidings have been technically modified since 2016. For example, photocells have been installed on the lighting towers along the siding track. Heating controls for building No 6419 have been installed. The first stage of the installation of energy-saving lighting fixtures at the siding in the ORLEN Unipetrol RPA complex in Litvínov took place in 2019, with the switch heating system being replaced, heating controls installed, and thermal insulation installed on buildings. The steaming time during vehicle cleaning has been reduced.

Water consumption in the Group (million m³/year)

Company	2019	2020	2021	2022	2023
ORLEN Unipetrol RPA	18.5	16.1	17.8	18.9	18.4
Kralupy Refinery	2.2	1.9	2.1	2.1	2.2
PARAMO*	0.4	0.3	0.3	0.2	0.2
Spolana	15.9	12.1	12.2	11.4	9.0
ORLEN Unipetrol Group	36.8	30.4	32.4	32.6	29.8

*Since 1 November 2023, Kolín Complex Section – originally incorporated into PARAMO - has been incorporated into ORLEN Unipetrol RPA. For the purposes of the annual report, data for 2023 are reported for the whole of PARAMO together.

A positive trend is seen mainly in specific energy consumption thanks to the utilisation of production capacities. This always has a positive impact on energy and raw material use, and so it is more appropriate to monitor the ratio of energy consumption in tonnes of oil equivalent (TOE) to tonnes of production per year:

Energy consumption in the Group (thous. TJ/year)

Company	2019	2020	2021	2022	2023
ORLEN Unipetrol RPA	9	8.6	9.9	9.2	9.17
Litvínov Refinery	10.2	8.1	9.3	9.8	9.7
Kralupy Refinery	7.9	7.1	8.7	7.7	8.1
PARAMO*	0.868	0.83	0.903	0.583	0.464
Spolana	2.6	2.0	2.0	1.8	1.2
ORLEN Unipetrol Group	30.6	26.6	30.8	29.1	28.6

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Specific energy consumption in the Group (TOE/t of production per year)

Company	2019	2020	2021	2022	2023
ORLEN Unipetrol RPA	0.151	0.158	0.145	0.140	0.15
Litvínov Refinery	0.047	0.050	0.048	0.046	0.047
Kralupy Refinery	0.053	0.059	0.063	0.059	0.058
PARAMO Pardubice Profit Centre*	0.134	0.148	0.154	0.131	0.118
PARAMO Kolín Profit Centre*	0.281	0.304	0.331	0.376	n. a.
Spolana	0.126	0.119	0.109	0.113	0.116

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12. Environmental investments

Environmental investments are defined as investment projects directly triggered by the requirements arising from environmental protection legislation, which are closely related to the application of integrated pollution prevention and control in practice or have a significant positive effect on the environment.

The following environmental investments were made in the Group in 2023:

Refinery

In Refinery, no environmental protection investment projects were implemented in 2023.

ORLEN Unipetrol RPA

Environmental protection investment projects amounting to CZK 34 million were implemented at ORLEN Unipetrol RPA. The most important ones included:

- ▷ the purchase of a flow meter for measuring CO₂ emissions + project documentation, installation within TA 2024
- ▷ the implementation of the technical reclamation of the New Venus Ash Dump – extension of the pipeline, preparation of project documentation for the zoning decision

A number of other measures with a positive environmental impact were implemented and funded as part of equipment maintenance operating costs

PARAMO

Environmental protection investment projects amounting to CZK 46.6 million were implemented at PARAMO. The most important ones included:

- ▷ the replacement of the K2 boiler (with the K5 boiler, power engineering)
- ▷ an oxygen analyser (solvent dewaxing)
- ▷ the renewal of low-temperature contacting (oil refining)
- ▷ the renewal of oil sensors in wastewater (power engineering)

Spolana

Environmental protection investment projects amounting to CZK 182 million were implemented at Spolana. The most important ones included:

- ▷ the optimisation of air use for oxychlorination – ongoing
- ▷ restoration of sewers, renovation and addition of wastewater treatment technology
- ▷ a new filling point for sulphuric acid dispatch - ongoing
- ▷ the renovation of cooling systems - ongoing
- ▷ replacement of water pollutant tanks

BENZINA

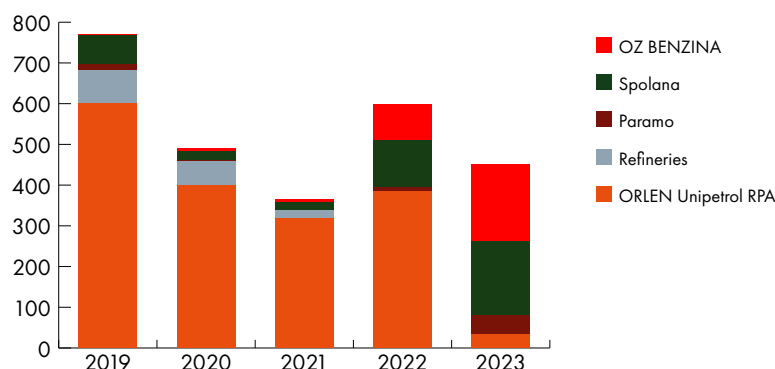
The BENZINA registered branch implemented environmental protection investment projects amounting to CZK 188.1 million. The investment projects focused primarily on:

- ▷ renovation of the petrol station sewers
- ▷ installation of new vehicle washing facilities
- ▷ the replacement of emergency collectors, fuel tanks and distribution systems
- ▷ modification of the drainage in water-proofed areas

Environmental protection investment costs in the Group (CZK mil./year)

Company	2019	2020	2021	2022	2023
ORLEN Unipetrol RPA	601	398	319	385	34
Refinery	81	60	18	1	0
PARAMO*	15.4	2.7	0.8	9.1	46.6
Spolana	70.5	22.2	21	115	182
BENZINA registered branch	2.5	6.7	5.1	89.3	188.1
ORLEN Unipetrol Group	770	490	364	599	451

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13. Environmental operating costs

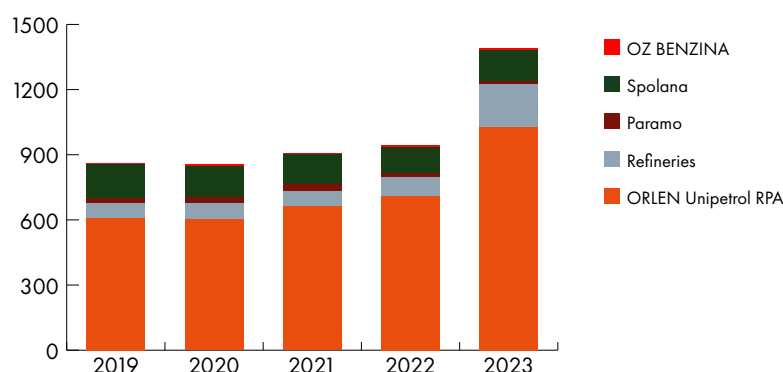
Costs associated with the operation of facilities for air protection, wastewater treatment, waste management, operation of environmental management systems, monitoring of substances discharged into the environment, environmental impact assessment (EIA), integrated pollution prevention and control and other related environmental activities are referred to as environmental operating costs.

Newly installed modern technologies with a high degree of raw material conversion, reduced waste volume and high energy efficiency have resulted in an overall reduction in environmental operating costs compared to the previous decade. Environmental protection operating costs have been more or less stable over the last decade.

Environmental protection operating costs in the Group (CZK mil./year)

Company	2019	2020	2021	2022	2023
ORLEN Unipetrol RPA	608	601	661	710	1 028
Refinery	70	77	73	83	196
PARAMO*	22.4	25.8	28.7	19.6	16.1
Spolana	154	144	139	123	141
BENZINA registered branch	8	8	7	9	10
ORLEN Unipetrol Group	862	855	909	945	1 391

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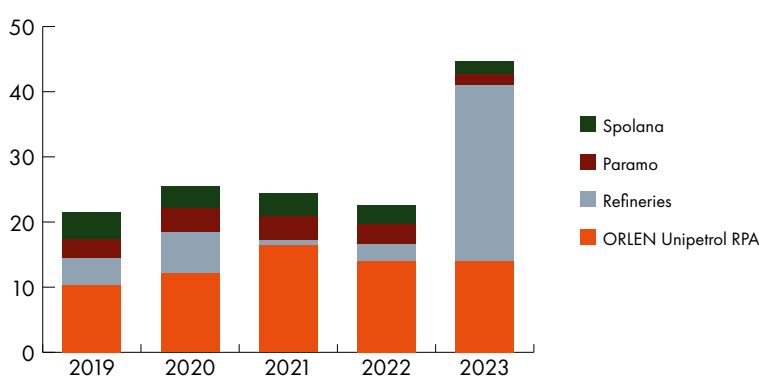
14. Total environmental protection costs

The total environmental protection costs at the ORLEN Unipetrol Group include environmental investment costs, environmental protection operating costs, environmental remediation costs and charges for air pollution, wastewater discharge, landfill disposal, generation of a landfill reclamation reserve and compensation for pollution damage to forests.

Environmental pollution fees and payments in the Group (CZK mil./year)

Company	2019	2020	2021	2022	2023
ORLEN Unipetrol RPA	10.3	12.1	16.4	14	14
Refinery	4.2	6.3	0.9	2.5	27
PARAMO*	2.9	3.7	3.6	3.2	1.6
Spolana	4.1	3.4	3.5	2.9	2.0
ORLEN Unipetrol Group	22	26	24	23	45

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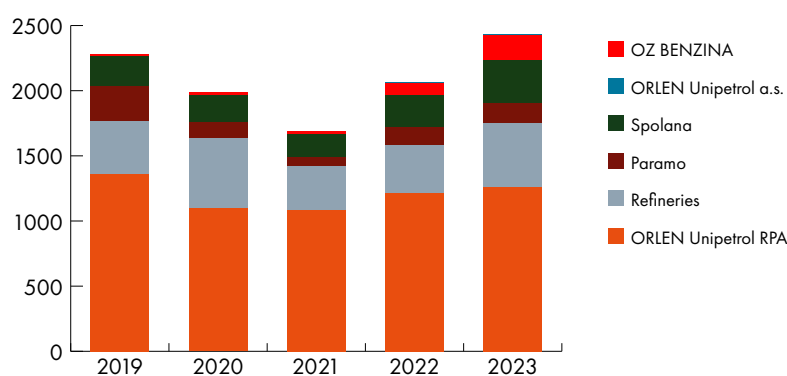


The total environmental protection costs incurred by the Group in 2023 amounted to approximately CZK 2,4 billion.

Total environmental protection costs in the Group (CZK mil./year)

Company	2019	2020	2021	2022	2023
ORLEN Unipetrol RPA	1 362	1 097	1 086	1 216	1 259
Refinery	400	541	336	362	488
PARAMO*	274.5	119.03	67.5	144.02	157.9
Spolana	229	211	178	241	325
BENZINA registered branch	11.6	16.2	16.7	99.5	198.9
ORLEN Unipetrol a.s.	1.3	1.6	1.6	2.46	2.8
ORLEN Unipetrol Group	2 251	1 986	1 686	2 065	2 432

*Since 1 November 2023, Kolin Complex Section – originally incorporated into PARAMO - has been incorporated into ORLEN Unipetrol RPA. For the purposes of the annual report, data for 2023 are reported for the whole of PARAMO together.



15. Remediation of old environmental burdens

Based on a decision of the government of the Czech Republic in connection with the privatisation, the ORLEN Unipetrol Group companies have concluded the following agreements with the Ministry of Finance of the Czech Republic to address environmental liabilities that arose prior to privatisation (Environmental Agreement):

- 1) Environmental Agreement No 14/94, as amended by Amendment 4 of 6 May 2019, signed by Unipetrol
- 2) Environmental Agreement No 32/94, as amended by Amendment 2 of 6 May 2019, signed by Unipetrol
- 3) Environmental Agreement No 39/94, as amended by Amendment 4 of 28 January 2019, signed by Paramo
- 4) Environmental Agreement No 58/94, as amended by Amendment 5 of 28 January 2019, signed by Paramo
- 5) Environmental Agreement No 184/97, as amended by Amendment 9 of 18 June 2019, signed by the BENZINA registered branch
- 6) Environmental Agreement No 33/94 including Amendments 1-4, signed by Spolana

Remediation work, which is at various stages of progress, is performed under the environmental agreements. **An updated overview is provided in the following table:**

Litvínov

Location	Current status	Further steps
Růžodol lagoons	in 2023 - the completion of landscaping and land reclamation	follow-up cultivation care, continuation of monitoring, a project to eliminate the occurrence of free-phase petroleum substances, a project for a solution for shafts in the R14 lagoon
Plant complex	Remediation completed and contamination clouds No. 1, 2c, 3, 4, 6, 9 and 10 handed over to the acquirer, in 2023 post-remediation monitoring was evaluated in contamination cloud No. 5, remediation work was not completed for contamination clouds No. 2, 7, 11 and block 32, after the termination of the contractor's activities, the work is performed by the acquirer to the necessary extent until a new contractor is selected	The performance of activities by the acquirer to the necessary extent, the preparation of project documentation for the selection of a remediation contractor for KM 2a, 11 and 7b, newly also 7a and block 32 due to the termination of the contractor's activities in 2023, selection of a contractor for KM 2a, 11, 7b, 7a and block 2
Uhlodehta landfill	Approval of the final report for the updated risk analysis	Design documentation for the selection of a remediation contractor
Landfill for solid industrial waste	A new CEI decision was issued in 2021	Monitoring continues, landfill reclamation project
Lime sludge dump II	A new CEI decision was issued in 2021	Monitoring continues, landfill remediation feasibility study
Lime sludge dump by the siding	A new CEI decision was issued in 2021	Monitoring continues, landfill remediation feasibility study
South foreland of ash dumps	Partial reclamation, a new CEI decision was issued in 2021	The continuation of monitoring, a new project for the operation of protective pumping of water from the Nová voda střed reservoir, including a flood test, a project for the removal of oil sludge, a project for the removal of bottom sediments in the Nová voda sever reservoir, and a project for covering non-remediated fly ash at Nová voda střed
Ash landfills	Partially reclaimed, in 2021 a new decision by the Czech Environmental Inspectorate was issued, a drilling project was completed, and the expansion of the monitoring system was partially implemented – phase 1	The continuation of monitoring, a project for the removal of local surface occurrences of oil sludge, a landfill remediation project, implementation of phase 2 of drilling work for the extension of the monitoring system
Dispersion plume 13	Protective remediation pump and treat process at the acquirer's expense (ORLEN Unipetrol a.s.)	Remediation feasibility study
Pump and treat in the Nová voda střed reservoir	Protective remediation pumping (after the termination of the contractor's activities, the pumping is being performed by the acquirer to the necessary extent until a new contractor is selected)	The selection of a new contractor for protective remediation pumping. For more, see the south foreland of ash dumps
Pumping and treatment of Růžodol dispersion plume 12	Protective remediation pumping (after the termination of the contractor's activities, the pumping is being performed by the acquirer to the necessary extent until a new contractor is selected)	Selection of a new contractor for the protective remediation pump and treat process, feasibility study for an optimal water management solution in the area

Kralupy nad Vltavou

Location	Current status	Further steps
Plant complex	Risk analysis updated (RAU)	Additional research, remediation project documentation
Nelahozeves landfill	Pollution remediation	Monitoring of groundwater and surface water, targeted risk analysis update, selection of a contractor for the temporary landfill closure
Plant complex – dispersion plume E	Selection of a remediation contractor	Pollution remediation
Oil sludge	Feasibility study – finalisation of verification and updating	Selection of the remediation contractor, pollution remediation

BENZINA registered branch (distribution storage sites and the most important petrol stations)

Location	Current status	Further steps
DS Točnick	Pollution remediation, protective remediation pump and treat process	Risk analysis update
DS Liberec-Rochlice	Protective remediation pump and treat process	Feasibility study
DS Šumperk	Protective remediation pump and treat process	Feasibility study
DS Bartošovice	Post-remediation monitoring	Remediation phase II
PS Pardubice Chrudimská	Protective remediation pump and treat process	Feasibility study
PS Přelouč	Post-remediation monitoring	Final report
DS Nový Bohumín	Pollution remediation	Post-remediation monitoring
DS Česká Ves	Pollution remediation	Post-remediation monitoring
DS Jičín	Protective remediation pump and treat process	Update of remediation project documentation

PARAMO Pardubice

Location	Current status	Further steps
Časy	Remediation implementation according to the remediation completion project	Remediation continues according to the remediation completion project
Hlavečník	Protective pumping of rainwater	Protective pumping of rainwater
Surroundings of the main plant – LIDL	Contract completed in May 2018	-
Surroundings of the main plant – U Trojice	Pump and treat in wells and drains, and monitoring	Pump and treat and monitoring continues (managed by PARAMO)
Main plants – phase 1 A	Contract completed in October 2020	-
Nová Ves	Contract completed in September 2023	Post-remediation monitoring (directed by PARAMO)

PARAMO Kolín

Location	Current status	Further steps
Plant complex and sludge lagoons	Implementation of remediation work according to variant D	Implementation of remediation work according to variant D continues

Spolana

Location	Current status	Further steps
Remediation of a toxic waste landfill	Remediation completed	Remediation completed
Remediation of facilities contaminated with dioxins	Remediation completed	Site maintenance – in progress
Remediation of an amalgam electrolysis facility	Remediation completed	Remediation completed
Groundwater remediation, petrochemicals and its surroundings	Targeted update of the risk analysis, new decisions, contract with the remediation project contractor, the Final Water Monitoring Report is still in the comments procedure	Remediation project for the award of a public contract for implementation
Groundwater remediation, old plant	Feasibility study, targeted update of the risk analysis, new decisions, contract with the remediation project contractor, the Report on Survey Completion is still in the comments procedure	Remediation project for the award of a public contract for implementation
Remediation of mercury contamination on the banks of the Elbe	Remediation completed, replacement planting	Remediation completed, aftercare of planted trees
New contamination hotspots	Tender documentation for the selection of the Risk Analysis contractor, contracts for work with Risk Analysis contractors, the Risk Analysis is still in the comments procedure	Risk analysis
Long-term water monitoring	Monitoring completed pursuant to the contract as of June 2023, contract for work with the contractor for the preparation of the underlying project documentation for the award of the public contract, the underlying project is still in the comments procedure	Contract for continued water monitoring

Overview of financial guarantees of the Ministry of Finance of the Czech Republic and drawing of funds at the ORLEN Unipetrol Group as at 31 December 2023 (CZK mil. incl. VAT)

	ORLEN Unipetrol Litvínov	ORLEN Unipetrol Kralupy	PARAMO Kolín *	PARAMO Pardubice	BENZINA registered branch	Spolana	Group total
Financial guarantees from the MF CR	6 012	4 244	1 907	1 242	1 323	8 159	22 887
Costs covered by the MF CR in 2023	25.9	-2.0	0.7	94.5	64.9	4.5	188.5
Costs covered by the MF CR since the start of work	4 482.0	63.8	1 903.6	1 202.6	871.1	5 669.7	14 192.8
Expected cost of future work	2 653.2	727.6	1.9	2 027.2	639.6	3 933.4	9 982.9
Total (estimated) cost of remediation	7 135.2	791.4	1 905.5	3 229.8	1 510.7	9 603.1	24 175.7

*Since 1 November 2023, Kolín Complex Section – originally incorporated into PARAMO - has been incorporated into ORLEN Unipetrol RPA. For the purposes of the annual report, data for 2023 are reported for the whole of PARAMO separately.

16. Chemical safety

All Group companies manufacture or use chemicals and mixtures in accordance with the applicable Chemical Act and Regulation (EC) No 1907/2006 (REACH). They classify their marketed chemical products in accordance with Regulation (EC) No 1272/2008 (CLP), and for those with hazardous properties, they process safety data sheets, which are then provided free of charge to all customers. At ORLEN Unipetrol RPA and Spolana, the safety data sheets of manufactured and purchased hazardous chemicals and mixtures are, in accordance with the REACH Regulation, available to all employees via the intranet – CASEC database (a system for the administration and accessibility of safety data sheets).

The Group companies continuously comply with the requirement of the REACH Regulation to keep the registration documentation up to date, and therefore they also have to make sure that their IUCLID software application, in which technical documentation for registered and notified substances is processed, complies with the latest version published on the ECHA website.

The Group constantly pays great attention to communication in the supply and demand chains in order to implement measures to protect employee health and the environment when hazardous chemicals are used directly or in mixtures. The Group monitors and incorporates any changes resulting from the clarification of processes associated with registering and classifying chemical substances and updates its safety data sheets accordingly.

All Group companies continuously monitor the handling of chemical substances and mixtures, from raw materials to finished products, and ensure compliance with applicable laws and regulations, including internal and external testing and the subsequent issuance of legal statements for the specific applications of selected products, for example when they are in contact with food, drinking water or used for medical purposes, etc. Customer services in the companies are in charge of providing detailed information about the characteristics of the products in relation to their specific use.

The Group companies are subject to international inspection by the UN focusing on compliance with commitments assumed under the Chemical Weapons Convention. All inspections carried out by government authorities and international inspection bodies in the Group companies to this day have shown compliance with the Convention commitments.

During 2023, ORLEN Unipetrol RPA continued its activities for the gradual registration of selected chemical substances under the local national REACH regulations in Great Britain and Turkey. This is a long-term process and the activities will continue in the coming period.

The registration documentation of all active substances at PARAMO a.s., including for which PARAMO is the main registering entity on the EU market (Lubricating oils / EC 278-012-2), was updated in 2023. PARAMO works closely with CONCAWE and responds operatively to official requests from ECHA for the possible additional testing of substances. PARAMO has also been continuously monitoring the situation surrounding the restriction of "N-methyl 2-pyrrolidine" (Restriction as per Annex XVII, REACH), which is used as an extraction agent in the selective refining plant in the Pardubice Profit Centre.

In August 2014, Spolana submitted its first application for authorisation to use trichlorethylene in the production of caprolactam under Article 56 of Regulation (EC) No 1907/2006 REACH to the European Chemicals Agency (ECHA). The authorisation was granted and was valid until 21 April 2020. In order to ensure the use of trichlorethylene after this date, an application for a review of the authorisation to use trichlorethylene (TCE) as an extraction solvent in the production of caprolactam was submitted to the European Chemicals Agency in accordance with REACH in August 2018. The first permit to use TCE was granted to Spolana (to April 2020), and in its review application Spolana requested an extension of the permit for another 12 years. In 2019, the ECHA made a recommendation to the European Commission to extend the Company's permit by the requested 12 years. On 4 March 2021, the European Commission issued an implementing decision authorising the use of trichlorethylene. The permit will expire on 21 April 2032 unless a review report is submitted in accordance with Article 61 (1) of the REACH Regulation by 21 October 2030.

In the spring of 2022, Spolana made a change to the fertiliser documentation in accordance with the new Regulation (EU) 2019/1009 of the European Parliament and of the Council of 5 June 2019 laying down rules on the making available on the market of EU fertilising products.

17. Occupational health and safety, process safety and fire protection

Strategy

The ORLEN Unipetrol Group successfully implemented its strategy for occupational health and safety, process safety and transport of hazardous goods (hereinafter "safety") in 2023. The ORLEN Unipetrol Group took over this strategy from the OrLEN Capital Group and it is defined in the "New Directions for the Development of Personnel and Process Safety 2022-2026".

The strategy is directed towards areas such as leadership, personnel safety, hazard assessment and risk analysis, technical safety, fire prevention and transport of hazardous goods. These directions are divided into sub-activities in the ORLEN Unipetrol Group. The main objective of the safety strategy is to continuously improve safety processes. All activities of the new safety orientations are defined in such a way as to contribute to the achievement of the target value for the level 1 indicators of accident frequency and frequency of process safety events.

Segment management

In accordance with the ORLEN Capital Group Cooperation Agreement of 15 October 2022, the ORLEN Capital Group has issued a standard for segment management in occupational health and safety, fire protection, and safety in the storage and transport of hazardous goods. The ORLEN Unipetrol Group has defined the requirements for segment management in the policy "Segment Management in Occupational Health and Safety, Fire Protection, Safety in the Storage and Transport of Hazardous Goods".

The aim of segment management within the ORLEN Unipetrol Group is primarily to set rules for cooperation within the ORLEN Unipetrol Group to ensure the uniform implementation of standards, strengthen cooperation, and increase the efficiency of information exchange within the ORLEN Unipetrol Group and also between the ORLEN Unipetrol Group and the ORLEN Capital Group.

Unification of rules and processes

The implementation of standards that contribute to the unification of safety rules continued throughout the ORLEN Unipetrol Group in 2023. The implementation of standards in safety in transport and storage was carried out within the Logistics Plus project. The implementation of these standards continued in 2023 at SPOLANA s.r.o. and was completed at PARAMO, a.s. according to the approved schedule.

Improving safety

A number of projects were implemented in the ORLEN Unipetrol Group to improve safety in 2023. Employees themselves also actively contribute to improving safety and are motivated to do so. Many projects implemented in 2023 were employee initiatives submitted as ideas for improvements through the IDEApus platform.

The ORLEN Unipetrol Group recognises the importance of the role that the human factor plays in the prevention of undesirable incidents and how leadership and an established safety culture can influence the human factor, especially a proactive approach, communication and understanding of their role in safety. Employee training focuses on risk awareness and knowledge of how to manage such risks.

The "Safety Week" event took place across the ORLEN Unipetrol Group in September 2023. Safety Week was an attendance event and included demonstrations of first aid, a simulation of the effects of drunkenness, securing people for work at height, demonstrations of personal protective equipment (protective footwear, head protection) and a presentation of a combined vehicle of the company's Fire Rescue Service, including a practical demonstration of extinguishing a burning flammable liquid. The event ended with a safety quiz. A safety information campaign was carried out in all ORLEN Unipetrol Group companies to highlight the importance of safety measures in the event of emergencies and compliance with safety rules at all ORLEN Unipetrol Group workplaces. The causes of specific emergencies are shared throughout the ORLEN Capital Group, primarily for the purpose of learning lessons from them.

In 2023, ORLEN Unipetrol RPA s.r.o. also continued the "Practical Safety Culture Training" programme for operations and maintenance employees at the Training Centre in Litvínov. This programme is aimed at improving the safety culture. The main topics include critical emergencies, multiskilling, safety valves, first aid, LOTO (Lock Out/Tag Out) and risk identification.

The system for selecting and evaluating contractors and subcontractors from the perspective of safety was also reviewed in 2023. A Czech version of the regular monthly Process Safety Beacon was published on the intranet in 2023 as part of raising employee awareness of process safety. Furthermore, the 2022 Lessons Learned Almanac was distributed within the ORLEN Unipetrol Group.

Safety performance indicators

A unified system for monitoring selected safety performance indicators, including the monitoring of target values defined for 2023, is in place in the ORLEN Unipetrol Group. The target values of the indicators are set for the entire ORLEN Unipetrol Group and correspond to the objectives defined for the entire ORLEN Capital Group. The main monitored indicators include the frequency of accidents, i.e. the TRR (Total Recordable Rate) and the frequency of Tier 1 process safety events, i.e. PSER Tier 1 (Process Safety Event Rate).

Overview of the number of Process Safety Events Tier 1 in the ORLEN Unipetrol Group 2020-2023

Company	2020	2021	2022	2023
ORLEN Unipetrol RPA	2	1	4	3
ORLEN Unipetrol Doprava	1	0	0	0
PARAMO*	0	0	0	0
SPOLANA	1	2	1	1
Group total	4	3	5	4

*Since 1 November 2023, Kolín Complex Section – originally incorporated into PARAMO – has been incorporated into ORLEN Unipetrol RPA. For the purposes of the annual report, data for 2023 are reported for the whole of PARAMO separately.

Target safety indicators

ORLEN Unipetrol Group	Objective for 2023	Final value
TRR: Number of accidents resulting in absence per million hours worked	≤ 1.70	1.637
PSER – Tier 1: Number of process safety events per million hours worked	≤ 0.3	0.23

PARAMO, a.s. successfully passed a surveillance audit of its integrated quality management system, assessing management system compliance with ISO 14001:2015 and ISO 45001:2018. A gradual update of the legislative documentation was initiated due to the separation and inclusion of the Kolín Profit Centre under the ORLEN Unipetrol RPA Group. In 2023, ORLEN standards for safety, transport and storage were further implemented. At the end of the year, the planned preparation for the modernisation of the fire alarm system and the new company fire brigade exchange in the Pardubice Profit Centre and the relocation of the fire alarm exchange in the Kolín Profit Centre began.

In 2023, there were no occupational injuries involving company employees at PARAMO, a.s.

18. Prevention, personal protective equipment

Implementation of and compliance with a risk prevention and management system is a fundamental commitment throughout the ORLEN Unipetrol Group.

The process of hazard identification and risk assessment in occupational health and safety, major accident prevention and process safety is an ongoing one and is implemented as a tool to prevent emergencies from occurring. All risks are recorded in the Risk Registers, which are regularly reviewed and updated. In 2023, ORLEN Unipetrol RPA released a new methodology for hazard identification and risk assessment.

Risk assessment is part of day-to-day activities, especially as part of the work authorisation process. At the same time, the identification of risky conditions and risky behaviour is carried out through daily regular inspections of workplaces, regular patrols, inspections and audits. All risks and risky behaviour are recorded and measures taken to address them. The aim is to eliminate risks immediately and thus prevent accidents.

Employees are motivated to identify risks and risky behaviour. Prevention as part of occupational health and safety is ensured by employees professionally qualified in risk prevention. However, during employee training, emphasis is placed on risk awareness so that both employees and contractors can assess the need to eliminate risks or take measures to minimise them as much as possible.

19. Quality of the work environment

The quality of the work environment at ORLEN Unipetrol Group companies is regularly monitored by measuring work environment factors including, but not limited to, noise levels and chemical and dust exposure limits, always based on the relevant work classification.

Extensive organisational changes have been carried out at PARAMO, a.s., Pardubice. On the basis of the ascertained facts, the Regional Health Authority recommended remeasuring noise levels and updating the classification of the second (risk (2R)) category.

At SPOLANA s.r.o., a comprehensive recategorisation of work was initiated with the aim of establishing group requirements and uniformity.

The decision was made to exclude it from the hazardous work categorisation because, based on the results of noise measurements in the work environment on 18 January 2023, it was confirmed that the resulting noise exposure does not exceed the permissible exposure limit for steady and variable noise over an eight-hour work shift.

20. Healthcare and prevention

The ORLEN Unipetrol Group companies have concluded occupational medical services contracts with physicians. Preventive medical examinations are performed in accordance with applicable laws and regulations and internal guidelines.

Above-standard health care is also provided to employees, in cycles and under conditions in accordance with the applicable collective agreement.

21. Major accident prevention

Most ORLEN Unipetrol Group production companies are, due to being classified as Group B, subject to the strictest interpretation of Act No 224/2015, on prevention of major accidents when handling selected hazardous chemical substances / mixtures.

For years, the ORLEN Unipetrol Group companies have paid great attention to the prevention of major accidents. Accident prevention is based on the reliable and trouble-free operation of production equipment which is designed, operated, inspected and maintained in accordance with the legislation of the Czech Republic and the company's internal regulations. Some of the regulations also contain requirements beyond legislation and are based on the best practices of the Group companies.

Production sites are equipped with control systems signalling deviations from standard operating parameters. Some dangerous plants are equipped with systems that automatically shut down operating units in the event that the specified operating parameters are exceeded. Depending on the type of hazardous substances handled, the plants are equipped with modern detection systems (detection of flame, smoke or leaks of hazardous substances) with outputs to control rooms and operational centres of the relevant company's fire brigade. Stationary and semi-stationary fire extinguishers and fire monitors are installed at the production plants.

Regular internal audits focused on safety and accident risk prevention are carried out at the ORLEN Unipetrol Group companies. In addition, regular external audits and inspections are carried out by state expert supervision authorities. This includes, for example, the CEI, RLI, FD, RHS, Czech professional organisations, insurance brokers, insurers and foreign reinsurers. Recommendations and conclusions from these audits are included in the relevant implementation plans.

Regular employee training and education are important components of major accident prevention. The functionality of the major accident prevention system is checked throughout the year using emergency and crisis response exercises for on-site employees as well as in cooperation with internal and external intervention units, in the form of emergency drills at the individual production plants, as well as on-site emergency drills carried out in cooperation with companies managing industrial premises or doing business in their immediate vicinity. In the ORLEN Unipetrol Group companies, emergency drills are carried out according to plans. The drills are used for practical training of appropriate employee response to a possible accident, to verify the valid emergency plans and procedures, and to improve the knowledge of everyone involved. If shortcomings are revealed during a drill, appropriate measures are taken during the evaluation of the drill to ensure such shortcomings are eliminated, including setting deadlines and nominating persons responsible for their implementation.

Drill plans for 2023 were developed, approved, issued and fulfilled. A total of 238 drills were carried out at the ORLEN Unipetrol RPA Litvínov facility, of which 37 were in cooperation with the company fire brigade. Twenty-one drills took place at the Kralupy facility, all in cooperation with the company fire brigade. As planned, a total of four emergency drills were carried out at ORLEN Unipetrol Doprava in cooperation with the company fire brigade (one each at the Pardubice and Kralupy facilities, two at the Litvínov facility). At PARAMO, a.s., 13 drills of the company fire brigade were held. In 2023, 55 drills were carried out at Spolana, all in cooperation with the company fire brigade. The management of major accident risks also includes liability insurance within the meaning of Act No 224/2015, on major accident prevention, as amended.

The safety level of the Group companies is significantly affected by new investments in production facilities. The potential risks of operating such facilities are already addressed in the project phase using generally accepted methods of assessing the risks of a major accident. New plants are always equipped with state-of-the-art safety systems and meet the requirements of the laws and regulations of the Czech Republic and the European Union.

The ORLEN Unipetrol Group production companies have their own fire brigades. Their equipment and training are first class, and this allows them to intervene in a highly specialised manner in the event of accidents involving the release of hazardous substances. The Kralupy Refinery unit uses the services of the SYNTHOS Kralupy, a. s. fire brigade. As part of the restructuring of PARAMO, a.s. and the discontinuation of production at the Kolín Profit Centre, the company fire brigade in Kolín was disbanded as of 31 July 2022.

Overview of the classification of businesses under Act No 224/2015, as amended

Company	Facility	Group	Safety report
ORLEN Unipetrol RPA	Litvínov facility	B	Approved by a decision of the Regional Authority of the Ústí nad Labem Region
	Kralupy facility	B	Approved by a decision of the Regional Authority of the Central Bohemian Region
	BENZINA registered branch	-	In accordance with Act No 224/2015, reports on non-inclusion of petrol stations were updated according to the law and submitted to the relevant regional authorities
	Kolín facility	-	In accordance with Act No 224/2015, a report on non-inclusion was submitted to the Regional Authority of the Central Bohemian Region
ORLEN Unipetrol Doprava	Operations, Pardubice Plant, Semtín, Pardubice Railway Operations	B	Approved by a decision of the Regional Authority of the Pardubice Region
	Operations, Pardubice Plant, Semtín, Semtín siding	B	Approved by a decision of the Regional Authority of the Pardubice Region
	Operations, Litvínov siding plant	B	Approved by a decision of the Regional Authority of the Ústí nad Labem Region
	Operations, Kralupy Plant, Neratovice, Kralupy Railway Operations	B	Approved by a decision of the Regional Authority of the Central Bohemian Region
	Operations, Kralupy Plant, Neratovice, Neratovice Railway Operations	B	Approved by a decision of the Regional Authority of the Central Bohemian Region
PARAMO*	Pardubice Profit Centre	B	The updated Safety Report was approved by the Regional Authority of the Pardubice Region on 8 September 2020
Spolana	Spolana	B	The updated Safety Report was approved by a decision of the Regional Authority of the Central Bohemian Region in 2019

*Since 1 November 2023, Kolín Complex Section – originally incorporated into PARAMO - has been incorporated into ORLEN Unipetrol RPA. For the purposes of the annual report, data for 2023 are reported for the whole of PARAMO separately.

22. Major accidents

In 2023, one accident occurred at one of the ORLEN Unipetrol Group facilities subject to Act No. 224/2015 Coll., on the Prevention of Major Accidents, and was reported to the Regional Authority of the Ústí nad Labem Region as a serious accident. On 11 May 2023, a mixture of TEAL, waste catalysts and mineral oil leaked at the ORLEN Unipetrol RPA polypropylene production unit in Litvínov and caused a fire in the collection container sump. There were no injuries or any negative impacts on the environment due to this incident, only local damage caused by the fire without the need for the activation and intervention of external units. An investigation resulted in the approval of measures to prevent a similar accident from occurring in the future.

Other operational accidents that occurred during the year were handled using our own resources, or using the companies' fire brigades. The response was adequate to remedy the issue and prevent recurrence. The effects of minor accidents did not extend beyond the territory of the ORLEN Unipetrol Group companies.

23. TRINS transport information and accident system

The TRINS transport information and accident system is an assistance system that defines a framework for collaboration in the following areas of cooperation:

- accidents involving the transport of hazardous goods
- cooperation in the emergency response to accidents involving stationary installations
- cooperation with member companies of the Czech Association of Cleaning Stations

TRINS was established by the Association of the Chemical Industry of the Czech Republic as part of the Responsible Care programme in 1996 based on an agreement between the Association and the General Directorate of the Fire and Rescue Service of the Czech Republic, and included in the Integrated Rescue System of the Czech Republic as a support system. Foreign equivalents of TRINS include, for example, the British CHEMSAFE system and the German TUIS system, which served as a model for the development of TRINS. Similar systems have also been created in Slovakia (DINS), Hungary (VERIK), and have been operating in a number of EU countries for many years. TRINS centres, in cooperation with the Fire and Rescue Service of the Czech Republic, provide the necessary urgent work-related consultations concerning data on chemical substances and mixtures, their safe transport and

storage, practical experience with handling dangerous substances and responses to extraordinary events associated with their transport. TRINS centres also provide practical assistance in handling such emergencies and eliminating subsequent environmental damage.

There are currently 21 companies included in the TRINS system in the Czech Republic, while there are a total of 36 centres providing assistance at the individual levels within the TRINS system throughout the Czech Republic. The ORLEN Unipetrol Group companies are founding members of TRINS. In addition, ORLEN Unipetrol RPA serves as the system's national coordination centre.

The names of the ORLEN Unipetrol Group companies (ORLEN Unipetrol a.s., ORLEN Unipetrol RPA s.r.o., ORLEN Unipetrol RPA s.r.o. – BENZINA, registered branch, ORLEN Unipetrol RPA s.r.o. – POLYMER INSTITUTE BRNO, registered branch, ORLEN Unipetrol DOPRAVA s.r.o., PARAMO, a.s., SPOLANA, s.r.o.) are also included in this report in their simplified versions (ORLEN Unipetrol, ORLEN Unipetrol RPA, BENZINA, registered branch/OZ BENZINA, Polymer Institute Brno / PIB, ORLEN Unipetrol Doprava, Paramo, Spolana).

Abbreviations and acronyms:

ACHV – chemical production site

APC – Adaptive Process Control

BAT – Best Available Techniques

BWWTP – biological wastewater treatment plant

BOD₅ – biochemical oxygen demand

SR – safety report

CASEC – Chemical Abstract Substances Evidence Centre – a database of chemical substances and safety data sheets

CEFIC – The European Chemical Industry Council

CLP – Classification, Labelling and Packaging of substances and mixtures – regulation of the European Parliament

CO₂ – carbon dioxide

CONCAWE – CONservation of Clear Air and Water in Europe

CEI (OI) – Czech Environmental Inspectorate (district inspectorate)

WWTP – wastewater treatment plant

PS – petrol station

DCCPD – dicyclopentadiene

DeSO_x – technology for reducing sulphur oxide emissions

DeNO_x – technology for reducing nitrogen oxide emissions

DS – distribution storage

EIA – Environmental Impact Assessment

ECHA – European Chemicals Agency

EU – ethylene unit

EnMS – Energy Management System

EMS – Environmental Management System

EU ETS – EU Emissions Trading System

FCC – Fluid catalytic cracking unit

FM – facility management

HMGWP – Hydrogeological Method of Ground Water Protection

HRGO – hydrogenation refining of gas oil

PC – profit centre

OHSMS – occupational health and safety management system

FRS – fire and rescue service

CFB – company fire brigade COD – Chemical Oxygen Demand

ICCA – International Council of Chemical Associations

IP – integrated permit

IPPC – Integrated Pollution Prevention and Control

ISCC / ISCC PLUS – International Sustainability & Carbon Certification – an international certification system for sustainability and greenhouse gas emissions

RHS – regional hygiene station
LPG – liquefied petroleum gas
MESA – Management of Energy System Application
MEK – methyl ethyl ketone
MF CR – Ministry of Finance of the Czech Republic
SS – suspended solids
NO_x – nitrogen oxide
RLI – Regional Labour Inspectorate
RB – registered branch
QMS – quality management system
PVC – polyvinyl chloride
REACH – registration, evaluation and authorisation of chemicals – EU regulation
RC – responsible care
SP – solvent paraffin
SCHP ČR – Association of the Chemical Industry of the Czech Republic
SO₂ – sulphur dioxide
SQAS – Safety and Quality Assessment System
TOE – tonne of oil equivalent
TRINS – transport information and accident system
VISUAL MESA – IT application (Management of Energy System Application)
VOC – volatile organic compound
ZERO – a software application for the central reporting of inspections and extraordinary events at ORLEN Unipetrol RPA
EP – environmental protection