

Statement
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POWER SYSTEM OF ARMENIA: DEVELOPMENT STRATEGY AND REGIONAL COOPERATION

Sustainable development of power system can't be obtained without reaching to a reasonable level of energy security by which the Armenian Energy Sector Development Strategy is oriented.

The Energy Policy of Armenia is based on the Government approved Strategy for country's Energy Security and its Implementation Program, on the basis of which the following main principles are identified:

1. maximum implementation of renewable energy resources and energy saving potential,
2. diversification of energy resources import/export routs,
3. nuclear power development,
4. integration of Armenia into regional energy markets, as well as its involvement in regional projects.

Practically, Armenia mostly depends on import of primary energy resources. The country doesn't dispose oil and gas explored deposits. The output produced by domestic primary energy resources is considered to be electricity generated by HPPs and, conventionally, by Armenian NPP.

In the energy development strategy of the Republic the preference of replacement the existing unit of Armenian NPP with the new power unit is proved upon long-term outlook, which will also serve as base power in the region.

Activities for realizing construction project of the new power unit are already launched in Armenia: "Bankable feasibility study of the new power unit (s) construction in Armenia" is developed; the Armenian-Russian joint "METSAMORENERGOATOM" CJSC is established and open for other investors; an Agreement is signed between the Government of the Russian Federation and the Republic of Armenia on Cooperation carried out in the frames of the new power unit(s) construction in Armenia; negotiations with other potential investors are conducted.

Today, one of the actual topics is the implementation of decommissioning program of the existing power units of ANPP. By this preparation works have already been initiated and are successfully being conducted in the country. Strategy for decommissioning of the existing units of Metsamor NPP has been developed in the frames of EU technical assistance. Within "Policy of European Neighboring" program financing issue on preparation Management Strategy development of radioactive wastes and spent fuel has been agreed. Under the aegis of Security Council of RA, the Concept for secure management of radioactive wastes and spent fuel has been developed.

In the sphere of thermal energy, Energy Strategy of Armenia targets to the natural replacement of TPP morally and physically obsolete capacities with new technologies of

high-performance and high maneuvering qualities, which will allow a considerable increase of competitiveness of electricity generated by TPPs both in domestic and offshore markets.

In April, 2010 a combined cycle unit of 250 MW installed capacity was put into operation on Yerevan TPP. "ARMROSGASPROM" of RF completes constructional works of the 5th Block of Hrazdan TPP with gas superstructure and 450 MW installed capacity.

Conditions for intensive implementation of domestic renewable energy resources have been created in Armenia. Power System development, based on domestic renewable energy resources, will allow a considerable growth of energy independence level, thus promoting political stability of the Country.

The Republic of Armenia disposes considerable resources of renewable energy. Exploitation of economically available wind and hydro power potentials will allow the Republic to cover energy demand in wind market in 2025 up to 30% without considering energy potential of geothermal and biogas units as well as units converting solar energy.

Feasible mechanisms for stimulating the usage of renewable energy resources have been developed in Armenia. Thus, according to market rules, overall electricity, generated by using renewable energy resources, is subject to mandatory procurement per fixed tariff during 15 years starting from the day of license concession for energy production. Public Service Regulation Commission forms tariff policy, which promote investment attraction in renewable energy. Implementation of stimulation policy on exploitation of renewable energy resources during the last 5 years allowed to increase generating capacity of electricity by small HPPs from 153 million kWh in 2005 to 400 million kWh in 2010, i.e. more than 2.5 times.

Actually, a number of initiatives are being undertaken for realizing projects in the scope of demand side management that are financed by international investment banks (such as KfW, WB, and EBRD). The target of these projects is to stipulate consumers in using energy efficient technologies and realizing the potential of energy saving in terms of "soft" credit lines.

Special attention is given to enlargement and integration of Armenia into regional energy markets as well as its involvement in regional energy projects. Still, it should be noted, that in the course of implementing regional projects on development of import/export routs of energy resources the prevailing role often belongs to political and not to economic motivation. Therefore, Armenia not only continues staying beyond the regional projects of oil and gas pipelines, but also, upon disposing a developed electrical power system both in surplus of generating and transforming capacities, has no opportunity for competent involvement in regional power projects. Advantage of power systems parallel operation of neighboring countries is apparent, i.e.

- ✓ the rise of reliability and security levels in the Power System operation
- ✓ the growth of economic indexes in the Power System operation,
- ✓ harmonization of normative-technical rules with world standards.

Political collisions rising between energy market participants shouldn't result interruption of energy resources supply, or impact the development of the new projects in the energy sphere. Countries must be more responsible for their role in global energy security provision and must make their feasible contributions via their interaction and

international and regional cooperation in the given sector. Armenia's policy in this regard is driven by the purposes of economic utility and feasibility.

Tangible results have been achieved through bilateral agreements realized in the frames of regional cooperation in the Energy sector. In particular, in 2009 an Iran-Armenia gas pipeline was put into operation for diversification of primary energy resources import. Construction of 400kV double-circuit transmission lines to Iran is under implementation stage. Negotiations with Georgia on the subject of Power Systems integration, as well signing of two agreements between the Governments of Armenia and Georgia on "Electricity and Capacity transit" and "Mutual support in the frames of breakage and other emergency occurrence" are going on. It should be noted about the contribution of the USA Government in "Energy Security Enhancement in RA and Regional Integration" project implementation, targeted to restoring parallel operation of Armenia-Georgia power systems.

The most perspective projects of regional cooperation of Armenia in Energy sector are:

- organization of Iran-Armenia-Georgia-CIS power systems synchronous operation;
- modernization of relay protection and automation devices of Armenian Power System;
- transformation from radial to synchronous regime of the Georgia's and Armenia' Power System through existing 220 kV "Alaverdi", 110 kV "Djavakhq" and 110 kV «Lalvar» overhead lines;
- resumption of 220 kV Armenia-Turkey overhead lines operation;
- construction of new 400 kV overhead lines Armenia-Iran and Armenia-Georgia in the short term outlook, as well as other projects envisaged for a longer term.

Having transmission lines with all neighboring Power Systems, Armenia repeatedly announced that the country is ready to undertake specified activities for integration into regional markets both as a supplier of base power and capacity and as a transit country.