



Sustainability in the Dutch Power Sector

Fact Sheet Series

Eneco

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Eneco

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.

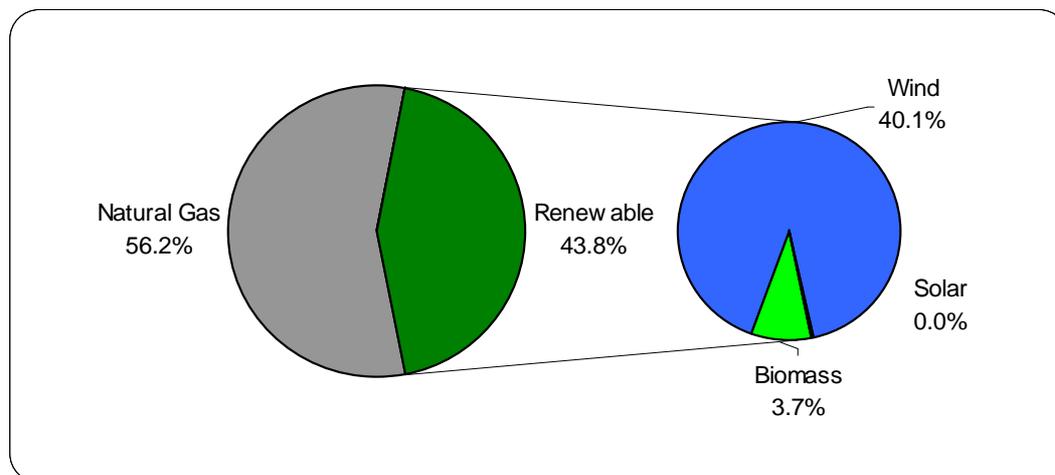
2 Basic company information

Eneco Holding N.V. is a non-listed public limited liability company with its official seat in Rotterdam. Through its wholly-owned subsidiary Eneco Nederland, the company supplies gas, electricity, and heat to retail and business customers throughout the Netherlands. Other activities revolve around the leasing of hot water and central heating and cooling systems, sustainable energy, public lighting, and traffic control systems. Along with Essent and Nuon, Eneco is one of the top three network operators in the Netherlands. Eneco's network operator Stedin serves approximately two million customers; Eneco also owns the electricity supplier Echte Energie and has a 30% stake in supplier Greenchoice.

3 Installed capacity for electricity generation in Europe

Eneco's two main sources of generation capacity are wind parks and natural gas plants. Eneco's total generation capacity currently amounts to 1,514MW. As shown in Figure 1, 43.8% of this capacity comes from renewable sources, mostly windparks.

Figure 1: Relative fuel mix of Eneco's generation capacity, 2007¹



Based on: Eneco²

Table 1: Absolute fuel mix of Eneco's generation capacity

Fuel type	Capacity (MW)
Wind	607
Biomass	55.30
Solar	1.3
Natural gas (CHP)	850
Total	1,513.6

According to Eneco's annual report, in the future the company will source parts of its biomass supply from outside of Europe. Here, the company applies the so-called Cramer-criteria, which sets several requirements for sustainable biomass.³ Its wind capacity is generated both from large off-shore wind parks, such as the Q7 park, and several smaller on-shore parks. The natural gas capacity comes from its exclusive contract with the Rijnmond Energie Centrale.

4 Electricity supplied in the Netherlands

As shown in Figure 2, the fuel mix of electricity supplied by Eneco is clearly less sustainable than that of its generation capacity. This is due to the fact that Eneco supplies much more electricity than it generates. The electricity that is not generated by the company itself is bought through its Trading business unit.

Figure 2: Fuel mix of electricity supplied by Eneco, 2007

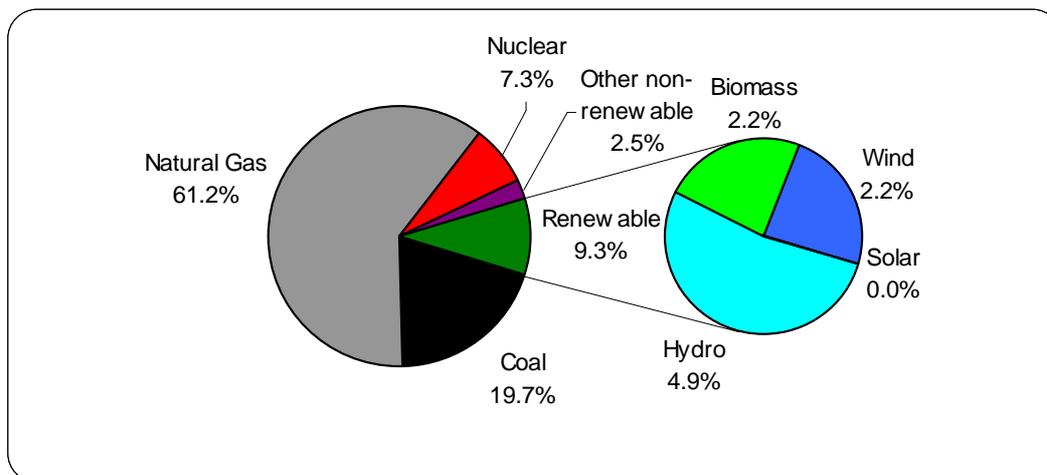


Table 2 presents the CO₂ emissions and radioactive waste production resulting from the generation of the electricity that Eneco supplies in the Netherlands.

Table 2: Emissions and waste resulting from Eneco's electricity supply, 2007

Indicator	Amount
CO ₂ (g/kWh)	419
Radioactive waste (µg/kWh)	200

Based on: Eneco Annual Report 2007

5 Announced investments in new generation capacity in Europe

Table 2 indicates all projects that are currently under construction. Eneco has announced that it is planning to invest a total of €5 billion in new gas and renewable capacity in the coming five years.⁴ The Q7 wind park and the wind park in the municipality of Tholen are also featured in this section, although they are already in operation. This is because they were still under construction when Eneco's annual report was released. Both the EnecoGEN and the PerGEN plants will have combined heat and power (CHP) facilities.

Table 3: Eneco's announced investments in new production capacity

Project name	Location	Fuel Type	Date in operation	Amount (€)	Output Capacity (MW)	Project status
Q7 Offshore park	IJmuiden (NL)	Wind	2008	383 million (jointly)	120	In operation
Wind turbines Tholen	Tholen (NL)	Wind	2008	12.5 million ⁵	15	In operation
EnecoGEN	Rotterdam Rijnmondgebied (NL)	Natural gas (CHP)	2008/2009	750 million ⁶	840	Under construction
PerGEN (exclusive contract)	Rotterdam (NL)	Natural gas (CHP)	2010	200 million (jointly) ⁷	250 (pro-rata)	Under construction

Eneco has expressed its intent to increase the share of renewable energy it supplies by investing in new renewable capacity. The company aims to supply 20% renewable energy by 2012, and 70% by 2020.⁸

Table 4: Eneco's announced plans for investment in new capacity

Project name	Location	Fuel Type	Date in operation	Amount (€)	Output Capacity (MW)	Project status
Blue Energy	Afsluitdijk (NL)	Osmosis	After 2010	N/A	200	Planning phase
Various plant in The Netherlands and Belgium	Netherlands (NL) and Belgium (BE)	Biogas	N/A	N/A	3-6	Planning phase
Tidal wave turbine	Borssele (NL) ⁹	Hydro	2008	1 million (jointly)	N/A	Planning phase
Tweede Maasvlakte (NL) ¹⁰	Maasvlakte (NL)	Wind	>2013	>100 million	N/A	Planning phase
Offshore windpark	Undisclosed location Belgium (BE)	Wind	N/A	1.5 billion	420-630	Awaiting permission

Based on: Eneco Annual Report 2007

6 Demand-side initiatives

Eneco's demand-side initiatives include:

- Eneco has developed a technology for micro combined heat and power (CHP) plants to be used by individual consumers to generate and use their own electricity.¹¹
- Eneco provides various services to stimulate consumption reduction by consumers. These include pre-paid meters, advice services, corporate CO₂ analyses, public awareness campaigns and various other schemes.¹²

¹ It should be noted that these figures are partially based on exclusive contracts Eneco has, and partially on generation capacity actually owned by the company.

² Eneco Annual Report 2007

³ Idem, p.18. For more information on the Cramer criteria, see http://www.senternovem.nl/mmfiles/412293MEZ%20biomassa%20EN_tcm24-198026.pdf (02-09-08).

⁴ "Ruim baan voor groene stroom", Het Financieele Dagblad, 11 juli 2008.

⁵ 5 windmills costing 2.5 million each. "Provincie zet sein op groen", BN/DeStem, April 12, 2005.

⁶ "Ruim baan voor groene stroom", Het Financieele Dagblad, 11 juli 2008.

⁷ The investment itself is made by Air Liquide and Shell. Eneco will be allotted with 250 MW. It is unclear what investment Eneco has made. Mourik Magazine, 37, no date, http://www.mourik.com/pdf/brochure/nl/Magazine_37_Ned.pdf (24-07-08) p.5.

⁸ "Eneco: Groene ambities zwarte cijfers", FEM Business, 10 mei 2008.

⁹ "Getijdenturbine aan Total-steiger", Provinciale Zeeuwse Courant, July 14, 2008.

¹⁰ "Groot windpark op nieuwe Maasvlakte", FEM Business, 10 mei 2008.

¹¹ Eneco Annual Report 2007, p.21.

¹² Idem. p.21-24