



**Facts & Figures 2013**  
(edition 2014)



## Creos, creator of smart grids

However, its 650 employees do more than maintain the conventional networks we know today, they are also agents of the transition to a more “carbon free” economy, thanks to the growing contribution of renewable energies. The increasing number of wind turbines and solar panels connected to the power grids means that smarter grids will be required in future to maintain the security of supply. Hence the need to integrate new technologies.

The new grids are characterised by an enhanced level of communication and data exchange. Creos will install 300,000 new electricity and natural gas smart meters by 2020. It will then be possible to read meters, change power ratings or change customers without the need for a Creos agent to attend in person. Customers will also benefit from better information about their consumption, which will encourage them to pay better attention to their energy bill.

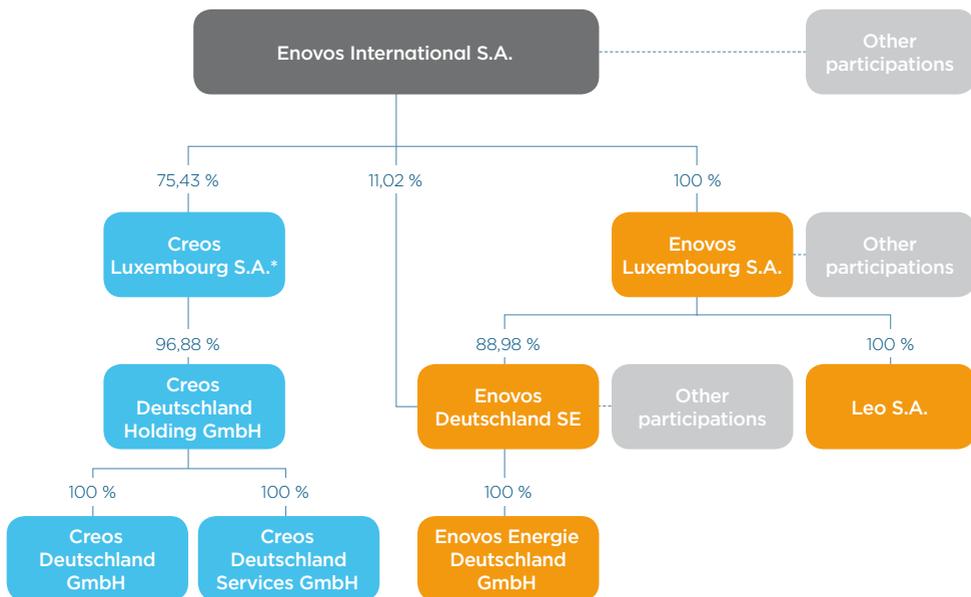


Information technologies will thus play an increasing role in grid management aimed at optimising energy control and managing energy flows. Creos will have to monitor a more decentralised power generation system and more intermittent regional generation from wind turbines and photovoltaic panels. Smart grids must therefore be developed to optimise the generation, consumption and storage of electricity.

Creos has also been asked to get involved in public charging terminals for electric vehicles. Approximately 850 charging terminals will be installed throughout the country in upcoming years for the purpose of promoting electrical mobility in Luxembourg and therefore helping to cut CO<sub>2</sub> emissions in the transport sector.

# Structure of the Enovos group

as at 31.12.2013



\* Creos Luxembourg S.A. holds 0.05 % own shares.

## Mission and values

Creos' mission to ensure the transportation and distribution of energy over the electricity supply and distribution networks and the natural gas pipelines is carried out reliably and at competitive prices in the Grand Duchy of Luxembourg.

Creos recognises that certain values are essential to the accomplishment of its mission. Day-to-day activities focus on ensuring commitment, quality, safety and innovation.



**Commitment**



**Quality**



**Safety**



**Innovation**



## Shareholder structure

### Shareholder structure of Creos Luxembourg S.A. as at 31.12.2013

Enovos International S.A.	75.43 %
City of Luxembourg Municipal Authority	20.00 %
State of the Grand Duchy of Luxembourg	2.28 %
Fédération des Installateurs en Equipements Sanitaires et Climatiques (Federation of Sanitary and Air-Conditioning Equipment Fitters)	0.10 %
42 Luxembourg Municipal Authorities	2.13 %
Creos Luxembourg S.A. (treasury shares)	0.05 %
<b>Total</b>	<b>100.00 %</b>



## Financial results

(under Lux GAAP)		2013
Net turnover	M€	202.5
EBITDA	M€	111.6
EBIT	M€	67.0
Profit for the financial year	M€	64.2

## Investment plan 2014 - 2018

Some 130 MEUR have been invested in 2013, mainly in the electricity grids. The amount of Capex is foreseen to remain at a high level in the next years.

Investment		2014	2015	2016	2017	2018
Electricity	M€	87.76	68.94	78.37	78.62	62.14
Natural gas	M€	12.57	13.25	16.32	15.87	13.52
Buildings	M€	12.93	15.80	2.00	1.00	7.00
Other activities	M€	22.80	13.18	8.25	7.94	8.82
<b>Total</b>	<b>M€</b>	<b>136.06</b>	<b>111.17</b>	<b>104.94</b>	<b>103.43</b>	<b>91.48</b>



## The electricity and natural gas networks - a regulated activity

Energy market organisation provides a strict separation of regulated activities (infrastructure management) and non-regulated activities like production, sale and purchase, open to competition.

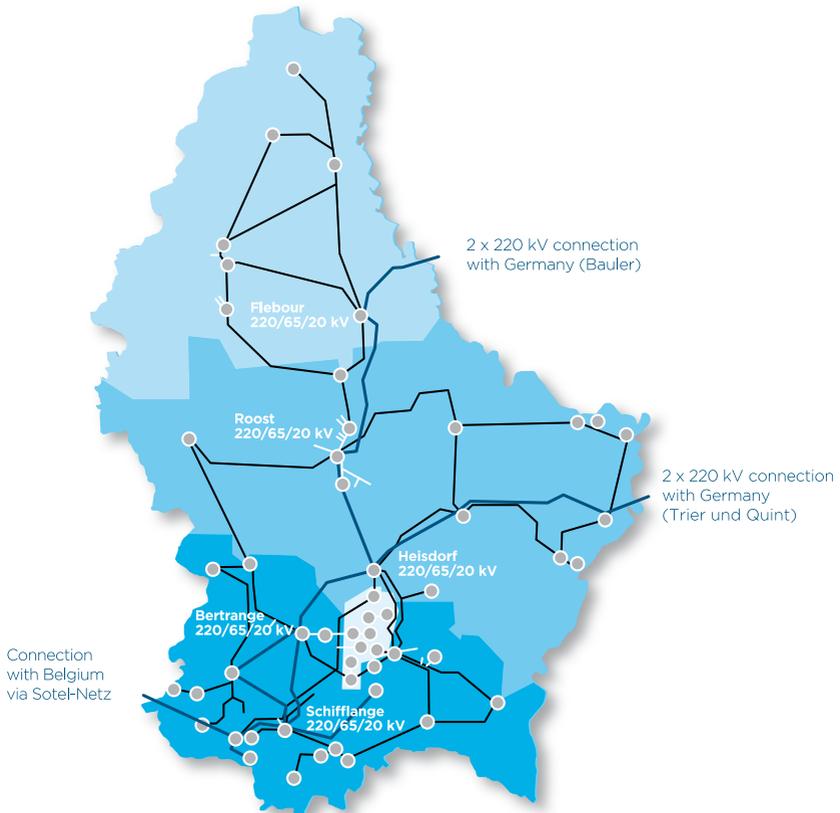
Infrastructures should remain a natural monopoly, but accessible to all suppliers under transparent and non-discriminatory conditions. In the Enovos Group, Creos Luxembourg S.A. is in charge of the network management including planning, construction and maintenance of electric and gas infrastructures.

Network access is organised and supervised by a regulator, in this case the Luxembourg Institute of Regulation (ILR). It is this independent body which for instance approves network access tariffs, “tolls” invoiced to all users of our networks. The regulator’s task in particular is to ensure non-discrimination, effective competition and the efficient operation of the markets.

# Electricity key figures

		2013
Electricity flow	GWh	4,856.8
Electricity network peak	MW	772.0
Network length	Km	9,310.9

## The high-tension electricity network



## Electricity networks - Technical data

Network evolution		31/12/2013
Transformer substations of 220/65/20 kV	(number)	6
Transformer substations of 65/20 kV (65/5 kV)	(number)	46
Transformer substations of 20,000 to 400/230 V	(number)	2,506
Low-tension lines (400/230 V)	overhead (km)	312.6
	underground (km)	5,130.8
	<b>Total LT (km)</b>	<b>5,443.4</b>
	Underground rate	94.3 %
Medium-tension lines (20 kV + 5 kV)	overhead (km)	1,089.2
	underground (km)	2,222.7
	<b>Total MT (km)</b>	<b>3,311.9</b>
	Underground rate	67.1 %
High-tension lines: 65 kV 2-phase	overhead (km)	187.1
	underground (km)	20.1
High-tension lines: 65 kV 1-phase	overhead (km)	213
	underground (km)	5.3
	<b>Total 65 kV (km)</b>	<b>425.5</b>
High-tension lines: 220 kV <sup>①</sup>	overhead (km)	122.4
	underground (km)	7.1
	<b>Total 220 kV (km)</b>	<b>129.5</b>
<b>Total</b>	(km)	<b>9,310.9</b>

<sup>①</sup> including Schiffflange-Bascharage-Bertrange (18.7 km) temporarily operated at 65 kV

# Protection of people and their environment

Creos has made a specific commitment to bury network infrastructure underground in population centres and the surrounding areas when renewing lines or installing new infrastructure.

These works are often completed in close collaboration with the state and municipal authorities.

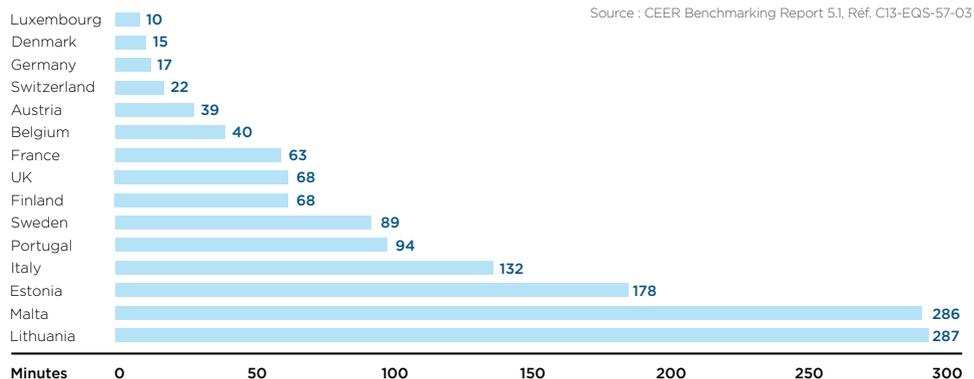
The burial of Creos power lines has now reached 94.3 % in low voltage and 67.1 % in medium voltage which represents more than 7,000 km and therefore more than ¾ of the grid, a European-level performance.

# Security of supply

## Reliability of the electricity networks in an international context

The objective of Creos is to provide our customers with a reliable, high-quality electricity grid. We also strive to keep any power supply interruptions and electrical faults to an absolute minimum.

The CEER (The Council of European Energy Regulators) has just published statistics showing that Luxembourg is number 1 in a comparison indicating the average annual power outage time for clients connected to the power grid.





## Roost Centre and Workshops

The new Roost site, which will open its doors in Autumn 2014, will bring together the existing regional electricity centres of Heisdorf and Wiltz, the Heisdorf high-voltage service, the Contern regional natural gas centre and the Mersch workshops and central store. The Centre will welcome more than 240 people around the two Creos flagship business lines of electricity and natural gas.

Its primary task will consist of constructing, operating and repairing the electricity and natural gas networks of the Central and Northern regions of the country. It will enhance customer service thanks to its strategic location, which will allow quick access to these regions and guarantee prompt maintenance work where necessary.

In order to meet sustainable development criteria, specific attention has been paid to ensuring the rational use of energy. The building also blends perfectly into the environment with a surface area of 14,300 m<sup>2</sup> reserved for the outside green areas.





## Luxmetering GIE

The law requires the smart metering system implemented to be the same across the country. This system must also be able to cope with other supplies, such as water and heat. Electricity and natural gas network operators Creos, Sudgaz, Sudstrom, Electricis, Ville de Diekirch, Ville d'Ettelbruck and Ville de Dudelange will operate this joint system through a common operator under the form of an economic interest group (EIG). Luxmetering was created on 28 November 2012 and started its activities in March 2013.

It is in charge of setting up and operating the national smart metering remote management platform.



## Creos Deutschland GmbH

In 2013, Creos Deutschland GmbH was restructured in order to separate the regulated activities from the unregulated ones. Creos Deutschland GmbH first became a holding company renamed Creos Deutschland Holding GmbH, then the grid activities and the service activities were transferred to two separate entities, Creos Deutschland GmbH and Creos Deutschland Services GmbH.

The reorganisation has been implemented with retroactive effect from 1 January 2013. Creos Deutschland GmbH employs over 100 people and is a direct subsidiary of Creos Deutschland Holding GmbH.

It is based in Saarbrücken, with operating sites in Völklingen, Homburg and Frankenthal. Its core function is the management of natural gas networks. Thanks to its employees' technological, commercial and legal expertise, Creos Deutschland GmbH can guarantee the supply of natural gas to the Saarland and Rhineland-Palatinate via its own high-pressure gas network measuring nearly 1,700 km.

Key figures		2013
Gas transport	GWh	29,493
Revenues	M€	78.5
EBITDA	M€	19.2
EBIT	M€	14.0
Profit for the year	M€	8.2
Workforce		101
Investments	M€	11.4

Pictures : construction of the new Roost Centre and Workshops.



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