

PVK in 2013

Pražské vodovody a kanalizace, a.s.

Background

Name:

Pražské vodovody a kanalizace, a.s.

DATE OF INCEPTION:

1 April 1998

EMERGENCE:

Pražské vodovody a kanalizace, a public company limited by shares, is the legal successor of the state-owned enterprises Pražské vodárny and Pražská kanalizace a vodní toky to the extent specified in the privatisation proposal.

LEGAL FORM:

Public company limited by shares

COMPANY NO.:

25656635

SHARE CAPITAL:

CZK 483,288,000

SHAREHOLDER:

VEOLIA VODA S.A. 100%

REGISTERED OFFICE:

Praha 1, Pařížská 11

The company does not have any organisational units outside the Czech Republic.

Bodies of the Company as at 31 December 2013

BOARD OF DIRECTORS

Philippe Guitard, Chairman
Rostislav Čáp, Vice-Chairman
Etienne Petit
Eva Kučerová
Petr Mrkos
Milan Kuchař
Martin Bernard

SUPERVISORY BOARD

Mrs Květoslava Kořínková, Chairperson
Mr Ivo Sušický, Vice-Chairman
Mrs Marcela Dvořáková
Mr Josef Šverma
Mrs Marie Abrahámová
Mrs Alena Březinová

MANAGEMENT BOARD

Mr Petr Mrkos, CEO (since 1 July 2013)
Mr Milan Kuchař, CEO (until 30 June 2013)
Mr Petr Slezák, Deputy CEO, Chief Personnel Officer
Mr Pavel Novotný, CFO and Sales Director
Mr Petr Kocourek, Chief Operating Officer
Mrs Radka Hušková, Chief Technical Officer
Mrs Marcela Dvořáková, Chief Communication and Marketing Officer

Facts and Figures

Turnover: CZK 5.86 billion

Profit: CZK 429,563,000

Number of people supplied: 1.24 million in Prague and 200,000 residents of the Central Bohemian Region and the Vysočina Region

Number of employees: 979

Water production - total: 114,520,000 m³, of which 100,181,000 m³ of drinking water by PVK, 903,000 m³ of industrial water, and 13,436,000 m³ of drinking water received from Želivská provozní s.r.o. (since 6 November 2013)

Quantity of treated wastewater: a total of 135,892,000 m³

Length of the operated water supply network, including supply pipes: 4,279 km

Length of the operated sewerage network, including drain pipes: 4,591 km

Number of contract customers: 87,614

Important events of 2013

Floods in June

In early June, floods affected a large part of Bohemia and Prague was not spared. Prolonged and copious rain swelled small water courses in Prague such as Botič and Rokytka, which flooded certain parts of the capital. The internal sewer system was overloaded with rain and infiltrated water. The sewer system was not endangered by the river Vltava backwater only; it was precipitation water that presented a risk. The floods also affected water treatment plants and an industrial mainline. While the premises of the Central Wastewater Treatment Plant (CWWTP) were not flooded during the floods, just about 50 cm was left before the protective dams would overflow. Throughout the floods, the CWWTP worked at its full capacity in accordance with the Flood Emergency Plan. Two branch wastewater treatment plants, in Uhřetěves-Dubeč and Kolovraty, and 31 wastewater pumping stations were flooded.

The 2013 floods put to test the flood control system in Prague as well as PVK's team. Despite the difficult situation, our employees managed to protect Prague citizens' property and health thanks to their huge effort.

New PVK logo

Pražské vodovody a kanalizace, a.s. (PVK) has decided to create and use a new logo. To date, PVK have used the logo of its shareholder, Veolia Voda. The new PVK logo started appearing on stationery, invoices and cars in September 2013; the goal is to present the water management service provider in Prague in a clearer way.

A centenary of the Káraný waterworks

PVK commemorated the centenary of the commissioning of the Káraný waterworks in September 2013. The ceremony was attended by the representatives of PVK, Pražská vodohospodářská společnost, Saint-Gobain PAM CZ, the City of Prague, Zdroj pitné vody Káraný, Hydroprojekt, Česká voda – Czech Water, the media and others. The waterworks was built between 1906 and 1912, and ran in trial operation in 1913.

Changes in WTP operations

November brought a major change to the system of supplying drinking water to Prague citizens. A 15-year contract under which PVK had operated the Želivka water treatment plant and the Sojovice WTP in Káraný ended on 6 November. A contract was executed on the same day between PVK, Pražská vodohospodářská společnost, a.s. (PVS) and the new WTP operators – Želivská provozní, a.s. and Vodárna Káraný, a.s. Under the contract, PVS will purchase water from the WTP operators and resell it to PVK. PVK will distribute the water to the end consumers.

OUR SERVICES

PVK is a stable firm with a long tradition. It provides reliable services in water supply and wastewater removal and treatment in the City of Prague. In addition to its core business, the company provides its customers with a number of additional services such as laboratory analyses, the laying of supply/drain pipes, surveys and measurements in the sewer system, rodent control etc.

PVK strives to meet the needs of its customers as well as it can and, as a member of the Veolia Voda Group, subscribes to the following values: Customer approach, innovation, responsibility, solidarity and performance.

In November 2013, the company underwent a surveillance audit of its integrated management system under the ČSN ISO 9001, ČSN OHSAS 18001 and ČSN ISO 14001 standards, and it was not easy by any means. Still, in the end the auditors stated that they did not find any deficiencies and that the employees were highly qualified and knowledgeable of both EMS and OHS requirements. The company also introduced risk management and mapped and introduced new measures to mitigate selected major risks in 2013.

WATER PRODUCTION

PVK supplies drinking water to 1.24 million Prague residents and another approximately 200,000 residents of the Central Bohemian Region and the Vysočina Region. The Želivka and Káraný water treatment plants produced water for most of the year. The Želivka WTP (and the Jesenice reservoir) has been operated by Želivská provozní, s.r.o., a newly formed company, and Vodárna Káraný, a.s. has been operating the artificial infiltration sources at the Káraný (Sojovice) WTP since 6 November 2013.

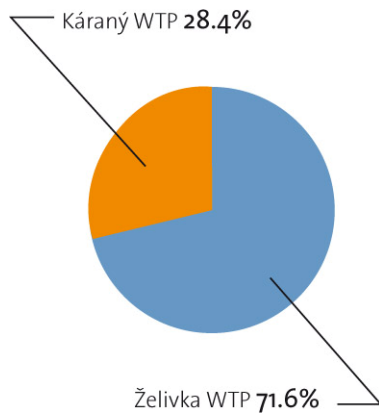
Since 2002, the Podolí water treatment plant has only been a back-up capacity in the event of failure of the other water treatment plants.

Water production in 2013 (m³)

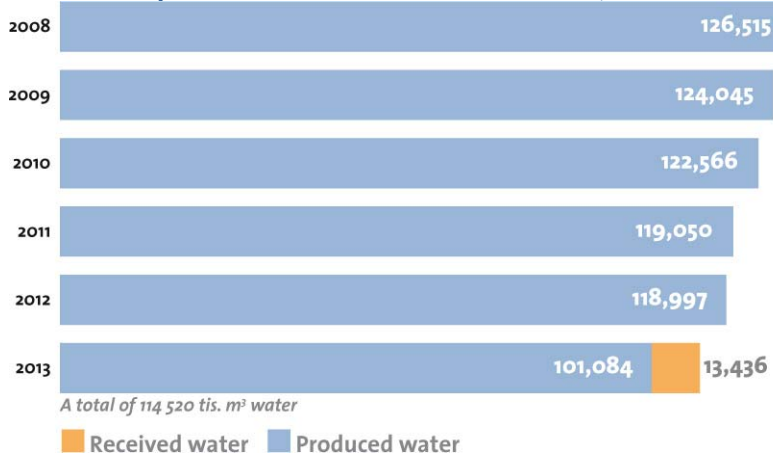
	m ³
Želivka water treatment plant	71,766,991
Káraný water treatment plant	28,414,363
Podolí water treatment plant	0
Total drinking water	100,181,354
Industrial water main	902,575
PVK's total production	101,083,929
Water received from other operators	13,435,610
Total water production including that received from the Želivka WTP	114,519,539

A total of 101,084,000 m³ of water was produced at PVK in 2013. Of this amount, **100,181,000 m³ was drinking water** (99.1%) and 903,000 m³ was non-potable water (0.9%). Total water production including received water was 114,520,000 m³.

Share of drinking water produced at water treatment plants in 2013



Total water production between 2008 and 2013, in thousands m³



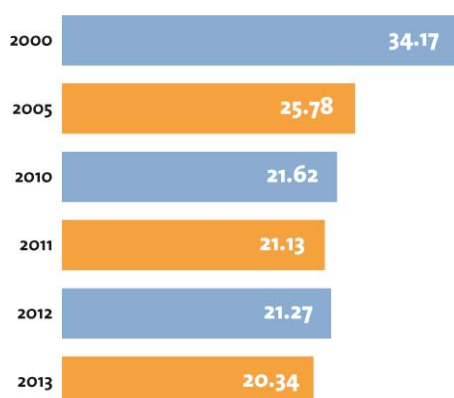
Water production and consumption in Prague has been in a steady decline year-on-year. In addition, as a result of the spin-off of the Želivka and Sojovice water treatment plants, in-house water production has been taking place only at the Káraný water treatment plant since 6 November 2013. Water from the Želivka and Sojovice water treatment plants is purchased – which is why accounts newly include the received water category.

Water business between 2008 and 2013 (in thousands m³), drinking water + the industrial water main

	2008	2009	2010	2011	2012	2013
Total production	126,515	124,045	122,566	119,050	118,997	101,084
Water supplied to other operators	16,525	16,327	15,827	16,135	16,686	15,159
Water received from other operators	0	0	0	0	0	13,436
Water intended for supply	109,990	107,719	106,738	102,915	102,311	99,361
Billed water	85,964	83,845	82,517	80,257	79,528	78,248
Unbilled water	24,026	23,873	24,221	22,659	22,783	21,113
Percentage of loss from water for supply	20.84	20.99	21.62	21.13	21.27	20.34

The average water consumption in Prague was 111 litres per person per day in 2013.

Water losses between 2000 and 2013 (%)



The trend in water losses was favourable last year. The good result was also due to the favourable weather during the winter of 2013, with a smaller number of emergencies involving leaks compared with 2012. Water losses were reduced from 21.27% to 20.34%.

Regular water system diagnostics also contributes to reducing water losses. In 2013, 2,774 km of the water supply network was subjected to checks, revealing 306 hidden water leaks.

Length of water supply network	3,496 km
Length of supply pipes	783 km
Number of supply pipes	110,781
Number of water meters	111,883
Number of reservoirs	68
Volume of reservoirs	746,404 m³
Number of pumping stations	49

Water Meters

At 31 December 2013, there were a total of 109,439 water meters in place for measuring drinking water consumption.

Walk-by reading of water meters is implemented for 2,300 water meters.

The walk-by system provides for water meter reading in dangerous shafts and at selected large producers. This process is applied in all cases where the risk of damage to the employees' health is intolerable.

For 183 billing water meters, remote readings are taken using the VEOLIA SMART system (the counter's value is transmitted over fixed telephone lines to PVK's web application).

The readings of counters' values are transmitted via wireless communication to a concentrator that directs all data straight to the end users over the Internet. The readings are taken on-line and the data is stored on a server and is immediately presented and accessible in the web environment at www.merenispotreby.pvk.cz.

Remote readings via radio offer greater user comfort and lower cost per reading as well as the possibility of monitoring water consumption on-line and detecting dysfunctional meters in good time. They also guarantee accuracy. For remote readings, PVK works with: Pražská teplárenská, a.s., Pražská plynárenská, a.s. and PRE měření.

A total of 19,450 water meters were replaced in 2013, primarily because their period of verification had expired. The repair and calibration of 8,604 water meters and 1,149 official water meter tests were outsourced to an external supplier.

Water System Emergencies

In 2013, the company addressed a total of **4,717** water system emergencies, which is 210 (4.7%) more than in 2012.

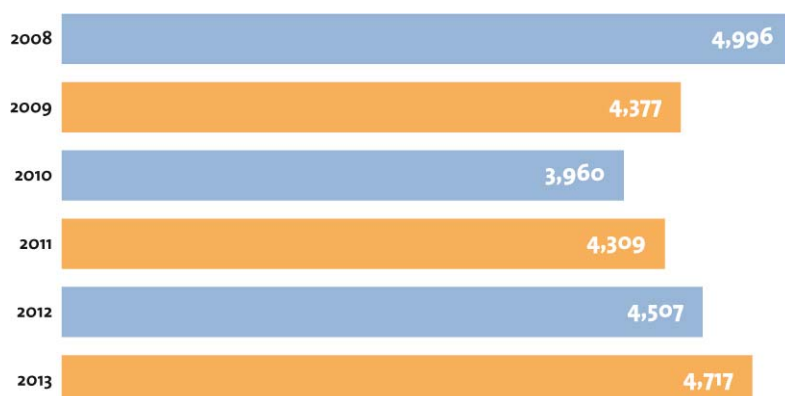
The average duration of service interruption per accident decreased significantly to 7 hours and 56 minutes despite the increase in the number of accidents. The figure was 10 hours and 39 minutes in 2012, which means that in 2013 the service interruption period shrank by 2 hours and 43 minutes compared with the preceding year. This has minimised the direct impact of emergencies on customers.

Broken down to piping system emergencies (affecting the mains and supply pipes) and other emergencies (primarily valves and other equipment), 1,885 water mains and supply pipe emergencies and 2,832 emergencies involving other equipment were resolved in 2013 .

Of the total number of accidents, 94 (the same number as in 2012) were of category 1, which means accidents where water supply is interrupted for more than 1,000 people or where healthcare or other important facilities are affected; 190 were of category 2 (53 accidents fewer, i.e. down by 21.8%) and 4,433 were category 3 accidents (263 accidents more, i.e. up by 6.3%).

The most frequent cause of the accidents was corrosion of materials, 3,431 accidents, followed by land movement, 984 accidents. These two causes accounted for 93.6% of accidents.

Number of defects in the water supply network repaired between 2008 and 2013



WASTEWATER COLLECTION AND TREATMENT

Total length of sewerage network	3,637 km
Length of sewage drain pipes	954 km
Number of sewage drain pipes	117,733
Number of pumping stations operated	313
Number of sewage treatment facilities	20 Branch WWTP + CWWTP

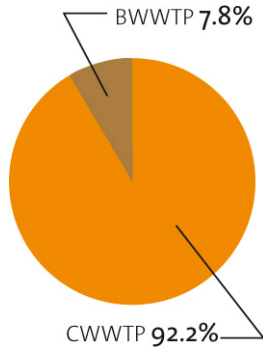
In 2013, 1.22 million people were connected to the sewerage network in Prague. Its overall length, including sewage drain pipes, was 4,591 km. The central part of the city has in place a combined sewerage system, which drains sewage together with rainwater to the Central Waste Water Treatment Plant (CWWTP). The outskirts of Prague have separate sewer networks that divert rainwater separately.

In 2013, PVK operated 20 branch waste water treatment plants (BWWTP) in addition to the CWWTP: in Běchovice, Březiněves, Horní Počernice - Čertousy, Dolní Chabry, Holyně, Kbely, Koloděje, Kolovraty, Klánovice, Královice, Lochkov, Miškovice, Nebušice, Nedvězí, Sobín, Svěpravice, Uhřetěves - Dubeč, Újezd nad Lesy, Újezd u Průhonic, Vínová, and Zbraslav.

Quantity of wastewater treated in 2013 (m³)

	m ³
CWWTP	125,342,044
BWWTP	10,549,562
TOTAL	135,891,606

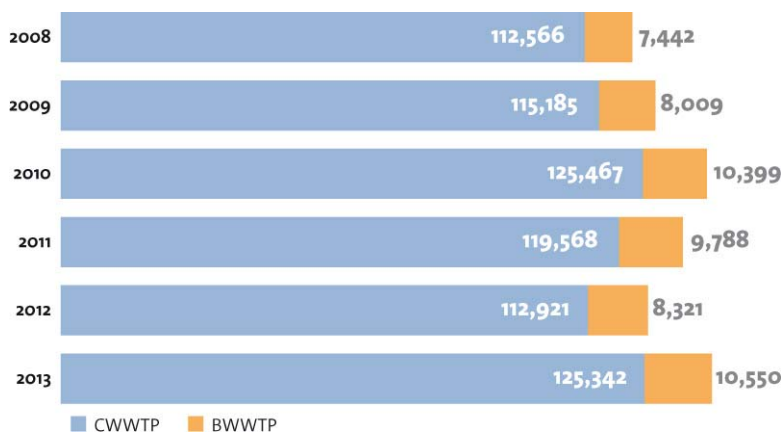
Share in wastewater treatment in 2013



PVK treated a total of 135,892,000 m³ of wastewater in 2013, which is 14,649,000 m³ (10.8%) more than in the preceding year. The increase in the volume of wastewater was due to greater rainfall. The largest part of wastewater, 92.2%, was treated at the CWWTP, and the remaining wastewater, 7.8%, was treated at BWWTP.

The biggest operating problem for the CWWTP in 2013 was the June floods, when approximately 50 cm was all that was left before river water would overflow the protective dams and flood the CWWTP. Happily, this scenario did not materialise and the CWWTP worked at its full capacity in accordance with the Flood Emergency Plan throughout the floods. However, maintaining the operation during the floods required great effort of all employees.

Quantity of wastewater treated at the CWWTP and BWWTP between 2008 and 2013 (thousands m³)



Accidents in the Sewerage Network

PVK addressed a total of **3,440** sewerage system accidents in 2013, which is 339 (or 15.6%) less than in the preceding year. More than half of the total number is attributable to drain pipe emergencies.

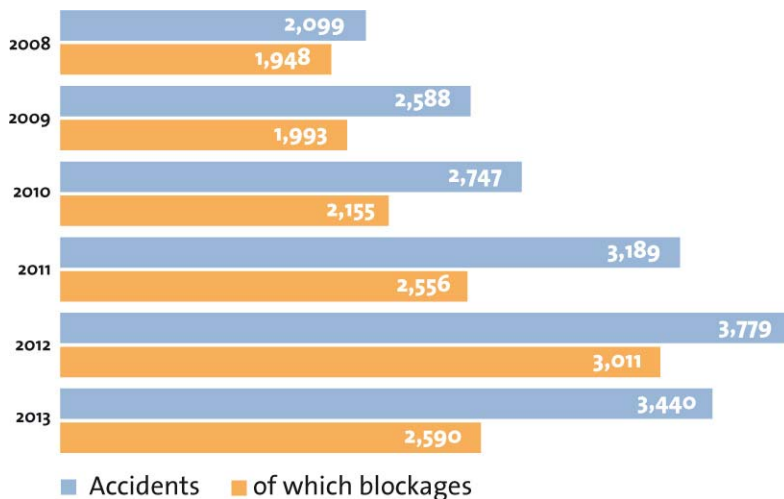
Number of sewerage system accidents by type of facility involved in 2013

Type of facility	Number of failures	%
Sewers	780	22.67
Drain pipes	1,845	53.63
Shafts, chambers, reservoirs, aprons	620	18.02
Other	195	5.67
Total	3,440	100.00

Of the total 3,440 sewerage system accidents, 2,590 (75.29%) were blockages, and it was also necessary to replace 325 missing or damaged lids (9.45%).

The other causes of accidents included pipe deformation, destruction, damaged wall masonry, cracks, mechanical damage, etc.

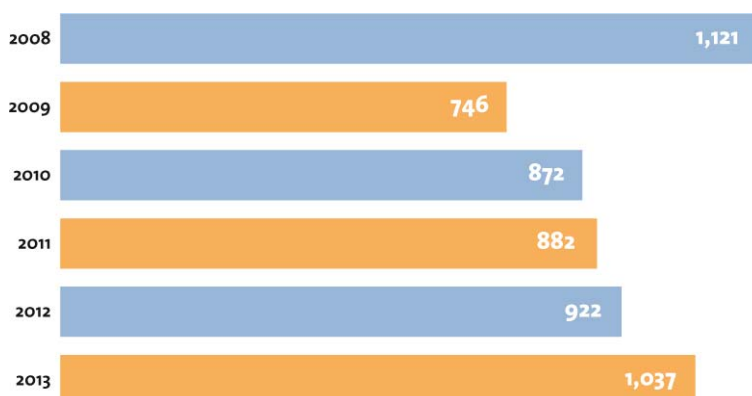
Sewerage system accidents between 2008 and 2013, of which blockages



Equipment Breakdowns

The number of equipment breakdowns has been increasing in recent years. PVK addressed a total of 1,037 equipment breakdowns in 2013, which is 115 (or 11.09%) more than in the preceding year.

Number of equipment breakdowns between 2008 and 2013



Water Quality

The company's laboratories provide regular analyses of both drinking water and wastewater. The laboratories are accredited, and the accreditation covers the entire range of the laboratories' activities: sampling and analysis of drinking, bottled, surface, raw, ground and waste water, water from intermediary process stages (inter-stage water), sludge, and water for swimming, including waste sampling and analyses of process chemicals used in water treatment.

Drinking Water

Throughout Prague, the quality of drinking water is systematically analysed from production to distribution to the consumer's tap. Drinking water supplied by the company is wholesome and it completely meets the Czech and European standards in physical, chemical, microbiological and biological terms.

Drinking water quality is monitored in accordance with Regulation No 252/2004, as amended, which is harmonised with the EU requirements for potable water. Among other things, it defines the requirements for drinking water and the scope and frequency of drinking water inspections.

In 2013, PVK's labs monitored the quality of drinking water supplied to customers in almost **6,000 samples. Water quality was compliant for 99.6%** of the samples. Of these, 72% were taken from the Prague distribution network and the other samples from the Želivka and Káraný water treatment plants. The distribution network was checked at reservoirs, penstocks and pumping stations, and at consumers.

A radical change in the PVK lab's activity came with the end of the agreement on the operation of the water treatment plants' assets, which are not owned by the City of Prague. The Želivka WTP and the Jesenice reservoir has been operated by Želivská provozní, s.r.o., a newly formed company, and Vodárna Káraný, a.s. has been operating the artificial infiltration sources at the Káraný (Sojovice) WTP since 6 November 2013. A tendering procedure was announced in respect of lab services and the associated process activities. PVK submitted the best bid and was chosen as the best applicant. PVK's labs thus continue to inspect water quality in the process of water treatment and water distribution to customers.

The Podolí water treatment plant did not supply drinking water to consumers in 2013, and analyses only took place as part of trial operation.

Wastewater

PVK's laboratory monitors the quality of wastewater from the CWWTP and its process equipment, including sludge and sludge gas, and also wastewater from BWWTP, industrial producers, sewerage networks, and drainage points operated by PVK, on a regular basis. It also checks liquid waste delivered to the CWWTP and BWWTP by external entities. The scope and frequency of monitoring complies with the applicable legislation on wastewater. The main reason for wastewater quality monitoring is to ensure compliance with the prescribed limits on released wastewater with a view to preventing damage to the environment. In 2013, PVK's labs paid great attention to locating the source of an excessive inflow of heavy metals into the CWWTP through the sewerage network, eventually successfully uncovering the origin of the excessive pollution and stopping the inflow. In 2013, the concentration limits that are subject to charges were not exceeded at the CWWTP in Prague in respect of any variable. In 2013, PVK's wastewater laboratories processed a total of **15,197** samples, of which **9,341** samples of wastewater, sludge, liquid waste and sludge gas for the CWWTP.

EXTERNAL SERVICES

Co-operation with ČEZ

The year 2013 brought another major co-operation project between PVK and ČEZ, a.s. (“ČEZ”). PVK delivers under the contracts that it wins in co-operation with Česká voda – Czech Water, a.s. (“CVCW”). In 2013, we succeeded in adding new professions, which had previously been outsourced, to the workshops at the Mělník Power Station, including the pump technician and valve technician positions. We created a new workshop centre at the Tušimice Power Station. Turnover under the contract amounted to almost CZK 54 million.

The co-operation with ČEZ was started in 2011 when PVK launched the provision of maintenance and repair services for the logical water and sludge management systems at the conventional (coal) power stations, which are used for the supply of raw water to the power stations and for the treatment of water to the quality required by the other process units. The system includes equipment for the drainage and treatment of wastewater and sewage. The project initially involved six sites – Hodonín, Poříčí and Dvůr Králové, Tisová, Počeradý, Mělník, and Dětmarovice. The power station portfolio was extended to include Ledvice and Tušimice in 2012.

In-house workshop facilities have been established at selected sites since 2011. The first workshops at Tisová and Počeradý were joined by a workshop in Mělník in 2012. Our facilities in Počeradý were enhanced in the same year.

Total contract value

Year	Total contract value in CZK
2011	41,995,980
2012	46,959,643
2013	53,807,766

In addition to the total value of the above contract, the repair of sumps for mixtures and clarified filtered and unfiltered water, a major project worth approximately CZK 9 million, was implemented in 2013. This involved the repair of 10 sumps intended for the production of process water for the Počeradý power station. The extensive scope of the project (some 2,200 m²) and the tight deadline (14 days during the general plant shut-down) necessitated the repair method using epoxy polymer coating.

Through its co-operation with PVK and CVCW, ČEZ has found strategic partners for water management facility care. This contract opens an opportunity for PVK and CVCW to participate in capital project supplies and/or extend the activities provided to other power stations operated by ČEZ.

Wastewater Measurements

The main services offered to external entities include the measurement of hydraulic variables in the sewerage system facilities and precipitation measurements in urban areas for the purpose of general drainage plans, the measurement of hydraulic variables in the hydraulic paths of wastewater treatment plants, mapping of sewerage system facilities and assessing their hydraulic functions, and general plans for water supply.

The measurements of hydraulic and hydrological variables involved many projects in 2013:

General plan for the drainage in Mikulčice, general plan for the Václav Havel Airport sewerage system, general plan for water supply in Vlašim, general plan of drainage in Zlín, monitoring of hydraulic parameters on sites in the Brno sewerage system, general plan of water supply for Velké Meziříčí, the second detailed phase of the general plan for drainage in the City of Prague - Jižní Město, detailed general drainage plan for Benešov, assessment of the site sewerage system at the ČD depot in Nymburk, and assessment of the sewerage system in the catchment area of the Královice – Hájek branch wastewater treatment plant.

Maintenance and Storage of Flood Control Pumps

PVK continues to maintain and store flood control pumps. Over the course of the year, it carried out tests using the equipment at the various pumping sites, with all of the equipment fully assembled. The testing is intended to practise the assembly process and inspect the components of both the mobile and stationary equipment to ensure the functionality of the entire pumping system and prepare it for the seamless deployment in the event of floods. The successful tackling of the 2013 floods confirmed the positive results of the regular drills.

Sewerage Network Surveys

In accordance with the operating agreement between PVK and Pražská vodohospodářská společnost, a.s., the sewerage network undergoes preventive surveys on an ongoing basis. In 2013, PVK's employees surveyed 146 km of sewers and inspected 1,280 access shafts and other installations in the sewerage network.

They detected 37 defects in the sewerage system during the inspections. For the purpose of repairing the defects detected in the sewerage network, 119 proposals for the repair of defects were drawn up and delivered for inclusion in the plan of repairs and investments.

We inspected 45 km of sewers in order to determine the damage caused in connection with the 2013 floods. Inspecting sewers endangered by the high speed of drained water, we checked 13 km of sewers.

For the purposes of coordinating sewer repairs with tram track and surface repairs, we inspected 5 km and 12 km of sewers, respectively.

Rodent, Pest and Infection Control

PVK provides across-the-board rodent control in the City of Prague sewer network in co-operation with the Prague Municipal Authority. When exercising rodent control in the sewerage network in 2013, we treated 13,550 sewer inlets and used 13,550 kg of rodent control baits.

In addition to this assignment, we also provide rodent, pest and infection control for external customers. We used 3,295 kg of baits when working for 61 of those customers. We had 49 pest control jobs and we provided disinfection to 4 customers.

CUSTOMERS

PVK listens to its customers with a professional approach, aiming to be able to adapt to their needs and develop stable and long-term relationships with its customers. Hence, the company is trying to provide all information on water supply and wastewater drainage to customers and all consumers through various channels. It adjusts its information channels to modern technologies.

Modern customer service

Two 'Moje voda' mobile applications, intended for the **owners of smart phones with iOS or Android OS**, were launched in 2013. **One of them is Moje voda^{Plus} and it gives the customers non-stop and secure access to their electronic customer accounts. The other application is called Moje voda and is intended for the general public, offering, among other services, topical information on water supply shutdowns and accidents directly in maps, showing the expected time when water supply should be resumed.** To date, 2,876 users have downloaded the application since its launch in April 2013.

Other news in 2013 included the launch of cashless payments using the QR code. **This involves a special payment QR code for banking applications on smart phones, which PVK prints on its billing documents.** The relevant bank's application installed in a device simply reads the **information contained in the QR code** shown on the bill and the payment order in the banking application is automatically completed with the correct data. All that is left to do is confirm the payment. This way, customers can avoid the potential mistakes while typing data in their banks' payment orders. **Even customers who do not own a smart phone with a banking application can use the QR code. Česká spořitelna offers this option to its clients.** Our customers who have their accounts with the bank can pay **using the QR code at all of Česká spořitelna's payment terminals. To date, 202 customers have used QR code payments.**

For customers who prefer cash payments, Veolia Voda offers the **option of payments using the terminals of Sazka sázková kancelář, a.s.** In addition to the QR code, customers will also find a **bar code** on the bill, and the terminal can read the payment information contained in it and issue a confirmation of the customer's cash payment. The broad terminal network (at news agents, fuel filling stations, late night shops etc.) and extended opening hours allow customers to pay the bill as it suits them. Customers pay a uniform CZK 15 fee for this service regardless of the amount paid. In 2013, 16,294 customers used the Sazka terminal option for payments and paid CZK 51.5 million in water and sewage rates.

Many visitors also use the option where the bill is sent to them via **electronic mail**. The bill, in the pdf format, is sent to the specified electronic mail address as an attachment to an e-mail message. In 2013, the company distributed 12,685 pdf bills.

Based on feedback from customers, PVK changed the water meter reading periodicity from quarterly to annual (once a year) in 2013. PVK also does not require the presence of those customers who have a water meter with radio transmission.

Electronic communication the new way

As part of improving customer service, PVK launched a **new e-mailing system** supplied by Artin Solutions, s.r.o., a company that provides **quality and reliable distribution of documents in electronic form**. This is used for the distribution of electronic bills and other documents to contract customers, and also newsletters and the customer magazine.

E-mail aimed at promoting the competition related to the 'pdf bill' service was first distributed to the customers who were not yet using this service in early December. Another campaign was the electronic distribution of the *Voda pro vás [Water for You]* e-magazine to all contract customers and clients with known contact e-mail addresses.

Contract customers can also find their **personal customer account** on the website. The account gives customers continuous access to information and control over their expenses. Thanks to their secured personal account, customers are kept posted about their water consumption, bills and readings of water meters in their properties, and can also notify changes in their contract details, amount of advance payments, their own readings of the water meter, etc. More than 8,000 customers (i.e. approximately 10% of all customers) already have the personal account. Via the website, customers can also **book a meeting** on contract and technical matters at a customer centre.

The year 2013 saw an increase in the number of visitors to PVK's website (**www.pvk.cz**). The monthly number of visitors has grown to 45,300 persons on average. Frequently sought information includes that on accidents and water supply shutdowns. The application showing accidents and planned

shutdowns on Google maps has met with great response. Prague residents can find their location directly in the map or by the address. As a new feature, an application showing tank trailers providing substitute water supply was launched towards the end of 2013. Complete water analyses, which the company posts every month, are also important and sought-after information.

Other Services

Last year also saw the continuation of the successful Customer Service Commitments project, which has helped to reduce the time of processing customer requests and inquiries and contributed to an overall improvement in customer satisfaction with the services provided by PVK. A full 97% of respondents were happy with PVK's services.

The demand for the **SMS INFO** service, i.e. text messages with information about water supply, accidents and water supply interruptions/disruptions, including the expected date of service resumption, again increased in 2013. As many as 20,902 Prague residents have signed up for this service, which PVK has been offering since late 2007. Registered customers receive, free of charge, important information about water via text messages transmitted to their handsets. Last year, 121,422 text messages were distributed. **Altogether 732,830 text messages have been distributed since the launch of this service.** Customers also used the option of withdrawing cash through their Komerční banka payment cards. The cash back service was set up at the customer centre in December 2009.

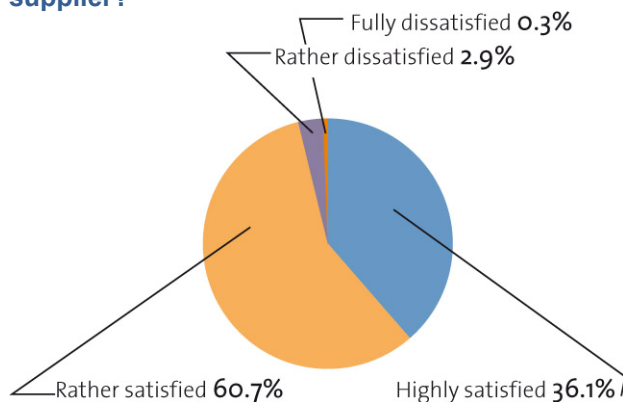
The **Services beyond the Water Meter, and More** project, which PVK started to offer in 2011, continued in 2013. Under the scheme, 1,648 repairs were requested and 1,614 actually made. Other requests concerned repair of failures on indoor water and drain pipes and the service helped to cope with 120 of such cases.

Prague citizens rate highly the professionalism of PVK employees

PVK conducts a number of surveys every year, aimed at further improvements in the services offered by PVK. The September satisfaction survey that IBRS - International Business and Research Services s.r.o., an independent research firm, conducted for PVK over the telephone again, showed a high rate of satisfaction with the services.

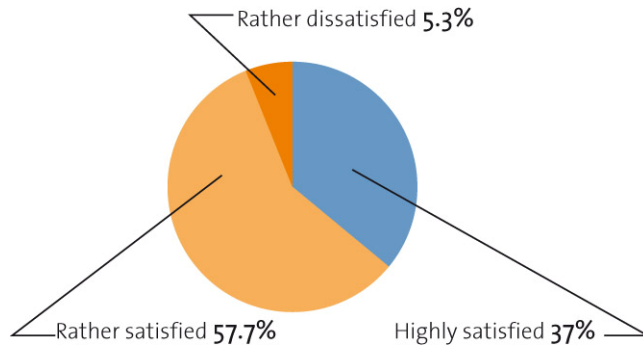
A full 97% of respondents are happy with PVK's services. As many as 99% of customers are happy with the professionalism of the company's employees. This applies to the employees with whom customers interacted directly. As many as 100% of the respondents are satisfied with water meter readers' behaviour and conduct. In addition, IBRS registered a slight increase in satisfaction over 2012 in respect of these variables. The poll included 700 respondents from Prague; they were owners of family houses, managers of residential buildings and housing cooperatives, and industrial customers and firms. The telephone poll took place in September and October 2013.

How satisfied are you in general with the level of the services provided by your drinking water supplier?



Prague residents are also satisfied with the quality of the tap water. 95% of customers say they are happy with the quality and 84% actually drink tap water. PVK has been organising numerous activities aimed at promoting tap water drinking since 2009. The best-known ones include the Fresh Tap Water? Just Ask! project, which is trying to bring tap water back to restaurants and cafés. More than 500 catering establishments in Prague have already joined the project. A list of those restaurants is available on-line at www.kohoutkova.cz

How satisfied are you with the drinking water quality?



New PVK logo

A survey has shown that Prague residents are uncertain as to who supplies water to them. **Just 22% of them said that it is Pražské vodovody a kanalizace and 64% believe that it is Veolia Voda, which is in fact a 100% shareholder of PVK. Previous surveys yielded similar percentages, which is why PVK proceeded to creating its own logo.** The new logo should contribute to more efficient presentation of PVK vis-à-vis its customers and give them the right direction for their inquiries and requests and for reporting failures and emergencies.

The new PVK logo has been appearing on stationery, invoices, cars etc. since the end of September. The new PVK symbol returns to the original PVK brand. The symbol is made of lines that suggest water stage measurement and a silhouette of the Bridge Tower evocative of Prague. The red colour refers to the logo of Veolia Voda, PVK's shareholder, and the City of Prague logo. The author of the new logo and visual style is Dynamo design s.r.o., a graphic design studio.

Call Centres

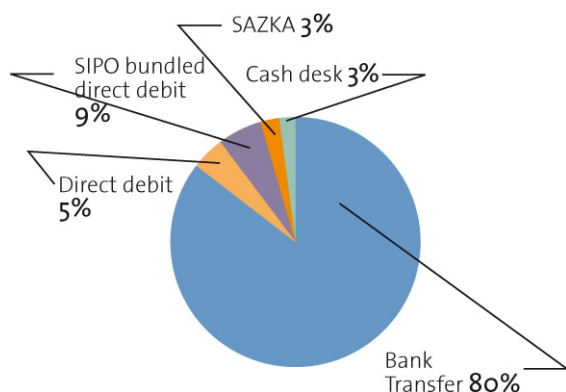
In 2013, PVK's **customer support line** handled **86,366 calls**. Of these, for example, 35,049 enquiries concerned drinking water supply and 16,642 enquiries concerned billing. The average service level was 86%. Customer service line operators also reply to e-mail messages from customers. They processed 24,153 customer e-mails in 2013. In addition to handling customers' telephone and e-mail requirements, the operators also help to promote the services provided, register customers for the SMS INFO service, and offer billing via e-mail and the activation of on-line customer accounts, the Moje voda mobile application and other services.

The customer care centre in Dykova Street was visited by **25,326 customers, which was 23% less than in 2012**. The steady decrease in the number of personal visits to the customer care centre shows that the customers can find increasingly more information on the website or via the customer support line, in effect reducing their personal visits to the customer care centre.

Customers also had an opportunity to pay their water and sewerage rates directly at the cash counter at the customer care centre. 14,240 customers used this option and the total collected amount was CZK 42.7 million. At the customer centre, the visitors could arrange everything related to contractual relationships, and also deal with all technical requirements, including technical documentation. Contractual matters can be arranged from 8 a.m. to 6 p.m. on Monday to Thursday. Friday opening hours are from 8 a.m. to 3 p.m.

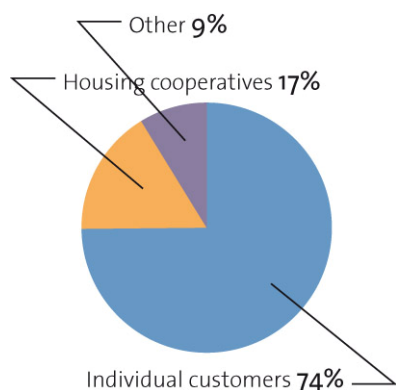
As part of the project of regionalising customer care centres of the Central Bohemian companies in the Veolia Voda Česká republika Group, 194 customers of Středočeské vodárny and 1.SčV visited PVK's

customer centre in 2013 (65 visits more than in the preceding year). Similarly, Prague residents could have their requests handled at the contact centre established by Středočeské vodárny and 1.SČV. Under the regionalisation scheme, CZK 70,401 was collected by the cash desk of the PVK customer care centre in water and sewage rates.



Number of contract customers	87,614
Number of water meters for billing	109,439
Number of people registered for SMS Info	20,902
Number of text messages sent as part of SMS Info	732,830
Number of justifiable complaints and claims	320

PVK's contract customers



In 2013, PVK received and handled 420 complaints, but only 26% of them, i.e. 110, were justified. As regards claims, 612 cases were handled, and 34% of them, i.e. 210, were justified.

Information Brochures and Magazines

PVK issues a number of information materials and brochures for its customers. These include, for example, a publication on the centenary of the Káraný waterworks and leaflets on water quality, laying of service pipes, sewage pipes etc.

A number of offer sheets promoting PVK's paid services, such as Measurements in the Sewerage Network and Remote Readings of Water Meters, SMART Metering and also PVK publications were produced in 2013. In December, the **Voda pro Vás [Water for You] customer magazine** was published and distributed together with all the major daily newspapers, as had become a tradition. PR campaigns in daily newspapers, advertising and periodical communication with the media also helped to promote PVK's services.

CORPORATE SOCIAL RESPONSIBILITY

Responsibility to employees and customers

Responsibility to customers and employees and corporate social responsibility is one of the cornerstones of the company's philosophy. Responsible business pursues the values on which the company builds - an ethical approach, observance of the ISO standards, occupational safety, social responsibility and environmental development.

Employees

PVK is a stable employer with regular wage increases. The principal prerequisite for open communication is social dialogue and co-operation with the trade unions. One of every year's highlights is the signing of the higher-level collective agreement by the Chairman of Svaz zaměstnavatelů Malá voda ČR [The CR Small Water Employers' Association], an association of employers in Veolia Voda Group, and the Chairman of Odborový svaz pracovníků dřevozpracujících odvětví, lesního a vodního hospodářství [The Trade Union of Workers in the Woodworking Industry, Forestry and Water Management].

PVK's collective agreement, which lays down a number of employee benefits, is then based on the above collective agreement.

Human resources

979 employees worked at PVK as at 31 December 2013. During the year, a total of 133 employees left and 67 new ones joined the company.

The principal reason for the reduction in headcount by 66 people compared with the preceding year was the end of the Želivka WTP operation at the end of the year. By the operation of law, 51 employees were transferred to the new employer.

Thanks to streamlining, the comparable number of employees decreased by 15. As a result, the employee turnover rate was 13.6%, or 8.3% net of the transfer of employees from the Želivka WTP. In 2013, the average employee age stayed at 47 years. Employee ageing is an important aspect for the company to tackle, in particular in connection with the transfer of operating know-how.

The headcount as at 31 December 2013 was 979 employees, of whom 708 were men (72%) and 271 women (28%). The company employed 14 people with changed capacity for work (1.43%).

Despite the very tight financial result, the wage-related covenants in the Collective Agreement were honoured. The average wage grew by 3.0% in 2013, which means more than CZK 1,000 per month.

Employee benefits

CZK 5.9 million was expended on social benefits, both tax deductible and non-deductible, in 2013. Of that, CZK 1.5 million was provided for the trade union activities, CZK 1.4 million for sports and cultural activities, and CZK 0.6 million for major personal and professional anniversaries. Funds were also provided for social assistance, CZK 0.15 million, and for employee loans, CZK 1.5 million.

An important part of the employee benefits, **personal non-state pension schemes and life assurance**, is used by 88% of employees. The employer's average monthly contribution to these policies amounted to CZK 1,100 and the company contributed altogether CZK 13.1 million.

Internal communication

The goal of internal communication is sharing information between the company's management and other employees and interconnecting the two groups. Employees receive information via various communication channels and tools such as internal magazines, intranet, employees' get-togethers at various social events, sport games, events for children, and periodical training sessions and meetings at all levels, where feedback can also be heard.

A Compliance programme aimed at mitigating the risk of criminal liability was set up in 2013. The programme emphasises the importance of preventive measures and prevents the possibilities for illegal or unethical conduct. As part of the programme, two mailboxes were set up for the submission of employees' suggestions and notices.

Employees receive the latest and quickest information via the **intranet**, which posts news in real time, thereby enabling the employees to respond immediately. The intranet is updated on a regular basis and the employees use it extensively. The logical arrangement of the various sections allows them to find the required information.

The **Pévékáčko in-house magazine** regularly brings information to employees in printed form. Employees are kept posted about the current developments in the company and in the Veolia Voda Group thanks to other periodicals such as **Voda je život [Water is Life]**, **Planeta Veolia [The Veolia Planet]** and **La Lettre**.

Improvements in internal communication have been made easier thanks to meetings that took place in 2013, e.g. sports and games, events for children and get-togethers organised by the trade unions.

Employee Training

Employee training and development is one of the important missions in human resource management. A systematic approach to education brings a number of advantages and enhances employees' motivation and stability.

Employee education is mainly provided by the Group's own institute, **Institut environmentálních služeb, a.s.** (IES), with its broad-ranging offering of courses and training programmes, many of which are accredited with the Ministry of Education (MŠMT) and IES partners: general courses, seminars and practical training, including a number of special periodical training sessions; tertiary and secondary education programmes; and vocational training.

PVK's training costs totalled CZK 4.2 million. The largest share, 74%, of these expenses was spent on increasing professional qualifications, 18% was earmarked for mandatory training and special skills training, and 8% was spent on improving the employees' language skills.

The most important training projects provided by IES include, on a long-term basis, a bachelor's course in water management at Moravská vysoká škola Olomouc [Moravian College Olomouc]. In 2013, two PVK employees successfully completed their course in Company Economics and Management and another ten employees were enrolled in tertiary education courses while working, which helped to increase the share of employees with higher education to almost 19%. The share of employees with secondary education was 38%.

In 2013, IES organised 42 first aid practice sessions for PVK employees, training a total of 981 people. 285 PVK employees took the basic and repeated IES training titled Working in Underground Areas and Above Depths, and 160 people took the Basics of Water and Wastewater System Operation course.

The year 2013 also saw further courses of the long-term technology-oriented development studies such as the "Technology–Water–Environment" two-semester development programme run in co-operation with the Faculty of Civil Engineering of the Czech Technical University in Prague and the "Quality of Drinking Water and Water Treatment Processes" in co-operation with the Institute of Chemical Technology in Prague.

In 2013, PVK employees used the eCampus (the IES e-learning portal) with a range of attractive fully flash-enabled audio courses focused on soft and managerial skills, comprehensive and systematic language instruction (1,000 hours of language lessons in total), official driver training and testing, occupational safety and health, and the environment and sustainable development. The eCampus also includes hundreds of hours of fully-fledged computer courses.

The employees also used induction training that gave them information on their new company and its organisational structure and systems for training, remuneration, occupational health services, catering, benefits etc. The induction training contains the most important information that every current and new employee should know in general.

Occupational Health and Safety

Pražské vodovody a kanalizace is a responsible employer mindful of the health and safety of its employees. Beyond the compulsory training, all employees take a hands-on first aid course once every two years, and its importance has been proven in practice several times. The company has long focused on reducing the number of occupational injuries and has been achieving good results in this area.

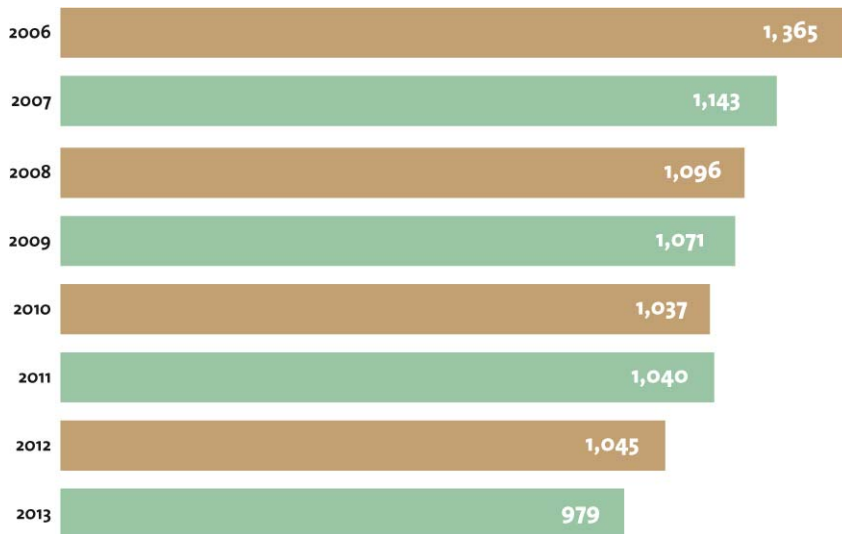
The key OHS rules contained in the Labour Code and ISO standards are explained to employees in the company's internal **Occupational Safety Charter**.

The company holds the safety certificate pursuant to ČSN OHSAS 18001. In November 2013, the company successfully retained its integrated management system certificates in a surveillance audit. Reducing the number of occupational injuries is one of the long-term objectives in the OHS area. The criteria for the **prevention of occupational injuries** and for employee health are evaluated on a regular basis. Thanks to that, the occupational injury rate has been kept at a favourable level. In 2013, there were 7 less serious occupational injuries involving 164 business days of incapacity for work, i.e. 2 injuries and 141 days of incapacity for work fewer than in the preceding year. None of these injuries required long-term hospitalisation.

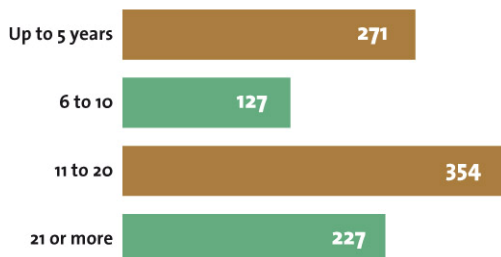
PVK provides for medical examinations of its employees over and above the mandatory checks. In co-operation with a contract partner, Salubra, admission and preventive checks were arranged for employees, including the vaccinations set out in the Collective Agreement, and other statutory examinations.

A general practitioner's office serves the employees and their family members in the Hostivař precincts. The sickness rate remained very low, accounting for 2.3% of working time, which is comparable with the preceding year.

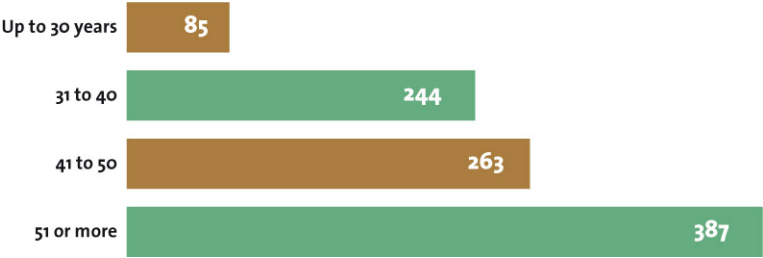
Number of employees by year



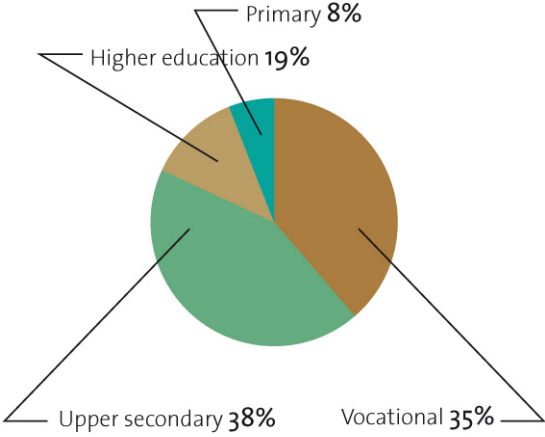
Employee structure by length of service at PVK



PVK employee age structure



Employment structure by level of education



ENVIRONMENTAL PROTECTION AND CORPORATE SOCIAL RESPONSIBILITY

Public education

Environmental training and public education have a long tradition at PVK. The company strives to improve its customers' awareness of how difficult drinking water production, sewage draining and wastewater treatment are, using information leaflets and various projects. Public education fosters thinking aligned with sustainable development.

The Way of Water to People and Back to River game that leads children to thinking and learning was distributed primarily to children and young people at schools in 2013. The **Klub vodních strážců [Water Guards Club]**, which brings together children aged 6 to 16, has been providing information to children for 15 years. It seeks to instil an interest in nature and the environment in children in an entertaining form. The children receive a magazine twice a year and they can participate in club meetings. In the spring, club members participated in a sports afternoon at the Gutovka leisure facility in Prague, and the autumn meeting with Egyptologists and their stories met with great success. The children also took an adventurous evening trip to a water tower. The club operates a website at www.vodnistrazci.cz that is updated on a regular basis.

The **Prague Water Management Museum** operated by PVK is the place to learn about the history, but also some of the current operations in drinking water production and distribution. The museum's collections were enriched in 2013 by a surviving unit of a home filtering station once used at a now-defunct distillery. In March 2013, the former control room of the Podolí waterworks was transformed into a venue where an **audio-visual programme** shows visitors how waterworks operate; it also features 1970s chlorinators from the closed Lehovec pump station. **A new interactive programme for children was prepared;** running on two touch screens, it provides various information and facts about water, the Water Guards Club, water circulation and the environment, as well as quizzes for children to test their knowledge.

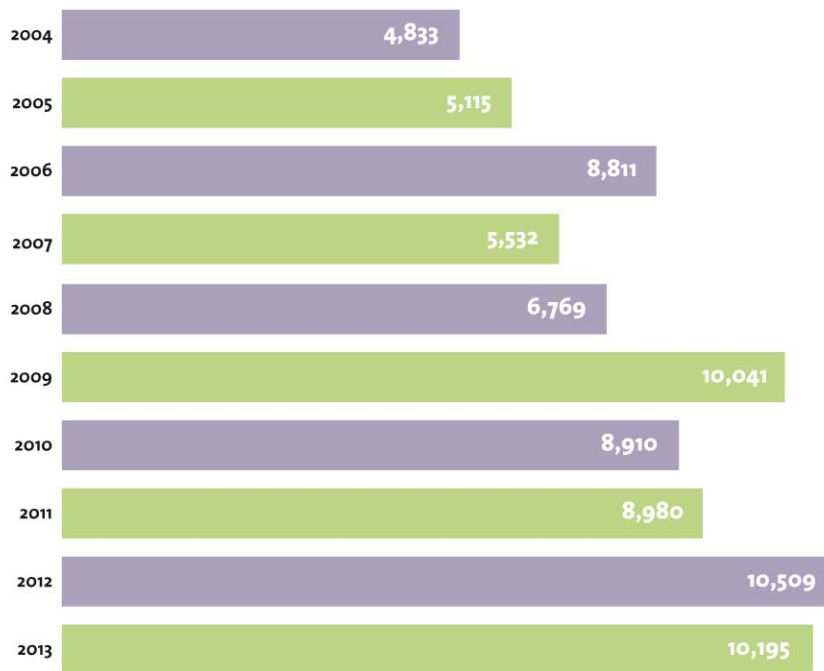
The museum held **Open Days** in the spring and autumn, on the occasion of the World Water Day in March and on the occasion of the *Primátorky [Mayoralty]* rowing races in September. The museum welcomed a total of 10,195 domestic and international visitors (coming from France, Slovakia, Poland, the US, Belgium, Germany and the UK).

Incentive tourism is another project that appeals to visitors. 603 paying visitors called on the Podolí museum and waterworks as part of incentive tourism in 2013.

The Prague Water Management Museum is also interesting for the media. Its employees gave several interviews and delivered several papers in 2013. A number of books and other printed materials were published, such as *A Century of the Káraný Waterworks*, *A Century of the Káraný Waterworks in Photographs*, *Public Space for Intimate Moments – The Transformations of Prague's Public Lavatories* (by Jaroslav Jásek) etc.

Thanks to increased promotion and popularisation of the museum, the numbers of its visitors have been growing recently to about 10,000 a year.

Number of visitors



PVK as a partner to the City

Corporate social responsibility is an integral part of our business. PVK contributes to events intended for Prague residents and works with the Prague Municipal Authority and the various municipal districts. In 2013, the company supported many cultural and sports events such as the Ladronka festival of leisure activities, the 100th edition of the *Primátorky [Mayoralty]* rowing races, the *Sport Prague* project, the *Bike Prague* event, *A Day with the Police* in Letňany, an international wheelchair tennis tournament and other events.

Fresh Tap Water? Just Ask!

In 2013, the company continued in its environmental project known as **Fresh Tap Water? Just Ask!**, which was launched in 2009. By the end of 2013, more than 530 restaurants and other catering facilities in Prague had joined the project. Restaurants are given free carafes and use them for serving tap water, suitable for a healthy lifestyle and also environmentally friendly. Tap water drinking is supported by a website at www.kohoutkova.cz, which also posts a list of the restaurants that offer tap water. For iPhone users, a mobile application has been prepared, which will direct them to the restaurants offering tap water. More than 4,000 iPhone users have already downloaded this mobile application. Beginning in 2014 the application is also ready for mobile handsets with the Android operating system. The company also promotes tap water at many other public events, where it uses a water bar connected directly to a hydrant. Visitors can refresh themselves and they also receive a lot of valuable information about drinking water from the tap and its quality.

Co-operation with Veolia Foundation

PVK is one of the major sponsors of **Veolia Foundation** established by its parent company, Veolia Voda. PVK and the Foundation work on a number projects. PVK supports its employees' leisure time volunteering for the public benefit. PVK employees are active in the Foundation's **MINIGRANTS** grant programme, which has been encouraging Veolia Voda Group's employees in care for the regions, developing community life and fostering environmental quality for more than 6 years. Between 2008 and 2013, the Veolia Foundation supported **589 projects** (focusing on the social sphere, leisure and educational activities, support of community life, environmental protection, and sports and culture) to the tune of more than CZK 15 million.

In 2013, 17 employee projects earned PVK's support and received CZK 610,300. They mainly helped disabled and socially underprivileged people.

Since 2008, PVK and the Foundation have been organising **corporate volunteering days**, in which usually whole work teams engage. This was also the case in 2013. Within normal working hours, employees have opportunities to help the needy or to improve the quality of life at a particular place. These events are organised as teamwork. In 2013, the employees of PVK volunteered at the Cesta domů [The Way Home] hospice association and the Sue Ryder Home and donated blood at the Nemocnice na Královských Vinohradech hospital.

Traditionally, the company supports **Dům na půli cesty „Maják“** [The "Beacon" Halfway House] in Praha 4, in which 12 young people found shelter after leaving children's homes. PVK wants to help these young people to integrate within society and overcome the complicated period after leaving children's homes.

PVK also participated in the **Water for Africa** project which helps to raise funds for repairing wells and boreholes in Ethiopia through sales of water carafes. It was for the fourth year that PVK and Veolia Foundation organised charity sales of carafes that featured an African motif. The proceeds from the sale of this fourth edition of crystal glass carafes totalled CZK 459,000 in 2013. In addition, Veolia Voda Group companies, including PVK, donated CZK 160,000 to the Real Help fundraiser as a gift for the addressees of New Year's cards for the purchase and distribution of drinking water containers to Ethiopian citizens in 2013.

The four editions of the project have helped to collect more than CZK 1.8 million for the Real Help public fundraiser organised by Člověk v tísni [People in Need].

Another project in which PVK is involved is a **five-year project for saving the populations of common trout and grayling** in our rivers. The project is organised in co-operation with **Jakub Vágner**, a world-renowned angler. He is also the star of the scheme called *Návrat přírody do škol* [Nature Returns to Schools], the gist of which is the organisation of lectures on nature conservation. In 2013, some 2 tonnes of truttaceous fish was released again into Czech rivers to help renew their populations. The trout was released into the river Elbe in and around Vrchlabí in 2013.

Environmental Protection

PVK actively interconnects its core business, i.e. the production and distribution of quality drinking water and draining and treatment of wastewater, with environmental protection. The goal of the sustainable development strategy is to meet the obligations imposed by the law, and PVK voluntarily undertakes to mitigate the environmental impacts of its business.

The continued improvements in operating activities focused on reducing environmental impacts and enhancing Prague residents' perception of the company are included in the annual targets of the integrated management system every year.

The company observes its Environmental Code, which lays down the principles of the company's environmentally responsible conduct and restricts environmentally harmful activities. All buildings are equipped with sorted waste containers. Employees drink tap water as part of their drinking regimen in the office buildings and the company encourages electronic communication and restricts printing to indispensable documents, with printers set for monochrome printing. The company uses environmentally sound promotional items.

The entire Veolia Voda Group works towards enhancing biodiversity in the water management facilities that it operates and cooperates with the Czech Union for Nature Conservation. The Prague-Kozinec drinking water pump station was included in the biodiversity programme in 2013. Support for biodiversity there included primarily the installation of lacking artificial cavities for birds and insects.

The quality of treated wastewater discharged into the river Vltava was in accordance with the limits set out by the applicable water management decision throughout the year. The average quality of treated water stayed continuously below the chargeable threshold in respect of all parameters. PVK did not

pay any charges for pollutant emissions from wastewater treatment plants or penalties for exceeding wastewater parameter limits in 2013.

In terms of environmental protection, the company meets all requirements of the laws in force. It monitors the current laws and regulations in close co-operation with SOVAK and participates in the development of a register of legal requirements, which focuses on laws and regulations relevant for water management business operators.

The company's environmental aspects are documented in the Environmental Aspect and Impact Register and they are checked for topicality on a regular basis. In November 2013, the company successfully underwent a surveillance audit by ITC Zlín concerning the requirements of the ČSN EN ISO 14001:2005 standard (EMS).

Waste Management

PVK generated 146,400 tonnes of waste in 2013, which is 18,300 tonnes (11.1%) less than in the preceding year. Of this amount, only 20.8 tonnes (0.01%) was hazardous waste.

For the sake of comparison: The percentage of hazardous waste in the total amount of waste was 1.9% in 2010, 0.3% in 2011 and only 0.01% in 2012, the same amount as in 2013. PVK uses several take-back systems for selected waste commodities (e.g. electric appliances and printing cartridges). The company will continue in this practice, extending the system to include additional selected types of waste as legislation allowing take-back for legal entities in the Czech Republic develops.

The company buys out wastes at the following PVK operations: Prague CWWTP, Čertousy BWWTP and Kbely BWWTP, and also carries out mobile collection of biodegradable waste at schools, kindergartens and hospitals and the servicing and maintenance of grease traps that can be processed at the wastewater treatment plants that it operates. The largest amount of imported waste was processed at the CWWTP, 15,905 tonnes, in 2013.

To optimise the process of waste transport to the CWWTP, the company is preparing the launch of a reservation system for customers (contracting partners) who supply biodegradable waste.

The co-operation within the Veolia Voda Group with SČVK in the provision of services for the sampling of the waste produced by PVK and comprehensive analysis of the samples as required by PVK continues.

In 2013, the company received a mandate from the Ministry of the Environment to evaluate hazardous waste properties. In 2014 it will progressively offer this service to the other Veolia Voda Group members for use.

In terms of waste management, PVK underwent an EMS surveillance audit, which found the waste management processes in place comply with the law.

Carbon Footprint

The Veolia Voda Group's companies seek to mitigate the environmental impacts of their operations in all areas. In 2010, the Group put in place a comprehensive evaluation of the company in terms of its carbon footprint. The scheme covers the water companies' operations, and also their equipment and products. The main areas under review include improving energy efficiency and reducing energy demand, and use of renewable sources (for example, biogas). For reducing the company's carbon footprint, and therefore its impact on the environment, the most important aspect is efficient energy use and achieving energy savings.

PVK evaluates its carbon footprint in the following areas: production, distribution, wastewater treatment and aggregate output, including the footprint associated with the use of chemicals. Environmental engineering is therefore an essential component of PVK's services, especially as regards the amount of greenhouse gas emissions, including indirect emissions (produced in the generation of the energy that is consumed within PVK).

PVK succeeded in reducing its carbon footprint to 38,370 tonnes of CO₂ equivalent in 2012 to 37,990 tonnes in 2013, primarily thanks to reducing the energy intensity of the water treatment and wastewater treatment processes. In 2013, indirect emissions (energy and heat) in the wastewater treatment process amounted to 10,570 tonnes of CO₂ equivalent and in the production and distribution of drinking water to 26,740 tonnes of CO₂ equivalent.

CO₂ emissions relative to the volume of sold water were reduced to 104.98 g CO₂ equivalent/m³ of water for distribution from the former 105.8 g of CO₂ equivalent/m³. CO₂ emissions relative to the volume of treated wastewater decreased from 90.89 g CO₂ equivalent/m³ of treated water to 71.52 g equivalent/m³ of treated water.

INNOVATIONS

INNOVATIONS, RENEWABLE RESOURCES, REFURBISHMENT, TECHNOLOGY ENHANCEMENTS

Smoke Testing of Sewers

Smoke tests help to detect the situations where rainwater is illegally drained from properties into wastewater sewers, when both rainwater and infiltrated groundwater is drained from a property into the sewerage system through a drain pipe at odds with the conditions of the Sewerage Rules.

This method allows for inspecting whether the rainwater drains are installed correctly, without the property owner's presence and without damaging or tampering with the property. The method is based on tracing harmless artificial fog blown into the separate sewage draining system. The smoke is produced in a smoke generator and blown using a powerful fan into the entry shaft of the sewage draining sewer and drainpipes of the connected properties.

If rainwater drainage from the property is incorrectly connected to the sewage drain pipe, the smoke will appear in eaves and/or yard gullies. Technicians evaluate and document these phenomena on site during the test, and the records are used in subsequent discussions with the property owners who are requested to rectify the situation. Developed by PVK's employee Daniel Hrdý, the equipment was registered as a utility design by the Industrial Property Office in March 2013.

Co-operation with O2 Telefónica

A new method of remote water meter reading, MTC (Managed Telemetric Collection), was developed and verified in a pilot project in 2013.

The service operates on the basis of radio wave technology. The transmission of information from any type of metering instrument to the customer portal uses Telefónica's fully redundant mobile and fixed networks. The various radio elements communicate with each other using only standardised protocols (Wireless M-BUS) and use signal and power supply redundancy in the case of power supply failure.

Known as "smart metering", this system supports any data collection from any metering instrument (electricity meter, water meter, gas meter, calorimeter...) and ongoing consumption monitoring, gives a precise overview of consumption in real time, optimises energy costs, monitors energy leaks, informs of emergencies, provides documents for billing and features many additional benefits.

Water Treatment Plants (WTP)

The Káraný-Sojovice WTP was run in trial operation throughout 2013, focused on ensuring the optimum operating settings in terms of the quality of filtered water and financial indicators. Due to the interruptions in the artificial infiltration process in 2013, the trial operation will continue into 2014, when it should be comprehensively evaluated and used for determining the refurbishment method for the other half of the filtering stage.

The Želivka WTP also underwent modelling tests during the year, aimed at optimising the preparation of the suspension prior to filtering and determining the optimum filtering substrates for the existing high-rate filters.

Refurbishment of Pumping Stations and Branch Wastewater Treatment Plants

Refurbishment and new technologies in operation yield greater operating reliability and efficiency, improve working conditions, stabilise and optimise pressure in the supplied area and, as the case may be, improve water quality.

Drinking water pumping stations and reservoirs underwent the following changes in 2013: The Kopanina pumping station, which supplies water to citizens in the south-western part of Prague and Zličín, underwent overall refurbishment and automation. The third stage of the refurbishment of the Bruska pumping station, entailing the replacement of the water mains in the precincts and of the equipment in the valve house of water reservoir 2, was completed. Accumulation chambers were overhauled at the Ládví III reservoir, chamber 4, and at the Velká Chuchle reservoir, chambers 1 and 2. The outdated pumps at the pumping station for the Slivenec reservoir, as part of the Barrandov pumping station, were replaced with new pumps and two pumps were added to the Ovčín reservoir pumping station to ensure the biological flow rate.

Branch wastewater treatment plant projects included partial refurbishment of the process equipment at the Horní Počernice-Svépravice WWTP. This included a modification of the inlet pumping station, installation of a new system for extracting floating impurities from the final settlement tanks, and building a new station for coagulant agent dosing.

Internal Pipe Protection Using Sprayed PUR

In 2013, PVK was the first company to successfully test the application of sprayed PUR (polyurethane) onto the interior walls of pipes. This is additional surface treatment of the inside of pipes, which was not treated since manufacture. Contact with the metal surface causes water turbidity, which impairs the water during its transport. This method has proven suitable for this purpose. Approximately 5 km of 100 to 200 mm pipes were treated, and when the pipes came online after the treatment no water quality issues were found. PVK will continue using this method for other, in particular terminating, water mains where water quality has been problematic.

Water Supply

A part of the master plan for the development of water supply in Prague, focusing on optimising water supply in the southern part of Prague, was launched in November 2013. The territorial scope includes approximately 350 km of water supply pipes and 18 supply zones.

Another project commenced is the preparation of the back flushing of the old Káraný mains in the Kyje Node – Káraný section.

The purpose is to remove sediments using higher flow rates in the DN 1100 pipes that date back to 1913-1939 to prevent secondary degradation of the water transported to Prague by ferrous sludge sediments when the flow rate from the Káraný WTP changes (e.g. due to a pump failure). The project follows up on a PVS investment in a high capacity outlet in the Káraný WTP precincts. At present, structural assessment is being carried out in respect of the forces caused by water backflow. If the assessment has a positive result, the back flushing should take place in 2014.

Electricity and Heat Generation at the CWWTP

The CWWTP's own electricity production from biogas totalled 32,029 MWh for 2013, and all of this electricity was immediately consumed directly at the plant. This was topped up by purchasing another 100 MWh of electricity from the public grid. The CWWTP therefore achieved a self-sufficiency of 76.2% in electricity demand. In respect of process heat, the CWWTP in Prague has been 100% self-sufficient for a long time.

Sludge processing was continuous in 2013 even though only five of the six pairs of digestion tanks were in operation due to repairs. Overall, 68,009 tonnes of dewatered sludge was produced, approximately 17% less than in the preceding year. This was due to the lower inflow of polluted water in particular during the June floods.

In 2013, a total of 18,066,981 Nm³ of biogas was developed in sludge digestion tanks, which is approximately the same amount as in the preceding year. Biogas was then used for energy generating purposes, and its surpluses were burned in tail gas burners.

Refurbishments in the Sewerage Network

Work on the refurbishment of the left branch of the siphon on the main sewer K under the Vltava (Výtoň – Smíchov) took place in 2013. The work included injection of grouting into the space between the brick lining of the DN 1500 branch and the conduit, replacement of closures in both the inflow and outflow chambers and the installation of basalt lining in the ascending and descending parts of the branch.

Furthermore, extensive refurbishment of major interceptor collectors was commenced – the Prosek interceptor collector, and also the sewer in the V Holešovičkách Street.

Water Supply System

Reduction shafts were built on the basis of the master water supply plan for the Pankrác area in 2013. Zone 237 has an equivalent network length of 256 km. The five newly built reduction shafts will optimise the pressure in three new zones (for the time being, they are referred to by their local names: the Na Dobešce, Jezerka, Děkanka, and Vyšehrad sites with an equivalent length of approximately 40 km of water network). The new supply zones should be “commissioned” in the second quarter of 2014.

Information Technology

Newly deployed IT systems improve the company’s efficiency, accelerate work and have a positive impact on customer communication. PVK meets its IT service needs in co-operation with Veolia Voda’s Solutions and Services subsidiary.

In 2013, we completed the implementation of a central Help Desk for all IT users. The results are zero delays in escalating employee requests to IT professionals and faster co-operation.

We have integrated centralised WiFi network management with the standardised log-in system for all sites with the WiFi network available, which has made using the network simpler.

The purchase and distribution of the EMC Data Domain back-up solution for the customer and financial systems has shortened the times needed for back-up roughly ten times.

Virtualisation and transfer of servers to a data centre continued, reducing the cost of their management in the process.

PVK’s data network was also optimised, improving line throughput.

The replacement of PCs and notebooks running on the Windows XP operating system continued in 2013 spurred by the discontinued support for the system. The replacement must be completed by March of 2014 to prevent the risk of attacks at the company’s operating system

New Software Improves Performance

A business trip tracking module was launched as part of the Helios Green (HG) system. The submission of business trip applications and the process of their approval and accounting are now fully electronic. Digitisation also applies to other fields. At the end of 2013, 85% of received invoices and 45% of issued invoices were in electronic form. This has allowed savings of material and other costs.

The project of collecting electronic price lists from the main suppliers was commenced with the goal of creating Price Catalogues in the HG system. The HG system was set up for electronic approvals of external material orders and their subsequent automated submission to the vendor’s address via e-mail.

At the request of the infrastructure asset manager, PVS, a system for ex-post audit of budgets for selected emergency and scheduled repairs was implemented and improved throughout the year. Sixty repairs were checked in this way.

SWIM

The year 2013 saw the start of the refurbishment of the central control centre area, including the installation of a large-display system for improved clarity of the information displayed, better organisation of work, and better decision-making during crises such as the 2013 floods.

Called SWIM, the new system is the result of a long process of innovating and implementing the latest technologies in the water industry.

The abbreviation stands for Smart Water Integrated Management and, put very simply, SWiM can be described as a central integrated system for the management and administration of water infrastructure. For PVK, SWiM is a proof of its ability to give the customers the very best in water management technology.

SUBSIDIARY

Institut environmentálních služeb, a.s. in 2013

Shareholders:

Campus Veolia Environnement France	40%
Pražské vodovody a kanalizace, a.s.	30%
Dalkia Česká republika, a.s.	30%
Turnover:	CZK 32,606,000
Number of employees:	12
Number of educational events held:	1,809
Number of training days:	8,562
Number of training hours:	199,415
Number of participants in educational events:	17,225

In 2013, Institut environmentálních služeb (IES) celebrated its 11th anniversary. For that year, IES once again managed to keep the bottom line in the black ink and ensure sustainable development of the training organisation. This was achieved despite training budget cuts on the part of certain IES customers, growing prices of rents, utilities and other services, and the fact that IES has not raised the prices of its training products or services since 2008. The successful operation of IES was primarily the result of the continued expansion of its training product and service range, in particular the development programmes prepared and run in co-operation with high-profile partners, primarily renowned universities. Revenue streams from international customers in and outside of the Veolia Environnement Group also made a favourable effect. IES improved its operating efficiency also thanks to using EduBase, its new information system. The cost cutting, organisational and HR measures had a positive effect as well. Each of IES's educational centres and offices in Prague, Ostrava, Banská Bystrica and Teplice successfully contributed to all of these processes. Provision of comprehensive services in the form of outsourcing, including personnel agenda in education, proved its worth again.

IES's major educational projects in 2013 included the opening of another study group that was put together for the Economy and Management bachelor's programme in co-operation with Moravská vysoká škola Olomouc [Moravian College Olomouc], the continuation of the follow-up master's programme in co-operation with Univerzita Tomáše Bati [Tomáš Baťa University] in Zlín, and also the Personnel Management development programme in co-operation with Charles University. New study groups were opened for the successful "Technology–Water–Environment" development programme in co-operation of the Faculty of Civil Engineering of the Czech Technical University. The "Energy Machines" development programme in co-operation with VŠB–Technical University in Ostrava continued. The "Quality of Drinking Water and Water Treatment Processes" development programme prepared in co-operation with the Institute of Chemical Technology in Prague became a successful new curriculum in 2013.

The eCampus (IES training portal) offer for 2013 included the new "Change Management I and II" e-learning courses and a series of allegorical management stories. Innovations also included the eCampus induction training programmes for the staff of the various divisions and companies of VE. IES continued delivering the contract for the training of Sdružení vodovodů a kanalizací (SOVAK, Water Supply and Sewerage Association of the Czech Republic) member companies' employees, totalling CZK 4 million. In 2013, IES's educational centre in Prague again organised a number of events for VE's international customers, many of which operate on the global scale.