



Nonfinancial report

UNIPETROL, a.s.

2017



Deloitte Audit s.r.o.
Nile House
Karolinská 654/2
186 00 Prague 8 - Karlín
Czech Republic

Tel: +420 246 042 500
Fax: +420 246 042 555
DeloitteCZ@deloitteCE.com
www.deloitte.cz

Registered at the Municipal
Court in Prague, Section C,
File 24349
Id. Nr.: 49620592
Tax Id. Nr.: CZ49620592

Check of the Preparation of Non-financial Information

In accordance with Section 32i of Act No. 593/1991 Coll., on Accounting, we checked that UNIPETROL, a.s. prepared a standalone report containing non-financial information for the year ended 31 December 2017.

In Prague on 14 June 2018

Audit firm:

Deloitte Audit s.r.o.
registration no. 079

Statutory auditor:

Martin Tesař
registration no. 2030

Content

- Word from the CEO 5
- Business model..... 6
 - Profile 6
 - Unipetrol Group operates 6
 - Two core business segments 6
 - Key Stakeholders of the Group 6
 - Mission 7
 - Values 7
 - Goals and strategies for 2018 7
 - Subject and scope of this report 7
 - UNIPETROL Group management 9
- Employees, human capital and respect of human rights 10
 - UNIPETROL Group objectives 10
 - Risks identified 10
 - Employment and respect for human - UNIPETROL Group approaches in aim to achieve its goals and manage the risks identified..... 10
 - 2. Workplace practice (Employees diversity policy) 11
 - 3. Respect for human rights and the Code of Ethics 11
 - 4. Workforce structure..... 12
 - 5. Employees development and training 13
 - 6. Employees' recruitment..... 14
 - 7. Employee welfare and HR policy 14
 - 8. Trade Unions..... 14
- Health, environmental and employment safety..... 15
 - UNIPETROL Group objectives 15
 - Risks identified 15
 - Health, environmental and employment safety - UNIPETROL Group approaches to achieve its goals and manage the identified risks..... 15
 - 1. The “Responsible Undertaking in the Chemistry field - Responsible Care” Program 15
 - 2. Important milestones of UNIPETROL Group in 2017 16
 - 3. Health and safety at work and fire protection 16
 - 4. Integrated management system policy..... 17
 - 5. Integrated management systems 17
 - 6. Prevention and personal protective equipment 18
 - 7. The quality of the work environment 18
 - 8. Health care and prevention 18
 - 9. Prevention of major accidents 18
 - 10. Major accidents 19
 - 11. Transport Information and Emergency System — TRINS..... 20
- Social Responsibility 21
 - UNIPETROL Group objectives 21

UNIPETROL Group approaches to achieve its goals and manage the identified risks in Social Responsibility	21
Activities of UNIPETROL Group in support of its goals accomplishment	21
1. Education and cooperation with the professional public.....	21
2. Social responsibility - Donation, cooperation with regions and the general public	23
3. Sport sponsorship	24
4. Communication with the public.....	24
5. Unipetrol Foundation.....	25
Environmental protection.....	26
Environmental protection.....	26
UNIPETROL Group objectives	26
Risks identified	26
The key events of 2017	26
Future targets and plans.....	26
Biofuel strategy.....	27
Environmental protection - UNIPETROL Group approaches and actions in order to meet the objectives and manage the risks identified.....	27
1. Compliance with environmental laws	27
2. Integrated pollution prevention	27
3. Overview of valid integrated operating permits	28
4. Emissions to the environment	29
5. Environmental investments	36
6. Environmental operating costs	38
7. Total costs of environmental protection.....	39
8. Programme for remediating old environmental burdens	39
9. Chemical safety.....	42
10. Other activities	43
Anti-corruption and bribery matters	45
Anti-corruption and anti-bribery policies	45
UNIPETROL Group objectives	45
Risks identified	45
Anti-corruption and anti-bribery - UNIPETROL group approach and preventions put in place to meet targets and manage risks identified.....	45
Departments and persons responsible for oversight of anti-corruption measures.....	46
Steps planned for 2018-2020	48
Details on the Non-financial report of UNIPETROL, a.s. 2017 preparation	48

Word from the CEO

Dear Ladies and gentlemen, shareholders and business partners,

We are the leader of the Czech refining and petrochemical industry. After all, most of the fuel in the Czech Republic comes from our refineries in Litvínov and Kralupy. There are other processing units in Litvínov where we produce basic products for the production of various plastics used in all aspects of human life. Each day, you are surrounded by products which were formed in one of our six manufacturing plants and two research and development centres. Unipetrol is with you every day and night - in short, constantly. And so it is right. We are inconspicuous, but stronger, the pillar of the Czech economy and your lives.

Through the of our modern research and development centres we invest in the development of the future of the Czech Republic. We are constantly asking ourselves how to produce more and better quality products at ever less and less environmental burden. That's why we are heavily investing in new technologies and also into our brains. Our innovations are born thanks to close contact with our customers and broad involvement in international projects. We are building a new polyethylene unit, which will soon produce the newest generation of plastics. In the refinery segment, we are currently exploring waste materials such as used cooking oil or tires in order to reuse them in production of high-quality fuels. We also keep our eyes on hydrogen in which we see the real future of alternative fuels.

We also grow and nurture partnerships where we operate. We are a good and responsible neighbour. We cooperate with local governments and support community lives and charity projects. Every year we invest more than one billion CZK in environmental protection!

We also take care of over 4,600 employees in a responsible way, offering a wide range of benefits and supporting their personal and professional development. We pay special attention to our talented staff, from which we develop future leaders.

We support education at primary, secondary and tertiary levels. We promote chemistry as an attractive field amongst schoolchildren and students, with the prospect of a high possibility of future use. We work closely with a number of secondary schools and universities and in cooperation with the University of Chemical Technology in Prague we run a University Centre where students can study master and postgraduate courses directly on the Litvínov production plant premises.

All of these activities can be accomplished thanks to you - through our joint partnership and constant dialogue. So let me thank you for this long-term inspiring partnership

Krzysztof Zdziarski

Chairman of the Board of Directors and Chief Executive Officer

Unipetrol, a.s.

Business model

Profile

Unipetrol, the refinery and petrochemical group (henceforward “Unipetrol Group”, “UNIPETROL Group” or “Group”), constitutes an important part of Czech industry. It is the only crude oil processor in the Czech Republic, one of the most important producers of plastics and the owner of the largest network of petrol stations, Benzina. It is also a major player in the field of refinery and petrochemical production in the Central and Eastern European region. Unipetrol Group has been part of the PKN ORLEN refinery and petrochemical group since 2005, where PKN ORLEN is owner of 94.03% of share capital of Unipetrol Group, representing a 94,03% share of voting rights at Unipetrol, a.s. general meeting.

UNIPETROL, a.s. is the parent company of Unipetrol Group.

Unipetrol Group operates

- 2 refineries with an annual conversion capacity of 8.7 million tons of crude oil
- 3 polyolefin units with an annual capacity of 595,000 tons
- a steam cracker unit with an annual capacity of 544,000 tons
- 401 petrol stations (number as of 31 December 2017)
- a broad range of transport services

Two core business segments

- downstream (combining refining and petrochemicals)
- retail distribution of fuels

Detailed description of individual business segments, 2017 data and expected development in 2018 is included in the Management report section of the 2017 Annual report of UNIPETROL Group.

Key Stakeholders of the Group

- Employees
- Customers
- Shareholders
- Professional public
- Wider public – regions, communities, media
- Suppliers
- Non-profit making organisations
- Regulatory bodies

Mission

Through the use of natural resources in our production we fuel the future.

Values

- The values of UNIPETROL Group promote strict ethical principles, aiming to ensure long-term and sustainable growth for our shareholders, to provide the best possible products and services to our customers and to exercise best solutions for both management and motivation. The values also support responsibility towards the environment.
- **Responsibility:** We respect our customers, shareholders, employees, the natural environment and the local communities
- **Progress:** We move forward, generating innovative ideas with motivated and competent people
- **People:** We strive for leadership and openness, respecting people's values in generating value for the company
- **Energy:** Our energy powers success and necessary change
- **Dependability:** With safety, we create valuable products and reliable services

Goals and strategies for 2018

To strengthen our human capital, streamline the innovation process, build a strong position in the petrochemical market, build the retail of the future, continue in our alertness, improve our services and products and focus on our new business opportunities.

Subject and scope of this report

This report has been prepared in accordance with Act No. 563/1991 Coll. Act on Accounting § 32 f) - § 32 i) and provides information on the following:

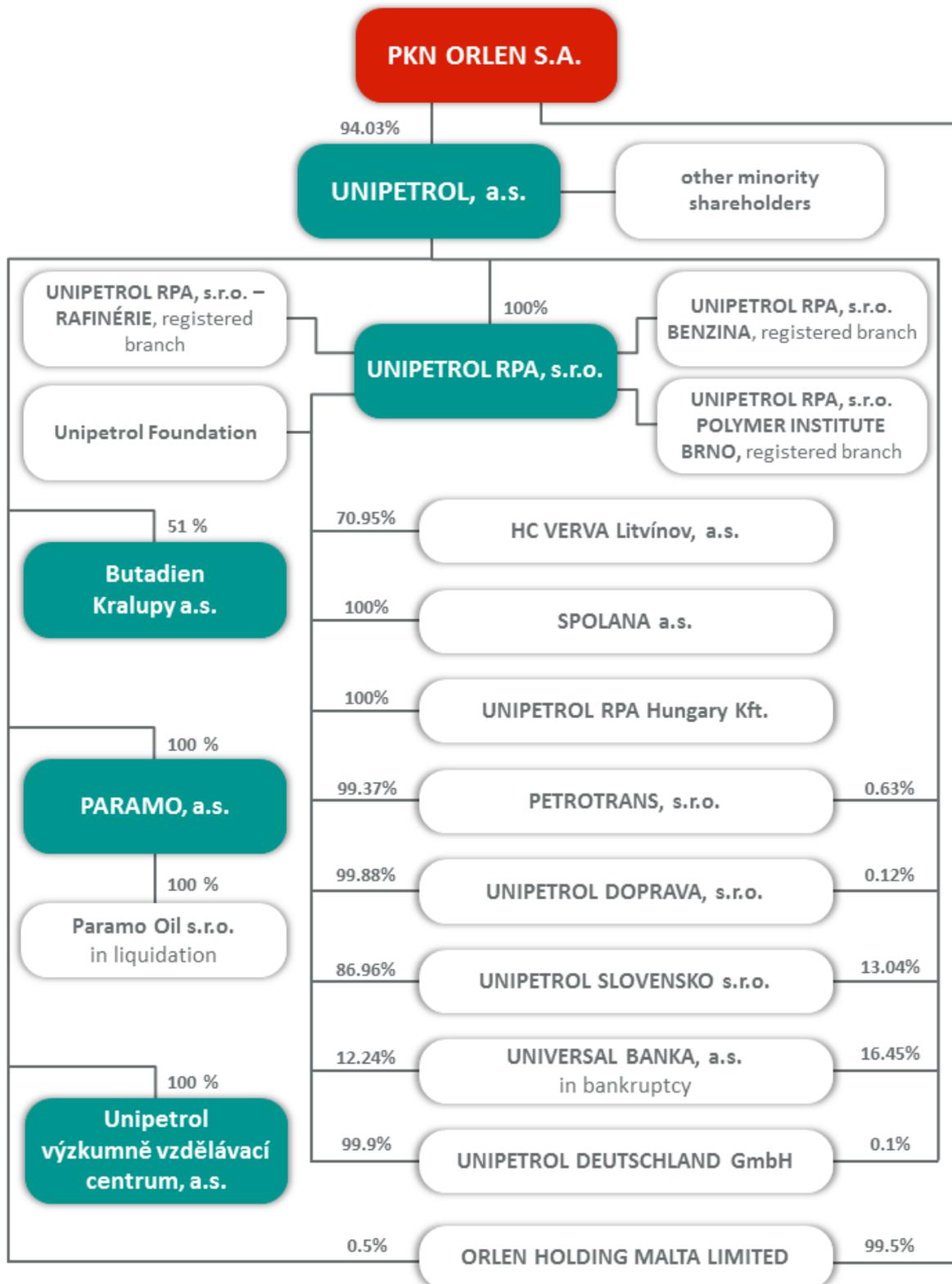
- Social and employment matters, human resources and respect of human rights
- Anti-corruption and anti-bribery matters
- Environmental matters

Unless otherwise stated in the data presented, the data of this report has been prepared for the Unipetrol group as a whole. (see below for a definition of UNIPETROL group).

UNIPETROL Group has assessed the impact of its activities of the above-mentioned areas and assessed that the environmental area was the most important area that the Group has a direct impact on, therefore the numerical and detailed data presented in this report has been prepared in accordance with this view.

UNIPETROL Group

The structure of the group to date as quoted further below*



*Picture 1- UNIPETROL Group structure as at 31 March 2018

UNIPETROL Group management

A detailed description of the management of UNIPETROL (and the UNIPETROL Group) is provided in UNIPETROL Annual Report, a.s. 2017 under the section of Corporate Governance and key management members, presented in the section Unipetrol's governing bodies and Management.

Members of the Board of Directors, as at 31 December 2017:

- Andrzej Modrzejewski – Chairman
- Mirosław Kastelik – Vice-chairman
- Krzysztof Zdziarski – Vice-chairman
- Robert Dominik Małek – Member
- Tomáš Herink - Member

Members of the Board of Directors, as at 30 May 2018:

- Krzysztof Zdziarski - Chairman
- Mirosław Kastelik - Vice-chairman
- Tomasz Wiatrak - Vice-chairman
- Tomáš Herink - Member
- Maciej Andrzej Libiszewski - Member
- Katarzyna Woś - Member

Employees, human capital and respect of human rights

UNIPETROL Group objectives

- To be perceived as an attractive employer
- To minimise employee turnover
- To provide support and care to the Group employees (education, benefits, etc.) and between 2018 and 2020 increase the budget by 5%
- Ensure full respect of human rights throughout the Group

Risks identified

- Lack of qualified workforce in the medium to long term horizon
- Lack of labour force in the market (in general)
- Employee turnover in professional positions
- Motivation to keep key employees

Employment and respect for human - UNIPETROL Group approaches in aim to achieve its goals and manage the risks identified

1. The Role of employees in the environmental area and safety at work

UNIPETROL Group employees are considered the key agents of environmental, occupational health and safety and fire prevention activities. The individual companies have therefore implemented an effective training system for all employees. Training and education of employees are part of the established management system. It is subject to regular review, evaluation and completion under ISO 9001, 14001, 50001 and OHSAS 18001 standards.

All employees are actively and continuously engaged in the creation and protection of the environment. They are acquainted at regular remedial training sessions with the policies in the areas of environmental protection, health and safety and fire prevention, as well as the environmental impact of their activities and the objectives and programmes defined for their workplaces.

The correct training applies to both the Group's own employees and the employees of external companies operating at the industrial complexes. Liabilities related to environmental protection, fire prevention and health and safety are included in agreements with individual contractors.

The active role of employees is also supported by a newly introduced IDEA platform through which the Group's employees are encouraged to forward their own ideas to help meet and improve the UNIPETROL Group's goals, including those in the area of the HSEQ.

2. Workplace practice (Employees diversity policy)

A diversity policy description applied to the statutory body, the supervisory board, the board of directors or any other similar body of the issuer.

Unipetrol recognises the importance of introducing an internal system that addresses aspects of diversity such as professional experience, education, age or gender. For this reason, Unipetrol seeks to transform professional experience from senior employees into junior staff in the Training Centre that was set up for these purposes. At the same time, so-called shading, works in practice, where we transfer of specific experiences from senior to junior employees is performed directly in production. Given the productive and scientific nature of society, gender balance is important, but priority is given to professional experience and competence.

Unipetrol continues to focus on introducing additional quotas and a set time frame when they will be fulfilled. In connection with this issue, Unipetrol implements a unified policy for its employees. We do not forget even retired employees. We organise regular parties for such employees. For example, they are permitted the use our catering facilities, under the condition they are Unipetrol formal employees. Unipetrol expects the implementation of a unified employee policy to ensure equal treatment and equal opportunities for all, which is one of the main priorities for the Group. As a means of implementing a unified policy for its employees, Unipetrol also uses career planning.

3. Respect for human rights and the Code of Ethics

In line with corporate values, Unipetrol honours the commitment to respecting human rights. These values are promoted by Unipetrol Code of Ethics, which is binding to all employees, adherence to which is one of the basic employee duties. The Company thrives towards creating a work environment based on integrity, mutual respect, tolerance and cooperation, and rejects any form of discrimination, bullying, harassment, intimidation and humiliation, and is strongly committed to interfering with such behaviour. The company seeks to create a culture based on trust, equal opportunities, and a fair treatment of all employees regardless of their sex, age, employment, and length of service, membership of trade unions, religion, race, nationality, physical appearance or sexual orientation. It offers employment to people with disabilities, provides them with the right working conditions and career opportunities while trying to remove all social barriers and encourage their integration. With open and honest communication, the company supports the building of good relationships with its employees. Continuously improves established systems and procedures to increase work safety and employee health protection so that all Unipetrol workplaces are always safe.

4. Workforce structure

The workforce structure in 2017 corresponds to the character of the whole Group. The most frequent level of education is of the secondary level, which is common in a production company. Higher education is quite frequent as well. It is mostly favoured within the managerial and leadership positions.

Total number of employees of Unipetrol Group (persons)

Company	2017	2016	2015
UNIPETROL RPA, s.r.o. - BENZINA	78	93	83
Butadien Kralupy a.s. (51%) ¹	10	10	10
UNIPETROL RPA, s.r.o. – RAFINÉRIE	486	519	604
PARAMO, a.s.	450	440	450
PETROTRANS, s.r.o.	141	128	146
UNIPETROL RPA, s.r.o. - POLYMER INSTITUTE BRNO	98	97	96
UNIPETROL, a.s.	11	10	47
UNIPETROL DEUTSCHLAND GmbH	16	16	17
UNIPETROL DOPRAVA, s.r.o.	408	409	409
UNIPETROL RPA, s.r.o.	2,166	1,998	1,522
UNIPETROL SLOVENSKO s.r.o.	25	25	10
Unipetrol výzkumně vzdělávací centrum, a.s.	119	119	125
UNIPETROL RPA Hungary Kft.	9	9	--
SPOLANA a.s.	683	682	--
HC VERVA Litvínov, a.s.	10	11	11
UNPETROL SERVICES, s.r.o.	--	--	286
MOGUL SLOVAKIA, s.r.o.	--	--	14
TOTAL	4,710²	4,566²	3,820²

¹ Number of employees in Butadien Kralupy a.s. (100%) was 19.5. (in 2017, 2016 and 2015)

² Inclusive of non-active employees

Employee's structure

Employment structure by education	2017	2016	2015
Primary	5%	5%	4%
Vocational	31%	29%	29%
Secondary	45%	45%	46%
Higher	19%	21%	21%
Employment structure by gender			
Men	75%	74%	74%
Women	25%	26%	26%
Employment structure by length of employment			
< 5	39%	33%	26%
5-10	15%	13%	14%
11-20	20%	17%	22%
21-30	18%	23%	23%
> 30	8%	14%	15%
Employment structure by age			
< 30	12%	11%	9%
31-40	16%	17%	19%
41-50	33%	34%	36%
51-60	30%	30%	29%
> 60	9%	8%	7%

5. Employees development and training

In 2017, the education of Unipetrol Group employees was mainly influenced by continued structural change.

The purpose of regular employee training is to prevent accidents, but also to increase their professionalism and efficiency of work.

The average number of training hours per year per employee was 6.3 hours in 2017. Employees can receive training up to CZK 28,000 per year.

The UNIPETROL Group supports the following types of training/education in particular:

- Training required by law
- Language courses (English, German, Polish, Czech)
- Professional training including IT skills
- Soft skills training
- Educational projects (talent program, succession program, managerial coaching, teaching and presentation training for the intent of internal lecturers, mentoring, succession program for Facility Team representatives, academy of masters).
- Education financed by European funds

Training is provided to employees according to their current needs, taking into account their career growth intend.

During 2018-2020 the Group expects to provide employees training at least to the same extent or up to the level corresponding to the objectives of the UNIPETROL Group as promoted in 2017, focusing more on the individual needs of employees.

In 2017, Unipetrol Group's employees' training was mainly influenced by the ongoing structural change. Unipetrol RPA's primary focus was on process of succession and individual development of current employees related to that. In 2017, employee education focused on the training and development within the "Operator in training" and "Graduate" programs. Unipetrol Group training focused on training and development of internal lecturers and mentors. During 2017, Unipetrol also launched the "Talent" program.

6. Employees' recruitment

UNIPETROL Group supports both, general training of its employees as well as professional education in the chemistry field. The Group collaborates with secondary schools, universities, supporting R & D, with focus on enhancement of student interest in working in the chemical industry and UNIPETROL Group.

A description of this cooperation is outlined in the education and cooperation with the professional public section, presented in this report.

7. Employee welfare and HR policy

As one of the largest employers, UNIPETROL Group offers attractive working conditions, which enhances employees' loyalty to the company.

UNIPETROL Group HR policy is described in details on page 52 of the Annual Report.

The Company offers its employees an Optional Benefit Scheme, under the terms of the Collective Agreement or the salary category and other benefits for employees under the Company's Conditions, such as:

- Financial compensation for the first three working days of temporary work incapacity of 50% of loss of earnings
- Rewards to blood donors
- Employment anniversaries related rewards
- Fuelling at Benzina petrol stations at lower prices
- Multisport card
- Contribution towards children's summer camps, schools and day care (UNI RPA)
- Medical care (UNI RPA)
- Purchases at a discount at partnering companies

8. Trade Unions

One of the pillars of Unipetrol's medium-term strategy is to invest in its people. An integral part of this pillar is building a long-term open relationship with employees, working along with Trade Unions representing their rights and interests, as evidenced by the successful collective bargaining with individual unions.

The objectives and the mission of the Trade Unions is to formulate, promote, satisfy and defend the professional, economic, social, educational, cultural and other interests and needs, opinions and rights of its members. This is mainly used by Trade Union solidarity and collective bargaining. Furthermore, it also protects and promotes employees equality, acts against discrimination and contributes to the protection of human rights.

Health, environmental and employment safety

UNIPETROL Group objectives

- Ensure safety at work so as to eliminate accidents and injuries to employees (zero accidents and injuries)
- Continually improve fire protection and other security systems to be as up-to-date and as efficient as possible
- in 2018-2020, adapt security systems and optimise responses to reported events to minimise the response time

Risks identified

- Accidents and injuries to employees
- Damages to property and the environment
- Economic and material damages caused by interruption in production
- Inoperative alarm and reporting systems
- Long reaction time for reported incidents

Health, environmental and employment safety - UNIPETROL Group approaches to achieve its goals and manage the identified risks

1. The “Responsible Undertaking in the Chemistry field - Responsible Care” Program

The Responsible Care (hereinafter RC) Program is a voluntary chemical industry initiative adopted worldwide, aimed at promoting the industry's sustainable development with responsive enhancements to the safety of facilities and product transportation, along with improvements in the protection of human health and the environment. The program is a reflection of the long-term strategy coordinated by the International Council of Chemical Associations (ICCA) and, in Europe, by the European Chemical Industry Council (CEFIC). The contribution made by the RC Program to sustainable development was recognised by the conferral of a UN Environment Program award at the global summit in Johannesburg.

The national version of the RC Program is the Responsible Business in the Chemical Industry Program, officially announced in October 1994 by the Minister for Industry and Trade and the President of the Czech Chemical Industry Association (SCHP ČR). Since 2008 the program has complied with the conditions of the RC Global Charter.

In 2014, the permission to use the Responsible Care programme logo was repeatedly given to UNIPETROL, a.s. and UNIPETROL DOPRAVA, s.r.o. After resuming its membership in the ACI CR, UNIPETROL RPA s.r.o. defended its right to use the R.C. logo in 2017.

As PARAMO is no longer a member of the Association of Chemical Industry of the Czech Republic, it does not use the authorisation, although it continues to meet the principles.

In 2015, SPOLANA defended the right to use the R.C. logo for the eighth time and in 2018, it will defend its right to use the logo for the ninth time.

2. Important milestones of UNIPETROL Group in 2017

The following milestones are considered the most important events of 2017 for the UNIPETROL Group from environmental and occupational health and safety perspectives:

- The shut-down of the amalgam electrolysis in 2017, SPOLANA a.s. in line with the European Commission's Implementing Decision No. 2013/732 / EU ordering the end of use of mercury electrolysis in the countries of the European Union. The production of polyvinyl chloride (PVC) continues. Preparations for PVC production from dichloroethane were completed in 2017
- Application of a unified method of system management for health and safety, fire prevention and environmental protection in the UNIPETROL Group
- Implementation of the initial stage of standardisation of security requirements in the PKN Orlen capital company
- Introduction of the ZERO electronic system for recording, reporting, managing and archiving emergencies and findings as an effective means of support for the process of continuous improvement in fire prevention and occupational health and safety
- Implementation of BENZINA's environmental protection standards at 36 acquired petrol stations and their gradual reconstruction according to the most up-to-date criteria
- Completion of redevelopment works under stage one of the Růžodol liquid waste dumps elimination project
- Construction of a new boiler room of the steam cracker unit
- Termination of trial operation of the WWTP Kralupy refinery and subsequent successful statutory approval

3. Health and safety at work and fire protection

The UNIPETROL Group considers occupational safety and health at work and fire prevention as one of its priority policies.

In 2017, systemic steps were taken to implement a uniform approach to integrated occupational health and safety management and fire prevention within the UNIPETROL Group. The result is a standardised approach to newly introduced processes and a plan for the gradual unification of safety requirements applied to individual companies in the group. An integral part of these steps is the standardising requirements across the entire PKN Orlen Group. In 2017, a uniform system of requirements associated with excavation work, emergency event investigations, work at heights and confined spaces was applied.

A unified system of monitoring selected performance indicators was set up within the Group, which includes target values for 2017. New monitoring of selected performance indicators in the field of process safety was included (according to ANSI/API Recommended Practices 754 Performance Indicators for Process Safety for the Refinery and Petrochemical Industry). In 2017, only four events were classified as Tier 1 Process Safety Events (PSE Tier 1) across the Group. The UNIPETROL Group met target values. The resulting values are listed in the summary table below.

UNIPETROL Group targets were met.

Results as listed in the table below:

UNIPETROL Group	Target 2017	Result
TRR: Number of accidents with consequent absence per million hours worked	1.8	1.35
PSER - Tier I: Number of process related events per million hours worked	1.0	0.29

UNIPETROL Group work related injuries overview

Number of workplace injuries	2017	2016 ⁴
LTI ¹	19	7
MTC ²	6	3
FAC ³	51	21

¹ Accident at workplace and subsequent work absence

² Accident with medical treatment in a defined range

³ Accident without or with treatment at workplace or at a doctor to a defined extent

⁴ Data is exclusive of Spolana

4. Integrated management system policy

In May 2017, UNIPETROL's top management approved an Integrated Management System policy based on the core values of the UNIPETROL Group and the PKN Orlen Group called **Responsibility — Development — People — Energy — Reliability**. In line with the strategic focus of the Groups' companies, the policy includes commitments in the fields of occupational health and safety, environmental protection, quality, and now also commitments associated with energy management.

The Integrated Management System policy is published on the individual company websites.

5. Integrated management systems

Established management systems are an important factor in environmental protection, product quality, occupational health and safety, and fire and major accident prevention. UNIPETROL Group companies have established and certified Quality Management Systems (QMS) and Environmental Management (EMS) and Safety Management (HSMS) Systems as a guarantee of systemic access to the customer and its needs, product quality and service delivery, environmental protection and occupational health and safety. Some of the companies have had a certified Energy Management System (EnMS) in place since 2016 through which their commitment to optimising energy use while meeting the legislative requirement of the Energy Management Act is declared.

The above management systems are certified according to international standards ISO 14001, OHSAS 18001, ISO 9001 and ISO 50001.

In the second and third quarters of 2017, a supervisory audit of management systems QMS, EMS, HSMS and EnMS took place at UNIPETROL, UNIPETROL RPA (including the BENZINA and RAFINÉRIE registered branches, Polymer Institute Brno), UNIPETROL DOPRAVA and PETROTRANS (note: at the Polymer Institute Brno only the EnMS). The Lloyd's Register Quality Assurance Certification Organisation has verified adherence to the system standards. At the Polymer Institute Brno registered branch, a QMS supervisory audit was conducted in September 2017 by CQS (Association for Quality Systems Certification) and IQ Net (International Quality Certification Network).

In May 2017, PARAMO, a.s., was inspected by Lloyd's Register Quality Assurance covering all three EMS, HSMS and QMS systems.

In June 2017, SPOLANA successfully underwent a re-certification audit of EnMS and a verification audit of QMS, EMS and HSMS by TÜV Rheinland Czech Republic s.r.o.

In 2018, the Group's companies are scheduled to adapt revised ISO 9001: 2015 (QMS) and ISO 14001: 2015 (EMS) standards. In the previous period, preparatory activities (differential analysis, processing of relevant documents, etc.) were performed in order to successfully complete the transition audit.

UNIPETROL RPA holds a certified sustainability system for producing fuels with bio components (ISCC). The last audit to verify compliance with system requirements was conducted in January 2018 by SGS Germany.

UNIPETROL DOPRAVA has implemented a Safety and Quality Assessment System (SQAS) for logistics providers.

Certified / Verified Management Systems in the UNIPETROL Group in 2017¹

Company	ISO 9001	ISO 14001	OHSAS 18001	ISO 50001	SQAS	RC	ISCC
UNIPETROL, a.s.	x	x	x	x		x	
UNIPETROL RPA (incl. BENZINA and REFINERY branches)	x	x	x	x		x	x
UNIPETROL RPA — PIB registered branch	x			x			
UNIPETROL DOPRAVA	x	x	x	x	x	x	
PARAMO, a.s.	x	x	x				
SPOLANA, a.s.	x	x	x	x		x	

¹Certificates are published on the individual company websites

6. Prevention and personal protective equipment

Prevention in occupational safety is ensured by employees qualified in risk assessment who perform inspections of individual workplaces. Personal protective equipment is issued to company employees according to the hazards identified and assessment of possible risks to life and health.

7. The quality of the work environment

According to work categories, working conditions at UNIPETROL Group companies are regularly checked by measuring the environmental factors of work, especially the exposure of employees to noise, chemicals and dust.

8. Health care and prevention

UNIPETROL Group companies have concluded agreements with physicians on the provision of occupational health services. Preventive medical examinations are conducted in compliance with the relevant laws and internal regulations.

9. Prevention of major accidents

The companies belonging to the Group pay much attention to preventing major accidents in the long term. The basis for preventing accidents is the reliable and trouble-free operation of production facilities. The facilities are designed, operated, inspected and maintained in accordance with Czech legislation and internal regulations. Some of the regulations contain requirements beyond legislation and are based on the best practices of the companies in the Group.

Production plants are equipped with control systems that signal deviations from standard operating parameters. Some plants performing hazardous operations are equipped with automatic unit shutdown systems in the event of specified operating parameters being exceeded. Depending on the type of hazardous substances, the plants are equipped with modern detection systems (detection of flames, smoke, or hazardous substance releases) connected to signalling panels in the control rooms and operation centres of the fire rescue service. Stationary and semi-stationary extinguishing systems and fire monitors are installed at the plants.

Regular internal audits of security and accident risk assessment take place in all companies of the Group. In addition, state technical supervisory bodies perform regular external audits and inspections. These bodies include the CEI, OIP, FRS and RHS professional organisations, insurance brokers, insurers and foreign reinsurers. The recommendations and findings of these audits are incorporated into the respective implementation plans.

An important component of preventing serious accidents is the regular training of employees. The functionality of the serious accident prevention system is tested throughout the year via simulations of both emergency and crisis situations. Testing is performed by operation plant employees in cooperation with its own and external operational divisions. They include emergency exercises (at individual plants + comprehensive emergency exercises performed in cooperation with the companies managing the industrial premises or businesses in their neighbourhood). The emergency exercises in UNIPETROL Group companies are carried out according to a defined plan. The exercises serve as practical training of employees to sufficiently respond to possible disasters. Their aim is also to verify the strength of emergency plans and procedures and improve the knowledge of all participants. If an exercise reveals deficiencies, sufficient corrective measures are adopted from evaluation of the exercise, including deadlines for removing these deficiencies and designating personnel responsible for implementing measures.

Risk management of major accidents includes liability insurance in accordance with the Act No. 224/2015 Coll., on the prevention of major accidents, as amended.

The safety level of the Group's companies is significantly influenced by new investment into production facilities whose projects address possible operational risks through generally accepted methods of major accident risk assessment. Each new facility is equipped with the most modern safety systems meeting the legal requirements of the Czech Republic and the European Union.

Production Group companies have their own fire departments with top-level equipment and training. Fire departments are capable of highly specialised intervention in accidents associated with the release of hazardous substances. Česká Rafinérská employs the services of the UNIPETROL RPA (Litvínov) and Synthos (Kralupy nad Vltavou) fire departments.

Most manufacturing companies in the Group have the "B" classification, which means they are subject to the strictest controls defined in the Act 224/2015 Coll., on the prevention of major accidents, as amended, in the handling of selected hazardous chemical substances/mixtures.

10. Major accidents

In 2017, a serious accident occurred in two objects of the UNIPETROL Group subject to Act No. 224/2015 Coll., on the prevention of major accidents, as amended, classified by the Ministry of the Environment as a major accident. UNIPETROL does not endorse this classification, as it is based on a completely non-transparent definition of what constitutes a major accident, as set out in the aforementioned Act. The UNIPETROL Group took several steps to obtain a clear definition of the concept of a major accident and to simplify the decision-making process of both operators and competent authorities. So far, these steps have not produced the expected outcome.

In spite of the above mentioned, in accordance with the requirement of the Major Accident Prevention Act, a report on the occurrence of a major accident was sent to the relevant regional authorities within 24 hours after the occurrence of the event and further processed within 3 months after the occurrence of a major accident and the Regional Offices of the Regional Authorities are sent draft Final Reports on the Origin and Impact of a Major Accident. Firstly, the Draft Final Report on the Origin and Impact of a Major Accident was approved as it was submitted; secondly, we are still waiting for the position of the Regional Authority concerned. In both cases, the draft final report on the occurrence and consequences of a major accident contained both organisational and technical measures taken to prevent recurrence of such events.

In both cases, in a few minutes after the accident, an anti-emergency intervention was initiated by the fire brigade of the company, in both events no one was injured, there were no losses of human life.

Other operating accidents that occurred during the year were managed in-house or by the company's fire departments. They were adequately responded to in order to prevent their recurrence. The effects of small operating accidents did not extend beyond the territory of the Group's companies.

11. Transport Information and Emergency System — TRINS

The Transport Information and Emergency System (TRINS) is a system to assist with accidents associated with transporting hazardous substances. TRINS was created by the Association of Chemical Industry of the Czech Republic as part of the “Responsible Care” programme in 1996. Under the agreement between the Association and the Headquarters of the Fire and Rescue Service, it was included as one of the support schemes in the Integrated Rescue System. TRINS is similar to the British system CHEMSAFE, for example, or the German TUIS, which served as the model for building TRINS. Similar systems have also been implemented in the Slovak Republic (DINS) and Hungary (VERIK) and have been applied by many EU countries.

TRINS centres (in cooperation with the Fire and Rescue Services of the Czech Republic) provide urgent consultations concerning information about chemical substances and products, their safe transportation and storage, and practical experience with the handling and disposal of hazardous materials and emergency situations associated with their transport. TRINS centres also provide practical assistance in liquidation of emergency situations, such as removal of subsequent environmental damage.

Currently, 21 TRINS regional centres are in the Czech Republic. The centres are provided by 34 companies operating in the chemical industry. UNIPETROL Group companies are founding members of TRINSUNIPETROL RPA acts as the national coordination centre.

Social Responsibility

As a socially responsible company, Unipetrol feels inextricably linked with the regions in which it operates. Therefore it supports activities that improve the environment and have a positive impact on the villages and towns around its plants. In addition, it uses its leading position in the chemical industry to educate and support young talents in areas that foster the development of chemistry in the Czech Republic. Unipetrol activities in the field of social responsibility can be divided into four main pillars:

- Education
- Volunteering
- Donation
- Environmental protection
- Sponsorship

UNIPETROL Group objectives

The UNIPETROL Group strives for a long-term concept of its CSR strategy (Sustainability and Corporate Responsibility Strategy). Social responsibility activities require personal ethical convictions from management and employees of the company. However, there is a need for a systematic approach where responsible behaviour builds on the business strategy, value and mission of the firm.

The main objectives are:

- Financial support for education and cooperation with the professional public
- Provide scholarly grants, scholarships, exchange programs and internships to support education
- Increasing social engagement through Unipetrol Foundation
- Provision of financial support for sport
- Support of regional projects

UNIPETROL Group approaches to achieve its goals and manage the identified risks in Social Responsibility

In the future, the UNIPETROL Group would like to maintain the amount of financial support provided at the minimum level of funding in 2017. For the period 2018-2020, it expects an increase of 10%.

UNIPETROL Group also wishes to support significantly the development of science which goes hand in hand with the company's business. This should prove beneficial for a long-term development of the company and chemical industry in the Czech Republic as well as in Central Europe.

Activities of UNIPETROL Group in support of its goals accomplishment

1. Education and cooperation with the professional public

UCT Prague

Unipetrol considers the fields of science, research and education important, and therefore has been supporting their development for the past several years. It is continuing in a seventeen-year-old strategic partnership with the University of Chemistry and Technology, Prague (UCT) with the main objective of popularising chemistry and supporting education in this field. In 2017 Unipetrol supported selected school projects with the amount of CZK 800,000, concentrating on proven and popular projects that students and teachers enjoyed in the past. In particular these have included The Summer and Autumn School for teachers of primary and secondary schools, a project called A Lesson of Modern Chemistry in the Ústí Region and awards for quality theses of the UCT students. The company is also a traditional partner of the national round Chemistry Olympics. In addition,

Unipetrol offers internships to young talents to give them an opportunity to gain much needed experience and expertise.

(CZK)	2017	2016	2015	2014
VŠCHT	800 000	800 000	800 000	800 000

University Centre UCT Prague – Unipetrol

The University of Chemistry and Technology, Prague opened its branch in Most – Velebudice, as early as in 2004. The aim of the cooperation between the school and Unipetrol is not only to train new students, but also to deepen the knowledge of specialists and employees through tailor-made programs. In February 2015, the branch moved into refurbished premises in Záluží, Litvínov, where the students can get hands on experience in an industrial complex and participate directly in the newly built research and education centre UniCRE. This is the first and only project of its kind that offers a unique interconnection of top bachelor's, masters and doctoral studies with projects, tasks and challenges of manufacturing operations of a refinery and petrochemical complex. The centre allows students to perform professional practice and obtain industrial experience, and it also organises activities referred to as third role, e.g. a lifelong learning.

Zlatý Ámos

Unipetrol continued supporting the national project Zlatý Ámos last year, under which the most popular Czech teachers selected by students receive awards. Last year saw the twenty fifth annual election, announced by the Domino Club, a Children's Press Agency, and whose prime mission is the popularisation of teachers who in the opinion of pupils and students contribute notably in shaping a good relationship between teachers and their charges. Unipetrol supported it as a silver partner for the fifth time. Unipetrol also participates in a nationwide event "Chemistry Teacher of the year".

The description of R & D activities, objectives and activities are described in the Annual Report (pages 48-50).

An integral part of the support of education and cooperation with the professional public is the involvement of UNIPETROL Group companies in professional and other associations:

The companies of the UNIPETROL Group are members of these associations:

UNIPETROL:

Club of Polish Capital in the Czech Republic
 Association of Chemical Industry of the Czech Republic
 Industry Union and Czech Republic Transport

UNIPETROL RPA:

Association of Energy Managers - Association of Major Energy Consumers
 Association of pressure equipment workers
 Czech Maintenance Company
 Czech Society of Non-Destructive Testing
 Czech Association of Technical Equipment
 Euroregion Krušnohoří
 The Economic and Social Council of the Most Region
 The District Economic Chamber of Most
 Association of Czech Testing Centres and Laboratories
 Association of Technical Normalisation of the Rubber and Plastics Industry - SGP Standard
 Association of Technical Normalisation of the Rubber and Plastics Industry - Technical Standards Commission 131 - Plastic piping systems
 Association of Technical Normalisation of the Rubber and Plastics Industry - Technical Standards Commission 52 - Plastics
 Association of Water Managers of the Czech Republic - Regional Association of the North Bohemian Region
 Association of Chemical Industry of the Czech Republic
 Confederation of the Czech Republic Industry

UNIPETROL RPA: Benzina branch

The Czech Petroleum Industry and Trade Association (ČAPPO)

UNIPETROL DOPRAVA

Czech Association of Purifying Stations
Association of holders and operators of railway wagons
Transport Union of the Czech Republic
Confederation of Industry of the Czech Republic

Unipetrol Centre for Research and Education (UniCre)

Association of Research Organisations
Czech Society of Industrial Chemistry
Confederation of Czech Republic Industry

PARAMO

The Czech Maintenance Association
Czech Society of Non-Destructive Testing
Czech Mechanical Association - special section of tribotechnology

2. Social responsibility - Donation, cooperation with regions and the general public

Collection Fulfilled Dreams

Unipetrol organised another year of the Fulfilled Dreams collection, which this time collected almost CZK 366,000. Half of the amount was donated by the employees, the other half as usual by the company. Some of the money was given to the Early Care Centre in Pardubice, which cares for children from birth to the age of seven with physical, mental and multiple disabilities and also provides support for the families of the children. The centre will use these finances for a purchase of a new car, which is necessary to guarantee an early care field service. Another amount supported the children's home in Most. These received donations will be used for bedrooms refurbishing and modernisation. A family-type children's home in Kralupy nad Vltavou will use the finances towards new fixtures and fittings. The children also benefited from a week's trip to the mountains. For the second year in a row, the Kociánka Foundation in Brno, which collects and invests funds towards improving care of children and young people in the Kociánka Centre, has been supported. The centre facilitates general development of young people, and helps them adapt successfully into everyday lives. Our employees also had an added option of supporting the Focus Centre in Mělník and Dolní Povitaví. The funds raised will be used towards clients' rehabilitation programs.

Vintage (CZK)	Vintage 7 2017/18	Vintage 6 2016/17	Vintage 5 2015/16	Vintage 4 2014/15
Fulfilled Dreams	369 232	396 950	326 310	236 983

Blood donation

In 2017, over 100 Unipetrol employees donated blood voluntarily as part of the internal project "Donate fuel for life" (Daruj palivo pro život). A total of 42 litres of blood were collected, which can save over 350 lives. Due to popularity and commitment showed by Unipetrol employees, two sessions were organised.

BENZINA Helps

Benzina has launched a long term corporate responsibility program called Benzina Helps. In cooperation with the Children's Home Federation of the Czech Republic, Benzina has prepared two projects aiming to support children living in care homes. The first project was a creative contest, Children's Home of the Future, where children portrayed their ideas of what their future children's home should look like. Over 34,000 voters assessed 124 drawings and videos. A jury headed by the Olympic athlete, Jiří Šlégr, chose the winner out of five finalists. The children from the winning Tuchlov Home enjoyed an adrenaline trip to Špindlerův Mlýn, and their Home has undergone a reconstruction. The homes ranking second and third received sports equipment worth CZK 40,000, and books worth CZK 20,000, respectively. Since May 1, 2017, people can also use a special box located at Prague petrol station Argentinská to donate both, new and used sports equipment for children. The box is

emptied regularly and the equipment is forwarded to children's homes all over the country in cooperation with the Children's Home Federation.

MDA Ride

In 2017, Paramo extended its support to a charity event organised by bikers to help children with muscular dystrophy. The proceeds from the event were given to organisations for patients with this disease – the Association of Muscular Dystrophy Sufferers in the Czech Republic and the Parent Project.

Financial support to District of Ústí and Střední Čechy

Direct financial support for selected villages and towns in the Ústí and Central Bohemia Region, where most of the company activities are concentrated, is a matter of principle for Unipetrol. A total of 20 entities received a total amount of CZK 1,980,000 and they decided on the public projects which should benefit from the money. This is a way for Unipetrol to contribute towards the development of infrastructure, sports, tourism, health and social life in the regions of its presence.

Grants distribution details

Financial Support (CZK mil)	2017	2016	2015	2014
Ústecký & Středočeský District	1 980	2 690	1 200	1 140
Distributed amongst a number of cities	20	16	13	12

3. Sport sponsorship

Unipetrol continued to support the Litvínov ice hockey club, the main partner being Benzina. However, Unipetrol Group goes beyond looking after the HC VERVA Litvínov professional team; it also takes care of young sport talents. It supports the youth ice hockey categories and promotes development of children's interest in ice hockey in Litvínov and its surroundings.

Besides supporting the ice-hockey club and junior teams in Litvínov, Benzina also promoted other sports. The rally drivers, Jan Černý and Roman Kresta, have been backed in the long term; Benzina is also involved in the racing specials' best known even in the Czech Republic, the Barum Rally.

Unipetrol has also had a long tradition of partnership with car racing, particularly through its subsidiary Paramo – Rally Šumava Klatovy, Rally Bohemia, Rally Český Krumlov, Barum Czech Rally Zlín and Rally Tatry. Paramo has been a partner of teams using Mogul oils in their racing cars, demonstrating their oil quality. The famous faces of the project are Jan Černý, a successful young driver, Roman Kresta, a Europe-wide rally legend, and Roman Častoral, multiple European rally cross champion.

Paramo also supports a female racer, Ollie Roučková, who beats many a man in her quadricycle.

MOGUL oils are also being used in the Czech drivers' racing specials in the well-known Rally Dakar, for example in Martin Macík's LIAZ, or in the Barth Racing motorcycles and quadricycles.

4. Communication with the public

The following tools are mainly used to communicate with the public:

- Social responsibility (CSR) principles applied by UNIPETROL Group companies in cities and their larger urban zones
- Participation of UNIPETROL Group company management representatives at public meetings of the neighbouring municipal councils to provide information about the influence of the company on the surrounding environment
- Open days for the public
- Meetings with the mayors of the region to acquaint participants with all activities, including environmental protection as well as information about the occurrence of non-standard operating situations
- Green line, internal communication sources (radio, print, intranet)
- Online connection of the Police of the Czech Republic and the Municipal Police in Litvínov and Most with the company's alarm system at Chempark Záluží

- Emergency SMS messages via an information channel
- Discussion of the Responsible Care programme implementation report with the representatives of trade unions and local and regional authorities
- Public information provided via the Ecological Centre in Most and Kralupy nad Vltavou.
- Cross-border cooperation with Saxony through the Ecological Centre
- Internet, Facebook
- Interactive and educational programmes for primary and secondary school students, such as Chemistry and the Environment and the Path to the Secret of Oil

5. Unipetrol Foundation

Unipetrol Foundation was founded by Unipetrol in 2016 with a publicly beneficial purpose. The Foundation contributes in the Czech society development and improvement of quality of life by supporting of secondary and higher education, promotion of natural and technical sciences, environmental improvement and promotion of science, research and development. The Foundation places emphasis on balancing opportunities for individual development, especially in areas of high unemployment and supports people, for whom the difficult financial situation is a barrier to education. Its goals are realised through scholarship programs, grant programs to support secondary schools and paid internships for students.

Unipetrol activities form three basic support pillars:

- Supports Scholarship program designed for students at science and technology secondary and higher education.
- Supports Grant program for secondary schools, through which the Foundation contributes towards the purchase of technical equipment and towards the realisation of student-led school clubs and seminar projects.
- Supports science projects which allow students to take part in international projects, engage in interesting assignments, and expand their practical experience in manufacturing or applied research.

The Foundation also focuses on providing educational support to primary schools, individuals and institutions, providing incentive study bonuses and organising seminars.

The Foundation confirmed its support to three colleges in their participation in the international program H2AC 2018 (Hydrogen Horizon Automotive Challenge).

Environmental protection

Environmental protection

The UNIPETROL Group assessed the impacts of its activities on its surroundings and assessed the area of the environment as the area with the most significant impact, with due attention. Major measures and practices that UNIPETROL Group has undertaken or is about to take are closely related to work safety, integrated systems, and employee health protection, details of which are provided in the previous chapter. Other environmental protection measures and evaluation of monitored indicators are being dealt with in this chapter.

UNIPETROL Group objectives

- Reduce environmental impacts over the next three years by 10%, especially in waste water
- Modify products manufactured to reduce CO₂

Risks identified

- Direct impact on environmental degradation in cases of accidents
- Adverse effects on health of workers and local residents
- Risk of reputation impact
- Economic impacts of damage elimination

The key events of 2017

- In 2017, a project in cooperation with the Prague ICT Institute aimed at the greater recycling of waste materials from road reconstruction was successfully completed
- Enhanced security of oil supply (signed agreement with Croatian company JANAF concerning transport of crude oil through Adria pipeline plus testing)
- Development of modern rheological, instrumental and analytical that have been applied in bitumen research

Future targets and plans

An important change will be the legislative modification of environmental legislation for the period 2018 - 2020, which will determine the level of the obligatory reduction of CO₂ emissions from fossil fuel burning in terms of the content of the lower-emission bio-component. The change depends on the future EU standard development. (for description please see further below – Biofuels).

UNIPETROL Group will continue to modernise its production lines and adapt according to regulatory requirements.

As part of the business strategy, UNIPETROL will support the expansion of fossil fuel assortment with additives, alternatives such as CNG or electric vehicles fast refuelling stands at petrol stations, improved fuel assortment, premium fuel and environmentally friendly Ad Blue.

Due to the complexity of UNIPETROL Group and the scope of its monitored areas, other 2017 key events, including the evaluation of previous years' data, are described below, in its relevant sections.

Biofuel strategy

UNIPETROL Group has fulfilled the legislative obligations laid down in Act No. 201/2012 on the protection of the air against the use of biofuels in transport and the obligation to reduce greenhouse gas emissions from motor petrol and diesel fuels. The Group monitors the legislative developments at European and national level relating to the share of renewable sources in transport for the period 2020-2030 given by the forthcoming RED II Directive and the efforts to reduce GHG emissions in transport by the FQD which is gradually being introduced in national legislations,. The Group also analyses legislative developments at EU and national level and prepares measures to meet the policy goals post year 2020. However, current renewable energy legislative developments have been so far confusing, leaving much uncertainty for post 2020 requirements.

Environmental protection - UNIPETROL Group approaches and actions in order to meet the objectives and manage the risks identified

1. Compliance with environmental laws

A consistent attempt to comply with environmental protection regulations is also evidenced by the low number of instances of partial violations of environmental law requirements due to non-standard operating conditions. In 2017, only 1 sanction in the amount of 30 000.00 CZK was issued to UNIPETROL RPA, s.r.o. for exceeding the "p" limit for the vanadium parameter in waste water in 2015.

2. Integrated pollution prevention

Obligations of selected industrial companies in the area of integrated pollution prevention (IPPC) are regulated by the Act No. 76/2002, as amended. All UNIPETROL RPA production units, including the refineries in Litvínov and Kralupy nad Vltavou, fall within the scope of the IPPC Act and have valid integrated permits issued by the Regional Authorities of the Ústí Region and the Central Bohemia Region. These permits are continuously updated in relation to the requirements of the amended legal regulations and the fulfilment of their terms and conditions, the implementation of investment actions, changes to the technological facilities and changes to the substances used.

In 2017, a total of 18 integrated permit changes were issued in respect of UNIPETROL RPA equipment. Changes related to, for example, permitting operation of the new ethylene plant's power unit, permitting operation of the thermal oxidation unit at the new polyethylene plant, implementing requirements for leakage tests at the Litvínov refinery, approving the updated operating rules and emergency plans for individual plants, adjustments in the operating conditions of recirculating circuit water, monitoring pollutants discharged into the air, conditions for waste water discharge, and updating the description of individual plant facilities due to approved planned changes at the facilities.

During 2017, work began on preparing materials to review the binding conditions set in the integrated permit as required by the Conclusions on BAT for Joint Systems for Wastewater and Waste Gas Treatment in the Chemical Industry published in the previous year. UNIPETROL RPA participated in preparing the document on Best Available Techniques for the Chemical Cleaning Industry via the technical working group set up by the Ministry of Industry and Trade. Conclusions on BAT for the Large Combustion Sources Sector and the BAT Conclusions for the Organic Chemicals Sector were published in 2017. Revisions of binding conditions for installations falling under the scope of the BAT conclusions will be launched in 2018. Implementation of projects to meet the BAT conclusions for the mineral oil and gas refining sector continued in 2017. These projects will be completed in 2018. Compliance with BAT requirements at refineries must be reached by October 2018 at the latest.

All technologies operated by PARAMO have valid integrated permissions. Integrated permits issued by the Regional Authority of the Pardubice Region have been received at EC Pardubice for power engineering and asphalt, fuel and oil production. During 2017, the IP was updated twice (termination of operation of the hot contact furnace 8H01, decommissioning of the boiler room as a stationary combustion source in accordance with the previous National Plan of the Czech Republic, including the abolition of emission ceilings and the introduction of a new stationary source Expedition BA 95-Terminal and trial operation of a new flare stack). HS Kolin obtained one integrated permit issued by the Regional Authority of the Central Bohemian Region. In 2017, the IP was once updated as a result of permitting temporary storage of hazardous waste generated by distribution depots and due to adjustments to the Noise chapter. Permits vary continuously according to planned investments, shutdown of partial technologies and legislative changes.

Four integrated permits have been issued to SPOLANA, a.s. to operate its facility. In 2017, the Regional Authority issued five changes to integrated permits. The most significant changes were terminating amalgam electrolysis operation and approving the new energy centre.

3. Overview of valid integrated operating permits

Production Unit	Integrated permit – (issuer)
UNIPETROL RPA	
Production of polypropylene and polyethylene	Regional Authority of the Ústí Region
Steam cracker	Regional Authority of the Ústí Region
Production of ammonia	Regional Authority of the Ústí Region
Heating oil gasification plant	Regional Authority of the Ústí Region
Energy services unit	Regional Authority of the Ústí Region
Production of dicyclopentadiene and non-hydrogenated C9 fraction	Regional Authority of the Ústí Region
Litvínov refinery	Regional Authority of the Ústí Region
Kralupy nad Vltavou refinery	Regional Authority of the Central Bohemia Region
PARAMO, a.s.	
Refinery plant, Cost Centre Pardubice	Regional Authority of the Pardubice Region
Cost Centre Kolín	Regional Authority of the Central Bohemia Region
SPOLANA a.s.	
Energetic materials and toxic waste landfill	Regional Authority of the Central Bohemia Region
Production of chlorine and sodium amalgam by electrolysis	Regional Authority of the Central Bohemia Region
Production of polyvinyl chloride (PVC)	Regional Authority of the Central Bohemia Region
Production of caprolactam and sulfuric acid	Regional Authority of the Central Bohemia Region

4. Emissions to the environment

Emission of pollutants into the environment has stabilised over the past five years at the levels determined by substantial green investments made during the previous decade. The individual emissions to the environment are listed in the following chapters.

4.1 Discharge of waste water

At UNIPETROL RPA, the increase in 2017 in the amount of pollution in waste water compared with the years 2015 and 2016 is due to the re-launch of the Steam cracker and other units limited in the previous years due to an accident. The increase in pollution in terms of the COD parameter was due to shutdowns of some of the biological treatment plant technology due to investment and reconstruction work.

The Kralupy refinery waste water treatment plant underwent extensive reconstruction from 2013 to 2015 followed by two-year trial operation in 2016 to 2017. The plant started permanent operation on 1 January 2017. We note a reduction of polluting discharges in these years.

SPOLANA, a.s. — The quantity of discharged pollution remains stable.

PARAMO, a.s. — the rate of pollution via waste water has not changed in any significant way in the course of the previous years. A slight increase in pollution (HS Pardubice) in terms of the COD petroleum substance parameters occurred in connection with more intensive reclamation using the system of hydraulic groundwater protection (HOPV) (into sewage network). Pollution by waste water in Kolín (recipient Hluboký potok) remains stable.

The balance of indicators for waste water pollution for the Benzina registered branch cannot be indicated because the monitored parameters in the petrol station network are not consistent and cannot be interpreted in the overview. In the overall evaluation of individual petrol stations, none of the monitored parameters exceed the “m” value.

The decrease in pollution in the UNIPETROL DOPRAVA company Insoluble Substance Index is due to a decrease in the amount of cleaning equipment containing insoluble substances.

Pollutants discharged via wastewater by the Group (t/year)²⁾

Company	Indicator	2013	2014	2015	2016	2017
UNIPETROL RPA, s.r.o.	BOD	48	37	16	19	24
OZ RAFINÉRIE ¹⁾	BOD	16	13	8	7	9
PARAMO, a.s.	BOD	26	24	19	17	32
SPOLANA, a.s.	BOD	31	44	46	35	56
UNIPETROL DOPRAVA	BOD	0	0	0	0	0
UNIPETROL Group	BOD	121	117	89	78	121

UNIPETROL RPA, s.r.o.	COD	277	290	258	220	238
OZ RAFINÉRIE ¹⁾	COD	38	38	30	18	28
PARAMO, a.s.	COD	116	104	84	69	110
SPOLANA, a.s.	COD	294	403	399	301	407
UNIPETROL DOPRAVA	COD	57	37	55	82	63
UNIPETROL Group	COD	782	872	826	690	846

UNIPETROL RPA, s.r.o.	Undissolved substances	111	83	34	32	47
OZ RAFINÉRIE ¹⁾	Undissolved substances	42	41	29	29	27
PARAMO, a.s.	Undissolved substances	39	25	18	13	20
SPOLANA, a.s.	Undissolved substances	207	286	294	176	244
UNIPETROL DOPRAVA	Undissolved substances	9.6	5.7	10.7	16.7	0.38
UNIPETROL Group	Undissolved substances	409	440	385	267	338

UNIPETROL RPA, s.r.o.	Oil substances	2	1.3	0	0	0
OZ RAFINÉRIE ¹⁾	Oil substances	1	1	1	1	0
PARAMO, a.s.	Oil substances	3	1.33	1	1	1.7
SPOLANA, a.s.	Oil substances	-	-	-	-	-
UNIPETROL DOPRAVA	Oil substances	0	0	0	0	0
UNIPETROL Group	Oil substances	5	4	3	2	2

¹⁾ BENZINA is not extensively monitored and representative data cannot be evaluated.

²⁾ Only the Kralupy site. No direct discharge at Litvínov.

4.2 Waste management

In UNIPETROL RPA, both the total amount of waste and hazardous waste has been reduced due to standard operation and consistent compliance with waste prevention. Increased production of hazardous waste in refineries in recent years is mainly due to increased use of the refinery's production units. Increased production of hazardous waste at PARAMO from 2013 to 2014 was due to the liquidation (sale) of larger volumes of waste slop oils. Currently, sales of waste oils have dropped to a less significant volume. At the same time, waste production generated by investment projects has also minimised.

The reduction of waste in UNIPETROL DOPRAVA is associated with the final closure of the rinse station in Neratovice and transfer of the rail maintenance section (track structure and subgrade and FM maintenance) to UNIPETROL RPA.

The increase in the production of hazardous waste in SPOLANA is associated with the shutdown of amalgam electrolysis.

For the BENZINA registered branch, the balance does not include any waste generated by petrol stations, but only wastes from investment and other contracts, i.e. the producer of the remaining waste production is the lessee of the PS as an independent entrepreneur.

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

Year	2013	2014	2015	2016	2017
UNIPETROL RPA, s.r.o.	10 904	6 368	5 177	15 514	4 165
OZ RAFINÉRIE	3 043	3 565	4 336	3 928	4 003
PARAMO, a.s.	3 439	3 038	1841	1 796	1 079
SPOLANA, a.s.	5 383	5 822	7 745	5 489	7 510
UNIPETROL DOPRAVA	2 364	3 394	953	1 870	633
OZ BENZINA	116	57	40	52	16
UNIPETROL Group	25 249	22 244	20 092	28 648	17 405

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

Year	2013	2014	2015	2016	2017
UNIPETROL RPA, s.r.o.	1 002	1 038	389	7 787	347
OZ RAFINÉRIE	806	1 075	1 540	1 421	1 470
PARAMO, a.s.	2 957	2 307	1 128	1 128	591
SPOLANA, a.s.	623	160	329	473	759
UNIPETROL DOPRAVA	532	361	654	300	463
OZ BENZINA	105	53	36	49	2
UNIPETROL Group	6 026	4 995	4 076	11 158	3 633

4.3 Air protection

The emissions of OZ RAFINÉRIE in 2016 were lower than those from 2013 to 2015 due to production outages at both refineries. Slightly higher emissions in 2017 are due to more extensive use of both refineries.

In 2017, production at UNIPETROL RPA, s.r.o. stabilised, resulting in slightly higher emissions compared with previous non-standard years, but SO₂ and solid pollutants dropped due to reduced emissions from the T700 heating plant.

In PARAMO, only natural gas was burned in the boilers of HS Pardubice and HS Kolín, which in the long term has led to lower sulphur dioxide, solid pollutant and volatile organic compound emissions. Low emission levels from combustion processes have been achieved despite an increase of oil processing at HS Kolín. This condition was supported by non-operation of some sources of air pollution at the Paliva plant and by limitation of total boiler plant power at HS Pardubice (only boiler K1 is in operation, boiler K2 serves as a backup source, and boiler K3 has been disconnected).

SO₂ have decreased at SPOLANA a.s. emissions due to less coal burning and more use of the gas boiler during production.

At UNIPETROL DOPRAVA, s.r.o., the quantity of VOC used at the cleaning and steaming station for road tankers and rail tankers is around 1 tonne per year.

Pollution released into the air by the Group (t/year)

Company	Indicator	2013	2014	2015	2016	2017
UNIPETROL RPA s.r.o.	NO _x	3 755.0	3 958.0	3 007.0	1 648.0	2 400.0
OZ RAFINÉRIE	NO _x	532.0	562.7	440.2	322.0	582.0
PARAMO, a.s.	NO _x	33.0	27.0	28.0	35.7	39.0
SPOLANA, a.s.	NO _x	649	586	642	644	616
UNIPETROL DOPRAVA	NO _x	0.0	0.0	0.0	0.0	0.0
UNIPETROL Group	NO _x	4 969.0	5 133.7	4117.2	2 649.7	3 637.0

UNIPETROL RPA s.r.o.	SO ₂	3 700.0	3 973.0	4 124.0	2 959.0	2 771.0
OZ RAFINÉRIE	SO ₂	3 375.0	2 333.8	2 342.4	1 934.0	3 490.0
PARAMO, a.s.	SO ₂	9.0	0.4	3.0	2.7	1.3
SPOLANA, a.s.	SO ₂	1049	948	978	811	585
UNIPETROL DOPRAVA	SO ₂	0.0	0.0	0.0	0.0	0.0
UNIPETROL Group	SO ₂	8 133.0	7 255.2	7 447.4	5 706.7	6 847.3

UNIPETROL RPA s.r.o.	Solids	99.0	85.0	67.0	65.0	62.0
OZ RAFINÉRIE	Solids	21.6	50.2	33.2	20.0	55.0
PARAMO, a.s.	Solids	0.4	0.4	0.4	0.4	0.5
SPOLANA, a.s.	Solids	27	28	15	16	13
UNIPETROL DOPRAVA	Solids	0.0	0.0	0.0	0.0	0.0
UNIPETROL Group	Solids	148.0	163.5	115.7	101.4	130.5

UNIPETROL RPA s.r.o.	VOC	33.0	31.0	18.0	7.0	26.0
OZ RAFINÉRIE	VOC	119.0	124.2	117.0	90.0	107.0
PARAMO, a.s.	VOC ¹⁾	343.0	318.0	349.0	332.0	400.0
SPOLANA, a.s.	VOC ¹⁾	37	42	44	40	43
UNIPETROL DOPRAVA	VOC	1.1	1.1	1.0	1.3	1.1
UNIPETROL Group	VOC	533.1	516.3	529.0	470.3	577.1

¹⁾90% are fugitive emissions that are reported only on the basis of solvent purchases in a given calendar

4.4 CO2 emissions and Emission Allowances trading

Carbon dioxide emission Regulation, under the EU Emissions Trading Scheme (EU ETS).

In the third trading period 2013–2020, the number of monitored CO₂ sources of emissions significantly increased and the methods for calculating, monitoring and reporting changed. Calculation of the freely allocated emission allowances has also been through an important change.

UNIPETROL Group companies' allowance allocation; UNIPETROL, a.s., PARAMO, a.s. and SPOLANA, a.s. under the 2013–2020 National Allocation Plan and actual CO₂ emissions in 2013–2017.

Allocation of allowances (thousand pcs) Real emissions (kt/year)	UNIPETROL RPA, s.r.o.	OZ RAFINÉRIE ²⁾	PARAMO, a.s.	SPOLANA, a.s.	UNIPETROL Group
Total allocation for 2013–2020 period	10 159¹⁾	6 494	445	1 051	17 333
2013: Actual CO ₂ emissions	3 062	772	47	232	4 113
2014: Actual CO ₂ emissions	3 138	877	37	251	4 303
2015: Actual CO ₂ emissions	2 841	888	36	239	4 004
2016: Actual CO ₂ emissions	2 491	678	37	233	3 439
2017: Actual CO ₂ emissions	3 324	954	42	207	4 527

¹⁾ In the period 2013–2020, the number of greenhouse gas emissions included in the EU ETS has increased significantly. The allocation may change as a result of changes in device operation.

²⁾ In 2017, UNIPETROL RPA and ČESKÁ RAFINÉRSKÁ were merged, and from then on registered as OZ RAFINÉRIE.

Based on the emission calculations for 2017, the allocated annual quantity of allowances in UNIPETROL RPA, including o.z. RAFINÉRIE, covered approximately 38% of annual emissions. The UNIPETROL RPA freely allocated allowances for the year 2017 were partially reduced as a result of a lower use of the steam cracker in 2016. The 2017 emission allowance deficit will be covered by the next year's allocation of allowances, and the remaining deficit will be covered by purchasing allowances.

Because of the closure of all major stationary sources of air pollution still burning liquid fuels (fuel oil, diesel fuel) PARAMO has long been managing a significant surplus of allowances from previous allocation periods. The drop in CO₂ emissions in 2016 reported by ČESKÁ RAFINÉRSKÁ was due to the limited operation of the Kralupy refinery and the planned stoppage of the Litvínov refinery. As a result of liquidation of the urea plant, the unallocated allowances of UNIPETROL RPA in 2018 will partially be reduced, but because of renewed operation and greater use of the steam cracker, the free allocation will again increase in 2018.

SPOLANA successfully reduced its CO₂ emissions through lowering its coal consumption.

4.5 Other greenhouse gases

All companies of the Group operate production facilities in accordance with the Earth's ozone layer protection requirements and in line with existing international agreements. Cooling media have been replaced by more environmentally friendly refills over the past few years.

4.6 Management of primary raw material and energy sources

To conserve primary raw material and energy sources, the UNIPETROL Group follows the principles of sustainable development and focuses its basic strategies on innovative approaches leading to the minimisation of energy and material use and promotes continuous improvement in environmental performance and increasing energy efficiency. Companies of the Group in which a successful energy management system certification in accordance with ISO 50001 has been implemented have committed themselves to these principles under the framework of the Energy Policy.

UNIPETROL RPA continuously implements diverse investments and technological changes that have directly or indirectly resulted in reduced energy and raw materials consumption, reduced waste and wastewater production and recycling of by-products or raw materials etc. at the operator's facilities.

Many projects are under preparation for the petrochemical plants to optimise the quality of feedstocks for the steam cracker and thereby improve its operation. These activities impact the formation of corrosion on the equipment and improve their technical condition, which greatly enhances the efficiency of the operation.

Continuous development is taking place in the area of Advanced Process Control (APC). Advanced Process Control systems are being gradually implemented at the FCC Kralupy and Butadien Kralupy units. The APC system for the T700 heating plant is currently the most important project under preparation. The project will contribute to optimising heat and power generation by improving the use of lignite, monitoring combustion efficiency etc.

UNIPETROL RPA is focused on reducing pipeline energy loss. The "Zero Tolerance" programme implemented from 2017 to 2019 has become a top priority. It principally involves extensive replacement of pipeline insulation and monitoring pipeline operation, removing leaks, and systematically verifying the functionality of condensate drainage. These activities are common to all parts of the UNIPETROL Group, i.e. Chempark Záluží, ACHV Kralupy, SPOLANA and PARAMO.

The future is benefitting from significant activities under which the strategies of energy sources operation is defined, including the size of these sources and observance of all legislative parameters. In 2017, the construction of a new boiler plant for the steam cracker began, which will significantly contribute to meeting all legislative requirements while also positively contributing to increased steam production efficiency during monomer production. A study is also underway to choose the new, optimal energy source and whether to replace or completely refurbish the T700.

At the RAFINÉRIE registered branch, an energy efficiency study of the production units was performed in 2017. It defined new measures aiming to reduce or optimise energy consumption. The inputs and measures will be further analysed and implemented as necessary, however, the study showed that energy management was already being handled very well.

Significant savings are achieved by better use of primary raw materials. The Group is focusing on an extensive modernisation programme aimed at deeper oil processing in favour of so-called light products, especially fuels. In principle, this is an ongoing process — new analyses and projects are continually being designed and implemented. Currently, a pre-flash column project is underway, which will have a significant impact on energy consumption while allowing for more efficient crude oil processing. Also, a vacuum distillation project is being prepared to allow better use of the input crude oil.

The BENZINA registered branch is focusing its efforts on water, electricity and gas consumption at petrol stations. Regular monitoring of energy consumption was introduced in 2017. A project to install media consumption meters (electricity, water, gas) is planned in 2018 for all petrol stations under an "Energy Management" scheme. The aim of the project is to evaluate and optimise energy consumption at individual petrol stations via online monitoring and to compare and evaluate consumer opportunities based on these data. Electrical energy use is optimised at petrol stations via the introduction of low-energy appliances and technologies (LEDs).

At the Polymer Institute Brno registered branch, energy use has been reduced mainly by installing new equipment to replace existing technologies. In 2017, a bulk homogeniser and an IR dryer were installed, and a central process water cooler was installed to cool water in the production line's processes. Replacement of the tube extruder, foil blower, twin screw and single screw extruder is planned for 2018.

To improve energy efficiency, PARAMO has been implementing projects to reduce steam consumption used for product heating and pumping routes (using heat from its own steam generated at the incinerator for the "Asfalty" operation). Optimisation of steam processing route distances (pipeline heat loss reduction) and installing thermal

insulation in selected tanks is also being performed. Particular attention is being given to insulation under the “Zero Tolerance to Steam Leaks and Missing or Damaged Insulation” project.

Efforts to reduce electricity consumption culminated in the installation of a new boiler feeding pump at the HS Kolín boiler plant with a similar project being prepared for the Pardubice boiler plant.

At SPOLANA, revitalisation of the backbone route of the 2.1 MPa steam pipeline was performed in 2017, thus achieving savings in input primary sources for the production of process heat. This will be followed in 2018–2019 by the revitalisation of 2.1 MPa steam pipelines at the Kaprolaktam and PVC plants.

In the first half of 2019, SPOLANA will undergo a major change in the energy management structure associated with the shutdown of coal steam boilers, during which a new gas boiler plant will be built and only the 2.1 MPa steam distribution network optimised and reduced as needed at respective production plants. The supply of all heat to the SPOLANA commercial zone and to external customers will also be discontinued and replaced with another form of energy selected by the feasibility study in 2017.

The SPOLANA production area continuously monitors the consumption of primary energy sources, especially natural gas and water, and a reconstruction of sulfuric acid operation at the Kaprolaktam plant is being prepared for implementation in the 2017–2021 period.

Efforts to improve energy intensive processes were also applied at the Kaprolaktam plant, which included reconstructing the lining of the sulfur burning furnace, installing a cooled cone in the drying kiln of the PVC plant and testing pressure reduction of the sulfur burning furnace steam boiler.

UNIPETROL DOPRAVA has placed particular emphasis on UNIPETROL DOPRAVA managing energy by optimising fuel, electricity, processes and heating steam consumption.

One very important aspect of this has been modernising the locomotive park, which is part of the company’s strategic plan. In 2017, the company purchased seven new locomotives (diesel and electric). Three new locomotives (two diesel powered transmission types and one electric powered transmission type) have already been put into operation. Other locomotives will be delivered in 2018. In addition to the expected savings in fuel and electricity consumption, new locomotives will also help reduce emissions.

Other activities include modifying technological equipment and adjusting technological procedures. Technical modifications have been performed on the siding since 2016 (e.g., installation of photocells on the railyard siding’s lighting towers). The plan for 2018 includes replacing energy saving lights at the UNIPETROL RPA Litvínov siding, changing the heating system for switches, installing heating control and thermal insulation for buildings etc. The time needed for steaming and cleaning railcars has been reduced and the plan also includes completion of insulation of the steam station’s technology.

Water consumption in the Group (mil. m³/year)

Year	2013	2014	2015	2016	2017
UNIPETROL RPA s.r.o.	21.4	17.8	16.8	14.3	18.4
OZ RAFINÉRIE Kralupy	2.7	3.0	2.9	2.3	2.0
PARAMO, a.s.	0.5	0.3	0.3	0.3	0.4
SPOLANA, a.s.	12.1	19.2	18.5	16.3	15.8
UNIPETROL Group	36.6	40.3	38.5	33.2	36.7

Stabilised energy consumption in the UNIPETROL Group is accompanied by a significant growth in production volumes. The development of energy efficiency in production processes can therefore be better seen in the following tables of specific energy consumption. Efficiency is expressed by the energy consumption coefficient calculated as tonnes of oil equivalent (TOE) related to tonnes of production per year:

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

Year	2013	2014	2015	2016	2017
UNIPETROL RPA s.r.o.	8.8	8.4	8.6	7.9	11.8
OZ RAFINÉRIE	16.1	16.8	16.7	14.0	17.3
PARAMO, a.s.	1.0	0.9	0.8	0.8	0.5
SPOLANA, a.s.	3.5	4.1	3.7	3.2	3.4
UNIPETROL Group	29.4	30.2	29.8	25.9	33.0

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

Year	2013	2014	2015	2016	2017
UNIPETROL RPA s.r.o.	0.166	0.145	0.189	0.291	0.219
OZ RAFINÉRIE Litvínov	0.047	0.043	0.047	0.050	0.045
OZ RAFINÉRIE Kralupy	0.060	0.055	0.054	0.062	0.050
PARAMO HS Pardubice	0.202	0.124	0.133	0.147	0.135
PARAMO HS Kolín	0.227	0.184	0.225	0.240	0.290
SPOLANA, a.s.	0.181	0.176	0.165	0.156	0.147

5. Environmental investments

Environmental investments are defined as capital investment projects caused directly by the requirements of environmental protection legislation and closely related to implementing integrated pollution prevention. Environmental investments include other investment projects with a significant and positive effect on the environment. In 2017, the Group implemented the following environmental investments:

OZ RAFINÉRIE

OZ RAFINÉRIE implemented environmental protection investment projects valued at CZK 63.96 million, including:

- Reconstruction of the Litvínov refinery sewage network. Design and preparation of a project for a compact block sewage system at the new Litvínov refinery and production units for preparing Petrochemical raw materials has commenced.
- Reconstruction of the sloping system at the new Litvínov refinery.
- Projects implemented in 2016 to ensure compliance with the best available techniques (BAT). Continuous emission measurements will be conducted on selected sources at both refineries. A DeSOx additive dosing will be installed on a fluid catalytic cracker unit at the Kralupy refinery.
- Commencement of a project to repair the storage yard for storage tanks at the Kralupy refinery.
- A project to exchange continuous emission analysers at the liquid sulphur production unit at the Litvínov refinery.

UNIPETROL RPA

UNIPETROL RPA implemented environmental protection investment projects valued at CZK 124.4 million, including:

- Preparation to install DeSOx technology at the T700 heating plant.
- Installation of DeNOx on the first three boilers in the T700.
- Reconstruction of the sewage system, including shafts at the steam cracker.

- Water management of the steam cracker's handling surfaces.
- Completion of construction of equipment to clean the mechanical final-cleaning station's tanks.
- Preparation of project documentation for the construction of a new power unit for the steam cracker, including EIA.
- Measures to meet the vanadium limit in waste water.

A number of other measures with a positive environmental impact were implemented under plant equipment maintenance costs.

PARAMO

PARAMO implemented environmental protection investment projects valued at CZK 0.433 million, including:

- Installation of a ground-level flare. Work on a safety element of the BA warehouse (Fuel operation) is currently being completed.
- Energy audit 2017 (HS Pardubice, HS Kolín)

SPOLANA

SPOLANA implemented environmental protection investment projects valued at CZK 8.2 million, including:

- Reduction of trichlorethylene emissions.
- Improvement of aeration at the sewage treatment plant.
- Waste water monitoring and instrumentation.

BENZINA

BENZINA implemented environmental protection investment projects valued at CZK 97 thousand, including a water treatment plant at the Břeclav PS (Petrol Station).

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

Year	2013	2014	2015	2016	2017
UNIPETROL RPA, s.r.o.	26	63	46	59	124.4
OZ RAFINÉRIE	82	177	258	81	64
PARAMO, a.s.	7	10	14	2	0.433
SPOLANA, a.s.	10.8	3.5	7.2	15.9	8.2
BENZINA	3	2	1	0.3	0.097
UNIPETROL Group	128.8	255	327	157	197.1

Scheduled investments in facilities with an environmental impact

Below are the planned investment amounts over the next five years. Planned spending for 2018 is based on the Business Plan, plans for the following years are based on the long-term plans (Meter Plan) and can deviate from the future business plan, following external/internal influencing factors.

Year	2018	2019	2020	2021	2022
CAPEX (CZK mil.)	740	1 066	538	315	180

The largest investments are:

- UNIPETROL RPA - New boiler room ethylene units in Chempark Záluží Litvínov (estimated amount of investment is CZK 1.7 billion 2018-20)
- SPOLANA, a.s.- New Energy Center (CZK 217 million invested in 2018-2019)
- SPOLANA, a.s. - (WWTP - Wastewater treatment plant) - Waste Water and Waste Water Treatment Plant - Unit renewal (CZK 200 million invested during the years 2019-2021)
- UNIPETROL RPA - (Drainage reconstruction SC) Reconstruction of the waste pipeline on an ethylene unit (CZK 140 million invested in 2020-21)

6. Environmental operating costs

Costs associated with operating installations for air protection, wastewater treatment, waste management, environmental management systems, emissions monitoring, evaluation of environmental impact (EIA process), integrated pollution prevention and other related environmental activities are called environmental operating costs.

Newly installed modern technologies with a high degree of raw material conversion, reduced waste amounts and high energy efficiency have resulted in an overall reduction in environmental operating costs compared with the previous decade. The total environmental operating costs have been more or less stable in the last decade. The development trend of environmental operating costs in 2013–2017 is shown in the following table:

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

Year	2013	2014	2015	2016	2017
UNIPETROL RPA, s.r.o.	486	433	437	439	512
OZ RAFINÉRIE	176	168	170	187	168
PARAMO, a.s.	15	13	18	17	17.4
SPOLANA, a.s.	197	143	153	148	145
BENZINA	2	3	3	3	4
UNIPETROL Group	876	760	782	794	846

7. Total costs of environmental protection

The total environmental protection costs for the UNIPETROL Group include environmental investment costs, environmental protection operating costs, costs for repairing environmental damage, and also expenses for air pollution, wastewater discharge, waste disposal in landfill, provisioning for landfill reclamation, and compensation for damage to forests by pollution. Development of expenses and payments for environmental pollution and the total costs of environmental protection in the years 2013–2017 are shown in the following table.

Fees and payments for environmental pollution in the Group (CZK mil. per year)

Year	2013	2014	2015	2016	2017
UNIPETROL RPA, s.r.o.	25	25	28	18	10.9*
OZ RAFINÉRIE	23.8	18	13	16	11
PARAMO, a.s.	1.2	1.3	1	1.5	1.8
SPOLANA, a.s.	5	4.6	3.7	4.3	3.5
BENZINA	0	0	0	0	0
UNIPETROL Group	55	49	46	40	27

* The actual balance of payments when taking into account use of the New ash dumps reserve in the amount of CZK - 19 486 million amounts to CZK -8.6 million.

The total costs of environmental protection in 2016 amounted to CZK 1.2 billion.

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

Year	2013	2014	2015	2016	2017
UNIPETROL RPA, s.r.o.	537	521	532	524	771
OZ RAFINÉRIE	281	363	442	284	233
PARAMO, a.s.	158	79	80	129	79
SPOLANA, a.s.	748	285	197	170	158
BENZINA	35	18	10	7	9
UNIPETROL, a.s.	1.3	1.3	1.3	1.3	1.3
UNIPETROL Group	1 760	1 268	1 262	1 116	1 251

8. Programme for remediating old environmental burdens

Based on the privatisation-related decision of the Government of the Czech Republic, UNIPETROL Group companies entered into the following agreements to solve ecological commitments sustained before privatisation (Ecological Agreement)

- 1) Ecological Agreement No. 14/94, as amended by amendment No. 3 on 25 January 2005, entered into by UNIPETROL
- 2) Ecological Agreement No. 32/94, as amended by amendment No. 1 on 4 July 2001, entered into by UNIPETROL
- 3) Ecological Agreement No. 39/94, as amended by amendment No. 2 on 4 July 2001, entered into by PARAMO
- 4) Ecological Agreement No. 58/94, as amended by amendment No. 4 on 27 June 2016, entered into by PARAMO

- 5) Ecological Agreement No. 184/97, as amended by amendment No. 7 on 18 January 2007, entered into by BENZINA
- 6) Ecological Agreement No. 33/94, as amended by amendment No. 4 on 8 April 2009, entered into by SPOLANA

Remedial works at different stages of completion are being performed under these Ecological Agreements. The current overview is shown in the table below:

Litvínov

Location	Current status	Next stage
Liquid sludge landfill Růžodol	Post-remediation monitoring after oil sludge has been drawn	Remediation project documentation for contractor selection
The works complex	Contamination clouds No. 1, 2c, 3, 6 and 10 remediated and handed over. Remedial works have not been fully completed on the contamination clouds No. 2, 4, 5, 7, 9 and 11	Remediation completed. Start of post-remediation monitoring
Uhlodehta landfill	Remediation project documentation	Updated risk analysis
Solid industrial waste landfill	Remediation project documentation	Updated risk analysis
Lime sludge landfill II.	Remediation project documentation	Updated risk analysis
Lime sludge landfill at the siding	Remediation project documentation	Updated risk analysis
Ash dump south foreland	Partially re-cultivated, preparing remediation of areas not yet remediated	Updated risk analysis
Fly-ash dump	Partially re-cultivated, preparing remediation of areas not yet remediated	Updated risk analysis
Contaminated cloud No. 13	Protective remediation pumping performed at the acquirer's expense (UNIPETROL, a.s.)	Remediation feasibility study
'Nová voda střed' reservoir pumping	Protective remediation pumping currently in progress	Remediation project documentation for contractor selection
Růžodol drain pumping Contaminated cloud No.12	Protective remediation pumping currently in progress	Remediation project documentation for contractor selection

Kralupy nad Vltavou

Location	Current status	Next stage
The works complex	Updated risk analysis URA (AAR)	Post-survey + Remediation project documentation
Nelahozeves landfill	Remediation project documentation realised	Remediation of pollution
The works complex — contamination cloud E	Remediation project documentation for contractor selection	Remediation of pollution
'Gudrony' (acid tar waste from crude oil refining)	Feasibility study	Remediation of pollution

BENZINA [Distribution Warehouses (DW) and main PS (Petrol Stations)]

Location	Current status	Next stage
Kostelec nad Černými lesy PS	Remediation project documentation for contractor selection	Remediation of pollution
Ostrava-Muglinov PS	Final survey and processing of remediation project currently under way	Remediation of pollution
Točnick DW	Final survey + Remediation project documentation for contractor selection	Remediation of pollution
Liberec-Rochlice DW	Final survey + Remediation project documentation for contractor selection	Protective remediation pumping Remediation of pollution
Šumperk DW	Final survey and processing of remediation project currently under way	Remediation of pollution
Bartošovice DW	Final survey + Remediation project documentation for contractor selection	Remediation of pollution
Pardubice Chrudimská PS	Remediation of pollution	Post-remediation monitoring
Přelouč PS	Realisation Project documentation of remediation	Remediation of pollution
Nový Bohumín DW	Realisation Project documentation of remediation	Remediation of pollution

PARAMO — Pardubice

Location	Current status	Next stage
Časy	Protective remediation pumping and monitoring	Remediation project documentation for contractor selection
Hlavečnick	Protective pumping of precipitation water	Protective pumping of precipitation water
Surroundings of the main works — LIDL	Updated risk analysis	Contract ended
Surroundings of the main works surroundings — U Trojice	Remedial pumping of bores and drains + monitoring	Continuation of remediation pumping and monitoring
The main works — stage 1A	Pre-remediation Eng. and Geo (IG) and Hydrological (HG) survey, dismantling of technological equipment	Remediation of pollution
Nová Ves	Updated risk analysis	Post-remediation monitoring

PARAMO – Kolín

Location	Current status	Next stage
The works complex and sludge lagoons	Processing of final remediation report	Updated risk analysis

SPOLANA

Location	Current status	Next stage
Toxic waste landfill remediation	Remediation completed	Post-remediation monitoring
Remediation of objects contaminated with dioxins	Remediation completed	Remediation completed
Remediation of old amalgam electrolysis	Remediation completed	Post-remediation monitoring
Ground water remediation at Petrochemie	Remediation project documentation for contractor selection	Remediation of pollution
'Starý závod' (Old works) Ground water remediation	Feasibility study	Remediation project documentation for contractor selection
Remediation of mercury contamination of the Labe riverbanks	Remediation project documentation for contractor selection	Remediation of pollution

Allocation of allowances to UNIPETROL Group companies according to the National Allocation Plan (mil. CZK incl. VAT) as of 31 December 2017

	UNIPETROL Litvínov	UNIPETROL Kralupy	PARAMO Kolín	PARAMO Pardubice	BENZINA	SPOLANA	Group total
Financial guarantee by the MoF	6 012.0	4 243.9	1 906.6	1 241.5	1 349.2	8 159.1	22 912.3
Costs paid by the MoF in 2017	69.9	0.2	38.2	21.2	4.2	1.7	135.4
Costs paid by the MoF since the works started	4 255.7	51.8	1 897.7	545.1	485.0	5 596.6	12 831.9
Expected cost of future works	2 513.2	788.6	2.9	2781.5	998.2	1 739.5	8 823.9
Total (estimated) remedial costs	6 768.9	840.4	1 900.6	3 326.6	1 483.2	7 336.1	21 655.8

9. Chemical safety

All the companies of the Group 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 that exhibit hazardous properties, they process safety data sheets which are then provided free of charge to all purchasers. At UNIPETROL RPA and in accordance with the REACH regulation, safety data sheets of manufactured and purchased hazardous chemicals and mixtures are available to all employees via the intranet computer network.

The Group continuously observes communications in the chain of supply and demand, which is the basis for implementing measures to protect employee health and the environment when using hazardous chemicals individually or contained as mixtures. It applies and monitors any amendments due to updated processes associated with registering and classifying chemical substances and updates these changes in its safety data sheets.

All the companies continuously monitor the handling of chemical substances and mixtures from raw materials up to the finished products and ensure compliance with applicable laws, including internal and external testing and subsequent issue of legal statements for specific application of selected products involving, for example, contact with food and drinking water, medical use etc. The companies have customer services to provide detailed information about the characteristics of the products in relation to their specific use.

The companies of the Group are subject to international inspection by the UN intergovernmental organisation (OPCW) monitoring observance of the "Chemical Weapons Convention". All previous checks carried out by state authorities and international inspections on the companies of the Group have shown thorough fulfilment of the Convention.

In accordance with the current legislation, PARAMO implemented the necessary registration of substances and isolated intermediates in due course. In 2017, in cooperation with the CONCAWE consortium, active registered substances and intermediates were updated according to REACH, including a complete update of the dossier for "Lubricating oils" substances for which PARAMO is the main registrant in the EU market.

At the end of 2017, PARAMO was inspected by the Hradec Králové Regional Czech Environmental Inspectorate (ČIŽP OI HK) and the Regional Public Health Station (KHS) focusing on the fulfilment of obligations stated in the exposure scenarios and the obligations under the Chemical Substances Act and REACH. The inspection did not reveal any legislative errors.

To fulfil the requirements of REACH, the companies continuously update registration dossiers and ensure that their software application IUCLID used to process the technical documentation for both registered and notified substances is in line with the latest version published on the ECHA website.

10. Other activities

Stocking fish in Bílina river

Unipetrol has been cooperating with the Czech Fishing Union on a long term basis in stocking fish in selected sections of the Bílina River. Hundreds of fish with a total weight of tens of kilograms are released into the river every year. The effort is bearing fruit; not only do the fish survive in the river, whose purity has greatly improved, but some species even naturally reproduce. Unipetrol contributes the amount of CZK 50,000 every year. Thanks to stocking, which takes place every spring and autumn, over 5,000 kilograms of fish were introduced to the river.

Project Life at full speed

In 2017, Benzina focused on drivers' emotions, dreams and active lifestyle, which has been supported in the long term. Avid fans of the brand went to the Altenberg race track, where the World Cup races are held, and had a go on bobsleigh, or they could try the radical formula at the Most racing ring.

Sport

Benzina prepared an adrenaline experience for keen athletes in the form of a night run, Benzina Sprint within the Red Bull 400 event at the ski jump-ramp in Harrachov, which welcomed a team consisting of Benzina supporters along with PKN Orlen, Benzina employees and the Unipetrol Runners club members. Even in 2017, Benzina remained a partner of the outdoor Spartan Race series, supporting the Benzina team during Kouty and Liberec races.

Overview of classification of companies into groups according to the Act No. 224/2015, as amended, and the condition identified in the Safety Report of 31 December 2017

Company	Object	Groups	Safety report
UNIPETROL RPA, s.r.o.	UNIPETROL RPA, s.r.o.	B	The SR update is currently undergoing approval / Regional Authority of the Ústí Region
	REFINERY registered branch Litvínov Production section (Litvínov refinery)	B	The SR update is undergoing approval / Regional Authority of the Ústí Region
	Kralupy Production section (Kralupy refinery)	B	The SR update is undergoing approval / Regional Authority of the Central Bohemia Region
	BENZINA registered branch	-	Not subject to the Act No. 224/2015. Report on non-inclusion according to the law was updated and submitted to the relevant Regional Authorities
UNIPETROL DOPRAVA, s.r.o.	Operating department, Pardubice facility, Semtín, Railway facility Pardubice	B	The SR update is undergoing approval / Regional Authority of the Pardubice Region
	Operating department, Pardubice facility, Semtín, Railway siding Semtín	B	The SR update is undergoing approval / Regional Authority of the Pardubice Region
	Operating department, Railway siding Litvínov	B	The SR update is undergoing approval / Regional Authority of the Ústí Region
	Operating department, Kralupy facility, Neratovice, Railway facility Kralupy	B	The SR update is undergoing approval / Regional Authority of Central Bohemia Region
	Operating department, Kralupy facility, Neratovice, Railway facility Neratovice	B	The SR update is undergoing approval / Regional Authority of Central Bohemia Region
PARAMO, a.s.	Pardubice Cost Centre	B	The SR update is undergoing approval / Regional Authority of the Pardubice Region
	Kolín Cost Centre	-	Not subject to the Act No. 224/2015. Report on non-inclusion according to the Act was updated and submitted to the Regional Authority
SPOLANA a.s.	SPOLANA a.s.	B	The SR update is undergoing approval / Regional Authority of Central Bohemia Region (the submission deadline was extended to 31 December 2017, submitted on 20 December 2017)

Anti-corruption and bribery matters

Anti-corruption and anti-bribery policies

To UNIPETROL Group (“Group”) it is of the utmost importance that their employees act and behave in accordance with applicable laws, ethical and transparency principles, best industry standards and in accordance with the values of the Group. In this respect Group constantly implements and improves its internal policies and regulations, so that all activities are based on the best practices of corporate management and operational excellence, with an emphasis on legality and highest ethical standards. Group companies’ management is devoted to the prevention of bribery and corruption and the support of a culture within Group in which bribery and corruption is unacceptable. Within the Group, the offering, giving or acceptance of any form of bribe, intended to cause inappropriate performance of a relevant function or activity is strictly prohibited. The Group’s Anti-corruption and anti-bribery regulation is dealt with by the following adopted internal regulations:

UNIPETROL Group objectives

Zero corruption

Risks identified

- Damage to the Group’s goodwill (reputational risk)
- Financial damage, property damage, if any
- Misuse of the position for the purpose of personal enrichment

Anti-corruption and anti-bribery - UNIPETROL group approach and preventions put in place to meet targets and manage risks identified

To UNIPETROL Group, it is extremely important that its employees act and behave in accordance with applicable laws, principles of ethics and transparency, industry best standards, and in line with UNIPETROL Group values. UNIPETROL Group constantly conducts and improves its internal policies and regulations in such a way that all activities are based on best practices of the corporate governance and operational excellence, with an emphasis on legality and highest ethical standards. UNIPETROL Group’s management is dedicated to the prevention of bribery and corruption within the Group and supports a culture in which bribery and corruption is unacceptable. It is strictly forbidden to offer, receive or accept any bribe that is likely to cause inappropriate and inappropriate performance of the relevant function or inappropriate performance of activities, anti-corruption and anti-credit regulation is regulated in the following internal regulations, applicable to the Group:

- a) **Rules for Reporting on Realised Business Activities** – this regulation deals with the reporting of business activities realised by the Group employees. This regulation forms an integral part of the above referred Anti-corruption policy.
- b) **Code of Ethics** – the Group key values and general principles of the Group are set forth in the Code of Ethics. The Code of Ethics defines basic rules of conduct of employees of the Group. Anti-corruption and anti-bribery matters are dealt with, mainly in Section 7 *Offering and receiving benefits* and in Section 8 *Conflict of interest and competitors*. The Code of Ethics may be found at:

http://www.unipetrol.cz/en/CSR/Corporate-Values-and-Code-of-Ethics/Documents/Eticky_kodex_2017_EN.PDF

The Code of Ethics is linked with applicable laws of the Czech Republic and the Group’s internal policies

- c) **Whistle-blower Phone Line** – serves for potential announcers of unlawful conduct in the Group companies not only in the area of corruption and bribery. The phone line is fully anonymous and directs straight to the Security and Control Department. The Security and Control Department is authorised to deal with notification regardless of the status of affected persons and therefore the whistle-blowers are

protected in line with applicable Czech and European law. Model of the Group Core Values and Standards of Conduct breach reporting and investigation is described further below.

- d) **Work Code** – in Art. 4.5.2.1 letter h) of Work Code it is explicitly specified that employees shall not engage in any corrupt activity in connection with the employer's business activities and the Group companies'.
- e) **Code of Ethics for Contractors of the Capital Group ORLEN** - a set of principles we expect from our suppliers. It includes social standards, environmental standards, ethical standards and management systems.
- f) **Connect - purchasing portal** - all purchases in excess of CZK 50,000 made by companies of the Group must be made via the Group's purchasing portal.

<http://www.unipetrolrpa.cz/en/AboutUs/Pages/Purchasing-and-Suppliers.aspx>

Departments and persons responsible for oversight of anti-corruption measures

Anti-bribery and anti-corruption behaviour in the Group is being supervised by the Security and Control Department, the Internal Audit Department and also by the Ethical Ombudsman. As specified in the below scheme, employees should report any bribery or corruption behaviour (respectively breach of the Anti-corruption Policy) to any authorised personnel. The authorised person notified with any bribery or corruption behaviour should oversee the company's response and decide how or whether to refer this issue to the law enforcement authority.

Anti-bribery and anti-corruption procedures are proportionate to the bribery and corruption risk the Group companies face and to the nature, extent and complexity of the commercial activities of the Group companies. They should also be practical, accessible, clear, effectively introduced and enforced. Regular external communication, internal communication to the Group employees, employees' regular training and clarity and comprehensibility of intranet pages ensures that bribery and corruption prevention policies and procedures are engraved and understood. Relevant employees of the Group companies and the Ethical Ombudsman review procedures designed to prevent bribery and corruption and take necessary measures aimed towards improving the implemented processes.

Department of Internal Audit

In 2017, two notifications of alleged corruption and unlawful business practices of UNIPETROL Group employees were reported to the Control and Security department by a whistle-blower. The first case of unethical business behaviour was not proven, where the second case was resolved internally.

In 2016, the Control and Security department received a notification of alleged corrupt activities of an employee which was investigated, with a violation of the company's code of ethics addressed by a labour law measure.

During 2015, two attempts at unethical behaviour were recorded by the Control and Security department, where employment was subsequently terminated, and in the latter case the case of bribery attempted was passed on to the police for investigation.

Security and Control Department

During 2017, the Internal Audit department received two notifications of alleged substandard activities of UNIPETROL Group staff in connection with tenders. None of these suspicious activities were proven.

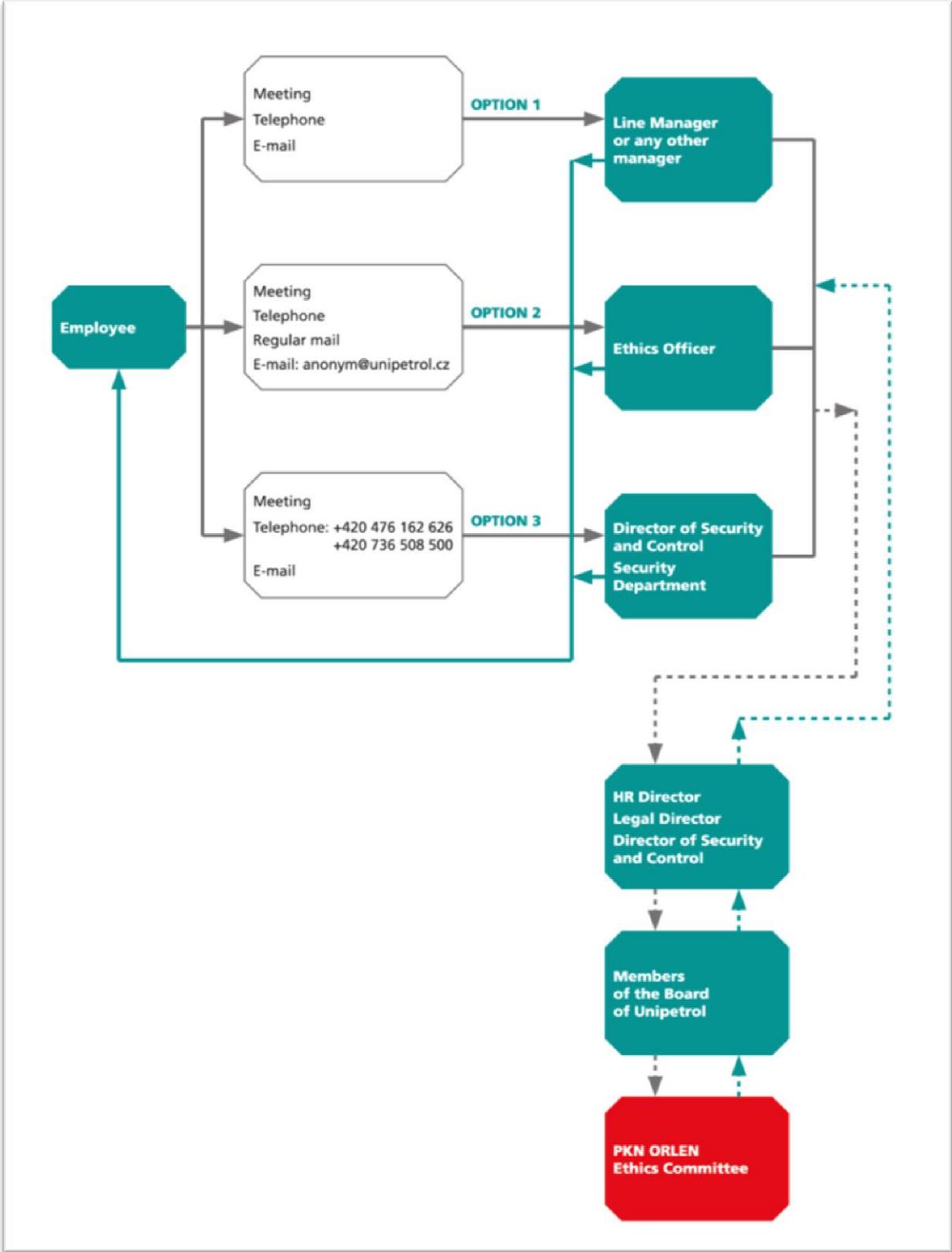
Ethical Ombudsman

An officer elected by the employees of UNIPETROL Group responsible for, inter alia, monitoring and anti-corruption activities. Since 2014, the position is held by Josef Kos, who also acts as mentor of the group's employees. The main purpose of this position is to establish and maintain a sense of equality in the UNIPETROL Group so that employees in inferior positions are not afraid of their superiors, and to establish mutual trust.

Through Ethical Ombudsman, employees can also deal with violations of labour law or other rules or concerns about their safety and health.

The main task of the Ombudsman's work is to oversee the compliance of the UNIPETROL Code of Ethics, mediation and solutions to employees' ethical problems, help in creating an open and friendly work environment.

Picture 2. - Flow of reporting bribery or corrupt behaviour to competent persons



Steps planned for 2018-2020

Anti-corruption Policy (as a new document) – is expected to come in force in April 2018, implements the following key anti-corruption measures: sets out general rules for the coordination of already existing directives and their usage for the fight against corruption and bribery. The Anti-corruption policy declares the introduction and determination of anti-corruption and anti-bribery measures from the point of view of the employer, employee and the manager. The policy describes the education system, e.g. training of newly hired employees. And furthermore, the policy describes how the suspicion of corruption and bribery behaviour can be reported and also deals with the submission of complaints from external environment and determines how those complaints are submitted and further processed. This policy also declares that the UNIPETROL Group companies are ready to protect the whistle-blowers and to provide them with an adequate protection in the area of labour law.

Details on the Non-financial report of UNIPETROL, a.s. 2017 preparation

Report prepared by: Eva Sacilotto
Date of completion: June 2018
Contact department: Investor Relations
Contact telephone no.: +420 225 001 488
Email: ir@unipetrol.cz