



Sustainability in the Dutch Power Sector

Fact Sheet Series

RWE

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RWE

1 Introduction

This series of fact sheets is designed to investigate the Dutch power sector and raise public awareness about the sustainability of power companies operating in the Netherlands. The series consists of ten company fact sheets and four thematic fact sheets, for a total of 14. The ten company fact sheets focus on ten of the Netherlands' leading power companies: DELTA, Electrabel, Eneco, E.ON, Essent, Greenchoice, Nuon, Oxxio, RWE, and Windunie. For each company, the fact sheet will contain information on four measures of sustainability: the company's current fuel mix for installed electricity generation capacity in Europe, current fuel mix of electricity supplied in the Netherlands, investments in new generating capacity in Europe, and initiatives to encourage consumers to become more sustainable in their energy use by conserving energy and reducing overall use (demand-side initiatives) in the Netherlands. The thematic fact sheets focus on these same four areas and compare the ten companies' performance in each area. Information for the fact sheets has been gathered from news articles and databases; company sources such as websites, annual reports and CSR reports; and personal interviews with the companies. All of the companies were given and used the opportunity to review a draft of their fact sheet, provide comments, and correct any factual errors. Funding for the fact sheets was provided by Greenpeace. All fact sheets in this series are available on the SOMO website at www.somo.nl.

2 Basic company information

RWE currently has no generation operations in the Netherlands, but it is examined here because it is likely to become a major player in the Dutch power sector in the near future due to planned investment in large electricity plants in the country. Furthermore RWE Energy, RWE's electricity supplier, is active in the Dutch supply market.

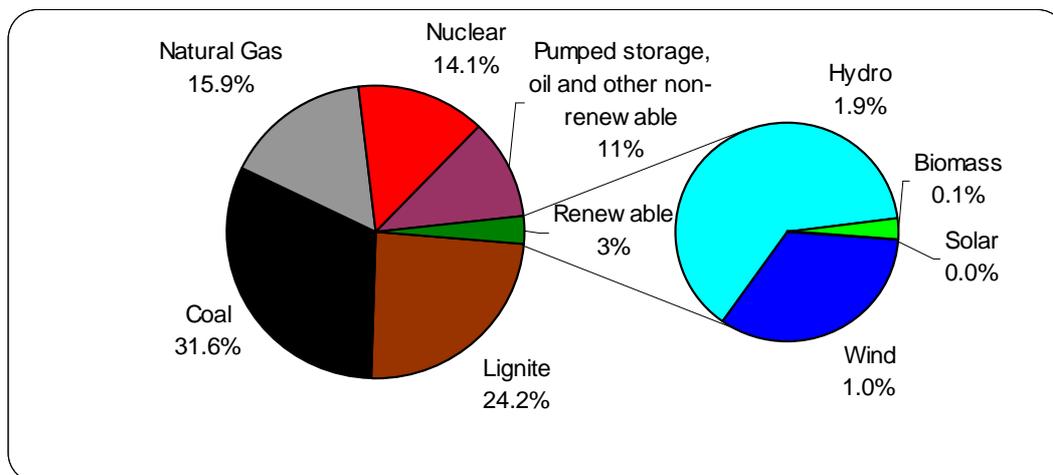
RWE generates power through three business units. RWE Power controls the generation operations in mainland Europe, RWE Innogy is in control of the company's renewable energy activities; and RWE npower is responsible for RWE's UK energy businesses. RWE Power is based in Essen, Germany, and with 32,604 MW of installed capacity at its disposal in Germany, it is the country's largest power producer.¹ RWE Power produces lignite and generates electricity from coal, lignite, nuclear fuel, gas and renewables in Germany, Hungary and Luxembourg. RWE npower has a total capacity of 10,207 MW in the UK, while RWE Innogy controls a capacity of 1,230 MW.²

In addition to its RWE Power, RWE npower and RWE Innogy subsidiaries, the RWE Group's other market units include RWE Dea (oil and gas production), RWE Energy (sales and grid) and RWE Supply & Trading (energy trading).³

3 Installed capacity for electricity generation in Europe

Figure 1 reveals the fuel mix of RWE's electricity generation capacity in 2007. RWE owns generation capacity sites in Germany, the UK, Hungary, Portugal, France, Spain, the Czech Republic and Luxembourg. RWE's total power plant capacity amounted to 44,533 MW in 2007.⁴

Figure 1: Fuel mix of RWE’s installed electricity generation capacity, 2007⁵



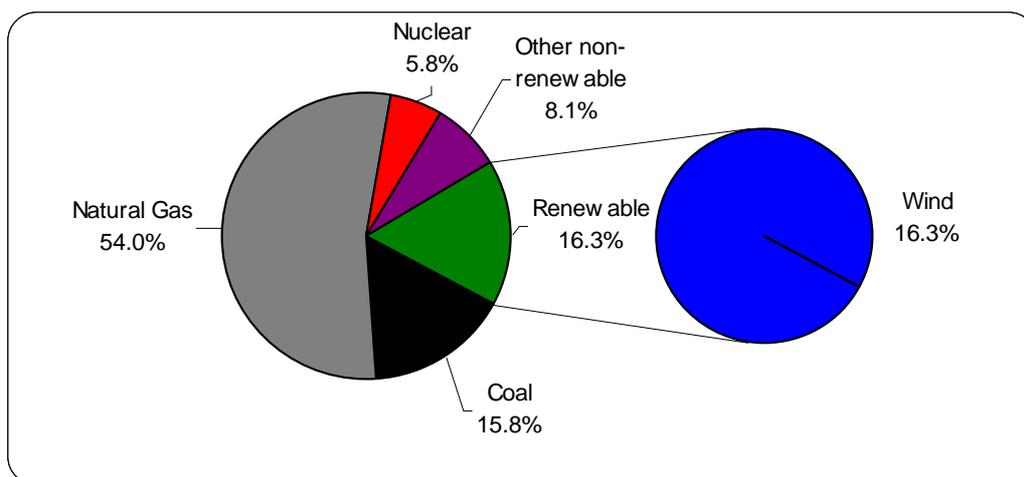
Based on: RWE⁶

The 3% renewable capacity amounts to 1,348 MW. Almost all this capacity is operated through its business unit RWE Innogy. This unit operates a total of 496 MW hydro power, 620 MW wind power, 113 MW biomass, and 2 MW solar power.⁷ Please note that these figures do not correspond to the total renewable capacity due to the differences in accounting as explained in Footnote 2.

4 Electricity supplied in the Netherlands

Figure 2 shows the fuel mix of energy supplied by RWE in the Netherlands. The 16.3% renewable energy is all derived from wind parks.⁸ RWE purchases this wind power on the spot market.

Figure 2: Fuel mix of electricity supplied by RWE Nederland, 2007



Based on: RWE⁹

Table 1 presents the CO₂ emissions and radioactive waste production resulting from the generation of the electricity that RWE supplies in the Netherlands.

Table 1: Emissions and waste resulting from RWE Nederland's electricity supply, 2007

Indicator	Amount
CO ₂ (g/kWh)	339.7
Radioactive waste (µg/kWh)	174

Based on: RWE¹⁰

5 Announced investments in new generation capacity in Europe

Table 2 shows RWE's new projects that have already started construction. It should be noted that the three projects in Germany are replacing older plants and are not adding any additional capacity to RWE.¹¹ In addition to investments in new to-be-built capacity, RWE has also been active in acquisitions of existing capacity.

Table 2: RWE's announced investments in new production capacity

Business unit	Location	Fuel Type	Date in operation	Amount (€)	Output Capacity (MW)	Project status
RWE Power	Neurath (DE)	Lignite	2011	2.2 billion	2,100	Under construction
RWE Power	Hamm (DE)	Coal	2011	2 billion	1,530	Under construction
RWE Power	Lingen (DE)	Gas (CCGT)	2009	500 million	876	Under construction
RWE npower	Staythorpe (UK)	Gas (CCGT)	2010	900 million	1,650	Under construction
RWE Innogy	Rhyl Flats (UK)	Wind	2009	280 million	90	Under construction
RWE Innogy	Various sites (UK)	Wind	N/A	N/A	82	Under construction
RWE Innogy	Masuria (PL)	Wind	2009	50 million ¹²	41	Under construction
RWE Innogy	Western Pomerania (PL)	Wind	2009	50 million ¹³	35	Under construction
RWE Innogy ¹⁴	Urvasco Energia (ES)	Wind	2008	N/A	150	Completed acquisition

Based on: RWE CSR Report 2007 and additional sources provided by RWE

Table 3 presents RWE's investment plans that have not been initiated yet. RWE Innogy, the company's new renewables unit, announced that it will invest € 1 billion annually in new renewable sources.¹⁵ This reflects in a large number of announced investments plans in new wind projects. However, RWE also has a number of large investments in coal plants planned. In addition, several news reports make mention of possible future acquisitions.

Table 3: RWE's announced plans for investment in new capacity

Business unit	Location/Project name	Fuel Type	Date in operation	Amount (€)	Output Capacity (MW)	Project status
RWE Power	Unknown (DE)	Coal or lignite	2014	>1 billion	360	Planning phase
RWE npower	Blyth (UK)	Coal	2014	>2 billion	1,600 - 2,400	Site option
RWE npower	Tilbury (UK)	Coal	2013	> 1.4 billion	1,600	Site option

RWE Power	Eemshaven (NL)	Coal	2012	2.2 billion	1,560	Awaiting permission
	Maritsa Iztok (BG) ¹⁶	Coal	unclear	700 – 800 million	600	Unconfirmed
RWE Power	Wola (PL) ¹⁷	Coal	2015	1.5 billion (jointly)	800	Planning phase
RWE npower	Pembroke (UK)	Gas (CCGT)	2011	1.1 billion	2,000	Awaiting permission
RWE Power ¹⁸	Belene (BG)	Nuclear	N/A	7 billion (jointly)	2,000	Acquisition of a 49% participation in two new plants.
RWE Innogy	Gwynt y Môr (UK)	Wind	2012	2 billion	750	Awaiting permission
RWE Innogy	Triton Knoll (UK)	Wind	N/A	N/A	1,200	Planning phase
RWE Innogy	Tromp (NL)	Wind	N/A	N/A	1,150	Awaiting permission
RWE Innogy	Unknown (NL)	Wind	N/A	N/A	850	Awaiting permission
RWE Innogy	South Italy	Wind	2009-2013	N/A	969	Planning phase
RWE Innogy	Various sites (PL)	Wind	2010	N/A	200	Planning phase
RWE Innogy	Western Hungary	Wind	N/A	N/A	300	Planning phase
RWE Innogy	Various sites (CZ)	Wind	N/A	N/A	100	Planning phase
RWE Innogy	Various sites (FR)	Wind	N/A	N/A	163	Planning phase
RWE Innogy	Various sites (ES)	Wind	N/A	N/A	77	Planning phase
RWE Innogy	Various sites (UK)	Wind	N/A	N/A	2,170	Planning phase
-	Tychow (PL) ¹⁹	Wind	2009/2010	100 million	70	Unconfirmed
RWE Innogy ²⁰	Aufwind Schmack (HU)	Wind	N/A	N/A	300	Acquisition (still awaiting permission)
-	Babcock and Brown (throughout Europe) ²¹	Wind	N/A	3.5 – 4 billion	N/A	Acquisitions (Unconfirmed)
-	Slovakia ²²	Renewable and gas projects	N/A	N/A	unclear	Unconfirmed

Based on: RWE CSR Report 2007; news reports.

6 Demand-side initiatives

RWE's demand-side initiatives include:

- RWE Nederland offers a number of energy saving tips on its website
- The company offers assessments of homes for energy labels, as well as personal energy savings advice. RWE charges customers for both these services.

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- ¹ RWE Annual Report 2007, p.62.
- ² It should be noted that there is a difference in calculating capacity between RWE Innogy and the other units. RWE Innogy is the only business unit that calculates its capacity on a pro-rata basis. This means that only the capacity of a plant that is attributable to RWE Innogy is calculated. For RWE Power, RWE npower and the consolidated figures of RWE Group, calculations are based on majority ownership. For all plants that RWE has a stake greater than 50%, the entire capacity of the plants is included. For all minority stakes, the capacity is not calculated at all.
- ³ Ibid. p.4.
- ⁴ RWE website, "Facts and Figures", 2007, <http://www.rwe.com/generator.aspx/investor-relations/inhalte-de/language=en/id=227214/factbook-extlink.html> (22-07-08).
- ⁵ Due to incongruence in the data provided on RWE's website, it is not possible to determine the exact mix of renewable sources within the production capacity of RWE. The total renewable capacity is 1,348 MW. However, when calculating from the data provided in RWE's Power Plant Portfolio, the combined capacity of all sites using renewable energy does not match up. Looking at the RWE Innogy capacity, there are also differences. Therefore, it is unclear what data was used to come to the total renewable capacity.
- ⁶ RWE website "Fact and Figures"
- ⁷ RWE Factbook Renewable Energy, June 2008, <http://www.rwe.com/generator.aspx/rwe-innogy/property=Data/id=612806/dl-factbook-1.pdf> (22-07-08).
- ⁸ RWE Nederland website "Stroometiket", April 2008, http://www.rwe.nl/documents/RWE_Stroometiket_042008.pdf (22-07-08).
- ⁹ RWE Nederland stroometiket 2007
- ¹⁰ Idem.
- ¹¹ Telephone conversation with Burkhard Pahnke, Investor Relations, RWE AG, 23-07-08.
- ¹² The Masuria and Western Pomerania projects have a combined investment of € 100 million
- ¹³ Idem.
- ¹⁴ "RWE Setzt auf windkraft in Spanien" Borsen-Zeitung, 10-06-08. This takeover was completed in June 2008, and was not taken up in the Annual Report, on which the current generation capacity figures are based.
- ¹⁵ RWE Annual Report 2007, p.25.
- ¹⁶ "Bulgaria: RWE ready to invest in power station", Dnevnik, 09-05-08.
- ¹⁷ "RWE, Polish company plan 800-MW project with carbon capture potential in Poland", Global Power Report 19-06-08.
- ¹⁸ "Bulgaria: RWE in leading position for Belene stake", Dnevnik, 20-06-08.
- ¹⁹ "Poland: RWE, PEP to build wind farms for EUR 100mn ", Gazeta Wyborcza, 10-06-08.
- ²⁰ "Hungary industry: RWE Innogy acquires series of planned wind farms", EIU ViewsWire Select, 20-03-08.
- ²¹ "RWE interested in acquiring parts of Babcock & Brown windparks ", Thomson Financial News Super Focus, 20-05-08.
- ²² "Slovakia: E.ON and RWE present their plans ", SME, 09-06-08.