Policy Resolution 2018-07

Enhanced Oil Recovery

A. BACKGROUND

1. Enhanced oil recovery (EOR), using carbon dioxide (CO^2), 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 CO^2 EOR process in West Texas in 1972, is the world leader. For decades, the EOR industry has captured, transported, and injected large volumes of CO^2 for oil recovery with no major accidents, serious injuries or fatalities reported.

2. The CO^2 EOR process typically works by injecting CO^2 obtained from natural and anthropogenic sources into existing oil fields – often referred to as "brownfields" – to produce additional crude trapped in rock formations. This CO^2 "flooding" can result in recovery of about twenty percent of the original oil in place.[1] CO^2 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 CO^2 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 CO^2 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 CO^2, which 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 CO^2, could be economically recovered, which is roughly double current U.S. proven reserves.[3]

5. EOR enhances our nation's energy and fiscal security by reducing dependence on foreign oil, often imported from unstable and hostile foreign sources. 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.

6. Coal, oil, 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, while industrial sources can provide CO^2 at lower capture costs. EOR presents an opportunity for state and local governments to stimulate economic activity and realize additional revenue by transforming their CO^2 emissions into a valuable commodity.

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[1] National Energy Technology Laboratory – Untapped Domestic Energy Supply and Long Term Carbon Storage.
[2] Energy Information Administration – Annual Energy Outlook 2015.
[3] U.S. Department of Energy, National Energy Technology Laboratory.

7. CO^2 is currently limited in availability from sources needed for EOR – natural sources will not close a supply gap projected to grow. Further, CO^2 capture and pipeline transport capacity to oil fields is not sufficient.

8. CO^2 capture equipment, installed on a broad range of industrial processes, has the potential to supply significant volumes of CO^2 to the EOR industry enabling the U.S. to achieve significant net carbon reductions through the permanent storage of CO^2.[4]

9. The U.S. has the opportunity to continue global leadership in carbon capture and storage (CCUS) research and technology development, while further deploying CCUS technologies that provide financial benefits to our nation's entire value chain.

B. GOVERNORS' POLICY STATEMENT

1. In recognition of the environmental and economic benefits of EOR, Western Governors Western Governors will work collaboratively to promote broad scale development of infrastructure for carbon capture, CO^2 pipelines, EOR, and other forms of geologic storage.

2. Western Governors support efforts to increase the awareness of the many benefits of CO^2 EOR.

3. In order to expand deployment of CO^2 capture at power plants and other industrial sources, the President and Congress should continue to enact federal incentives to increase CO^2 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. Federal policies aimed to limit CO^2 emissions should promote, and not impede, development and deployment of CO^2 capture and commoditization. Federal regulations should allow states to create programs tailored to individual state needs, industries and economies and recognize permanent CO^2 storage 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 permanent storage of CO^2 in different geologic formations.

5. Recognizing that lack of pipeline infrastructure is a critical challenge to deployment of CCUS technology, Western Governors support proactively identifying, analyzing and evaluating opportunities for pipeline corridors to transport industrial and power plant CO^2 for beneficial use and permanent storage.

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[4] As of 2014, approximately 13.6 million metric tons of CO^2 was captured that would otherwise be released into the atmosphere has been permanently stored 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 CO^2 from entering the atmosphere (Kuuskraa, Godec, Dipietro – Energy Procedia). Further, the volume that could be captured and permanently stored from industrial facilities and power plants to support economically recoverable EOR reserves could be 8.9 to 16.2 billion metric tons of CO^2. This is equal to the total U.S. CO^2 production from fossil fuel electricity generation for approximately 4 to 8 years (EPA 2015 Green House Gas Inventory).

C. GOVERNORS' MANAGEMENT DIRECTIVE

1. The Governors direct WGA staff to work with Congressional committees of jurisdiction, the Executive Branch, and other entities, where appropriate, to achieve the objectives of this resolution.

2. Furthermore, the Governors direct WGA staff to consult with the Staff Advisory Council regarding its efforts to realize the objectives of this resolution and to keep the Governors apprised of its progress in this regard.

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