

CHERNOVTSY ENERGY PLAN (CEP) —

LESSONS AND PERSPECTIVES FOR CO-OPERATION

CEP continued the consistency of TACIS projects (Ukrainian-Austrian TCT ‘Concept of water supply for Chernovtsy’ in 1996-1998 & Ukrainian-Austrian-Romanian CBC ‘Ecoprofit’ in 1998 -2000) aimed to establish the new approach of EcoEuroRegion as a basis for Sustainable Development & Techogenic-Environmental Safety.

One of the main characteristic features of the post-communist economy is the clutter of Energy Production, Consumption and Utilisation System. According to the necessity to develop the regional economical and energy policy in cities and mountain districts where energy supply systems was founded as far as Austrian Monarchy, the partners of Bukovina in EU projects are Land of Carinthia & City Klagenfurt which have common historical roots, similar geo-landscape & urban conditions.

Project aimed to develop the Concept for transformation & progress in the energy-supply as well as the simultaneous implementation of modern energy-saving technologies in traditional areas of the economical activity in the City & Region.

Such objective determined the necessity for the project realisation in few parallel directions:

- acquaintance with Austrian federal & land legislation and management systems for energy-supply adopted to the European Standards, comparative analysis, definition of the force function of Ukrainian legal basis and determination of priority tasks in this sphere;
- research of experience and possibilities to use in Bukovina the systems for control, accountings, motivation and stimulation of energy-supply as well as scientific & technical solutions for revealing of losses, practice of alternative energy sources, engineering development, nowadays materials & technologies;
- attaining of agreements and concrete co-operation between state, public and private enterprises & organisations which operate in the energetic sphere.

The elements of the project (main modules in Austria, seminars in Germany & Denmark, visits to enterprises, tentative approbation and numerous discussions in Ukraine & Austria) allowed Ukrainian participants to make systems evaluation of the long-term western experience as well as perspectives for further collaboration with Austrian partners. Austrian participants received immediate knowledge and acquired a habit for comprehensive assessment of the further projects aimed to create joint ventures, the investments and application of Austrian materials, technologies and equipment.

Taking into account the establishment of new Euroregion ‘Upper Prut’ and decision of the Ukrainian Government to determine Chernovtsy Region as a pilot for working out the elements of the State regional policy and the sub-regional integration into EU, systems solutions of this project will be widening in other border Regions of Ukraine and Counties of Romania and Republic of Moldova.

Abstracts of X Conference of CIS countries «Environmental problems and operation of Energetic units» (Sevastopol, 26-30 June, 2000.) - Kiev. – 2000.- P..30

CHERNOVTSY ENERGY PLAN (CEP) — CONTINUATION OF INTERREGIONAL CO-OPERATION AND MODERN BACKGROUND FOR NEW ECOEUROREGION

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CEP continued the consistency of TACIS projects (Ukrainian-Austrian TCT “Concept of water supply for Chernovtsy” in 1996-1998 & Ukrainian-Austrian-Romanian CBC “Ecoprofit” in 1998-2000) aimed to establish the new approach of EcoEuroRegion as Sustainable Development & Technogenic-Environmental Safety basis for Economical & Social conversion in the framework of Ukrainian-Romanian-Moldovian Euroregion ‘Upper Prut’ and further - in 3 other Euroregions along the western border of Ukraine.

One of the main characteristic features in these border regions is the clutter of Energy (and energywares) Production, Consumption and Utilisation System.

When Austrian Monarchy laid the foundation of the Economy in former Crown Land Bukovina the Energy Supply was completely decentralised and foreseen further competitive development of different sources (fuel electric stations, mountains rivers, wind & biomass usage and some later - small gas generators etc.) For the last 60 years the practice and mentality in this area was completely turned to the centralised Electric System, large power stations etc. and it wholly cancelled the previous approach.

Under the existent conditions the Euroregion ‘Upper Prut’ (near 3 Mio inhabitants, large part of which are the mountain and foothills depressive territories with high population density) extremely needs systems solution to combine both above mentioned approaches.

The necessity to develop regional Energy Policy is also determined by the follows peculiarities:

- good conditions for hydroelectric power stations on the mountain rivers (in the middle of XX century only in Northern Bukovina was 11 small power stations);
- high potential of the wind energy in the mountain districts;
- the best indicator of so called ‘geo-thermal grade’ in Carpathian Mountains;
- large amount of biomass waste of forestry and of wood processing;
- good prognosis for further development of the already explored oil and gas deposits;
- large accumulation of yang lignites in the mountains which can become an alternative source of energy and of building materials by modern technologies;
- a lot of opportunities for ‘secondary’ energy resources conservation & utilisation whereas the average power consuming in all productions & services of the former socialist non-competitive economy is few times higher then in the market one.

Taking also into account partly built new hydro-accumulated power station in Novodnistrovsk this region offers as a pilot to work out step-by-step the power base for long-range regional Economical Policy in CEE/NIS countries. Such approach is necessary because the lead-time of the Economy (and Energy Supply) radical reconstruction hurts the main part of these countries population. On the other hand the Chernobyl Catastrophe as well as resent disasters on the Danube tributaries in Romania evidently demonstrated the Global Danger if the existent situation will further conserve.

Co-operation with Austrian Land Carinthia as a constant EU partner of the Euroregion ‘Upper Prut’ is very important for CEP project because of two issues. First of all it’s possible to compare in general the peculiarities of the continued ‘Austrian Land’ development way (the legal, normative, technical, economical & social aspects of the Energy Systems) versus the former Bukovina & Galicia Lands (4 Western Regions of Ukraine). On the other hand (as it was demonstrated by two previous TACIS projects) it’s possible to make more detailed comparison study for the concrete branches (enterprises) of the public & private energy systems & institutions in municipal sphere, mountain districts, settlements, plants etc. It gives an opportunity to select the most eligible

solutions and/or experience for further implementation in transition economics as well as for direct business connections between regional & local authorities and enterprises in the energetic areas. And such systems solutions are more efficient and “continueable” than the throwaway separated one as it was shown by the survey [1] of more than 40 TCT projects co-ordinators & key participants.

Whereas the main results of CEP should be elucidated on the special Conference in 2001 and can't be specified in the brief item - let us study only few most significant of them.

First of all (as it was shown by previous TACIS/PHARE CBC project [2]) there are few possibilities to reveal industrial & municipal “weak” places of great energy losses (and of other kinds of resources) which can be reduced or/and utilised in the comparatively cheap & simple way. One of the examples is the typically wrong usage of materials & technologies for construction and repairing of buildings, heating and water supply systems. And Ukrainian team consecutively detected domestic and became acquainted with Austrian, German & Danish solutions which already started to be implemented in Chernovtsy City & Region.

The another group of CEP developments makes for the local & regional energy management systems. For this aim there was translated and compared Austrian & Carinthian Legislation versus Ukrainian legal basis and approaches. And in parallel there was revised the energyware & heat sensors & meters systems to work out efficient measures for energy control as well as for step-by-step change of the mass mentality.

As a succession of former centralised economy there is a problem of boiling systems, especially for local objects heating and of boilers repair/reconstruction. It needs very close co-operation between the concrete enterprises as well as between correspondent authorities. The most effective way is to establish special funds & investments (loans) conditions. In the same time such pilot projects can become very fruitful to work out efficient mechanisms for Kioto Protocol facilities realisation as a part of euroregional co-operation.

For the last years became very acute social & economical crisis in the mountain and foothills districts of Bukovina and its neighbours. When USSR was destroyed and the prices for energyware grown up to the world level—all Economy of these districts became non-competitive. The situation is additionally redoubled by the high length of the electric transmission lines what makes impossible normal energy supply and their maintenance in these backwoods areas.

The alternative for the energy supply in the Putila district of Chernovtsy Region as well as in Suceava County of Romania can be nominated as:

1. Restoration of the former small hydroelectric stations (HES) and new constructions in basins of Prut & Siret rivers;
2. Wind-electric stations (WES) installation on the mountains tops, bridgewalls and ravines;
3. Utilisation of forestry and wood waste;
4. Usage of the gas from the oil & gas deposits.

The 3-rd and 4-th variants are good for heating but they can't satisfy the population's necessity as well as the manufacturing needs in electricity.

Comparison of points 1 & 2 shows that small HES restoration & construction need more investments than WES. On the other hand the minimum of the water amount in the rivers take place in that time of the year when the needs of power are maximal (cold period and short light day). While the winds capacity through the year is cymbate to energy consumption.

The mostly representative for Euroregion “Upper Prut” may be the pilot project which suggest installation in the mountain Putila District two Wind Electric Units with total capacity of 1.2 MWt. As a result there should be significantly improved life standards for the mountain and foothills population aggregates as well as there will be better conditions for reactivation of the existent and creation of new enterprises and business activities to satisfy the needs of population and to promote employment rate. It's well known that Carpathian Mountains as well as Crimea & Tavriya in Ukraine have the best climatic and landscape conditions for the Wind Energetic.

In the case when this proposal will be realised it foreseen the final selection of the optimal place for WES dislocation as well as the system of the energy users. At that it should be maximally equipped already exist facility and infrastructure—operational transmission lines, former military radar installation, meteorological station etc.

One more problem is the often switching-off and low quality of the centralised network electric power for the enterprises of main industries of the Region. And there have place the purchase break-down of energywares (diesel oil, gas etc.) that also makes worse the above mentioned situation. The additional risk factor is the deterioration of the electrotechnical and other kinds of equipment as well as the communal infrastructure. Because of that there often arise emergency for the population energy supply in the areas of these enterprises. This situation is inadmissible for such activities as medical care, communal services, bread production, etc. and it generates crucial social stresses.

For this problem resolution it foreseen for the interested enterprises & by the support of the local, central authorities and international organisations procurement of the autonomic energy-generated equipment which is able to work with the few alternative kinds of energywares (for instance gas and/or petroleum fuel). Simultaneously there can be realised re-equipment of already exist facility for multi-energyware usage.

The final Energy Plan will include the system of engineering measures as well as facility for their financial & political support as well as their educational & training providing cross-linked with the agreed priorities of Sustainable Economical & Social Development in the Euroregion ‘Upper Prut’.

1. Z.Broyde. Survey of Participants of the Second consulting Conference of the Tacis City Twinning Programme // Tacis City Twinning NOVOSTY.—№ 5.—October 1998.—P.3-5
2. Pilot implementation of the Austrian ECOPROFOT Programme as a facility for ISO 14000 and CIS Waste Management Standards / Z.Broyde, H.Ferner, W.Hafner a.o.—Chernovtsy: Colir-Druk,—April 2000.—33p.