STRUCTURAL CHANGES IN ENERGY AS A FACTOR OF PROVIDING ECOLOGICAL SAFETY

I. Guseva
National technical university of Ukraine «Kiev polytechnic institute», Ukraine

Present ecological situation in Ukraine can be described as critical, formed during a long period of time by ignoring the objective laws of development and reproducing of natural-resource complex of Ukraine. In Decision of Supreme Council of Ukraine «About basic directions of public policy of Ukraine in branch of guarding environment, use of natural resources and providing of ecological safety» [1], among main reasons which resulted in the unsatisfactory state of environment, are marked the unfavorable pattern of industrial production with a high concentration of ecologically dangerous productions and absence of the proper nature protection systems, low level of exploitation of existing nature protection objects. Also according to Conception of national ecological policy of Ukraine on a period to 2020 year (further Conception) [2], among the basic tasks of national ecological policy is ecologization of industry, which foresees introduction of ecologically effective methods of production organization, principles of corporate social responsibility, more clean production, with the purpose of diminishing of volumes of the troop landings and upcasts of minimization of formation of wastes and complex use of raw material resources, including secondary.

Energy is one of the major elements of the economic system of the state, but at the same time is one of the most active elements of contamination of environment. Within the framework of task of ecologization of energy, Conception foresees the necessity to increase the energy efficiency of production, development of alternative energy, minimization of the negative influence on an environment and introduction of modern technologies and innovative projects. One of priority directions of minimization of accumulation of industrial wastes is returning them in a production with the purpose of exception of valuable components and use of them as the secondary resources. Source of such wastes can be wastes of coal-cleaning in a fuel and energy complex. According to Conception it follows to examine the problem of wastes within the framework of the unique fitting to socially ecological and resource-technological aspects which aggregate three components (problem aspects):

– resource (development of second resource usage);

– ecological (achievement of ecological safety);

– methodological and organizational (scientifically methodical, analytical, legal providing of decision and adjusting).

Wastes can replace primary resource sources, thus diminishing common resource usage. Therefore the block of aims of resource aspect foresees the economic ground of directions and ways of utilization of wastes and creation of closed-circuit resource systems of territorial-production connections on the basis of interindustry co-operation, cascade planning of production.

The purpose of resource and ecological aspects of problem is creation ecologically safe, resource saving, low-waste and nonwaste productions and territorial-production complexes of different levels (industrial area, city, district and others), where wastes of one productions fully or partly will be raw material for other, that cascade chart of production. The decision of problem of wastes must be examined from positions of the so-called industrial metabolism, according to which an economy, pattern of production and consumption and also quality of life is a unique system and respectively unique socio-economic problem.

One of possible ways of decision of this question is creation of vertically or horizontally integrated fuel and energy associations (IFEA) with including of enterprises-utilizers.

In the case of including the enterprises-utilizers to the IFEA, which are oriented to power utilization of industrial wastes, it is possible to decide several tasks:

– bringing in to fuel and energy balance of territory an additional fuel and energy resource such as synthesis gas [3];

– diminishing of external charges of ecological origin due to unloading of territory from ecologically dangerous hard industrial wastes;

– diminishing the cost of basic product of IFEA due to the usage of cheap synthesis gas;

– an increase of profitability of enterprises-utilizers due to the advantages of working in association;

– diminishing of the anthropogenic pressure on a natural environment.

Therefore the exit from an ecological crisis for industrial complex must be carried out by development and implementation of the program of structural and technological alteration of industry, first of all in power industry, and programs introducing the high-efficient systems of cleaning and decision a problem of redoing industrial wastes.

References

1. Decision of Supreme Council of Ukraine «About basic directions of public policy of Ukraine in branch of guarding of environment, use of natural resources and providing of ecological safety» // List of Verkhovna Rada of Ukraine, from 13.10.1998

2. Conception of national ecological policy of Ukraine on a period to 2020 //Official announcer of Ukraine from 29.10.2007 ¹ 79, ñòîð.170

3. Korpan r.V., Kotsko t.A. Integration of enterprises of fuel and energy complex as factor of increasing their ecological and economical efficiency// The Scientific news of NTUU “KPI”. - 2004. -# 4. – p. 5-13.