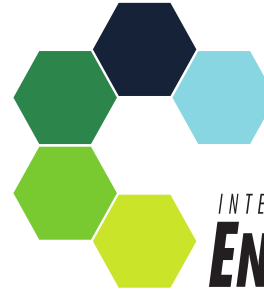




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# ENERGY EFFICIENCY GOVERNANCE

**National Capacity Building Workshop**  
**Baku, Azerbaijan**  
**24 October 2017**



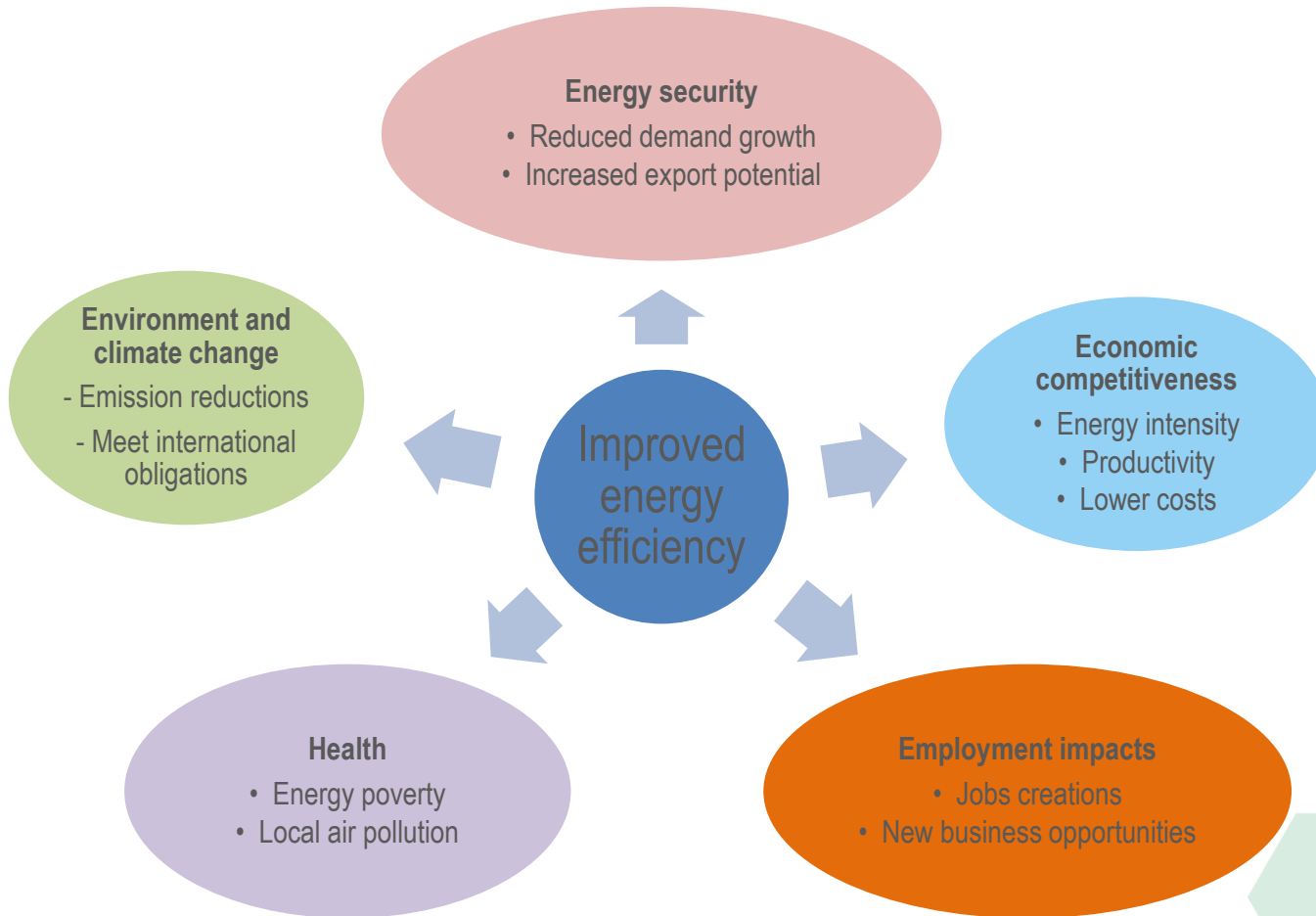
Funded under the EU4Energy Initiative of the European Union



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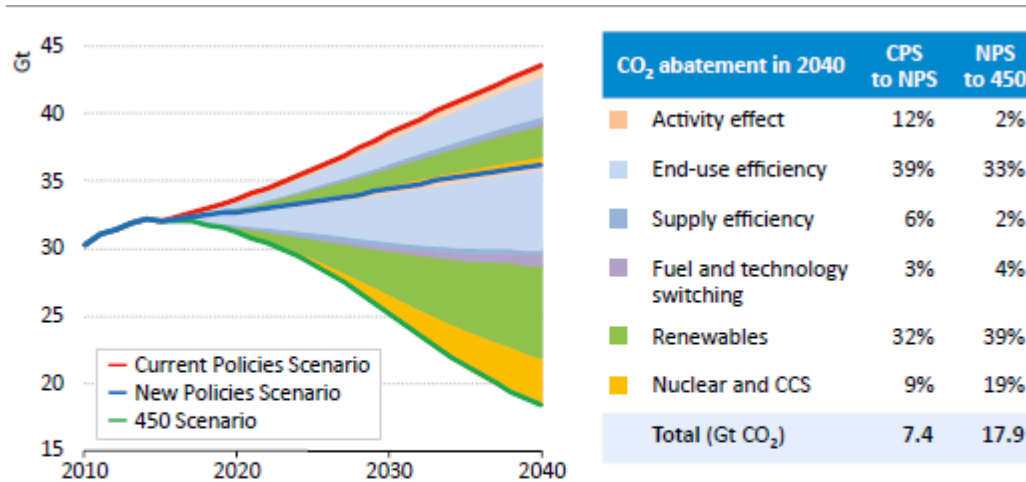


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*Energy efficiency is a key abatement measure in the New Policies and the 450 Scenario*

Notes: CPS = Current Policies Scenario; NPS = New Policies Scenario; CCS = carbon capture and storage.

• Source: IEA energy outlook 2016

- AZ has committed itself to a **35% reduction** in the level of greenhouse gas emissions **by 2030** compared to 1990 as its contribution to global efforts to mitigate climate change.

- Globally, EE has the potential to contribute to **35% - 45 % of CO<sub>2</sub> emission reduction by 2040**
- Majority of the potential lies in end-use sectors – buildings, lighting, industry, transport
- Supply side only accounts for 2-6 % of global potential



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# What is *EE* Governance

## *Enabling Frameworks*

*Laws and Decrees*

*Strategies and Plans*

*Government Policies*

*Funding Mechanisms*

## *Institutional Arrangements*

*Implementing Agencies*

*Role of Energy Providers*

*Funding Mechanisms*

*Private Sector Cooperation*

*Stakeholder Engagement*

*International Cooperation*

## *Coordination Mechanisms*

*Targets and Goals*

*Inter- and Intra-  
Governmental Coordination*

*Evaluation and Oversight*





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# Main challenges to energy efficiency

- Energy efficiency – energy or economic, social and quality of life matter?
- Policy, legislative and Institutional framework?
  - National policy goals and objectives do not reflect the potential for energy efficiency
  - Legal framework is underdeveloped
  - Lack of/Under resourced national institutions for energy efficiency
  - Monitoring and review of implementation
  - Energy statistics and energy efficiency indicators



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# Main challenges to energy efficiency

- Energy market
  - Energy sector reform is still ongoing or not started
  - Non-cost reflective energy pricing policy
- Availability of specific regulations – buildings, district heating, energy using products, lighting, transport
- Local authorities self governance
- Availability of financing - financial mechanisms and incentives
- General awareness on energy efficiency



<i>Level of EE implementation</i>	<i>Belarus 2012</i>	<i>Azerbaijan 2012</i>	<i>Ukraine 2013</i>	<i>Kazakhstan 2014</i>	<i>Moldova 2015</i>
<i>EE Policy and legislation</i>	Advanced	Intermediate	Basic	Intermediate	Basic
<i>Institutional setting</i>	Intermediate	Low	Basic	Intermediate	Basic
<i>Energy sector reform</i>	Intermediate	Intermediate	Intermediate	Basic	Intermediate
<i>Cost reflective energy prices</i>	Basic	Basic	Basic	Basic	Advanced
<i>Specific EE regulations</i>	Basic	Low	Basic	Intermediate	Basic
<i>Financial incentives</i>	Low	Low	Low	Low	Low
<i>ESCO</i>	Intermediate	Low	Intermediate	Intermediate	Intermediate
<i>General public awareness</i>	Intermediate	Intermediate	Intermediate	Intermediate	Intermediate

Low (L) – no existence and no intention to develop;

Intermediate (I) – intention to start developing;

Basic (B) – regulations exist in draft or just adopted;

Advanced – EE activities under implementation

# Examples of Government Policies for EE



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Sector	Control Mechanisms, Regulations & Requirements	Fiscal Measures, Pricing Mechanisms & Tax Incentives
<b>Appliances &amp; Equipment</b>	<ul style="list-style-type: none"> <li>• Minimum energy performance standards;</li> <li>• Penalties for inefficient or fuel-consuming equipment</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced VAT or sales tax on purchasable EE products;</li> <li>• Import duty exemptions;</li> <li>• Direct procurement of EE products by government</li> </ul>
<b>Buildings</b>	<ul style="list-style-type: none"> <li>• Thermal building codes</li> </ul>	<ul style="list-style-type: none"> <li>• LEED incentives</li> </ul>
<b>Large energy consumers</b>	<ul style="list-style-type: none"> <li>• Energy audits;</li> <li>• Energy managers;</li> <li>• Energy management systems</li> </ul>	<ul style="list-style-type: none"> <li>• Tax credits and accelerated depreciation for EE investments;</li> <li>• Inverted block rates</li> </ul>
<b>Utilities</b>	<ul style="list-style-type: none"> <li>• Obligations</li> </ul>	<ul style="list-style-type: none"> <li>• Cost recovery mechanisms for utilities carrying out mandated EE activities</li> </ul>
<b>Vehicles</b>	<ul style="list-style-type: none"> <li>• Minimum energy performance standards</li> </ul>	<ul style="list-style-type: none"> <li>• Gasoline taxes;</li> <li>• Vehicle access charges</li> </ul>





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# EE Regulations and Requirements ("sticks")

Country	Mandated Energy Audits for Large Energy Consumers	Energy Savings Obligations for Public Buildings	Mandated EE Activities for Utilities		
			generation	transmission	DSM
Belarus	✓	✓			
Czech Republic	✓	✓			
France	✓	✓	✓	✓	✓
Germany	✓	✓			
Greece	✓	✓			✓
Italy	✓	✓			
Kazakhstan	✓				
Russia	✓	✓	✓	✓	
Sweden		✓		✓	
Turkey	✓	✓			
Ukraine	✓				
United Kingdom				✓	✓



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# EE Fiscal and Financial Measures ("carrots")

Country	Tax incentives for large consumers investing in EE	Public procurement of EE products and services	Cost recovery mechanisms for utilities with EE mandates
Belarus		✓	✓
Czech Republic		✓	✓
France		✓	
Germany	✓	✓	
Greece		✓	✓
Italy	✓	✓	✓
Kazakhstan	✓		✓
Russia		✓	✓
Sweden		✓	
Turkey		✓	
Ukraine			✓
United Kingdom	✓	✓	✓





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# Organisational Types for Implementing EE Policies

- *Several types:*
  - *Generalised government energy agencies with an EE department*
  - *Specialised government EE agencies*
  - *Combined EE/clean energy agencies;*
  - *Independent authorities and state-owned corporations*
  - *NGOs*
  - *EE public private partnerships*
  - *Utilities / energy providers as EE institutions are starting to emerge*
- ***The most successful EE agencies have a firm legal and a permanent statutory basis***

# Examples of EE Organisational Types

Organisational Type	Country	Organisation
Department within a government energy agency	Canada China Indonesia Russia Singapore Sweden Thailand Turkey	Natural Resources Canada National Development & Reform Commission Ministry of Energy and Mineral Resources Russia Energy Agency National Environment Agency Swedish Energy Agency Ministry of Energy Ministry of Energy and Natural Resources
Specialised governmental energy efficiency and clean energy agencies	Brazil Czech Republic Hungary India New Zealand Tunisia Ukraine	Procel ICE Group The Energy Centre Bureau of Energy Efficiency Energy Efficiency and Conservation Authority National Agency for Energy Management National Agency for Efficient Use of Resources
Independent energy efficiency and clean energy statutory authority or corporation	Costa Rica Finland Korea Norway	ICE Group Motiva Oy Korea Energy Management Corporation ENOVA
Energy efficiency and clean energy NGO or public benefit organisation	Jordan United Kingdom	National Energy Research Centre Energy Trust and the Carbon Trust
Energy efficiency and clean energy PPP	Chile	Chilean Energy Efficiency Agency



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# Pros & Cons of Organisational Types

	Access to decision makers	Access to resources	Credibility	Cultural benefits	Firm basis in law / permanent arrangement	Independence and autonomy	Influence on policy and legislation	Coordinate / line up with Government Policies	Salary and staff
<i>Division within a Government Energy Agency</i>	+					-	+	+	-
<i>Specialised Government Agency, or combined with a Clean Energy Agency</i>			+	+	+	-		+	-
<i>Independent Statutory Authority or Corporation</i>		+		+	+	+			
<i>NGO</i>	-	-	+	+	-	+		-	
<i>Public Private Partnership</i>	-	+		+	-	+		-	
<i>Utilities / Energy Providers</i>		+						-	



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# Pros & Cons of Organisational Types

	<i>Division within a Government Energy Agency</i>	<i>Specialised Government Agency, or combined with a Clean Energy Agency</i>	<i>Independent Statutory Authority or Corporation</i>	<i>NGO</i>	<i>Public Private Partnership</i>	<i>Utilities / Energy Providers</i>
<i>Access to decision makers</i>	+			-	-	
<i>Access to resources</i>			+	-	+	+
<i>Credibility</i>		+		+		+
<i>Cultural benefits</i>		+	+	+	+	
<i>Firm basis in law / permanent arrangement</i>		+	+	-	-	
<i>Incentive to meet demand growth</i>						+
<i>Independence and autonomy</i>			+	+	+	
<i>Influence on policy and legislation</i>	+			-		
<i>Policy Coordination</i>		+/-		-	-	
<i>Taking decisions</i>	-					
<i>Salary and staff, turnovers</i>	-	-				
<i>Societal interests</i>	+	+	+	+		-



***THANK YOU***

# EE Obligations on Demand-Side Energy Companies



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	Obligations on a Distribution Company	Obligations on an Energy Supplier
Advantages	<ul style="list-style-type: none"> <li>Stable source of revenue as a regulated monopoly is not subject to market competition;</li> <li>Energy regulator is used to dealing with variations in the size of the obligated distributor</li> </ul>	<ul style="list-style-type: none"> <li>Closer contact with end-use customer;</li> <li>Still viewed by customers as the place to ask about EE;</li> <li>In a competitive market, suppliers have more marketing skills than regulated monopolies;</li> <li>Could encourage an energy service approach;</li> <li>Provides a recognised brand that can help overcome some of the concerns in relation to the installation of building fabric measures in homes.</li> </ul>
Essential Requirements	<ul style="list-style-type: none"> <li>Distributor revenue decoupled from the volume of electricity and gas transported;</li> <li>Costs recovered through distribution price control;</li> <li>Distribution has infrastructure and systems to manage delivery or procurement of eligible energy savings.</li> </ul>	<ul style="list-style-type: none"> <li>Price transparency to government or energy regulator to assure customers that imposition is modest;</li> <li>Not a barrier to market entry for new or smaller energy suppliers</li> <li>Reduce conflict of interest if the supplier has an energy efficiency business within the group</li> </ul>
Disadvantages	<ul style="list-style-type: none"> <li>Little contact with end users, especially those with small energy demand;</li> <li>Unknown brand to small users for some distributors.</li> </ul>	<ul style="list-style-type: none"> <li>Can exert control on supply of EE;</li> <li>Prices may not always be as transparent as government would wish.</li> </ul>