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Trends in the United Kingdom

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

Key Renewable Energy Takeaways in 2020 from the UK

- UK cities are frontrunners in setting climate and energy targets. The UK100 network has been instrumental in encouraging city governments across the UK to adopt energy and climate targets, including net-zero targets, in the late 2010s/early 2020s.
- In line with national bans on fossil fuels, several UK cities are implementing policies and sourcing alternatives for transport and heating in buildings, namely low emission zones and community choice aggregation.
- Several city-level projects across the UK are aimed at addressing energy poverty.

Brand new data shows

- 106 cities had renewable energy targets and/or policies. UK cities represent around 8% of all cities where renewable energy targets and/or policies were identified (from a global total of over 1,300 cities). This covers 40.6 million people, 73% of the urban population in the United Kingdom:
 - Most targets were aimed at “100% clean energy” by 2050 (under UK100).
 - 6 cities had EV targets; **Brighton & Hove** aimed for 100% RE in transport by 2030.
 - Many city-level policies are passed and proposed low emission zones (15) or vehicle bans (7).
 - 8 cities launched community choice aggregation (CCAs) to support solar power.
- 45 UK cities had targets for net-zero¹ (from a global total of around 800 cities with net-zero targets).
- UK cities are also global frontrunners on declaring climate emergencies: 493 cities in the UK had declared a climate emergency by 2020 (up from 450 in 2019); globally a total of 1,852 cities had such a declaration.
 - 61 UK cities had both climate action plans and renewable energy targets.
 - The number of climate action plans almost doubled between mid and late 2020, driven by UK municipal governments which added 87 plans in September alone.

¹ Net-zero" emissions can be achieved, for example, by using natural sinks, such as reforestation 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.

Renewable Energy Developments in UK Cities

City renewable energy commitments and policies

- The UK adopted a ban on the sales of new petrol and diesel vehicles (from 2030) and banned the use of gas heating for new homes (from 2025). In line with that, cities adopted:
 - New LEZs and other vehicle restrictions/bans, EV targets, procurement and direct investment in EVs and other vehicles running on renewable fuels, etc.:
 - Passed and proposed LEZs in UK cities include **Aberdeen, Bath, Birmingham, Dundee, Edinburgh, Leeds, Leicester** and **Southampton**.
 - Due to measures enacted in response to COVID-19, some planned UK-based low emission zones (including in **Oxford**) were postponed. Also, some existing low emission zones and associated financial penalties and congestion charges were suspended and then later reinstated, including in **London**.
- Many cities adopted policies and took action for renewables-based power and heating in buildings. In **Leicester**, the municipal government provides grants of GBP 1,000 to GBP 7,000 (USD 1,357 to USD 9,504) for small businesses to implement renewable heating systems and energy efficiency measures.

Scaling up renewables in buildings and transport

- **On-site renewable power generation capacity is increasing in UK cities:**
 - A new anaerobic digestion facility to convert organic waste into biomethane for electricity generation opened in **Glasgow** in 2019.
 - In 2020, **Exeter** was developing its first solar-plus-storage project which will provide electricity for city council operations.
- **Purchasing electricity via green tariffs:** Green tariff purchases (>50% with renewable energy content) motivated 19% of consumer switches between energy suppliers in mid-2020, up from 9% in 2018. **Bedford** will rely on GOs from the local energy supplier to power all council-owned/operated buildings and streetlights with 100% renewables from 2021.
- **First Power Purchase Agreement between a city government and renewable producer signed in the UK in 2020:** The city of **London** signed a Power Purchase Agreement (PPA) with Voltalia in 2020 for an off-site 49 MW solar farm in **Dorset**.
- **Several city initiatives help to reduce energy poverty:**
 - **Hackney's** Green Homes programme provides free insulation and trials renewable heating upgrades to help residents save on energy bills.
 - In 2019, the Mayor of **London** and Octopus Energy, that provides renewable electricity only, formed London Energy, with the aim of fighting fuel poverty affecting 1 million Londoners.
- **Scaling up renewables for district heating:** The first district heating network in Scotland using large-scale water-source heat pumps entered into operation in **Clydbank** to serve various buildings.
 - **Leeds** plans to invest GBP 24 million (USD 31.5 million) in six new district heating networks (relying on biomass or heat pumps).

- **The UK ban on the sales of new petrol and diesel vehicles (from 2030) is promoting the use of renewable fuels and electricity across all modes of urban transport:**
 - **Biofuels:** **Bristol** partly funded the deployment of 77 biomethane buses; **Liverpool** commissioned 20 refuse trucks that run on biogas; first biomethane-fuelled trams started testing in **Birmingham** and in **Warwickshire**.
 - **EVs:** Renewably powered ferries were being developed in **Cardiff-Bristol**; **Leeds** took delivery of 122 electric vans to be used for municipal services; the waste management company in **Manchester** purchased 27 electric refuse trucks.
 - **London** is one of the world's EV capitals², with 405 public EV chargers per million population which rely on 37% renewables in the national mix.
 - **Hydrogen:** In **Aberdeen**, the first green hydrogen-powered double-decker buses started operating in 2020; Shell's hydrogen refuelling stations in **Beaconsfield** and **Cobham** supply hydrogen produced on-site using renewable electricity.

Financing renewables in cities

- Although the UK was still a leader in investment in renewable energy capacity in 2019, the country's investment decreased in comparison with 2018 to USD 5.4 million.
 - **Swansea** launched a GBP 60 million (USD 83.6 million) ocean energy project that aims to accelerate the city's climate actions and to help its COVID-19 economic recovery.

Citizen engagement to achieve energy and climate goals

- At least 300 community energy groups were active in the UK, mainly in electricity generation, installing 15.4 MW of new electricity in 2019:
 - Groups pushed to finalise community-owned electricity projects in anticipation of the ending of the feed-in tariff programme in March 2020.
 - Community energy projects exist in **Brighton, Bristol, Bournemouth, Cardiff** and **Edinburgh**.
- In 2019, citizens successfully campaigned in **Leicester** and **Eastbourne** for local climate plans.
- A number of UK municipalities attempted to set up publicly owned energy providers to address energy poverty by offering low tariffs for struggling citizens:
- As of late 2020, there were 13 cases of remunicipalisation of energy infrastructure.

UK's Energy Profile

<https://www.iea.org/countries/united-kingdom>

Regional Trends: Europe

- 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

² London has one of the largest e-bus fleets in Europe (over 310 e-buses by mid-2020) and over 2,500 e-taxis.

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.

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>