



Veolia Environnement

# Our activities





#### Water services

**10.1 billion cubic meters** of drinking water distributed

**103,127,519** people provided with water services

**346,744 km** of drinking water networks

#### Wastewater services

Urban wastewater treatment plant total capacity  
**100.7 M eq. inhabitants**

**7.1 billion cubic meters** of wastewater collected

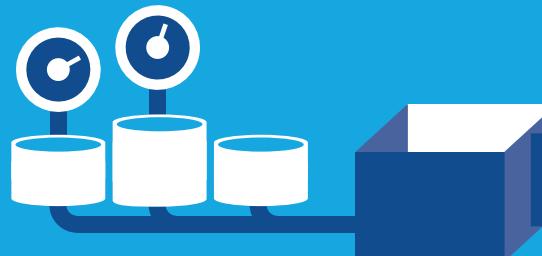
**73 million** people provided with wastewater services

#### Energy

**805,798 MWh** renewable energy produced

#### Wastewater

**171 million cubic meters** of wastewater treated and recycled



# **“Value begins with a change of mindset: instead of considering pollution a nuisance, Veolia Water views it as a resource from which value can be extracted.”**

## **Interview with Jean-Michel Herrewyn**

Head of the Water Division, Chief Executive Officer of Veolia Water



**Veolia Water has redefined its business by integrating the concepts of Service, Value and Responsibility. Is this new SVR approach well adapted to the current economic environment?**

**Jean-Michel Herrewyn:** SVR is becoming a natural, intrinsic reflex for how we think about our business and how we present our offer. It is a frame of reference that enables us to respond effectively to our clients' priorities, including: the need for cost-effective, high-quality services; the ability to constantly find new ways of creating value in a highly-competitive economic environment; and the ability to demonstrate that we are responding to stakeholder expectations by making responsible decisions to ensure a sustainable future. These three elements enable us to maximize benefits for our clients. In this challenging economic environment, more than ever, SVR provides a relevant framework for our offer.

### **Is your business model evolving?**

**JMH:** In the municipal market, we continue to invest in the infrastructure of the water networks we operate. We also are seeing increased demand from clients for our service expertise. In these situations, it is our capacity to optimize management of assets and improve operational efficiency and customer services that is our added value. Our contract with the City of Winnipeg, Canada, to design, build and operate the city's wastewater and sludge treatment plants is just one example. Likewise, in New York, the City's Department of Environmental Protection called on our expertise in its effort to provide residents with better water and wastewater treatment services. We will be working with them to recommend measures to increase productivity and improve reliability while reducing costs.

Part of our compensation is linked to the recurrent savings achieved. These and other new opportunities reflect the exceptional strengths of our technologies, our network optimization capabilities and our service expertise.

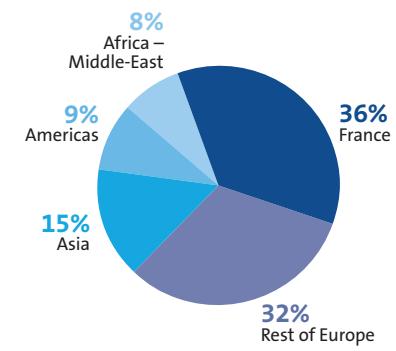
### **What are your overall prospects for the coming year?**

**JMH:** We will continue to develop in France, Eastern Europe, the US, India and China. In 2011, we took a number of actions to refocus our expertise and core technical competencies on the most promising markets, laying the foundations for future growth. With our ability to adapt, to innovate and to deliver industry-leading performance, we should see the first results from the implementation of our strategy in 2012. •

**€12.6 bn**

revenue

### **Revenue breakdown by geographic area**



# Service, Value, Responsibility is a new vision for responding to our clients' challenges



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The global leader in water and wastewater services, Veolia Water delivers outsourcing services, designs technological solutions and constructs and operates facilities for municipal and industrial customers.

Veolia Water operates at all stages of the water cycle: extraction, treatment, storage and distribution of drinking water; collection, transportation, treatment, recycling and restitution of wastewater. The strength of Veolia Water is its water expertise. With 150 years of experience, Veolia Water has acquired a unique knowledge of water. It is what gives it the ability to imagine new treatment solutions, to create solutions to accelerate the replenishment of groundwater, to adapt water quality based on its use, to improve the efficiency of distribution and continuously control its quality. Throughout, Veolia Water saves energy, controls costs and limits the environmental impact of its actions. It is

through the continued strengthening of its expertise and significant investments in R&D, that Veolia Water has become a leader in technology and networks. Today, Veolia Water produces and delivers the best quality water to more than 100 million people worldwide.

**STRENGTHENING SERVICE PERFORMANCE**  
The "S" of SVR reflects the company's ability to continuously improve service performance to provide its customers with more security and comfort at the best price. Service encompasses all actions taken to improve operational performance. In 2011, Veolia Water broke new ground and laid the groundwork for future development. Its business activities

in France were reengineered with the traditional organization of regional agencies replaced with three business sectors – operations, development and clients – allowing elimination of a hierarchical level.

Each sector is able to leverage dedicated resources and develop cutting-edge services. Operations, for example, set up 35 planning centers to optimize the 20 million annual customer calls, which were previously managed locally. This commitment to performance responds to the expectations of communities and their stakeholders. In Bucharest, Veolia Water's solutions enable the city to proactively manage assets and optimize capital expenditure, as well as renew its wastewater system. In Kuwait, work is underway to design, build and operate a reverse osmosis desalination plant to serve the Az-Zour South power plant.



## Veolia Water-led consortium wins €776 million contract

In February 2012, a consortium led by Veolia Water's OTV subsidiary was awarded the contract to renovate the Seine Aval biological wastewater treatment plant in Achères near Paris, the world's second largest wastewater treatment plant. The €776 million contract is the biggest ever signed by OTV, which is responsible for coordinating the work of the members of the consortium as well as designing and building the structures and providing the treatment process.

## ► Montauban selects Veolia Water to manage services

As part of a nine-year public service delegation contract, Veolia Water will operate public water services for the city of Montauban, France, assuming all service risks. As part of Veolia Water's commitment to results, performance indicators will be monitored, such as improved network performance, water quality and management of customer payments. Innovations include installation of remote water meter readers to allow customers to better manage their consumption, with real-time alerts sent in case of abnormal usage patterns.



### CREATING VALUE

Value begins with a change of mindset: instead of considering pollution a nuisance, Veolia Water views it as a resource from which value can be extracted. The company combines its technological and operational expertise to recycle and reuse resources, recover energy and extract valuable composites.

**Generating green energy.** In the French town of Roquebrune-Cap-Martin, Veolia was chosen to install thermal exchangers for the wastewater system to provide heat for its Cap Azur eco-neighborhood. In the Paris region, the company creates the energy necessary to operate a wastewater sludge treatment plant by using steam recovered from incinerating the plant's own sludge.

**Recycling wastewater.** In Fairfield, in the suburbs of Sydney, a newly-started wastewater recycling plant is the first managed by a private

operator in Australia. The four billion cubic meters of recycled water are resold to industrial companies at a lower price than the previously used drinking water. In France, Veolia applied technological expertise on behalf of the world leader for corrective lenses, Essilor, to build a plant capable of recycling water within the company's production cycle using a biological reactor and CeraMem™ ceramic membranes.

**Material value.** In Belgium, Veolia Water built the world's first pilot plant capable of producing bioplastics from wastewater. Veolia Water has demonstrated its expertise in extracting value from waste materials on behalf of clients from all types of processes; the priority now is to accelerate and multiply this capacity.

**HONORING OUR RESPONSIBILITY COMMITMENT**  
As a multi-local company, Veolia Water is a partner to the regions it serves. Acting locally

to maintain jobs, support environmental actions and improve daily lives is part of Veolia Water's responsible approach to taking care of residents, employees, communities and the environment.

In Nagpur, India, Veolia Water and its local partner were selected to provide 24/7 water services to 2.7 million inhabitants, 36% of which live in impoverished neighborhoods (see page 37). It is through a commitment to responsibility that Veolia Water makes the difference. In Perpignan, France, Veolia Water launched a "Water for All" program to ensure universal access to essential water and wastewater services. Under these contracts, the company donates 2% of revenues to a fund to support local assistance and offset carbon emissions. At L'Oréal's plant in Suzhou, China, application of Veolia Water's technologies helped reduce carbon emissions by 43%. •



## Water and wastewater services contracts renewed in Perpignan

In renewing contracts with the French metropolitan area of Perpignan, Veolia Water committed to an ambitious “water for all” program to ensure universal access to essential drinking water and wastewater services. The contracts include several innovative provisions including reduced tariffs for those with very limited water consumption to assist low-income households. In addition, the services are designed to be carbon neutral through the reduction of energy consumption and the production of renewable energy with solar panels and a cogeneration unit. Under the 12-year contract, Veolia also will install remote metering devices for the community’s 44,500 customers.

**100,000 inhabitants  
=**  
**500 tons of bioplastics**

The volume of bioplastics that can be produced from the organic matter in the municipal wastewater of a city of 100,000 inhabitants.

## GrowingBlue.com

In the US, Veolia Water launched the GrowingBlue.com website, providing information on water management issues and best practices for public water authorities, industrial clients and customers. The site uses animated maps, graphics and case studies to provide a visually-compelling, user-friendly portrait of current water conditions in 180 countries – as well as on possible water availability scenarios in 2050.

## PXP, high quality water

In North America, Veolia Water is designing, building and will operate a produced water reclamation facility at a PXP (Plains Exploration and Production Company) oilfield. Using proprietary Veolia Water OPUS® II technology, water will be treated to high-quality standards. Approximately half will be reused in the production process with the remainder released back into the natural environment.



## Optimizing water services in New York

New York City's Department of Environmental Protection (DEP) chose Veolia Water to provide expert consulting services to help optimize its water and wastewater services networks that delivers one billion gallons (3.8 billion liters) of water each day to nine million people. To support the DEP's drive to improve operational efficiency and become one of the world's most reliable and transparent public water systems, an integrated Veolia and DEP team are making recommendations in 2012 for productivity improvements and cost reductions over four years. A portion of the company's compensation will be based on savings achieved by the city.

**\$100-200 million:** targeted savings from DEP's current \$1.1 billion annual maintenance and operations budget.

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# 380 km

The length of pipe being laid by Veolia Water's team in Senegal to supply drinking water to the city of Tambacounda.



## Water Impact Index

Developed by Veolia Water and Veolia Environnement Research and Innovation, the indicator goes beyond existing volume-based tools to incorporate variables such as volume, water stress, water quality, competing demands, and the quality and quantity of water extracted.



#### **Wastewater services contract in Bucharest**

Veolia Water subsidiary Apa Nova Bucharest was selected to provide integrated management of wastewater services for the Romanian capital. The contract includes an initial phase of renovating the wastewater system including the principal sewer, "La Cassette," located under the Dambovita River. The €39.27 million modernization project includes a number of adaptations, including upgrading facilities to significantly increase the quantity of wastewater discharged into the treatment plant at Glina.



#### **Durban: recycling to reduce use conflicts**

Veolia Water has just celebrated 10 years of success of a recycling project that allows South Durban industrial clients to use recycled water to meet their production needs instead of drinking water. The 40,000 cubic meters of drinking water per day previously used in manufacturing processes are now released for the consumption of the city's inhabitants, responding to a longstanding supply problem. The first and only public-private partnership water services project of its kind in South Africa benefits both industrial manufacturers, who now pay 60% less for their water than for drinking water, and the community, where more people are provided with access to drinking water. In addition, environmental impact is reduced, as 98% of wastewater is recycled for industrial use.

## **French national gendarmerie partnership**

Veolia Water became France's first water company to partner with France's *gendarmerie nationale* national police force on a program to place trainees into public safety positions, an example of how the company contributes locally to the development of Veolia's host communities. Each year, France's National Gendarmerie police force trains 14,000 assistant volunteers from disadvantaged neighborhoods. As part of a commitment to fostering job creation in local communities, Veolia Water signed an agreement with the National Gendarmerie to facilitate volunteer retraining and to help meet its recruitment needs.

## Focus

# Nagpur meeting the challenge of water for all



### In figures

**36%** of the population in Nagpur lives in urban slums.

**5 years**  
needed to renovate the infrastructure and extend the network.

**750 million**  
eventual liters per day production capacity of Nagpur's installations.

**6,000 to 8,000**  
the average number of meters installed every month over five years.

### COMMUNITY SUPPORT

Veolia Water's local partner, Orange City Water (OCW) has made a number of commitments to support the community as part of this project in areas such as local employment, training and skills transfer. OCW, the largest private employer (direct or indirect), provides training for 100% of the public water company's employees, subcontractors and local officials, and supports skills development of students from India's leading business school.

#### Projected quantity of water available to Nagpur inhabitants



#### Expansion of the water services contract in Nagpur, India, at the end of 2011 testifies to Veolia Water's long-term commitment to ensuring universal access to essential services.

Nagpur, a rapidly growing city of 2.7 million inhabitants, will soon become the first city in India with tap water access for all dwellings, 24 hours per day, seven days a week. The contract, the first Public-Private Partnership for drinking water in India, includes upgrading the city's infrastructure for water production and distribution and delivery of services over a 25-year period. Upon completion of the five-year renovation, the city's 2,500 kilometer network and

six plants will meet international standards, including increasing the quantity of water available for inhabitants on a daily basis from 90 liters to 130 liters. Total investment of €18 million includes the installation of 300,000 to 450,000 water sensors. In addition to the technical challenges, the project included important cultural and humanitarian considerations: 36% of the city's population resides in slums, disconnected from the drinking water network. To meet its

commitment of 100% accessibility to water services, Veolia Water and its local partner have adopted a close-to-the-customer approach, with a particular focus on disadvantaged residents. Actions included:  
– door-to-door surveying to determine the precise number of inhabitants and understand customer needs;  
– 10 local customer care centers;  
– customer relations teams who meet with residents before and after the work is performed;  
– a network of volunteers in each neighborhood to assist local residents. •



More than  
**70,000**  
employees  
worldwide<sup>(1)</sup>



**€9.7** billion  
in revenue



**36.1**  
million metric  
tons of waste  
collected



**40.4**  
million metric  
tons of waste  
recovered as organic,  
inorganic matter  
and energy



**7.4**  
million MWh  
of electricity  
and thermal  
energy sold

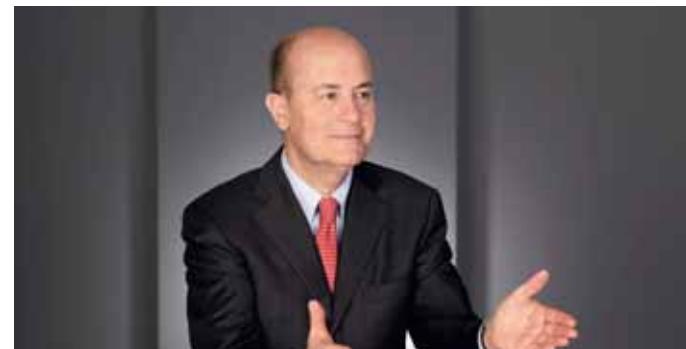


**59.9**  
million metric  
tons of waste  
treated

# **“Veolia Environmental Services made a strategic decision several years ago, well ahead of the market, to turn waste into a resource.”**

## **Interview with Jérôme Le Conte,**

Head of the Waste Management Division, Chief Executive Officer of Veolia Environmental Services



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### **How is the business of Veolia Environmental Services evolving?**

**Jérôme Le Conte:** Three of the four billion tons of waste produced in the world today still contain value, which represents an enormous potential. Meanwhile, raw materials are becoming scarcer and energy needs are increasing. Veolia Environmental Services made a strategic decision several years ago, well ahead of the market, to turn waste into a resource. Today, this is a reality, as we have become producers of raw materials and energy. Clients look to us to implement solutions that enable them to improve their environmental and energy performance, while maintaining profitability. Veolia Environmental Services is mobilizing on all fronts, taking into account the constraints of each country, to reduce the

environmental impact of our operations, to increase our capacity to extract value and to establish new recycling streams. For example, we've gone from the pilot phase to industrial-scale recovery of lithium, a rare metal necessary for recycling electric vehicle batteries.

### **What were some of your other important recent innovations?**

**JLC:** In a few weeks, Veolia Environmental Services will open two development centers for used motor oil in France and Canada. The project, in partnership with Total, represents a significant achievement in the development of a new recycling stream. The plants will advance technologies that enable more than 80% recovery of this resource at a time of record petroleum prices. We also are working

on upstream solutions that integrate new technologies to enable incentive pricing for waste collection, which supports local authorities in their waste reduction policies. Installation of the first fixed vacuum collection system for household waste in Romainville, France, marks another real change in collection methods and represents a growth driver for the company. In the current economic crisis, these technological advances signal our vitality and the ability of our teams to execute our business plan and maintain our leadership in delivering sustainable solutions.

### **Does the economic crisis call your innovation and development strategy into question?**

**JLC:** The economic crisis has forced us to adapt our organization and to focus on markets

and businesses with the best prospects. We responded quickly, demonstrating our resilience and agility, for example, through the successful turnaround of our business in Germany. These efforts are a prerequisite for returning to growth as the economic recovery takes hold. The effects from the crisis are still present but I am convinced that our strategy is well aligned with market conditions. Not making the most of the potential value of resources represents a cost to our customers; our industrial expertise in treating all categories of waste has made us the benchmark reference and we can rely on the commitment of our employees as our greatest asset in meeting the challenges we face. •

# Innovative, high quality waste management



## Become a materials and energy producer and convert waste into a resource.

Veolia Environmental Services is the only company in the world that operates across the entire waste management spectrum. Its innovative solutions help municipal and industrial clients improve their environmental performance through efficient management and recycling of solid, liquid, non-hazardous and hazardous wastes.

The market for the company's services is huge: globally, over four billion tons of waste is produced every year, only a quarter of which is recovered. Increasing environmental awareness, rising energy prices and concerns about the depletion of natural resources are creating major opportunities for Veolia Environmental Services with its capacity to extract value from wastes and establish new recycling streams.

## CENTERS OF EXCELLENCE

To leverage the worldwide expertise that exists within the company, five centers of excellence were established in 2011, gathering leading experts from around the world on selected priority subjects: safety and health; waste separation and sorting; environment; incineration; storage. The centers draw on the power of the company's collective international expertise, resulting in exchanges on best practices, the pooling of knowledge to resolve problems faced by clients around the world and reinforced competitive advantage. 2011 also was marked by several business successes. The company continued to grow in the strategically important UK market with its selection as preferred bidder to build and

operate advanced waste recycling and energy recovery facilities in Leeds and Hertfordshire (see article on page 45) under 25-year Private Finance Initiatives (PFI).

## NEW COLLECTION MODES

In partnership with Envac, Veolia Environmental Services continued to pioneer new waste collection methods, implementing automated vacuum collection of household waste in the Paris suburb of Romainville, with two more communities following shortly. The new collection method reduces vehicle traffic, saving on fuel and greenhouse gas emissions and reducing odors and noise. The company also continued to innovate by "reinventing" horse-drawn waste collection (see page 43) and implementing "intelligent collection" approaches that enable incentive pricing: sensors in waste



## Key figures

**807,000**  
business clients.

**More than 60 million**  
people served.

**763**  
treatment plants worldwide.

bins transmit information to a collection center regarding the weight or level of materials in the bin allowing truck pick-ups to be optimized and providing an incentive to users to reduce the quantity of waste disposed by better sorting.

**MANAGING SPECIAL MATERIALS**  
In Europe, the company continued to develop networks of hazardous waste management facilities, combining its treatment and recovery systems to optimize the wide variability of wastes. Veolia Environmental Services also continues to develop new tools to extract value to help clients respond to new economic and environmental challenges such as the new Osilub motor oil and lubricants recycling plant in France or the new process for recycling batteries and mercury-containing catalysts opened in Switzerland in October 2011.

### SERVING INDUSTRIAL CLIENTS

Veolia Environmental Services continued to innovate on behalf of its clients to help them improve their environmental performance. In the UK, the company's assistance helped Unilever reach its "Zero to landfill" objective, part of its Sustainable Living plan. Its agreement with Veolia requires that 97% of Unilever's non-hazardous waste are recycled, with the remaining 3% converted into usable energy. In Bordeaux, the company helped Michelin reduce its reliance on fossil fuels by providing it with steam captured from waste handling operations. For Shell, the company is dismantling the well pads at a gas field, in the North Sea, a project that will also revitalize a former shipyard and create a substantial number of local jobs (see page 44).

### Helping New York manage hazardous wastes

The company's reputation for efficiently and safely managing hazardous wastes was confirmed with New York City's award of a 10-year citywide contract to remove, handle and process electronic, lighting, mercury and medical sharp waste. Under the contract, Veolia Environmental Services will be responsible for providing the labor, equipment, material and support to properly manage the waste generated by city agency facilities throughout New York's five boroughs, including ballasts, batteries, electronic waste, mercury-containing equipment and mercury-containing lamps.

### Australia: sustainability education recognized

For the second consecutive year, Veolia Environmental Services won the 2011 Australian Business Award for Environmental Sustainability. The award recognized the company's leadership in delivering innovative educational services for Australian businesses on the importance of recycling and resource recovery and encouraging behavioral changes to reduce the environmental impacts from waste.

established a women's network for dialogue and exchange, part of its efforts toward achieving gender balance. The company also continues in its commitment to actively recruit and integrate individuals with disabilities, renewing its partnership in 2011 with the Agefiph association in France. •

### PROMOTING HEALTH AND SAFETY

Safety continues as Veolia Environmental Services' highest priority, as reflected by the fact that it is one of the five centers of excellence. Safety awards presented in November 2011 recognized best safety practices throughout the world. Veolia Environmental Services is able to maintain its leadership in innovation as a result of the commitment and dedication of its employees. The diversity of the workforce, composed of 101 nationalities, is an important contributor to the creation of an innovative environment. The "Diversity Cookbook," produced by the company, illustrates the breadth of cultures and backgrounds that help in customizing solutions to local conditions and needs. Veolia Environmental Services also

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## Pioneering incentive pricing

Veolia Environmental Services is helping French municipalities prepare for a new law that requires incentive pricing for waste collection. Through analysis of data collected on the frequency and number of collections, as well as on waste quantities, Veolia optimizes logistics and collection rounds and encourages separation at the source in order to limit environmental impacts and reduce waste volumes. Individual invoices provide an incentive to users to sort their wastes and so reduce the volume. A pioneer in this field, Veolia signed a new contract in 2011 with the Loir-et-Sarthe public authority in France bringing to 700,000 the number of people it serves through an incentive pricing program.

## Biopôle Angers, a first in France

Veolia Environmental Services manages the new waste recycling center for the Angers Loire community, including a mechanical biological processing unit, a composting unit and a biogas plant to maximize waste recycling.

The brand new treatment center, with annual capacity of 90,000 metric tons, separates the biodegradable from other waste to extract value through biogas and composting. The cutting edge facility produces 23,000 metric tons of compost/year, 15,000 MWh of thermal energy and 15,400 MWh of electricity.

## Putting Fiat on the road

In Serbia, Veolia Environmental Services signed a contract for the recovery of a brownfield site, on which will be built an assembly plant for the automaker Fiat. The project involves the treatment of 200,000 metric tons of earth.



## Safety at work: objectives and actions

For Veolia Environmental Services, protecting the health and safety of its employees is an absolute imperative. The company's safety policy is implemented on an ongoing basis through reporting, recording and follow-up of accidents, corrective actions and the involvement and empowerment of employees in ensuring health, safety and prevention at all levels of the company.



**6%**

The portion of Veolia Environmental Services' workforce in France who have disabilities. In 2011, the company hired 229 individuals with disabilities, (compared to an original goal of 200) and 226 employees attained disabled-worker status.



## Second life for used batteries

2011 saw the opening of Veolia's battery recycling center in Wimmis, Switzerland. The new center's innovative process recovers mercury from spent industrial catalysts and activated carbon which then can be cleaned and prepared for reuse. The plant has an annual capacity of 1,000 metric tons of catalysts and 3,000 metric tons of activated carbon.

## Waste collection at a trot

Combining the old with the new, Veolia Environmental Services introduced horse-drawn household waste collection services in September in the French city of Hazebrouck, featuring a specially-designed lightweight receptacle based on sophisticated aircraft technologies. In addition to the environmental benefits of a lower carbon footprint and less noise than traditional waste collection by truck, the service has proven immensely popular with residents, many of whom bring their children with them to the curbside to deposit their trash.



### Vacuum your neighborhood

An automated vacuum waste collection system moves municipal waste through underground tunnels from stationary collection terminals to a central unit. The compacted waste is then transported by truck to a facility for treatment. In addition to the convenience, long-term cost savings and environmental benefits, the system enables individualized pricing. With several systems already installed in France, Veolia was awarded the first contract in Paris to design, build and operate a vacuum waste collection service for the future Clichy-Batignolles neighborhood. The project will ultimately provide service for a population of 19,000 people and will be shared between residential units and offices, shops and public facilities.



### Dismantling expertise

Veolia Environmental Services UK is continuing its partnership with Peterson SBS on the dismantlement of gas platforms in the North Sea, a market with considerable potential. Following its work on six platforms, Veolia signed a new contract with Shell to dismantle platforms at a gas field. The project also benefits local community development in revitalizing a former shipyard and creating a substantial number of local jobs. In the port of La Rochelle on France's Atlantic coast, Veolia Environmental Services dismantled a large bulk cargo vessel under a comprehensive environmental plan, including reuse/recycling of material. In applying its expertise in recycling and management of end-of-life products, the company was able to recover 95% of the ship's materials.



50

The number of employees who contributed to the "Diversity Cookbook," produced to illustrate the breadth of cultures and backgrounds in France. All participants, who work in a country in which they were not born, provided a recipe from their home country.



### Ultrasound

The Revodyn® process uses two ultrasonic detectors to measure the level of waste on a waste conveyor, automatically adjusting its speed. The innovation enables increases of more than 10% in the capacity of waste sorting plants and improves working conditions.

**Focus**

# In the UK, Hertfordshire County Council designated Veolia Environmental Services as preferred bidder under a 25-year PFI residual waste treatment contract



## Key figures

**352,000**

metric tons of residual waste.

**28,000**

metric tons of recyclable ferrous and non-ferrous metals, plastics and other materials.

**26 MW**

of electricity to be fed to the national electricity network.

"We offer a sustainable approach to increase recycling and extract value from residual waste by converting it into energy; we develop high performance facilities that minimize environmental impact and are well-integrated into the local environment."

Jérôme Le Conte,  
CEO of Veolia Environmental Services

## In brief

Length of the contract:

**25 years**

**52 long-term jobs**

created

The site will produce sufficient energy to power

**50,000 homes**

Under the contract, Veolia Environmental Services will combine recycling with energy recovery, generating financial savings and environmental benefits for the community and its residents over the contract period. Through front-end pre-mechanical treatment, 28,000 metric tons of recyclable ferrous and non-ferrous metals, plastics and other materials will be extracted from the residual waste, providing a beneficial boost to recycling rates. The remaining 352,000 metric tons of residual waste will be processed using high-efficiency energy recovery technology, producing 26 MW of electricity for the National Grid – sufficient to power 50,000 homes, with the further potential to distribute heat to suitable local users. An extensive consultation and community engagement process was undertaken as part of the development of the design concept and development proposals. In addition to significant employment and economic activity created during the construction period, 52 long-term jobs will be created for the period of operation. •

Yesterday

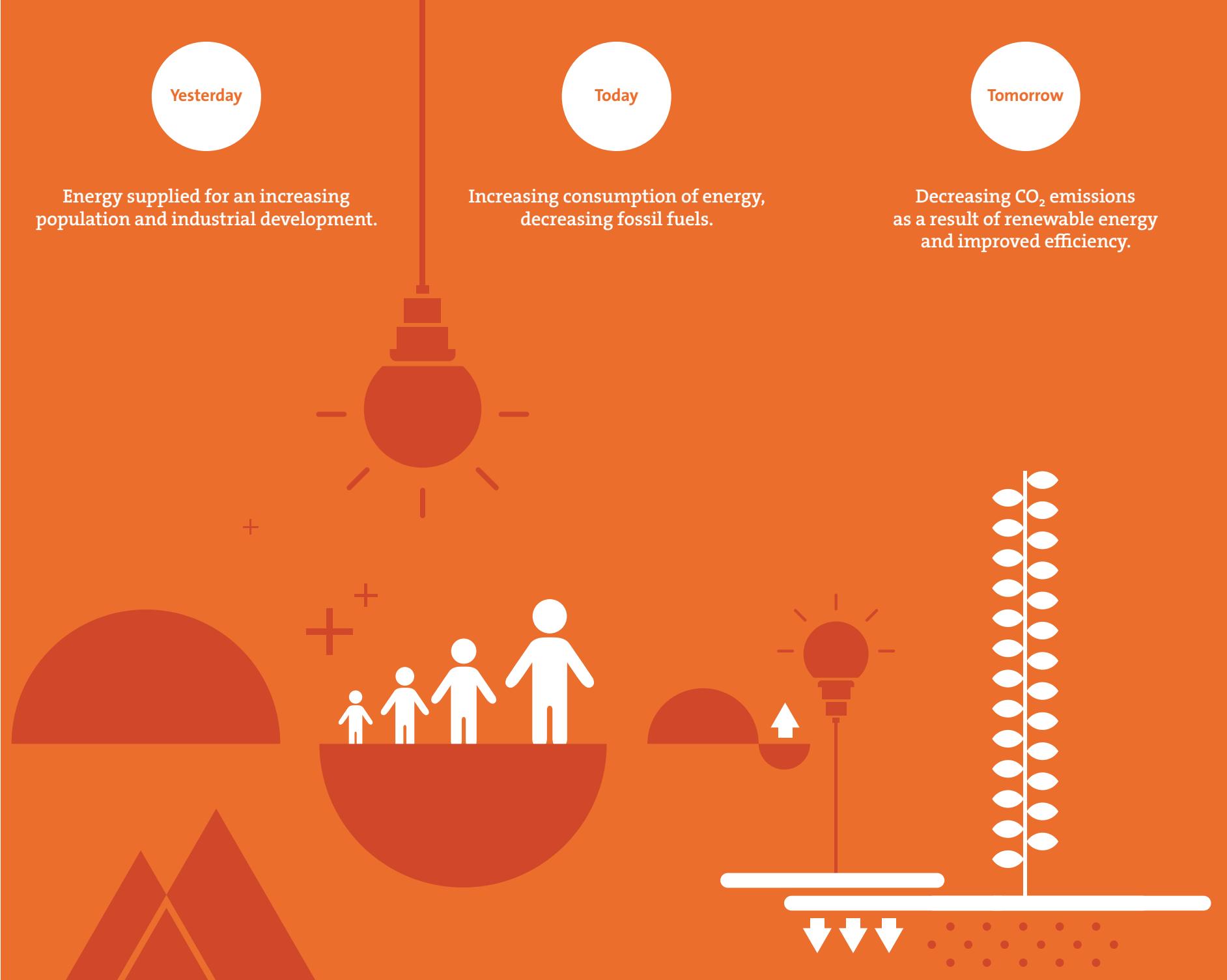
Today

Tomorrow

Energy supplied for an increasing population and industrial development.

Increasing consumption of energy, decreasing fossil fuels.

Decreasing CO<sub>2</sub> emissions as a result of renewable energy and improved efficiency.



# **“For Veolia Energy – Dalkia, the main goal is to be the benchmark reference in energy savings by providing sustainable energy solutions to our public and private sector clients.”**

## **Interview with Franck Lacroix,**

Head of the Energy Services Division, Chief Executive Officer of Dalkia



### **What are the key elements of your strategy?**

**Franck Lacroix:** Our goal is to be the global benchmark reference in offering sustainable energy solutions to public and private sector clients. We continue to help clients reduce energy consumption through efficiency and optimization measures. As a local energy provider, we are leading the development and modernization of heating and cooling networks, combined heat and power plants, geothermal energy, biomass, photovoltaic solar power and smart grids. Our relationship with EDF is also crucial and our strengthened ties will help accelerate Veolia Energy – Dalkia's growth internationally, as well as achieving operational synergies.

### **Tell us more about the three components of your offer.**

**FL:** District heating and cooling networks include design, build and operation of cities'

heating, cooling and distribution networks, network management and local energy production. Our industrial offer includes local production of industrial energy utilities and the design, build and operation of energy facilities for industrial clients. Energy services include local energy production, energy management and production of technical energy solutions for buildings and design, build, operation and maintenance of energy facilities. Our three offers are very complementary; for example, optimizing a city's heating network and recovering the heat for a nearby industrial site. We offer clients comprehensive, customized solutions for their energy needs and are capable of supporting them from design through long-term operation, with guaranteed results. Our ability to aggregate energy resources enables us to optimize energy purchasing and find the best balance between national and regional markets.

### **Can you give us some examples of how Dalkia is helping create the “smart” energy city?**

**FL:** First, by reducing the energy consumption of buildings, whether residential, hospitals, offices or industrial sites. This is an area in which Dalkia has unique expertise to make existing buildings more energy efficient while improving occupant comfort. Then, by “de-carbonizing” residual consumption in replacing fossil fuels with alternative energy. This of course includes biomass and wood energy, where Dalkia is clearly the leader in Europe, as well as agro-industry products (such as coffee grounds or distillation residues). Dalkia also has recognized expertise in geothermal energy through our integrated solutions, studies, drilling and operating, with guaranteed long-term performance. More recently, extracting the value of energy recovered from data centers or wastewater has opened new possibilities. The intelligent city encompasses

the concept of the “smart energy city.” Dalkia has been investing in “smart heat grids,” which are intelligent district heating and cooling networks. With Veolia Environnement Research and Innovation (VERI), we will be experimenting with creative solutions for network control. Dalkia is also a partner in the European SmartHeat4Cities collaborative project through which complementary experiences are being developed and shared on five sites. Also in the field of smart grids, we are working together with VERI on France's Project Reflexe – responsible and flexible electricity – and the development of networks and intelligent electrical systems. •

# A leader in energy services in Europe and around the world



Dalkia (Veolia Energy – Dalkia) is a European leader in delivering energy services to public authorities and industrial companies.

Dalkia designs, implements and manages energy solutions that support the sustainable growth of cities and businesses. It meets customer expectations through customized, end-to-end solutions that ensure comfortable living and efficient energy supply.

The company creates value through its three complementary offers:

- production of heat and urban networks;
- production for industrial clients;
- energy-efficiency services, to help clients reduce consumption.

Dalkia's capacity to leverage economies of scale in order to aggregate energy resources,

supply the national electricity network and find the best balance between regional needs and energy resources is a major source of competitive advantage. With the experience gained at more than 120,000 sites, Dalkia is well positioned by virtue of its involvement throughout the local energy cycle and its capability to directly implement the solutions it creates and support client needs over the long term.

## REDUCING CO<sub>2</sub> EMISSIONS

By increasing use of renewable energy sources such as biomass and geothermal energy and

lowering the consumption of energy through efficiency and optimization measures, significant environmental benefits are generated; Dalkia is moving closer to its 2015 objective of 13 million metric tons of CO<sub>2</sub> emissions avoided as a result of implementation of its projects.

Despite the turbulent economic environment in 2011, Dalkia achieved a number of important successes. In Warsaw, the company began operating the largest district heating network in Europe, covering more than 1,700 kilometers. The contract allows Dalkia to reinforce its leadership in heating networks and energy services in Central Europe. In France, which continues to be one of the world's leading markets for energy services, the company continues to expand its capabilities in biomass



## Key figures

**€8.3 billion**  
managed revenue.

**Almost 52,700**  
employees.

**107 TWh**  
of energy managed.

**6.6 million**  
metric tons of CO<sub>2</sub> emissions avoided.

**123,500**  
energy facilities managed worldwide.

cogeneration with three new projects added to the portfolio. Dalkia also won the contract to construct and operate the new biomass-fired district heating system for the Greater Dijon metropolitan area and signed several significant energy performance contracts.

### ADDING VALUE FOR INDUSTRIAL CLIENTS

Industrial clients continued to turn to Dalkia for solutions to lower their costs through reduced energy consumption, a priority increasingly important in the economic crisis. Dalkia also provided value-added solutions that enable clients to reduce CO<sub>2</sub> emissions and improve their environmental footprint.

Dalkia's ability to forge close relationships is an essential factor in the value-added

solutions the company creates. In Hungary, the company will design and operate the Bonduelle Nagykörös biogas plant. In France, Dalkia signed an energy services management contract with Schneider for its sites in Grenoble. Other successes included ArjoWiggins and Seyfert Paper (to build-operate a biomass cogeneration plant to provide process steam and produce green energy). Dalkia also helped Sara Lee double its production of instant coffee while reducing its carbon footprint with a more efficient on-site waste-to-energy system, using spent coffee grounds and biogas produced from wastewater.

**ENERGY OPTIMIZATION, REAL RESULTS**  
In partnership with EDF Optimal Solutions, Dalkia is ensuring optimized energy

## Smart grid project in France

Veolia Environnement is leading a consortium of companies in building a smart grid demonstration project being sponsored by the French government under its "investing in the future" program. Smart grids must integrate multiple sources of decentralized energy generation, storage and consumption; the considerable amounts of information generated must be managed in real time using a parallel communications network. The project, located in Nice, will assess the grid's technical feasibility on a large scale and its various energy, business and environmental management benefits.

## Data center = energy center

Dalkia is leading the development of a huge potential source of energy: recovery of heat from data centers, the offices used to house computer equipment, which need to be constantly cooled by air conditioning units. Using recent technological advances, Dalkia recovers the high volume of hot air, which is then transmitted via a heat exchanger to a heating network that supplies green energy to buildings. A newly opened 600,000 square meter business park at Marne-la-Vallée, France, will soon be heated using green energy recovered from data centers, avoiding 5,400 metric tons of annual CO<sub>2</sub> emissions.

performance for 20 schools and three museums in northern France as well as the regional governmental headquarters. Similar contracts have been won elsewhere, including in Spain and the US. Dalkia continued its development in the healthcare market in several countries, including contracts with Southampton Hospital in the UK and the hospital center of Saintonges, France.

### SMART ENERGY CITY

Dalkia is a partner in the "SmartHeat4Cities" project, in collaboration with other industry representatives and leading European scientists, including COWI, Vattenfall, MVV, Euroheat and Power. The project will combine experience sharing from five district heating demonstration

sites in Upssala, Sweden; Swansea, UK; Mannheim, Germany; Aarhus, Denmark; and La Rochelle, France. As the project leaders of the demonstration in France, Dalkia and Veolia Environnement Research and Innovation will conduct experiments using innovative solutions to run the heating network, including intensifying interaction with clients and end users to develop and evaluate the concept of Smart District Heating.

The UN has designated 2012 as the year of sustainable energy for all. With its expertise in biomass and geothermal energy, Dalkia is well positioned to play a leadership role in this area as it continues to develop sustainable solutions for clients – and for society. •

# Veolia Energy – Dalkia

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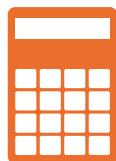
## Biomass for Brest, France

Dalkia will build a “wood” cogeneration plant in Brest, in western France. The main beneficiaries will be heating network users, Cargill and Entrepôts Frigorifiques Bretois. The project also will contribute significantly to the city's energy climate plan, with approximately 70,000 metric tons of CO<sub>2</sub> per year avoided.



## 100% recovery of biogas in Hungary

Dalkia will design and operate a biogas plant for Bonduelle Nagykörös in Hungary. The company will recover 100% of the biogas produced at the site, eventually supplying up to 20% of the plant's energy. Among the benefits for Bonduelle: a 15%-reduction in energy costs.



## More than €200 million

The value of Dalkia's contract to design, build and operate for 25 years a new district heating network for the city of Dijon, France. Renewable energy will be used to meet 80% of the network's needs.



## Renewable energy

Continuously regenerated energy derived from natural processes. The definition includes energy generated by solar, wind, biomass and geothermal sources. Among numerous examples, conversion to biogas enabled coffee producer, Sara Lee, to avoid 14,000 metric tons of CO<sub>2</sub> emissions.



## A breath of fresh air for Hong Kong's Kai Tak airport

In Asia, Dalkia was awarded an eight-year design-build-operate contract for the cooling network at Kai Tak Airport in Hong Kong as part of the airport's renovation. Dalkia will deliver a 284-MW capacity cooling plant and two seawater-supplied district cooling facilities for the 1.7 million square meter site.

# 20%

Percentage improvement in Dalkia's safety performance between 2010 and 2011, with a reinforced focus during Health and Safety week in November 2011.



## Energy efficient in Hempstead, New York

In Hempstead, New York, Veolia Energy – Dalkia is providing support for the town's energy efficiency program and implementation of several sustainability and conservation initiatives. Designed to lower the town's carbon footprint, achieve major energy savings and improve the facilities for residents, program elements include a wind turbine, solar panels, a GHG inventory, a light-bulb exchange and a public outreach campaign.

# 2.6 million

metric tons of biomass consumed in 2011 at more than 390 Dalkia facilities worldwide. Dalkia commissioned biomass power plants for Trelleborg in Sweden, Dairy Crest in the UK and the hospital center of Saintonges, France.

## Diversity commitment recognized

Dalkia France's commitment to promoting diversity, equal opportunity and discrimination prevention was recognized through the award of the "Diversity Label," received from French association Afnor. The certification recognizes the work done by all company stakeholders, including the Campus Veolia Environnement organization.



#### **Improving energy efficiency at Southampton Hospital**

Dalkia will design, build, operate and maintain a power plant through a contract with University Hospital of Southampton, UK, one of the largest energy-efficiency contracts to date. The 20-year contract will result in power output of 2 MW (combined, heat and electricity), with a reserve capacity of 4 MW.



#### **Measured energy optimization**

Under a pioneering Energy Performance Partnership, Dalkia is ensuring optimized energy performance for 20 schools and three museums in northern France as well as the regional governmental headquarters. In partnership with EDF Optimal Solutions, Dalkia commitments include a 58%-reduction in CO<sub>2</sub> emissions in renovated buildings, a guarantee of 32%-energy savings for 15 years and improved comfort for facility users. A similar agreement was signed with the schools in France's Aquitaine region.



## **285 cubic meters of water per hour**

Average flow from drilling carried out by Dalkia in the towns of Torcy and Lognes in the Paris region as part of a double-well geothermal installation.  
Temperature level: 71 °C.

## Focus

# Warsaw: major acquisition in Poland for Veolia Energy – Dalkia



### Competitive heating prices:

**70%** cheaper than electricity

**55%** cheaper than heating fuel

**33%** cheaper than natural gas

Dalkia reinforced its leadership in the heating networks market in winning the contract for the European Union's largest district network in Warsaw, Poland.

In October 2011, Dalkia Polska, a 60%-owned subsidiary of Dalkia International and IFM – Industry Funds Management (40%), purchased an 85%-stake in SPEC SA (Stofeczne Przedsiębiorstwo Energetyki Cieplnej), which manages the city of Warsaw's district heating network. This major foothold in Central Europe bolsters Dalkia's leadership in heating networks and energy services.

When the city initiated the contracting out of its 1,700-kilometer district heating network

### Key figures

**1,700 km**  
network.

**80%**  
of city buildings supplied.

**10,000**  
beneficiaries.

### CONVERTING TO BIOMASS IN POLAND

With 14 years of experience in Poland, Dalkia produces and distributes local energy for 40 cities, including Łódź and Poznań. Dalkia is deploying its expertise for each of the facilities entrusted to it to offer competitive heating prices and improve service quality.

System improvements being implemented by Dalkia include installation of a sensor system to provide a complete picture of the system's operations in real time and allow rapid response to system breakdowns. Planning also is underway for an intelligent heating network to optimize the system's functioning and reaction times. Energy and environmental performance objectives are monitored and improvement actions are being put in place including applying controls to reduce CO<sub>2</sub> emissions, increasing the use of biomass and linking the network with cogeneration facilities. •

**13**  
transit modes

**3.3 billion**  
passengers  
transported/year

**60,000**  
vehicles



**€7.8 billion**  
in revenue  
in 2011

**102,000**  
employees  
worldwide



**27**  
countries



# **“Veolia Transdev’s expertise and resources make us an ideal partner for cities and public authorities, one capable of delivering innovative, cost-effective solutions.”**

## **Interview with Jérôme Gallot**

Chief Executive Officer of Veolia Transdev



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### **How is Veolia Transdev positioned to respond to today's transportation market?**

**Jérôme Gallot:** Veolia Transdev’s expertise and resources make us an ideal partner for cities and public authorities, one capable of delivering innovative, cost-effective solutions customized to respond to local needs. Mobility demand is increasing rapidly and will continue to grow in coming decades with the rapid pace of urbanization around the world. Local public authorities facing constrained budgets and the need to maintain and improve transport services for travelers are looking for reliable partners who are able to deliver. Our clients’ confidence in Veolia Transdev as a global benchmark reference was underlined by the more than three billion euros in value of contracts wins and renewals we received in the 4<sup>th</sup> quarter of 2011.

### **What are the differentiating strengths of Veolia Transdev?**

**JG:** Our strengths today reflect the powerful reasons for the merger of Veolia Transport and Transdev, which have lost none of their validity. We have the combined advantage of being our industry’s most international, yet most locally-based company, enabling us to leverage global resources and expertise to deliver customized local solutions. The 13 transit modes that we deliver is also the world’s broadest service platform. We also have the resources to support our clients on a long-term basis, partnering to share risks and ensure the continuous improvement of services for the traveler. Finally, our ability to innovate and share best practices keeps us at the cutting edge to respond to customers’ new mobility expectations – today and tomorrow.

### **What are your priority areas for development?**

**JG:** We are focusing on three areas because of their growth and profitability and their role in reshaping public transportation: rail, for which markets are opening in Europe and elsewhere in the world; transportation on demand, which responds to the growing need for individualized transit solutions; and digital services, which has major implications for public transportation and the overall economy. At the same time, our teams continue to perform with professionalism in our core businesses – bus, coach, metro and light rail – in which we currently generate 75% of our revenues. We also will continue to develop our services to travelers such as taxis, long-distance transportation, by rail or on-road, and transportation on demand and to further establish Veolia Transdev as a mobility integrator. •

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## Nice, France – Electric car sharing

The “Autobleue” electric car-sharing network launched in Nice, France, in April 2011, attracted more than 1,800 subscribers in its first eight months of operation. In addition to offering a more environmentally-friendly approach to mobility, the service offers some of the latest advances in digital services with contactless ticketing, mobile NFC payment, personalized booking on the Web and an “intelligent” re-charging system. With a 24/7 customer care center, the service offers mobility packages for all means of transportation (public transit, car sharing and cycling) and has earned customer satisfaction scores of 80%. The network plans to expand to 210 electric cars and 70 stations by the end of 2012.



**94%**

Bus passenger satisfaction rates in Sydney, Australia, for public transportation in areas served by Veolia Transdev.

## Chile – Santiago chooses Veolia Transdev to upgrade its bus system

Veolia Transdev was awarded the three-year contract, with a possible 18-month renewal, to operate the 600-bus system serving Santiago's northern and northeastern suburbs. With 100 million passengers transported annually, Veolia Transdev's Chilean subsidiary, Redbus, now operates one of the company's largest bus systems in the world in the fast-growing country.

## Thello: a strong foothold in the European rail market

Thello, created by Veolia Transdev in partnership with Trenitalia, is the new entry to the rail market between France and Italy. With tickets starting at €35, Thello's overnight service between Paris, Milan and Venice offers daily departures in both directions serving Dijon, Milan, Brescia, Verona, Vicenza and Padova. The service offers three levels of comfort on board.



## Sustainable mobility

Sustainable mobility makes a positive contribution to the environmental, social and economic sustainability of the communities served. Transport systems exist to provide social and economic connections and are able to attract increased ridership by offering new opportunities for increased mobility.



## Transportation on demand

Already the leader in transportation on demand in Europe and the US, Veolia Transdev has created a new global business unit to accelerate its development. In the Netherlands, the company provides services for the elderly and disabled under a national contract and operates 30% of Dutch taxis. Many of its ambulances have been equipped with cameras and monitors enabling physicians to make a preliminary diagnosis while the patient is en route to the hospital. In the US, the company's transportation on demand contract was renewed last year with the City of Seattle, Washington, for seven years.



## Close-up: Nassau Inter-County Express (NICE)

In January 2012, Veolia Transdev began operating the bus service for Nassau County, New York, through an innovative five-year Public Private Operating Partnership (PPOP) contract. Under the contract, the largest for public transit in the US, Veolia is responsible for all operations in transporting 100,000 passengers every day; the County retains the assets and approves the annual plan, budget, rates and service levels.

## Nancy, France: urban transit network

Veolia Transdev's contract to manage the bus and light rail urban transit system for the city of Nancy, France, was renewed for seven years in November 2011.

## Airport management

Veolia Transdev manages the Perpignan-Rivesaltes airport in France under a seven-year contract.