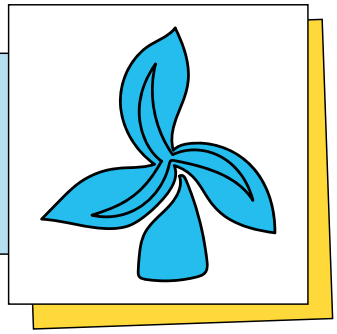
C40 RENEWABLE ENERGY ACCELERATOR



How cities are accelerating their energy transition

SIGNATORY CITIES

Buenos Aires, Copenhagen, Lagos, Lisbon, London, Los Angeles, Melbourne, Montréal, Paris, San Francisco, Seoul, Sydney, Tokyo, Tshwane and Vancouver

COMMITMENTS

Municipal commitment:

- Lead by example, either by switching municipal electricity consumption to 100% renewable energy by 2025 or deploying renewable energy systems on all feasible municipal assets by 2030.

City-wide commitment:

Cities will adopt one of the following pathways in line with their objectives, priorities and context.

- *Accelerating renewable energy transition:* Use 100% renewable electricity citywide by 2035 and fully decarbonised energy to cook and heat and cool buildings within the city no later than 2050.
- *Enabling energy access with renewables:* Achieve universal access to reliable, sustainable and affordable electricity and clean cooking fuels and technologies by 2030 and use 100% renewable electricity citywide by 2050.
- *Maximising local renewable energy:* Deploy clean energy systems for electricity, heating, cooling and cooking to achieve 50% of the assessed feasible potential within the city by 2030 and 100% by 2050.

SUMMARY

Decarbonisation of energy remains essential to meet the goals of the Paris Agreement. Cities host more than half of the world's population and make up over 75% of universal energy demand. They therefore hold the key to a global fossil-free energy future, with more affordable, accessible and secure energy supply systems, resilient communities, local green jobs and improved air quality. Despite the accelerated proliferation of renewable energy supply, fossil fuel use is still significant, and energy transition challenges are amplified by global geopolitics and socio-economic factors like rapid urbanisation. To fast-track progress and overcome existing challenges, cities need to step up in their critical role of championing a just energy transition.

The **C40 Renewable Energy Accelerator** was launched at a UN High Level Dialogue on Energy in September 2021. The Accelerator has **15 global signatory cities** demonstrating their leadership by joining the Accelerator and committing to accelerate the full decarbonisation of electricity, heating, cooling and cooking while phasing out fossil fuels. The Accelerator's commitment focuses on municipal and citywide energy use.

Cities are adopting various approaches to fulfil their municipality commitments, including: deployment of renewable energy systems on public assets; sourcing renewable energy through market based mechanisms, such as Power Purchasing Agreements (PPAs) and green tariffs; and meeting municipal demand from city-owned utilities that supply clean electricity. Cities are meeting their citywide Accelerator commitments using: partnerships and engagements with businesses and communities, sharing information and knowledge; use of regulatory powers over buildings; actions to address financial barriers; and providing support to innovative and emerging energy technologies. In **London**, Transport for London (TfL) entered into a 15-year PPA for renewable energy supply to the city's tube network in 2025. **Sydney** installed a total of 2 megawatts (MW) of solar on its properties by 2025, and **Paris** developed solar potential maps and a city registry. **Lagos** hosted clean energy hackathons that encourage women-led startups to develop renewable energy solutions.

Between 2023 and 2025, signatory cities collectively phased out over 20 MW of non-renewable energy supply. In the same period, four cities implemented new renewable energy procurement models, highlighting a major shift towards more democratised and digitalised renewable energy sources. Additional cities also raised their renewable energy ambitions and targets, including **Seoul** and **Lagos**, increasing their 2030 renewable energy targets to 3 gigawatts (GW) and 2 GW respectively. Limited jurisdiction over energy supply is a major challenge for cities tackling the energy transition. Signatory cities including **Montréal, San Francisco, Sydney, Seoul** and **Tokyo** began implementing renewable energy mandates and ordinances for buildings to foster local renewables deployment. Increased advocacy for renewable energy use was evidenced in cities like **Tshwane** and **Vancouver**, along with escalated adoption of innovative and emerging technologies, such as community solar and energy storage projects in **Buenos Aires, Los Angeles**, and **Melbourne**.

Since the Accelerator's launch, all signatory cities have come a long way in decarbonising their energy use. As of June 2025, more than a third of Accelerator cities were 100% reliant on renewable energy sources for their municipal electricity consumption. The majority of the remaining cities recorded increased renewable energy reliance to power city operations since 2021. Under the city-wide commitment, 8 of the 15 cities reported that all households within their boundaries had access to clean electricity or clean energy for heating and cooling.

The successes of the C40 Renewable Energy Accelerator cities will inspire other stakeholders, including utilities, businesses, and other cities and levels of government, to shift away from expensive and polluting fossil fuels and give way for a clean energy future – with healthier communities, more green jobs, and fairer, more inclusive cities.

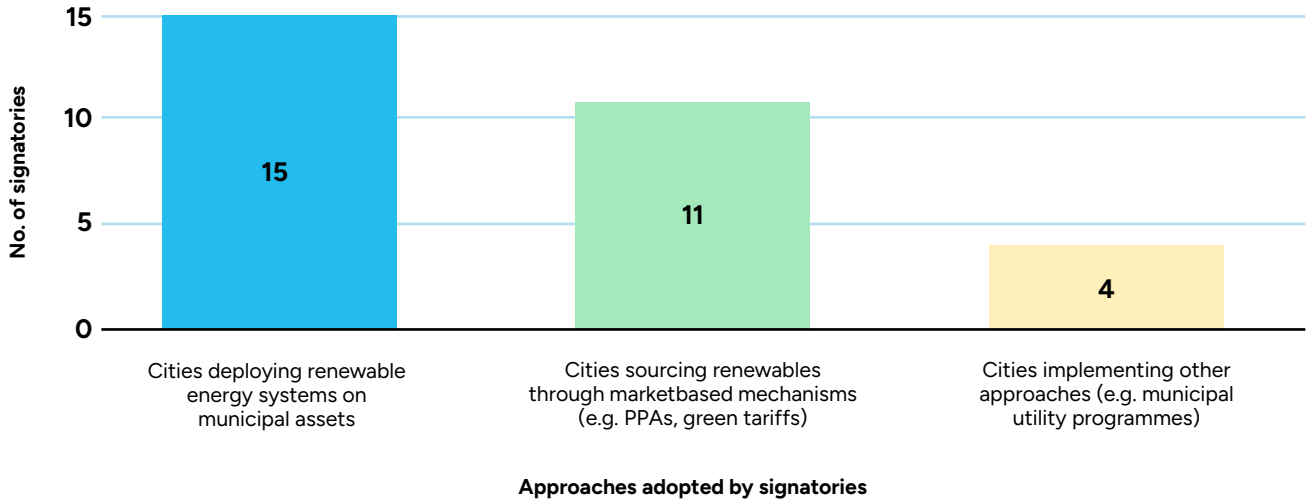
IMPACT

Progress on Accelerator commitments as of 2025:

33%

of signatory cities have achieved the municipal commitment, while 40% are progressing.

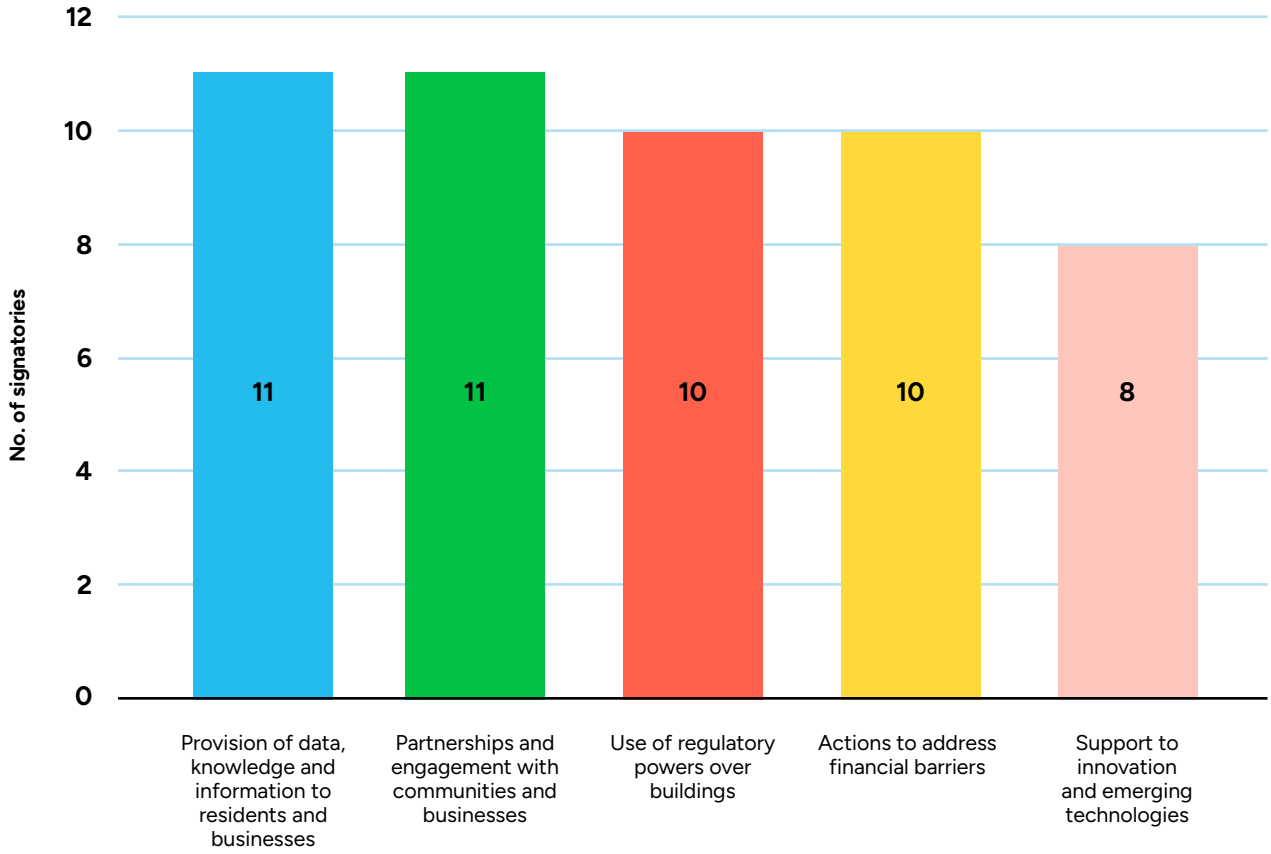
Main approaches cities are adopting to meet the municipal commitment (number of cities using that approach):



60%

of signatory cities are on track to meet the citywide commitment.

Main actions cities are taking to meet the city-wide commitment (number of cities taking that action):



Over 20 MW of non-renewable energy was phased out by signatory cities between 2023 and 2025, an equivalent of 17,520 American homes no longer being powered by fossil fuels.

100%

of signatory cities are implementing actions towards grid decarbonisation (either building-scale or large scale)

67%

of signatory cities are using regulatory powers over buildings to boost renewable energy use

TURNING COMMITMENT INTO ACTION

Municipal commitment: Lead by example, either by switching municipal electricity consumption to 100% renewable energy by 2025 or deploying renewable energy systems on all feasible municipal assets by 2030

Buenos Aires had a total renewable energy installed capacity of 2 MW on its assets as of 2025, up from 1.6 MW in 2023. This was a result of various city initiatives such as the enactment of law 6.646, on the use of renewable energy in public buildings. The law legally established the promotion and incorporation of clean energy into municipal consumption to align with the city's environmental commitments and a strategic plan for energy use from renewable sources in public buildings. The city also launched a PPA tender to facilitate electricity supply service from renewable sources to 12 local government buildings (12,850 MWh/ year) in 2023.

Melbourne prioritises 100% renewable energy, as stated in its Climate Change Mitigation Strategy. Its assets are already being supplied by 100% renewable electricity under the 10-year Melbourne Renewable Electricity Project power purchase agreement. Other initiatives include: Power Melbourne, a groundbreaking network of community batteries; a Gas Free Operations programme to shift city assets to 100% renewable electricity, which was awarded A$2.5 million (US$1.6 million) in grants from the federal government in 2025; and expansion of solar PV. The city has rapidly grown its renewable energy generation, bringing the city's total solar capacity across council-owned buildings to 1.35 MW as of 2025, avoiding approximately 900 tonnes of CO_2 emissions per year.

City-wide commitment: Accelerating renewable energy transition: Use 100% renewable electricity citywide by 2035 and fully decarbonised energy to cook and heat and cool buildings within the city no later than 2050

Los Angeles has launched one of the largest solar and battery energy storage projects in the US – the Eland Solar-plus-Storage Center project. The city's energy utility (LADWP) has a 25-year PPA with the project's owner, Arevon Energy, Inc. The energy supply from the project will meet 7% of the city's energy consumption needs and power over 266,000 households. It will also increase the city's clean energy share to above 60%, moving towards the goal of being powered by 100% clean energy by 2035.

Copenhagen is implementing a number of actions to reach its target of being supplied by 100% carbon neutral electricity. These includes the retrofitting and modernisation of the city's main Combined Heat and Power (CHP) plants to phase out fossil fuels – mainly coal. As of 2024, the city had nearly net zero district heating, and about 80% of its electricity production was carbon neutral. Copenhagen also has a newly approved Energy Strategy, and new 2035 targets of 330 MW of heat pump capacity, 550 MW of heat boiler capacity and 75 MW rooftop solar PV within city limits.

City-wide commitment: Enabling energy access with renewables: Achieve universal access to reliable, sustainable and affordable electricity and clean cooking fuels and technologies by 2030 and use 100% renewable electricity citywide by 2050

Tshwane issued a Request for Information (RFI) that aims to identify 1,000 MW of renewable and clean energy projects from independent power producers (IPPs), which the city can then contract to power the local grid. The RFI was advertised in December 2023 and closed in February 2024. In 2025, Tshwane also approved the Embedded Generation policy – encouraging the use of renewable energy technologies by providing guidelines and regulating the connection of generators into the city's electrical grid. The Energy Wheeling policy was also ratified – aiming to facilitate access by generators to wheel and sell energy to off-takers.

City-wide commitment: Maximising local renewable energy: Deploy clean energy systems for electricity, heating, cooling and cooking to achieve 50% of the assessed feasible potential within the city by 2030 and 100% by 2050

Montréal is focusing on expanding the deployment of renewable energy for consumption by private buildings to reach its goal of net-zero buildings by 2040, as its buildings are already 100% powered by the Hydro-Québec electricity grid. Biomass, geothermal and photovoltaic energy sources are being assessed and explored. The city solely uses biogas from a former landfill, Saint-Michel Environmental Centre, to cogenerate electricity and heat, and plans to commission new projects to utilise all municipal biomass (sludge and organic waste) to produce energy. The city also intends to: deploy more geothermal systems for heating and cooling, with the city currently having a total of 33 systems for municipal buildings; study its additional solar potential and heat recovery mechanisms for buildings; and explore other interventions.

Seoul is aiming for 50% of its renewable energy generation to come from geothermal energy, and maximum local renewable energy to be attained by deploying systems on all feasible municipal assets by 2030. As of 2025, the city has a cumulative renewable energy capacity of 1,545 MW, covering both the public and private sectors. In addition, the city launched an efficiency improvement programme to replace outdated geothermal equipment. In 2024, nine public and three private facilities received support from the programme. A comprehensive geothermal expansion plan was also prepared by the city, and, between 2022 and February 2025, 65 MW of geothermal systems had been installed as a result of major city-led initiatives such as the Garak Market redevelopment. Over the same period, 16.6 MW of additional solar PV was installed.

INSPIRATION

San Francisco delivered a joint presentation with the city of **Boston** in 2023 during a convening organised by Architecture 2030, where they reviewed and learned from their complementary renewable zoning policies, for example the San Francisco Environment Code Chapter 30 (Ordinance 220-19).

Copenhagen's work with energy flexibility has been inspired by Swedish cities, including **Gothenborg.** The city is interested in the fact that some Swedish utility companies have the option to turn off electricity to consumers as part of a security of supply strategy.

COLLABORATION

The **Tokyo** Metropolitan Government (TMG) is working with national and local governments and businesses to strategically promote the spread of next-generation solar cells, to reach its target of 10 MW capacity by 2035. Since 2023, TMG has been working with companies to conduct verification projects for solar cells, like the one at the Tokyo International Cruise Terminal.

Vancouver aims to reduce upfront costs for energy upgrades and lower electricity rates to support electrification and energy efficiency for all city residents, including economically disadvantaged groups. It is achieving this through advocacy and collaboration with other stakeholders, including the utility BC Hydro and provincial government. Examples of such initiatives include the BC Hydro's residential rebates and free programmes.

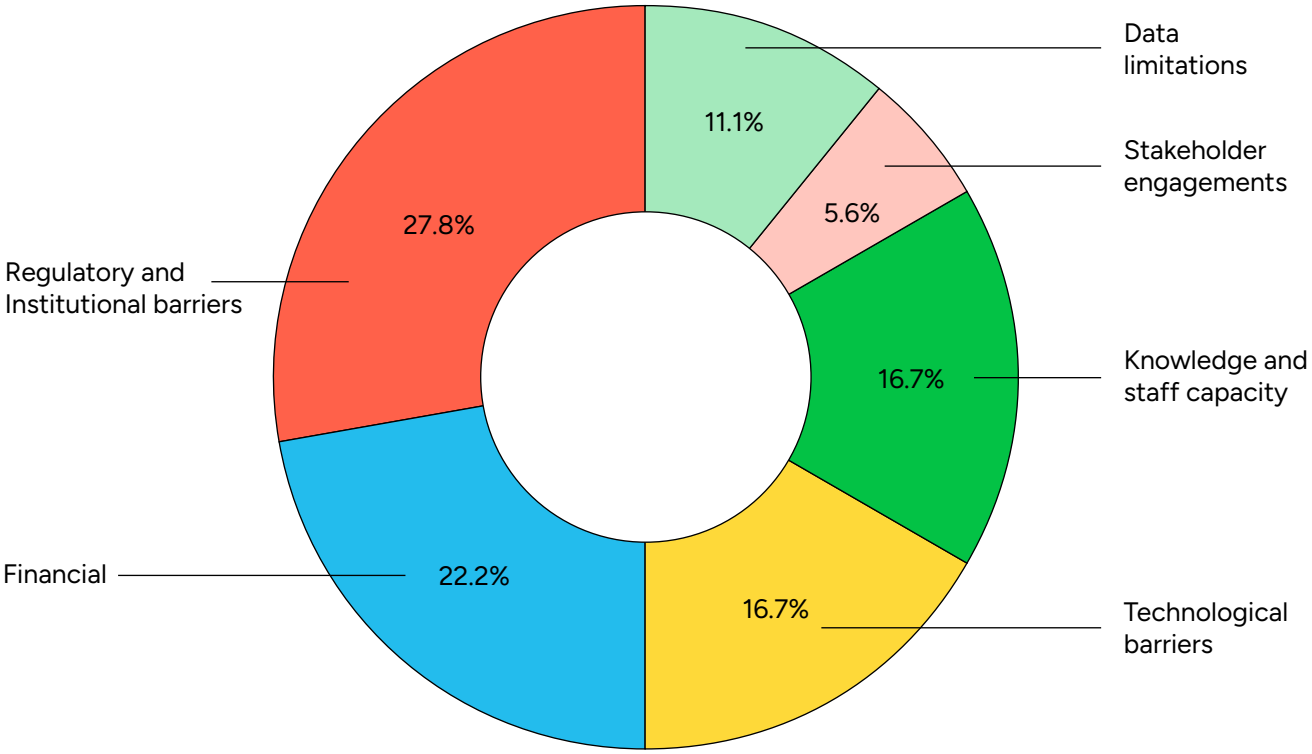
EQUITY AND INCLUSION

Lisbon launched the 'Loja Lisboa Clara' in April 2025, a one-stop-shop for climate and energy that focuses on residential decarbonisation, and supports the most vulnerable households. Integrated into the national Espaço Energia network, this physical hub helps residents access information, technical support, and funding – particularly those experiencing energy poverty.

The Loja Lisboa Clara is a key tool for distributing Vale Eficiência vouchers, a grant-based national programme that provides free energy efficiency upgrades for economically vulnerable families. By connecting residents directly with support and ensuring access to climate benefits for low-income groups, Lisbon is advancing a just and inclusive energy transition.

Lagos State is advancing equity, inclusion, and collaboration in the energy sector through a mix of renewable energy deployment, gender-focused programmes, and public-private partnerships. The Lagos State Development Plan (2025–50) prioritises low-income and underserved areas, using mini-grids and solar home systems to improve access, particularly in rural and peri-urban communities. The Solar Power Naija Initiative, a collaborative project with the Federal Government and World Bank, has provided over 100,000 subsidised solar systems to low-income households. Gender inclusion is addressed through the Women in Energy Empowerment Programme (WEEP), training women in solar installation, maintenance and entrepreneurship.

Challenges faced by cities



CHALLENGES

Data limitations, financial barriers, regulatory and institutional barriers, technological barriers, knowledge and staff capacity, and stakeholder engagement are among the most common challenges faced by signatory cities. Regulatory and institutional barriers were the highest reported challenges, mainly caused by cities' limited jurisdiction over the energy supplied within their boundaries. This challenge has been overcome by cities through various ways, such as collaboration with energy utilities and other entities, deployment of renewable energy systems on municipal assets, and use of regulatory powers over buildings to incentivise solar installations.

Prerequisite funds needed for renewable energy deployment are becoming more difficult to raise for cities, as they have many competing priorities to address with limited resources. Therefore, cities are taking up emerging approaches to access additional funds, including application to grants and climate funds, and using innovative financing models to address their financial hurdles. Low stakeholder engagement, limited data and knowledge, and staff capacity on renewable energy solutions can be addressed through advocacy, capacity building and sharing of information and data on public platforms.

HOW CITIES ARE STEPPING UP THEIR ACTION

The next five years remain pivotal for signatory cities to successfully achieve their commitments, ahead of the 2030 target year. **Lisbon** plans to install another 2.2 MW of solar power on its municipal assets by 2027. **Paris** is aiming to increase the green share of its district heating network energy mix from 50.7% in 2024 to 75% in 2030. The continued implementation of city energy actions and plans requires collaborative stakeholder processes to fast-track progress and address pressing challenges encountered along the way. One collaborative approach is the city of **London**'s Solar Together Programme – a group-buying initiative facilitated by the city to help households and small businesses address the challenge of high costs of energy equipment.

To address existing and future challenges and help implement energy plans, C40 is supporting signatory cities to find tailored solutions through various avenues like city-to-city knowledge-sharing sessions and workshops. Extra support will be offered to signatory cities lagging in progress to help them gain momentum in the transition. Technical assistance for the decarbonisation of energy supply and demand is also being offered to various cities through programmes like the 24/7 Carbon Free Energy Project and South African Energy Project. As 2030 approaches, C40 Renewable Energy Accelerator signatory cities continue to set the pace for ambitious climate actions and advance the energy transition.

FUTURE ACTION

Paris has embarked on the second phase of its Énergiesculteurs programme, promoting solar panel installations on public building rooftops. The initiative is expected to run from 2025 to 2029 and add 1.7 GWh of renewable electricity. The first phase (2022–25) had a goal of 750 MWh/year and was implemented by an energy cooperative – Enercitif.

Sydney will begin to implement its recently endorsed environmental strategy 2025-2030. The strategy proposes increased targets for city operations, including 85% reduction in emissions based on 2006 levels, 30% reduction in total energy based on 2023 levels, and elimination of fossil gas.