
August 3, 2017

Honorable Orrin Hatch
Chairman
Committee on Finance
United States Senate
219 Dirksen Senate Office Building
Washington, D.C. 20510

Honorable Ron Wyden
Ranking Member
Committee on Finance
United States Senate
219 Dirksen Senate Office Building
Washington, D.C. 20510

Dear Chairman Hatch and Ranking Member Wyden:

Western Governors support the responsible use of enhanced oil recovery (EOR) using carbon dioxide (CO₂) and appreciate efforts to develop federal policy designed to promote deployment of this technology. Language contained in the bipartisan Furthering Carbon Capture, Utilization, Technology, Underground storage, and Reduced Emissions (FUTURE) Act, [S. 1535](#), would help increase the use of EOR technology by providing greater regulatory certainty for the Carbon Dioxide Sequestration Credit, created by Section 45Q of the Internal Revenue Code of 1986.

Given the importance of EOR to western states, the Governors enacted Western Governors' Association (WGA) Policy Resolution [2015-06](#), *Enhanced Oil Recovery*. This resolution (attached for your reference) reads in part:

In recognition of the environmental and economic benefits of EOR, Western Governors support policies and incentives that advance investment in EOR projects, infrastructure, technology, and research.

Further, in order to expand deployment of CO₂ capture at power plants and other industrial sources, the President and Congress should enact federal incentives to increase CO₂ supply available for the oil industry to purchase and use in EOR. Federal incentives have the potential to leverage private and state investment, harness the ingenuity of entrepreneurs and capitalize on billions of dollars' worth of [Department of Energy] sponsored research and development to enable new commercial carbon capture and pipeline projects.

The use of CO₂ for EOR was pioneered in the United States during the 1970s. Since that time, this technology has proven to be a safe, effective way to increase domestic oil production while

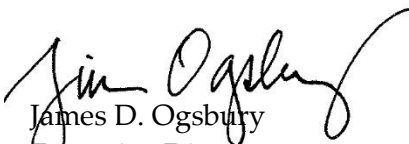
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sequestering millions of tons of CO₂. Many western states have demonstrated their commitment to CO₂-EOR by proactively addressing then-existing regulatory barriers, establishing tax incentives, and providing financial assistance.

The FUTURE Act would clarify the regulatory requirements for secure geological storage of carbon dioxide for the purposes of the Carbon Dioxide Sequestration Credit.

Western states look forward to helping provide for the energy needs of the United States through the continued efficient and responsible development of our natural resources. Western Governors stand behind federal policies – like the FUTURE Act – that enable cost-effective development of new commercial carbon capture and pipeline projects.

Sincerely,



James D. Ogsbury
Executive Director



Western Governors' Association Policy Resolution 2015-05

Enhanced Oil Recovery

A. BACKGROUND

1. Enhanced oil recovery (EOR), using carbon dioxide (CO₂), when performed appropriately and responsibly offers a safe and commercially proven method of domestic oil production. The U.S. oil and gas industry, which pioneered the CO₂ EOR process in West Texas in 1972, is the world leader. Over four decades, the EOR industry has captured, transported, and injected large volumes of CO₂ for oil recovery with no major accidents, serious injuries or fatalities reported.
2. The CO₂ EOR process works by injecting CO₂ obtained from natural and anthropogenic sources into existing oil fields – often referred to as “brownfields” – to free up additional crude trapped in rock formations. This CO₂ “flooding” can result in recovery of about twenty percent of the original oil in place.¹ CO₂ flooding utilizes existing assets to recover significant additional resources stimulating the economy and minimizing surface disturbance that new exploration and development projects necessarily entail. In addition, many areas favorable for CO₂ application exist where new or continued significant drilling activity is unlikely to occur at a meaningful scale for years, if ever.
3. As of 2013, EOR using CO₂ produced approximately 280,000 barrels of domestic oil per day, or four percent of U.S. crude oil production.²
4. America has an estimated 21.4 billion barrels of oil, requiring 8.9 billion metric tons of CO₂, that could be economically recovered with today's EOR technologies. With advances in technology, 63.3 billion barrels of oil, requiring 16.2 billion metric tons of CO₂, could be economically recovered, which is roughly double current U.S. proven reserves³.
5. EOR enhances our nation's energy and fiscal security by reducing dependence on foreign oil, often imported from unstable and hostile regimes. It allows reduction of our trade deficit by keeping dollars now spent on oil imports here at home and at work in the U.S. economy.

¹ National Energy Technology Laboratory – *Untapped Domestic Energy Supply and Long Term Carbon Storage Solution*

² Energy Information Administration – Annual Energy Outlook 2015

³ U.S. Department of Energy, National Energy Technology Laboratory

6. Coal and oil production and utilization and other industrial processes are a vital component of many western states' economies. EOR provides a long-term path for continued low-carbon production and use of our nation's coal and oil resources and presents an opportunity for state and local governments to stimulate economic activity and realize additional revenue at a time when most governments face significant fiscal challenges.
7. CO₂ is currently limited in availability from high-volume sources needed for EOR – natural sources will not close a supply gap projected to grow. Further, CO₂ capture and pipeline transport capacity to oil fields is not sufficient.
8. CO₂ capture equipment, installed on a broad range of industrial processes, has the potential to supply significant volumes of CO₂ to the EOR industry enabling the U.S. to achieve significant net carbon reductions through the sequestration of CO₂.⁴
9. The U.S. has the opportunity to provide global leadership in carbon capture research and technology development, hydrocarbon recovery and geologic storage research and technologies, manufacturing, engineering and other services.

B. GOVERNORS' POLICY STATEMENT

1. In recognition of the environmental and economic benefits of EOR, Western Governors support policies and incentives that advance investment in EOR projects, infrastructure, technology and research.
2. Western Governors support efforts to increase the awareness of the many benefits CO₂ EOR.
3. In order to expand deployment of CO₂ capture at power plants and other industrial sources, the President and Congress should enact federal incentives to increase CO₂ supply available for the oil industry to purchase and use in EOR. Federal incentives have the potential to leverage private and state investment, harness the ingenuity of entrepreneurs and capitalize on billions of dollars' worth of DOE-sponsored research and development to enable new commercial carbon capture and pipeline projects.

⁴ As of 2014, approximately 13.6 million metric tons of CO₂ was captured that would otherwise be released into the atmosphere has been sequestered as a result of EOR (U.S. Department of Energy – Quadrennial Energy Review). Over the life of a project, for every 2.5 barrels of oil produced, it is estimated that a typical commercial EOR project can safely prevent one metric ton of CO₂ from entering the atmosphere (Kuuskraa, Godec, Dipietro – Energy Procedia). Further, the volume that could be captured and sequestered from industrial facilities and power plants to support economically recoverable EOR reserves could be 8.9 to 16.2 billion metric tons of CO₂. This is equal to the total U.S. CO₂ production from fossil fuel electricity generation for approximately 4 to 8 years (EPA 2015 Green House Gas Inventory).

4. Federal policies aimed to limit CO₂ emissions should promote, and not impede, development and deployment of CO₂ capture and commoditization. Federal regulations should allow states to create programs tailored to individual state needs, industries and economies and recognize CO₂ sequestration that results from EOR in meeting federal regulatory objectives. As such, EPA should abide by principles already established by the Agency in its regulations promulgated to ensure the long-term storage of CO₂ in different geologic formations.

C. GOVERNORS' MANAGEMENT DIRECTIVE

1. The Governors direct the WGA staff, where appropriate, to work with EPA and other federal agencies, Congressional committees of jurisdiction, and the Executive Branch to achieve the objectives of this resolution including funding, subject to the appropriation process, based on a prioritization of needs.
2. Additionally the Governors direct the WGA staff to develop, as appropriate and timely, detailed annual work plans to advance the policy positions and goals contained in this resolution. Those work plans shall be presented to, and approved by, Western Governors prior to implementation. WGA staff shall keep the Governors informed, on a regular basis, of their progress in implementing approved annual work plans.

Western Governors enact new policy resolutions and amend existing resolutions on a bi-annual basis. Please consult westgov.org/policies for the most current copy of a resolution and a list of all current WGA policy resolutions.