Chapter 2. Commercial and residential sub-sector

2.1. Action at sectoral level

The commercial and residential sectors have been considered main sources of GHG emission, as emissions from these sectors have had an increasing tendency over the years.

Issues related to energy efficiency have been indicated in “the law on use of energy resources”, adopted in 1996. Although the government has not defined the strategy for prioritized technologies in this sub-sector, there are some existing initiatives to promote use of high efficiency lighting systems.

Biogas application has been supported by different local and international donors, however all initiatives were local. It should be mentioned that those initiatives were not sustainable, as project activities were not followed by appropriate awareness-raising and financial components. With regard to heating pumps, there are no specific policies or programmes related to this technology.

Major barriers to technology deployment could be categorized as economic/financial, capacity building/information, policy/regulatory, technology, environmental and social barriers. High cost of investments/infrastructures, low level of awareness and capacities, and social barriers could be mentioned as main barriers to technology application.

According to rough estimates, deployment of prioritized technologies, such as high efficiency lighting systems, heating pumps and biogas for heating/cooking and efficient stoves, will lead to a total of 32.7 MT GHG emission reductions by the year 2030.

2.2. Action plan for high efficiency lighting systems technology

Despite the fact that there are no specific policies or regulations related to high efficiency lighting systems, energy efficiency is always a priority issue for the government. Presently, there are no subsidy or grant mechanisms for private initiatives related to application of high efficiency lighting systems in the commercial and residential sector.

Application of high efficiency lighting systems technology lines with the country’s social, economic and environmental development priorities. With regard to the country’s social development priorities, it improves livelihood of the population by reducing energy costs.

Regarding the country’s economic development priorities, the technology contributes to security of energy supply and generates new manufacturing sectors, leading to the reviving of that economic sector.

With regard to the country’s environmental development priorities, application of the technology contributes to the government’s strategy to provide more environmentally sound energy supply.

According to rough estimates, for the year 2030, total GHG emission reduction will be 23 million tons of CO_2.

Regarding the mechanisms and institutional arrangements for deployment of high efficiency lighting systems technology, it should be mentioned that the key institution involved in the implementation of measures will be the Azerenergy Company under State Oil Company of Azerbaijan Republic.

During the preparation of TAP for high efficiency lighting systems technology, measures have been assessed taking into account their priorities, time scale, related stakeholders, key indicators for measuring implementation and funding resources.

TAP for the technology is provided in table 5.

Table 5: TAP for high efficiency lighting systems technology

#	Measures	Priority	Why it is important	Time scale	Related stakeholders, implementers	Key indicators	Risks	Funding sources	Costs
Policy and regulatory									
1	Develop a package of recommendations for improvement of enabling environment, including subsidy mechanism and tax regulations, in order to stimulate private sector initiatives	Medium	- Create enabling environment for private sector initiatives	0-5 years	SOCAR, MIE, MED, National Parliament, NGOs	- New subsidy mechanism and tax regulations related to sector	- Lengthy state procedures and bureaucracy leading to slow endorsements of proposed recommendations	State	$ 300,000
2	Develop standards and certification process	High	- Put in place standards and certification procedures	0-5 years	MIE, Standardization and Patent Agency under MED	- Standards and certification procedures in place	- Lengthy state procedures and bureaucracy leading to slow endorsements of proposed measures	State	$ 100,000
Economic/financial									
3	Develop mechanism for provision of long-term and low-interest loans, as well as grants through state, private and international funds	High	- Create easy access to affordable loans	0-5 years	MED	- Easy access to funds created	- Low interest of financial institutions - Insufficient state funds	State, International	$ 100,000
Information/capacity building									
4	Capacity building programs for local authorities, communal units, private sector and residents	High	- Increase capacity on technology deployment	0-5 years	SOCAR, MIE, NGOs	- Improved capacity in energy efficiency	- Low interest of local authorities, communal units, private sector and residents	State, International	$ 400,000
5	Information campaigns on the advantages of applied technology	High	- Raise awareness on advantages	0-5 years	SOCAR, MIE, NGOs	- Increased awareness in energy	- No major risk	State, International	$ 250,000

#	Measures	Priority	Why it is important	Time scale	Related stakeholders, implementers	Key indicators	Risks	Funding sources	Costs
						efficiency			
Other measures									
6	Develop mechanism for waste management of used bulbs	Medium	- Decrease environmental risks from hazardous wastes	0-10 years	Azerenergy, SOCAR, local executive committees and local authorities	- Specific mechanism for waste management of used bulbs in place	- Poor coordination among respective organizations	State, International	$ 350,000
7	Implementation of pilot projects at municipal or community level to demonstrate advantages of the technology	Medium	- Demonstrate practical application	5-10 years	MIE, SOCAR, MED, NGOs	- Increased level of awareness	- Weak collaboration of related organizations	State, International	$ 750,000