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## Trends in the Republic of Korea

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

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#### Key Renewable Energy Takeaways in 2020 from the Republic of Korea

- Most city-level renewable energy targets and policies are aimed at the transport sector, but efforts to install solar systems in buildings are also significant.
- Korean cities are frontrunners in declaring a climate emergency: Almost 80% of the municipal governments that had declared a climate emergency in Asia, were in the Rep. of Korea (228 out of 278).
- As part of the Korean Local Governments' Action Alliance for Carbon-Neutrality, 226 local governments that had already declared a climate emergency by September 2020, pushed the national government to commit to carbon neutrality by 2050.

#### Brand new data shows

- <sup>1</sup> 5<sup>1</sup> cities had renewable energy targets and/or policies (from a global total of over 1,300 cities). This covers over 26 million people, 55% of the urban population in the Rep. of Korea.
- Municipal governments in the Republic of Korea dominate the number of climate emergency declarations issued in Asia, representing 228<sup>2</sup> out of the 278.
- On a global scale, Korean cities are lagging behind on setting net-zero<sup>3</sup> targets: only 2 cities had a net-zero target - **Dangjin-si** and **Seoul** (from a global total of around 800 cities with net-zero targets).

#### Renewable Energy Developments in Cities in the Rep. of Korea

##### City renewable energy commitments and policies

- Growing pressure from local governments on the national government to scale up climate action and their goal to reduce dependency on nuclear energy and improve air pollution have driven demand for EVs and renewable energy.

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<sup>1</sup> Dangjin-si, Incheon, Sejong, Seoul and Suwon.

<sup>2</sup> All but one were issued in 2020.

<sup>3</sup> 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 CO<sub>2</sub>, 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.

- The 2020 Green New Deal adopted at the national level has also stimulated city-level action on renewable energy.
- The adoption of the national Green New Deal in July 2020 represents a significant step towards accelerating Korea's energy transition, but it requires collaboration at all government levels:
  - By 2025, the Korean government will invest USD 37 billion in Green New Deal policies and a further USD 7 billion in carbon-cutting measures, including on green mobility:
    - The Green New Deal envisions the involvement of central and local governments, with half of the money to be invested **outside of Seoul**.
  - **Seoul** responded by pledging to invest around **USD 2.2 billion** by 2022 as part of its own city-level Green New Deal implementation plan focusing, inter alia, on buildings, transport and renewable energy.
  - Since 2012, **Seoul** has adopted policies to become a zero-carbon city by 2050 while reducing its dependency on nuclear energy (e.g., the One Less Nuclear Power Plant Project, the Solar City Seoul project) and plans to phase out diesel vehicles in public fleets by 2025 and replace them with battery electric and fuel cell vehicles.

### Scaling up renewables in buildings and transport

- **Plans to scale up renewable power, despite land scarcity:** In 2017, Solar City **Seoul** was launched with the goal of adding 1 GW peak of solar power capacity by supplying PV panels to 1 million households by 2022. The programme exceeded its intermediate goal by installing a total of 357.1 MW of solar panels for 285,000 households by 2019.
- Although the Rep of Korea is among the top 10 countries in district heating in terms of heat output, **district heating continues to be dominated by fossil fuels** (only 4% of renewables – less than the global average of 8%)
- **High focus on actions in transport:** Most city targets and policies in the Rep. of Korea focus on transport which is the second-largest energy-consuming sector and has the second-highest emissions. These support strong national ambitions to create a hydrogen economy:
  - In 2019, the Korean government announced plans to set up 3 green hydrogen-powered cities by 2022, which entails a significant scale-up of hydrogen vehicles as well as hydrogen refuelling infrastructure. In 2020, four “candidate cities” were announced (**Ansan, Ulsan, Wanju** and **Jeonju**) for the Hydrogen Cities Initiative. Each of the 3 cities ultimately selected will receive around USD 25 million in funding.

### Citizen engagement to achieve energy and climate goals

- Community energy projects are emerging in cities in the Rep. of Korea, partly stimulated by the 2012 Cooperative Act, issued in response to the **Fukushima** disaster:
  - More than 100 community renewable energy projects by late 2018, many of them in cities: The country's first project, comprising 5 solar PV stations (total 332 kW) was built in leased public space in **Seoul's** Eunpyeong district in 2013. Another 6/7 plants (600-700 kW total) are planned by 2021.

### Republic of Korea's Energy Profile

<https://www.iea.org/countries/korea>; <https://www.iea.org/reports/korea-2020>

## Regional Trends: Asia

- In Asia, growing concerns about air pollution and smog have driven public demand for renewable energy technologies and electric vehicles to improve public health.
- At least 78 municipal governments in Asia had adopted renewable energy targets and/or policies, most of which were in buildings and transport.
- Local governments have been instrumental in pushing national governments in East Asia to commit to carbon neutrality and/or net-zero targets.
- Green hydrogen for transport also is garnering interest across Asia, with several cities having ongoing or planned pilot projects.

**Questions?** Please contact [press@ren21.net](mailto: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>