13th INPRO Dialogue Forum on Legal and Institutional Issues in the Global Deployment of Small Modular Reactors

Legal, economic and technical aspects in the analysis of the possibility of replacing the existing nuclear power unit to SMR, in Armenia in 2026

AREG GALSTYAN
DEPUTY MINISTER OF ENERGY INFRASTRUCTURE AND NATURAL RESOURCES

18-21 October 2016,
IAEA Headquarters Vienna, Austria
LEGAL BACKGROUND

• RA LAW ON SAFE USE OF NUCLEAR ENERGY FOR PEACEFUL PURPOSES (ADOPTED ON 1 FEBRUARY 1997) and LAW on AMENDMENT ON THE LAW ON SAFE USE OF NUCLEAR ENERGY FOR PEACEFUL PURPOSES (ADOPTED ON 9 NOVEMBER 2004) (according to the amendment the new nuclear power unit(s) could be also owned by the private company).

• RA LAW ON CONSTRUCTION OF NEW NUCLEAR UNIT(S) IN THE REPUBLIC ARMENIA (ADOPTED 27 OCTOBER 2009).

• CONCEPT ON ENSURING THE ENERGY SECURITY OF THE REPUBLIC OF ARMENIA ADOPTED BY DECREE OF RA PRESIDENT ON 23 OCTOBER 2013 (NK-182-N).

TECHNICAL AND ECONOMIC BACKGROUND

• Intergovernmental agreement between Republic of Armenia and Russian Federation on cooperation of peaceful uses of nuclear energy (25 September 2000).

• Intergovernmental agreement between Republic of Armenia and Russian Federation on the cooperation on the construction of new nuclear unit(s) on the territory of RA (signed 20 August 2010).

• In 2011 was finalized the environmental impact assessment report and public hearings were conducted in the Armavir and Gyumri regions.

• In 2011 the document «seismic and volcanic hazard assessment for the new unit at the Armenian NPP site» has been developed, which had the positive feedback from the IAEA experts. The assessment was done with involvement of international leading companies and famous experts.
TECHNICAL AND ECONOMIC BACKGROUND

• Long – term (up to 2036) development pathways for RA energy sector adopted by the government of RA in 20 December 2015.

• According to the investigation, least cost generation program compels to construct the new nuclear unit in all cases but as the result of the case studies it suggests nuclear unit(s) up to 600 MW capacity, as an economically feasible option. Different scenarios have been considered in investigation, including the units with middle capacity as well as the scenarios with SMR technologies with total capacity up to 600 MW.

• Currently we are developing the program for construction of new nuclear unit according to the IAEA recomendations and taking into account the adopted Design Safety Requirements to New NPP Unit(s) (adopted by the Governement of RA on 29 September 2016).

• The capacity of the new nuclear unit(s) will be up to 600 MWt, it should satisfy the condition for the units 3+ generation, with compliance to the latest seismic safety requirements.
• We continue negotiations with potential investors and vendors for the construction of new nuclear unit(s) in the Republic of Armenia.

• Country participation in the project includes existing infrastructure, NPP site, new roads, etc.

• We are ready to sign the mutually beneficial power purchase agreement with investors.