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Lithuania: Arginta

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About

Case study name:

[The greening of industries in the EU](#)

Country:

Lithuania

Organisation Size:

100-499

Sectors:

Energy

This case study describes the greening practice of Arginta in the area of renewable energy and the influence of such practice on the quantity and quality of jobs. There was only a slight increase in the number of company's staff as a result of the development of new renewable energy activity in 2009, because the company had preferred to improve the professional qualifications of existing employees instead of hiring new staff. Implementation of the green practices did not have significant effects on working conditions either, as the working conditions, according to the company's management, were determined by employee qualifications and work intensity rather than the 'greenness' of the workplace.

Introduction

Though development of renewable energy sources (RES) is one of the main priorities of the Lithuanian energy policy, in 2010 less than 20% of all energy consumed in the country was produced from RES. In May 2011 the Law on Renewable Energy Resources was adopted by the Parliament of the Republic of Lithuania ([LRS](#)) with the aim of sustainable development of RES.

[Arginta](#) was established as a private limited company in 1991, in the city of Vilnius. At the beginning the company's main business was metal processing and production of non-standard metal structures. In 1995, the company started implementation of design and installation projects in the field of waste water treatment facilities. Since 2009, research, consultation and design of renewable energy equipment has been added to the company's business. Currently, Arginta is providing RES-related consultancy and various high-quality services: manufacture of metal structures for mounting of solar modules and installation and maintenance of solar power plants. In addition to solar energy, Arginta is engaged in researching wind farm efficiency.

Today, all three fields – metal processing and production of non-standard metal structures, waste water treatment and renewable energy – are equally important business activities of Arginta. Currently the company employs about 200 highly skilled designers and managers. Arginta also regularly hires external qualified professionals for the performance of additional jobs.

According to the management of the company, implementation of the green business processes had no significant impact on the quantity or quality of jobs – the working and financial conditions of employees depend on the employees' skills and work intensity rather than on 'greenness' or 'greening' of jobs.

Though Arginta is a comparatively small company, it is well known in Lithuania not only for its green practices, but because of the promotion of the green ideas both inside and outside the company.

Drivers and motivations

There were several factors encouraging the company to implement its green practices in business. First of all, it was a responsible approach of the management of the company towards protection of the environment and climate change as well as the willingness to improve the image and reputation of the company. According to the management of the company, a responsible approach towards climate change contributed to the formation of a favourable attitude towards the company in the eyes of its customers and employees and reduced staff turnover at Arginta.

The second reason/driver – exploring business opportunities – was related to the economic feasibility of the green products, the necessity to

develop local energy production sources in Lithuania and the strong potential of knowledge and skilled human resources available in Lithuania for the development of renewable energy.

The global economic downturn that started in 2008 to some extent slowed down the implementation of green technologies in Lithuania and other EU countries, but did not have any more palpable negative impact on the company itself. Accordingly there is no information on the effect of any stimulus packages adopted in response to this crisis on the company's motivation to implement the selected green business practices.

Green business practices

One of the most important green business practices introduced in the company was research into renewable energy systems and the design of relevant facilities. As already mentioned, Arginta is currently providing RES-related consultancy and various high quality services: manufacture of metal structures for mounting of solar modules, installation and maintenance of solar power plants.

Arginta offers the following services to those who are willing to set up a solar power plant:

- assistance in obtaining and handling all necessary permits and licences;
- design works for a solar power plant (such as solar power feasibility studies, selection of optimal solutions, and design of solar module arrangement and grouping);
- solar power plant installation works (for example, preparation and optimisation of schemes for solar module location, estimating and ordering the materials needed, control of the course of equipment supplies, equipment quality control, installation of the main components of solar power plants, and commissioning and testing of power plants);
- solar power plant maintenance services (for instance, installation of monitoring systems, remote monitoring of plant parameters, identification and elimination of likely breakdowns, periodical inspections of the equipment of solar power plants, and equipment quality control).

Arginta has installed and maintains a 150 kWp solar power plant, which is used as an industrial solar power lab. Since 9 September 2010, solar power has been delivered to the Lithuanian power grid according to a contract signed with Lithuanian distribution network operator [Lesto](#).

In addition to solar energy, Arginta is engaged in researching wind farm efficiency (research on the efficiency of horizontal axis wind turbines vs. vertical axis wind turbines).

The company started the above-mentioned activities in 2009. Arginta was one of the pioneering companies in Lithuania in the analysis and development of renewable energy opportunities. In cooperation with researchers from the Vilnius Gediminas Technical University ([VGTU](#)), Arginta was the first company to prove that there were promising opportunities for renewable energy in Lithuania. In Lithuania 1 square metre receives 1,000 kilowatt-hours of solar energy on average, which is equal to the figures for central Germany or northern France. Applying the most advanced methods, Arginta has started advising corporate and individual customers interested in the development of renewable energy. Likewise, the company has launched other services related to power generation: production of metal structures for the implementation of modules, and installation and maintenance of solar power plants.

One more important aspect of company's activities is promoting technologies that do not use combustion processes for generating electric energy. This is done by presenting the aforementioned technologies to the representatives of other companies in the process of discussing the future of Lithuania's energy.

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

Impact on quantity of jobs

Arginta currently employs about 200 workers, of whom the average age is below 40 years. Ten staff members are employed in the field of renewable energy, approximately 140 in metal processing and the production of non-standard metal structures, and 50 in waste water treatment.

After the decision to start new renewable energy activity in the company in 2009, four new employees – designers of solar systems and project managers – were hired. Six other employees were transferred from another (waste water) unit of Arginta. The job specification and qualification requirements were similar in both units, so it was easy for these six to learn how to assemble both the mechanical and electrical parts of the solar power station.

Currently employees of Arginta renewable energy unit are engaged in the design of solar plant installations and the organisation of plant installation processes. As this field is highly innovative in Lithuania and the legislative framework is not yet favourable for the development of such activities, the company's expansion in this direction has not been very rapid. The implementation of a number of legal amendments in the area of renewable energy is anticipated in the country with effect from 2012. If these amendments are favourable, the company plans to double the number of employees in the above-mentioned field over the next five years.

To prepare itself properly for likely expansion, Arginta cooperates very closely with VGTU and [Vilnius University](#) (VU), in order to provide students with information about career opportunities in Arginta. Today, there are 10 students from the VGTU Departments of Electrical Engineering and Physics writing their graduation theses for master's degrees at Arginta; every year, between 5 and 8 university and college students are placed for internship with Arginta. In addition, 3–5 video seminars a year are held on renewable energy issues via [AIESEC](#) and other student organisations.

Arginta also cooperates actively with vocational training centres; Arginta employees and the Power Engineering Training Centre are partners in a project aimed at providing training in renewable energy to the trainers of vocational training centres. Every year the company organises 6 to 10 in-house tours for graduating students of vocational and comprehensive schools in order to inform the students about the potential and attractiveness of renewable energy.

Impact on quality of jobs

The implementation of green practices requires much higher qualifications and creativity from employees but, according to the company's management, this makes work much more interesting, efficient and safer. After the renewable energy unit was established in 2009 certain employees (project manager, manager, system designer) attended different training courses in Germany. This allowed them to adjust better to the labour market needs and provide high quality services for Arginta clients.

Implementation of the green business practices in the company created better opportunities for improving the safety of the working environment. Likewise, the implementation of ISO 14000 environmental protection standard ensured the creation of a more worker-friendly environment in the company. In turn, it improved the speed and efficiency of work and considerably reduced sickness rates among the employees.

According to the management of Arginta, working conditions of employees depend on the attitudes of the management to the job quality of employees and employees' skills and work intensity rather than on the 'greenness' of the job. Taking care of its employees and ensuring a safe working environment has always been one of the company's priorities. Arginta is certified according to the quality management system standard ISO 9001 (in 2002) and environmental protection management system standard ISO 14001 (in 2004) and safety and health at work standard OHSAS 1800 (2011). For example, while implementing the ISO 14001 standard, pollution risk factors were identified, descriptions of risk analyses were developed, measures were identified to eliminate and/or reduce risks, and likely threats in the workplace and for the company's environment were discussed and identified along with the procedure for employees' instruction and training. It is important to note that organisational instruments of Arginta also include an Employee Health and Safety Guide laying down the functions, procedures, precautions and work policy for all workers exposed to hazardous materials.

From the interviews conducted it appears that the remuneration of the employees of the renewable energy unit of Arginta currently is close to the Lithuanian average and remuneration average of other Arginta employees; however, the possibilities for career development as well as possibilities for self-realisation are very high. It is expected that the area of renewable energy will develop rapidly in Lithuania in the near future. As there are currently few professionals in this field, it is likely that the well-trained professionals of Arginta and their knowledge will be in high demand in the near future.

Anticipating and managing green change

As already mentioned, the implementation of green business practice had an insignificant impact on the number of employees, as Arginta chose a different path, the professional development of its employees.

From the interviews with the representatives of Arginta, it became clear that there is currently a lack of professional development and training courses in the area of renewable energy in Lithuania. Employees in the renewable energy unit of Arginta attend the relevant courses abroad. (The courses are of different lengths – from one week up to one year.) Managers in Arginta's renewable energy unit attend courses on topics such as the management of green change and solar and water energy management, while the technical employees (for instance, the system designers) are improving their qualifications in particular technical and system development fields. After qualification improvement courses Arginta employees are not only able to provide high quality services for the clients of the company, but are also considered by all stakeholders to be highly qualified experts in the field of renewable energy.

According to the management of Arginta, the assistance of the social partners – employer organisations and trade unions – is helpful to the company's employees in terms of improving their general competencies (by participation in various projects), while improvement of special skills is sought in foreign countries, usually in Germany. This year Arginta professionals have attended training provided by such companies as [AEG](#) and [IDEEMATIC](#); in 2011 they participated in training workshops hosted by [Schletter](#), [Hanning](#) and [SMA](#).

The company itself regularly delivers training aimed at improving employees' competencies, instructing them about production management systems, etc. Employees of the company frequently attend training and seminars; R&D activities related to the green practices are in place and introduced to the company's employees on a regular basis.

In order to provide up-to-date information on the development of the renewable energy, the unit organises monthly in-house training and qualification improvement courses – seminars at the premises of Arginta. During these seminars an appointed employee from the company's renewable energy unit presents to his or her colleagues information on the recent developments in the area of renewable energy, collected from professional literature – specialised journals, internet pages, etc.

Role of public authorities

According to the management of Arginta, the role of public authorities in facilitating development of skills and working conditions of the employees is minor. The only contribution of public authorities is related to the provision of available of EU structural funds, allowing it to apply for funding to improve employee qualifications.

Collaborating partners

Arginta is a member of the Engineering Industries Association of Lithuania ([LINPRA](#)). In cooperation with the LINPRA, Arginta frequently holds seminars for employees from other companies. As the company implements different greening practices, professionals from other companies are interested in visiting Arginta and discussing obstacles faced in the implementation of green practices.

Within the framework of implementing its green practices, the company collaborates with the Association of Photovoltaic Technology and Business ([FTVA](#)). This collaboration is aimed at finding solar energy systems that would require considerably lower quantities of assembly materials. Arginta does not use the modules based on cadmium telluride, which are very popular in some countries but also highly toxic to dispose of due to the cadmium content.

Challenges in the greening process

Implementation of the new activities required considerable investments, know-how and efforts on the part of the management and employees of the company. One of the major difficulties faced by Arginta in the implementation of the green business practices was the lack of skilled professionals to train the company's employees in the area of renewable energy and the lack of instructional material in the Lithuanian language. In Lithuania, this is a very innovative business field, and the legislative framework for the development of such activities is not yet favourable enough. Business organisations are in continuous conflict with the [Ministry of Energy](#) about drafting of legal acts simplifying the procedures, and the submission of such legal acts to the [government of Lithuania](#). The procedure for the legalisation of

renewable energy plants (issues of permits, project handling, signing of contracts with the national electricity network operator and so on) is extremely long and complicated. For example, legalisation of a low-capacity solar or wind power plant requires some 50 different documents that must be obtained/prepared and coordinated with various different authorities.

Employee consciousness is vital for the implementation of greening processes. Adherence to the 'green' rules inevitably makes the technological process longer, requires care and internal discipline. Therefore, employees, especially those at a lower level, are unwilling to adhere to the requirements relating to the green practices. According to the management, the main means of changing the attitudes of employees were the policy and patience of the management. Meetings and discussions between the management and employees were held on an ongoing basis and finally the Arginta can say that the all staff of the enterprise are working as a team and are seeking the same goals.

In addition, according to the management of the company, implementation of the green practices in Lithuania is hampered by the numerous bureaucratic obstacles often requiring formal compliance with the rules set forth. For example, setting up a small power plant requires five different permits, which are issued on the basis of dozens of documents. Installation of electricity supply meters takes a couple of hours, but there are two months of waiting before this is done according to the procedures established by [LESTO](#); it takes two to three weeks to build a plant and six to eight months to obtain the required documents and permits.

Impact of the crisis

The global crisis has not affected Arginta's activities. On the contrary, the interest of foreign companies based in the Netherlands, Sweden, Switzerland and other countries in Arginta products has increased during the crisis, as the product quality in Arginta is equal to that of the foreign companies, but prices are much more attractive. Foreign companies are interested not only in one-off orders, but also in long-term cooperation.

Conclusions and recommendations

One of the most important green business practices introduced in the company was research into renewable energy systems and design of relevant facilities. Implementation of the green business processes was beneficial for the company in that it improved customers' opinions about the company and positively influenced the attitude of its employees towards the company (according to the management of Arginta, this reduced employee turnover).

Implementation of the green practices required considerable investment, know-how and effort on the part of the management and employees of the company. Major difficulties faced by the company in the implementation of the green business practices included the lack of professionals skilled to train the company's employees in the area of renewable energy, and bureaucratic restraints from public authorities.

So far Arginta has experienced only an insignificant increase in the number of employees, as a different path, i.e., professional development of its employees, was chosen. Yet, Arginta is actively preparing for likely expansion. Under favourable conditions, the company plans to double the number of employees in the coming five years. In this connection, Arginta is actively engaged in awareness-raising activities for students as potential employees of the company in future.

According to Arginta's management, implementation of the green business processes had no essential impact on the quality of jobs or certain qualitative characteristics of jobs in the company – working and financial conditions of employees depend on the employees' skills and work intensity rather than on 'greenness' or 'greening' of jobs.

In order to ensure employees have the skills necessary for the implementation of green practices, Arginta pays great attention to the collaboration with vocational training and education institutions (such as VGTU and VU). In addition, the company encourages the development of innovations, applies knowledge management methods and principles of team work. This strategy has brought excellent results for the company – average worker productivity has doubled over the past two years.

The main areas of improvement are related to the elimination of numerous bureaucratic obstacles.

Bibliography

Arginta website, www.arginta.lt

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