



# Energy Efficiency for Sustainable Cities

By Benoit Lebot, Executive Director, and Jurei Yada, Policy Advisor, IPEEC

“*If like me you live in a city, your average day may look much like mine: I wake up in the morning, commute to work, spend a day at the office, return home, and switch off the lights to sleep. At each step, I interact with services powered by energy. From transport and street lighting to heating and cooling in buildings, what supports my day-to-day life are energy services accessed locally. My most immediate relationship with energy is therefore at the city level, and this is precisely why cities are so vital in the global push for sustainability.*”

Between now and 2030, the number of city dwellers is projected to rise from roughly 3.5 billion to 5 billion. In much of the world – including the Asia-Pacific region – more than 50 percent of the population lives in cities. Urbanization at this rate has led to the growth of “megacities” – or urban areas with more than 10 million inhabitants. There are already 15 megacities in the Asia-Pacific region, and this number will approach 20 in the next decade. This rate of urban growth will require significantly more energy to support greater economic activity, expanded infrastructure, and the rising need for municipal services. This is especially true for developing countries, which will account for 90% of urban growth in the next fifteen years. In order to ensure that such growth is sustainable, cities around the world need to become more energy efficient.

Energy efficiency reduces the amount of energy required to deliver a product or service. At the same time, it offers a range of other benefits including improved economic performance and competitiveness, job growth, energy security, and better health, to name a few. It is also a critical measure to mitigate climate change. Up to a third of the global greenhouse gas emissions reductions required to achieve the goal of the Paris Agreement on climate change can come from energy efficiency. For these reasons, SDG 7 calls for a doubling of the rate of energy efficiency globally by 2030 (target 7.3).

For cities, energy efficiency is both a long-term necessity and an opportunity. Cities are uniquely placed to encourage and deploy energy efficiency measures, given their multifaceted nature as energy consumers, managers of energy networks, and potential energy producers. City administrators can be effective communicators vis-à-vis their citizens, since they are the closest level of government to the people. To enable municipal authorities to deliver on energy efficiency's vast potential, several elements are required.

**1** City governments must develop the right policy framework for implementation. This means integrating energy efficiency into local priorities and strategies, including implementing national energy efficiency policies and programmes at the local level and ensuring that such measures are part of the long-term urban development plan. Multiple stakeholders should be consulted to maximize buy-in and create a shared sense of ownership. Energy efficiency is cross-cutting and involves a range of actors, from policymakers and investors to service providers and consumers. These diverse interests need to be taken into account to establish a successful basis for long-term action on urban energy efficiency. Wider priorities and targets must also be aligned with these requirements, so that local and central governments can work jointly towards realizing national or international energy efficiency and sustainability goals.

**2** Energy efficiency needs investment. Local budgets must be set aside or reallocated towards energy efficiency projects to support implementation. For cities this could be renovating public buildings or putting in place more efficient public transport. Municipal budgets however are often limited. Other sources of finance need to complement the gaps. These can come from central government, multilateral development banks, or the private sector. But to identify and mobilize financing, city authorities often require assistance and training, and this is where capacity building comes into play.

**3** Municipalities do not always have the capacity, awareness, or knowledge to identify energy efficiency opportunities, shape policies, and leverage investments. Local capacity building is therefore key to successfully deploying and scaling-up urban energy efficiency. To this end, city authorities should make the most of inter-municipal collaboration networks to share tools and experiences. A number of such initiatives exist: the Covenant of Mayors for Climate and Energy, Energy Cities, C40 Cities, the OECD Inclusive Growth in Cities Campaign, and the Sustainable Cities and Eco-Energy Towns Initiative announced by the Clean Energy Ministerial in June

2017. These platforms have the added benefit of bringing cities' voices to national and international debates, helping with the integrated policy-setting dimension. In addition, municipalities in developing economies could tap into technical assistance programmes like the World Bank's **Energy Sector Management Assistance Program (ESMAP)**, which provides training in identifying energy efficiency opportunities and financing, among others. We should not forget however that national governments and the international community must continue to support and reinforce resources to local governments for change to take hold. Good policies must be set and shared nationally and internationally, and initiatives and forums like IPEEC and the G20 can contribute significantly to wider energy efficiency cooperation.

**4** Finally, awareness-raising is critical to improving energy efficiency in cities. From creating multi-stakeholder partnerships to financing and citizen behavior in the local context, the municipal community must be made aware of the opportunity energy efficiency represents. Local governments have a vital role to play in educating these numerous actors. At the level of citizens, communication campaigns and education programmes could establish the basis for long-term transformation towards an energy efficient society.

All these elements are interactive and complementary, and all are necessary for cities to realize their energy efficiency potential and contribute to sustainable growth. That is why cities are fundamental to achieving SDG 7, and why energy efficiency is part and parcel of SDG 11 – the goal to make cities in the Asia-Pacific and around the world inclusive, safe, resilient and sustainable.

\* This article is based on an editorial previously published by the SDG Knowledge Hub.



IPEEC is an autonomous partnership of nations founded in 2009 by the G8 to promote collaboration on energy efficiency. Its membership now includes 17 of the G20 economies, which represent over 80% of global energy use and over 80% of global greenhouse gas emissions. Through IPEEC, members work together and partner with other international and private entities to identify and implement policies that hasten the deployment of energy efficient technologies and best practices. In 2014, IPEEC was designated the lead coordinating agency for the G20's collaborative activities on energy efficiency.