

Embargoed until: 09:30 CET Paris Time – 18 March 2021

Trends in Sweden

Facts from the *Renewables in Cities 2021 Global Status Report*

Key Renewable Energy Takeaways in 2020 from Sweden

- Transitioning the heating and cooling of buildings to renewables is a priority for Swedish cities, many of which have extensive district heating and cooling systems; overall these networks already rely on one of the world's highest shares of renewables in such systems but efforts are in place to reach 100% renewables.
- The decarbonisation of transport is well underway in many Swedish cities, due to the increased penetration of both biofuels and renewable electricity in the sector.

Brand new data shows

- 25 cities had renewable energy targets and/or policies (from a global total of over 1,300 cities). This covers 3.7 million people, 46% of the urban population in Sweden:
 - 18 cities had 100% renewables targets.
- 24 cities had adopted/planned net-zero¹ targets; 5 of these were adopted in 2020 (**Malmö, Sigtuna, Stockholm, Trelleborg** and **Umeå**).
- Swedish cities are lagging behind on declaring climate emergencies. Notable exception are **Lund** in 2019 and **Malmö** in 2020; globally 1,852 cities worldwide with such a declaration.

Renewable Energy Developments in Swedish Cities

Targets and Policies

- Most policies in Swedish cities focus on the transport sector, including 8 cities with low emission zones.
- **Gothenburg** and **Stockholm** have EV targets as well as renewable power targets.
- **Helsingborg** is one of only three cities worldwide that have biofuel targets for transport (since 2019) – most biofuel targets and policies are enacted at state/national levels.
- A ban on the use of coal in buildings is expected to come into force in **Stockholm** in 2022; the city also pledged to ban the use of oil for the same purposes.

Scaling up renewables in buildings and transport

¹ Net-zero" emissions can be achieved, for example, by using natural sinks, such as reforesting land or adopting agricultural best practices, or through a technological solution, such as carbon capture and storage. Net-zero targets also are referred to commonly as "climate-neutral", "carbon-neutral" or "zero-emission" targets, although technically these are not the same. Carbon neutrality refers to net-zero emissions of only CO₂, whereas climate neutrality indicates a broader focus on net-zero emissions of all greenhouse gases. There is no agreed-upon definition, and implementation of these targets also varies broadly.

- Municipal governments can adopt stricter reach codes than those set at higher levels: Since 2012, **Stockholm** has allowed a maximum of 55 kWh/m² of energy consumption for new buildings on municipally allocated land, which means that energy use by the city's new buildings is on average 30% below the values set at the national level.
- **Cities are pushing to increase the share of renewables in district heating:** Sweden has the second-highest share of renewables (69%) in district heating and cooling worldwide and is among the world leaders in total production of district heating (these systems serve mostly urban areas):
 - To help reduce fossil-based energy use in its district heating system, **Malmö** is constructing a 50 MW_{th} geothermal deep-heat plant (expected to start operation in 2022). The city plans to build a total of five geothermal heat plants by 2028.
 - **Stockholm's** district energy network has a 3,600 MW heating and 220 MW cooling capacity, supplying six municipalities. Since the city's last coal-fired plant closed in 2020, heat supply has been based on biofuel and municipal waste, with plans to use 100% renewable fuels by 2022.
- **Several Swedish cities have used neighbourhood approaches to increase renewables:**
 - In the new residential neighbourhood of Tamarinden in **Örebro** (which relies on 100% renewable electricity), 600 housing units are being developed with plans to produce and share renewable energy.
- **Electrification of urban transport is gaining ground, but biofuels still play an important role in decarbonising urban transport systems:**
 - **Stockholm** is among the world leaders in the number of EV chargers per person, these benefit from a 69% share of renewables in the city's electricity mix.
 - All urban rail systems and buses in **Stockholm** have been using 100% renewable energy (renewable electricity and biofuels) since 2017.
 - In 2019, **Gothenburg** placed the largest single order for electric buses in Europe (157 buses), as well as an order for 27 biodiesel buses.

Financing renewables in cities

- Various Swedish cities have issued municipal bonds to finance renewable energy installations, including **Gothenburg, Lund, Malmo, Necka, Norrköping, Örebro, Östersund, Vasteras** and **Vellinge** – together totalling over USD 2.7 billion between 2013 and 2019:
 - **Gothenburg** was the first city to issue a green bond in 2013, and by 2019 it had provided the highest total value of municipal bonds for renewables worldwide.

Sweden's Energy Profile: <https://www.iea.org/countries/sweden>

Regional Trends

- European cities are global leaders on urban energy and climate issues, often driven by the push for greater climate action and the desire to improve the health of city residents; Europe is spearheading the climate emergency declaration movement, accounting for almost half of the total 1,852 declarations (2020). More than 350 cities had a renewable energy target.

- In line with the EU Green Deal, cities have also committed to net-zero goals, developed more holistic strategies, integrated solutions to decarbonise activities in urban areas: scaling up renewables on municipal buildings, using waste and wastewater as inputs, shifting municipal fleets, integrating solar and geothermal district heating.

Questions? Please contact press@ren21.net or +33 1 44 37 50 99.

All report materials, figures, case studies and the full data pack can be downloaded here:
<http://ren21.net/rec2021press>