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CCS: A Look Back at 2015

Erin Burns



Last year, Third Way released a [report](#) explaining why Carbon Capture and Storage (CCS) is important. In a nutshell: CCS improves the political outlook for enacting climate policy—and we can't meet climate goals without it. ¹

Luckily, momentum for CCS is building. You might not know it from the headlines, but 2015 was a good year for CCS. The White House proposed a new set of CCS tax incentives, the Senate sought to improve the Department of Energy's CCS R&D program, and nations across the world recognized the need to invest in CCS.

This is a great start. What's needed now is comprehensive financial and policy commitment to get CCS across the finish line.

The President's Budget Includes CCS Incentives

- The President's 2016 Budget included two new tax incentives for CCS: \$2 billion in investment tax credits for new and existing power plants deploying CCS and a refundable tax credit for sequestering CO₂. Third Way worked with the White House on these incentives which would encourage CCS deployment—much like the incentives that helped increased deployment of renewable technologies.

Action by Congress

- Senate Energy Committee Chairman Murkowski moved a comprehensive energy bill through her committee with pro-CCS amendments from Senators Manchin, Heitkamp, and Whitehouse. Throughout the year, Third Way worked with these members to encourage their support of CCS and to further their engagement with industry, utility, labor, and environmentalist advocates for CCS.
- The American Energy Innovation Act—the bill Senate Democrats introduced as their list of energy priorities—included the same provision as the bipartisan energy bill to prioritize Carbon Capture, Utilization, and Storage (CCUS) in the Fossil Energy program.

CCS Facility Launches and Milestones

- Shell officially launched its Quest project in Alberta, Canada in November. This large-scale demonstration project is expected to capture more than 1 million tons of CO₂ annually and is already providing important lessons in geological storage. Additionally, the Uthmaniyah Project in Saudi Arabia was launched and is the Middle East's first large-scale, operational CCS facility. ²

- Sask Power's Boundary Dam project in Saskatchewan, Canada reached 1 year of operation. The plant is a first-of-a-kind facility that Sask Power believes will reduce the cost of the next CCS facility they build by up to 30%. ³

U.S.-China Cooperation

- The United States and China reached an agreement on clean coal technologies that will include six CCUS pilot projects in China. Under this agreement, the countries will share information on technology and best practices. China accounts for half of the world's coal consumption; to meet climate goals, China will be particularly dependent on CCS. ⁴

Senate and International Push for CCS at COP21

- Leading up to COP21, a number of nations included CCS in their submitted emissions reduction plans and the overall process reaffirmed the role of CCS in fighting climate change. The week before the COP, Senators Heidi Heitkamp and Sheldon Whitehouse sent a [letter](#) to Secretaries Kerry and Moniz asking that CCUS be a U.S. priority in Paris.

XPrize Recognizes Economic Potential of Captured CO₂

- XPrize announced a \$20 million competition to find breakthrough technologies to convert CO₂ into commercial products. The competition isn't just about the environmental impacts of carbon emissions, but also the economic potential for utilization: the winning team will be the one who utilizes the most CO₂ for the most profit.

Department of Energy Announced CO₂ Storage Milestone

- DOE announced that 10 million metric tons of CO₂ had been captured and stored by CCS projects supported by the agency, showing that we can safely and permanently store CO₂. ⁵

State Support for CCS

- The Western Governors' Association, which serves the governors of 19 states, passed a resolution recognizing the leadership role of the U.S. in CCS research, the need for federal CCS incentives, and the potential emissions reductions from CCS deployment on power plants and industrial sources. The resolution cited the importance of CCS as a way to maximize domestic energy resources and stimulate state and local economies. ⁶

- A similar resolution was passed in September by the Southern States Energy Board, a group representing 16 states and two territories, which reaffirmed their support for CCS research and incentives, as well as the possible jobs impact of building, installing, and managing CCS technology.⁷

And 2016 looks to be an even better year. Led by a broad, bipartisan group of cosponsors, the Senate passed an amendment to its Energy Bill in early February highlighting the importance of CCS and the need for continued federal support to promote it. In the coming year, three projects in the U.S. alone—Kemper, Petra Nova, and the Illinois Industrial CCS project—are all expected to begin operations. Additionally, four other projects are expected become operational by 2017 and five others are anticipated to make a final investment decision in the first half of 2016.⁸ Each project provides valuable data for the next generation of projects—bringing down costs, improving technology, and refining regulatory processes. What’s needed now is not only continued support of existing projects but even bigger commitments to CCS, both domestically and globally, if we have any chance of meeting climate targets.

ENDNOTES



- 1.** “IPCC, 2014: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland, 151 pp.; see also: Maria van der Hoeven, “Technology Roadmap: carbon capture and storage,” report, International Energy Agency, 2013, p. 1. Accessed December 3, 2015. Available at: <http://www.iea.org/publications/freepublications/publication/TechnologyRoadmapCarbonCaptureandStorage.pdf>; see also: “Closing the gap on climate—why CCS is a vital part of the solution,” report, ENGO network on CCS, December 2015. Accessed January 14, 2016. Available at: http://www.engonetnetwork.org/ENGO_Report_Dec_8_2015.pdf.
- 2.** “The Global Status of CCS: 2015 Summary Report,” report, Global CCS Institute, November 4, 2015, p. 3. Accessed January 14, 2016. Available at: <http://hub.globalccsinstitute.com/sites/default/files/publications/196843/global-status-ccs-2015-summary.pdf>.
- 3.** “The Global Status of CCS: 2015 Summary Report,” report, Global CCS Institute, November 4, 2015, p. 3. Accessed January 14, 2016. Available at: <http://hub.globalccsinstitute.com/sites/default/files/publications/196843/global-status-ccs-2015-summary.pdf>.
- 4.** United States, Department of Energy, “Forum Highlights U.S., China Commitment to CCUS,” press release, Office of Fossil Energy, August 26, 2015. Accessed January 14, 2016. Available at: <http://energy.gov/fe/articles/forum-highlights-us-china-commitment-ccus>.

- 5.** United States, Department of Energy, “In Milestone, Energy Department Projects Safely and Permanently Store 10 Million Metric Tons of Carbon Dioxide,” press release, April 22, 2015. Accessed January 14, 2016. Available at: <http://energy.gov/articles/milestone-energy-department-projects-safely-and-permanently-store-10-million-metric-tons>.
- 6.** “Enhanced Oil Recovery,” Policy Resolution, Western Governors’ Association, June 25, 2015. Accessed February 8, 2016. Available at: <http://www.westgov.org/policies/302-energy/987-enhanced-oil-recovery>.
- 7.** “Resolution Supporting Carbon Capture and Storage and Enhanced Oil Recovery,” Resolution, Southern States Energy Board, September 28, 2015. Accessed February 8, 2016. Available at: <http://www.sseb.org/wp-content/uploads/2015/09/6.2015.pdf>.
- 8.** “The Global Status of CCS: 2015 Summary Report,” report, Global CCS Institute, November 4, 2015, p. 5. Accessed January 14, 2016. Available at: <http://hub.globalccsinstitute.com/sites/default/files/publications/196843/global-status-ccs-2015-summary.pdf>.