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International Roundtable:
Strengthening International Collaboration on CCUS

February 13-14, 2019
Washington, D.C.

Summary Recommendations

With the support of Japan's Ministry of Economy, Trade and Industry, the Center for Climate and Energy Solutions (C2ES) and the Research Institute of Innovative Technology for the Earth (RITE) organized a roundtable in Washington, D.C. on February 13-14, 2019, to consider opportunities to strengthen international collaboration on carbon capture, use and storage (CCUS) during Japan's G20 Presidency. The roundtable included more than 60 participants from 11 countries, representing over 40 governments, companies, multilateral bodies, NGOs and other organizations.

In keynote remarks, Parliamentary Vice-Minister of Economy, Trade and Industry Akimasa Ishikawa recalled Prime Minister Shinzo Abe's address in Davos, Switzerland, in which the Prime Minister highlighted the importance of disruptive innovation to address climate change, including technologies such as carbon recycling. Other keynote remarks at the roundtable were delivered by U.S. Senator Sheldon Whitehouse (D-RI) and U.S. Under Secretary of Energy Mark Menezes.

Participants expressed the strong view that this year's G20 presents an important opportunity to strengthen awareness of the climate and other benefits of CCUS technologies and to initiate new actions by the G20 and by Member countries, building on existing initiatives and partnerships, to advance the development and deployment of these critical technologies.

Based on these roundtable discussions, C2ES and RITE offer the following recommendations for consideration at the energy and environment Ministerial meeting on June 15-16, 2019, in Karuizawa, Japan, and at the G20 Summit on June 28-29, 2019, in Osaka, Japan:

Highlighting the Importance and Benefits of CCUS

While many nations have made progress in advancing CCUS, broader understanding of the importance and multiple benefits of these technologies is a vital step toward their broader deployment. The communique from the Karuizawa Ministerial should note, in particular, that:

- Analyses by the Intergovernmental Panel on Climate Change and other expert bodies demonstrate the essential role of CCUS technologies in achieving the Paris Agreement goal of holding the increase in the global average temperature to well below 2 °C above pre-industrial levels;
- CCUS technologies are especially critical in reducing CO_2 emissions from industrial sectors where alternative abatement options are limited;
- These technologies also can play a critical role in achieving the U.N. Sustainable Development Goal (SDG) of universal energy access by ensuring the availability of a broad array of low-carbon fuels, and can contribute to energy security, a just transition, and other SDGs focused on water and sanitation, health, education and economic growth.
- The public and private sectors, often in partnership, have made important strides on CCUS, including through initiatives such as the Carbon Sequestration Leadership Forum, the Clean Energy Ministerial CCUS initiative, and Mission Innovation.
- Member countries should seek, individually and in partnership, to build on this progress in order to fully realize the multiple potential benefits of CCUS.

We recommend that the Leaders' communique in Osaka take note of the Ministers' recognition of the importance and benefits of CCUS including carbon recycling, their call for stronger action to advance these technologies, and any related initiatives they may undertake.

Integrating CCUS into Action Plans

Mechanisms available to energy and environment ministers to advance shared G20 objectives include the adoption of joint action plans and the initiation of national action plans by individual Member countries. Such action plans should give full consideration to the potential of CCUS technologies to contribute to collective and national goals. In particular:

- Ministers, as part of a broader energy and environment action plan, should initiate the development of a joint CCUS action plan to be adopted by the G20 in 2020. This CCUS action plan should identify the specific areas where additional collaborative efforts can best capitalize on and complement existing international initiatives. The development of this action plan should be a joint undertaking of the Japan and Saudi G20 Presidencies.
- In their national planning, Member countries should consider undertaking national readiness assessments, including an analysis of measures needed to facilitate commercial deployment of large-scale CO_2 storage, and of other domestic policies that could incentivize CCUS on a level playing field with other clean energy technologies. Member countries should further consider ways that CCUS can contribute to their long-term low greenhouse gas emission development strategies and their future nationally determined contributions under the Paris Agreement.

Promoting Carbon Recycling

CCUS efforts to date have focused most heavily on technologies to capture CO_2 emissions from power plants and industrial facilities and to transport and safely store those CO_2 emissions. One promising area that deserves stronger attention is the development of processes and technologies enabling the productive

utilization of captured CO_2, or "carbon recycling." Potential uses include building materials, polymers and plastics, fuels and other high value-added materials. In addition to sequestering CO_2 from the atmosphere, the creation of additional commercial uses for captured carbon can provide stronger incentive for investment in CCUS technologies and infrastructure. Toward these ends:

- Energy and environment Ministers should consider, as part of a joint G20 action plan, the establishment of a working group to develop a "carbon recycling" action plan for adoption by the G20 in 2020.
- This working group should include business participation from relevant sectors and should examine the potential for large-scale CCUS chains, including cross-border projects, to facilitate markets and supply chains for "carbon recycling" products.

Other Recommendations

The roundtable considered a wide array of other options to strengthen international collaboration on CCUS. Further recommendations include:

- Engaging financial institutions and encouraging stronger public and private sector investment in CCUS, including through contributions to the CCS Trust Funds of the World Bank and the Asian Development Bank, which provide critical support in developing countries.
- Facilitating large-scale CCUS chains and encouraging the ratification of the export amendment of the London Protocol to allow the export of CO_2 for offshore storage.
- Pledging stronger support for collaborative efforts highlighted in the 2017 Roadmap of the Carbon Sequestration Leadership Forum, including the International Test Centre Network and the CO_2 Storage Data Consortium.
- Organizing side events at the G20 Summit to highlight recent CCUS successes, build stronger understanding of these technologies and their multiple benefits, and identify opportunities for their advancement.

Acknowledgements

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