Ministry of Energy and Natural Resources
Republic of Armenia

DEVELOPMENT OF ENERGY SECTOR IN THE REPUBLIC OF ARMENIA

15th Meeting of the Eastern Partnership, Platform 3 - Energy Security,
Brussels, Belgium
24 June 2016

Strategy of Energy development in the Republic of Armenia

- In 24 October 2013 the President of Republic Armenia has signed the ordinance of the Approval of the measures of the energy security ensuring Concept.
- In 31 July 2014 the Government of Republic Armenia has taken a decision on the Approval of the action plan for the ensuring the implementation of the measures of the energy security ensuring Concept.
- Long-term (up to 2036) development pathways for RA energy sector has been approved by government of RA on 10 December 2015.

Energy security ensuring Concept

1. Development of nuclear energy:

- Live time extention program of the second unit of ANPP (up to 2026)
- ANPP decommissioning plan
- New nuclear power plant construction up to 600 MW capasity (2027)

2. Diversification of energy supply :

- Diversify gas supply
- Strengthen regional electricity transmission interconnections
- Modernize and expand gas storage

3. Development of domestic renewable energy and energy efficiency:

- New HPPs at Meghri, Loriberd and Shnokh
- New SHPPs
- Distributed and Utility Scale Solar
- Geothermal potential

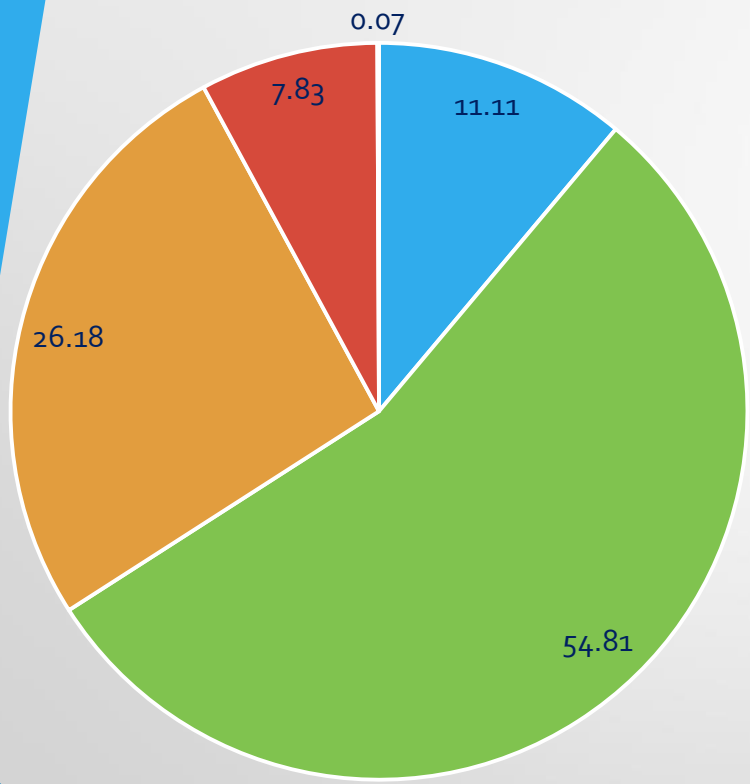
4. Regional Integration and cooperation:

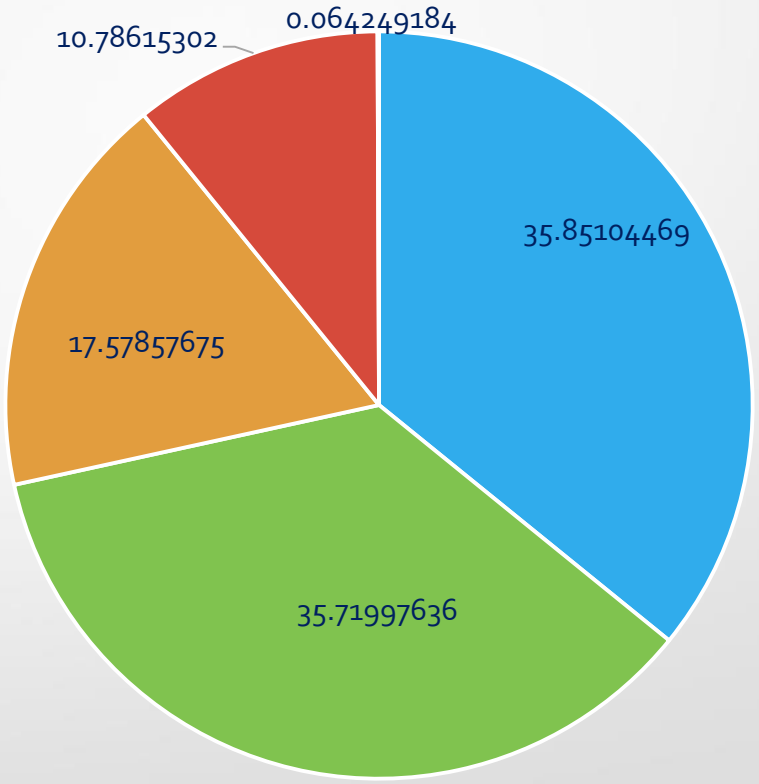
- European Energy Charter
- Economic cooperation for Black sea region
- TASIS, USAID, Innogate progects
- Developing the regional cooperation

Currently Installed Capacities

Currently in operation (strategic projects)	Capacity, MW
Armenian Nuclear Power Plant (new nuclear power unit)	407.5 (up to 600)
Razdan TPP Razdan TPP Unit 5	800 450
Yerevan TPP Yerevan TPP (new combined steam-gaz cycle)	550 210
Sevan Razdan cascade HPP	556
Vorotan cascade HPP	404
Small HPP (New small HPP)	287 (additional 94 MW)
Wind energy (potential of wind energy)	2,6 (200)

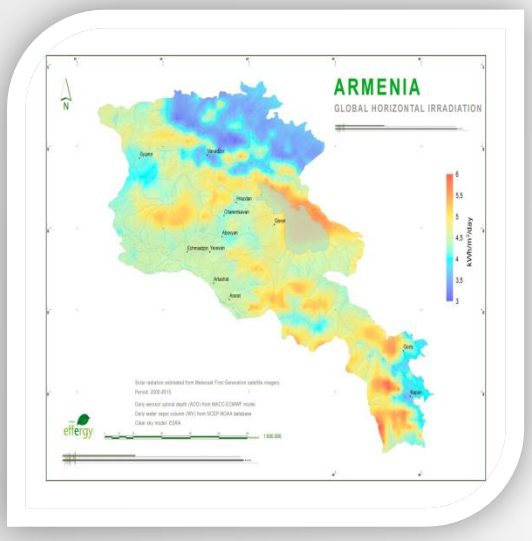
Currently Installed Capacities and Production



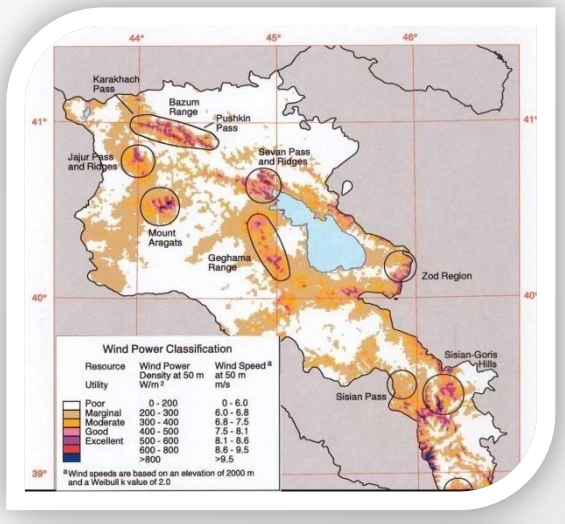


Feasible Renewable Energy by Technology

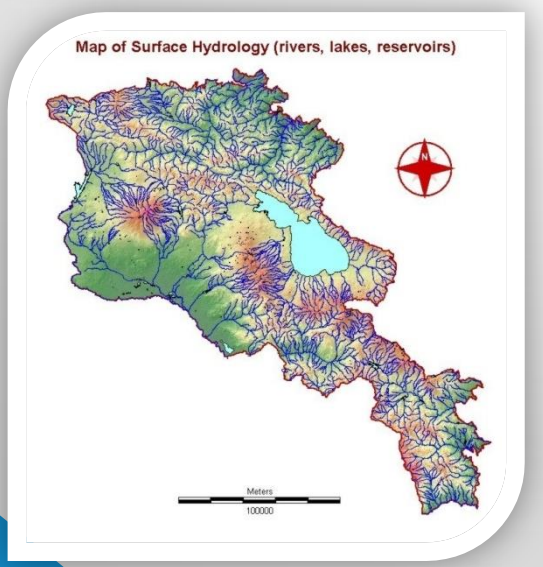
Solar
40MW



Wind
200MW



Hydro
94MW



Geothermal
25MW

Scaling up Renewable Energy Program (**SREP**)

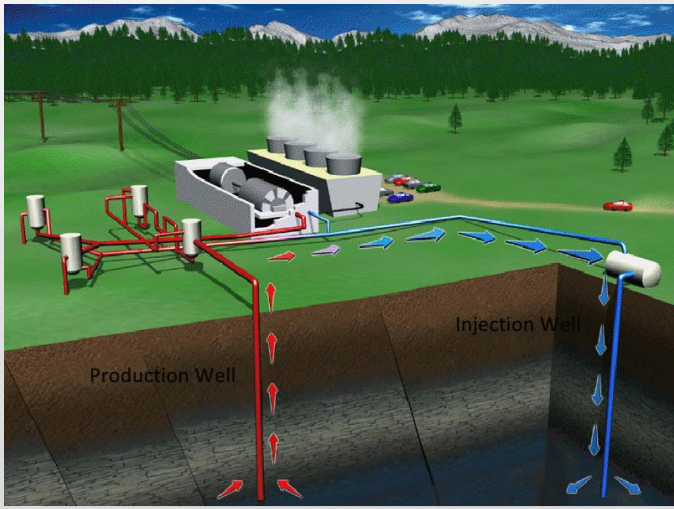
- The objective of the SREP is to pilot and demonstrate the economic, social and environmental viability of low carbon development pathways in the energy sector by creating new economic opportunities and increasing energy access through the use of renewable energy

CLIMATE INVESTMENT FUNDS

Total $40 millions financing through MDBs which will attract additional $242 millions

Scaling up Renewable Energy Program (**SREP**)

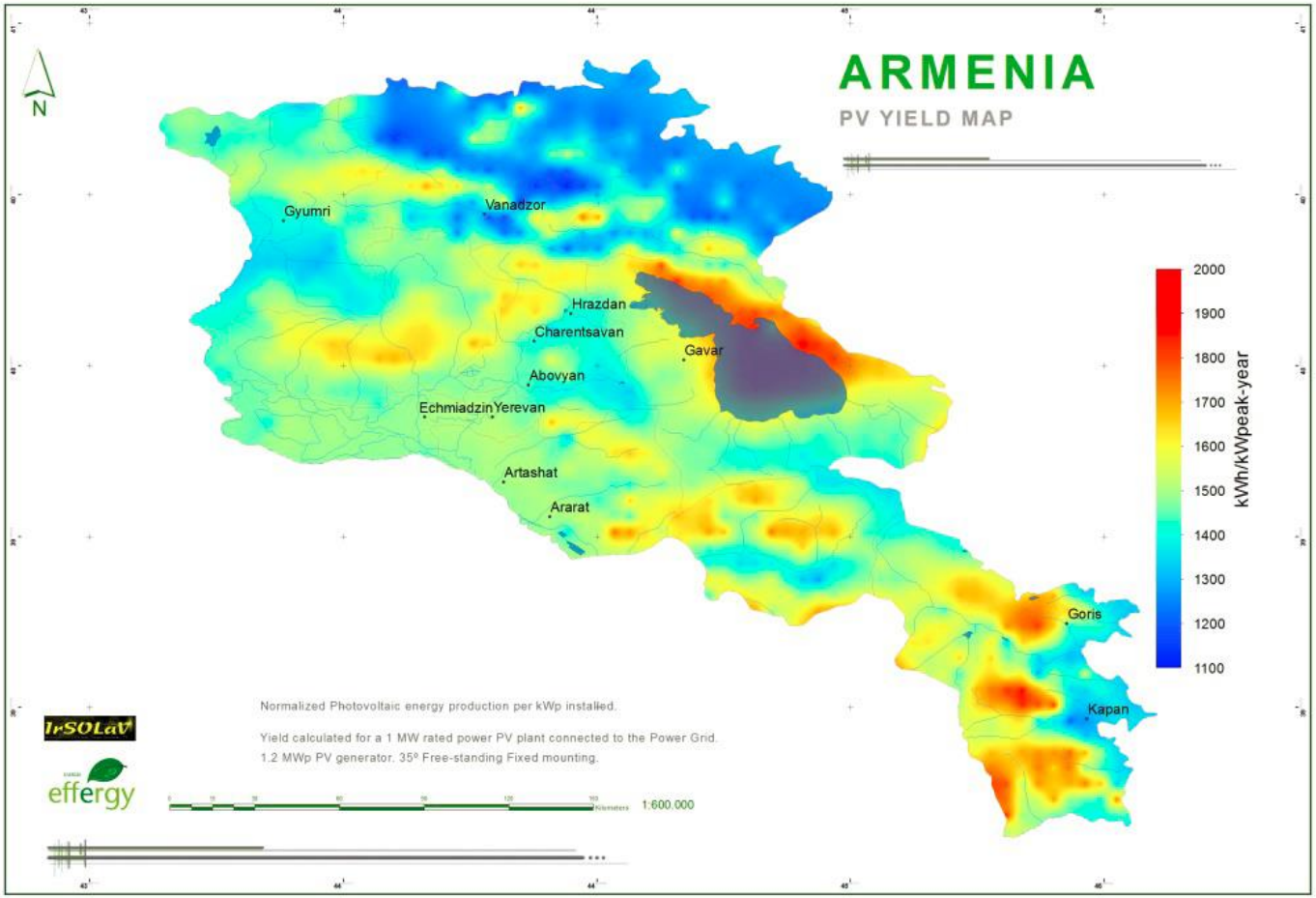
- ✓ Geothermal power exploration and development through exploratory drilling and resource assessment
- ✓ Utility-scale solar PV power plant developments by PPP based on resource assessment and feasibility studies
- ✓ Promotion of geothermal heat pump and solar thermal projects through local banks



SREP Current Developments: Solar PV

- ✓**Solar resource assessment for 4 locations and creation of precise solar resource map is in progress**
- ✓**Feasibility Studies and Transaction Advisory Consultant is preparing the financing scheme and bidding documents for utility scale solar power plants**
- ✓**Feasibility Studies for 6 sites to be completed in summer 2016**

PV Yield Map


ARMENIA
PV YIELD MAP
N
Gyumri
Vanadzor
Hrazdan
Charentsavan
Gavar
Abovyan
Echmiadzin
Yerevan
Artashat
Ararat
Goris
Kapan
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
kWh/kWpeak-year
Normalized Photovoltaic energy production per kWp installed.
Yield calculated for a 1 MW rated power PV plant connected to the Power Grid.
1.2 MWp PV generator. 35° Free-standing Fixed mounting.
1:600.000
effergy

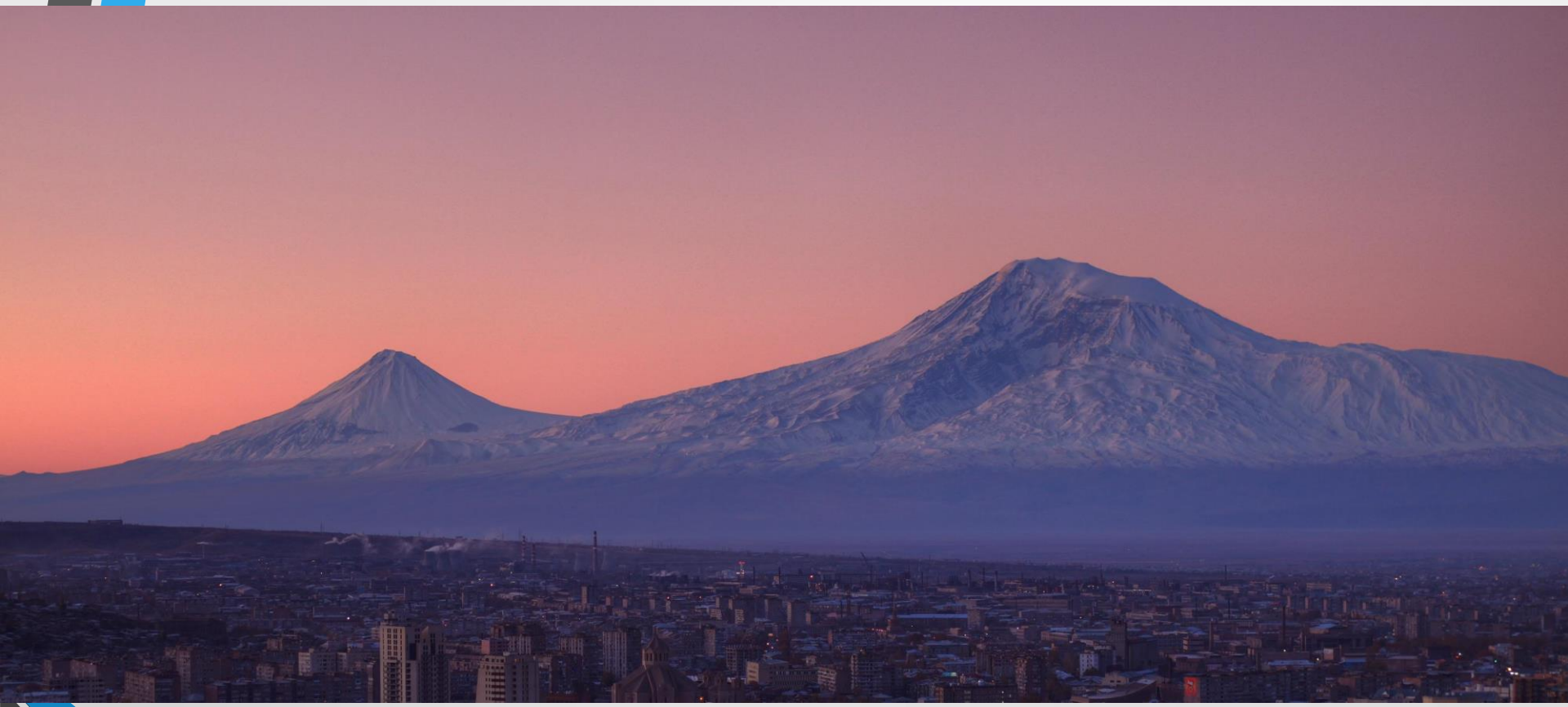
SREP Current Developments: **Geothermal**

- ✓**Construction of the access road to the main explored site is in progress**
- ✓**Exploratory drilling contractor has been selected**
- ✓**Investors to be attracted in 2017-18**

Current situation

- Feed-in Tariffs (FIT) for wind, SHPP and biogas, solar PV (to be decided in late 2016)
- Tariff adjustment mechanism
- PPA 20 years
- <150 kW – no license for RES power plants, net metering is enabled, excess generation sold to the grid.

Thank you!



3 Goverment House , Republic Square, Yerevan, 0010, RA