

Energy in the Republic of Armenia

2012

Ministry of Energy and Natural Resources, Republic of Armenia

Common data about the Republic of Armenia



to Akhalkalak to Bolnis GEORGIA to Zaqatala GEORGIA Novemberyan Alaverdi Tashir. Anhstafa of Arna Jake Mingecha reservoir Stepanavan . Tumanyan Tavuz Chidr lake AZERBAIJAN 2038 Pushkin pass lievan • Berd Shamkhor Kars Gyanja Spitak Gyumri. Vanadzor - Dilijan to Bak Gandzak) Evlakh Pambak pass Akhuryan Sevan pass Artsvasher Artik reservoir Chambarak Khanlar Aparan Maralik Sevan Hrazdan ipem2a ragats m 4090 Shahumyan Talin • Gavar Ashtarak Jardob Abovyan Sotk pass 2365 Martakert Metsamor Kaghiyan Yerevan Araks eservoi Carriero Armavi Vagharshapat Martuni Qarvachar Margara ARMENIA Tuzluja (Qelbajar) Aghdam 2410 Artashat (Koghb) Askeran 🕈 Sulemay (Selimi) pass NAGORNO- KARABAKH Vedi TURKEY Igdir Jermuk Ararat Gaylatu Stepanakert Mart B. Ararat m. Eghegnadzor (Balg) lake 5165 Shushi Vorotan pass 2344 2080 Berdzor Lisagor pass S. Ararat m. Vajq Sisian pass . Fizul Goris TRANSPORT Doghubayazet, Sisian Hadrud Horadia Railway (Bayazet) Jabrav Federal highways NAKHIJEVAN Ghubatli Regional highways Kapan Nakhijevan Kajeran Passes, absolute 2114 altitude in m "Araks" Sevan pas Tashtun pass hidrocenter Kovsakan reservoir Mijnavan Julfa (Zangelan) Klometr Meghri 20 IRAN Scale 1:2 000 000 toTavriz to Khervane

Capital: Yerevan Area: 29.8 th. km2 **Population:** 3.5 mln. **Religion:** Christianity **Climate:** mountainous. continent summer- up to +40Cwinter – up to -30C

Legislative and regulative documents

- "Energy Law of the Republic of Armenia"
- "The Law on Energy Saving and Renewable Energy"
- "National Plan on Energy Saving and Renewable Energy in RA"
- "Energy Sector Development Strategy in the Context of Economic Development"
- "Action Plan for the Ministry of Energy and Natural Resources Stipulated by the Provisions of the National Security Strategies of the Republic of Armenia"

Public Services Regulatory Commission Decision on: "Definition of sale tariffs of Electricity Delivered from Plants that Generates Electricity by Utilization of Renewable Energy Resources at the Territory of the Republic of Armenia" and many other regulative decisions.

Energy Sector Review

- Energy is one of the most developed sectors of economy in Armenia with qualified specialists,
- The Armenian energy sector was and is developing as a regional centre of energy,
- We have a significant practices in design, construction, operation and maintenance of nuclear, thermal and hydro stations, and of parallel work with integrated energy system.
 - Five Pillars of Armenian National energy strategy
- utilization of renewable energy sources and improving energy efficiency;
- development of nuclear energy;
- diversification of primary energy resources and import/export routs;
- regional integration and cooperation.
- development of thermal energy to cover electrical energy demand peak;

Structure of operating tariffs

(In US dollars)

Consumer	Weltere kW	Tariff, \$/kW/h		
Consumer	Voltage, kW	night	day	
High – voltage consume r	35 and above	0.043	0.053	
Direct feeder	6 – 10	0.043	0.064	
Indirect feeder	6 – 10	0.043	0.076	
Low – voltage consumer	0.38 and lower	0.051	0.076	

Soft tariffs for energy producers utilizing renewable sources :

- > 0.05 \$/ kW /h (excluding VAT) for Small HPPs, constructed on natural stream canals
- > 0.09 \$/ kW /h (excluding VAT)– for wind power plants
- > 0.096 \$/ kW /h (excluding VAT) for power stations utilizing biomass

According to the confirmed technique, tariffs are reconsidered annually till the 1st of December of current year and come into force from the 1st of January of following year

Small HPPs in RA:

- 115 small HPPs -operating :
- 88 small HPPs -under construction: 177 MW / 637 mln. kW /h
- 115 small HPPs -projected:

147 MW / 540 mln. kW /h

158 MW / 520 mln. kW /h

Wind energy

First Wind Power Plant in Armenia and Transcaucasia: "Lori - 1" : 2.6 MW / 5 mln. kW /h

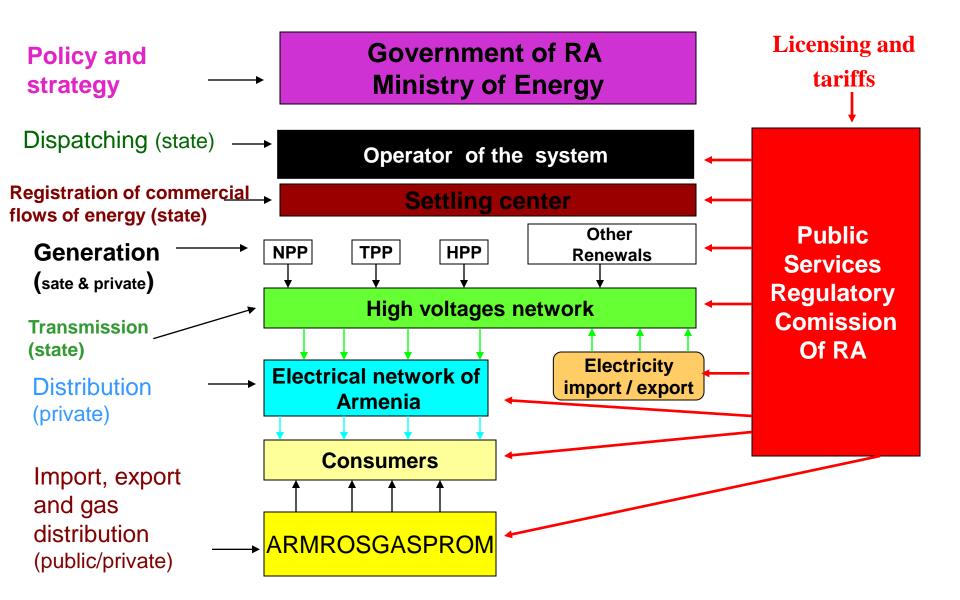
Intersystem relations

country	Starting and terminal points of substations (projects at a development stage)	Voltage (kV)	Length (km)	Operating flow (MBA)	Other
Iran	Shinuhayr (Arm.) - Agar (Iran)	220	176.8	270	operating
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	Armenia - Iran	400	290	1000	Under the construction
Georgia	Alaverdy-2(Arm.) – Tbilisi (Georgia)	220	63.5	250	operating
	Ashotsk (Arm) - Ninotsminda (Georgia)	110	35.8	85	operating
	Alaverdy - 2 (Arm) – Sadakhlo (Georgia)	110	30.0	85	operating
	Armenia -Georgia	400	105	600	Under the design
Turkey	Gyumry-2 (Arm) – Kars (Turkey)	220	80.0	250	not operating
Azerbaijan	Hrazdan HPP (Arm) –Akstafa (Az)	330	108	400	not operating
	Ararat-2 (Arm) - Babek (Nahichevan,Az)	220	99.6	250	not operating
	Ararat-2(Arm) -Norashen(Nahichevan, Az)	110	98	85	not operating
	Agarak (Arm) - Ordubad (Nahichevan, Az)	110	30	85	not operating

Transmission and distribution systems

220 kV 1323 km 14 substations 110 kV 3169 km **119 substations** 35 kV 2675 km **278 substations** 6(10) kV 9740 km overhead cable lines **4955** km cable lines 8598 substations 0.4 kV **13570 km overhead cable lines 2160 km cable lines**

Functional structure of Armenian Energy System



Participation in Regional Energy Programs

European Energy Charter

Black Sea Economic coopereation

Energy Council of CIS

Regional Projects: WB, Tacis, USAID, Inogate, EBRD, UNDP etc.

Development of multilateral economical cooperations



Thanks for the attention