



ECO Secretariat Staff Papers

ECO Clean Energy Centre:
An attempt towards regional resilient energy architecture

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ECO Clean Energy Centre: An attempt towards regional resilient energy architecture

It is evident that today both the developed and developing countries move towards sustainable energy and “green economy”. The global trend of the steadily increasing share and dynamics of clean energy sources in the energy mix necessitates focused attention and strong contribution by all stakeholders, including regional intergovernmental organizations such as ECO.



Rationale and Objectives: Why Clean Energy?

Over the past few years, ECO has been experiencing the paradigm shift in energy cooperation towards energy efficiency and renewables, in line with their particular complementary role in ECO`s overall energy mandate. These endeavours are motivated by the ECO Member States` stance for promoting energy efficiency policies, whereas their tremendous unfolded potential in clean energy is a built-in regional advantage making ECO Region more competitive vis-à-vis neighbouring and other regions.

Some ECO Member States have set ambitious renewable energy targets in power electricity and different sub-sectors of renewables, which is illustrated in the below table.

Country	Sector	Target
Afghanistan	Electricity	100% share of RES in power generation by 2050
Azerbaijan	Electricity	1 GW by 2020 20% share of RES in power generation by 2020
Iran	Solar and wind power	5 GW by 2020
Kazakhstan	Electricity Bio-power Hydropower Solar power Wind power Primary energy mix	1.04 GW by 2020 15 MW by 2020 539 MW by 2020 713 MW by 2020 1.8 MW by 2020 50% share of RES in power generation by 2030
Kyrgyzstan	Renewables	100 MW by 2025
Pakistan	Electricity Primary energy mix	10,000 MW by 2030 10% share by 2015
Tajikistan	Hydropower (small-scale)	100 MW by 2020
Turkey	Bio-power from solid biomass Geothermal Hydropower Solar Wind	1 GW by 2023 1 GW by 2023 34 GW by 2023 5 GW by 2023 20 GW by 2023 30% share of RES in power generation by 2023

Source: REN21¹

¹ Compiled based on “Global Status Report by Renewable Energy Policy Network for the 21st Century” (REN21)

With these in mind, ECO strives for building up diverse and resilient energy architecture in the ECO Region supported by transformation to cleaner and sustainable energy sources. To achieve this goal, ECO is pursuing proactive cooperative policy with other international organizations, and is keen on promoting and implementing UN Agenda 2030 for Sustainable Development, SDGs with their relevant energy and environment-related objectives, as well as UN Secretary General's Sustainable Energy for All (SE4ALL) initiative. ECO thus continues to add more weight to its profile on energy efficiency-related cooperation.

Background and Prioritization in "ECO Vision 2025"

The idea of establishment of ECO Regional Centre for Clean Energy (hereinafter the Centre) was initiated by ECO Secretariat as the outcome of ECO-UNIDO consultations held in Vienna and Tehran in the past few years. The 69th session of the UN General Assembly in its Resolution A/RES/69/111 on Cooperation between UN and ECO, adopted on 10 December 2014, underlined the special and increasing role of renewables to support sustainable energy development and welcomed the idea of establishment of a regional energy centre with possible assistance of the UN agencies².

ECO Secretariat made initial attempts to stimulate policy debates for development of appropriate frameworks for regional partnerships during the 1st, 2nd and 3rd meetings of ECO Experts Group on Renewable Energy Sources held in Tehran (2011), Baku (2013) and Kabul (2014) respectively. However, building a momentum for cooperation in renewables and energy efficiency requires focusing on synergy impacts and enhancement of regional concerted actions.

"ECO Vision 2025" - recently endorsed at 22nd Council of Ministers - stipulates the enhancement of energy security and sustainability through wider energy access and trade as ECO's strategic objective. It is noteworthy that 3 out of 8

² Resolution adopted by the General Assembly on 10 December 2014 - 69/111 - Cooperation between the United Nations and the Economic Cooperation Organization, p. 4, Para 18

http://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/69/111

expected outcomes in energy segment of “ECO Vision 2025” directly refer to clean energy and energy efficiency goals. In this respect, the establishment of ECO Clean Energy Centre is explicitly reflected among them³.

UNIDO’s experience in setting up similar centres

UNIDO has been engaged in a number of similar centres around the globe and its best practices seem promising and encouraging for ECO Region. UNIDO’s experience demonstrates that to create a regional renewables and energy efficiency market, it is crucial for the centres to stimulate as much as possible spill-over effects across result areas and national borders. Any such centre should primarily focus on activities and projects with regional impact or national projects which demonstrate high potential for scaling-up or regional replication. The expanding south-south multi-stakeholder partnership comprises various UNIDO-supported Centres in Africa, the Caribbean, the Pacific and in other regions.

The process of establishment of UNIDO-supported centres was initiated almost ten years ago with the establishment of ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE) and the Regional Centre for Renewable Energy and Energy Efficiency (RCREEE). ECREEE covers the Economic Community of West African States (ECOWAS) whereas this Organization has gradually taken steps to mainstream renewables and energy efficiency into its regional activities and policies, while RCREEE aims at enabling and increasing the adoption of renewable energy and energy efficiency practices in the Arab region through its solid alliance with the League of Arab States. These two centers have eventually advanced to higher operational phases of development.

Later on, East African Centre for Renewable Energy and Energy Efficiency (EACREEE), Southern African Centre for Renewable Energy and Energy Efficiency (SACREEE), Caribbean Centre for Renewable Energy and Energy

³ ECO Vision 2025, done on 28 February 2017 in Islamabad, Pakistan, p. 5-6

http://www.eco.int/parameters/eco/modules/cdk/upload/content/general_content/3512/1500446776906us945rcqm2q8kg3oramosqae2.pdf

Efficiency (CCREEE), Pacific Centre for Renewable Energy and Energy Efficiency (PCREEE) were also launched in the same path.

Almost all of these Centres share the common objectives to improve energy access, energy security and climate change mitigation by promoting an enabling environment for renewables and energy efficiency investments and industries, and to mitigate existing barriers for them. RCREEE set an objective to diffuse the implementation of cost-effective renewable energy and energy efficiency policies, strategies and technologies, and to increase the share of renewables and energy efficiency products and services⁴.

These Centers respond to the urgent need for increased regional cooperation and capacities to mitigate existing barriers to renewable energy and energy efficiency investment and markets. They enjoy high-level support from the energy ministers and respond to the individual needs of the respective national governments. The Centres complement and strengthen ongoing national activities in the areas of policy and capacity development, knowledge management and awareness-raising, as well as investment and business promotion⁵.

⁴ See the following links for details:

<http://www.ecreee.org>

<http://www.eacreee.org>

<http://www.rcreee.org>

<http://www.pcreee.org>

<http://www.se4allnetwork.org>

⁵ The Global Network of Regional Sustainable Energy Centres: Powering the path to Inclusive and Sustainable Industrial Development and SE4ALL, A Post-2015 South-South and Triangular Partnership UNIDO Energy Programme



Source: UNIDO and SE4ALLnetwork

Scope of the ECO Centre and its Expected Benefits and Impacts

Based on UNIDO's experience, ECO Centre may envisage the following components:

- Capacity-building and applied research
- Knowledge-management and awareness-raising
- Policy and regulatory support
- Investment promotion/private sector involvement in energy-efficiency
- Transformation to "green industry" in the ECO Region

ECO Centre could act as a regional hub and think-tank for sustainable energy in ECO Region and position itself more as a regional renewables and energy efficiency promotion agency rather than an implementer on micro and grass-root levels. It may work action and service-oriented rather than political.

Implementation of specific assignments could in many cases be delegated to third parties or the National Focal Institutions (NFIs). Cooperation with a wide range of public/private and local/international stakeholders during implementation will maximize the local added-value, technology and know-how transfer to the Region.

The strong inter-linkage between the establishment of similar centres and increasing energy efficiency has been widely recognized. The functioning of the Centre could consequently pave the way for many energy efficiency solutions. It will seek to support the transformation to cleaner and sustainable energy sources in ECO Region, contribute to intra-regional trade among ECO Member States through regional connectivity and proper utilization of renewables and energy efficiency.

Opening of the Centre could also promote new relevant programmes and projects, investments (notably private sector investment) and employment creating a robust market on clean energy and thus contributing to the long-term economic growth in the ECO Region. Driven by the experience of several similar institutions across the world, the Centre could focus on activities which demonstrate high relevance for promoting investments in energy efficiency infrastructure, services, local businesses and industry. Investment and business promotion could be an important activity component of the Centre but also a cross-cutting issue across the other result areas (e.g. capacity development, policy, etc.).

The Centre could also contribute towards increased access to modern, affordable and reliable energy services, energy security and mitigation of negative externalities of the energy system by creating a conducive environment for energy efficiency and renewable energy markets and investments. The opening of the Centre will also complement ECO Energy Ministers proclamation of 2013-2022 as the “ECO Decade for enhanced Energy Cooperation” at the 3rd Ministerial Meeting on Energy and Petroleum, held in March 2013⁶.

Implications for energy cooperation within ECO and beyond

The last but not least, the establishment of the Centre is sought to create ample opportunities in stimulating energy cooperation within ECO, and notably in

⁶ “*Tehran Declaration on Energy Cooperation among ECO Member States*”, done on 6 March 2013 in Tehran – I.R. Iran

energy efficiency/conservation, renewables, sound environmental technologies and “green economy”. This vision also conforms to the Global SDGs adopted during historic UN Summit on Post-2015 Development Agenda in September 2015 in New York, particularly SDG7. The Centre will contribute to this trend via introduction of pertinent partnership framework tailored to the needs and aspirations of its Member States. ECO Secretariat has recently launched consultations with other international partners for promoting the establishment of this Centre.



On-grid solar power plant on the roof of the ECO Secretariat