

Status of Energy Efficiency in Afghanistan

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Kathmandu, Nepal

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RE and EE Structure in Afghanistan

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- Energy Sector in Afghanistan
- **EE** and **RE** Authorities in Afghanistan
- **EE** and **RE** Laws and Policies in Afghanistan
- **EE** and **RE** Status in Afghanistan

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Energy Sector Goal in Afghanistan

Afghanistan's Energy Sector Strategic goal is to provide sustainable power supply, at affordable prices, and in an environmentally sound manner, for economic growth, and to improve living standards.

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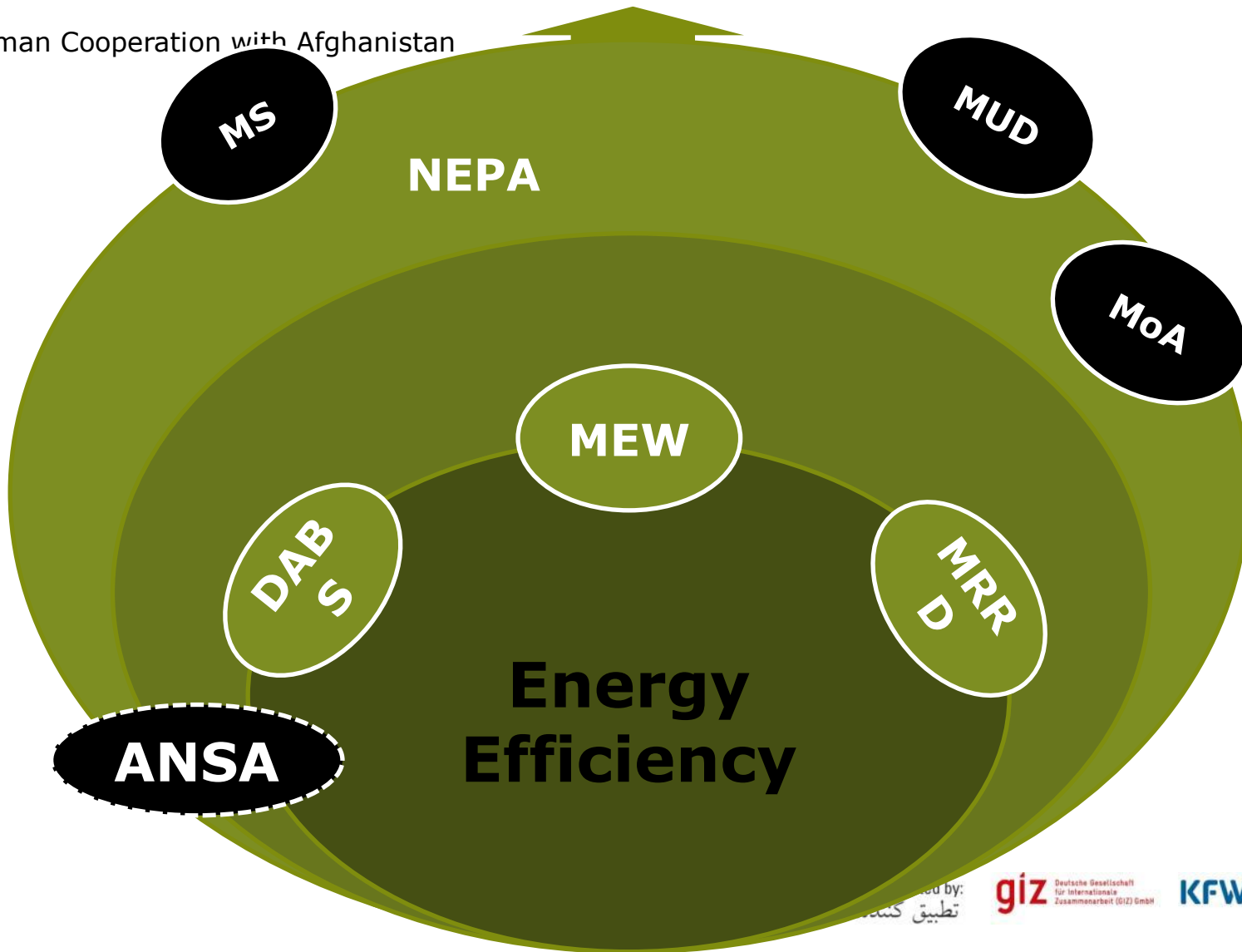
EE and RE Responsible Authorities in Afghanistan

- ➔ Da Afghanistan Brishna Sherkat (DABS)
- ➔ Ministry of Energy and Water (MEW)
- ➔ Ministry of Rural Development (MRRD)
 - Afghan National Standards Authority (ANSA)
 - Ministry of Urban Development (MUD)
 - Municipality in the national and provincial levels
 - Ministry of Agriculture (MoA)

EE in Energy Sector

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International Collaboration
(Finance, Capacity Building, Innovation Activity, etc.)



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Afghanistan Power System Development

- Utility (DABS) customers connected to the National Grid have increased on more than 60% within the last 6 years.
- This is the result of the construction of North East Power System (NEPS), transmission system, that interconnects Uzbekistan and Tajikistan to Afghanistan and the expansion of the Distribution Network

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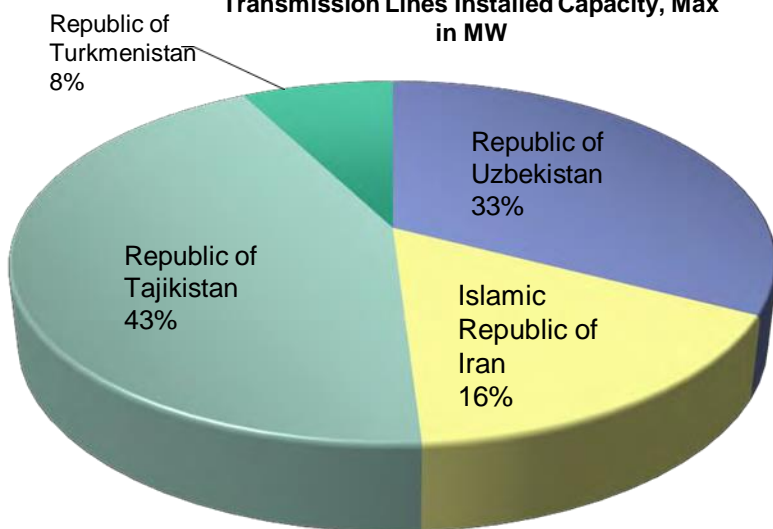
Afghanistan Power System Development

- Power generation in Afghanistan is mainly hydro-power.
- Access to electricity in the major economic hubs has improved significantly.
- More than 75% of the population in Kabul, Herat, Mazar-e Sharif, Kunduz, Zaranje, Aybak, Maymana and Pul-e Khumri have a 24-hour power supply for the first time in decades.

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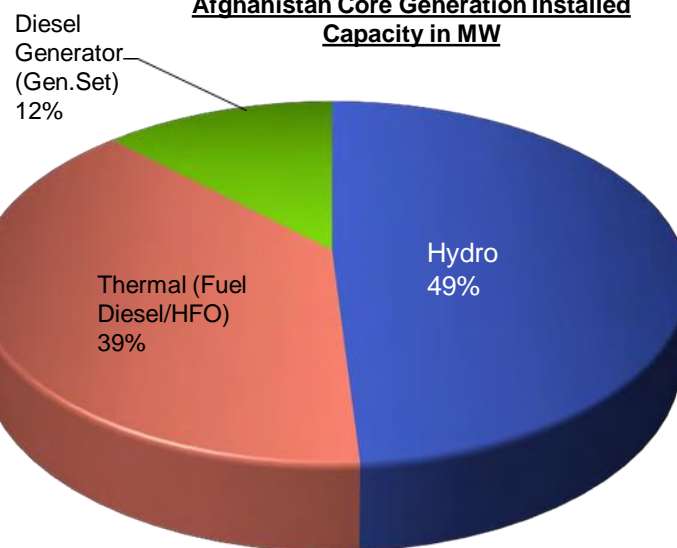
Afghanistan on Grid Generation / Transmission Profile

Transmission Lines Installed Capacity, Max in MW



Republic of Uzbekistan	326
Islamic Republic of Iran	164
Republic of Tajikistan	433
Republic of Turkmenistan	77
Total	1,000

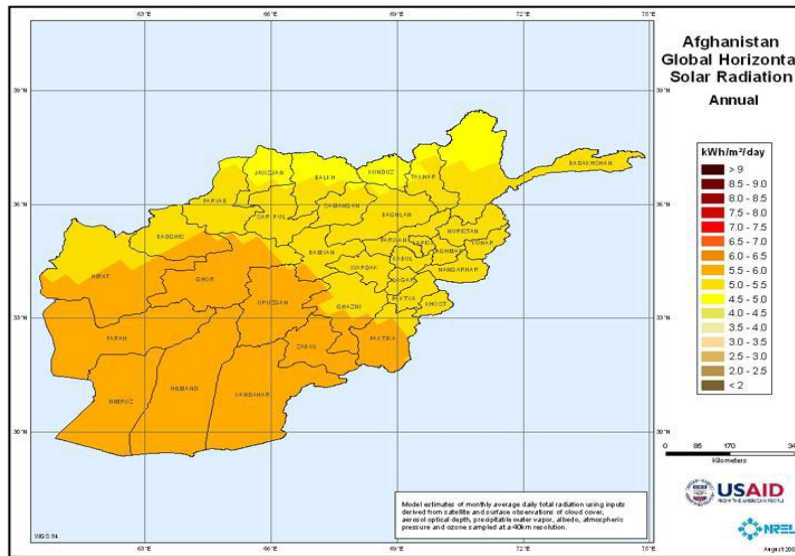
Afghanistan Core Generation Installed Capacity in MW



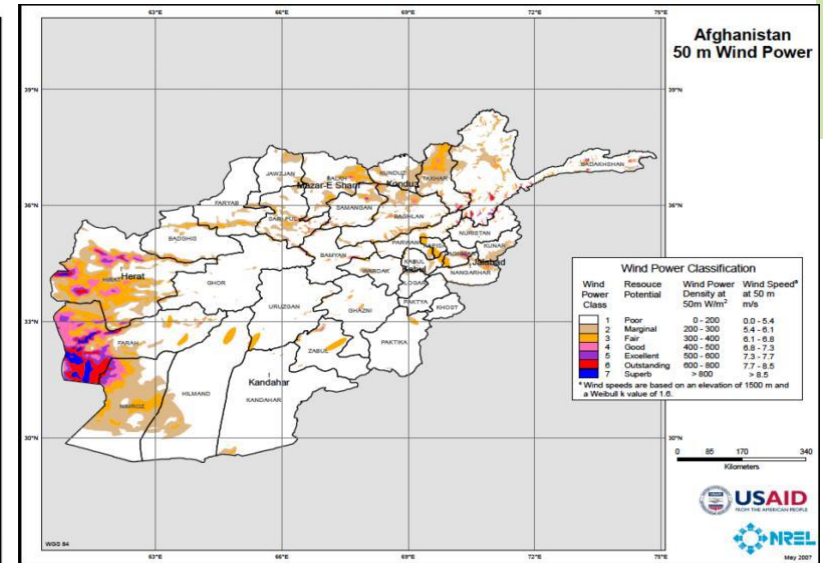
Hydro	254
Thermal (Fuel Diesel/HFO)	200
Diesel Generator (Gen.Set)	65
Total	519

Renewable Energy Potential

Solar Radiation Assessment



Wind Potential Assessment



Afghanistan's Renewable Energy Projects and Potential Summary Under 1MW

Status	Number	Capacity (MW)
Renewable Energy Projects Completed	5,046	60
Renewable Energy Projects Surveyed	87	100
Afghanistan's Feasible Solar Energy Potential	222,000 MW	
Afghanistan's Feasible Wind Energy Potential	66,000 MW	
Afghanistan's Feasible MHP Energy Potential	23,000 MW	
Afghanistan's Feasible Biomass Energy Potential	20,000 MW	

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EE and RE Laws and Policies in Afghanistan

- Afghan Building Code (ABC)
- Afghan Energy Efficiency Code for Building (AEECB)
- Renewable Energy Policy (REP)
- Afghan Energy Efficiency Policy (AEEP)
- Afghan Electric Standards



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Energy Efficiency Status in Afghanistan



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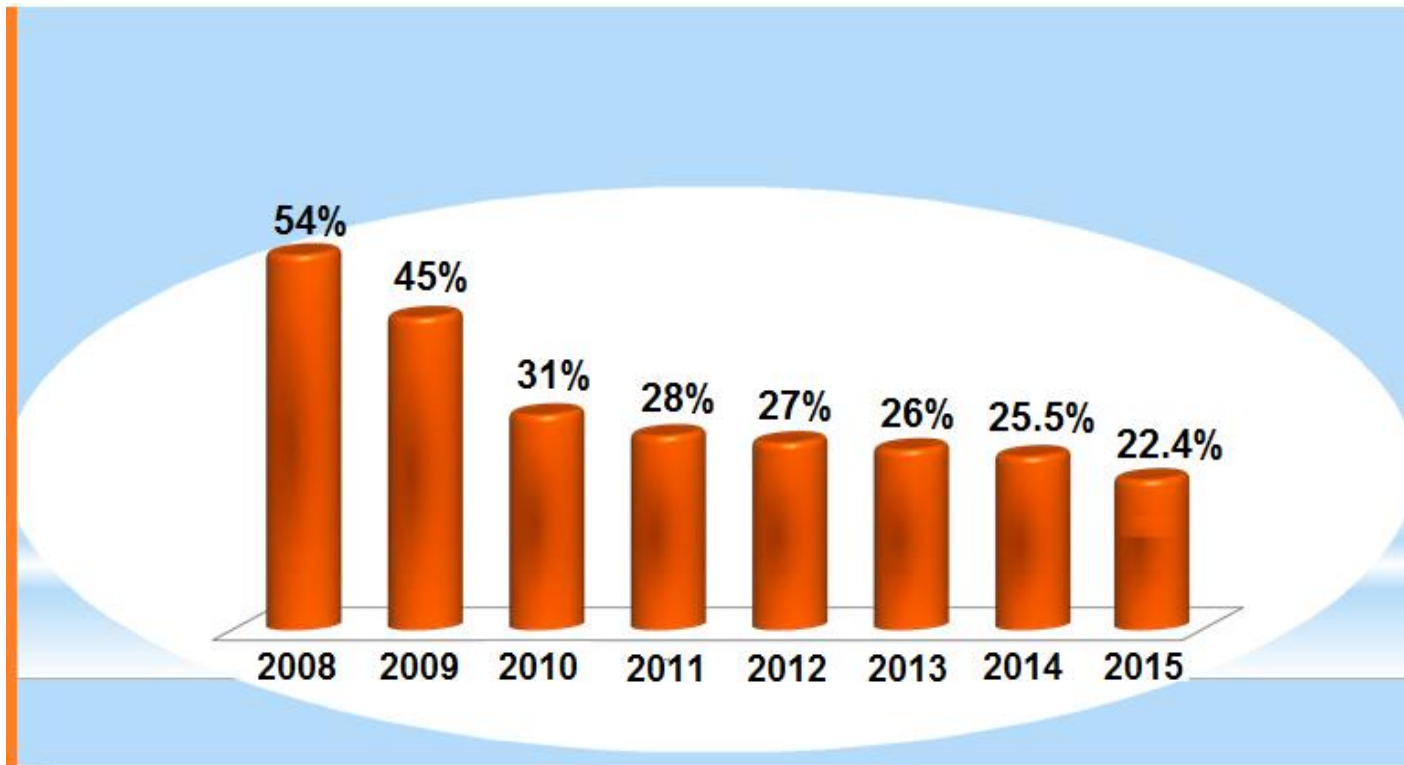
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- Energy Efficiency in Electricity Grid
- Energy Efficiency in Building
- Utility Journey toward Energy Efficiency
- Ways to improve Energy Efficiency
- Utility Plan for Energy Efficiency



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Energy Losses Profile



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Technical and Commercial losses



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Reduce Technical and Commercial Loses



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Utility Division Plan for Energy Efficiency

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- Expansion of the CIS system.
- New customers service facilities.
- New contract with financial institutions (Bank) on account of online services for DABS Customers
- Customer's meter reading with Handheld device.
- Mobil (Cell phone) Payment.
- Replacing the analogue meters with digital meters.
- Identification of zone for energy losses reduction .
- Launching computerized billing system in serviced provinces .



Utility Division Plan for Energy Efficiency

1. Training of staff (for better O & M) of system
2. Survey for identification of grid defects
3. Development of Generation plans
4. Transmission line maintenance
5. Decreasing the number of over loaded feeders
6. Decreasing the number of over loaded Transformer stations
7. Load management

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Improvement plan for Energy Efficiency

- Standardizing the system
- Foundation for certification and testing systems
- Supporting Renewable Energy programs
- Develop and recommend specific energy conservation building codes
- Minimizing costs of repairs
- Rehabilitation programs
- Introducing advanced technology with greater efficiency

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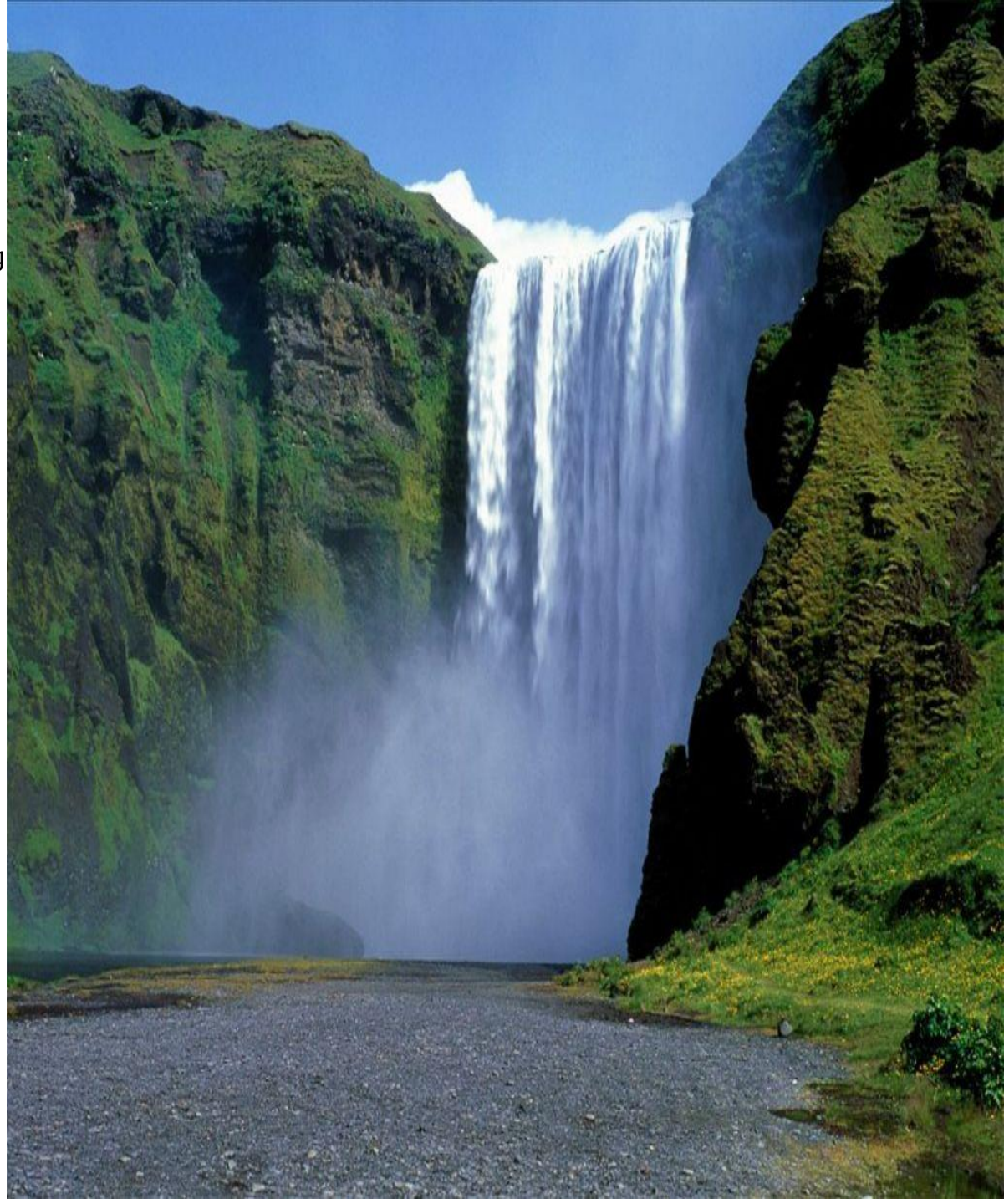
Ways to Improve Energy Efficiency

- Creating Bureau of Energy Efficiency (BEE) as the nodal agency at the center to implement the Act.
- Improving Vocational Training Centers.
- Take necessary measures to create awareness for efficient use of energy and its conservation.



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Please Save Energy





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Thank You!



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