Austria: Wienerberger

22 January 2013 | Observatory: EMCC

About

Case study name:
The greening of industries in the EU

Country:
Austria

Organisation Size:
100-499

Sectors:
Construction and woodworking

For Wienerberger, a corporation engaged in the manufacture of clay bricks and roof tiles, green issues lie at the core of its business, and climate change is a major challenge. The corporation has for many years focused on the energy-efficient production of bricks and the further optimisation of its production processes. Another focus is improving the energy efficiency of the end products. The 'green transformation' of the company had considerable impacts on the quantity and quality of jobs. Most green jobs were the result of the transformation of pre-existing positions, with some new jobs also created.

Introduction

Wienerberger, established in 1819, is a large, Austrian-based international corporation specialised in producing building materials made of fired clay. Wienerberger is the largest producer of bricks in the world and the second largest producer of clay roof tiles in Europe. In 2010, the corporation employed roughly 12,000 workers, of whom about 380 were based in Austria. The sector to which Wienerberger belongs, designated by NACE Rev. 2 as C 23.3 'Manufacture of clay building materials' , is rather small in Austria, with 21 companies and just under 1,000 employees in 2010. The GDP share of the sector lies well below 1%.

Wienerberger has defined energy efficiency as a key focal point of research and development. The corporation thus focuses on energy-efficient production of bricks and on the further optimisation of its production processes. As the process of drying bricks in particular needs large amounts of energy, methods for more efficient ways of drying bricks, as well as using energy from alternative sources to fossil fuels, are currently being developed. Wienerberger sees climate change as a central challenge for society. It also works on improving the energy efficiency of housing systems by making the bricks lighter and better insulating. The adoption of green business practices has led to the transformation of pre-existing jobs into green jobs and the additional creation of some new green positions. The company has provided its own internal training in green skills, as well as working with external training providers in green skills development.

Drivers and motivations

A number of drivers and motivations shaping the green change process and development of green business practices can be identified (listed in order of importance below).

- The most important motivation for the development of green business practices was the profound personal conviction and commitment of the company's CEO to act greener and make the production process more energy efficient. The aim of the company is to produce the same high-quality products with less impact on the environment.
- The second important motivator was the company's awareness of its image and reputation as a large corporation and the wish to be regarded as a green company that is making a sustainable contribution to society.
- The third important motivator was the intention to gain competitive advantage over other players on the market. The number-one customer group for bricks is private home builders, who do not exert pressure on manufacturers to produce the bricks in an energy-efficient way; instead, customers are more interested in the bricks' thermal insulation properties. Wienerberger hopes to gain competitive advantage by providing these customers with information and advice on how to build a brick house so that its energy performance is optimised.

- Regulations at EU level have also had some influence on the adoption the green change, such as regulations on emissions trading, the Energy Efficiency Directive and the Industrial Emissions Directive.
- A recent driver for green change was, interestingly enough, the financial and economic crisis, which accelerated and reinforced the focus on green production due the cost-savings arising from lower energy consumption.

Green business practices

Wienerberger produces five different clay product groups: clay blocks (for walls); facing bricks (for façades); paving bricks; clay roof tiles; and clay and plastic pipe systems. The most energy-consuming part of brick production is not the firing, but the drying process when moisture is removed from the clay body. The central issue for Wienerberger is to make this drying process cheaper and more energy efficient. The green business practice of producing bricks more energy efficiently is done in three different ways:

- *Optimising the production process so that it is more energy efficient, using fewer kilowatt hours per ton of burned brick*: The optimisation of the production process has been a major challenge for the company. It aims at making existing production sites more energy efficient by implementing improved technologies. The production plants where bricks are produced are being upgraded step by step with, for example, specific driers with highly efficient fans and optimised air flow.
- *Making the product thinner and lighter (with the same outstanding technical quality)*: Reducing the product weight (by making holes in the brick and filling them with insulating materials, for example) means that less energy is being used for firing and drying the bricks. This is done by making pores in the bricks by adding biogenic raw materials such as sawdust or sunflower seed shells (55% of total additives consist of biogenic materials). Use of these materials improves the thermal insulation properties of the bricks.
- *Substituting a fossil energy source with a renewable one*: Traditionally, energy from fossil fuels – mainly natural gas – is used for the drying and firing process. The central challenge for Wienerberger is to use less natural gas or to substitute it with energy from renewable sources. While the reduction of energy can only be done in many small steps, the substitution of fossil energy with a synthetic one is more radical. By using synthetic gas, two environmental problems are tackled at the same time. Firstly, an environmentally friendly disposal service is provided (waste is changed into energy). Secondly, the use of fossil sources is reduced. However, at the moment, the economic efficiency of using synthetic gas is a problem due to the costs involved, for example for biomass.

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

Impact on quantity of jobs

When Wienerberger started to focus on green business practices, between four and seven new jobs were created: three to five new jobs in the corporate headquarters in Vienna and one or two new plant manager positions. The exact number of green jobs in the company is difficult to estimate due to its size and the lack of classification or statistics on which jobs are green and which are traditional. A rough estimate shows that between 20% and 30% of all pre-existing jobs in Wienerberger have been transformed into green jobs, bringing this to a total of about 50 to 75 transformed jobs. This includes jobs that have been 'enriched' with green considerations and tasks, such as workers on the production lines who have control over the right composition of bio-admixtures (for example, the sawdust or sunflower seeds added in the Austrian plant in Göllersdorf) or sales staff who advise customers on the energy efficiency of the products. No jobs have been substituted or eliminated during the implementation of green business practices.

No specific approaches or tools are used to anticipate the impact of green business practices on the quantity of jobs; rather, anticipation of employment levels is part of the company's overall budgeting process. Budgeting is central and the need for personnel is established in the various departments. It is expected that more green jobs will be established through transformation and only partly through job creation, mostly in the engineering departments in order to work on further energy saving and energy efficiency. It is expected that no jobs will be substituted or eliminated due to the implementation of the selected green business practices.

Impact on quality of jobs

Skills development

Implementing green business practices not only has an impact on the quantity of green jobs, but also on job quality and skills development. Generally, three types of green jobs can be distinguished: jobs in engineering departments (engineers); jobs on the production line (production workers); and jobs in sales (sales staff).

Firstly, skills development for engineers in the production department is affected. Engineers need to know about energy reduction in the production process and resource-efficient production. They are being trained within the Wienerberger Corporation through internal seminars on good and best practices. Furthermore, engineers take part in expert groups and platforms with specialists and share their specific know-how. For its plant managers, Wienerberger recently founded the Advanced Engineering Academy platform. This platform is intended to bring the plant managers together in order to discuss good practice on energy saving and energy efficiency.

Secondly, production line workers also need to have specific green skills. Like the engineers, they need to know about energy reduction and efficient resource management in the production process. Furthermore, they need to be trained to adapt to new machines, such as heat exchangers, when they are introduced. These training sessions are organised internally. Internal training is also provided to workers on the production lines on how to control and compose the right admixtures for bio-enriched bricks.

Thirdly, sales staff need to have specific green skills in order to sell the green products successfully. They take part in internal training sessions conducted by the product managers. An additional advantage of buying a Wienerberger product is that customers are made aware of energy efficiency and advised on building energy-efficient systems (houses). Sales staff provide this information to customers and need to know how systems work together and how energy-efficient houses are built. Their green skills are thus of a more generic nature than the green skills of employees in the engineering department and on the production lines, whose skills are rather job-specific.

Green change and its impact on skills development is managed both autonomously by the company and in cooperation with training and education providers such as universities. There is competition in the job market for applicants with green skills, in other words people trained in areas such as environmental engineering, energy efficiency and the like; however, it is still possible for the company to fill positions that are needed. The need for specifically skilled employees in this field will grow; however, as the number of job-seekers trained in green skills is also growing, the market (demand/supply) will remain stable. There will be a sustainable, permanent demand for workers with green skills not only in the company, but also in the whole sector and globally. Wienerberger invests in green skills in all three of the areas mentioned above. The company benefits from the best practice exchange and green skills development of its employees due to a reduction of energy use and thus a reduction of costs.

Other working conditions

With regards to working conditions, there are no formal differences between workers engaged in green jobs and those in traditional jobs. Generally, standard full-time, open-ended contracts prevail within the company. Part-time work is usually provided at the request of employees only. However, the workers in the engineering departments who are considered to be engaged in green jobs generally work more independently and autonomously. Their work is often organised in projects; their formal employment relationship is nonetheless the same as for the other employees. The employability and job security is considered to be higher for workers with green skills due to increased demand for such workers in the job market. At first, the transformation of jobs on the production line was viewed with scepticism by the affected employees due to somewhat higher job requirements. Soon, however, it was appreciated as it tended to increase job security (i.e. the chance of being made redundant was decreased). There is no difference in incomes between workers in traditional and green jobs.

The vast majority of workers in the corporation are men; this holds especially true for the more technology-affiliated positions. In product management and sales, the share of women is somewhat higher than in engineering positions, but male employees still dominate. This gender imbalance arises from the lack of female workers in the job market. Wienerberger is, however, committed to increase the share of women in its corporation by giving priority to a female job applicant over a male one when they are equally qualified and suitable for the job. There are no differences with regard to health and safety and work–life balance between traditional and green jobs. However, internal training on safety issues takes place regularly for production-line workers in order to reduce the frequency of work-related accidents. Significant improvements have been made in this area in the past three years.

Anticipating and managing green change

Skills

Wienerberger does not implement any activities targeted towards the anticipation of green skills in a structured way. Rather, the company is in a constant dialogue on skills needs and skills development with universities, particularly specific university institutes. At Wienerberger Austria all further training is organised internally within the globally operating Wienerberger Corporation. Selective cooperation with universities and specific university institutes takes place, especially with regard to so-called competence centres for development. In this way, the need for green skills is managed through cooperation with these institutions. The company seeks collaboration with companies that could make its production process more energy efficient (for example, in the development and use of synthetic gas), as well as universities. Collaboration activities with universities and specialists include cooperation in research and development, as well as academic exchange and the development of new collaborative projects (for example, Wienerberger engineers occasionally supervise university students' theses and dissertations). Within the last few years (since the onset of the economic crisis), activities targeted towards greening the production process have been increased, and the corporation's image as a green company has improved. This is also reflected in the creation in 2011 of the specific position of a sustainability manager. This new position has been developed in order to make the company culture greener.

For Wienerberger, green issues lie at the core of its business. The corporation seeks dialogue and collaboration with other companies in the market – for example with building services and housing technology companies or companies specialised in thermal insulation – because the energy efficiency of buildings is not only determined by the performance of the bricks but is influenced by the whole building concept (architecture, HVAC, energy carriers and so on). Cooperation activities include the development of new housing systems, smart houses, that produce more energy than they consume. This cooperation takes place at an informal level, and it has to be borne in mind that there is some competition between the companies cooperating.

There is relatively little information about public financial support and little transparency on where and how this could be obtained; this was identified as a potential barrier in responding to green change. However, as Wienerberger has implemented green practices not because of pressure from outside, but rather on its own initiative, this cannot be considered a barrier for the company. Public authorities play virtually no role in facilitating the development of green skills and other working conditions.

Conclusions and recommendations

The conclusions and recommendations that can be drawn from the case study are outlined below.

- **Drivers for implementation of green practices:** The main motivation for the development of green business practices in Wienerberger was the personal conviction and commitment of the company's CEO to make the production process greener and more energy efficient, followed by the aim to improve its image and reputation and the intention to gain competitive advantage. Wienerberger's success lies in linking its green agenda with operational excellence.
- **Collaboration:** Wienerberger has been collaborating with other internationally operating businesses in the sector for about 18 months, especially with regard to innovative production technologies such as the development and use of synthetic gas from waste and its use in the production process. While the companies are competitors as such, the advantages of collaboration prevail with regard to increasing know-how and securing funding. Through collaboration, the whole sector is becoming greener, and this is in Wienerberger's interests.
- **Green skills:** Investment in green skills will be developed further in the years to come. The company already cooperates with external training providers such as universities; however, the number of green jobs is expected to increase further. As a result, collaboration between the industry and training and education facilities, as well as public authorities, will be intensified. The dialogue about what specific skills are needed in the sectoral labour market will also continue.
- **Support by public authorities:** Adopting a green business strategy in its own interest has been Wienerberger's business model, so the implementation of a green business strategy has never been dependent on external support. However, the corporation would certainly welcome public support in the form of an increase in funded projects and grants in energy-intensive sectors.

Bibliography

Statistik Austria (2008–2010), *Leistungs- und Strukturdaten*, Wien.

Wienerberger (2011), *Annual report 2010*, Wien.

Wienerberger (2011), *Sustainability report 2010*, Wien.

WKO Fachverband Steine-Keramik (2010), *Ihr Wegweiser für Baustoffe und keramische Produkte in Österreich*, Wien.

Useful? Interesting? Tell us what you think.

Your name *

E-mail *

More information?

Homepage

Subject

Comment *

Save Preview

European Monitoring Centre on Change - EMCC

About EMCC

European Restructuring Monitor

European Jobs Monitor

Labour market research

Case studies

Future of Manufacturing in Europe (FOME)

European Observatory on Quality of Life - EurLIFE

European Observatory of Working Life - EurWORK

Quick links

- Legal information
- Data protection
- Environmental policy
- Cookies
- Subscriptions
- Multilingualism
- Templates for Eurofound reports
- Eurofound style guide
- Management Board extranet
- Map - how to get to Eurofound
- FAQ
- Sitemap

Contact us

Eurofound, Wyattville Road, Loughlinstown, Co. Dublin, D18 KP65, Ireland

Phone: (00) 353 1 2043100

E-Mail: information@eurofound.europa.eu

Press: media@eurofound.europa.eu

MEMBER OF THE NETWORK OF EU AGENCIES

EUROFOUND ACHIEVES EMAS REGISTRATION

EUROFOUND IS AN AGENCY OF THE EUROPEAN UNION

Eurofound