Implementing an ambitious net-zero roadmap in Korea

Political implications

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An ambitious net-zero roadmap in Korea implies a radical U-turn away from carbon-intensive path dependency

- More than 90% of the energy consumption in Korea is covered by imported fossil fuels such as coal, oil, and LNG.

- The energy intensity in Korea (0.141 koe/$ in 2020) is two times higher than in other developed economies (FR 0.081, JP 0.076, DE 0.07 koe/$).
Current climate measures must be **significantly accelerated** in order to reach climate neutrality.

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<th>Most climate protection measures needed to reach net-zero are already in place, but their scope and speed is limited:</th>
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<td>a) Renewables Portfolio Standard established in 2011 does not guarantee investment stability</td>
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<td>b) K-ETS is negligible to reduce emissions in power and industry sectors</td>
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<td>c) Zero Energy Building announced in 2014, but mandatory for private buildings in 2025</td>
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<td>d) Manure fermentation is still optional</td>
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- Renewables have not been given yet political predominance, since wide technology options are still under discussion (role of SMR, CCUS, blue hydrogen)

→ K-Map strongly request to establish *climate protection* as the country’s top priority
An ambitious net-zero plan presents important opportunities for the manufacturing-based export-oriented Korean business

Most carbon-free technologies are still immature in Korea

- a) Floating offshore wind turbines
- b) Energy storage
- c) Green electrolyzer
- d) Hydrogen based DRI
- e) Green naphtha with CCU

The road to carbon neutrality represent a major opportunity for technological leadership

Our roadmap shows a clear direction for Korean manufacturers
The Next Korean Presidency will be key to implement an ambitious and coherent net-zero policy

- Election is the biggest *window of opportunity* for policy action in representative democratic states
  - New German government (Dec 2021): successfully strengthened climate protection ambitions with higher RES promotion target and earlier coal phase-out

- Korean Presidential Election on 9th March 2022
  - Minor interest in climate protection: economical and social equality as the main topic during the campaign
  - All candidates promising *economic growth* and *job creations*, but propose different solutions: energy transition and climate protection for the liberals, advanced scientific technologies for the conservatives

→ 2022 and 2023 as critical years for climate actions in Korea
  - **Power to change only in the first two years** given the Korean presidential system with a single five-year term
  - The framework condition for an ambitious net-zero roadmap should be implemented by the next presidency in Korea
Thank you for your attention!

Questions or Comments? Feel free to contact me:

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