THE ECONOMY OF ENERGY AND THE INTERNATIONAL ENERGETIC POLICY

Beginning with 1973, the world energetic crisis has engendered in all states of the world, major preoccupations with a political, economic, scientific and technological character. The result of these preoccupations has evinced the necessity of developing the energetic resources, of more judiciously using and reducing the consumption of fuel and energy. A new conception on the problem of energy was thus outlined, entirely different from that of the period of so-called "energetic abundance", a conception which was materialized in national energetic plans and programs which also express the energetic interdependence existing on a world plane.

The new conception concerned the production, transport, distribution and especially the consumption of energy.

The necessity of training and educating specialists in the spirit of the new energetic conception was imposed both on an international and national plans, a difficult demand owing to the lack of models of schools and of the economy of energy (in a didactic sense) which could be used. In this context, the first program of economic engineering intended for engineers in energetics and economists, within the industrial branches which are big consumers of electric and thermic power: metallurgy, chemistry and engineering has been set up at the Bucharest Academy of Economic Studies. This program pursued the permanent ensuring in teaching of a useful interdisciplinary relationship between economy and energetics.

Among the knowledge delivered to the participants we should mention: the acquiring of the methods and general schemes for the saving of energy and of knowledge specific of the industrial branches the students came from, implying a thorough knowledge of the elaboration, analysis and updating of the energetic balancesheet, the quantitative establishment of the efficiency and utilization of energy at an aggregate, technological process, installation and economic unit level, the economic optimizations which may occur the drawing up of the energetic balance-sheets, the determination of the economic efficiency of energetic investments occasioned by the measures meant to overcome the noticed shortcomings; the determination of the economic efficiency of the new substituting sources of energy (solar, wind, ebb and flow, geothermal, marine currents, nuclear, residues, urban, etc.)

Another major objective pursued within this Program was the formation of a large cultural knowledge of the participants in the field of the economy of energy. In this way, some problems were introduced, such as: the forecast of demand, the energy consumption and production; the content, causes and theories on the world energetic crisis; more representative national programmes or those of some international bodies; the energetic world economic and technical-scientific cooperation; reorganizations and adaptations in the

world economy in keeping with the trends concerning the availabilities of energetic resources; energetic legislation, etc.

Within the conception of the programme, special attention was paid to the necessity for the preliminary acquiring by the students of knowledge of mathematical statistics, the theory of probabilities, operations research, the electronic computation technique, etc.

Through its endowment, the recently set up "Laboratory for the economy of energy" enables the implementation of a number of laboratory studies on models, the students having thus the possibility of simulating technical processes (electric drives, illumination, ventilation, freezing, etc.) for acquiring the methodology for the elaboration, analysis and updating of energetic balance-sheets, of energetic efficiency, etc. In the future, these works will be extended to ever more complex technical and technological processes. A library with volumes in the field of the economy of energy has also been organized within the "Laboratory for the economy of energy".

To ensure a scientific atmosphere and continuity necessary in this domain, concurrantly with the program, a scientific seminar has been set up meant to submit to the discussion of students and other participating specialists, fundamental problems on the economy of energy in the field of propulsion and transport of liquids, gases or dusts through pipes, lubrication, etc. The training of researchers in the field of the economy of energy, their selection is also constantly pursued.

The final graduation studies of the students generally derive from the energetic problems of the economic units they come from. The estimation of their value is made according to the solutions proposed.

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