IRC Section 48A and 48B Audit Technique Guide

Advanced Coal and Gasification Project Credits

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The taxpayer names and addresses shown in this publication are hypothetical.

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I. Overview

A. Background / History

(1) IRC Section 46 provides that the amount of investment credit under IRC Section 38 for any taxable year is the sum of the credits listed in IRC Section 46. This includes, among others:

(2) The qualifying advanced coal project credit, (IRC Section 48A) and

(3) The qualifying gasification project credit, (IRC Section 48B).

(4) The IRC Section 48A (See also IRC Section 48A(b)(1)) and 48B credits are determined by the qualified basis of these projects placed in service during the taxable year. (See also IRC 48B(b)(1))

(5) To qualify for the credit, a qualifying advanced coal project under IRC Section 48A must be placed into service for tax purposes within five years from the date of the IRS issued project certification letter (SeeIRC 48A(d)(2)(E)), while an IRC Section 48B qualifying gasification project must be placed into service within seven years of the date of IRS award acceptance letter per the Notices listed in Table 1 below.

(6) IRC Section 48A and IRC Section 48B each provide that taxpayer claims for the advanced coal project and gasification project credits are subject to a competitive application, certification, and allocation process. The statute provides that the IRS establishes and administers phased programs, with each phase consisting of one or more rounds. Qualification is based upon each taxpayer's qualified project application and a Department of Energy analysis that provides a project feasibility certification and ranks the application. The IRS then issues an acceptance letter to all IRC Section 48A and 48B "award winner" applicants. See IRCSections 48A(d), 48A(h), and 48B(d)(3)

(7) Each program's phases and rounds are summarized in the Table 1 below.

Table 1: IRC Sections 48A and 48B Program Summary[1]

	IRC Section 48A	**IRC Section 48B**
Phase I	Round 1: 2006 (Notice 2006-24) Round 2: 2007-2008 (Notice 2007-52) Special Allocation Round: 2008 (Notice 2008-26) Round 3: 2008-2009 (Notice 2008-96)	Round 1: 2006-2007 (Notice 2006-25) Round 2: 2007-2008 (Notice 2007-53)
Phase II	Round 1: 2009-2010 (Notice 2009-24) Round 2: 2010-2011 (Announcement 2010-56) Round 3: 2011-2012 (Notice 2011-24 and Announcement 2011-62)	Round 1: 2009-2010 (Notice 2009-23) Round 2: 2011-2012 (Notice 2011-24 and Announcement 2011-62)
Phase III	Round 1: 2012-2013 (Notice 2012-51) Round 2: 2015 (Notice 2015-14) Round 3: 2020 (Notice 2020-88)	Round 1: 2015 (Notice 2014-81)

(8) IRC Section 48A and 48B credits are determined and reported on Form 3468 Part II as part of the Investment Credit.

(9) Award winners must submit closing agreements in a format substantially similar to the closing agreements attached to the Notices issued (See Part II.A.1 of this guide). The IRS will execute proper closing agreements (that

[1] Table information for IRC Section 48A program phases and allocation rounds based on IRS Notices 2006-24, 2007-52, 2008-26, 2008-96, 2009-24, 2011-24, 2012-51, 2015-14 and 2020-88 and IRS Announcements 2010-56, 2011-62, 2013-02, 2013-43 and 2016-33. Table information for IRC Section 48B program phases and allocation rounds based on IRS Notices 2006-25, 2007-53, 2009-23, 2011-24, and 2014-81 and IRS Announcements 2010-56, 2016-34, and 2017-06.

After the Phase I Round 1, each notice updates and amplifies the procedures for the allocation of additional IRC Section 48A and 48B Phases and Rounds.

provide for recapture and forfeiture of credits) with award winners[2]. IRC Section 48A projects require an additional project certification letter from IRS that is distinct from the project feasibility certification provided by the Department of Energy (DOE). IRC Section 48A(d)(2)(D) states the taxpayer has two years from the application acceptance date to provide evidence showing the project meets the IRC Section 48A(e)(2) certification requirements some of which includes all Federal and State environmental authorizations needed to construct the project and a binding contract to purchase the main steam turbine(s), unless the project involves a retrofit , but could be contingent on receiving a certification from the Treasury Secretary.

B. Relevant Terms

1. IRC Section 48A

(1) **Advanced coal-based generation technology**: a technology which uses integrated gasification combined cycle technology or, except as provided in IRC Section 48A(f)(3), has a design net heat rate of 8530 Btu/kWh (40 percent efficiency) and is designed to meet the performance requirements listed in IRC Section 48A(f)(1)(B).

(2) **Coal**: anthracite, bituminous coal, subbituminous coal, lignite, and peat. See also IRC Section 48A(c)(4). Coal includes waste coal (that is, usable material that is a byproduct of the previous processing of anthracite, bituminous coal, subbituminous coal, lignite, or peat). Examples of waste coal include fine coal of any of the listed ranks, coal of any of the listed ranks obtained from a refuse bank or slurry dam, anthracite culm, bituminous gob, and lignite waste. See Notice 2012-51 Section 3.01.

(3) **Electric generation unit**: any facility at least 50 percent of the total annual net output of which is electrical power, including an otherwise eligible facility which is used in an industrial application. See also IRC Section 48A(c)(6).

(4) Eligible property: either

- integrated gasification combined cycle (IGCC) project - any property which is a part of that project and is necessary for the gasification of coal, including any coal handling and gas separation equipment, or
- any other qualifying advanced coal project - any property which is a part of that project. See IRC Section 48A(c)(3).

[2] All reference, discussion and instruction relate to closing agreements or IRS issued Memorandum(s) of Understanding (MOU) as applicable. Beginning with the 2007 allocation round, the IRS issued MOUs regarding the taxpayer credit awards and project requirements. The MOUs effectively replace the closing agreements for this allocation round. Subsequent allocation rounds returned to the use of closing agreements.

(5) **Fuel Input**: the amount of fuel used during normal plant operations. The amounts of the fuel used are measured (i) in British thermal units (BTUs) on an energy input basis and (ii) pursuant to applicable standards prescribed by the American Society for Testing and Materials (ASTM). Only fuel used during normal plant operations is allowed for IRC Section 48A. Normal plant operations are operations other than during periods of initial plant certification, plant startup, plant shutdown, integrated gasifier shutdown for gasification system maintenance, or interruption of the coal supply to the project resulting from an event of force majeure (including an act of God, war, strike, or other similar event beyond the control of the taxpayer). See IRC Section 48A(e)(1)(b) and Notice 2012-51 Section 3.03.

(6) **Greenhouse gas capture capability**: an integrated gasification combined cycle technology facility capable of adding components which can capture, separate on a long-term basis, isolate, remove, and sequester greenhouse gases which result from the generation of electricity. See IRC Section 48A(c)(5).

(7) **Integrated gasification combined cycle**: an electric generation unit which produces electricity by converting coal to synthesis gas which is used to fuel a combined-cycle plant which produces electricity from both a combustion turbine (including a combustion turbine/fuel cell hybrid) and a steam turbine. See IRC section 48A(c)(7).

(8) **Placed-in Service**: IRC Section 48A, property is placed in service in the taxable year in which the property is placed in a condition or state of readiness and availability for a specifically assigned function. The specifically assigned function for a qualifying advanced coal project is for that project to produce electricity from coal. See IRC Section 48A(b)(1).

(9) **Qualifying advanced coal project**: a project which meets the minimum requirements of subsection (e) of IRC Section 48A. Refer to Part I.B. discussion for the list of IRC Section 48A(e) project minimum requirements.

2. IRC Section 48B

(1) **Biomass**: any agricultural or plant waste, byproduct of wood or paper mill operations, including lignin in spent pulping liquors, and other products of forestry maintenance. The term “biomass” does not include paper which is commonly recycled. See IRC Section 48B(c)(4).

(2) **Carbon capture capability**: a gasification plant design which is determined by the Secretary to reflect reasonable consideration for, and be capable of, accommodating the equipment likely to be necessary to capture carbon dioxide in the flue gas either for later use or for sequestration, from a project which uses a nonrenewable fuel. See IRC Section 48B(c)(5).

(3) **Coal**: anthracite, bituminous coal, subbituminous coal, lignite, and peat. See IRC Section 48B(c)(6). Coal includes waste coal (that is, usable material that is a byproduct of the previous processing of anthracite, bituminous coal, subbituminous coal, lignite, or peat). Examples of waste coal include fine coal of any of the listed ranks, coal of any of the listed ranks obtained from a refuse bank or slurry dam, anthracite culm, bituminous gob, and lignite waste. See Notice 2014-81, Section 3.01.

(4) **Eligible entity:** any person whose application for certification is principally intended for use in a domestic project which employs domestic gasification applications related to chemicals, fertilizers, glass, steel, petroleum residues, forest products, agriculture, including feedlots and dairy operations, and transportation grade liquid fuels. See IRC Section 48B(c)(7).

(5) **Eligible property**: property that is necessary for the gasification technology in a qualifying gasification project. See IRC Section 48B(c)(3).

(6) **Gasification technology**: any process which converts a solid or liquid product from coal, petroleum residue, biomass, or other materials which are recovered for their energy or feedstock value into a synthesis gas composed primarily of carbon monoxide and hydrogen for direct use or subsequent chemical or physical conversion. See IRC Section 48B(c)(2).

(7) **Petroleum residue**: the carbonized product of high-boiling hydrocarbon fractions obtained in petroleum processing. See IRC Section 48B(c)(8).

(8) **Qualifying gasification project**: any project which employs gasification technology, will be carried out by an eligible entity, and any portion of the qualified investment of which is certified under the qualifying gasification program as eligible for credit under this section in an amount (not to exceed $600,000,000) determined by the Secretary. See IRC Section 48B(d)(1).

C. Law / Authority

1. IRC Section 48A. Advanced Coal Project Credit

(1) IRC Section 48A(a) provides that the qualifying advanced coal project credit for any taxable year is an amount equal to the following:

(2) Phase I credits of

- 20 percent of the qualified investment for that taxable year in the case of any qualifying advanced coal project using an integrated gasification combined cycle (IGCC), and
- 15 percent of the qualified investment for that taxable year in the case of any other qualifying advanced coal project

(3) Phase II and Phase III credits of

- 30 percent of the qualified investment for that taxable year in the case of any qualifying advanced coal project (IGCC or non-IGCC)

(4) The total amount of IRC Section 48A project credit available for award was $2.55 billion. Phase I of the program included $1.3 billion, of which $800 million was allocated to IGCC projects and $500 million was allocated to other advanced coal projects. Phases II and III provided an additional $1.25 billion allocated to any qualifying advanced coal projects. See IRS Notice 2009-24, IRS Notice 2012-51, IRC Section 48A(d).

(5) IRC Section 48A(b) states that "qualified investment" is based on eligible property which

- the taxpayer constructed, reconstructed, or erected, orthe taxpayer acquired and whose original use started with the taxpayer, and
- is subject to depreciation or amortization in lieu of depreciation

(6) IRC Section 48A(b) also authorizes application of the progress expenditure rules in IRC Section 46. See also Treasury Regulation Section 1.46-5.

(7) IRC Section 48A(d)(2)(E) states a taxpayer has 5 years from the IRS certification date to place a qualifying advanced coal project in service. If the project is not placed within that period, the certification is no longer valid.

(8) IRC Section 48A(e) provides the following list of minimum requirements for a qualifying advanced coal project:

- the project uses an advanced coal-based generation technology to power a new electric generation unit or to retrofit or repower an existing electric generation unit (including an existing natural gas-fired combined cycle unit);
- the fuel input for the project, when completed, is at least 75 percent coal;
- the project, consisting of one or more electric generation units at one site, will have a total nameplate generating capacity of at least 400 megawatts;
- the applicant provides evidence that a majority of the output of the project is reasonably expected to be acquired or utilized;
- the applicant provides evidence of ownership or control of a site of sufficient size to allow the proposed project to be constructed and to operate on a long-term basis;
- the project will be located in the United States; and

- for any Phase II and III applications, the project includes equipment which separates and sequesters at least 65 percent (70 percent in the case of an application for reallocated credits under subsection (d)(4)) of such project's total carbon dioxide emissions.

(9) IRC Section 48A(e) also requires that, prior to IRS certification, the applicant receive all Federal and State environmental authorizations or reviews necessary to commence construction of the project and, except in the case of a retrofit or repower of an existing electric generation unit, purchase or enter into a binding contract for the purchase of the main steam turbine or turbines for the project (the contract may be contingent upon receipt of IRS certification).

(10) IRC Section 48A(i) authorizes the IRS to require recapture of credits for Phase II and III projects that fail to meet or maintain the 65 percent (or 70 percent, as applicable) carbon dioxide emissions separation and sequestration requirement.

2. Qualified Investment Basis – Additional Guidance for IRC Section 48A

(1) In a generic legal advice memorandum (GLAM), GLAM-2008-004, the Service provided additional guidance for determining eligible investment property for advanced coal project credits under IRC Section 48A. The GLAM should not be cited as precedent.

(2) The advice memorandum set forth the following four conclusions related to qualified property.

- For qualifying advanced coal projects using an integrated gasification combined cycle (IGCC), the “eligible property” under IRC Section 48A(c)(3)(A) means any property that is a part of the qualifying project and is necessary for the gasification of coal.
- For qualified advanced coal projects using advanced coal technologies other than IGCC, the “eligible property” under IRC Section 48A(c)(3)(B) means any eligible property that is a part of the qualifying project. The eligible property includes steam turbines, generators, foundations for generators, foundations for the power trains, silos for storage of coal, blending facilities for coal, control boards for the plant, assets necessary for steam generation, and assets necessary for emission control.
- The amounts incurred in the qualifying advanced coal project generally must be capitalized under IRC Section 263 based on costs incurred under IRC Section 263A. The final regulations under IRC Section 263 concerning the treatment of tangible assets were published on September 19, 2013 (see T.D. 9636; 78

FR 57685) and July 21, 2014 amendments to correct the final regulations (see 79 FR 42189).

- The qualified progress expenditures provisions of former IRC Section 46(d) in effect on the day before the enactment of the Revenue Reconciliation Act of 1990 only apply to expenditures that are for eligible property. Thus, to the extent an expenditure is for an item of eligible property or for a cost that is capitalized into the basis of eligible property under IRC Section 263 and IRC Section 263A, the expenditure qualifies for treatment as a qualified progress expenditure if the conditions of former IRC Section 46(d) are met. The amounts treated as a qualified progress expenditure in a particular year are described in former IRC Section 46(d)(3)(A), in the case of self-constructed property, and in former IRC Section 46(d)(3)(B), in the case of non self-constructed property.

(3) For IGCC projects, only the property (including any coal handling and gas separation equipment) that is a part of qualifying IGCC project and that is necessary for the gasification of coal is eligible property. Therefore, any property that is used in the qualifying IGCC project after the gasification of coal is completed is not an eligible property. Furthermore, any property that is used prior to the completion of the coal gasification must be necessary for the gasification in order to be an eligible property.

(4) Accordingly, the assets that are necessary for the gasification train (including any necessary gas separation equipment to clean, and to separate out components of, the synthesis gas prior to combustion of the gas in the gas turbine) are part of qualifying IGCC project. These assets are eligible property. The blending facilities for coal and the silos for storage of coal may qualify as eligible property but only to the extent that such blending and storing of coal at the project site are necessary for the gasification of coal.

(5) Any transportation facilities that are used to transport the coal to the project site from another location are neither part of the project nor necessary for the gasification of coal. Therefore, such transportation facilities are not eligible properties. However, the coal handling facilities directly necessary for the IGCC projects such as facilities for feeding coal into the gasifier may qualify as eligible property.

(6) Other properties such as the steam turbine and generators that are part of the qualifying IGCC project do not qualify as eligible properties because they are not necessary to the gasification of coal. The transmission lines also are not eligible properties because they are not part of a qualifying advanced coal project, as explained further below.

(7) For advanced coal projects other than IGCC, the statute provides a broader definition of eligible property. Under IRC Section 48A(c)(3)(B),

the eligible property is any property that is a part of qualifying advanced coal project. IRC Section 48A(c)(1) defines the term "qualifying advanced coal project" as a project that meets the requirements of IRC Section 48A(e). IRC Section 48A(e)(1)(C) describes a qualifying project as consisting of one or more electric generation units. Under IRC Section 48A(e)(1)(D), the applicant must provide evidence that a majority of the output of the project is reasonably expected to be acquired or utilized. Thus, the qualifying project is the project for the production of electricity. The qualifying project does not encompass the transmission of the electricity produced by the project. Therefore, any property used beyond the generation of electricity is not eligible property for purposes of IRC Section 48A(c)(3). For example, transmission lines and rights of way or easements for transmission lines are not eligible property.

(8) Any transportation facilities that are used to transport the coal to the project site from another location are not eligible properties because transporting coal to the project site is not part of a qualifying project. However, any part of the transportation facilities that is used directly to meet the requirements of IRC Section 48A(e) may qualify as eligible property.

(9) Consequently, the eligible property for other than IGCC projects includes:

- Steam turbine
- Generators and foundations for generators
- Foundations for the power train
- Assets that are necessary for the power train
- Silos for storage of coal
- Blending facilities for coal
- Control panels related to the qualified project
- Assets necessary for steam generation
- Assets necessary for emission control

3. IRC Section 48B. Gasification Project Credit

(1) IRC Section 48B(a) provides that the qualifying gasification project credit for any taxable year is an amount equal to the following:

- 20 percent of the qualified investment for that taxable year in the case of any qualifying gasification project, and
- 30 percent of the qualified investment for the taxable year in the case of any qualifying gasification project that includes equipment

which separates and sequesters at least 75 percent of such project's total carbon dioxide emissions.

(2) The total amount of the IRC Section 48B gasification project credit available for award is $600 million. Phase I of the program began with $350 million to fund the 20 percent credit from 2006 to 2008. Phase II later added an additional $250 million to fund the 30 percent credit in 2009. Phase III made Phase I credits that were forfeited available for reallocation in 2015. See IRC Section 48B(d)(1) and Table 1 for the Notices.

(3) IRC Section 48B(b) states that "qualified investment" is based on eligible property which

- the taxpayer constructed, reconstructed, or erected, or
- the taxpayer acquired and whose original use started with the taxpayer, and
- is subject to depreciation or amortization in lieu of depreciation

(4) IRC Section 48B(b) also authorizes application of the progress expenditure rules in IRC Section 46.

(5) Section 4 of the IRC Section 48B Notices listed in Table 1 above provide that a taxpayer has seven years from the date of the IRS letter of acceptance and certification of application to place a qualifying gasification project in service. If the project is not placed within that period, the certification is no longer valid.

(6) IRC Section 48B(e) states that no gasification project credit will be allowed for any project for which the advanced coal project credit is allowed.

(7) IRC Section 48B(f) authorizes the IRS to require recapture of credits for Phase II and III projects that fail to meet or maintain the 75 percent carbon dioxide emissions separation and sequestration requirement.

II. Issues / Examination Techniques / Additional Information/ Resources

A. Issues

1. IRC Section 48A and 48B Closing Agreements

(1) Each IRC Section 48A and 48B credit award winner is required to execute a closing agreement with the Service. The closing agreement applies only to the accepted taxpayer. See the applicable Notice listed in Table 1 above; for example, Notice 2012-51, Notice 2015-14.

(2) In accordance with Notice 2012-51 for IRC Section 48A and Notice 2014-81 for IRC Section 48B, the taxpayer must notify the Service within 90 days of the acquisition of the project by any other person (a successor in interest). A successor in interest that plans to claim the IRC Section 48A or 48B credit allocated to the project must request permission to execute a new agreement with the Service. If the request is granted, the new agreement must be executed no later than the due date (including extensions) of the successor in interest's Federal income tax return for the taxable year in which the transfer occurs. If the successor in interest does not execute a new agreement, the following rules apply:

- In the case of an interest acquired at or before the time the advanced coal or qualifying gasification project is placed in service, any credit allocated to the project will be fully forfeited (and rules similar to the recapture rules of IRC Section 50(a) apply with respect to qualified progress expenditures); and
- In the case of an interest acquired after the advanced coal or qualifying gasification project is placed in service, the project ceases to be investment credit property and the recapture rules of IRC Section 50(a) (and similar rules with respect to qualified progress expenditures) apply.

(3) IRC Section 48A(h) gives the Secretary the authority to modify certification awards and closing agreements related to IRC Section 48A and 48B credits. Examiners should be aware that any closing agreements entered into during the allocation process are subject to modification pursuant to the following conditions: (i) is consistent with the objectives of such Section, (ii) is requested by the recipient, and (iii) involves moving the project site to improve the potential to capture and sequester CO2 emissions, reduce costs of transporting feedstock, and serve a broader customer base. The Secretary will not agree to a project site change if the dollar amount of tax credits available to the taxpayer under these Sections would increase as a result of the modification or such modification would result in such project not being originally certified. In addition, the Secretary is required to consult with other relevant Federal agencies, including the Department of Energy, in considering any modification under IRC Section 48A(h).

2. IRC Section 48A and 48B Closing Agreements Audit Techniques and Recommendations

(1) Request and review a copy of the executed closing agreement.

(2) Ensure any successor in interest (if any) has executed a new closing agreement.

(3) Audit the closing agreement:

- Each closing agreement will have numerous determinations, agreements and performance requirement items. These closing agreement items will have specific requirements such as placed in service dates, emission, fuel input, name plate and design capacity, and carbon capture requirements, etc. A recapture event under IRC Section 50(a) will be triggered if these requirements are not met. Alternatively, there may be a proportional reduction to the allocated credit amount.
- Applicable items of the closing agreement should be reviewed and checked for compliance. Because of the long timeframes for project construction, not all items of the closing agreement will be applicable to the current audit. For example, each IRC Section 48A closing agreement will have a certification requirement under IRC Section 48A(e)(2) and a beginning date that starts the certification period. Examiners should ensure that if the certification deadline has passed, a certification letter was issued by the Service. In contrast, emission and performance requirements referenced in a closing agreement for a facility not yet placed in service would not be an applicable item for the current audit.

3. Section 48 Qualified Progress Expenditures

(1) IRC Section 48A(b)(3) and 48B(b)(3) provide that rules similar to the rules of former IRC Sections 46(c)(4) and (d) to claim the investment credit on qualified progress expenditures made by a taxpayer during the taxable year for the construction of progress expenditure property (as defined in former IRC Section 46(d)(2)) apply for purposes of these sections.

(2) To claim the IRC Section 48A or IRC Section 48B project credit on qualified progress expenditures paid or incurred by a taxpayer during the taxable year for construction of a qualifying advanced coal or gasification project, the taxpayer must make an election under the rules in Treasury Regulation Section 1.46-5(o). A taxpayer may not make the qualified progress expenditures election until the taxpayer has received an acceptance letter for the project.

(3) Election in General

- Treasury Regulation Section 1.46-5(o)(1) provides in part that the election under former IRC Section 46(d)(6) in effect on the day before the enactment of the Revenue Reconciliation Act of 1990 to increase qualified investment by qualified progress expenditures may be made for any taxable year ending after December 31, 1974. Except as provided in paragraph (o)(2) of this section, the election is effective for the first taxable year for

which it is made and for all taxable years thereafter unless it is revoked with the consent of the Commissioner. Except as provided in paragraphs (o)(2) and (3) of this section, the election applies to all qualified progress expenditures made by the taxpayer during the taxable year for construction of any progress expenditure property. Thus, the taxpayer may not make the election for one item of progress expenditure property and not for other items. If progress expenditure property is being constructed by or for a partnership, S corporation (as defined in IRC Section 1361(a)), trust, or estate, an election under (former) IRC Section 46(d)(6) must be made separately by each partner or shareholder, or each beneficiary if the beneficiary, in determining his tax liability, would be allowed investment credit under section 38 for property subject to the election.

(4) Time and Manner of Election

- Treasury Regulation Section 1.46-5(o)(2) provides in part that an election under (former) section 46(d)(6) must be made on Form 3468 and filed with the original income tax return for the first taxable year ending after December 31, 1974 to which the election will apply. The election is made by claiming the energy credit on Form 3468 and attaching the election to a timely filed income tax return for the tax year that the property is placed in service. In addition, the election may not be made on an amended return filed after the time prescribed for filing the original return (including extensions) for that taxable year.

(5) Qualified Progress Expenditures - Defined

- For purposes of Treasury Regulation Section 1.46-5, qualified progress expenditures are defined as the sum of qualified progress expenditures for self-constructed property, plus qualified progress expenditures for non-self-constructed property. Only amounts includible in the basis of new investment tax credit property may be considered as qualified progress expenditures. See Treasury Regulation Section 1.46-5(g)(1).
- Treasury Regulation Section 1.46-5(h)(1), provides that qualified progress expenditures for self-constructed property are amounts properly chargeable to capital account and are properly includible in computing basis. Qualified progress expenditures for self-constructed property include both direct costs (e.g., labor, material, parts) and indirect costs (e.g., overhead, insurance) associated with construction of property.
- Treasury Regulation Section 1.46-5(j)(1), provides that qualified progress expenditures for non-self-constructed property are

amounts actually paid by the taxpayer to another person for construction of the property as progress is made in construction. For example, such expenditures may include payments to the manufacturer of an item of progress expenditure property, payments to a contractor building progress expenditure property, or payments for engineering designs or blueprints that are drawn up during the normal construction period.

- Excess amounts paid for non-self-constructed property can be carried over into the succeeding taxable year. See Treasury Regulation Section 1.46-5(j)(6)(iii).
- The term "construction" includes reconstruction and erection.

(6) Determination of Percentage of Completion

- For non-self-constructed property, the proportion of construction costs for a tax year shall be determined by the basis of engineering or architectural estimates or on the basis of cost accounting records. Unless the taxpayer establishes otherwise by clear and convincing evidence, the construction shall be deemed to be completed not more rapidly than ratably over the normal construction period. See Treasury Regulation Section 1.46-5(j)(6)(i).

(7) Application of Economic Performance Rules Under IRC Section 461

- Qualified progress expenditures for self-constructed property are amounts properly chargeable to capital account in connection with that property. In general, amounts paid or incurred are chargeable to capital account if under the taxpayer's method of accounting they are properly includible in computing basis under Treasury Regulation Section 1.46-3. See Treasury Regulation 1.46-5(h)(1).

(8) Component Parts

- Property, which is to be a component part of, or is otherwise to be included in, any progress expenditure property shall not be taken into account until it is properly chargeable to a capital account.
- Treasury Regulation Section 1.46-5(h)(3)(i) states that expenditures for component parts and materials are included when consumed or physically attached in the construction process or which have been irrevocably allocated to construction of that property are properly chargeable to a capital account. In addition, component parts and materials designed specifically for the self-constructed property may be considered irrevocably allocated to construction of that property at the time of manufacture of the component parts and materials. Component

parts and materials not designed specifically for the property may be considered irrevocably allocated to construction at the time of delivery to the construction site if they would be economically impractical to remove. For example, pumps delivered to sites of construction of a tundra pipeline may be treated as irrevocably allocated to that pipeline on the date of delivery, even if they would be usable, but for their location on the tundra, in connection with other property. Component parts and materials are not to be considered irrevocably allocated to use in self-constructed property until physical work on construction of that property has begun (as determined under paragraph Treasury Regulation 1.46-5(e)(1)(ii) of this section). Mere bookkeeping notations are not sufficient evidence that the necessary allocation has been made.

- Treasury Regulation Section 1.46-5(h)(3)(ii), states a taxpayer's procedure for determining when an expenditure is properly chargeable to a capital account for self-constructed property is a method of accounting. Under IRC Section 446(e), the method of accounting, once adopted, may not be changed without consent of the Secretary.

(9) Certain Borrowings Disregarded

- Treasury Regulation Section 1.46-5(j)(5), Qualified progress expenditures for non-self-constructed property do not include any amount paid to another person (the "payee") for construction if the amount is paid out of funds borrowed directly or indirectly from the payee. Amounts borrowed directly or indirectly from the payee by any person that is related to the taxpayer (within the meaning of IRC Section 267) or that is a member of the same controlled group of corporations (as defined in IRC Section 1563(a)) will be considered borrowed indirectly from the payee. Similarly, amounts borrowed under any financing arrangement that has the effect of making the payee a surety will be considered amounts borrowed indirectly by the taxpayer from the payee.

(10) Application of Recapture Rules

Notice 2012-51, Section 9.04 provides that if a taxpayer makes the qualified progress expenditures election pursuant to section 9.03 of the notice, rules similar to the recapture rules in IRC Section 50(a)(2)(A)-(D) apply. In addition to the cessation events listed in IRC Section 50(a)(2)(A), examples of other events that will cause the project to cease being a qualifying advanced coal project are: (see Notice 2015-14 and Notice 2020-88)

- (1) Failure to satisfy any of the certification requirements in IRC Section 48A(e)(2) within 2 years from the date that the Service accepted the taxpayer's application for IRC Section 48A certification for the project under the notice;
- (2) Failure to receive a certification for the project in accordance with section 6.03 of the notice;
- (3) Failure to place the project in service within 5 years from the date of issuance of the certification under section 6.03 of the notice;
- (4) A significant change to the plans for the project as set forth in the applications for IRC Section 48A and DOE certification if, under section 7.01 of this notice, the Service's acceptance of the project is void as a result of the change; or
- (5) Failure of the project, at any time during the recapture period (as provided in IRC Section 50(a)), to attain or maintain the separation and sequestration of CO2 emissions required by IRC Section 48A(e)(1)(G).

Notice 2014-81, Section 8.04 provides that if a taxpayer makes the qualified progress expenditures election pursuant to section 8.03 of the notice, rules similar to the recapture rules in IRC Section 50(a)(2)(A)-(D) apply. In addition to the cessation events listed in IRC Section 50(a)(2)(A), examples of other events that will cause the project to cease being a qualifying gasification project are:

- Failure to place the project in service within 7 years from the date of the acceptance letter under section 4.02 (9) of the notice; or
- A significant change to the plans for the project as set forth in the applications for IRC Section 48B and DOE certification if, under section 6.01 of the notice, the Service's acceptance of the project is void as a result of the change.

4. Section 48 Qualified Progress Expenditures Audit Technique Recommendations

(1) Review Treasury Regulation Section 1.46-5 for guidance on the definition and determination of qualified progress expenditures.

(2) If the taxpayer has elected to claim the credit on Qualified Progress Expenditures, request the work papers used to determine the amount qualified progress expenditures claimed for the taxable year. This should include a detailed itemized breakdown of claimed qualified expenditures and whether the expenditures were for self-constructed or non-self-constructed property.

(3) For IRC Section 48A claims, review Generic Legal Advice Memorandum (GLAM) 2008-004 regarding guidance on the definitions of qualified IRC Section 48A property. Review and compare the taxpayers claimed qualified property expenditures to the guidance provided in GLAM 2008-004.

(4) Categorize the expenditures between Self-Constructed and Non-Self-Constructed property.

(5) Determine the total amounts paid for non-self-constructed property. Determine percentage of construction completed for non-self-constructed property. The qualified progress expenditure is equal to the lesser of the amounts paid or the pro rata (percent complete) portion attributable to construction completed in the taxable year.

- For example, a taxpayer enters a $500,000 contract for the construction of qualified IRC Section 48 property. The construction period is 5 years. Construction progress is assumed to occur ratably over the 5 years which is 20% per year. In year one the taxpayer makes a $200,000 payment to the contractor. Because the $200,000 is greater than the percentage of completion limitation of $100,000 (20% of $500,000), the taxpayer is limited to $100,000 as a qualified progress expenditure. The excess $100,000 paid in year 1 is carried over into the year 2 determination of qualified progress expenditures.
- If the taxpayer incurred $100,000 costs for self- constructed property in year 1 in addition to the $500,000 contract for non-self-constructed property, then the taxpayer's qualified progress expenditure would be $200,000 in year 1, ($100,000 paid for self-constructed property plus $100,000 attributed to the percentage of completion limitation paid for non-self-constructed property).

(6) Depending upon the results of your risk analysis, you may want further documentation of claimed qualified property to ensure the economic performance rules under IRC Section 461 have been met.

5. Application of At-Risk and Recapture Rules

(1) The at-risk rules in IRC Section 49 and the recapture and other special rules in IRC Section 50 apply to the qualifying advanced coal and gasification project credits.

(2) IRC Section 49 provides "at-risk" rules applicable to energy credits under IRC Section 48. The at-risk rules generally apply to every business, although application is at the shareholder or partner level for flow-through entities. The general rule is that the credit base of the energy property shall be reduced by the nonqualified nonrecourse financing which is applicable to the property as of the close of the tax year the property is placed in service. There are three primary factors

to which will determine if the amount at risk for any property is limited by the general rule:

- The property placed in service must be by a taxpayer and a type of property described and subject to the at-risk limitation in Section 465 (see IRC Section 49(a)(1)(B)),
- The property cannot be financed by nonqualified commercial financing (see IRC Section 49(a)(1)(A)), and
- The financing must be nonrecourse debt. See IRC Section 49(a)(1)(D)(iii).

(3) IRC Section 50 provides for recapture in the case of dispositions, etc.

(4) If, during any taxable year, investment credit property is disposed of, or otherwise ceases to be investment credit property for the taxpayer, before the end of the recapture period, then the tax shall be increased by the recapture percentage of the credit allowed for the property. See IRC Section 50(a)(1)(A).

(5) Successors in Interest

Under Notice 2012-51 and Notice 2014-81, Section 4.02(10), for an IRC Section 48A or 48B agreement, the taxpayer must notify the Service within 90 days of the acquisition of the project by any other person (a successor in interest).

Notice 2012-51, Section 4.02(10), a successor in interest that plans to claim the IRC Section 48A credit allocated to the project must request permission to execute a new closing agreement with the Service. If the request is granted, the new closing agreement must be executed no later than the due date (including extensions) of the successor in interest's Federal income tax return for the taxable year in which the transfer occurs. If the successor in interest does not execute a new closing agreement, the following rules apply: (see Notice 2015-14 and Notice 2020-88)

- In the case of an interest acquired at or before the time the qualifying advanced coal project is placed in service, any credit allocated to the project will be fully forfeited (and rules similar to the recapture rules of IRC Section 50(a) apply with respect to qualified progress expenditures); and
- In the case of an interest acquired after the qualifying advanced coal project is placed in service, the project ceases to be investment credit property and the recapture rules of IRC Section 50(a) (and similar rules with respect to qualified progress expenditures) apply.

Under Notice 2014-81, Section 4.02(11), a successor in interest that plans to claim the IRC Section 48B credit allocated to the project must request permission to execute a new agreement with the Service. If the request is granted, the new agreement must be executed no later than the due date (including extensions) of the successor in interest's Federal income tax return for the taxable year in which the transfer occurs. If the successor in interest does not execute a new agreement, the following rules apply:

- In the case of an interest acquired at or before the time the qualifying gasification project is placed in service, any credit allocated to the project will be fully forfeited (and rules similar to the recapture rules of IRC Section 50(a) apply with respect to qualified progress expenditures); and
- In the case of an interest acquired after the qualifying gasification project is placed in service, the project ceases to be investment credit property and the recapture rules of IRC Section 50(a) (and similar rules with respect to qualified progress expenditures) apply.

6. At-Risk and Recapture Rules Audit Techniques Recommendations

(1) Determine if any of the recapture rules or events under IRC Section 50 apply.

(2) Notify the Energy and Investment Tax Credits Practice Network (ECR PN) of any IRC Section 48A or IRC Section 48B recapture or forfeiture amounts. All recaptured credits are to be returned to the Treasury for future allocations. The ECR PN can be contacted at the "Contact an Expert Site".

B. Examination Techniques:

1. Section 48A and 48B Risk Analysis

(1) Risk assessment is an essential component of an effective issue management strategy. It should engage managers, examiners, and taxpayers at the earliest stage of the examination to determine the appropriate scope and duration of the examination. It should be used for all LB&I tax returns, Campaigns, Coordinated Industry Cases (CIC) and Industry Cases (IC), although the detail and depth of the process will vary according to the complexity of the tax return. Refer to IRM 4.46.3.

2. Application Files Available

(1) All taxpayer credit allocation application files are maintained by the Energy and Investment Tax Credit Practice Network (ECR PN). These

files are extensive and can assist in risk assessment, issue examination and development. Revenue Agents can obtain copies of taxpayer applications from the ECR PN by contacting them at the "Contact an Expert Site".

3. Section 48A Risk Analysis

(1) The IRC Section 48A credit is equal to 30% of the qualified investment for both integrated gasification combined cycle projects, (IGCC) and for projects which use other advanced coal-based generation technologies. These investment credit rates apply to the Phase III allocation periods covered in Notice 2015-14[3].

(2) Taxpayers claiming the IRC Section 48A credit must have the following:

- An executed closing agreement or MOU[2] with the IRS stating the specifics of credit award
- A certification letter from the IRS stating the taxpayer has met the provisions of IRC Section 48A.

(3) Claims for the IRC Section 48A credit by taxpayers without these documents should be considered high risk and the issue should be included in the examination audit plan. Only credit allocation award winners are entitled to claim the IRC Section 48A and 48B credit.

(4) For taxpayers with proper documentation establishing the credit award, risk analysis considerations should include the following:

a. Determine the total amount of credit awarded (see closing agreement or MOU[2]).

b. Determine the amount of credit claimed in the current periods and consider materiality.

c. Determine if any portion of the project was subsidized by financing provided under a Federal, State, or local program, a principal purpose of which is to provide subsidized financing for projects designed to conserve or produce energy. Subsidized financing reduces the basis of property that can be claimed for the credit. IRC Section 48A(b)(2) and 48B(b)(2).

d. Estimate/determine the total qualified property basis claimed by the taxpayer.

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[3] Table information for IRC Section 48A program phases and allocation rounds based on IRS Notices 2006-24, 2007-52, 2008-26, 2008-96, 2009-24, 2011-24, 2012-51, 2013-02, 2013-43, 2015-14, and 2020-88 and IRS Announcements 2010-56, 2011-62, 2013-02, 2013-43 and 2016-33. Table information for IRC Section 48B program phases and allocation rounds based on IRS Notices 2006-25, 2007-53, 2008-97, 2009-23, 2011-24, and 2014-81 and IRS Announcements 2010-56, 2016-34, and 2017-06.

e. Has the taxpayer placed the property in service? Consider issues and impact of placed in service rules under Treasury Regulation Section 1.46-3(d) and Treasury Regulation Section 1.167(a)-11. If the project placed in service is an Other Advanced Coal-Based Technology, consider the impact of the performance requirements of IRC Section 48A(f)(1)(B).

f. Has the taxpayer claimed Qualified Progress Expenditures? (i.e., claimed the credit prior to placing the qualified property in service). Consider the issues and impact of the economic performance rules under IRC Section 461 and Qualified Progress Expenditure rules under Treasury Regulation Section 1.46-5.

g. Consider the recapture provisions of IRC Section 50(a) for any early disposition of qualified investment property, i.e., a disposition or cessation within five years of the placed in-service date.

h. Consider how much excess qualified investment property is available to the taxpayer, (i.e., qualified property basis in excess of basis necessary to support the awarded credit amount). Large amounts of excess qualified property basis will tend to mitigate issue risk.

- For example, a taxpayer is awarded an IRC Section 48A credit allocation of $100 million for a qualified IGCC project. Total qualified property basis necessary to support this credit allocation is $500 million, (20% x $500 = $100 million). Pre-examination research and discussions with the taxpayer indicate that the entire project will have $1 billion in total qualified investment property. In this instance, the excess qualified investment property basis is $500 million. Consider that an audit adjustment re-classifying claimed qualified investment property to non- qualified property of at least $500 million would be required to impact the allocated $100 million credit.
- On the contrary, consider for example, a taxpayer with a $20 million credit allocation award for a $100 million IGCC project. Taxpayer claims 100% of the $100 million project is qualified investment property. The amount of excess qualified investment property is zero. Any reclassification of claimed qualified property to nonqualified investment property will impact the allocated $20 million credit.

4. Section 48B Risk Analysis

(1) The IRC Section 48B credit is equal to 20% of the qualified investment for a qualifying gasification project. This investment credit rates apply to the Phase III allocation periods covered through Notice 2014-81.[4]

(2) Taxpayers claiming the IRC Section 48B credit **must** have the following:

- An executed closing agreement or a memorandum of understanding with the IRS stating the specifics of credit award

(3) Claims for the IRC Section 48B credit by taxpayers without this document should be considered high risk and the issue should be included in the examination audit plan. Only credit allocation award winners are entitled to claim the IRC Section 48A and 48B credits.

(4) For taxpayers with proper documentation establishing the credit award, risk analysis considerations should include items a. through g. as listed in Section II, B, 3, (4) for the IRC Section 48A Credit Risk Analysis and a similar item h. consideration using qualified investment in the gasification property to determine any excess qualified property basis.

5. Audit Technique Recommendations for both IRC Sections 48A and 48B

(1) Obtain and review Form 3468.

(2) Ensure the basis claimed for the qualified project is reported on the correct line using the correct investment credit percentage.

(3) Determine if the project has met the placed in-service date requirements. See the discussion (below) on IRC Section 48A and 48B Placed in Service Guidance, noting that IRC Section 48B facilities will not have the added requirement of "synchronization to the grid" to be placed in service.

(4) Determine if the taxpayer has elected to claim the credit on Qualified Progress Expenditures (QPEs). If so, request a copy of the project acceptance letter and see Section II A. 2. of this ATG relating to Qualified Progress Expenditures.

(5) Request a detailed itemized break down of the claimed qualified basis.

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[4] IRC Section 48A program phases and allocation rounds based on IRS Notices 2006-24, 2007-52, 2008-96, 2009-24, 2011-24, 2012-51, 2013-02, 2013-43, 2015-14, and 2020-88 and IRS Announcements 2010-56, 2011-62, 2013-02, 2013-43 and 2016-33. Table information for IRC Section 48B program phases and allocation rounds based on IRS Notices 2006-25, 2007-53, 2008-97, 2009-23, 2011-24, and 2014-81 and IRS Announcements 2010-56, 2016-34, and 2017-06.

(6) Determine if there is excess basis, this could be due to ineligible property, ineligible services or excessive payments included. For IRC Section 48A claims, review Generic Legal Advice Memorandum (GLAM) GLAM 2008-004 regarding guidance on the definitions of qualified IRC Section 48A property. Review and compare the taxpayers claimed qualified property expenditures to the guidance provided in GLAM 2008-004.

(7) For Other Advanced Coal Based Generation Technology (non IGCC) IRC Section 48A facilities that are already placed in service, you may want to request the taxpayer's current Design Net Heat Rate computations to ensure the facility has a net heat rate of 8530 BTU/kWh (40% efficiency). See IRC Section 48A(f)(1)(A)(ii) and (f)(2). (Note that these computations are dependent upon the input coal BTU value use to fuel the facility.) Consider requesting an Engineer to verify these computations.

(8) For Other Advanced Coal Based Generation Technology (non IGCC) IRC Section 48A facilities that are already placed in service, you may want to request the taxpayer's documentation substantiating that the performance requirements of IRC Section 48A(f)(1)(B) have been met and ensure the measurement criteria used for determining the performance standards are in accordance with current industry practices. Note that many facilities have continuous emission monitoring systems (CEMS) installed to collect emission data for environmental reporting purposes. Consider requesting an Engineer to verify this data.

(9) Determine if any of the recapture rules or events under in IRC Section 50(a)(2)(A)-(D) apply.

C. Additional Information:

1. UIL and SAIN codes for IRC Sections 48A and 48B

(1) The following UIL and SAIN codes are to be used for IRC Sections 48A and 48B:

- UIL Code: 48A-00-00, SAIN Code: 604-06
- UIL Code: 48B-00-00, SAIN Code: 604-06

2. IRC Section 48A and 48B Placed in Service Guidance

(1) The section 48A credit is the relevant percentage of the "qualified investment" for the taxable year. IRC Section 48A(a). The qualified investment for any taxable year is the basis of eligible property placed in service during that year. IRC Section 48A(b). Similar definitions apply to the section 48B credit. IRC Section 48B(a) and IRC Section 48B(b). In general, property is placed in service in the taxable year the

property is placed in a condition or state of readiness and availability for a specifically designed function. See Treasury Regulation Sections 1.46-3(d)(1)(ii) and 1.167(a)-11(e)(1)(i). Placed in service has the same meaning for IRC Sections 48A and 48B as it does for purposes of the investment tax credit under IRC Section 46 and depreciation under IRC Section 167. Treasury Regulation Section 1.46-3(d)(2) provides examples of when property is in a condition of readiness and availability. One example relates to equipment acquired for a specifically assigned function and is operational but undergoing tests to eliminate defects. See Revenue Ruling 79-40, 1979-1 C.B. 13 (machinery and equipment were placed in service in the year critical tests with appropriate materials and operational tests were completed).

(2) It is axiomatic that property cannot be “placed in service” in a trade or business until the underlying trade or business begins. Wall v. Commissioner, T.C. Memo. 1992-321 (no depreciation and no energy credit allowable in a year in which no active trade or business is undertaken). See Piggly Wiggly Southern, Inc. v. Commissioner, 84 T.C. 739, 748 (1985), nonacq. on another issue, 1988-2 C.B. 1, aff’d on another issue, 803 F.2d 1572 (11th Cir. 1986) (assets may be "placed in service" even though not yet in actual use if in a state of readiness and available for a specifically assigned function in an established trade or business).

(3) The following factors are applicable to electric generating power plants in determining placed in service:

- Approval of required licenses and permits
- Passage of control of the facility to taxpayer
- Completion of critical tests
- Commencement of daily or regular operation and
- Synchronization to the grid

(4) See, generally, Rev. Rul. 76-256, 1976-2 C.B. 46; Rev. Rul. 76-428, 1976-2 C.B. 47. In Rev. Rul. 84-85, 1984-1 C.B. 10, the Service found that reaching the design capacity was not a prerequisite to a determination that a facility was placed in service. The Service looked to daily operation of the facility to determine the placed in service date.

(5) If the facility is composed of several component parts that are functionally interdependent, the component parts will be treated as one unit of property and they will not be treated as placed in service until the date that the last component is installed, and the facility becomes operational. See, e.g., Valley Natural Fuels, supra; Armstrong World Industries, Inc. v. Commissioner, 974 F.2d 422 (3rd Cir. 1992). Components of real property produced by, or for, the taxpayer, for use by the taxpayer or a related person are functionally interdependent if the placing in service of one component is dependent on the placing in

service of the other component by the taxpayer or a related person. See Treasury Regulation Section 1.263A-10.

(6) The following discussions concern several relevant cases concerning determinations of when certain property has been placed in service.

- Several Tax Court cases have addressed placed in service questions in the context of electric power plants. Oglethorpe Power Corp. v. Commissioner, T.C. Memo. 1990-505 and Consumers Power Co. v. Commissioner, 89 T.C. 710 (1987) are clear that facilities can be deemed placed in service upon sustained power generation near rated capacity. A facility may still be considered placed in service if it operates on a regular basis but does not produce the projected output. Sealy Power, Ltd v. Commissioner, 46 F.3d 382 (5th Cir.1995), nonacq. 1996-1 C.B. 6. In the Action on Decision for Sealy Power, the Service stated its position that to be considered placed in service the property at a minimum, needs to have been in a state of readiness sufficient to produce electricity on a sustained and reliable basis in commercial quantities. AOD 1995-10. In Rev. Rul. 84-85, 1984-1 C.B. 10, a solid waste facility that was experiencing operational problems of such magnitude that it was unable to operate at its rated capacity was nevertheless considered to have been placed in service since it was being operated on a regular basis and saleable steam was being produced. However, if a facility is operating merely on a test basis, it is not placed in service until it is available for service on a regular basis. Consumers Power, 89 T.C. at 710.
- In Valley Natural Fuels v. Commissioner, T.C. Memo. 1991-341, aff'd in an unpublished opinion, 990 F.2d 1266 (9th Cir. 1993), the Court required an ethanol plant to be producing ethanol of the quality for which the plant was designed prior to being placed in service. In Noell v. Commissioner, 66 T.C. 718 (1976), the rock base of an airplane runway was laid and used prior to the installation of the pavement atop the base in a subsequent tax year. The Court held that the runway was not in a condition or state of readiness until it was paved, explaining that the rock surface was only a stage of construction which could not be used on a permanent basis.

D. Resources

(1) IRC Section 48A and 48B guidance and resources are available in the Corporate/Business Issues & Credits Knowledge Base-Other Energy Credits as part of the IRS's Large Business and International Virtual Library.