

Coal Utilization Research Council  
1050 Thomas Jefferson St. NW, Suite 700  
Washington, DC 2007  
bny@vnf.com  
(202)298-1857

**Written Statement of the Coal Utilization Research Council  
submitted to  
The House Committee on Ways and Means  
on  
Energy Tax Incentives and the Green Job Economy**

This written statement is submitted by the Coal Utilization Research Council (CURC). We request that it be included as part of the record for the public hearing that the Committee conducted on April 14, 2010 entitled: "Energy Tax Incentives Driving the Green Job Economy."

**INTRODUCTION:**

CURC is an organization of U.S. coal producers, electric utilities, equipment manufacturers and technology suppliers, state governments and academic institutions interested in coal technology policy and research. CURC is organized specifically to promote the research, development, demonstration and early deployment of advanced coal and carbon capture and sequestration (CCS) technology.

Coal is an important contributor to the nation's energy mix and provides just under half of our electricity generation. However, coal is also a contributor of greenhouse gases, and the nascent CCS technologies are costly. Currently available CCS technologies will typically increase the cost of power, versus power from a pulverized coal system without capture, by 65-75%. Expressed in terms of cost per tonne of CO<sub>2</sub> avoided, CCS systems cost approximately \$70 per tonne. Financial incentives are necessary to enable the industry to gain experience with these new technologies through the construction and operation of large-scale CCS projects, and, when combined with continuing research, to drive down costs for future units to a point where incentives are no longer needed. At such time, it should be expected that all low-carbon energy technologies will be able to compete in the market without government subsidies.

These remarks will focus on an existing financial incentive authorized by Section 115 of PL 110-343 (The Energy Improvement and Extension Act of 2008), as amended by Section 1131 of PL 111-5 (The American Recovery and Reinvestment Tax Act of 2009), and implemented through Internal Revenue Bulletin 2009-44 (Notice 2009-83). The incentive, set forth in Section 45Q of the Internal Revenue Code, is a tax credit of either \$10 or \$20 per tonne of CO<sub>2</sub> captured and sequestered under certain conditions, as explained below. The Committee should also consider the addition of several new tax incentives that would encourage the development and commercial use of advanced coal technologies to energy facilities equipped with CCS technology systems.

Coal Utilization Research Council  
1050 Thomas Jefferson St. NW, Suite 700  
Washington, DC 20007  
bny@vnf.com  
(202)298-1857

**CURC REQUEST OF THE COMMITTEE TO MODIFY SECTION 45Q THE CARBON SEQUESTRATION TAX CREDIT:**

Section 45Q authorizes a tax credit available to a taxpayer that captures qualifying carbon dioxide (CO<sub>2</sub>) and causes such CO<sub>2</sub> to be permanently sequestered. The taxpayer may dispose of the CO<sub>2</sub> either by permanently storing the CO<sub>2</sub> into geologic formations or by using the CO<sub>2</sub> for hydrocarbon recovery and thereafter permanently storing the CO<sub>2</sub>. The taxpayer may store the CO<sub>2</sub> directly or cause another to transport and/or store the CO<sub>2</sub>. The Secretary of the Treasury is authorized to issue credits for no more than 75 million tonnes of qualified CO<sub>2</sub>.

As currently drafted and administered by the IRS, the taxpayer who captures CO<sub>2</sub> must claim the section 45Q credit at the end of its tax year. From one tax period to another, a CO<sub>2</sub> capture project is not assured that sufficient credits remain unclaimed and therefore will be available. This is so because currently there is a cap of 75 million tonnes of CO<sub>2</sub> against which the section 45Q credit may be claimed. No administrative mechanism exists that would enable a given CO<sub>2</sub> capture project to rely upon the existence of the credit in any given year.

The section 45Q credit should be structured to provide a CO<sub>2</sub> capture project with certainty that credits for a given qualified CO<sub>2</sub> capture project will be available for a specified period of time. In this way, the credit, much like the existing renewable energy production tax credit, can be used to secure financing for early, first-of-a-kind CO<sub>2</sub> capture projects.

A full-scale fossil fuel based capture project would emit (but for CO<sub>2</sub> capture) two to five million tonnes of CO<sub>2</sub> annually. With a cap of 75 million tonnes, several of these full-scale projects would consume the entire number of credits within a matter of a few years or alternatively, multiple projects could claim the credit thereby consuming the available credit/tonne of captured CO<sub>2</sub> quickly. In either case, the credit, as currently administered cannot be incorporated into a project's financial projections and therefore cannot be utilized to secure financing or project cash flows.

Second, we believe that the IRS has misinterpreted Congressional intent in its determination that a taxpayer receiving a section 48A or section 48B investment tax credit for advanced coal power generation technology is not eligible for the section 45Q tax credit. As discussed more specifically below, Congress should modify the section to make clear that receipt of credits under sections 48A or 48B does not preclude eligibility for credits under section 45Q.\*

---

\* Public Law 110-343, the Emergency Economic Stabilization Act requires that qualified projects awarded a section 48A or section 48B investment tax credit must capture a designated percent of CO<sub>2</sub> that would

Coal Utilization Research Council  
1050 Thomas Jefferson St. NW, Suite 700  
Washington, DC 2007  
bny@vnf.com  
(202)298-1857

Third, while CURC agrees that the taxpayer who causes the CO<sub>2</sub> to be captured and stored is the appropriate party that should be eligible to claim the credit, there should be a mechanism by which that tax credit owner can transfer the credit to another taxpayer. Such flexibility would enhance the ability of the party capturing the CO<sub>2</sub> to utilize the credit as a tool for heightening the economic viability of the project.

Fourth, the current language of section 45Q does not provide that the utilization of technologies by the taxpayer to convert CO<sub>2</sub> to a stable form which will permanently store it is eligible for the tax credit. As discussed more specifically below, we urge Congress to modify 45Q to make CO<sub>2</sub> converted to a stable form eligible for the credit. Such eligibility should extend to converted CO<sub>2</sub> which is beneficially used.

Finally, early carbon capture and sequestration projects will be exceedingly expensive and very technically challenging. The existing value of the section 45Q credit is insufficient to meaningfully assist these early projects.

## **FURTHER DESCRIPTION OF PROPOSED MODIFICATIONS TO SECTION 45Q**

### **I. The 75,000,000 Ton Limit.**

The Section 45Q credit applies to qualified carbon dioxide sequestered or used “before the end of the calendar year in which the Secretary ... certifies that 75,000,000 metric tons” have been captured and disposed of or used as a tertiary injectant (and disposed of).

Because the project owner can claim annual credits only so long as the overall 75,000,000 ton cap has not been exceeded (collectively by all participants), and therefore has no idea, at the inception of the project, how many credits can be claimed, it is impossible to calculate the value of the credit with any certainty when determining a project’s economics. This problem and uncertainty has been recognized by financial institutions and potential investors in such projects and they will not take into account the potential receipt of any credit by the project for purposes of determining whether to provide financing or investment.

In order to provide an incentive that would encourage early deployment of carbon capture and sequestration systems and operations, Congress should modify 45Q and structure the incentive similar to a production tax credit, by specifying a date by which carbon capture systems must be “placed into service” rather than the current 75M ton cap. The credit

---

otherwise be emitted into the atmosphere. Prior to enactment of P.L. 110-343, eligibility for such tax credits was not conditioned upon the actual capture of CO<sub>2</sub>.

Coal Utilization Research Council  
1050 Thomas Jefferson St. NW, Suite 700  
Washington, DC 20007  
bny@vnf.com  
(202)298-1857

would apply with respect to qualified carbon dioxide captured at a facility after carbon capture equipment is placed into service. The taxpayer would be entitled to claim the credit for a 10-year period commencing on the date when the carbon capture system is placed into service.

## **II. Eligibility for Credits.**

In its interim guidance, IRS takes the position that a taxpayer cannot claim section 45Q tax credits if it is claiming credits pursuant to the qualifying advanced coal project program of section 48A or the qualifying gasification project program of section 48B as authorized by public law 110-343. Ordinarily, eligibility for a credit is excluded when Congress determines that the receipt of another credit would result in a double benefit. It seems clear that section 45Q credits and credits under sections 48A and 48B do not fit in this category. The credits under sections 48A and 48B are *investment tax credits for eligible property* and the credits under 45Q are *credits for carbon dioxide sequestration*. The credits are entirely distinct and separate and undoubtedly, Congress saw them as such.

While the Service does not provide an explanation for its position, it seems to find rationale for the exclusion in the 45Q definition of “qualified carbon dioxide”, which provides that such term means carbon dioxide captured from an industrial source which would “otherwise be released into the atmosphere as an industrial emission of greenhouse gas.” The Service appears to be taking the position that since 48A and 48B require, for receipt of an investment tax credit, that at least 65 percent of the carbon dioxide from the facility must be captured and sequestered, such carbon dioxide would not otherwise be released into the atmosphere.

The word “otherwise” appears to be the source of the misinterpretation by the Service. While perhaps the policy is not clearly articulated, it seems that the most simple way to reflect what we believe to be the true intent of Congress would be to substitute the phrase “,but for the capture and sequestration,” for the word “otherwise”. Subsection (b)(1)(A) would then read as follows:

“(A) would, but for the capture and sequestration, be released into the atmosphere as industrial emission of greenhouse gas, and”

When Congress intends to preclude eligibility for one credit when another is received, as it did specifically in section 48B(e), it provides a statutory exclusion. Here, there is no statutory exclusion because that was not the intent of Congress. We encourage Congress to modify the section to make clear that the receipt of an investment tax credit under sections 48A or 48B does not preclude eligibility for capture and sequestration credits under section 45Q.

Coal Utilization Research Council  
1050 Thomas Jefferson St. NW, Suite 700  
Washington, DC 20007  
bny@vnf.com  
(202)298-1857

### **III. Person Entitled to the Credit.**

Under the provisions of section 45Q, only the taxpayer who owns the “qualified facility” is entitled to the credit under this section. CURC agrees with this structure of the credit. However, there will be numerous cases in which the owner of the facility will transfer the captured carbon dioxide to a third party to sequester or use. Section 45Q should be structured in a manner that would allow the owner of the facility to transfer the right to claim the credit to a third party in receipt of the carbon dioxide, if contractually agreed upon by the parties and consistent with such transfer rules as may be prescribed by the Secretary. In addition, section 45Q does not currently permit the owner of the credit (the taxpayer who captures the CO<sub>2</sub>) who has no tax liability to transfer the credit to a third party that has tax liability and can take advantage of the credit. Such transferability will permit the entity that captures the CO<sub>2</sub> but has no tax liability to obtain value from the credit.

### **IV. Beneficial Reuse of Captured Carbon Dioxide**

Section 45Q, as currently written, provides for credits for two specific categories, qualified CO<sub>2</sub> which is captured and permanently sequestered in geological storage and qualified CO<sub>2</sub> which is captured, used as a tertiary injectant, and thereafter permanently sequestered in geological storage.

New technologies are being developed and refined that enable CO<sub>2</sub> to be converted to a stable form in which it will be permanently and safely stored and, in some cases, allow the converted CO<sub>2</sub> to be used for a beneficial purpose. This method of permanently sequestering captured CO<sub>2</sub> provides flexibility in storing the CO<sub>2</sub> and can provide value to society in its beneficial use.

We encourage the committee to modify section 45Q to allow entitlement to the section 45Q tax credit not only for use of the captured CO<sub>2</sub> as a tertiary injectant, but also for conversion to a form that ensures permanent stability without subsequent release into the atmosphere and for the converted CO<sub>2</sub> to be beneficially used.

### **V. Increased Value of the Per Tonne Credit**

As noted above, the existing credit per tonne of CO<sub>2</sub> is insufficient to meaningfully assist and encourage early adoption of carbon capture and storage technologies. Currently available technologies add a cost of at least \$70 per tonne of CO<sub>2</sub> captured to power production cost over the life of a power plant, typically 30 years or longer. Clearly, an incentive of \$10 or \$20 per tonne can offset only a small percentage of this cost increase. CURC recommends a significant increase in the value

Coal Utilization Research Council  
1050 Thomas Jefferson St. NW, Suite 700  
Washington, DC 20007  
bny@vnf.com  
(202)298-1857

of the per tonne credit provided under section 45Q to encourage early adoption of this costly technology. It is particularly important that we gain experience and knowledge with the capture and permanent sequestration of CO<sub>2</sub> into deep geologic structures. In the longer term, these permanent storage repositories may be relied upon almost exclusively to sequester CO<sub>2</sub> and thus the value of the tax credit now should reflect this need by assigning a significantly higher value to such permanent storage as compared to the use of CO<sub>2</sub> for hydrocarbon recovery. In the nearer term, however, the financial viability of a CCS project may depend upon the use of CO<sub>2</sub> for hydrocarbon recovery. The cost of CCS cannot be recovered through the sale of CO<sub>2</sub> for such hydrocarbon recovery uses and, as a result, a substantial increase in the credit for use of CO<sub>2</sub> for hydrocarbon recovery is also recommended.

**CURC REQUEST OF THE COMMITTEE TO CONSIDER ADDING ADDITIONAL TAX INCENTIVES TO ENCOURAGE THE USE OF ADVANCED COAL TECHNOLOGIES WITH CARBON CAPTURE AND SEQUESTRATION:**

As the Committee continues its examination of tax policy changes to support the “Green Job Economy” CURC also requests that consideration be given to the importance of clean coal technologies equipped with carbon capture and sequestration that will thereby ensure the use of our Nation’s most abundant fossil fuel resource while greatly reducing the emissions of CO<sub>2</sub>. Such actions will also create and maintain jobs and provide greater energy security.

To advance these multiple goals the Committee is encouraged to consider the enactment of a 30 percent investment tax credit that would be used to assist in reducing the capital costs of installing equipment needed to capture CO<sub>2</sub> from existing or new power generation facilities using coal. Such a new credit would be applied against only the increased costs incurred from the installation of such equipment as determined by measuring such costs against the costs of constructing a baseline supercritical pulverized coal facility (current technology) without such capture equipment.

Second, it has become apparent that many “first mover” gasification projects seeking to use coal or petcoke and simultaneously capture the CO<sub>2</sub> emissions from such facilities plan to produce substitute natural gas (SNG) which can then be transported and comingled with natural gas and used for electricity production or other uses. These coal to SNG facilities permit very low cost carbon capture, thus making the capture and sequestration of CO<sub>2</sub> easier and less costly. The Committee is encouraged to consider amending section 45 to allow a tax credit for facilities using coal and other feedstocks such as petroleum coke or biomass to produce substitute natural gas so long as a specified percentage of CO<sub>2</sub> which would be emitted from such facility is captured and sequestered.