

**CASE STUDY:** Green municipality,  
green electricity

**SECTOR:** Energy

**COUNTRY:** Netherlands

### **SUSTAINABILITY STATEMENT**

The government of the Netherlands committed itself to the Kyoto agreement, which means for the year 2008-2012 a decrease of 6% CO<sub>2</sub> emission compared to 1990. This may seem a lot, but is only a first small step towards a sustainable energy supply. Local authorities have two major roles in the present energy system in the Netherlands: motivator and consumer. Municipalities should accept consequences for their climate policy and take the opportunity they have as a consumer. Electricity generated from renewable sources or combined heat power contributes less to the increased CO<sub>2</sub> emission than electricity generated from oil or (brown)coal. The municipality of Utrecht took their opportunity and purchased 'clean' electricity and asked how the offered electricity is generated.

### **BACKGROUND**

Utrecht occupies approximately 400 buildings and objects. Street- and traffic devices in the city also consume a great deal of electricity. Added to this, there is also a quantity of gas and district heating consumed.

In 1996 an extensive energy saving project was launched for municipality buildings. In three phases Utrecht reduced the energy use in 100 buildings. These 100 buildings use approximately 80% of the total energy consumption in the municipal buildings. The three phases are:

- Phase 1: motivating people working in the buildings for energy saving
- Phase 2: developing an energy management system for the 100 buildings

- Phase 3: implementing energy efficient measurements in buildings and installations



The results of all these acts show a CO<sub>2</sub> reduction with an economical budget. As the demand for energy in buildings and installations has decreased, it is time to introduce renewable and 'clean' energy.

In the Netherlands the energy market is liberalised in three tranches. In 2000 the municipality of Utrecht was allowed to purchase electricity for street- and traffic devices. Utrecht uses standardised tenders and can tender for the best economic value. Utrecht chose not to tender for 100% renewable electricity. First of all is the supply of renewable electricity not very large in the Netherlands. Besides this are the prices for renewable electricity quite high for large users.

The former minister of Economic Affairs Mrs. Jorritsma stated that the labelling of electricity, with the exception of renewable electricity, should be a market development. Utrecht wishes labelling of all electricity (renewable, combined heat power, nuclear, coal et cetera). In this way the consumer can compare between price and quality and choose between different 'products'. It may be that the 'market' of local authorities in the Netherlands (the Netherlands have approximately 600 local or national

authorities) can force energy suppliers to label their electricity. Someone had to start, and Utrecht did.

The municipality of Utrecht tendered for electricity produced with the lowest emission of CO<sub>2</sub>. The amount of nuclear energy should be minimal. The winning supplier offered 5% renewable electricity and 95% electricity generated by combined heat power.



### INDICATORS

Electricity from combined heat power stations (gasheated) has a 20 – 25% lower CO<sub>2</sub> emission compared to the standard Dutch fuel mix (gas, coal and nuclear sources). By purchasing 'clean' electricity the city of Utrecht reduces the annual CO<sub>2</sub> emission approximately by 1400 ton.

### EVALUATION

The next tranche of the Dutch liberalisation starts in 2003. Beside electricity for street- and traffic devices, the municipality will tender electricity for about twenty municipal buildings. In this tender the guarantees for the offered electricity will be stricter.

Despite the municipal demands about the origin of the electricity, the offered electricity was 10% cheaper than before.

It is expected that in the next tender electricity prices may be higher compared to the first offer, due to the extra demands. The municipality should be trustworthy and not choose for the cheaper and more 'dirtier' electricity. Obviously, this choice is not always easy in the political arena.

### BENCHMARK DATA

There is no benchmark data.

### DRIVERS

The environmental conditions were defined in the tender by a collaboration between the purchasing and environmental departments of the municipality. The experiences have been told to approximately 100 local authorities in the Netherlands in order to start a discussion about their role as a consumer.

The idea has been awarded with the Energy Award 2001, an award presented by the Dutch national energy agency.



### LESSONS LEARNED

The municipality has learned a great deal on the tender. Unfortunately, the consumer must still trust the supplier that the delivered electricity is 'clean' electricity. The delivery of 'clean' electricity is not guaranteed by official documents. In the next tender the guarantees for the offered electricity will be stricter. However, the guarantees will not be solid proof, until an independent supervisor labels electricity.

tel: +31 30 286 4598; fax +31 30 294  
6634; e-mail A.Harting@utrecht.nl

Other problems also occurred with the tender for street- and traffic devices. Through the years the energy distributor had been included all sort of services in the electricity price. Contracting an energy supplier requires a clear and written record of how the old price was constructed. Thus, prices for ecotax, transportation, TF signals (switch for turning on and off the streetlights) et cetera should be known. In Utrecht serious problems occurred and the national government is repairing the unclear regulations in the Electricity Law at this point.

### **APPLICATION**

Every municipality and enterprise purchasing electricity, can think about their role as a consumer and contributor to the CO2 emission and act upon their responsibilities.

### **TRANSFERABILITY**

As the European energy market is not fully harmonised, the transferability might be different in different European countries.

### **IMPACT ON SUSTAINABILITY AREAS**

environmental: small; there is a small reduction of the CO2 emission

social: high: setting the good example for all consumers

economic: unknown: if many consumers ask 'clean' electricity, more environmental friendly production units will appear. It could lead to the development of a new product for energy suppliers beside the existing renewable electricity.

institutional: unknown

### **PROJECT CONTACT**

City of Utrecht  
DSO/environmental department  
Arno Harting  
Postbox 8406  
3503 RK Utrecht