Denmark: EnergiMidt

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About

Case study name:
The greening of industries in the EU

Country:
Denmark

Organisation Size:
500+

Sectors:
Energy

EnergiMidt is an electricity distribution company situated in central Jutland. The company was formed in 2002 after a merger of three electricity companies. In the same year, EnergiMidt started its green practice: selling and installing solar panels and heat pumps in the region. In the past decade, EnergiMidt has grown from 200 to 625 employees. Of the new employees, 80% work with solar panels and heat pumps and related green technologies. The employees working with the green technologies are mostly electricians and plumbers. EnergiMidt cooperates with municipalities in the region and Danish research institutions on sustainable energy.

Introduction

The green energy sector is growing in importance in Denmark, even though most energy is still generated from fossil fuel. Wind, solar and water energy accounted for around 33% of electricity distribution in 2011, and there is a political and public focus on new renewable energy forms.

EnergiMidt is an electricity-distributing company situated in Silkeborg in central Jutland, Denmark. It was formed from a merger of three electricity companies in the area in 2002. Since then, it has expanded rapidly in terms of the number of customers, business areas and staff. At the end of 2011, EnergiMidt had 625 employees, who are skilled, with a medium-level or higher education.

EnergiMidt's green business area selected for this case study concerns promotion, sales and installation of heat pumps and solar panels as well as giving advice to customers on these technologies.

EnergiMidt also provides outdoor and street lights to municipalities, and energy conservation advice to individuals, public and private enterprises, and agriculture. The company sells high-speed fibre-optic broadband connections that will contribute to faster and reliable communications in more remote areas of the Jutland peninsula.

Drivers and motivations

In general, the development of sustainable energy is crucial to the official Danish economic strategy, and there is increasing general public awareness of its importance as an alternative to fossil energy sources. There is a widespread belief among decision-makers as well as the media that Denmark's ability to stay competitive lies in education and innovation. Green business practices or 'green tech' are common issues in this discussion.

It is against this background that the drivers behind EnergiMidt's green practices should be seen. As it was already a player in electricity distribution, it was not a major step for the company to promote and sell energy-saving utilities and solutions. The existence of solar cells and heat pumps, which are relatively easily marketed and installed, supported the motivation.

Another factor is the economic limitation of distributing electricity in Denmark. The area is regulated by the state, which owns the grid and determines the level of taxes that in turn influence the prices. EnergiMidt has no control over which sources the electricity is generated from. This imposes certain limitations on its opportunities to expand. But starting a green practice enabled the firm to expand in the region. The activities and competencies of EnergiMidt now include solar panels and heat pumps, which makes the company a multi-utility company supplying services including electricity, communication and heat.

Green business practices

After the merger that created EnergiMidt in 2002, the new management developed the green aspect of its business. EnergiMidt started to sell, install and give advice about solar energy and energy-saving heat pumps. The company advertised in professional magazines and through marketing. According to the HR manager, both management and employees showed great willingness to adapt to the added green profile of the company. According to management, the turnover of the company doubled from 2002 to 2011 due to the new green profile. Furthermore, EnergiMidt was among the first to take up heat pumps and solar panels as a business area.

At first, EnergiMidt received funding from the Electricity Research Fund (Elforsk), which is distributed by the state. The fund was set up with the aim of encouraging entrepreneurship among companies in the field of alternative energy sources. The state helped the chosen applicants with financing and consulting. Besides Elforsk, there are other state funds that support entrepreneurship and innovation in the energy sector. The aim is to make Denmark a leading country in the field of alternative energy sources. EnergiMidt continues to apply for and receive funds for the implementation of green projects.

There is a high level of collaboration between staff within EnergiMidt, which is an important factor in developing new ideas. Management and employees hold different types of meetings – café meetings, group meetings and department meetings – in the context of developing green practices. EnergiMidt has also implemented self-management in its departments.

Other green practices

An example of how EnergiMidt tries to expand and stay competitive is the project on the island of Fur called Innovation Fur. The goal is to meet the energy needs of the island from solar panels, and to cover the island with high-speed fibre-optic broadband to improve communication. The project was initiated by EnergiMidt and Skive Municipality. The project runs from 2011 to 2015, but Fur will then operate as a test laboratory for future energy supply and technology. Innovation Fur has an estimated budget of DKK 240 million (€32 billion on 26 November 2012) and it will feature, among other things, the building and demonstration of a smart grid, technology-driven homes – so-called 'smart homes'– and climate-friendly transport solutions. Furthermore, it is hoped that the project will create regional industrial development.

A newly constructed high-technology and carbon-neutral office building serves as EnergiMidt's headquarters. The new headquarters was inaugurated in 2010 and is something of an attraction. It was the first Danish office building in energy class 2015. The building cost €11 billion (DKK 80 billion), of which €1 billion was invested in innovative energy-saving solutions. EnergyMidt expects that the investment will have paid for itself in 10 years because of a significantly lower energy bill. The heating in the headquarters comes from several sources. The cellar contains a large server room, and the heat from here is used to warm up the building, along with the heat coming from electric light and the employees themselves. The largest part of the power consumption comes from different solar cell panels.

Anticipation and management of the impact of green change on quantity and quality of jobs

Impact on quantity of jobs

In the 10 years since 2002, the number of employees increased from 200 to 625. EnergyMidt estimates that 80% of this increase has taken place in new green jobs or in jobs supporting its green business component. The new posts were for engineers, plumbers, technicians, electricians, specialists in solar cell technology and energy-saving water pumps, and also jobs in environmental auditing and energy auditing. Two lead auditors were hired to carry out quality, environmental and energy management control relating to the international standards of ISO 14001, ISO 9001 and ISO 50001 respectively. The Danish Energy Agency is currently working on formulating requirements for a certification scheme for installers of renewable energy, including solar. Until it is approved, authorisation is needed only to connect the solar power plant to the building installation, not to mount the unit.

Lawyers and economists were also employed to support the emerging green practice. Employees within the field of marketing and promotion were also hired. Most of the new employees had taken a short further education course or had a higher education. Only a few jobs were substantially changed by the green practice. Employees with skills as machine engineers and other engineers were already highly adaptable and were engaged as heads of departments. In-house courses were held in order to bring them up to date with the green practices.

Impact on quality of jobs

Skills development

The required green skills are connected with the energy sector – distribution of electricity (NACE Rev. 2: 35.13.00) and with advising on sustainable energy solutions (NACE Rev. 2: 71.12.90). The growth of staff numbers has mainly taken place within sales and installation of sustainable technologies. Both generic and specialist skills are needed. Generic skills include knowledge of sustainable materials, environmental-impact assessment skills, understanding of environmental legislation, and improving resource efficiency in the workplace. Specialist skills are within the fields of engineering and technology, which require vocational education as electricians and plumbers (covering installation, maintenance, and advising on solar panels and heat pumps), or a business school or university background (promotion, sales, environmental legislation, advising and certifying).

EnergiMidt offers continuous high-level training or other measures to improve the qualifications of those working with solar panels and heat pumps. Courses and further training to keep up with technological developments are delivered in-house or by specialist providers.

With the development of jobs in the sustainable energy sector, new training and continuing education courses have been established. According to legislation, vocational training, including further education, is the responsibility of the social partners, who form technical committees (*faglige udvalg*) with equal numbers of representatives from the trades unions and the employers. It is the task of the committees to formulate, manage and monitor the quality of the education. New training programmes have emerged relating to solar panels and heat pumps. Energy Technology is offered as a bachelor's degree or a master's degree and covers the development of existing and new energy technologies and alternative energy sources such as power plants run on biomass, wind turbines, solar panels and fuel cells. Short courses (from one to six weeks) are the most common. One of these courses trains participants in the installation of solar cells. At the end of the course, the participant can calculate and install the correct fastening on roofs and facades for the setup of solar cells. The participant can independently perform the installation of solar cell panels, either as a standalone solution or as a grid solution. Training on the installation of heat pumps trains participants to install, test, troubleshoot and maintain heat pump systems. They are also trained in advising on proper

selection of energy source. Teaching takes place in technical schools all over the country.

EnergiMidt offers a relatively high number of internships. Apprentices are taken on regularly to gain work experience within the specialised fields, including the green practices that a company with EnergiMidt's competencies offers. Apprentices can join special project development teams within green practices if they are undertaking relevant education or training that EnergiMidt thinks innovative. If they qualify, the apprentices are offered a job at EnergiMidt after completing their course.

Other working conditions

The green jobs at EnergiMidt are full-time jobs on permanent contracts. Working time is flexible for all jobs relating to the solar panel and heat pump business. Flexible working time is actually implemented in the whole company. The numbers of hours worked on a weekly basis can be agreed at workplace level. According to the collective agreement in force, the reference period can be up to 52 weeks. This means that the average working time over 52 weeks is set at 37 hours a week, which is the national weekly average. Thus, the employees and the employer can agree on longer working hours in busy periods. This does, however, require local agreement between the parties.

In terms of health and safety, basic working conditions, work–life balance, insurance, access to paid maternity leave or continuing training, there are no differences between the green and non-green jobs. These conditions are either laid down in the collective agreement, which is also the same for green and non-green jobs, or in legislation. Regulations about health and safety are laid down in legislation.

Impact of the crisis

The economic crisis did not have the same negative impact on EnergiMidt as it had in many other Danish companies. The level of production stood still for a period but no redundancies were necessary. No new jobs were created, and job transfers between the departments secured status quo. The public interest in energy-saving utilities was not reduced because of the crisis. On the contrary, the possibility of saving money on energy is obviously attractive among the public, and there is widespread support for the expansion of alternative energy sources. Furthermore, lower prices and a favourable taxation scheme have boosted the sales and installation of solar panels.

Anticipation and management of green change

In February 2005 EnergiMidt Udvikling (EnergiMidt Development) was established by EnergiMidt. The aim of the department is to invest in new energy technologies with commercial possibilities. Small, innovative companies can apply to EnergiMidt Udvikling for financial and professional support. EnergiMidt has so far worked with four small companies with green innovative practices.

EnergiMidt has also set up a project development group with the aim of anticipating and managing green change. The group is searching for, and testing, new innovative green practices and finding ways to develop the green practices already in use. The groups consist of specialists, mostly energy technology engineers, but also lawyers and economists.

From the beginning, EnergiMidt has worked with other companies or institutions on research projects, including the Danish Technological Institute, an independent, not-for-profit institution. The institute develops, applies and disseminates research- and technology-based knowledge for the Danish and international business sectors.

Another partner is Go' Energi (the Danish Energy-Saving Trust), which is an impartial public organisation under the Ministry of Climate, Energy and Construction. Go' Energi was set up in 2010 and is expanding the activities of the former Danish Electricity-Saving Trust, with a remit to promote energy efficiency in households, the public sector, and the commercial and industrial sectors for all forms of energy use.

Conclusions and recommendations

- EnergiMidt chose its green practice – the installation of solar panels and heat pumps – following careful consideration of the development needs of the company. EnergiMidt opted to develop into a green area that was close to its fundamental practice – electricity distribution.
- In recent decades there has been growing interest among the public as well as decision-makers in green energy forms, with the aim of reducing CO_2 emissions. EnergiMidt took this opportunity to invest in attractive green solutions for private homes as well as public institutions. From a broader perspective, solar panels and heat pumps are relatively cheap and not difficult to install.
- EnergiMidt was able to make the transition into a green practice gradually because the basic skills for dealing with solar panels and heat pumps were already there. To carry out installation requires training as an electrician or a plumber with heating as speciality. Continuing vocational training within the area of solar panels and heat pumps was available and is still developing.
- State funding for green projects of different kinds has existed since EnergiMidt started, and the company has over the years received funding to support different projects.
- Measures to anticipate the impact of greening on jobs include close collaboration with research institutes and supporting new actors in the sector, a reasonable intake of qualified interns, a high level of further training, a solid position in the region and finally a high level of listening and consulting within the company, based on a high level of employee participation.

Bibliography

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