

September 2010

Contacts

Washington, DC Office

1900 K Street, NW
Washington, DC 20006-1109

Richmond Office

Riverfront Plaza, East Tower
951 East Byrd Street
Richmond, Virginia 23219-4074

[David S. Lowman, Jr.](#)

(202) 419-2070
dlowman@hunton.com

[Richard E. May](#)

(202) 955-1578
rmay@hunton.com

[Laura Ellen Jones](#)

(804) 788-8746
ljones@hunton.com

[Timothy L. Jacobs](#)

(202) 955-1669
tjacobs@hunton.com

IRS Issues Revised Section 45 Guidance Regarding Refined Coal Facilities

On September 16, 2010, the Internal Revenue Service (“IRS”) issued Notice 2010-54 (the “Revised Guidance”), providing revised guidance relating to the tax credit for refined coal under Section 45 of the Internal Revenue Code (“Code”). [A copy of the Revised Guidance may be found here.](#) The Revised Guidance largely restates and supersedes the initial guidance issued in Notice 2009-90, 2009-51 I.R.B. 859 (the “Initial Guidance”), described in a [prior alert](#). The Revised Guidance makes the following modifications to the Initial Guidance: (1) the definition of “refined coal” is revised specifically to include additive processes; (2) certain processing of utility-grade coal is permitted to be taken into account in determining whether a “qualified emission reduction” has been achieved; and (3) the testing protocols for determining emissions reductions are revised. These modifications are discussed in more detail below.

Definition of “Refined Coal” includes Additive Processes

Section 3.01(a) of the Initial Guidance defined the term “refined coal” for purposes of the credit to include “a liquid, gaseous, or solid fuel produced from coal” The Revised Guidance adds after the word “fuel,” the following: “(including feedstock coal mixed with an additive or additives).” Thus, the Revised Guidance confirms that additive processes which mix certain chemicals

or other additives with the coal in order to achieve emission reductions qualify for the refined coal tax credit.

Exception to Mining Process Exclusion for Processes to Produce Utility-Grade Coal

Section 6.01(1) of the Initial Guidance specifically excluded any reduction in emissions attributable to “mining processes or processes that would be treated as mining if performed by the mine owner or operator.” This provision was intended to exclude from qualifying for the refined coal tax credit any process that would be considered a “mining process” as defined under section 613 of the Code for purposes of percentage depletion. The Service’s apparent intent was to exclude from the credit any processes that a coal mining company otherwise would perform to produce a marketable coal. Some taxpayers were concerned that the broad language describing mining processes could inadvertently cause certain non-mining processes for beneficiating merchantable coal to achieve improved emission reductions to not qualify. The Service therefore provided a clarifying exception to “mining processes” for post-mining processes that go beyond those typically performed by a mine owner or operator.

The Revised Guidance continues to exclude mining processes but provides an exception for processes that produce “utility-grade coal” in Section

6.01(4). The Revised Guidance states that mining processes do not include a process that satisfies all of the following requirements:

- (i) The process modifies “utility-grade coal.”
- (ii) The process consists predominantly of operations that are not ordinarily performed on similar coal by a mine owner or operator.
- (iii) The process goes beyond those necessary for the production of “utility-grade coal” from “similar coal.”

“Utility-grade coal” is defined as “coal that, without further processing, satisfies commonly applicable utility specifications for similar coal.” Coals constitute “similar coals” if “they are of the same rank, are extracted in the same geographic area, and are customarily sold in the same geographic area (which may differ from the area where they are extracted).”

Modifications to Emission Testing Methods

A key requirement to qualify for the refined coal tax credit is achieving a “qualified emission reduction” when comparing the emissions from the refined coal product to the emissions from the feedstock coal. The definition of a “qualified emission reduction” depends on whether the refined coal production facility was placed in service before or after January 1, 2009. In the case of refined coal produced at a facility placed in service after December 31, 2008, a reduction of at least 20 percent of the emissions of nitrogen oxide (NOx) and at least 40 percent of the emissions of either sulfur dioxide (SO₂) or mercury (Hg) released when burning the refined coal (excluding any dilution caused by materials combined or added during

the production process), as compared to the emissions released when burning the feedstock coal or comparable coal predominantly available in the marketplace as of January 1, 2003 is required. In the case of production at a facility placed in service before January 1, 2009, a reduction of at least 20 percent of the emissions of NOx and at least 20 percent of the emissions of either SO₂ or Hg released when burning the refined coal (excluding any dilution caused by materials combined or added during the production process), as compared to the emissions released when burning the feedstock coal or comparable coal predominantly available in the marketplace as of January 1, 2003.

The Initial Guidance provided a number of acceptable testing methods for determining a “qualified emission reduction.” These testing methods are highly technical and were determined by the Service in consultation with the EPA. The Initial Guidance requested taxpayer comments on the emission reduction testing methods. A number of taxpayers provided comments to the Service on appropriate methods and necessary changes. The Service, after further consultation with the EPA, made a number of additions and clarifications to testing methods in the Revised Guidance.

Operating Changes

Section 6.03(1)(a) of the Initial Guidance specified the requirements for continuous emission monitoring system (CEMS) field testing. Among those requirements, the Initial Guidance required that emissions for both the feedstock coal and the refined coal be measured at the same operating conditions and over a period of at least 3 hours during which the boiler is operating at a steady rate and at least 90 percent of full load.

The Revised Guidance clarifies that “[o]perating changes to power plant components that are directly attributable to changing from the feedstock coal to refined coal, such as adjustment to primary and secondary air are not treated as a change in operating conditions for this purpose.”

Downstream CEMS Testing Permitted

The Initial Guidance provided that all CEMS measurements were required to be taken “upstream” of any scrubber or other pollution control device. In other words, emission measurements were required to be made before any scrubber or pollution control device. This rule failed to take into account that certain processes for producing a refined coal could improve the refined coal in a manner that causes a pollutant to be more efficiently or effectively captured by pollution control devices, thereby resulting in lower emissions downstream of the control device.

Section 6.03(1)(b) of the Revised Guidance clarifies that downstream CEMS testing is permitted to establish qualified emissions reductions. Specifically, CEMS testing for emissions of SO₂ downstream of an SO₂ scrubber, of Hg downstream of an SO₂ scrubber or Hg control device, or of NOx downstream of any NOx controls is permitted if such testing satisfies the following requirements:

- (i) The boiler used to conduct the test is coal-fired and steam-producing and is of a size and type commonly used in commercial operations.
- (ii) Emissions are measured using a CEMS.
- (iii) If the EPA has promulgated a performance standard that applies at the time of the test

to the pollutant emission being measured, the CEMS must conform to that standard.

- (iv) Emissions for both the feedstock coal and the refined coal be measured at the same operating conditions and over a period of at least 3 hours during which the boiler is operating at a steady rate and at least 90 percent of full load. (See “Operating Changes” above.)
- (v) Emissions are measured in accordance with either “Method 1” or “Method 2,” described below.

Method 1: Under the first method, the taxpayer must satisfy the CEMS testing for same operating conditions and provide verification that any scrubber or control device was operated under the same operating conditions during the test period. The Revised Guidance specifies that such verification should include, depending on the nature and type of the control device, important control device operating parameters such as, for a scrubber, continuous pressure drop, liquid flow rate, and gas flow rate, and for an electrostatic precipitator, continuous secondary voltage and current and number of fields in operation.

Method 2: Under the second method, if, during the 5-year period immediately preceding the date that the plant began burning the refined coal, the plant burned, throughout any 24-consecutive-month period selected by the taxpayer (the “base period”), feedstock coal from the same source and of the same rank as the feedstock coal used to produce the refined coal, emissions of SO₂ or NO_x may be measured by treating the average emissions

at which the plant actually emitted the pollutant during the base period as the emissions for the feedstock coal and the average emissions at which the plant actually emitted the pollutant during a 6-month period in which the plant burned the refined coal as emissions for the refined coal. Emissions must be determined for these purposes without regard to any reduction attributable to physical improvements or replacements of pollution control devices or other physical changes to the plant made after the beginning of the base period.

The Revised Guidance requires taxpayers to provide verification of the test results described above. The Revised Guidance also requires taxpayers to provide, in the case of any permitted changes to operating conditions, a statement that such operating changes are directly attributable to the change in fuel and are consistent with good air pollution control practices.

The key to downstream CEMS monitoring in Method 1 is that any control device is operated under the same operating conditions for both the feedstock test and the refined coal test. This requirement is intended to assure that any emission reduction is attributable to changes in the refined coal and not to any change in the control device. In the case of Method 2, the baseline emissions are determined over a 24-month period and compared to average emissions from the refined coal over a 6-month period. The use of these long-term averages in Method 2 likewise is intended to eliminate any manipulation of control devices to achieve an emission reduction.

Other Testing Methods

Section 6.03(2) of the Initial Guidance permitted testing methods other

than CEMS field testing to be used to determine emissions reductions — specifically, (i) a testing method using a demonstration pilot-scale combustion furnace, or (ii) a laboratory analysis of the feedstock coal and refined coal. The Initial Guidance, however, provided no further guidance on laboratory analysis. The Revised Guidance provides that a laboratory analysis that complies with a currently applicable EPA or ASTM standard and is permitted under one of the following methods is permitted to demonstrate emissions reductions:

SO₂ or Hg Method: Laboratory analysis may be used to establish that the requisite emissions reduction for SO₂ or Hg will be achieved if the analysis shows that the SO₂ or Hg content of the amount of refined coal necessary to produce an amount of useful energy has been reduced by at least 20% (40%, in the case of facilities placed in service after December 31, 2008) in comparison to the SO₂ or Hg content of the amount of feedstock coal necessary to produce the same amount of useful energy, excluding any dilution caused by materials combined or added during the production process.

NO_x Method: Laboratory analysis, including proximate and ultimate analysis, if combined with appropriate analytical methods, including Computational Fluid Dynamics (CFD) modeling, may be used to show that the requisite reduction in NO_x will be achieved when the refined coal is burned. Such analytical methods must be based on sufficient combustion emission data to permit a “qualified individual” (i.e., a qualified and licensed professional engineer), to

reliably conclude that the emission reduction will be achieved.

Importantly, the Revised Guidance confirms that CFD modeling may be used to demonstrate emissions reductions.

Use of Different Tests for Different Pollutants

Section 6.03(3) of the Revised Guidance clarifies that any permissible testing method provided for in the Guidance can be used in emission testing for any pollutant. In other words, a taxpayer can use different testing methods for each of NO_x, SO₂, or Hg, provided the method used for any pollutant is a permissible method.

Redetermination Methods

Both the Initial Guidance and the Revised Guidance provide that an emission test establishing a “qualified emission reduction” qualifies the refined coal for a six-month period provided there is no change in the process for producing the refined coal or in the source or rank of the feedstock coal. A taxpayer must “redetermine” the emission reductions to qualify for the succeeding six-month period using one or more approved methods.

Section 6.04(2) of the Revised Guidance clarifies in the context of “redetermination” that the

redetermination requirement may be satisfied by laboratory analysis establishing *either* that —

- The SO₂ or Hg content of the amount of refined coal necessary to produce an amount of useful energy has been reduced by at least 20% (40%, in the case of facilities placed in service after December 31, 2008) in comparison to the SO₂ or Hg content of the amount of feedstock coal necessary to produce the same amount of useful energy, excluding any dilution caused by materials combined or added during the production process; or
- The SO₂ or Hg content of both the feedstock coal and the refined coal do not vary by more than 10% from the SO₂ and Hg content of the feedstock coal and refined coal used in the most recent determination that meets the requirements of the testing methods for emissions reductions in Section 6.03 of the Revised Guidance.

The Initial Guidance included the latter method but not the former. The former method is relevant to processes that remove sulfur or Hg from the feedstock coal.

Effective Date

The Revised Guidance is effective for refined coal produced after September 16, 2010. However, taxpayers are entitled to apply the provisions of the Revised Guidance with respect to refined coal produced on or before September 16, 2010.

[A blackline of the Revised Notice showing changes made to the Initial Notice is found here.](#)

Hunton & Williams LLP Energy Tax Credit Practice

Hunton & Williams lawyers have extensive experience in energy tax credits, including the Section 45 tax credit for refined coal. Our lawyers routinely represent clients before Congress, the Treasury Department, and Internal Revenue Service in order to preserve and extend the benefits of the credits for taxpayers, including obtaining guidance from the Internal Revenue Service and Treasury Department through private letter rulings, technical advice, and published guidance, such as IRS Notices and Announcements. Our lawyers employ a team approach, drawing on the expertise of the firm’s environmental lawyers, energy regulatory lawyers, and other disciplines, where technical issues affecting tax credits require coordination and input from other government agencies, such as the EPA and Department of Energy.

© 2010 Hunton & Williams LLP. Attorney advertising materials. These materials have been prepared for informational purposes only and are not legal advice. This information is not intended to create an attorney-client or similar relationship. Please do not send us confidential information. Past successes cannot be an assurance of future success. Whether you need legal services and which lawyer you select are important decisions that should not be based solely upon these materials.