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Consideration of the future focus of the subprogramme

Review of implementation of the programme of work for the biennium 2016-2017**

Note by the secretariat***

Summary

The General Assembly in 2015 approved the establishment of subprogramme 9: Energy. The strategic framework and the work programme for the biennium 2016-2017 were subsequently reviewed and approved by the Committee on Programme Coordination (CPC) in 2016.

Energy activities have previously constituted an integral part of the subprogramme 4 of ESCAP on environment and development with a view to facilitate the implementation of internationally agreed goals including the Millennium Development Goals. Energy activities have been carried out under subprogramme 4 until CPC has officially approved the subprogramme on energy with a view to facilitate the implementation on the Sustainable Development Goals in particular Goal 7 of the Sustainable Development Goals (SDG7). It also has a focus on the promotion of energy connectivity in support of Sustainable Development Goals. Subsequently, Energy Division has been established in August 2016.

The present document highlights main activities implemented by the newly established energy division to seek guidance from the member States on its directions, and identifying priority areas. The document is divided into two sections: (1) Major activities implemented in 2015 and 2016; and (2) activities planned in 2017 and beyond. A separate document on programme performance will be prepared and submitted to the Commission at its 73rd session in 2017.

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** This present document is being issued without formal editing.

*** This note was submitted late owing to the extensive research and internal consultation that was necessary.

Implementation of the Sustainable Development Goal, Target 7: Ensure access to affordable, reliable, sustainable and modern energy to all

A. Pro-Poor Public Private Partnership: Widening access to energy services:

1. Financing for energy access is important to achieve SDG7. The Asia-Pacific region faces significant gaps in investment for energy access. The majority of such investment required is to develop electricity generation, and transmission and distribution infrastructure in South Asia, South East-Asia and the Pacific.

2. Public resources alone will not be sufficient to close the financing gap in the Asia-Pacific Region. Financing from international financial institutions and the private sector will play a crucial role with public sector financing playing a catalytic role. Many countries in the region have yet to put in place enabling policies, legislation, regulations and incentives to attract such financing and also to minimize risks, mobilize micro-finance, and support technology demonstration.

3. Innovative public-private partnerships, if properly structured, can offer a long-term solution for energy access. Building sufficient capacity of member States is necessary as such projects are complex to prepare structure and transact. ESCAP has developed a pro-poor public-private partnerships capacity building programme to support member States for increasing financing for energy access efforts. Such approach engages the community as the co-owners in consultation on appropriate technology, business models, tariff-setting and collection, as well as system operation and maintenance. The approach aims to engage the private sector in energy access projects as investors, developers and co-owners, with supportive government policies for replication and scaling-up.

4. In 2004, ESCAP launched a project to promote pro-poor public private partnership (5P) and implemented a pilot project in Cinta Mekar, Indonesia by constructing a 125kw micro-hydro power plant. The objectives of the pilot project was to test the willingness of social entrepreneurs to invest in community based power plants to improve energy services to community members without access to electricity. People Centered Business and Economics Institute (IBEKA) has been instrumental in mobilizing Cinta Mekar community to establish a cooperative owned by members of the community and the private sector. The power plant has been operating more than 12 years, which is a positive sign towards sustainable operation.

5. Based on the successful operation of the power plant, ESCAP with financial support from the United Nations Development Account and the International Agriculture Development Fund (IFAD), initiated to implement three more pilot projects in Nepal and Lao People's Democratic Republic.

6. In Nepal, one mini-solar grid has been completed, which connects approximately 100 households. Another project is currently under construction utilizing multi-purpose solar water-pumping system (irrigation and drinking purposes) is under construction. In Lao People's Democratic Republic, a micro-hydro power plant is under construction (irrigation and household use).

7. The main findings from these pilot projects can be summarized as:

(1) To increase sustainability and reduce investment risk of 5P projects, there is a need to better integrate productive energy use is required.

(2) To ensure that marginalized members of the community benefits from the power plant, there is a need to ensure, effective community mobilization.

(3) An integrated national strategy for rural electrification is required that combines grid expansion and distributed energy systems.

(4) Longer-term evaluations are required for pilot projects before up-scaling

8. The project provided opportunities in both Nepal and in the Lao People's Democratic Republic to review existing policies to support replicability of the 5P approach. In Nepal the Renewable Energy Subsidy Policy has been expanded to include solar technology and to provide direct loans to private sector to develop mini-solar systems. Currently the Government is exploring possibilities to replicate the 5P approach with financial resources from climate financing.

9. Through a workshop that was held in Kathmandu, Nepal on climate financing with participation from UNEP and the Green Climate Fund, experts from Nepal, Lao People's Democratic of Republic and Indonesia explored possibilities to develop project concepts based on the 5P approach with a particular focus in accessing Green Climate Fund. Experts noted the importance and the need to highlighting benefits of climate change impacts of the project over and above the development benefits.

B. Energy Connectivity for Regional Economic Cooperation and Integration

10. Within the framework of the ESCAP resolution 70/1 Implementation of the Bangkok Declaration on Regional Economic Cooperation and Integration, more in-depth studies have been conducted by the secretariat with a view to propose a vision and strategies in promoting seamless energy infrastructure. With energy demand in Asia and the Pacific forecast to nearly double from 2010 to 2035, access to reliable and adequate energy services will remain a focus for the decades to come. The region is expected to account for over 40 per cent of the US$68 trillion of cumulative energy investments until 2040. Against this background, the secretariat prepared a report, based on two expert groups meetings held in 2015 and published in 2016. The report "Towards a sustainable future – Energy connectivity in Asia and the Pacific" explores the potential of regional energy connectivity to meet broader energy goals within the framework of sustainable development.

11. This report highlights the linkage between energy connectivity, energy security and sustainable development by addressing the challenges in meeting growing energy demand while ensuring that energy developments are consistent with the Sustainable Development Agenda, covering energy efficiency, renewable energy, and energy access. The report highlights opportunities and actions as well as a mechanism that can address the multiple challenges in the energy sector. Also highlighted is the role that regional cooperation and energy connectivity will play in meeting this challenge.

12. Based on the report, the secretariat continues to explore options in promoting energy connectivity in different subregions. For South-East Asia, the secretariat is planning to work with the Association of Southeast Asian Nations (ASEAN) Centre for Energy and hold a workshop to identify potential solutions in addressing subregional challenges that could be share with other subregions, including South and South-West Asia. These workshops are planned to be held in 2017 subject to availability of funds.

13. In North and Central Asia, the secretariat held a workshop on Challenges and Prospects for Regional Electricity Cooperation and Trade in Central Asia and the Caucasus in Baku in November 2016. Experts attending the workshop noted that countries in North and Central Asia are at different stages of market liberalization, with several of them remain having monopolized markets, and several being in the process of market liberalization and unbundling. Thus, it remains unclear if the market reforms may lead to a market design that is common for all the countries, allowing them to enhance efficient cross border electricity trade, and facilitate the attainment of a higher rate of access to affordable, reliable, sustainable and modern energy.

14. Experts further noted a need to maintain dialogue on expert, corporate and governmental levels in order to strengthen integration of national energy development plans into common regional infrastructure development framework, hence enforce complementarity of concurrent projects execution, conscious of synergy and balance of countries' interests.

15. Regarding the development of renewable energy sources in the Central Asia and the Caucasus the experts supported the initiative for development of renewable energy atlas that is consistent with common methodology for classification of renewables. Studies on possibilities for technical cooperation, and awareness raising in terms of local content in manufacturing, along with proper labeling of equipment, are needed. Finally, the experts agreed that there is a need for the development of the set of generic renewable energy solutions that might be implemented in order to provide access to electricity for households in rural areas. At the same time, distributed power generation must be economically viable, and needs to be specific to circumstances. Given a relatively high share of hydropower sources in total energy mix of the region, drastic acceleration of renewable energy development at any cost is not required and may lead to negative economic consequences.

16. ESCAP exchanged memorandum of understanding with two institutions with a view to promote further energy connectivity in the region: 1. Electric Power Council of the Commonwealth of Independent States (EPC-CIS); and 2. Global Energy Interconnection Development and Cooperation Organization (GEIDCO). Further collaboration with these institutions in the coming years will provide opportunities to conduct studies and pre-feasibility studies as well as dialogues among policy makers to promote energy connectivity in the region. One of expected achievements will be a roadmap on power grid interconnection in Asia through in-depth study and consultations with member States.

C. Regional Trends Reports on Energy for Sustainable Development (2015 and 2016)

17. In support of the implementation of the outcomes of the first Asia and the Pacific Energy Forum held in 2013, the Regional Trends Report on Energy for Sustainable Development in Asia and the Pacific is published to

accelerate knowledge-sharing within the region by providing an additional platform for member States to share their experiences, through case studies, regarding the energy sector and its future development. In 2015, the Regional Trends Report focused on two topics: (a) Energy scene and emerging trends in Asia and the Pacific; (b) Integration of renewable energy in electricity systems; and (c) Promotion of high-efficiency, low-emissions coal technologies in electricity generation. In 2016, the Regional Trends Report focused on (a) Energy scene and emerging trends in Asia and the Pacific; (b) Transboundary power trade for increasing power sector sustainability and regional connectivity; (c) Developing effective policies for widening access to energy services; (d) Sustainable energy – snapshots of progress on the Asian and Pacific Energy Forum Regional Plan of Action. Both publications are available at the ESCAP web-site.

18. At the 72nd session of Commission, member States decided to have a theme study focusing on Regional Cooperation for Sustainable Energy, the Regional Trends Report in 2017 will be subsumed by the theme study.

D. Asia Pacific Energy Portal

19. The Asia Pacific Energy Portal is developed as one of the supportive mechanism to facilitate the implementation of the outcome of the first Asian and the Pacific Energy Forum. The Portal provides open access to energy data, policies and infrastructure information. It enables identification of trends and rapid analysis of data through data visualization and policy cross-sections and supports informed decision-making among Asia-Pacific energy policy makers. It also supports data and policy tracking, research, and analysis for regional and global initiatives.

20. The Portal collects data from over 200 different data sets including UNDATA, the United Nations Comtrade database, the World Bank, International Energy Agency, The International Renewable Energy Agency, Bloomberg, the Energy Information Administration of the United States of America. It also contains over 2,600 policy and programme documents. Under the infrastructure map, more than 3,900 power plants have been mapped.

21. ESCAP will continue to update data, policies as well as the infrastructure map. The portal is available at http://asiapacificenergy.org

E. Collaboration with Group of Twenty (G20)

22. With a view to support the implementation of target 7.1 of the Sustainable Development Goals, ESCAP worked closely with the G20 through China's G20 Presidency in 2016 in developing the Enhancing Energy Access in Asia and the Pacific: Key Challenges and G20 Voluntary Collaboration Action Plan. The Roadmap acknowledges investment, financing, innovation, building institutional capacity, and ensuring market viability of the new projects as key challenges to achieve universal energy access in the Asia-Pacific, and that technological options will need to be tailored to utilizing all indigenous available sources.

23. ESCAP further collaborated with the Government of Singapore during the Singapore International Energy Week by jointly organizing Energy Access Forum – Powering Development in Asia and the Pacific based on the Action Plan adopted by the G20.

Planned activities for 2017 and beyond

24. ESCAP will continue to support the implementation of the Sustainable Development Goals in particular Goal 7 on Ensure access to affordable, reliable, sustainable and modern energy to all through the following projects/areas:

25. United Nations Development Account 10th tranche, the secretariat will implement Evidence-based policies for the sustainable use of natural resources in the Asia-Pacific region. Utilizing the Asia-Pacific Energy Portal developed in support of the implementation of the outcomes of the first Asia and the Pacific Energy Forum, ESCAP will work with selected countries in the region to align national energy policies to facilitate the implementation of the Target 7 of the SDG. The objectives of the project is to strengthen capacities of policymakers in Asia and the Pacific to develop evidence-based policy and planning for sustainable use of natural resources at national and regional levels. It will be implemented between 2016 and 2019.

26. The government of the Russian Federation generously supported the secretariat to implement the outcomes of the Asian and Pacific Energy Forum 2013 (APEF) with a five-year project. It is to assist member States in the implementation of the APEF regional Plan of Action through the establishment and further support of a platform that provides the foundation for continuous dialogue and cooperation.

27. In 2016-2017, the project will continue to further develop and strengthen the APEF Implementation Support Mechanism in order to form a solid framework for ESCAP member States, the secretariat, and development stakeholders to implement the outcomes of APEF and to formulate a clear and relevant agenda for the second Asian and Pacific Energy Forum to be organized in 2018. The project will contribute to the work of the secretariat on supporting member States in implementation of the 2030 Agenda for Sustainable Development and in the achievement of the SDG 7 in particular. The work of newly established Committee on Energy in the subsidiary structure of the Commission will play a critical role the project success.

28. With the support of the Global Energy Interconnection Development and Cooperation Organization (GEIDCO), the secretariat will initiate studies to identify practical solutions to promote transboundary power trade within the Asian region. The project is expected to be initiated in 2017. The main objective of the project will be to increase the share of renewable energy through achieving a broader range of consensus among member States to promote sustainable power trade and interconnection through the facilitation of bilateral and multilateral consultation and joint studies to address common concerns and challenges. The project will be implemented during 2017 and 2018.

29. The Committee may wish to provide guidance to the secretariat in identifying important areas of interest to the member States in further developing future programme activities and projects.