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5 impactful actions for cities to clean their energy supply

[Clean Energy](#)[Climate Action Planning](#)Originally Published: **March 2019**Author(s): **C40 Cities Climate Leadership Group, C40 Knowledge Hub**

These are five priority actions that cities can take to clean their energy supply and progress towards 100% clean energy. We explain how to implement each of these measures in the linked articles. [Actions to improve building energy efficiency](#) alongside investment in clean energy are vital to minimise energy demand.

1. Set an ambitious, science-based clean energy target

- Agree on an ambitious target of [100% clean energy by 2050](#), with an initial focus on 100% clean electricity by 2035. This will build momentum and signal the direction of travel.
- Set a target for [universal access to reliable, sustainable and affordable electricity](#) and clean cooking fuels and technologies, aiming to meet [WHO air quality guidelines](#) by 2030.
- Create a [roadmap for your city's renewable energy transition](#), informed by an analysis of your city's current and future energy needs, and locally-feasible renewable energy resources. Engage neighbouring municipalities and regional authorities – [city renewable energy is a regional issue](#). If your city does not have power over the electricity grid, or to decide energy sources for the city, set clean energy targets for municipal operations.
- Engage residents and businesses to understand all viewpoints and explain the [local benefits of ambitious action](#).

2. Incentivise building-scale renewables



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- Conduct market analysis and stakeholder engagement to understand the local renewable energy context. Deploying building-scale renewables such as solar PV and battery storage can support the goal of universal access to electricity and increase energy reliability.
- Introduce financial incentives, streamlined permit and planning processes for building-scale renewables, bulk equipment purchasing programmes and green building codes that require building-scale renewables.
- If your regulatory context allows it, introduce net-metering or feed-in tariffs for building-scale renewables. If not, lobby the relevant national or state authority to do so.
- Assist community groups to implement shared clean energy projects on community property.

3. Lead by example with municipal solar energy or other municipal clean energy projects

- Create an inventory of all city-owned property and its suitability for rooftop solar energy.
- Consider the full range of ownership options for solar energy. Direct ownership means all financial benefits flow to the city but requires upfront investment. Third-party ownership models, such as power purchase agreements (PPAs) or leases, require ongoing payments to a private investor/developer.
- Consider using the natural gas produced through anaerobic digestion, which is a zero-carbon process for treating organic waste, or assessing your wind energy potential.

4. Create demand for large-scale clean energy generation

- Negotiate a PPA with a renewable energy supplier, either bilaterally or as part of a group of local institutions.
- Support citizens to aggregate demand through clean electricity subscription programmes, either through a municipal utility, a subscription-based PPA, or community solar energy.
- Invest in large-scale, city-owned clean energy installations.
- If the city controls its energy supplier, negotiate bulk purchasing programmes for clean electricity and automatically enrol residents, with the option to opt out.
- If the city's grid energy supply is powered by coal, act to reduce demand for coal and block expansion.

5. Promote clean energy sources for heating and cooling buildings



- Use financial and policy tools, such as rebates and green building codes, to encourage owners to switch to more efficient and renewable-powered heating and cooling technologies.
- Develop an energy map of the city and introduce policies, such as mandatory connection requirements or connection-dependent density bonuses, to expand district heating and cooling networks. Use network upgrading or expansion projects as opportunities to integrate renewable energy technologies and storage.
- If fossil gas (natural gas) is widely used for heating and cooking, explore options for moving away from this fossil fuel. Fossil gas is not a ‘clean’ bridging fuel or a good investment.
- Consider using heat and clean electricity from the treatment of organic waste to heat buildings. Avoid incinerating waste to produce energy – it’s likely to be the most expensive and inefficient way for your city to make energy.

Cities that are currently unable to make decisions over their energy sources can lobby the relevant government departments to raise their ambition, and seek the power to take action. To achieve 100% renewable energy, cities will need to implement a combination of these actions defined in a clean energy roadmap, alongside measures to reduce energy demand, particularly in buildings. Explore the energy profile and policies of your city, or of peer cities, in our data explorer and policy explorer.



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