

INTERNATIONAL RENEWABLE ENERGY AGENCY

Twelfth meeting of the Council

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Note of the Director-General
Renewable Energy in Urban Settings
IRENA Input to the New Urban Agenda

1. Cities hold the key to the world's transition to a sustainable, low carbon economy. Accounting for 65% of global energy use, and 70% of man-made carbon emissions, cities' energy use will only grow as urban populations increase. Total energy demand in cities is expected to rise by 35% between now and 2030. The 2030 Agenda for Sustainable Development through Sustainable Development Goal 11, aims to "make cities and human settlements inclusive, safe, resilient and sustainable". The Paris Agreement explicitly recognises the role of cities in achieving national climate ambition. As a result, cities will - to a great extent - define the success of the global development and climate change efforts. Renewables are opening new opportunities for cities which, traditionally, did not have significant control or influence over energy policies and strategies. As renewables deployment is rising rapidly, driven by technology advancements and falling costs, a growing number of cities are looking to switch to 100% renewable energy.

2. IRENA's Work Programme 2016-2017 includes activities in support of the sustainable development of cities to empower national, sub-regional and local stakeholders with concrete advice to design and implement transformational change in the way energy is produced, distributed and consumed in sub-national and city settings. During the 2016-2017 biennium, IRENA is placing specific focus on a) increased knowledge on policy and regulatory frameworks and integrated planning for renewables, b) capacity building at the municipal level, c) tools and information on technology solutions, and d) identification of best practices and replicable innovative solutions for renewables in cities.

3. In an effort to provide policy-makers with the most up-to-date information, IRENA has undertaken an analysis on renewables in cities, including the identification of city best practices and a roadmap based on the detailed modelling of 3.649 cities across the world. Analysis¹ shows that cities face three major priorities in transitioning to sustainable energy: 1) greater efficiency and renewable energy in buildings; 2) sustainable transport solutions; and 3) greater use of smart technologies through cross-sectoral system integration. Results indicate that promoting renewable energy at the municipal level is best achieved through urban planning, regulation, demand-driven change and local financing mechanisms. In some instances, accelerating the transition to renewables may require significant decentralisation of power generation.

¹ *Renewable Energy in Cities* will be launched on 18 October 2016 in Quito, Ecuador.

4. Analysis also shows that energy use varies significantly depending on climate, economic development, and population density. For instance, developing cities will account for 70% of global growth in energy use in 2030, and have the best opportunity to integrate sustainability in their planning, and deploy the latest efficiency and renewable energy technologies in new buildings. Established cities, with lower building turnover rates, will rely on retrofits and technologies that can be added relatively easily to existing buildings (e.g. heat pumps and rooftop solar). High density cities, which will account for half of future growth, can benefit from renewables-powered electric public transit systems, and cost effective district heating and cooling systems. Low density cities can benefit from highly distributed renewable energy technologies, and the growth of electric cars.

5. To bring greater visibility to renewable energy options for cities, IRENA will actively participate at the Habitat III Conference in Quito in October 2016. Meeting every 20 years, the Conference places renewed focus on the leading role of cities in advancing the global energy transition and will, for the first time, promote renewable energy as a means to achieving a sustainable urban future. The prominent role of renewable energy is evidenced in *The Habitat III - New Urban Agenda: Draft outcome* document² for adoption in Quito, which recognises renewable energy as an important part of the urban economic prosperity and social inclusion. The draft document notes, among other things, that “We commit to encourage national, sub-national, and local governments, as appropriate, to develop sustainable, renewable, and affordable energy, energy-efficient buildings and construction modes, and to promote energy conservation and efficiency, which are essential to enable the reduction of greenhouse gas and black carbon emissions...”.

6. IRENA, in partnership with the governments of Ecuador, Germany and the United Arab Emirates, is hosting a high level forum, *RE-energising Cities: Renewable Energy in Urban Settings*, as a parallel event of Habitat III. The forum capitalizes on the unique gathering of urban stakeholders to showcase examples of renewable energy policy frameworks and best practice; share cutting-edge information, and discuss priority areas for action. Through a series of interactive dialogues, the forum will highlight the key elements and levers that can drive change and accelerate the deployment of sustainable energy solutions.

7. Fueled by global ambition, cities can now take the next step-change to transform their energy systems and become the solution providers of a sustainable future. IRENA - through its analytical work, vast networks and partnerships - stands ready to support this change, so that renewable energy can inspire progress and trigger sustainable development.

Questions

- Many cities have set ambitious renewable energy targets, and could benefit from greater peer-to-peer learning. How can the exchange of experiences and best practice on renewable energy deployment be facilitated?
- What partnerships/initiatives should be formed or leveraged in support of advancing the urban sustainable energy agenda?
- Considering IRENA’s 2016-2017 Work Programme and activities to date, how should the Agency ramp up support to cities given their important role in transitioning to a sustainable energy future?

² <https://habitat3.org/the-new-urban-agenda>