

Existing Federal Incentives for Carbon Capture are Insufficient and Not Effectively Supporting Commercial Deployment



- **Grants for commercial-scale projects**
 - Available through Clean Coal Power Initiative, Industrial Carbon Capture and Storage Initiative, Recovery Act of 2009
 - Similar levels of funding in the future are uncertain.
- **Tax incentives – 48A and 48B Investment Tax Credits, 45Q Production Tax Credits**
 - ITCs allocated (and reallocated), but projects awarded credits still in process of moving forward
 - 45Q has limited allocation, could run out in the future without enabling broad deployment of capture projects
- **Loan Guarantee Program**
 - No known awards by DOE to date

Key Goal:

- Reduce the economic barriers to developing carbon capture projects that sell CO₂ for EOR

Package Provisions:

- Various incentives and policies can address different economic needs of a capture project:

Expand and reform existing
Sec 45 federal tax credit

Authorize private activity
bonds (PABs) for CO₂
capture projects

Authorize master limited
partnerships for CO₂ capture
projects

Proposals to Improve or Provide New Incentives



Expand and reform existing 45Q Tax Credit for Carbon Sequestration

- Improve existing tax credit and eliminate cap on number of credits
- Primary recommendation of NEORI coalition
- House Republican leaders Conaway and Jenkins are preparing a bill for current tax extenders package (most intensive CCS-EOR policy effort since 2009 federal climate legislation)

Authorize master limited partnerships (MLP) for carbon capture projects

- Would authorize business structure for carbon capture projects; already available for CO2 pipelines and EOR projects
- Bipartisan legislation introduced in Senate and House

Authorize private activity bonds (PABs) for carbon capture projects

- Long available for other pollution control technologies
- Bipartisan legislation introduced last month in the Senate by Portman (R-OH) and Bennet (D-CO)

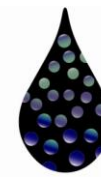
Oil Price Stabilizations Mechanisms

- Reduce oil price risk to increase financial certainty and reduce the cost of capital
- Legislation introduced by Senators Heitkamp (D-ND) and Manchin (D-WV).

Other tax credit proposals

- President Obama's FY 2016 (ITC & PTC for CCUS)
- Sen. Wyden's energy tax reform plan
- Sen. Heitkamp's ITC for coal projects

Proposed 45Q Expansion/Reform Provisions



National Enhanced
Oil Recovery Initiative

Eliminate cap to provide credits for beyond 75 million tons of CO₂

- Already 35 million tons claimed by 2014 per IRS
- Likely exhausted in next 3-6 years, so credit is uncertain and fails to attract private investment in projects

Increase \$/ton value for power plants and certain industrial sources

- Currently \$10/ton for EOR storage; \$20/ton for non-EOR storage
- For power plants, need for \$30-\$50/ton credit; at least \$20/ton for certain industrial sources

Address potential lack of tax appetite

- Make 45Q refundable (renewables once had similar benefit)
- Alternative: allow transferability/assignability to another entity with tax appetite

Adopt other potential reforms

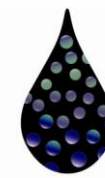
- Eliminate need to own facility that generates the CO₂ in favor of ownership of CO₂ capture equipment
- Reduce 500,000 ton annual capture threshold for facilities

Congressional Interest in CCUS Incentives Has Returned and is Growing



- CCS incentives received considerable attention in the stimulus bill and climate legislation in 2009, but interest waned after the 2010 election amidst global recession.
- Interest is growing again, with major legislation introduced in 2012, 2014, and now 2015.
- CCUS incentives do not enjoy an organized constituency base comparable to wind and solar, but that is beginning to change.
- National Enhanced Oil Recovery Initiative and Coal Utilization Research Council are major active coalitions working together to advance federal CCS incentives.

NEORI's Industry, Labor, Environmental and State Membership Reflects that Broad-Based Interest



**National Enhanced
Oil Recovery Initiative**

Coal Producers

- Arch Coal
- Cloud Peak
- Peabody Energy

Power Generators

- Basin Electric Power Cooperative
- Great River Energy
- NRG Energy
- Summit Power Group
- Tenaska Energy

Industrial Suppliers of CO₂/Technology Vendors

- Air Products
- Alstom
- Archer Daniels Midland
- C12
- GE Oil & Gas
- Jupiter Oxygen
- LI-COR Biosciences
- Linde
- Praxair

Project Developers

- Lake Charles Methanol

Environmental NGOs

- Clean Air Task Force
- Natural Resources Defense Council
- Wyoming Outdoor Council

Labor

- AFL-CIO
- International Brotherhood of Boilermakers
- SMART Transportation Division
- Utility Workers Union

State Officials

- California, Kentucky, Maryland, Michigan, New Mexico, and Texas

Academic/Research Institutions

- Enhanced Oil Recovery Institute (University of WY)

Observers

- Chaparral Energy
- Core Energy
- Tellus Operating Group
- Interstate Oil and Gas Compact Commission

New Momentum Right Now in Washington



- Private activity bond legislation introduced by Senators Portman and Bennet last month.
- House GOP leaders Conaway and Jenkins' imminent introduction of legislation to make the 45Q tax credit permanent and increase its value to \$40/ton represents a transformative step forward on the Republican side.
- Senators Whitehouse and Booker plans to introduce major CCS tax credit legislation this month for power plants and industrial sources (including EOR) marks a watershed change among coastal Democrats in the Senate.
- Cooperation among top energy companies, unions, and environmental organizations around the Conaway-Jenkins 45Q extension proposal is unprecedented for CCUS incentives.

[DISCUSSION DRAFT]

NOVEMBER 5, 2015

114TH CONGRESS
1ST SESSION

H. R. _____

To amend the Internal Revenue Code of 1986 to improve and make permanent the credit for carbon dioxide sequestration.

IN THE HOUSE OF REPRESENTATIVES

Mr. CONAWAY introduced the following bill; which was referred to the Committee on _____

A BILL

To amend the Internal Revenue Code of 1986 to improve and make permanent the credit for carbon dioxide sequestration.

States Beginning to Engage



- Western Governors passed CO₂-EOR resolution in June calling on Congress to enact CCUS incentives.
- Governor Mead (R-WY) and Governor Bullock (D-MT) convene a State CO₂-EOR Deployment Work Group of 13 oil and gas and coal-producing states that was launched in September.
- Southern States Energy Board also passed a resolution in September calling for CCUS incentives at the federal level.

Challenges Going Forward

- Urgently need to elevate CCUS incentives politically: Most lawmakers support CCUS, many think it is necessary but, as the extenders debate shows, almost none make it a priority.
- Time is not on our side:
 - Future of the coal industry requires progress with CCUS deployment now
 - Window for realizing full potential of CCUS for carbon mitigation is closing
 - Politically, increasing federal fiscal constraints and growing grassroots opposition to fossil fuels risk making passage of incentives increasingly difficult
- The oil and gas industry needs to step up to the plate and partner with other industries and stakeholders to support a federal incentives agenda. We need your help now.