

Promotion of Energy Efficiency: Ongoing Efforts in the Republic of Armenia



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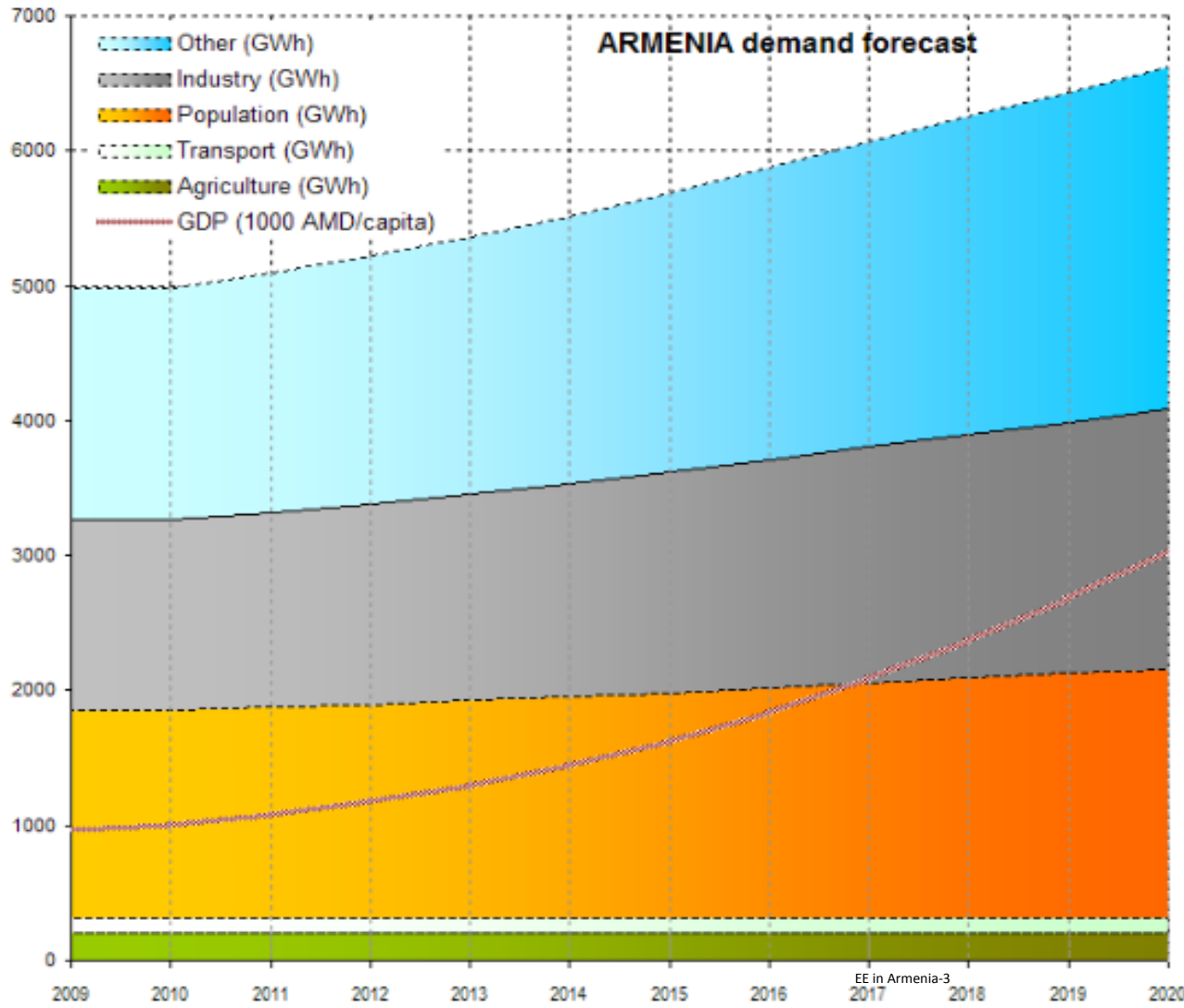
Energy Situation as of 2010-12 documented

Realized Energy Balance - 2010 (ktoe)	TOTAL	Coal	Nuclear Energy	Natural Gas	Oil products	Biomass (Fire wood)
Final energy consumption	1948.033	1.624		900.043	371.620	205.189
Industry	404.082	1.145		219.431	0.000	0.000
Iron and steel	7.873			3.291		
Non-ferrous metal industry	46.134			16.457		
Chemical industry	96.328			32.915		
Glass,ceramics&construction material industry	113.908	1.145		87.772		
Excavating industry	7.345					
Food ,drinks&tabacco industry	75.819			43.886		
Textile ,leather and clothing	7.332			4.389		
Paper and printing	1.232					
Engineering&other metallic industries	9.373			5.486		
Other industry	38.738			25.235		
Transport	499.617			257.871	231.546	0.000
Railway	10.200				0.000	
Road transport	453.417			257.871	195.546	
Air	36.000				36.000	
Other transport	0.000				0.000	
Houshold	695.678	0.479		324.931	11.360	186.535
Agriculture	140.185	0.000			128.714	
Services	208.471	0.000		97.810	0.000	18.654
Statistical difference	11.117	0.000		10.859	0.000	0.000

72%

Source: USAID LEDS Project

Energy demand is forecasted



Y	Total GWh	Demand growth%
2009	4977	
2010	4988.1	0.20%
2011	5094.2	2.10%
2012	5218.2	2.40%
2013	5355.6	2.60%
2014	5517.7	3.00%
2015	5686.7	3.10%
2016	5875.2	3.30%
2017	6063.7	3.20%
2018	6249.8	3.10%
2019	6434.7	3.00%
2020	6614.2	2.80%
		Average%
		2.71%

Source: Armenia Energy Security and Regional Integration Project

EE in Armenia-3

National Legislative Framework for Energy – *new developments*

RA Constitution

Law "On Energy"

Law "On State Technical Supervision in the Spheres of Energy and Energy Consumption"

Law "On Energy Saving and Renewable Energy" (*voluntary*) 2003

- **Amendment passed by Government on 25 Dec 2014 Govt resolution 1504**

Law "On Public Services Regulatory Commission" 2004

Law "On Urban Development"

Law "On Standardization" (*not normative*)

Law on Condominiums

Law on Multi-Apartment Building Management (amendments proposed)

Law on "Technical Regulations"

International Treaties

Energy Charter Treaty Signatory

United Nations Framework Convention on Climate Change

Rio Declaration on sustainable development

Nuclear safety and security conventions

Energy Community Treaty Observer

Eurasian Customs Treaty

EU Covenant of Mayors





Secondary Legislation

Building codes / construction norms

- National, CIS, EU, EvrAzEs,

Standards & Normative-technical documentation

- A set of EU norms and standards transposed by UNDP/GEF IEEB project

Energy Auditing bylaw

- Accredited Training Facility (Scientific Research Institute of Energy)

Technical regulations

- Draft transposing EU EPBD

Government resolution on Mandatory integration of energy efficiency in new construction and all state-funded construction/ reconstruction

Programs and Plans

1. Energy sector development strategy 2005
2. Heating strategy for the Armenian residential areas 2006
3. National program on energy saving and renewable energy 2007
4. National Sustainable Development Program 2008 & implementation plan
5. 1st National Energy Efficiency Action Plan 2012-20
6. National energy security concept 2012
7. Renewable energy roadmap 2014
8. **National energy balance 2010-2012**
9. **Scaling Up Renewable Energy Program Investment Plan 2014**
10. **Nationally Appropriate Mitigation Action (NAMA) Project Proposal Developed for Public Building and Social Housing EE Finance**
11. **2nd National Energy Efficiency Action Plan 2015-2020 (underway)**

Facilitating Investments

Establishment & successful operation of R2E2, public sector EE lending and ESCOs (WB / GEF)

Populated donor & IFI community:

- UNDP/GEF Improving EE in Buildings Project
- EC SUDEP EE&RE for Spitak and Vayk Communities, COMO-East
- EBRD EnergoCredit
- IFC Sustainable Energy Finance
- Green For Growth Fund
- French Development Agency (AFD) Jerm Ojakh /NMC loans
- KfW: (1) EE-integrated reinforcement of Schools;
(2) SME & Housing EE credit lines
- Eastern European Energy Efficiency & Environment Program (E5P)

Challenges

- Promote efficiency of energy use and expansion of renewables
 - **Assessing the competitiveness of various options, prioritizing adequately, managing feed-in-tariffs for various energy generation options based on efficiency, energy security vulnerability, and environmental footprint**
 - **ensuring adequate enforcement of existing energy efficiency requirements in new construction and state-financed investments**
 - **Enforcing net metering regulation to promote RE generation for own consumption by independent producers**
- Ensure affordability of energy and energy efficiency services to low-income population
 - **Assess cost-effectiveness of substituting social assistance with low-income energy efficiency programs and EE-integrated construction/reconstruction**
- Develop legal amendments (or new legislation) to eliminate investment barriers in housing sector EE projects

Broader Perspective

- Build on Banking Sector Capacity
- Utilized guarantee funds as a loan security tool
- Redirect local government budgets for condominium support for loan leveraging
 - Integrate co-financing into the local sustainable energy agendas
- Raise IFI/donor support for project development
- Integrate residential building refurbishment and comprehensive thermal modernization into nationally appropriate mitigation actions
- Adequately prioritize building energy efficiency based on cost-optimality among competing energy sector priorities
- Open the market for near-zero, zero-, green-, negative and other energy – friendly buildings
- Keep the need for thermo-modernization and efficient and green building sector on the green economy and sustainable development agenda!

Thank you!

Questions?



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