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*Ministerial Conference and 8th International Forum on Energy for  
Sustainable Development, Astana, Kazakhstan, 11-14 June 2017*

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## Towards Smart Sustainable Cities – Integrated Approaches

### Background Document

The global urban population is currently estimated to be approximately 3.5 billion and is projected to reach 8.5 billion by 2030. Cities are one of the biggest consumers of energy in the world, representing almost two-thirds of global primary energy demand, and nowadays accounting for 70 per cent of greenhouse gas emissions in the energy sector. Most emissions in cities originate from the building, industry and transport sectors, and a sizeable share of these emissions could be avoided through city-level mitigation options, such as spatial planning, improving transit options, increasing and co-locating employment and residential densities, and increasing green spaces.

Urban habitats play a key role in addressing the grand challenges of the 21st century. More sustainable lifestyles, behaviours, cultures and consumption patterns are important considerations when designing policies and programmes. Urbanization does not necessarily need to lead to more energy consumption and increased pollution, this transformation presents an opportunity for innovation and solutions through a combination of factors such as urban planning, energy efficiency, renewable energy and smart grids.

Many cities are choosing to reduce energy use and emissions beyond what is being pledged by national governments to deliver the array of multiple benefits on offer to its citizens. A growing number of cities are joining partnerships and networks, in an effort to become more efficient, sustainable and low emitting. A growing number of cities are leading by example and setting the pace and scale of action that is required to put the climate on a safe pathway.

The concept of Smart Sustainable Cities is a combination of solution-oriented and integrated approaches based on technological innovations to address the current and future challenges of cities to improve the way cities function.

In line with the Sustainable Development Goal 11 on cities and human settlements, UNECE and ITU together with other partner organizations, developed a common definition of a smart and sustainable city: *“A smart sustainable city (SSC) is an innovative city that uses information and communication technologies (ICTs) and other means to improve quality of life, efficiency of urban operation and services, and competitiveness, while ensuring that it meets the needs of present and future generations with respect to economic, social, environmental as well as cultural aspects.”*

In the framework of the Energy Ministerial and 8th International Forum on Energy for Sustainable Development, the UNECE Housing and Land Management Unit, swissuniversities, the ZHAW Zurich

## swissuniversities

University of Applied Sciences and the Copenhagen Centre on Energy Efficiency are jointly organizing the parallel event “Towards Smart Sustainable Cities – Integrated Approaches” on 14 June.

The event aims to discuss the benefits of integrated approaches, the role and use of technologies to realize smarter and more sustainable cities worldwide; to highlight existing networks and opportunities for cities that want to accelerate action; to identify innovative solutions, including implementation models and finance opportunities, to energy challenges for cities; to discuss the transformation of sociotechnical energy and transport systems at the city level and to examine the role of energy infrastructures. It will, furthermore, showcase city-level solutions and innovations relating to energy efficiency that provide inspiration and replication models for other aspirational cities.

The event is also the first day of the international seminar “Towards Smart Sustainable Cities – Integrated Approaches” which will continue at Nazarbayev University, Qabanbay batyr. 53 in Astana, Kazakhstan from 15 to 16 June 2017 (for more information on this event and registration, please visit this [website](#) or contact Vicente Carabias-Hütter at [cahu@zhaw.ch](mailto:cahu@zhaw.ch)).

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