

Habitat III high-level forum on Renewable Energy in Urban Settings

Quito, Ecuador 18 October 2016

Outcomes

The high-level forum *RE-energising Cities: Renewable Energy in Urban Settings*, held in Quito on 18 October 2016 as part of the Habitat III Conference, highlighted the rapidly growing role of renewable energy in sustainable urban development and identified key actions for accelerated deployment. The *New Urban Agenda*, the development framework adopted by the 193 United Nations' members at the Conference, enshrines sustainable energy, and renewable energy in particular, in its principles and objectives, recognizing it as a key driver of economic prosperity, social inclusion, and improved environmental performance. *RE-energising Cities* offered diverse perspectives on the energy transformation that is taking hold in cities globally. It evaluated the multiple benefits of renewable energy, current challenges to deployment, and synergies with energy efficiency and integrated resource management to accelerate its deployment in urban settings. The forum was co-hosted by IRENA and the governments of Ecuador, Germany and the United Arab Emirates.

Through the sharing of experiences and showcasing of achievements and hurdles to date, *RE-energising Cities* affirmed that renewable energy, coupled with energy efficiency, can provide financially viable sustainable energy solutions for cities in extremely diverse settings around the globe. Participants highlighted that renewable energy aligns the Agenda 2030 and objectives of the Paris Agreement, as it is crucial for mitigating climate change, reducing urban air and water pollution, lowering energy costs for businesses and consumers, stimulating economic growth and job creation, and improving overall health and wellbeing of citizens. It was also highlighted that cities will be at the forefront of the development and deployment of renewable energy solutions in the transport sector and commercial and residential buildings.

The participants stressed the need for a continuous dialogue on urban deployment solutions, especially given the fast rate of evolution in the renewable energy sector. There was a strong recognition that, while circumstances of cities and municipalities are diverse and require solutions tailored to local conditions, cooperation among provincial, national and global levels can accelerate deployment. They encouraged IRENA and other stakeholders, particularly working with city networks, to continue to provide targeted knowledge products and collaborative platforms to facilitate exchanges on technology, policy, and financing options.

The forum highlighted key issues and action areas:

The rapidly falling cost of renewables energy technologies is accelerating deployment in a growing number of cities

- Rooftop solar is already competitive with or cheaper than other power sources in a wide variety of urban settings, and costs continue to decline
- All cities have their own unique set of affordable renewable energy resources - such as solar, wind, hydro, bioenergy, and geothermal - to meet their energy needs
- Electrification of urban transport is becoming increasingly cost-attractive but especially electric vehicles remain capital-intensive due to high purchase costs; it also faces the challenge of ensuring that the electricity used is generated by renewables to truly decarbonise the sector
- Financing and regulatory costs vary widely between cities in different countries (for instance, divergent interest rates for the same type of projects), but are coming down as regulators and banks gain experience with renewables; capacity-building, enabling policies (e.g. net metering, solar ordinances), and financial instruments can further reduce costs
- Distributed renewables for energy access (such as lighting and battery charging) are often economically viable and provide optimal solutions for urban areas and settlements without high levels of energy access, but require relatively high upfront investments that are not always readily available

Cities are empowered through building codes and procurement to drive renewables deployment and could potentially have more influence over power generation

- Cities are increasingly requiring renewable energy solutions through regulation, e.g. through solar water heating ordinances which can go beyond national regulations (such as building codes), or by linking building and development permits for solar power installations
- Many cities lead by example through direct procurement of renewable energy for public buildings, vehicle fleets, and public transport
- The level of control over power generation varies greatly between cities, which impacts the ability of local authorities to directly accelerate renewable energy deployment; some cities are creating their own entities to bypass power suppliers that do not have similar renewable energy ambitions
- A right balance between enforcement of regulations (e.g., checking whether installations are completed and maintained) and provision of incentives (e.g., tax reductions or granting building expansion permits) can accelerate renewable energy deployment

Capacity building needs to be further strengthened at the city and municipal levels

- Appropriate staffing and training of city officials is crucial; renewable energy expertise within local governments is required for effective planning and implementation
- Cities in developing countries often require more technical capability within their local governments; international and national partnerships and cooperation can assist in the short term to support local capacity building that ensures longer-term sustainability efforts
- Capacity-building should focus on new and innovative business models, such as pay-as-you-go, so that cities have a longer menu of deployment and financing models
- Local workforces with renewable energy skills accelerate deployment and reduce costs; encouraging inclusion of renewables in university and technical education especially pays off

Access to finance is improving, but should be enhanced to scale up renewables in cities around the world

- There is significant potential for innovative financial mechanisms at the city level, such as pay-as-you-go systems, as well as the use of green bonds and revolving funds
- Concessional finance remains important to kick-start renewable energy deployment in developing economies, as many stakeholders lack experience with renewables and therefore are slower to implement or capitalize on cost attractiveness
- To increase private sector investment, ensuring regulatory stability as well as education of officials at financial institutions are key

Partnerships and cooperation at the national and international levels should be further strengthened

- Coordination and cooperation between different levels of government (i.e. federal, state, and local) needs to be improved for cities to realize their potential in deploying renewable energy solutions
- Key energy stakeholders (e.g. regulators, utilities, energy distribution companies, consumer groups, etc.) need to be involved in decision making, so there is a common vision and commitment
- City networks and partnerships - including at the global, peer, South-South, and national levels - can be effective in supporting renewables deployment, and should expand membership and energy focuses
- Existing international cooperation platforms, like IRENA, should be used as a conduit to improve exchange of knowledge and common barriers and solutions, including between local and national authorities and in connection with city networks

There is a need for comprehensive and integrated planning towards sustainable urban energy systems

- The benefits of renewable energy are increased through a “systems approach” that integrates planning and management across all forms of energy, as well as other urban sectors; selection of energy supply and policy should be based on multi-sectoral analysis (health, environment, waste, water, etc.)
- Buildings and transport sector are often the most important energy end-users in cities and come with their own unique challenges (such as the need for deep retrofits of buildings and reshaping transport infrastructure to allow for electric mobility); however, they are also becoming increasingly interconnected with the power generation sector through the growth in electrification, decentralised energy generation and storage
- Optimizing energy supply from industrial waste heat and municipal waste, as well as capturing synergies with related areas such as water provision and urban planning is also important. There are critical synergies between deploying renewable energy and increasing energy efficiency; therefore they should be considered simultaneously for urban development

A long term vision supported by citizens is key to achieving objectives

- As investments in energy infrastructure often span decades, cities need a well-publicized long-term vision for renewables and the broader energy system
- Residents’ support for renewables is pivotal, especially in overcoming the pressure of election cycles
- Raising awareness of the benefits of renewables and encouraging behavioural adjustments to increase efficiency, as well as providing information on their application and financing, are key elements of accelerating deployment
- Local authorities can shift understanding of renewable energy by mainstreaming renewables in public buildings and transport
- Mainstreaming sustainable energy in school curricula or extracurricular activities is one among many effective tools to engage the public
- Local authorities can quickly build public support by linking renewable energy to specific social, economic and cultural references and priorities; for instance, in a Ugandan city where citizens are historically known as “people of the snow,” renewables are now seen as a key tool to fight climate change and preserve the snow cap of the local mountain.