

Importance of Legal Protection and International Quality Standards for Environmental Protection

V. POZEB¹, T. KROPE²

¹Dravske elektrarne Maribor

Obrežna ulica 170 2000 Maribor, Slovenia

²Ministry of Economy, Directorate for Foreign Economic Relations

Kotnikova 5, 1000 Ljubljana, Slovenia

Abstract: The article discusses the importance of environmental protection requirements in the progressively liberalized energy market in the EU. We present environmental issues in general, focusing on a system of environmental management according to the ISO 14001 standard, which demands that the organizations introduce the policy of continuous improvements on all fields where the environment or health are endangered. The article aims to give practical solutions for firms and/or organizations and concludes with emphasizing and explaining the importance of sustainability for our environment and the future of humankind.

Key words: energy market, environmental protection, environmental management, ISO standards, sustainable development

1 Introduction

The intention of this article is to draw attention to the meaning of legal regulation for the environmental protection, because a very strong (too strong!) meaning is given to the first two columns. Though most of all, this article wants to warn about the importance of the international quality standards that supplement the valid legislation in the field of the environmental protection for a responsible management of the environment as a whole.

2 Liberalization of European energy market

In the period after the Second World War the energy sector had a character of public services. It was a monopolistic system of supply (natural monopolies), which took advantage of the economics of size – reduction of costs on a product's unit along with an enlargement of capacity.

At the end of the seventies and the beginning of the eighties the production of electrical energy no longer grew in accordance to predictions and anticipations of energy monopolies. The economic efficiency was not as high as it could have been if competition would have functioned in the energy market. Because of the intensive development and the construction of nuclear power plants the sector of energetic started to face the growth of electrical energy prices, saturation of capacities and hesitations about environmental protection had occurred, and a graduated imperfect allocation of capital was the price [1].

The greatest impact on the progressing liberalization of the energy market in the EU had the foundation of the EU-internal market in 1992 which was supported with technological innovations and stimulations from some member countries (Great Britain, Sweden, and Finland). The main goal of this liberalization is to increase the economic efficiency and to minimize costs, which will also lead to increased international competitiveness of the EU-industry.

The liberalization of the electricity market brings besides general benefits also structural crises in regions that strongly depend upon utilization of non-competitive energy sources. In addition, the lower prices will cause certain aspirations for increased energy use and reduction of interest for economizing and efficient energy use. For the constant question is, can liberalization in the energy sector cause neglect of environmental protection or not? The passage from the monopolistic to the market economy is expected not to have negative effects on the environmental protection. Instruments used on the liberalized energy market allow larger transparency (even ban of subsidies) and smaller interventions into the market activity [1].

Due to competitive pressure development stimulations usually take the side of cheap technologies, which from the ecological point of view are not necessarily the best. Therefore the production of renewable electricity will be, despite of its higher environmental acceptability, less competitive on account of the relatively expensive technology e.g. gas power plants.

3 Environmental protection

At the beginning of the 21st century humankind has to accept the fact that after the numerous environmental and other views its one-way track is coming to an end. This one-way track where everything was subordinated to social development which led to the phenomenon of disproportions between an individual and society, which resulted in environmental pollution that proved to be a contradiction between economics and ecology.

So far individuals as well as the society aimed at rising of material welfare. Cognition that the world is near the end of its natural resources and the critical environmental pollution should be the milestone for humankind [2]. The material activity of humankind has due to interventions into the carrying capacity of natural systems dangerously approached, and in many places already exceeded the critical point, which marks the upper frontier of the planet's capacity and the capacity of several regions. In spite all that, there still prevails the belief of unlimited material progress and use of fossil fuels. Numerous specialists believe that the coming global problems (still) hinder us in achieving the balanced conditions on this planet [3]:

- Harmful impacts of humankind on the atmosphere and climatic changes;
- Lost of biological diversity in global and regional sense;
- Increase of consumption (raw materials and energy) and
- Population growth.

For the existence and the sustainable progress of humankind in accordance to principles of natural production it is of key importance:

- Stability of atmosphere and climate;
- Biological richness of nature;
- Proper use of (limited) natural resources and
- Stability of size and rise of the world population.

In itself the economic system is very successful; the extent of the world's economy has increased five times from year 1950 to the present. We need to keep in mind that we owe a large share of this bloom and abundance to our predecessors. The profit of numerous companies in the 20th century was gained by destruction and degradation of natural resources [4]. We were building the present with increased material production and consumption to our loss for the future, this can by no means be the continuation of the past and the present. The United Nations should instead of non-obligatory declarations adopt binding task programmes for the preservation of nature and the future of humankind; also needed is the world solidarity for the future [3].

- By solving the questions of the environmental

protection according to the energy policy of the EU, three goals are mentioned:

- Reducing the influence of energy production and use on the environment;
- Encouraging energy economizing and efficient energy use and
- Increasing the share of consumption and production of renewable energy.

It is urgent to keep in mind that next to the listed goals of the EU and its member states' legislation on this subject, the key also lies in the cognition of energy specialists that the only goal is not the highest and most reliable production with the lowest expenses, but a production with the minimal or no impact on the environment.

4 System model of environmental protection

A person is a creature of nature and has always lived in harmony with it. The human way of life has fundamentally changed in the 20th century, when a period of brutal interventions in nature and its laws began. This kind of human acting influenced nature and its existence severely. Slowly, also the members of the civilised society started to realise that the consequences of such management of the environment could bring fatal consequences for their descendants. This was the reason why they organised the conferences and debates and pondered about how to stop the destruction of nature, to protect the environment in which our children will someday live.

Though the question arises, what can a single organization and its employees do to contribute to a higher environmental protection? One of the answers to this question and a challenge for the organisations lies in the introduction of a system of environmental management according to the ISO 14001 standard. With this introduction the organisation gains credibility in its aspirations for the environmental protection; this improves relations with the local community, the media and the inspection services.

The ISO 14001 standard demands that the organizations introduce the policy of continuous improvements on all fields, where the environment or health are endangered. In this way the organizations face important questions and can make progress in its development. According to this the ability of organizations at ensuring the suitable environmental protection is rising from year to year. It is impossible to achieve such progress without clearly defined goals and tasks in programmes of environmental management.

An organisation that strives to treat the

environment responsibly needs to set basic measures on the field of environmental management. Chuck Sutfin from the company WMX Technologies Inc. suggests [5]:

- Environmental protection and the increase of care for the environment: ecological adjustments of the organization as an important part of managing the organization. All plans and activities are conducted in a way that prevents environmental pollution and that all negative impacts are restricted to the greatest extent or eliminated;
- Development and research: development, production and marketing of products or services harmless to the environment;
- Reduce risk impacts on the environment, resolve and eliminate mistakes, estimate and change the environmental management policy: follow the environmental management system with regular control measurements and periodical examinations, check its efficiency and continuous improvement;
- In accordance to the ISO 14001 standard: regular checks of the accordance of environmental management with internal opinions and own analysts and execution of external opinions with analysts from certified institutions. Execution of all activities in accordance to the valid legislation;
- Active incorporation into the environmental protection movement: incorporation of the company or their representatives into the modification of the legislation, warning the public about the environmental pollution, pointing to the focal points of the environmental pollution;
- Responsible use of natural resources, waste reduction, recycling, waste dumping: care for rational use of natural resources, because they are not inexhaustible, care for waste reduction, as well production as personal waste, recycling of waste materials, where this is possible, use of recycled materials, disposal of waste materials in foreseen protected areas, safe waste transport to the dumps;
- The annual report environmental management: annually draft an environmental protection report, accessible to employees and the public or local communities that this report concerns;
- Public policy of environmental management and informing the public: informing of employees of the goals, education, qualifying and motivating for an active attitude for the environment, notifying the clients and suppliers, the public, local communities about environmental

orientations and demands for active cooperation.

The responsibility for a clean environment becomes more and more connected to the financial responsibility and this is why it is realistic to expect that in a few years the presentation of the certificate concerning the fulfilment of demands set by the standard ISO 14001 will be a condition for organizations signing up for commercial loans [6].

5 Development of ISO 14000 standard group

The ISO 14000 standard group is a result of work of several years on the gradually more and more polluted environment, as well natural as urban. This is why the International Organization for Standardization - ISO founded the SAGE - ISO/IEC Strategic Advisory Group on Environmental in year 1991 with a task to study the current state and possibilities and make recommendations for the environmental protection. The standards of the ISO 14000 group were written based on the ISO/IEC recommendations that were adopted on the United Nations Conference on Environment and Development – UNCED in 1992 in Rio de Janeiro.

The first response to this conference was the regulation of EMAS (Eco-management and Audit Scheme) issued by the European Commission. In EMAS the European Commission has emphasised the role and responsibility of companies by the enhancement of economy and environmental protection in the EU. For now only companies of the EU-member states can acquire the EMAS-certificate. The EMAS demands are stricter in comparison to the demands of the system on environmental management according to the ISO 14001 standard.

In the future it will be impossible to avoid responsible environmental management and attentive attitude for the environment. The market is the one that forces companies to environmental care and more rational use of natural resources. The most important EU-document on this topic is the "Directive of Council 96/61/ES on Integrated Pollution Prevention and Control" adopted in 1996. According to this directive all new companies in the EU need to acquire a licence on the environmental protection before they start their operation, while the already working companies need to acquire this licence in the next eight years [7].

The ISO organisation issued its first environmental standards ISO 14001 and ISO 14004 in the end of year 1996. Their foundations are taken from the British BS 7750 standard. Today the ISO 14000 group already consists of 21 published standards, technical reports and guidelines. The ISO

14001 standard represents a certain compromise between different approaches; this proves especially the fact that the standard does not state demands for the initial environmental analyses.

The trends, also and above all in the EU-member states show that only the international ISO 14001 standard has, due to its universality, adaptability to all sizes, shapes, particularities and diversities of the environment in which the organizations work, become the standard that in its further development and likely growing integration with standards of the ISO 9000 group turned out to be the standard model for an efficient system for running a company [8].

6 Presentation of ISO 14001 standard

The ISO 14001 standard defines the instructions of the environmental system or system of environmental management. The system of environmental management is an organizational structure with clear and documented procedures, processes, means and responsibilities that allow efficient and systematic environmental management. By following these instructions we gain evidences that by their estimating proof the efficiency of the environmental system that is designed according to the standard mentioned. The ISO 14001 standard is written very generally and systematically oriented, requests the realization and maintenance of this system and at the same time allows constant system improvements and consequently reduction of environmental pollution. The standard has no value limits or measurements for the execution operations or making of products. Instead it relies on the philosophy that the given environmental policy, which carries continuous improvements and progress, is also the best one for the environment. The standard is written in a way that it is practical and useful in any type of organisation independent of size or type of the organisation's activity.

We need to emphasize that this international standard does not state absolute demands for the environmental management that would exceed the demands for liability of fulfilling the demands of legislation and regulations and constant improvement expressed in the environmental policy.

An efficient use of the system of environmental management offers the companies a realisation of the impact on the environment and its highest reduction possible, either through production processes or products made in these processes. Improved control of the operational process allows tracing in accordance to environmental protection demands and a substantial cost reductions. A systematic approach to environmental management brings observation

and consideration of environmental legislation or trends on environmental protection, which may influence the business and the competitive advantages of the company, smaller hazards of ecological disasters (reducing of insurance premiums), strategic advantage on the market, prepared environmental documentation, priorities at choosing suitable and appropriate suppliers, company's reputation, proper utilization of natural resources and raw materials, reduction of waste substances (water, emissions, noise...), systematic observations and control of environmental points of view [8].

7 Conclusion

In the today's world of many environmental issues the sustainable development model is the only responsible and realizable development strategy of the new millennium. But for the sustainable development model to succeed it is important that it has the support from all the factors that could be beneficial, because commitment, awareness and responsibility help to improve the environment much more than any legal restrictions and legal regulations. Meeting the requirements of environmental standards of quality is just one of the ways of showing our awareness.

The notion of a sustainable development appeared among experts as early as in 1980 in the natural heritage report, but as a development paradigm it became known in 1987 in the "Our Common Future" report by the World Commission on Environment and Development of the United Nations.

Sustainable development works to integrate environmental and development policies. The natural environment and its resources must be evaluated not only as the balance of costs and benefits (cost-benefit analysis) but also as a part of the new-emerging value and development.

The sustainable development is the balance of three equal dimensions that enable and ensure a quality life for every human being:

- Economy;
- Ecology;
- Socially just future.

According to World Commission on the Environment and Development humanity can develop on the principalities of sustainability and nature protection, meaning that system meets the needs of the present without compromising the ability of future generations to meet their own needs. But the concept of such development is possible only when it is based on the real type of economic

progress in harmony with the limitations in nature, especially the amount of natural sources and the regeneration and neutralization capabilities of the biosphere combined with human-made emissions. From the point of view of physical restrictions the sustainable development must meet three basic requirements [3].

- The renewable resource usage percentage must not exceed the renew percentage of the renewable resource;
- The non-renewable resource usage percentage must not exceed the velocity of the development of renewable substitutes (taking into consideration the technological advancement);
- The emission percentage must not exceed the assimilation capability of the environment.

The sustainable paradigm is therefore a holistic-based view of the world and the civilization advancement from point of view of the sustainable possibilities of preserving the quality living conditions for people and other life forms. The basic definition of the sustainable development is that it meets the needs of the present without compromising the ability of future generations to meet their own needs. The future generations have the right to inherit a healthy environment and a share of the natural resources. The current civilization pattern with its tendency to material growth quickly endangers their living conditions. The basic principles of sustainability are marked by the following factors:

- Quality economic development within the physical boundaries (space, natural resources, the self-restoring capability of the environment and ecosystems) with a more efficient use of resources and energy;
- The internalization of production and consumption costs to the environment;
- The minimization of use of non-renewable natural resources;
- The use of renewable natural sources within the boundaries of their capability to renew (sustainable yield);
- Decreasing or keeping the pollution loads (emissions) within the limitations of the assimilation capabilities of ecosystems;
- Preventing environmental pollution loads instead of reducing the effects on the environment;
- The principle of the minimum environmental encumbrance (preventive rather than curative).

One of the main obstacles of sustainable development is the overabundant consumption. Various environmental instruments (taxes, subventions, environmental product marking etc.) to bring nature closer to an environment friendly

consumption are being introduced by several governments. Nevertheless, it is the duty of the industrial companies to encourage a sustainable environment management. It is their job to inform the consumers and encourage them to a more responsible relationship with the environment [9].

What the sustainable paradigm means to the industry is a shift to a reduction of the consumption of energy and resources per production unit, the development of durable products, the reduction of waste and other emissions and the gradual shutting-down of material and consume oriented industry. A well-adjusted sustainable management increases the work-efficiency and improves the natural resources management, brings new job opportunities and decreases the encumbrance of the natural environment.

The primary concern of the sustainable development should be people, because we have the right to a healthy and creative life in harmony with nature.

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