
Editorial: Energy conservation policy in Central and Eastern European countries

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The centrally planned economy was introduced first in the former Soviet Union and later, after the Second World War, also in Central and Eastern European countries.

Although the influence of the Soviet Union on the determination of the principles of these economies was fundamental, the centrally planned economies in the countries of the region under discussion differed considerably from the beginning of their existence.

After the death of Stalin, especially after the sweeping changes in Poland and Hungary (1965) these differences became even greater. In general, however, the principles of the centrally planned economy were still accepted in all the countries of this region up to the revolutionary insurrections in 1968 and the occupation of Czechoslovakia by the forces of the Warsaw Pact countries.

Considerable changes in the planned system became apparent immediately after the uprising in Gdansk (Poland). Similar changes were later also introduced to other countries of the region under discussion. Economically, however, the countries of Central and Eastern Europe developed relatively poorly and after massive strikes in Poland (1980) further changes in the centrally planned system were carried out in order to improve the effectiveness of this system.

Actually one can term these attempts as the beginning of the end of the centrally planned systems in Central and Eastern Europe. The beginning of this phase can be identified with the failure of the elections in Poland which had provided evidence of a very predominant rejection of the existing governmental system.

As a result of similar processes, liquidation of the centrally planned economies in all countries of the region under discussion was initiated (by 1991) and these countries have entered a transition period from the centrally planned to the market economy.

The starting conditions in individual countries as well as new systems introduced at the beginning of the transition period were different and therefore also the transition phase showed a very widely deviating development in individual countries of the region in question. Unfortunately, however, in all of the countries of the region concerned, an unexpectedly major economic recession was sparked off.

It was also assumed that the effects of the transformation from a centrally planned system to a market economy system would be of relatively short duration.

Meanwhile the transition processes have developed into something considerably more difficult than had been expected at the beginning of these processes, a fact which has contributed to a situation in which the transition periods in almost all of the countries can be assessed as so far unchanged.

After some experience it was possible to state that in all countries of the region under discussion some changes are of a general nature and some are characteristic of only one country (or a group of countries of the region in question).

The efficient use of energy was not always organized in the same way in centrally planned economies, as was the case in economically developed countries. The reason for this was that the economic criterion for the assessment of effectiveness was not recognized as fundamental at that time.

Therefore, from the beginning of the existence of centrally planned economies, governmental promotion became noticeable; the aim of which was to reduce energy consumption.

These activities became apparent immediately after the end of the Second World War when the principles of the centrally planned economy were only at the introductory stage.

To a large extent the countries of Central and Eastern Europe had very low fuel reserves of their own and only some countries possessed hard coal or lignite mining industries (Czechoslovakia, Poland and the former GDR).

As Russia possessed sufficient fuel deposits, especially oil and gas, gradually all of the Central and Eastern European countries became increasingly dependent on fuel supplies from Russia. Only Rumania possessed some limited oil deposits and therefore the policy of this state at that time was to be relatively more independent of Russia.

Both fuel imports and also production of the country's own (relatively expensive) fuels placed a considerable strain on the state budget. These above mentioned governmental activities had brought about energy conservation measures on the part of the governments of that region.

One can therefore also state that at that time in the countries of Central and Eastern Europe (perhaps less so in the Soviet Union) the activities of the governments in the area of efficient energy use pursued similar goals to those in developed countries.

This thesis can still be considered justified for a later period when oil prices fell and the supply of oil became very plentiful.

Therefore also from the beginning of the 1950s the countries of Central and Eastern Europe began different cooperation activities which were to contribute to the promotion of energy conservation measures. Among other things, regular international conferences with the title 'Industrial energy' were organized. These conferences were mainly aimed at an exchange of experience in the field of energy use. The fundamental difficulties in this respect were based on implications which had their origin in the relatively low energy prices in the countries of the region discussed.

At that time, in the countries in question, governmental institutions became established which were responsible for the problems of energy efficiency. Their organization was chiefly, but differently influenced in the individual countries by the Soviet Union.

Their aims were similar to the aims of institutions in the area under discussion in the developed countries. However, their activities were based more on control and ordinances which were preferred according to the principles of the centrally planned economy than on the basis of economic stimulation and training.

Considerable change in this attitude became apparent in the countries of Central and Eastern Europe after the so-called oil crisis in 1973. It made itself felt in the relatively slowly emerging conviction that complex analyses of the whole energy industry, i.e. (with the inclusion of energy consumption and energy requirement problems as a prior aid to decision making) are necessary.

One can also state that actually a clear and effective policy of efficient energy use in the countries of the region under discussion did not exist.

This thesis is well founded since in these countries, fuel promotion and power station industry sections, a priority position even had a so-called lobby position.

After 1973 the relative importance of problems of efficient energy use in all of the countries of the region concerned rose considerably.

Approaches in this respect were different and their areas were also different. However, in scientific activities in the area discussed, the attempts mentioned in all of the countries concerned were remarkable.

That took effect, among other things, in the organization of various groups of experts and committees within the former 'Comecon', the aim of which was analyses of problems of efficient energy use.

Also, in cooperation between academies of sciences of all the countries of the region concerned, four working groups were organized. This cooperation was mainly on the programming of energy balances. Energy conservation has had an essential influence on cooperation between experts from Central and Eastern European countries within the scope under discussion.

The second group especially, which was led from the east German side (Prof. W. Riesner) had, as its main direction, the problems of the policy of efficient energy use.

Not comparable with other countries of the region under discussion is Poland where a large governmental program for a period of five years starting in 1981 was introduced.

Of essential importance for the emergence of this program was the change in the system which was introduced in the Polish economy after the mass strikes in Poland in 1980.

In this governmental program (No. 8 – 'Complex problems of energy') efficient energy use was considered the main direction which had also contributed to a considerable expanding of studies in the area of energy conservation policy.

The Polish Academy of Sciences (PAN) and the corresponding governmental institution which was responsible for efficient energy use (GIGE) even decided to found a joint department which was mainly aimed at basic research into the problems of efficient energy use – especially the policy in this regard.

In the relatively large area of this department, studies on the efficiency of policies in the area of efficient energy use in the developed countries of Europe and the USA and also in all of the centrally planned countries were carried out.

Therefore, during this period, very intensive cooperative research also developed between this department and experts from similar programs in western European countries and the USA.

The scientific research introduced with regard to the improvement and effectiveness of the policies of efficient energy use and publication of their results abroad contributed to the leadership of one of the three basic directions within the European project of UNDP-UNIDO entitled 'Energy conservation in industry', i.e. 'Energy conservation policy' being transferred to the Polish side (specifically to the department of the Polish academy of sciences mentioned earlier).

This project was designed in such a way that it was dedicated to analyses of experience in the field of the policy of efficient energy use both in market economies (mainly OECD countries) and centrally planned economies.

Therefore also after the start of the transformation processes in Poland, research was changed in UNDP-UNIDO project – especially in the basic direction ‘Energy conservation policy’ – and in the department mentioned for basic research into the area of efficient energy use to analyses of transformation problems in the area discussed.

Also some countries of the OECD showed interest in these problems from the beginning. In this regard to be emphasized in particular are the initiatives of the National Academy for Science in the USA (Prof. Stelson) and of the Energy Department of the USA.

During preparatory work and also during the workshops organized in the area of efficient energy use, a school for young scientists in the discipline of efficient energy use (Dr. Schipper and myself) arose as well as cooperation between the Energy office of Pennsylvania (director Castelli) and two institutes of the Polish Academy of Sciences (Prof. Ney, Asst. Prof. Kapala and myself).

Also with the British Institute for Energy Economies (Prof. Carter), joint research on efficiency improvement of the policy of rational energy use in Central and Eastern Europe was carried out.

Unfortunately the activities in the area discussed, the new governmental *élites* of Central and Eastern European countries were mainly dominated by other transition problems. Such a situation was promoted by the conviction that the forces of a market economy alone can promote the rationalization of energy consumption under new conditions.

At the same time it became apparent, however, in situations in which consultation was sought, that the new *élites* mainly used experts from the developed countries for this purpose. After some years of experience of the transition period it became generally apparent that the opinions of experts from abroad had divergent views. Slowly it also became apparent that the governmental *élites* of Central and Eastern Europe began to rely increasingly on their own personnel and also became more careful in the selection of foreign consultants.

Difficulties in this regard were based mainly on the implications of economic recessions, which had occurred in all of the countries of Central and Eastern Europe. These had an effect, on, among other things, the size of the reduction of national incomes and indirectly on the considerable reduction of research funds for energy conservation policy. What is remarkable about this is that the processes which occurred after transformation had proved more complicated than can be seen in stable economic conditions, a fact which was not presumed before transformation.

For this reason greater pre-decision analyses were necessary for the governments of the Central and Eastern European countries. Meanwhile, due to the shortage of funds mentioned, these analyses had to be restricted.

In order to continue research in the area of the improvement of energy conservation policy under transformation conditions, the financing of this research has been initiated by the Institute of Environmental Engineering of the Polish Academy of Sciences in Zabrze with the support of the Europa Management Academy in Düsseldorf.

The research still carried out also had the additional aim of promoting the maintenance of contacts of competent experts from all of the countries of Central and Eastern Europe in the area mentioned.

A similar aim was also pursued by Prof. W. Riesner, previously mentioned, who since the termination of cooperation between the academies of sciences of the Central

and Eastern European countries has been organizing a seminar in Zittau for energy-industry problems of these every year (since 1991).

Due to existing personal contacts between experts from Central and Eastern European countries and myself on mutual problems, the special journal of *IJGEI* relating to the policy of efficient energy use in Central and Eastern European countries was also initiated. The existing contacts between experts from 13 of these countries and myself were made use of in order to invite them to present their experience gained during the transformation period in their countries.

At the same time experts were also invited who in the transition period, had dealt with scientific analyses of general problems of the transformation period in order to present the results of the studies mentioned in their articles.

For the future, one should take into consideration certain conclusions after the hopeful and difficult ten years for the transformation countries. Very great endeavour has been seen by those in the countries undergoing transformation, not only in designing processes to aid transition, but also in attempting to find the path to one joint Europe. In view of this achievement, the countries of the economically stronger part of Europe should provide more definite support for development in the scientific sector and particularly in the field of energy and the environment.

After the seventh conference on the subject 'Cold fusion' had taken place in Vancouver in 1998 and also the first conference had dealt with the subject of 'Future energy forms' with the main topic of 'free energy' it became clear that in the area of 'new energy sources,' considerable change could be expected in the near future in the attitude of governments of all countries of the world to the development of the efficient use of energy and environment. This change and its consequence of great opportunities for economically less developed countries could result in faster developments of their own.

Particularly in the energy sector, this great sweeping change can be expected and therefore, in this field, creative, innovative and enterprising manager personalities are required. For the development and training of these personalities, know-how and economic support is required in the countries which are in the post-transformation phase. At the same time a considerable intensification of the attempts to identify new implications on the part of the governments of the countries in the region under discussion, is apparent.

The reason for the intention to present these problems came from the editorial staff of *IJGEI* and particularly from the editor in Chief Dr. Dorgham and I would like to thank him on behalf of all the colleagues from the 13 transformation countries participating in the preparation of the journal.

I would also like to express my sincere thanks to all the colleagues I invited, who all without exception accepted my proposal.

My thanks are also due to those persons without which the cooperation mentioned between experts from the countries of Central and Eastern Europe could probably no longer function at all, i.e. the director of the Institute of Environmental Engineering of the Polish Academy of Sciences (IPIS-PAN) Ass. Prof. Dr. Habil. Eng. J. Kapala, the secretary of Europa Management Academy (EMA), Dr. D. Frommann and my friends: the former and long-standing head of the energy department of the ministry of Poland - Mr. F. Krawczynski, Dipl.-Ing. as well as Prof. Dr. habil. Ing. N. Zeltinsh from the Latvian Academy of Sciences and Prof. Dr. habil W. Riesner from the Zittauer Seminars (Germany).

