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UNIDO activities in environment and energy

UNIDO activities related to energy

Report by the Director General

The present document reports on the implementation of General Conference resolution GC.15/Res.4 and provides information on UNIDO's activities in the area of energy. It updates the information presented to the forty-first session of the Industrial Development Board (IDB.41/17). It also complements chapter 4 of the *Annual Report of UNIDO 2013* (IDB.42/2).

I. Introduction

1. The Lima Declaration, adopted by UNIDO Member States on 2 December 2013, provided UNIDO with a clear mandate to promote inclusive and sustainable industrial development (ISID) in the post-2015 development agenda by focusing on efficient, cost effective and results-oriented solutions.
2. UNIDO's activities in the field of energy and climate change are driven by the challenges and opportunities of, as well as the concerns over energy poverty, energy security and climate change issues in the context of ISID. UNIDO seeks to address these concerns by promoting sustainable energy solutions for making industries more productive and climate resilient, which in turn promote green jobs and green growth. UNIDO promotes integrated solutions to assist industry in reducing their carbon footprint by using clean energy in the most efficient manner to enhance their competitiveness and productivity, while also promoting gender empowerment and increasing employment opportunities.
3. UNIDO's activities in the field of energy and climate change are built on four strategic pillars, namely industrial energy efficiency; renewable energy for productive uses; low-carbon, low-emission technologies; and policy, partnership and

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global forums. The core building blocks of UNIDO's energy strategy are technology demonstration, knowledge management, capacity-building, policy planning, awareness-raising, and building capacity to provide inclusive and sustainable energy solutions.

4. UNIDO's energy portfolio is characterized by the deployment of industrial energy efficiency standards, smart grids based on renewable energy and renewable energy for industrial applications for promoting climate resilient industries. The energy strategy also focuses on enhancing women and youth empowerment in the design and implementation of energy projects, creating job opportunities, and fostering clean energy technological innovations in small and medium-sized enterprises (SMEs) for the promotion of competitiveness and productivity. Promoting regional and national sustainable energy centres for knowledge management and capacity-building, strengthening multi-stakeholders partnerships and networks, and South-South cooperation are some of the other key activities.

II. Industrial energy efficiency (IEE) programme

5. UNIDO's IEE programme places a special focus on addressing the energy efficiency requirements of SMEs, as they represent the backbone of socioeconomic development in a country. UNIDO's ongoing IEE project portfolio at the end of the third quarter of 2014 amounted to around \$125 million, with a widespread geographical coverage of over twenty countries, including three least developed countries. The programme focuses on promoting the industry's efficient use of energy and the dissemination of IEE best available practices and technologies to accelerate economic growth and enhance competitiveness and job creation, while addressing climate change.

6. The three core thematic areas of the UNIDO's IEE programme are:

- (a) IEE policy development and standards;
- (b) IEE capacity-building and awareness-raising;
- (c) IEE technology and measures demonstration and upscaling.

7. UNIDO's IEE programme focuses on promoting the implementation of energy management systems based on the International Organization for Standardization's ISO 50001 energy management standard, and system optimization approach; both approaches assist industry in continual and system-wide IEE improvement.

8. Other IEE programmes focus on improvements to the energy efficiency of energy intensive industrial equipment, energy-efficient and low-carbon transport vehicles, and related infrastructure.

9. For example in Burkina Faso, one UNIDO project focuses on increasing energy efficiency in the local beer brewing industry operated by the women of the local community. In the four clusters created with improved energy-efficient stoves for brewing, the project resulted in more than 600 women entrepreneurs being trained in operating of the new efficient stoves and 50 craftsmen being trained in building the improved stoves. Over 500 improved stoves are planned to be installed by the end of 2014, resulting in energy savings.

III. Renewable and rural energy (RRE) programme

10. UNIDO's RRE programme focuses on promoting the use of renewable energy for productive uses and industrial applications. UNIDO's ongoing renewable and rural energy project portfolio at the end of the third quarter of 2014 amounted to around \$110 million, including more than 30 countries.

11. UNIDO's RRE energy activities focus on promoting business models for renewable energy-based mini-grids for enhancing access to energy, and on demonstrating the social and economic viability of selected renewable energy technologies.

12. UNIDO seeks to strengthen counterparts and local entrepreneurs in their capacity to create sustainable energy enterprises and industrial producers. The aim is to enable these primary beneficiaries to deliver reliable and affordable energy services based on renewable energy technologies. Another goal is for the producers and enterprises to promote global standards on renewable energy technologies, appliances and systems.

13. A concrete example of a key activity in the field of knowledge exchange and policy support has been developed through collaboration between UNIDO and the International Centre on Small Hydro Power based in China to develop a global knowledge-sharing platform¹ and publish the world's first assessment of global small hydropower potential in the *World Small Hydropower Development Report 2013*.

IV. Global flagship programmes

14. UNIDO believes that in order to achieve its mandated goals in the field of energy, it is essential to identify high impact opportunities and synergies with strategic partners. In an effort to capitalize on these opportunities and synergies, UNIDO has developed global flagship programmes.

15. The four main global flagship programmes are as follows:

- (a) Global Network of Regional Sustainable Energy Centres;
- (b) The Global Cleantech Innovation Programme (GCIP) for SMEs;²
- (c) Vienna Energy Forum 2015: "Sustainable Energy for Inclusive Development";
- (d) Sustainable development of the cold chain.

Global Network of Regional Sustainable Energy Centres

16. Further to the report to the forty-first session of the Board (IDB 41.17), the regional centre approach has been expanded to now include a total of six regions —

¹ Further information is available from: www.smallhydroworld.org.

² Previously known as the GEF-UNIDO Cleantech Programme for SMEs.

West Africa, East Africa, Southern Africa, Pacific Island Countries, Caribbean Island Countries and the Middle East and the North Africa region.

17. The global network of regional sustainable energy centres contributes to an enabling policy environment for increased investment in renewable energy and energy efficiency by addressing existing barriers through the development of regional methodologies and interventions. Specifically, the centres themselves focus on building capacities in the region, knowledge management, awareness-raising, as well as business and investment promotion. The linking of these centres, both to each other and to relevant institutions in the industrialized world, aims to utilize diverse sources of practical and experience-based solutions to complex sustainable energy issues and challenges.

Global Cleantech Innovation Programme (GCIP) for SMEs

18. UNIDO's GCIP for SMEs was presented to the Board at its forty-first session (IDB.41/17). It encompasses seven countries, and more than ten countries have expressed demand for the GCIP to be developed in their countries. The GCIP for SMEs demonstrates the significance that UNIDO places on nurturing innovation in clean energy technologies, strategic partnerships and enhancing private sector involvement. The programme involves four key features — a competition to create an ecosystem for sustainable growth, the showcasing of innovative technologies, the provision of mentoring and training, and enhancing access to capital.

19. Some countries have requested UNIDO to develop new projects to support the most promising alumni of the current programme in becoming commercial entities through strengthening of their existing commercialization programmes. This would include incubation, targeting specifically innovative start-ups in clean technologies.

Global Forum — Vienna Energy Forum 2015

20. The Vienna Energy Forum (VEF) 2015 will be held in Vienna from 18 to 20 June 2015, focusing on “Sustainable Energy for Inclusive Development”. The VEF has established itself as a unique global platform, convening policy and opinion-makers in Vienna to the share multi-sectoral perspectives and exchange knowledge on energy-related issues.

21. The VEF 2015 will be convened at a crucial time in the global development process. In 2015 the Millennium Development Goals (MDGs) will be replaced by a new development agenda. The global community will take stock and critically review the progress towards reaching the MDGs and establish new sustainable development goals for the future. 2015 will also see a new international climate change agreement that brings together the current patchwork of binding and non-binding arrangements under the United Nations climate convention into a single comprehensive regime.

Sustainable development of the cold chain

22. UNIDO pioneers an approach to link Montreal Protocol funded activities with financial assistance provided by the Global Environment Facility (GEF), combining activities phasing out ozone depleting substances with energy-efficient solutions for developing countries and countries with economies in transition.

23. UNIDO's focus on energy efficiency in the cold chain is particularly evident in four GEF-funded projects in Azerbaijan, the Gambia, the Russian Federation and Viet Nam. These reflect the approach to extend Montreal Protocol funded activities related to refrigeration by an additional set of activities, targeting energy savings and greenhouse gas emissions reduction. In the next biennium, UNIDO will try to replicate the same approach to a substantial number of the other countries assisted under the Montreal Protocol framework.

24. UNIDO is in the process of exploring interest from donors at the national, international and multilateral levels to cover energy efficiency interventions outside the scope of Montreal Protocol funding. For instance, a pilot project was funded by the Climate and Clean Air Coalition in the retail sector of the cold chain in Jordan, extending activities related to the Montreal Protocol by additional activities, aiming to achieve and demonstrate energy savings of 15 to 30 per cent in refrigeration equipment.

V. Action required by the Board

25. The Board may wish to take note of the information provided in the present document.
