
Editorial: Institutional support for energy and environmental policy in Central and Eastern European countries

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After World War I, the countries of Central and Eastern Europe had developed, relying on the principles of a free market economy. The start-up conditions in particular countries of the considered region varied significantly, because their levels of socio-economic development were different. Some differences also resulted from the fact that some of the countries of Central and Eastern Europe regained their statehood only after World War I (Poland, Czechoslovakia, Hungary, Latvia, Lithuania and Estonia) and others significantly reorganised the form of their statehood (Romania, Bulgaria).

The outcomes of World War II also had a significant impact on the development of state institutions and of economies of the considered region. This was due to the fact that particular countries were members of adverse war coalitions. From the beginning of the war, Poland and Czechoslovakia had been under the regime of National-Socialist Germany and little later, although retaining some autonomy, Romania, Bulgaria and Hungary were also brought into the sphere of influence of National-Socialist Germany.

In 1941 the Baltic Sea countries, i.e. Estonia, Latvia, Lithuania were incorporated into the former Soviet Union as separate (but with very limited scope of freedom) Russian republics.

After World War II ended all countries in the considered region formally regained their freedom, but all of them, without exception, found themselves under the strong influence of the former Soviet Union.

A similar situation could be observed in the eastern part of Germany.

However, the participation of the population in left-wing political inclinations was very diversified and the way of governing in the former Soviet Union had little and very diversified acceptance by the people in the countries of the considered region.

The transformation of systems aiming at the introduction of a centrally planned economy in the countries of Central and Eastern Europe after World War II had been rapid and ruthless methods were applied. Socio-economic solutions existing in the former Soviet Union had constituted a model to be followed.

After a few years, this actually led to the merging of new state institutions operating within a new system of managing states but at the same time one could also notice a further drop in support of the population of these countries for such a policy.

In the initial period of operation of the centrally planned economies, nationalisation of the majority of these economies became the main goal. Due to this the number of ministries (which, to a large extent, were overtaking the coordinating role that in the former system was performed by authorities of particular types) had increased.

Simultaneously, the complex coordination of economies in these countries was overtaken by the so called Economic Planning Committees and on the international level

the Mutual Economic Assistance Council was set up with all the Central and Eastern European countries as participants.

Therefore, as a principle, in these countries there existed ministries that dealt with energy problems, although differing in the scope of responsibilities and named differently, e.g.: ministry of Energy, Ministry of Fuels (Resources, Mining), Ministry of the Chemical Industry.

In order to develop and control issues of efficient energy usage, the so-called Inspectorates of Fuel-Energy Economy were set up as independent or subordinate units. They were set up not only at governmental level, but also at regional level in the considered countries.

The scope of competence of such Inspectorates included mainly the control of ways of efficient energy usage, evaluation of modernisation projects of energy usage and control of employers' credentials dealing with machinery operation, services and supervision as well as with energy consuming systems.

In 1956, after the collapse of the so-called Stalinist system that was binding in all countries of Central and Eastern Europe, changes of governmental and regional institutions and in enterprises took place and they concerned the scope of methods of work in all these countries. To a large extent people also began to deal with systemic problems of energy economies and in particular with problems of efficient energy usage. As a result of the changes the competences of Economic Planning Committees and other governmental institutions were significantly limited.

After the so-called energy crisis in 1973, growth in activities rationalising energy usage in general took place and, in particular, where a systematic way of dealing with them was concerned.

This caused a considerable growth of:

- importance of economic calculations
- the significance of a systematic way of dealing with problems of energy economies on various levels of management

The significance of the above-mentioned governmental bodies dealing with the problems of improving energy usage efficiency, i.e., the above-mentioned Inspectorates, had grown too (often by subordinating them to the Prime Minister) and their scope of competence was extended to the whole energy economy of a given country.

As a result, preferences for particular directions of research increased, including basic research in the considered scope. This was also manifest in the establishment of proper research centres within the given Academies of Sciences in the considered countries.

The above-mentioned changes caused a growth in the intensity (especially after the energy crisis in 1973) of dealing with principles and ways that state institutions affect the efficiency of energy usage. Hence research on the so-called policy of rational energy usage by a given country was initiated. However, the lack of capital necessary for the development of economies in general and energy problems in particular, was gradually becoming more and more evident in all sectors of life.

In consequence, methods allowing for efficient allocations of the limited financial resources available began to develop, also within the scope of all national Energy Economies. This gave rise to a progressive diversification of efficiency of production methods and services in almost all sectors of socio-economic life in these countries.

It was becoming characteristic, that such diversification required greater and greater coordination of the state and was slowing down the dynamics of the development in relation to the dynamics of the states in the free market economies. That is why the rationalisation of energy usage, apart from exceptional projects, as a principle, was of lower relative importance than the problems of obtaining and distribution of energy.

In research, (having gradually been taken into account), not only energy saving, but also environmental conservation and other activities were undertaken in order to utilise the knowledge of the potential of activities rationalising energy usage and obtaining information on the costs of realisation of particular activities that constitute such a potential in a given country. Within this research, analyses of the efficiency of state institutions' activities that were set up to support activities rationalising energy usage (the end of the 1970s and the beginning of the 1980s) were carried out.

Based on the outcomes of the research, one could note that in the countries of Central and Eastern Europe institutional support for activities rationalising energy usage was carried out through:

- particular centralised institutions
- regional institutions
- particular scientific and research centres

In the given countries of the considered region, there was diversification in preferences in the considered scope, especially in relation to the factors affecting the relative importance of the above-mentioned institutional support for rationalisation of energy usage.

Such research to a greater and greater degree also included experiences:

- of particular countries of Central and Eastern Europe
- economically developed countries
- from joint research

The following deserve particular distinction:

- research carried out within a European project UNDP/UNIDO called Energy Conservation in Industry, comprising both Central and Eastern European states as well as the majority of Western European Countries and the USA
- exchange of experience within cooperation with Academies of Sciences in the considered region
- activity developed by bona fide institutions of the Mutual Economic Assistance Council.

Representatives of the economically developed countries participated in the research of the above-mentioned project UNDP/UNIDO and these were mainly such research centres as MIT-USA, British Energy Economy Institute, Kernforschungszentrum in Julich, as well as representatives of international organisations such as: WEC, the World Bank, the European Economic Commission, the UN.

The project was mainly targeted at, among other things, working out a model of researching the policy of efficient energy usage, which would be useful, both in the conditions of centrally planned and free market economies.

It focused mainly on:

- methods of determining the potential of energy usage rationalisation
 - considering only the savings outcomes in the energy area that can be achieved
 - considering additional effects on the environment
 - considering all outcomes
 - the investments necessary for the realisation of potential activities
- rationalising energy usage and potential results that can be obtained
 - ways of assessing the probable dispersions of the results obtained
- methods of programming the effects of activities rationalising energy usage, including a specified degree of satisfaction
 - factors that guarantee the realisation of concrete activities rationalising energy usage and, in particular:
 - flows of financial means needed for the realisation of program activities that can be obtained
 - sources of machinery and equipment needed for the realisation of potential rationalisation activities that can be obtained
 - sources of necessary flows of specialist services needed
 - factors with a proactive impact on the preparation and the realisation of potential activities rationalising energy usage and in particular:
 - research carried out in the proper scope and direction
 - proper use of foreign experience in the scope of activities rationalising energy usage
 - potential effects of introducing proper stimulators of activities rationalising energy usage
 - arranging proper institutional support for activities rationalising energy usage.

That is why research was carried out within the project on the participation of effects of rational energy usage policy on the following issues: total savings of activities rationalising energy usage and total savings effects.

In order to do this, opinions of the prevailing number of industrial energy users were gathered in Central and Eastern European countries. The results of this research showed that the average values of public opinion on the effects of rational energy usage amount to 15% of total savings effects of activities rationalising energy usage that were carried out.

The research of the mentioned UNDP/UNIDO project concerned the years 1985-1992 and that is why it allowed for tracing the phenomenon of socio-political transformation in the countries of Central and Eastern Europe from the very beginning and in particular the research of transformational phenomena in the scope of energy and environmental policy

of these countries. In particular, it addressed the changes occurring in the operation of existing institutions dealing with problems of rational energy usage and the effectiveness of the newly established institutions operating in the considered area.

The results of research done earlier (especially within the already mentioned UNDP/UNIDO project), which concerned the assessment of institutional support, activities aimed at the conservation of energy usage both in the centrally planned and free market economies, appeared to be helpful.

Apart from this, contacts established in the past among particular experts from Central and Eastern Europe survived the transformational processes and even confirmed the usefulness of intensifying the cooperation of these experts in new conditions.

Transitional processes have also comprised changes in the ways of supporting activities rationalising energy usage that were applied in the past. That is why the significance of implications of socio-economic changes on the problems of using energy and natural environment became more important. Equally the significance of control-command characteristics, which dominated the previous socio-economic system of Central and Eastern European countries, began to lessen.

The difficulties with providing proper machinery and equipment, as well as specialist machinery for the realisation of concrete activities rationalising energy usage lost their significance, whereas the significance of economic stimulators and foreign experience (especially of the economically developed countries) has increased.

The intensity of economic contacts among enterprises and institutions of the economically developed countries, which also included rational energy and natural environment usage, grew rapidly.

Some US institutions, especially the ones that in the initial period of transformation were leaders in establishing contacts with Central and Eastern European countries, deserve to be distinguished in this respect.

There was a considerable growth in significance of the criterion of energy efficiency in the undertaking of socio-economic decisions, which contributed to the integration of energy conservation into these policies.

That is why the scope of activities of institutions dealing with rationalisation of energy and environment usage to a larger degree comprised complex socio-economic problems.

This was very important for the merging of small and medium size enterprises, as the realisation of activities rationalising energy usage was becoming one of the possibilities of lowering production costs or costs of services provided by these enterprises. This led to a significant increase in the number of people interested in applying methods of complex systems as well as modern production management methods and services in the economy in general and in particular in managing energy and the environmental economy.

Cooperation with experts of economically developed countries, especially regarding assistance provided to governments and enterprises in the countries of the considered region in the scope of a proper development of transformation, allowed the following observations to be made:

- poor knowledge of representatives from economically developed countries about the conditions in which centrally planned economies operated
- poor knowledge of the specific conditions of transformation

- an indiscriminate application of methods that were successful in stable free market economies to the conditions of Central and Eastern European countries in transition

As a consequence of this, cooperation in the considered scope was limited to some extent and, at the same time, modern methods started to develop. They allowed for the selection of the most attractive partners for the realisation of concrete projects to rationalise energy and environment usage, as well as for the initiation of exchange of experiences among the countries in transition. The criterion of the degree of knowledge of socio-economic realities in countries of Central and Eastern Europe under transformation became the most important one.

The potential for state institutions dealing with rational energy usage began to decrease and, simultaneously, the number of institutions financed by various institutions and only partly by the state began to decrease. These were e.g.: Environmental and Energy Associations dealing with concrete services useful in the development of rationalisation of energy and environmental usage. This led to the emergence of very diversified institutions operating in the area considered, with reference both to their competence and to the size of their employment and methods applied.

A significant drop in the national income has largely limited state expenditures on research in general. The state expenditures on researching the efficiency of rational energy usage policy has been limited even more, especially in the area of supporting activities of rational energy usage. One could, however, observe that research on environmental policy and the realisation of activities aiming at the improvement of natural environment was in a more advantageous situation.

In consequence, there was an increased interest in methods enabling the identification not only of the energetic outcomes of activities rationalising energy usage, but also other effects of these activities, e.g. in the scope of environmental protection, decrease in material consumption index, improvement in quality of production and services. The number of institutions dealing with environmental protection increased too, especially in the regions, towns and gminas (small local administrative units), which were also interested in rational energy usage.

However, one could also observe that the state pressed more strongly to decrease the outcomes of environmental pollution, whereas lesser pressure was exerted on the development of activities aiming at decreasing environmental pollution sources, e.g. the rationalisation of energy use. This resulted in decreasing the scope and degree of the certainty of researching the problems of strategic development in energy usage.

In consequence, this led to the growth of the degree of uncertainty in:

- development and realisation of energy policy and particularly the policy of rational energy usage
- the selection of direction and scope of international cooperation in the development of ways of rational energy usage

Hence, the experiences of other countries in transition became most valuable.

Because of this, the following bodies began to cooperate from the very beginning of the transformation processes:

- a network of experts from Central and Eastern European countries and experts from the USA and Germany, which was set up within the previously mentioned project UNDP/UNIDO in 1985

- the so called ‘Zittau seminars’ established with cooperation with the Academy of Sciences of Central and Eastern Europe in 1991

The new states that were created after the collapse of the Soviet Union and Czechoslovakia in the considered region (Ukraine, Belarus, Estonia, Latvia, Lithuania, the Czech Republic, Slovakia) allowed for the multiplication of experience from the realisation of transformation processes. These were used at the introduction of the joint research with reference to the general transformation problems in the scope of the rational energy usage policy (the problems persisted in all countries in the considered region, although in varying degrees).

The ways of developing cooperation of Central and Eastern Europe with economically developed countries were still very significant, however, the ways they were prepared changed. This resulted from the fact that:

- research carried out in the first years of systemic transformation revealed a diversified approach to such cooperation demonstrated by particular economically developed states, which were interested in the development of cooperation, especially in the area of:
 - friendly approach to the representatives of Central and Eastern European countries
 - organisation of in-depth cooperation
 - organisation of long-term cooperation
 - readiness to take risks
 - parameters of solutions offered
 - readiness to increase the participation of countries in the considered region
 - readiness to provide financial assistance

At the same time, the influence of state institutions in this respect was decreasing, as this became a common practice that the more and more self-dependent companies began to analyse the above mentioned partial criteria with reference to projects organised together with enterprises that were recruited not only from the economically developed countries. That is why in the countries of the considered region the interest in modern enterprise management methods, in ways of developing entrepreneurial activity and creativity, grew significantly.

A direct outcome of this was the establishment of the International Centre for Energy and Environmental Policy of Central and Eastern European Countries (Russia, Ukraine, Belarus, Estonia, Latvia, Lithuania, the Czech Republic, Slovakia, Poland, Bulgaria, Romania, Hungary) with the participation of the USA, Germany and recently of China. The centre was established in 1998 on the initiative of the Institute of Environmental Engineering at the Polish Academy of Sciences, the Institute of Physical Power Engineering LAN and the Europa Management Academie (Germany).

The major research goals of the centre are as follows:

- analysis of current energy and environmental policy problems

- analysis of the efficiency of institutional support of energy policy (with particular focus on the policy of rational energy and environmental usage)
- development of modern management methods of energy and environmental economy of the country, regions, cities and of enterprises in relation to the conditions that exist in the countries of Central and Eastern Europe

Due to the large number of parameters and links affecting the above mentioned problems and due to their large degree of fuzziness, the quantification of effects of institutional support for activities rationalising energy usage, required limiting only to some basic factors influencing the efficiency of institutional support for energy and environmental policy.

The already mentioned specifics of the post-transitional situation result from the existence of additional factors (in relation to the situation of the economically developed countries), which evoke a further growth of uncertainty about the outcomes of research and analyses carried out in the field under consideration. That is why research carried out by ICEEP is done periodically in order to be able to assess changes made and their results.

These are the reasons for changes that have occurred since the time when the last research took place in the considered field and they undertook analysis in particular with the use of the same research methodology. That is why in the research carried out by the Centre it analyses the usefulness of modern management methods that are particularly compatible with the post-transformation conditions, such as:

- change management
- risk management
- chaos management

and the methods:

- development of 'learning'
- researching the sensitivity of systems to change
- research on the growth of creativity and entrepreneurial activity in particular
- permanent corrections resulting from the increase of the degree of uncertainty in the descriptions of particular systems

Recently, i.e., in the last two years, an analysis of the efficiency of energy problem management at governmental level and in enterprises of Central and Eastern European countries has been carried out. The current issue of the *International Journal of Risk Assessment and Management* contains papers on the results of this research and on the analysis of change that has taken place in the last five years in the considered field. Apart from the papers on the problems of some countries in the region that were written by native experts, a synthesis of the results obtained in the above-mentioned research was developed.

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