No. _____

In The
Supreme Court of the United States

AMPERSAND CHOWCHILLA BIOMASS, LLC, *AND* MERCED POWER, LLC,

Petitioners,

v.

UNITED STATES,

Respondent.

On Petition for a Writ of Certiorari to the United States Court of Appeals for the Federal Circuit

PETITION FOR A WRIT OF CERTIORARI

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QUESTION PRESENTED

Congress has incentivized the use of renewable, alternative energy sources by providing tax benefits to taxpayers who produce electricity at or invest in qualifying energy property. Eligibility for these benefits often turns in part on the year the energy property is "placed in service," which the Treasury Department has construed to include when the property is "placed in a condition or state of readiness and availability for a specifically assigned function." In fact, the availability of over a dozen federal tax benefits is dictated by placed-in-service date, as are other tax consequences.

Petitioners here own two biomass electrical generation facilities that qualify for tax incentive payments under Section 1603 of the American Recovery and Reinvestment Act of 2009 if they were "placed in service" between 2009 and 2011. The Government claims the facilities were "placed in service" in 2008 because they produced and sold some electricity that year. But in 2008, they undisputedly were producing *far* less electricity than their contracts set as capacity thresholds and were incapable of operating without very significant noncompliance with environmental laws. Yet the Federal Circuit held that such a facility could still be considered "placed in service" under federal law.

The question presented is:

Whether an energy facility is "placed in service" within the meaning of federal law whenever it can produce and sell some electricity without regard for the level of operation and compliance with laws, as held by the court below in joining the Fifth Circuit, or only after it can produce and sell electricity as intended on a fairly consistent basis, as held by the Eighth Circuit.

PARTIES TO THE PROCEEDING

Petitioners are Ampersand Chowchilla Biomass, LLC and Merced Power, LLC. Petitioners were plaintiffs in the United States Court of Federal Claims and appellants in the United States Court of Appeals for the Federal Circuit.

Respondent is the United States. Respondent was defendant in the trial court and appellee in the court of appeals.

CORPORATE DISCLOSURE STATEMENT

Pursuant to this Court's Rule 29.6, petitioners state as follows:

The parent companies of petitioners are Global Ampersand, LLC; ACM California, LLC; and Akeida Environmental Fund LP. There are no publicly held companies that hold any stock of the petitioners.

STATEMENT OF RELATED PROCEEDINGS

This petition arises from:

Ampersand Chowchilla Biomass, LLC v. *United States*, 26 F.4th 1306 (Fed. Cir. 2022) (opinion and judgment issued February 24, 2022)

Ampersand Chowchilla Biomass, LLC v. *United States*, 150 Fed. Cl. 620 (2020) (opinion issued under seal and judgment issued October 30, 2020, and opinion reissued November 9, 2020)

Petitioners are not aware of any other proceedings in state or federal courts directly related to this case within the meaning of Rule 14.1(b)(iii).

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PETITION FOR A WRIT OF CERTIORARI

Petitioners Ampersand Chowchilla Biomass, LLC and Merced Power, LLC respectfully petition for a writ of certiorari to review the judgment of the United States Court of Appeals for the Federal Circuit in this case.

OPINIONS BELOW

The opinion of the United States Court of Appeals for the Federal Circuit is reported at 26 F.4th 1306 (Fed. Cir. 2022), and reproduced at App.1a-16a. The opinion of the United States Court of Federal Claims is reported at 150 Fed. Cl. 620 (2020), and reproduced at App.17a-90a.

JURISDICTION

The court of appeals issued its opinion and judgment on February 24, 2022, and had jurisdiction under 28 U.S.C. § 1295(a)(3). On May 16, 2022, Chief Justice Roberts extended the time to file a petition for a writ of certiorari to July 22, 2022. This Court has jurisdiction under 28 U.S.C. § 1254(1).

STATUTORY AND REGULATORY PROVISIONS INVOLVED

This case involves the American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, Div. B, tit. I, § 1603(a), 123 Stat. 115, 364 (2009) and Treasury Regulation § 1.46-3(d)(1)-(2). Those provisions are reproduced at App.92a-95a.

INTRODUCTION

Congress has often conditioned tax benefits on the year property is "placed in service," among other

qualifying criteria. The test for determining when property is "placed in service" thus has significant consequences for a wide range of federal benefits, including whether taxpayers are entitled to depreciation deductions, tax credits, and other tax incentives like grants. These consequences are particularly evident in the renewable-energy sector, where Congress incentivizes clean energy use by awarding tax benefits based on the year renewable, alternative energy facilities are "placed in service." Indeed, Congress enacted a new program like this last year in the Infrastructure Investment and Jobs Act, authorizing incentive payments for certain property on this basis.

This case involves another such benefit, arising under the American Recovery and Reinvestment Act of 2009 (ARRA). Section 1603 of the ARRA provides grants to persons who "placed in service" qualifying energy properties between 2009 and 2011. Petitioners contend they met this requirement by placing two open-loop biomass facilities into service in 2011, when the facilities were able to consistently operate at or near their capacities and they could comply with federal and state environmental laws.

But the Government rejected petitioners' grant requests, determining the facilities were placed in service in 2008 (outside of Section 1603's eligibility period) when the facilities were first able to generate and sell *some* electricity. The Government ignored that the facilities were unable to produce electricity at or near the capacity thresholds set forth in petitioners' contracts with the local utility company. The Government also disregarded that the facilities were incapable of operating without significant noncompliance

with environmental laws—an unusual position, given the ARRA's stated purpose of investing in environmental *protection* and the Government's aggressive stance to *protect* the environment and enforce the Clean Air Act, see generally *West Virginia* v. *EPA*, 142 S. Ct. 2587 (2022).

The courts below nonetheless affirmed the Government's denial of the grants. In doing so, the Federal Circuit widened disagreement over the proper legal standard for determining when property has been "placed in service" under federal law. The Federal Circuit joined the Fifth Circuit, which earlier had embraced legislative history to hold that only *some* generation and sale of electricity is required, without regard to the facility's intended level of production.

The Eighth Circuit, however, has stated a different legal standard, requiring property to function on a fairly consistent basis and as intended to be "placed in service." This—unlike the Federal Circuit's rule—is properly grounded in the statutory text as well as a Treasury Regulation that defines the term as "placed in a condition or state of readiness and availability for a specifically assigned function." Treas. Reg. § 1.46-3(d)(1)(ii). As the Eighth Circuit correctly recognized, this language requires more than *some* functionality, as property that cannot function consistently as the taxpayer intended cannot be "ready" and "available" for its specifically assigned function. Further, here, this position is the only one that effectuates the ARRA's textual aim and purpose to promote clean energy use. The Federal Circuit's holding perversely pinned the facilities' eligibility for federal tax incen-

tives at a time when their operations were significantly *violating* federal environmental laws, undermining the statutory goal to incentivize activity that *protects* the environment.

The existence of this conflict and broader confusion among courts and the Internal Revenue Service (explained below), coupled with the issue's wide-reaching and meaningful tax consequences, make resolution of the proper legal standard important. This Court's review is warranted.

STATEMENT OF THE CASE

I. Factual Background

A. Petitioners' refurbishment of two energy facilities

This case arises from petitioners purchasing two mothballed energy facilities and making them operational and environmentally compliant between 2007 and 2011. The facilities at issue, the Chowchilla and Merced facilities, are open-loop biomass facilities located in California that each have nameplate capacities of 12.5 megawatts. App.20a. The facilities produce electricity using renewable biomass in the form of agricultural and urban wood waste. App.20a.

The facilities began operations in the late 1980s, but were shut down in 1995. App.23a. Global Ampersand, LLC ("Global") purchased the facilities in 2007, seeking to use them for commercial operations. See App.23a-24a. Because the facilities had in place power purchase agreements with Pacific Gas & Electric Company ("PGE," the local utility company and electric transmission grid operator, App.20a) when

Global acquired them, Global's intended commercial operations largely turned on the facilities' ability to produce their contractual quota of electricity. See App.28a-32a.

Given the facilities' disrepair, a significant refurbishment and upgrade program preceded any possibility of meeting the quotas. App.24a, 38a; JA.100.[1] A preliminary step in the refurbishment and upgrade program was securing Authorities to Construct ("ATCs") from the San Joaquin Valley Air Pollution Control District (the "District"), the California state agency charged with regulating the facilities. App.39a. Global applied for and secured these permits in 2007. App.42a; JA.3178-95, 3236-46. These "initial" permits allowed Global to construct the facilities in accordance with state and federal emissions standards, and to generate and sell electricity on a conditional basis. App.39a. To operate on a more permanent basis, Global needed to secure a state Permit to Operate and a federal Title V permit, which were available only after passing a series of tests.[2] See App.39a-41a.

After receiving the ATCs, Global began the necessary testing and produced and sold some electricity, but problems arose. In 2008, for instance, the District noted the facilities "operated sporadically with emissions in excess of those allowed under" the ATCs, and

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[1] "JA" citations refer to the joint appendix filed in the U.S. Court of Appeals for the Federal Circuit.

[2] The Chowchilla and Merced Facilities would not secure their Title V permits until 2009 and 2011, respectively. App.50a.

also lacked mandatory equipment, including pollution control equipment. *E.g.*, JA.7967, 8080-83. This resulted in a series of Notices of Violation from the District subjecting Global to penalties for its noncompliance with the state's emission standards and failure to install mandatory equipment. App.43a-44a.

Although the facilities generated roughly $2.2 million in revenue in 2008 from the production and sale of limited amounts of electricity, it is undisputed they did not operate at or near capacity or generate sufficient electricity to satisfy the capacity thresholds specified in the contracts with PGE. See App.36a-37a, 44a-46a, 88a. For example, while the facilities needed to operate around 80 to 90 percent capacity under the contractual specifications, see App.28a-30a, 49a, they were operating on average at less than 50 percent, JA.3515-16.

The facilities also could not operate without significant noncompliance with environmental laws. See App.43a-45a. To the contrary, according to the findings below, "[s]oon after" the facilities restarted in mid-2008, the District and the U.S. Environmental Protection Agency ("EPA") began issuing Notices of Violation. App.43a. There were a total of 7 notices for Chowchilla and 3 for Merced in 2008 alone,[3] with the Chowchilla Facility operating under a variance that "required [it] to operate at a reduced capacity" because

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[3] Between 2008 and 2010, the facilities received a combined 42 Notices of Violation from the District and the EPA. See JA.8007-23, 8034, 8080-107, 8118.

of its emissions problems, and both facilities still lacking the necessary equipment to properly operate. App.43a-45a; see also JA.8007-14, 8080-83. And in 2009, the EPA issued notices to the facilities for their failure to comply with federal emissions standards and to install necessary equipment. App.51a; see JA.8023-33, 8107-17. Failed tests and irregular operations (averaging around 50 percent of capacity) likewise continued to plague the facilities. App.51a-52a.

These problems continued into 2010. The EPA issued another round of Notices of Violation. JA.8034-45, 8118-29. The U.S. Department of Justice ("DOJ") also got involved, at the request of the EPA and the District, informing Global that its continued violations of emissions levels, plus its failure to install necessary equipment, warranted significant monetary penalties. App.56a. The DOJ proposed $1.6 million in penalties to settle the alleged Clean Air Act violations, which ultimately were resolved for $835,000 in penalties. App.56a. Operations at the facilities were suspended later that year due to funding issues.[4] App.57a.

In February 2011, the facilities' problems culminated in the DOJ and the District jointly filing multi-count Complaints against petitioners. App.60a. They sought an injunction to stop the facilities' operations entirely. App.60a; JA.7974-8005, 8046-78. Consistent with the prior Notices of Violation, they asserted that

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[4] Several months after the suspension of operations, companies related to petitioners acquired Global, and petitioners took ownership of the facilities. JA.7570-661; App.59a-60a.

the facilities had failed to pass (or even conduct) required testing, were missing mandatory equipment, and were exceeding emissions limits. App.60a; see also, *e.g.*, JA.7993-99, 8067-74.

Petitioners entered consent decrees with the District and EPA, requiring the facilities to remedy equipment problems, pass emissions testing, provide notice of potential violations in the future, and pay the penalties noted above. App.61a; JA.7873-906, 7907-40. The facilities made the required changes and certified compliance by August 2011. App.61a. Only then—for the first time—did the facilities have all the required permits to operate, comply with major federal and state laws, and produce sufficient electricity to fulfill their contracts with PGE. See App.50a, 61a-62a, 88a; JA.615-16.

B. The Government's denial of grants based on its "placed in service" determination for the facilities

While Global and petitioners were in the process of repairing the facilities, Congress passed the ARRA. The ARRA was designed to "invest in … environmental protection … and other infrastructure that w[ould] provide long-term economic benefits." Pub. L. No. 111-5, § 3(a)(4), 123 Stat. 115, 115-16 (2009). To effectuate this purpose, a tax portion of the ARRA created benefits for persons who "placed in service" renewable energy property in certain years. See, *e.g.*, *id.* § 1603.

Relevant here, the ARRA directed that the Government "shall … provide a grant to each person who places in service specified energy property" (like the facilities here) in order "to reimburse such person for

a portion of the expense of such property." *Id.* § 1603(a). To qualify, the property needed to be "placed in service" between 2009 and 2011. See *id.* § 1603(a), (j).

The ARRA did not define "placed in service." But for purposes of another federal tax benefit, the U.S. Treasury Department has interpreted the term to include when the property "is placed in a condition or state of readiness and availability for a specifically assigned function." Treas. Reg. § 1.46-3(d)(1)(ii).[5]

Petitioners (through Global) applied for the Section 1603 grants in 2011. App.62a-63a. Petitioners believed the facilities were "placed in service" that year because the facilities were, for the first time, consistently producing the intended, contractually specified amount of electricity and doing so in compliance with major federal and state regulations. See App.50a, 61a-62a, 88a; JA.615-16. The Government disagreed, informing petitioners the facilities had been "placed in service" in 2008, making them "ineligible for payment." App.64a-65a.

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[5] The ARRA adopts the definitions of terms used in Sections 45 and 48 of the Internal Revenue Code. ARRA § 1603(h). Those sections refer back to Section 38 of the Internal Revenue Code. 26 U.S.C. §§ 45(a) (referencing Section 38), 48(a)(1) (referencing Section 46, which references Section 38). The Internal Revenue Service ("IRS"), in turn, has interpreted the meaning of terms used in Section 38, including "placed in service," in Treasury Regulation § 1.46-3.

II. Proceedings Below

A. Proceedings in Court of Federal Claims

Petitioners challenged the Government's denial of the Section 1603 grants. App.18a. After an 11-day trial, the trial court found the facilities were "placed in service" in 2008 and thus ineligible for the grants. App.19a, 89a-91a.

Relying heavily on *Sealy Power, Ltd.* v. *Commissioner*, 46 F.3d 382 (5th Cir. 1995), the trial court concluded that the facilities' "specifically assigned function" was "to produce and sell electricity," "regardless of the level of production attained." App.75a-77a. Consequently, the facilities were "placed in a condition or state of readiness and availability for [that] specifically assigned function," *i.e.*, "placed in service," Treas. Reg. § 1.46-3(d)(1)(ii), as soon as they produced and sold *any* electricity, without regard to whether the facilities were operating at their intended levels or in significant noncompliance with environmental laws. App.74a-77a, 79a-81a, 87a-90a. In analyzing this issue, the trial court squarely relied on the legal standard enunciated in *Sealy*. *E.g.*, App.76a-77a.

The trial court next analyzed a five-factor test from IRS Revenue Rulings, which represent the IRS's official interpretations of the Internal Revenue Code and related statutes and regulations, to decide when

the facilities met the specifically assigned function.[6] App.81a-90a. The trial court's analysis of these factors was necessarily grounded in its prior conclusions that "regular achievement of anticipated production levels," "achieving ideal or near ideal production levels," and complying with environmental laws were "not required for a facility to achieve its specifically assigned function." See App.76a-77a, 79a-81a (citing *Sealy*, 46 F.3d at 393-94). Analysis of each factor relied on the "specifically assigned function" of producing and selling electricity—*some* electricity, regardless of amount or legal compliance. See App.76a-81a.

For example, the trial court found the facilities had all the "necessary permits and licenses" to operate because they had secured ATCs in 2007, which the court found rendered the facilities ready and available for their specifically assigned function of "produc[ing] and sell[ing]" any amount of electricity. See App.83a-85a. Based on the trial court's prior legal conclusion, the court overlooked that the ATCs permitted operations only on a temporary (not regular) basis, and downplayed that the facilities were not in compliance with the conditions in the ATCs, including because of environmental law violations and missing equipment.

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[6] This test was recognized in *Oglethorpe Power Corp.* v. *Commissioner*, 60 T.C.M. (CCH) 850, 860 (1990), which stated the factors as whether: (1) the necessary permits and licenses for operation have been obtained; (2) critical tests necessary for proper operations have been performed; (3) the taxpayer has control of the facility; (4) the facility has been synchronized with the transmission grid; and (5) daily (or regular) operation has begun. See *id.*

App.83a-85a; see also JA.8003, 8076 (District and EPA seeking to enjoin the facilities' operations).

The same was true when analyzing critical tests necessary for operations, as the trial court discounted the environmental law violations and other points in finding additional tests were not necessary for the facilities "to generate and sell electricity." App.85a-87a. The court found that the only critical tests were those needed to ensure compatibility with the grid and "those specified in the" contracts with PGE, see App.85a-86a, despite the court's finding that the facilities' "specifically assigned function" was not tied to their ability to comply with those contracts, App.75a.

The trial court's legal conclusion also dictated its finding that the facilities began "daily or normal operations" in 2008. See App.87a-89a. The court reasoned that the facilities "were generating and selling" some electricity (and generating revenue) in 2008 and that this was enough, even though the facilities' capacity levels were "below the range stated to be required" by their contracts with PGE and the facilities' "repeated shutdowns and environmental compliance issues" were not largely resolved until 2011. App.87a-89a.

B. The court of appeals' decision

The Federal Circuit affirmed. App.2a. *First*, as a legal matter, for a facility to be "placed in service," it expressly "agree[d] with the trial court's decision and the Fifth Circuit's *Sealy* opinion" that "a facility need not achieve ideal or near-ideal production levels," as it characterized petitioners' proposed standard to be. App.8a. The Federal Circuit claimed to make this legal determination based on the text of Section 1603

and the Treasury Regulation defining "placed in service" (§ 1.46-3(d)(1)(ii)), observing that the "plain language" of "neither the statute nor the regulation 'states []or implies that the property must produce an anticipated or projected amount before it may be considered ready and available for a specifically assigned function.'" App.8a-9a (quoting *Sealy*, 46 F.3d at 394).

The Federal Circuit performed little other textual analysis. It relied almost exclusively on *Sealy*, which expressly relied on legislative history. 46 F.3d at 393-94. The Federal Circuit disclaimed "rel[iance] on legislative history" in reaching its decision, yet quoted the legislative-history discussion favorably. App.10a. The court then adopted *Sealy*'s rationale that reading Section 1603's placed-in-service requirement to require "ideal or near ideal production" would "undermine[]" the statute's purpose of incentivizing "initial investment decision[s]" and getting facilities online. App.10a-11a (quoting *Sealy*, 46 F.3d at 394).

Second, having legally ruled that production in an "anticipated or projected amount," or "ideal or near-ideal production," was unnecessary for energy facilities to be "placed in service," App.8a-9a, the Federal Circuit turned to reviewing and upholding the trial court's finding that the facilities' "specifically assigned function" is merely to produce and sell *some* electricity, App.11a-13a. The court of appeals reviewed that finding only for clear error, but upholding it necessarily rested on the prior legal ruling that the facilities did not need to produce electricity "near [their] expected" or "anticipated" levels to be "placed in service." App.9a-13a.

Third, the Federal Circuit also upheld as not clearly erroneous the findings that the five-factor Revenue Ruling test favored a determination that the specifically assigned function was achieved in 2008, again resting the analysis on the same foundational legal conclusions as the trial court. App.13a-16a. For example, the court of appeals agreed with the trial court that the ATCs were the only necessary permit for the facilities to begin generating some power; that as to both permits and testing, environmental "violations were [simply] a fact of life for biomass plants at that time," making significant noncompliance with environmental laws unrelated to the placed-in-service analysis; and that the facilities' generation and sale of some electricity in 2008, regardless of the level of production and compliance issues, constituted "regular[]" operations. App.13a-16a.

REASONS FOR GRANTING THE PETITION

I. The Circuits Apply Conflicting Legal Standards, And There Is Broader Confusion, On A Significant Question Under The Tax Code.

A. The circuits disagree on the proper legal standard for when an energy facility is "placed in service."

Multiple statutes premise federal tax benefits on the year that qualifying property is "placed in service." *Infra* Part II.A.1. But the circuits disagree on what "placed in service" means, particularly for energy facilities. The question boils down to what degree of production is required: "fairly consistent" production at intended levels, as stated in one circuit, or *any* produc-

tion, as stated in two others? The conflicting standards have generated confusion that has impacted and will impact many taxpayers.

1. Focusing on the language's plain text as well as a straightforward reading of Treasury Regulation § 1.46-3(d)(1)(ii), the Eighth Circuit has correctly held that facilities must be producing as intended on a "fairly consistent basis" to be "placed in service." See *United States* v. *Tierney*, 947 F.2d 854, 866 (8th Cir. 1991); see also *N. States Power Co.* v. *United States*, 151 F.3d 876, 880 (8th Cir. 1998) (in distinct context of replacement equipment, acknowledging *Tierney*'s holding). In *Tierney*, the Eighth Circuit held that an ethanol plant had to meet this standard before it could be "placed in service" for tax-credit purposes. 947 F.2d at 866. Part of meeting the standard, the court analyzed, was functioning as anticipated. *Id.*

This conclusion was based on the tax-credit statute as well as Treasury Regulation § 1.46-3(d), which is the regulation relied on by the court of appeals here. *Id.* The Eighth Circuit reasoned that an ill-functioning plant is no more ready and available for its specifically assigned function than a car that "can be driven at only 10 miles an hour for only 3 miles at a time." See *id.* Put simply, the court ruled, it is not.

Under this standard, the ability to operate consistently enough to meet intended contractual specifications, not to mention avoid significant noncompliance with environmental regulations, is a prerequisite to being "placed in service." Concluding otherwise not only contravenes the plain language of "placed in service" and Treasury Regulation § 1.46-3(d)(1)(ii), but also perversely bases these facilities' federal placed-

in-service point on a date where they were unable to operate without violating federal emissions standards—an inconsistency that is especially puzzling because the tax incentives were designed in part to protect against environmental harm.

2. The Fifth and Federal Circuits, on the other hand, have held that energy facilities are "placed in service" when they produce *any* amount of electricity, regardless of the level of production or any major noncompliance with applicable environmental laws.

In *Sealy*, the Fifth Circuit held that an energy facility is "placed in service" for purposes of federal law (there, energy and investment tax credits and depreciation deductions) when it is "ready and available to play its role in an operating facility, regardless of the level of production attained." 46 F.3d at 388, 397. Under this low legal threshold, an energy facility need not "achiev[e] ideal or near ideal production levels" to be "placed in service." *Id.* at 394. It also need not "generate electricity at its rated capacity." *Id.* at 397. It need only generate *some* electricity. *Id.* at 397-98.

The Fifth Circuit relied heavily on legislative history in formulating this rule. *Id.* at 393-94, 397-98. The court reasoned that Congress' intent behind the tax credit at issue was to encourage spending on renewable, alternative energy sources, not to ensure the success of the resulting infrastructure. *Id.* at 393-94. Thus, the court concluded that requiring "ideal or near ideal production levels" would improperly shift the focus away from the initial investment decision. *Id.* at 394. That analysis of the statute's legislative history disregarded the environmental impacts of a facility's actual operations, yet it dictated *Sealy*'s outcome, as

the core dispute was whether the facility could be "placed in service" without ever generating its anticipated levels of electricity. *Id.* at 391.

The court's erroneous resolution of that legal dispute led it, like the Federal Circuit here, to rest on factual findings under the five-factor Revenue Ruling test that supported a premature "placed in service" date. *Id.* at 394-97. For example, to the Fifth Circuit, operations were "conducted regularly" at the facility "even though its performance was sporadic and the volume of its output was disappointing." *Id.* at 396. Had the court concluded that more than some production of electricity was required to be "placed in service," it could not have found that such "disappointing" production satisfied the legal standard.

The Fifth Circuit's attempt to square the logical inconsistency between its position and the text of Treasury Regulation § 1.46-3(d)(1)(ii)—*i.e.*, that the property be available and ready to perform its intended function—fell flat. The court merely observed that the regulation did not "state[]" or "impl[y]" that any level of production was required, and pointed to inapposite examples of "operational" equipment being "placed in service," despite the equipment in those examples being impracticable to use or undergoing testing to eliminate defects. *Id.* at 394 (citing Treas. Reg. § 1.46-3(d)(2)). But the court's holding is contrary to the fact that an energy facility that cannot function on a fairly consistent basis as intended is never "operational" under the term's plain meaning. See *Operational*, MERRIAM-WEBSTER ONLINE DICTIONARY,

https://www.merriam-webster.com/dictionary/operational (defining "operational" as "ready for or in condition to undertake a destined function").

Notwithstanding these flaws in *Sealy*, the Federal Circuit below fully adopted it and held as a legal matter that electric facilities are "placed in service" when they produce and sell *any* amount of electricity. See App.8a-11a; see also App.9a (rejecting contention that facilities must be able to "produce an anticipated or projected amount" of electricity before being "placed in service"). As a result of that legal ruling and the subsequent analysis of the trial court's findings based on that ruling, the court of appeals held that petitioners' biomass facilities were "placed in service" in 2008 even though they undisputedly "operated below" the capacities specified in their contracts and were seriously noncompliant with environmental laws. App.13a-16a. Given these undisputed performance and compliance issues, it is clear the court of appeals considered the legal standard dispositive here—the court felt it necessary to answer that question first, and the answer informed the court's analysis of all the Revenue Ruling factors.

The court of appeals claimed it was not relying on legislative history, but it parroted *Sealy*'s analysis and concluded that because requiring the facilities to "achiev[e] ideal or near ideal production" would undermine the tax incentive's focus on the "initial investment decision," such production was not required. App.10a. The court of appeal's terse "textual" analysis likewise mirrored *Sealy*'s, ignoring that being "ready and available for a specifically assigned function" requires more than producing electricity at roughly half

of the facilities' intended capacity and in violation of environmental laws. See App.8a-10a. That is especially so given Congress' exclusion of energy facilities from certain federal benefits if the facilities cannot operate in compliance with environmental laws. See JA.8115 (EPA's Notice of Violation, observing that under the Clean Air Act, "facilities to be used in federal contracts, grants, and loans must be in full compliance with the Act and all regulations promulgated pursuant to it").

3. As a result of these conflicting standards, in two circuits, taxpayers' energy facilities will be deemed "placed in service" as soon as they produce *any* electricity, without regard to whether the facilities produce electricity at their intended capacity or operate in compliance with the law. In another circuit, such facilities will be held "placed in service" only after they can produce electricity on a fairly consistent basis as intended, permitting tax incentives only once the taxpayers' facilities are capable of reliably producing the clean energy the incentives were designed to promote. This disparity warrants resolution.

4. Beyond that conflict, there is even broader confusion in the circuits. For example, the Third Circuit has employed a standard that may represent a third approach for determining when property has been "placed in service." In *Armstrong World Industries, Inc.* v. *Commissioner*, 974 F.2d 422, 431-32, 434 (3d Cir. 1992), the Third Circuit required that railroad property be "ready for regular income-producing use" before it could be considered "placed in service" for purposes of sale-leaseback tax benefits.

The court's opinion—like the Eighth Circuit's in *Tierney*—makes clear that property must operate *as intended* to be "placed in service." *See id.* at 434-36 (citing *Consumers Power Co.* v. *Commissioner*, 89 T.C. 710, 724 (1987), which held that a hydroelectric plant was "placed in service" when it became "available … to provide electrical power on a regular basis"). And the Third Circuit was primarily addressing property that was, based on its intended use, complete with no further work to be done. *Id.* But by expressing in one place a standard that requires only "regular *income-producing use*," *id.* at 434 (emphasis added), the Third Circuit arguably requires less "regularity" than operations on a "fairly consistent basis" as intended. *Tierney*, 947 F.2d at 866.

Even so, the standard adopted in *Armstrong* itself conflicts with the Federal and Fifth Circuits' standard, which plainly does not require *any* degree of regularity to be "placed in service." *Sealy*, 46 F.3d at 397 (holding that electric facilities can be "placed in service" "regardless of the level of production attained"); App.12a-13a (holding that the facilities' specifically assigned function was merely "to produce and sell electricity" at any level). Thus, while the Government relied heavily on *Armstrong* in the court below and attempted to frame it as consistent with *Sealy*, *Armstrong* actually favors petitioners' position. At a minimum, *Armstrong* expands the number of differing legal standards.

The broader confusion does not end with the Third Circuit. The Ninth Circuit has approved of a standard in line with the Eighth Circuit's, but only in unpublished decisions. See, *e.g.*, *Visser* v. *Commissioner*,

19 F.3d 32, 1994 WL 96395, at *1 (9th Cir. 1994) (stating that property is "placed in service" when it is "available for full operation on a regular basis"). The Tenth Circuit, on the other hand, has referenced *Sealy*'s formulation of the placed-in-service test favorably, but has not itself addressed what degree of production is required. See *United States* v. *RaPower-3, LLC*, 960 F.3d 1240, 1246 (10th Cir. 2020).

Given this division and broader confusion, and given that many tax benefits and federal incentives are contingent on when property is "placed in service," see *infra* Part II.A.1, this Court should resolve the proper legal standard.

B. The standard adopted below is also at odds with the bodies tasked with interpreting and adjudicating disputes under the Tax Code.

The IRS—the agency tasked with administering tax laws—rejected the legal standard adopted by the Fifth Circuit and now the court of appeals below. And the Fifth Circuit in *Sealy* openly disagreed with the decisions on "placed in service" by the United States Tax Court, which adjudicates IRS determinations. Yet the Tax Court and IRS apparently continue to rely on standards that differ from the Fifth Circuit (and now the Federal Circuit). While the IRS and Tax Court generally both employ a placed-in-service standard that more closely resembles the Eighth Circuit's, the IRS has taken a somewhat softer stance on requiring a facility to produce at its intended capacity. These variations in the legal standard, on top of the circuit confusion, bolster the need for review.

1. The IRS and the Tax Court are in a recognized conflict with the Fifth Circuit's position adopted by the Federal Circuit. *First*, the IRS published an Action on Decision expressly stating that it did not "acquiesce" in the Fifth Circuit's *Sealy* opinion. *Sealy*, 46 F.3d 382, *action on dec.*, 1995-10 (Aug. 7, 1995). In disapproving of *Sealy*, the IRS reasoned that "[a]t a minimum," a facility needs to be "in a state of readiness sufficient to make it available to produce electricity *on a sustained and reliable basis in commercial quantities*" to be "placed in service." *Id.* (emphasis added). In doing so, the IRS rejected the Fifth Circuit's rule (adopted by the Federal Circuit) that *any* amount of production can satisfy the placed-in-service standard.[7]

Second, in *Sealy*, the Fifth Circuit expressly rejected the Tax Court's *Oglethorpe* and *Consumers Power Co.* decisions because those decisions required facilities to "consistently sustain[] generation levels near [their] rated capacit[ies]" and "show sustained, regular generation of electrical power" to be "placed in service." *Sealy*, 46 F.3d at 391-93. As the Fifth Circuit recognized, its standard—which permits facilities to be "placed in service" "regardless of the level of production attained," *id.* at 397—cannot be squared with the Tax Court's standard, which requires facilities to be ready and available for "full service." *E.g.*, *Brown* v. *Commissioner*, 106 T.C.M. (CCH) 630, 636-37

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[7] Although this Action on Decision is not precedential, the IRS has consistently invoked its formulation of the placed-in-service standard in its determinations. *Infra* Part I.B.2.

(2013). The Tax Court's continued reliance on *Oglethorpe* and *Consumers Power Co.* post-*Sealy* confirms the variations in the placed-in-service rule. See, *e.g.*, *Green Gas Del. Statutory Tr.* v. *Commissioner*, 147 T.C. 1, 50-52 (2016) (relying on these cases), *aff'd*, 903 F.3d 138 (D.C. Cir. 2018). And while the Tax Court's decisions are not binding on the circuits, taxpayers will, as a practical matter, justifiably continue to look to these opinions in assessing whether their property has been "placed in service" under federal law.

2. Because they require more than *some* production of electricity, the IRS's and the Tax Court's placed-in-service standards appear to align somewhat with the Eighth Circuit's. For example, the IRS requires that facilities be "ready and available to produce on a sustained and reliable basis in commercial quantities" to be "placed in service." *E.g.*, I.R.S. Tech. Adv. Mem. 2011-13-025, 2011 WL 1210325 (Apr. 1, 2011). The Tax Court likewise requires facilities to be available for "full service," *i.e.*, reliably operating as intended, to be "placed in service." *E.g.*, *Brown*, 106 T.C.M. (CCH) at 636-39 (functional airplane lacking a conference table and screens for displaying PowerPoints was not "placed in service" because it was "not available for its intended use [of facilitating the taxpayer's business] on a regular basis"); *Oglethorpe*, 60 T.C.M. (CCH) at 859-60 (rejecting Commissioner's position that plant was "placed in service" merely because it was synchronized to the transmission grid and produced "some electricity" on a test basis).

The standards—particularly the IRS's—however, are not identical to the Eighth Circuit's. While the IRS does require "sustained and reliable" production

"in commercial quantities," it does not require the facility to "have reached design capacity" to be "placed in service." *E.g.*, I.R.S. Tech. Adv. Mem. 2011-13-025, 2011 WL 1210325 (Apr. 1, 2011); see also Rev. Rul. 84-85, 1984-1 C.B. 10, 1984 WL 262650 (June 18, 1984). The IRS's apparent amalgamation of the various standards further complicates the issue, causes more confusion, and warrants this Court's review.

II. The Question Presented Is Important And Warrants Review In This Case.

A. This question impacts multiple federal laws and has significant consequences.

Determining the placed-in-service date has significant tax consequences under multiple federal statutes, impacting if and when property qualifies for: tax credits, *Tierney*, 947 F.2d at 866; federal grants in lieu of tax credits, as in this case; depreciation deductions, *Sealy*, 46 F.3d at 388-89; and other tax incentives, App.8a-9a; *Armstrong*, 974 F.2d at 431. Further, each of the federal law instances of this term will likely be interpreted with some reference to the Treasury Department's regulation. The proper legal standard has broad-reaching and important consequences.

1. Federal legislation frequently bases a taxpayer's entitlement to benefits on what year property was "placed in service." *First*, over a dozen federal statutes base tax credits on this. Tax credits like these have significant value to taxpayers because they "directly reduce[] the amount of tax that must be paid, dollar for dollar." *United States* v. *Hemme*, 476 U.S. 558, 561 n.1 (1986).

Many such credits relate to renewable energy, and use the "placed in service" point to determine a property's eligibility for a credit and, in some cases, even the credit amount. One set of these credits relates to production from renewable energy facilities. For example, Section 45 of the Tax Code permits taxpayers to claim a "renewable electricity production credit" based on the amount of electricity produced "at a qualified facility during the 10-year period beginning on the date the facility was originally placed in service." 26 U.S.C. § 45(a). The section then defines "qualified facilities" as renewable energy facilities that were "placed in service" in specific years. *E.g.*, *id.* § 45(d)(1) (qualifying wind facilities must be "originally placed in service after December 31, 1993"). When the facilities are "placed in service" thus dictates the availability *and* amount of the credit because it determines which facilities qualify for the credit and how long that credit is available.

Other tax credits for renewable energy production follow similar patterns. The credit for advanced nuclear power facility production is based on the amount of electricity produced at those facilities—partially defined as those "placed in service after the date" of the statute's enactment "and before January 1, 2021"—"during the 8-year period beginning on the date the facility was originally placed in service." 26 U.S.C. § 45J (a), (d). And the credit for producing fuel from a nonconventional source likewise applies to qualified fuels that are produced from facilities "placed in service" in certain years. 26 U.S.C. § 45K(e); see also 26 U.S.C. § 45Q(a) (similar for carbon oxide sequestration credit).

Another set of renewable-energy tax credits, similar to the grants in Section 1603 of the ARRA, relate to placing qualified energy property into service. For instance, Section 48A of the Tax Code creates a credit for taxpayers that construct or acquire qualifying advanced coal projects. 26 U.S.C. § 48A(a)-(b). That credit is limited, however, to a percentage of "eligible property placed in service by the taxpayer during [a] taxable year." *Id.* The tax credits for placing into service qualifying gasification projects, 26 U.S.C. § 48B(a)-(b), and advanced energy projects, 26 U.S.C. § 48C(a)-(b), use similar limitations. When such properties are "placed in service" determines the amount of the credit a taxpayer can claim in any given year.[8]

The federal offerings also include tax credits apart from renewable energy. For example, the Tax Code provides for low-income housing and building rehabilitation credits based on when qualifying buildings are "placed in service." 26 U.S.C. §§ 42(b), 47(a)-(b). It also limits the amount of certain employer-provided childcare credits based on the year qualifying child care facilities are "placed in service by the taxpayer," 26 U.S.C. § 45F(d), and curtails the availability of certain disabled access credits for small businesses by disallowing the credit for expenditures "paid or incurred in connection with any facility first placed in service" after the section's enactment, 26 U.S.C. § 44(c)(4).

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[8] The Tax Code also permits tax credits based on when other renewable energy properties are "placed in service." *E.g.*, 26 U.S.C. §§ 25D(g)-(h) (residential energy efficient property credits), 30D(a) ("new qualified plug-in electric drive motor vehicle" credit).

Like Section 1603 of the ARRA at issue here, each of these credits contains the "placed in service" term, which the IRS has interpreted in Treasury Regulation § 1.46-3(d)(1)(ii). See Treas. Reg. § 1.46-3(d)(1)(ii) (interpreting meaning of "placed in service" for purposes of 26 U.S.C. § 38); see also 26 U.S.C. §§ 42(a), 44(a), 45(a), 45F(a), 45J(a), 45K(a), 45Q(a) (referencing § 38); 26 U.S.C. §§ 47(a), 48A(a), 48B(a), 48C(a) (referencing § 46, which references § 38). The legal standard should be the same for each of these tax benefits, which illustrates the importance of resolving the proper rule. *IBP, Inc.* v. *Alvarez*, 546 U.S. 21, 34 (2005) (observing that "identical words used in different parts of the same statute are generally presumed to have the same meaning").

Second, and similarly, federal depreciation deductions are based on when property is "placed in service." See 26 U.S.C. § 167. The depreciation statute permits taxpayers to deduct "wear and tear" of "property used in [a] trade or business" or "held for the production of income." *Id.* § 167(a). This deduction can be used to offset the taxpayer's income, reducing its tax obligation. *Hemme*, 476 U.S. at 561 n.1. But to qualify for a depreciation deduction, the taxpayer must show its property was "placed in service" during the year for which it is claiming the deduction. Treas. Reg. § 1.167(a)-10(b) (asset's depreciation period "begin[s] when the asset is placed in service" and "end[s] when the asset is retired from service"). As with the above-discussed tax credits, according to the Treasury Department, this includes analysis of when the property is "placed in a condition or state of read-

iness and availability for a specifically assigned function." Treas. Reg. § 1-167(a)-11(e)(1)(i). Having a uniform legal test for "placed in service" is thus significant for any taxpayer who owns depreciable assets.

Third, large-scale federal legislation, like the ARRA (at issue here) and the recent Infrastructure Investment and Jobs Act, Pub. L. No. 117-58, 135 Stat. 429 (2021) ("IIJA"), have likewise conditioned tax incentive payments on when qualifying energy properties are placed in service. The IIJA, enacted just last year, directed the Government to "make incentive payments to the owners or operators of qualified hydroelectric facilities" for certain capital improvements, if the facilities were "placed into service before the [section's] date of enactment." *Id.* § 247. Although "placed into service" is defined in neither Section 247 of the IIJA nor the Energy Policy Act of 2005 that it amends,[9] it stands to reason the term has the same meaning as "placed in service" in other federal laws. See *IBP, Inc.*, 546 U.S. at 34. This consequential new infrastructure legislation renders the meaning of "placed in service" all the more important and timely.

2. Congress' use of the term "placed in service" to determine such broad-ranging tax consequences underscores the importance of a uniform legal standard. *First*, the current lack of uniformity makes it difficult

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[9] The Energy Policy Act of 2005 also based tax benefits on when qualifying property was "placed in service." *E.g.*, Pub. L. No. 109-58, § 1331, 119 Stat. 594, 1020, 1023 (2005) (creating deduction for the "cost of energy efficient commercial building property placed in service during the taxable year," but limiting deduction to property "placed in service" before 2008).

for taxpayers to plan their activities such that they can capitalize on Congress' tax incentives. Many of the tax benefits that turn on this term are designed to incentivize investments in large infrastructure projects. See *supra* Part II.A.1. For these projects, the significant tax consequences, as determined by the projects' "placed in service" date, can be critical to the economic model. Without certainty on what this term means, investors and developers can have little confidence as to the timing and amount of the projects' tax results. This increased financial risk deters—rather than promotes—investment, undermining the tax incentives' intended purposes.

Second, having different legal standards in different places for the same question is inherently problematic, and here it directly impacts the dollar-for-dollar reduction of taxpayers' tax liability through tax credits, an overall reduction of taxpayers' taxable income through deductions, and outright payments to taxpayers through grants and other incentives. Under the current law, taxpayers in different circuits are eligible for these benefits on different terms. A taxpayer in the Fifth Circuit can consider its property "placed in service" as soon as it starts operating. *Sealy*, 46 F.3d at 394, 397. That taxpayer's property will be "placed in service" earlier than a similarly situated one in the Eighth Circuit, based on its standard of when the property is functioning as intended on a "fairly consistent basis." *Tierney*, 947 F.2d at 866. This significantly impacts tax liabilities, and the disparity makes no sense. A uniform rule is needed.

Third, the placed-in-service rule's formulation impacts other laws. For one, it impacts the taxpayers'

compliance with environmental laws. The Fifth and Federal Circuits' minimal "placed in service" threshold—especially applied to legislation involving renewable energy facilities—could encourage a taxpayer to ramp up operations quickly, without regard to state and federal environmental regulations, in order to capitalize on federal tax benefits. The Eighth Circuit's holding, by contrast, ties federal tax benefits to a time when taxpayers are operating their properties in compliance with other federal (and state) laws.

Further, the formulation of the "placed in service" rule impacts federal tax reporting. When there is confusion over the proper legal standard, determining when an asset is "placed in service" depends largely on the tax accountant making that determination. The creation of a bright-line rule—like one requiring operations as intended on a fairly consistent basis—increases the likelihood of regularity in reporting and accounting for assets that qualify for tax benefits.

For all these reasons, the question presented here has significant consequences.

B. This case squarely presents the question.

1. The question posed here is squarely presented by the Federal Circuit's decision. The court recognized that this question of statutory interpretation is a legal one and expressly agreed with *Sealy* that to be placed in service, a property need not "produce an anticipated or projected amount" or "achieve ideal or near-ideal production levels." App.8a-9a; see App.74a (trial court's recognition that disagreement over the "legal standard for defining when an asset is placed in service" is a question of law). The court's adoption of

this legal rule is alone reason for reversal, and it necessarily informed the rest of the court's analysis of the trial court's determinations, including all the findings and conclusions that went into the notion that the facilities had been placed in service for federal tax purposes in 2008 even though they could not produce sufficient electricity to satisfy their contracts or operate without violating numerous laws. See *infra* Part II.C.2. Deciding the question here will thus affect the judgment below.

Indeed, the Federal Circuit's decision to address this threshold legal question demonstrates that the outcome here depends on what the proper legal test is: if energy facilities must function on a consistent basis as intended to be "placed in service," the facilities did not meet that description in 2008, but if facilities must only produce and sell *some* electricity, the facilities were "placed in service" that year.

2. The question presented is a purely legal one. Issues of statutory interpretation are questions of law. See *Mid-Con Freight Sys., Inc.* v. *Mich. Pub. Serv. Comm'n*, 545 U.S. 440, 446 (2005). So are questions about what the proper legal standard is, see *Monasky* v. *Taglieri*, 140 S. Ct. 719, 730 (2020), and whether a court properly applied that standard "to essentially undisputed facts," see *United States* v. *Singer Mfg. Co.*, 374 U.S. 174, 193 (1963). The question presented here has each of these characteristics.

First, the question presented involves the interpretation of the term "placed in service" as used in Section 1603 of the ARRA (and, by extension, interpretation of that term as used in a large number of other federal statutes). See *supra* Part II.A.1. It also

involves the interpretation of Treasury Regulation § 1.46-3(d)(1)(ii), which defines "placed in service."

Second, the question presented turns on what is required for property to be "placed in service" under federal law, *i.e.*, what the proper legal standard is. See *Sealy*, 46 F.3d at 393 (acknowledging "interpretation of the legal standards defining when an asset is placed in service" is a legal question); accord App.8a. As discussed, *supra* Part I.A, courts disagree on the proper standard. This Court can and should resolve that issue.

Third, at this stage, the underlying, basic background facts are materially undisputed, leaving this Court to resolve the legal question presented. See also *infra*, Part II.C.2 (further discussing impacts of incorrect legal standard on collateral fact-findings). The parties do not dispute that in 2008, the facilities "experienc[ed] emissions problems" and "outages," failed tests and inspections, received ten Notices of Violation from the District, and operated at far less than their intended capacity (and in the Chowchilla facility's case, operated under a variance that explicitly required reduced-capacity production). App.42a-45a, 88a; see also JA.3515-16. By 2011, however, the facilities' compliance issues were largely resolved and their production levels had increased. See App.50a, 61a-62a, 88a; see also JA.615-16.

Consequently, even if a question of fact might ordinarily exist as to the date property is "placed in service," see *Armstrong*, 974 F.2d at 429-30; App.7a-8a, the resolution of the proper legal standard will matter here as to whether petitioners' facilities were placed

in service in 2008, when they were undisputedly operating well below the levels specified in their contracts and in contravention of environmental laws, as opposed to later when they were operating as intended on a fairly consistent basis. This case is an appropriate vehicle to decide the question presented.

C. The judgment below is wrong.

1. The Federal Circuit erred in concluding that producing "anticipated or projected amount[s]" does not matter—and achieving "ideal or near-ideal production levels" is not required—because producing and selling *any* amount of electricity is sufficient for an energy facility to be "placed in service." App.8a-11a. That legal position is contrary to the plain meaning of the term "placed in service." As even the Treasury Department has recognized, to be "placed in service," a facility must be "placed in a condition or state of readiness and availability for a specifically assigned function." Treas. Reg. § 1.46-3(d)(1)(ii). As a legal matter, property that does not function as intended on a "fairly consistent basis" cannot meet that description. See *Tierney*, 947 F.2d at 866.

Under the proper legal test, an energy facility that is producing far less than its intended output, lacks necessary equipment, and is experiencing repeated shutdowns is not "ready and available" for consistent operations, which is a prerequisite to being "placed in service." *See id.* To that end, an energy facility that cannot operate without significant noncompliance with environmental laws, like the Clean Air Act, is not operating as intended, which likewise prevents the asset from being "placed in service." The courts below

erred (and clearly erred) in disregarding or discounting these points. Because the facilities were unable to operate at their intended capacity on a fairly consistent basis and in compliance with the law in 2008, the court of appeals erred in holding that the facilities had been placed in service in 2008. App.16a.

2. Had the court of appeals employed the proper legal analysis and required production on a "fairly consistent basis" as intended—rather than just some electricity—it would have correctly held that the facilities qualified for the Section 1603 grants. Because the trial court (and the Federal Circuit) accepted and then applied the wrong legal standard throughout in assessing when the facilities were "placed in service," the trial court's subsequent factual findings—which flowed from that incorrect legal framework—are clearly erroneous, and the court of appeals erred in affirming. See also *Sealy*, 46 F.3d at 392 (observing that application of the five-factor test was "clearly influenced" by the legal standard for "placed in service").

For example, application of the proper legal test compels a finding that the facilities' "specifically assigned function" is more than just "produc[ing] and sell[ing] electricity," App.75a; it is to produce and sell electricity on a fairly consistent basis as intended. Additionally, the trial court found that the facilities were operating on a "daily" basis in 2008 because the facilities "first produced and sold electricity" at that time. App.88a-89a. But under the correct legal standard, *i.e.*, that the facilities needed to operate on a fairly consistent basis as intended to be "placed in service," the facilities' production of electricity far below their intended and contractually contemplated levels could

not have constituted "daily or normal operations." The same applies to the trial court's findings on permits and testing. For example, the court found the facilities' ATCs were the only necessary permits because the facilities "were ready and available to generate electricity and revenue" once those permits were received and implemented. App.85a. Under the proper legal standard, merely being "ready and available to generate electricity and revenue" at any level, regardless of ability to produce as intended, cannot support a "placed in service" finding.

These findings, among others, flowed from the trial court's application of the wrong legal standard and are clearly erroneous. At minimum, the mere fact that the courts below assessed petitioners' claims under the wrong legal standard warrants a remand for further proceedings consistent with the proper standard. Applying the correct legal test, the court of appeals should have reversed the district court's decision and ruled that petitioners are entitled to the Section 1603 grants based on a 2011 placed-in-service date.

CONCLUSION

The Court should grant the petition for a writ of certiorari.

Respectfully submitted,

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July 22, 2022

APPENDIX

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APPENDIX A

United States Court of Appeals for the Federal Circuit

AMPERSAND CHOWCHILLA BIOMASS, LLC,
MERCED POWER, LLC,
Plaintiffs-Appellants

v.

UNITED STATES,
Defendant-Appellee

2021-1385

Appeal from the United States Court of Federal Claims in No. 1:14-cv-00841-MCW, Senior Judge Mary Ellen Coster Williams.

Decided: February 24, 2022

STEPHEN G. LEATHAM, Heurlin, Potter, Jahn, Leatham, Holtmann & Stoker, P.S., Vancouver, WA, argued for plaintiffs-appellants.

CLINT A. CARPENTER, Appellate Section, Tax Division, United States Department of Justice, Washington, DC, argued for defendant-appellee. Also represented by BRUCE R. ELLISEN, DAVID A. HUBBERT.

Before NEWMAN, HUGHES, and STOLL, *Circuit Judges.*

HUGHES, *Circuit Judge.*

This is a tax case. Ampersand Chowchilla Biomass, LLC and Merced Power, LLC appeal a decision of the Court of Federal Claims denying their request for additional payments of Section 1603 grants under the American Recovery and Reinvestment Act of 2009. Because we agree with the Court of Federal Claims that the relevant power facilities did not meet the requirements of the statute, we affirm.

I

A

In 2007, California Biomass Fund I, LLC (CalBio) acquired two defunct facilities and began restoring them and upgrading them to biomass facilities, expecting the facilities to be operational in 2008.

Before CalBio acquired the facilities, Pacific Gas & Electric Company had entered into power-purchase agreements with the facilities' previous owner. PG&E had agreed to purchase electricity when (1) the facilities achieved commercial operations and passed initial capacity tests, (2) PG&E received performance-assurance payments, and (3) the facilities received approval from the California Public Utilities Commission. CalBio assumed these power-purchase agreements, and CalBio and PG&E later amended

the agreements to loosen their requirements. CalBio and PG&E also entered into interconnection agreements that required the facilities to pass pre-parallel testing, which ensures that the facilities can operate at the same frequency and in the same phase as the transmission grid so that the facilities do not damage the grid.

While renovating in 2007, CalBio secured Authority to Construct permits for the facilities. These permits allowed construction on the facilities and allowed the facilities to generate and sell electricity. The Authority to Construct permits could be converted into Permits to Operate after the facilities met certain conditions, like emissions tests. Biomass facilities, though, often have some difficulty passing environmental tests. So instead of shutting down biomass facilities at the first sign of noncompliance—which could lead to agricultural waste being burned in open fields, causing more environmental pollution—the San Joaquin Valley Air Pollution Control District has a Notice of Violation process in which the District fines and oversees noncompliant facilities until they are brought back into compliance.

The Chowchilla and Merced facilities had their "initial fires" in April and July 2008, respectively. CalBio labeled the facilities "in operation" as of May 15, 2008 and August 23, 2008. And the facilities passed pre-parallel testing under the PG&E interconnection agreements on June 17, 2008 and August 24, 2008.

Following these events, the facilities began selling electricity on the spot market. On December 12, 2008, Chowchilla met the requirements under its power-purchase agreement and accordingly started selling its electricity exclusively to PG&E. Although Merced did not start selling its electricity exclusively to PG&E until February 21, 2009, the parties recognized that Merced had met the requirements under its power-purchase agreement based on data from the third and fourth quarters of 2008.

From May 15, 2008 until the end of that year, the Chowchilla facility operated at 34.1% of its rated capacity, generating 20,553 MWh of electricity and $1,408,941 in revenue. And from August 23, 2008 through the end of 2008, the Merced facility operated at 42.1% capacity, generating 14,306 MWh of electricity and $851,152 in revenue. The facilities operated fairly continuously throughout 2009, during which the Chowchilla facility operated at 53.9% capacity and the Merced facility operated at 51.2% capacity. The facilities occasionally were noncompliant with emissions regulations, but the District allowed the facilities to continue operating and never revoked their Authority to Construct permits.

B

In 2009, Congress passed the American Recovery and Reinvestment Act "[t]o assist those most impacted by the [2008] recession." American Recovery and Reinvestment Act of 2009 (ARRA), Pub. L. No. 111-5, § 3(a), 123 Stat. 115, 115–16. Stated

purposes of this statute were "[t]o provide investments needed to increase economic efficiency" and invest in "environmental protection[] and other infrastructure that will provide long-term economic benefits." *Id.* One provision allowed entities to receive federal grants if they "placed in service" a renewable energy facility during 2009 or 2010 or if they began constructing property in 2009 or 2010 that they later placed in service before the relevant credit-termination date. *Id.* § 1603(a)(l)–(2), 123 Stat. at 364–66. The government intended that these "Section 1603" grants would "increase investment in domestic clean energy production" by "reimburs[ing] eligible applicants for a portion of the cost of installing the specified energy property." *See* U.S. Dep't of Treas., *1603 Program: Payments for Specified Energy Property in Lieu of Tax Credits,* https://home.treasury.gov/policy-issues/financial-markets-financial-institutions-and-fiscal-service/1603-program-payments-for-specified-energy-property-in-lieu-of-tax-credits (last visited Jan. 18, 2022).

CalBio was experiencing financial difficulties at that time, so it investigated whether it could apply for Section 1603 grants for the Chowchilla and Merced facilities. CalBio ultimately concluded that it could not apply for Section 1603 grants because its facilities had been placed in service in 2008, outside of the statute's required period. Finding no resolution to its continuing financial problems, CalBio suspended operations in June 2010 and decided to sell the facilities.

On December 28, 2010, Akeida Environmental Fund LP acquired the facilities. Akeida spent nearly $15 million improving the facilities, which passed emissions tests in August 2011. In October 2011, Akeida applied for Section 1603 grants, claiming that the facilities were placed in service when Akeida's emissions improvements were certified on August 11, 2011.

Akeida requested a $12 million grant for each facility. The United States Department of Treasury largely rejected Akeida's claims because, according to Treasury, most of the property had been placed in service in 2008. Instead, Treasury granted only $1.1 million for each facility, awarded for the additional property that was eligible based on the date Akeida placed it in service.

Appellants, the direct owners of the two facilities and subsidiaries of Akeida, sued in the Court of Federal Claims for the remainder. The Court of Federal Claims held for the government, agreeing that the facilities were placed in service in 2008.

In its two-part analysis, the Court of Federal Claims applied Treasury's regulatory definition of "placed in service," which required it to determine the "taxable year in which the property is ... availabil[e] for a specifically assigned function." Treas. Reg. § 1.46-3(d)(l)(ii). First, the Court of Federal Claims ascertained the facilities' "specifically assigned function." Appellants asserted that the facilities' specifically assigned function is "to produce electricity on a baseload basis for sale to PG&E at the quantities

required under the [power-purchase agreements], reliably, and in compliance with applicable law." *Ampersand Chowchilla Biomass, LLC v. United States,* 150 Fed. Cl. 620, 643–44 (2020). The Court of Federal Claims disagreed and found that the facilities' specifically assigned function is simply "to produce and sell electricity." *Id.* at 644.

Second, the Court of Federal Claims evaluated five factors—drawn from the IRS's published revenue rulings and formally established in *Oglethorpe Power Corp. v. Comm'r,* 60 T.C.M. (CCH) 850 (1990)—to determine when the facilities achieved their specifically assigned function and were therefore "placed in service." The Court of Federal Claims found that all five factors indicated that the facilities were placed in service in 2008. Therefore, the Court of Federal Claims concluded that Akeida was not owed the money that it claimed because its property was placed in service outside of the statute's designated time period.

Chowchilla and Merced appeal. We have jurisdiction under 28 U.S.C. § 1295(a)(3).

II

We review the Court of Federal Claims' conclusions of law, including statutory interpretations, de novo and its findings of fact for clear error. *Bd. of Cnty. Supervisors v. United States,* 276 F.3d 1359, 1363 (Fed. Cir. 2002); *WestRock Va. Corp. v. United States,* 941 F.3d 1315, 1318 (Fed. Cir. 2019). The Court of Federal Claims' conclusions

about the facilities' specifically assigned function and the year they were placed in service are questions of fact. *See Armstrong World Indus., Inc. v. Comm'r,* 974 F.2d 422, 429-30 (3d Cir. 1992).

A

We review de novo the Court of Federal Claims' conclusion that the applicable statute and corresponding regulation do not require facilities to produce power at ideal or near-ideal production levels to be placed in service. In making this determination, the Court of Federal Claims relied largely on *Sealy Power Ltd. v. Commissioner,* 46 F.3d 382 (5th Cir. 1995). Appellants request that we reject the Fifth Circuit's analysis in *Sealy,* labeling it an "outlier" and asserting that "courts have consistently rejected this standard for power plants and repeatedly required a far higher standard" than merely "generating and selling power." Appellant's Br. 22, 29.

We agree with the trial court's decision and the Fifth Circuit's *Sealy* opinion: to be placed in service, a facility need not achieve ideal or near-ideal production levels.

The statute at issue here states in relevant part:

> [T]he Secretary of the Treasury shall ... provide a grant to each person who places in service specified energy property to reimburse such person for a portion of the expense of such property ....

ARRA, Pub. L. No. 111-5, § 1603, 123 Stat. 115, 364-66 (adding a note to 26 U.S.C. § 48) (now expired). Treasury defines "placed in service"—as used in a separate but related statute[1]—via regulation:

> [P]roperty shall be considered placed in service in ... [t]he taxable year in which the property is placed in a condition or state of readiness and availability for a specifically assigned function ....

Treas. Reg. § l.46-3(d)(l)(ii). Based on their plain language, we conclude that neither the statute nor the regulation "states []or implies that the property must produce an anticipated or projected amount before it may be considered ready and available for a specifically assigned function." *Sealy,* 46 F.3d at 394.

In fact, the regulations' examples of property that is placed in service suggest the opposite. One example concerns operational farm equipment that is impracticable to use, and therefore is not used, in the year it is purchased. Treas. Reg. § l.46-3(d)(2)(ii). Despite the farm equipment's non-use, it is still "placed in service" in the year of purchase. *Id.* This

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[1] This regulation limits itself to "purposes of the credit allowed by" 26 U.S.C. § 38. Treas. Reg.§ l.46-3(d)(l). But "[g]enerally, 'identical words used in different parts of the same statute are ... presumed to have the same meaning.'" *Merrill Lynch, Pierce, Fenner & Smith Inc. v. Dabit,* 547 U.S. 71, 86 (2006) (quoting *IBP, Inc. v. Alvarez,* 546 U.S. 21, 34 (2005)). And the Court of Federal Claims' decision and the parties' briefs invoke this regulation, so we apply it here. Even if it were not applicable, our conclusion would be the same.

example implies that the farm does not need to produce crops near its expected levels (i.e., the levels that the farm would achieve if it used its new equipment) for the equipment to be placed in service. *See Sealy,* 46 F.3d at 394.

A second example explicitly acknowledges deficient performance, classifying equipment that "is operational but is undergoing testing to eliminate any defects" as "placed in service." Treas. Reg. § l.46-3(d)(2)(iii); *see Sealy,* 46 F.3d at 394.

And although we do not rely on legislative history to reach our conclusion, we note that Congress enacted the legislation to "promote economic recovery" in light of the 2008 recession and "[t]o invest in ... infrastructure that will provide long-term economic benefits." ARRA, Pub. L. No. 111-5, § 3(a), 123 Stat. 115, 115–16. Like the tax credits in *Sealy,* Section 1603 grants "provide[d] an incentive to acquire property such as machinery and equipment by lowering the effective after-tax acquisition cost of the qualified property," "lower[ing] the profit risk that these firms faced in starting out a new venture and therefore [facilitating] their investment decisions." 46 F.3d at 393–94. By incentivizing this "initial investment decision," the statute suggests that the placed-in-service inquiry is primarily focused on getting a facility online. Reading the statute to strictly require "achieving ideal or near ideal production levels demands a hindsight approach to the success of a taxpayer's investment expenditures which undermines the very focus of' this objective. *Id.* at 394.

The statute and regulation simply do not require the strict construction for which Appellants ask. Therefore, we agree with the Court of Federal Claims' statutory interpretation and hold that a specifically assigned function need not require ideal or near-ideal production levels.

B

Next, we review for clear error the Court of Federal Claims' finding that the facilities' specifically assigned function is to produce and sell electricity.

The Court of Federal Claims considered Appellants' assertion that the facilities' specifically assigned function is "to produce electricity on a baseload basis for sale to PG&E at the quantities required under the [power-purchase agreements], reliably, and in compliance with applicable law." *Ampersand,* 150 Fed. Cl. at 643–44. The Court of Federal Claims recognized that the power-purchase agreements "were the cornerstone of the Facilities' functioning" but also found them "not as rigid or inflexible as [Appellants] portray[ed] them to be." *Id.* at 644. In fact, PG&E had amended the power-purchase agreements several times, and "Akeida was aware ... that PG&E was not demanding performance at the stated capacity levels and was willing to waive or reduce performance penalties." *Id.* at 645. The Court of Federal Claims concluded that "the parties' course of dealing under the [power-purchase agreements] evinces a flexible contractual relationship permitting less than consistent baseload production." *Id.*

The Court of Federal Claims also rejected Appellants' suggestion that the facilities had to operate in accordance with environmental laws and regulations. *Id.* The trial court determined that "[a]chieving compliance with environmental law was not part and parcel of the Facilities' function to produce electricity using biomass." *Id.* And the trial court further found that even when the facilities did not comply with environmental laws, their continued operation still prevented "burning waste in open fields—a circumstance local environmental authorities viewed as more problematic than operating with emissions violations." *Id.* at 646. These findings were not clearly erroneous.

On appeal, Appellants make largely the same arguments, asserting that the trial court chose to overlook whether the facilities were operating in compliance with applicable law and that the *original* power-purchase agreements, not the amended versions, should dictate the facilities' specifically assigned function. The trial court's finding that the facilities' intended use did not include operating at 90 to 95% capacity or any of the other stringent requirements for which Appellants advocate is not clearly erroneous. Evidence in the record supports the trial court's conclusion. A December 2007 contract specified that the contractor was to refurbish the facilities "so as to return their respective 12.5 MW units to full service *for the purpose of generating electricity for sale." Id.* at 625 (emphasis added) (quoting Appx5748). The Court of Federal Claims did not clearly err in rejecting Appellants' arguments or finding that the facilities' specifically assigned

function is to produce and sell electricity, so we affirm its finding.

C

Finally, we review for clear error the Court of Federal Claims' factual findings as to the five-factor test used to determine when a facility achieves its specifically assigned function and is therefore placed in service. The five factors the court weighs are

1. "whether the necessary permits ... for operation have been obtained,"
2. "whether critical preoperational testing has been completed,"
3. "whether the taxpayer has control of the facility,"
4. "whether the unit has been synchronized with the transmission grid," and
5. "whether daily or regular operation has begun."

Sealy, 46 F.3d at 395; *Ampersand,* 150 Fed. Cl. at 646 (citing *Oglethorpe Power Corp. v. Comm'r,* 60 T.C.M. (CCH) 850 (1990)).

Appellants contest the trial court's findings only for factors one, two, and five.

At factor one, the Court of Federal Claims found that "the only permit necessary to begin generating power was an" Authority to Construct permit. *Ampersand,* 150 Fed. Cl. at 647. The Court of Federal

Claims further found that the Authority to Construct permits "were the only permits necessary for the Facilities to begin producing electricity under the" power-purchase agreements. *Id.* Because the Chowchilla facility received its Authority to Construct permit on April 19, 2007 and Merced received its Authority to Construct permit on February 3, 2007, the Court of Federal Claims concluded that the facilities had obtained their necessary permits for operation by 2008. *Id.*

Appellants dispute that conclusion, asserting that, in 2008, their facilities often did not comply with the local and federal environmental requirements in the Authority to Construct permits. The Court of Federal Claims rejected this argument, finding that "violations were a fact of life for biomass plants at that time." *Id.* The trial court also emphasized that the District never revoked Appellants' Authority to Construct permits, "permitting them to operate in the face of" Notices of Violation because continued operations were "environmentally preferable to shutting down the Facilities and having agricultural and wood waste burned in open fields." *Id.*

The Court of Federal Claims did not clearly err in its analysis of factor one. Appellants' Authority to Construct permits allowed them to operate the facilities by producing and selling electricity. While the facilities occasionally went out of compliance, the District never revoked Appellants' permits and allowed the facilities to continue operating.

At factor two, the Court of Federal Claims first determined what constituted "critical testing." *Id.* at 647–48. Appellants argued that environmental tests were critical, but the Court of Federal Claims disagreed, finding that Appellants had "overstate[d] the role that environmental compliance and testing have in the placed-in-service analysis." *Id.* at 648. Especially because "in California, a biomass facility's noncompliance with emissions requirements d[oes] not prevent that facility from being ready and available to perform its specifically assigned function of generating and selling electricity." *Id.* The Court of Federal Claims also relied on the government's expert in engineering, plant operations, and testing, Mr. Filsinger, to find that "environmental tests required by the [Authority to Construct permits] were not critical, given that environmental compliance for a biomass facility was always 'difficult.'" *Id.*

The Court of Federal Claims therefore concluded that the critical tests were (1) pre-parallel testing and (2) testing required under the power-purchase agreements. *Id.* And because the facilities passed these tests by 2008, the trial court concluded that the facilities had passed the critical tests necessary for proper operations by 2008. *Id.*

The Court of Federal Claims did not clearly err in its analysis of factor two. The facilities could and did operate without passing environmental tests, and the facilities passed all pre-parallel testing and the testing required by the power-purchase agreements by 2008, allowing them to generate and sell electricity starting that year.

At factor five, the Court of Federal Claims pointed out "that the Facilities were generating and selling electricity in 2008, and that they generated revenue of $2,260,093 that year." *Id.* And although the facilities operated below the capacity required by the original power-purchase agreements, "PG&E accepted this level of performance, amend[ing] the [power-purchase agreements] to waive or reduce performance penalties, and continued to work with CalBio to keep the Facilities operational." *Id.* at 649.

The Court of Federal Claims did not clearly err in its analysis of factor five. The facilities were generating and selling a substantial amount of electricity in 2008. While the facilities occasionally shut down, the Court of Federal Claims did not clearly err in finding that they nonetheless operated regularly.

Therefore, the Court of Federal Claims did not clearly err in finding that all five factors indicate that the facilities were placed in service in 2008. We accordingly affirm.

III

We have considered Appellants' other arguments but find them unpersuasive or unnecessary to reach. For the reasons above, we affirm the Court of Federal Claims' decision.

AFFIRMED

APPENDIX B

In the United States Court of Federal Claims
No. 14-841C
(Filed Under Seal: October 30, 2020)
(Reissued: November 9, 2020)[1]

AMPERSAND CHOWCHILLA BIOMASS, LLC, and MERCED POWER, LLC,	*
Plaintiffs,	*
v.	*
THE UNITED STATES,	*
Defendant.	*

Stephen G. Leatham, Heurlin, Potter, Jahn, Leatham, Holtmann & Stoker, P.S., 211 E. McLoughlin Blvd., Suite 100, Vancouver, Washington 98663, for Plaintiffs.

Richard E. Zuckerman, David I. Pincus, G. Robson Stewart, Courtney M. Hutson, Margaret E. Sheer, and Katherine R. Powers, U.S. Department of Justice, Tax Division, Court of Federal Claims

[1] The Court issued its Opinion under seal to provide the parties an opportunity to submit redactions. The parties did not propose any redactions. Accordingly, the Court publishes this Opinion.

Section, P.O. Box 26, Ben Franklin Station, Washington, D.C. 20044, for Defendant.

OPINION AND ORDER

WILLIAMS, Senior Judge.

In this action, Plaintiffs Ampersand Chowchilla Biomass, LLC ("Chowchilla LLC") and Merced Power, LLC ("Merced LLC") challenge the Government's denial of grants under Section 1603 of the American Recovery and Reinvestment Act of 2009 ("ARRA"). This statute, which has since expired, provided grants to entities that "place[d] in service specified energy property" in 2009, 2010, or 2011. Pub. Law. No. 111-5, Div. B, tit. I, § 1603, 123 Stat. 115, 364-66 (2009). Each Plaintiff owns an open-loop biomass facility which qualified as a specified energy property under the ARRA ("the Facilities"). Plaintiff Chowchilla LLC sought a grant of $12,282,984, and Merced LLC, a grant of $12,299,723. The United States Department of Treasury, which administered the Section 1603 program, denied a substantial portion of these grants, finding that Plaintiffs' Facilities had been "placed in service" in 2008—outside the 2009-11 statutory window.

Under Treasury Regulations, a facility is placed in service when it is "in a condition or state of readiness and availability for a specifically assigned function." Treas. Reg. § 1.46-3(d)(1)(ii). Plaintiffs allege the Facilities were placed in service on August

11, 2011, when the Facilities had passed all required testing, installed all necessary equipment, were compliant with environmental laws, and were selling baseload electricity at amounts required by their Power Purchase Agreements ("PPAs") with Pacific Gas & Electric Company ("PG&E"). Defendant claims that the Facilities were placed in service in 2008, when the Facilities' prior owners substantially completed their refurbishment, acquired permits from the San Joaquin Valley Air Pollution Control District, and were producing and selling power and generating revenue.

This Court finds that both Facilities were ready and available to perform their specifically assigned function—to produce and sell electricity—in 2008, when the Facilities had synchronized to the transmission grid, began selling electricity, operated under their PPAs, and generated approximately $2.26 million in revenue. Although the Facilities did not operate at high capacity and suffered from emissions violations, these performance problems did not lead to termination of their PPAs with PG&E or cessation of the Facilities' role as a supplier of electricity. In short, the Facilities' specifically assigned function was to produce and sell electricity, and the Facilities were ready and available to do so in 2008, precluding their owners from obtaining additional Section 1603 grants.

Findings of Fact[2]

The Biomass Facilities

The Chowchilla Facility ("Chowchilla") and Merced Facility ("Merced") are open-loop biomass facilities, each with a nameplate capacity of 12.5 megawatts. Jt. Stip. ¶ 10; JX 40 at 1; JX 32-4. An open-loop biomass facility generates electricity by using various types of organic waste as fuel. Tr. 1158-59. Chowchilla and Merced use a mix of agricultural and urban wood waste. Tr. 1159.

Producing electricity with biomass is a thornier operation than producing electricity with most other fuels. Tr. 1658. Unlike other fuels, a biomass fuel load consists of a hodge-podge of organic materials, including orchard prunings, scrap lumber, sawdust, and construction debris. Tr. 1158-59, 1664; JX 32-4. This variety makes the precise composition of a given fuel load unpredictable, making it difficult to maintain consistent operations and to control emissions. Tr. 934-35, 1579-80, 1664. The Facilities connect to an electric transmission grid overseen by the California Independent System Operator ("CAISO") and operated by PG&E. Tr. 193-94.

Biomass facilities are equipped with emissions-control technology. Burning of wood waste produces pollutants such as nitrous oxide ("NOx") and, depending on the composition of the waste,

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[2] These findings are derived from the evidentiary record developed during an 11-day trial. Grammatical and typographical errors in quotations have not been corrected.

sulfur oxide ("SO2"). Tr. 1126, 1160. Disposal of wood waste by burning it in a field (an "uncontrolled burn") releases those pollutants unadulterated into the air, contributing to pollution problems. Tr. 483, 1160, 1923-24; JX 45-3.

Biomass facilities produce other pollutants as well, such as PM10 (visible emissions), VOC (Volatile Organic Compounds), and NH3 (ammonia), and under state and federal law, must be outfitted with technology that reduces emissions. Tr. 594-96, 719-20; PX 45-3. Chowchilla and Merced are equipped with technology that measures and controls such emissions including:

(1) Continuous Emissions Monitoring System ("CEMS") which records the amount of SO2, NOx, CO, and various pollutants that a facility is emitting, and transmits it to the District[3]

(2) Continuous Opacity Monitoring System ("COMS") which records the level of opacity of the facility's emissions and transmits it to the District

(3) Baghouses or asymmetrical filters which remove particulate matter from flue gases and store it in siloes

[3] The District refers to the San Joaquin Valley Unified Air Pollution Control District, the local authority which enforces California's implementation plan to achieve federal air quality standards.

(4) Selective non-catalytic reduction ("SNCR") system which injects anhydrous ammonia into the combustor to control NOx emissions

(5) Limestone injection system which injects limestone into the combustor bed to control SO2 emissions, and

(6) Multiclone and pulse jet baghouse, a second particulate control system that removes large portions of particulate matter from the airstream.

Tr. 149, 152-53, 155, 933, 1125; PX 13; PX 23.

Ownership of the Facilities

The Merced facility is the only asset owned by Plaintiff Merced LLC, a California LLC formed on May 1, 2001. The Chowchilla facility is the only asset owned by Plaintiff Chowchilla LLC, a Massachusetts LLC formed on November 20, 2006. Jt. Stip. ¶¶ 8-10. Plaintiffs Chowchilla LLC and Merced LLC are owned by a holding company, Global Ampersand LLC. DX 480. Global Ampersand in turn is owned by ACM California LLC, which is owned by Akeida Environmental Fund LP ("Akeida Onshore").[4] Tr. 171-72; DX 480.

Akeida Onshore is owned by a group of investors in the United States and is managed by Akeida Capital Management, LLC ("Akeida

[4] Akeida Environmental Fund LP is known as the "onshore fund." Tr. 176.

Capital"), a fund management entity run by David Kandolha and Harvey Abrahams. Tr. 4, 37-38; DX 480. [5] Akeida Capital manages two other funds: Akeida Environmental Master Fund Ltd. ("Akeida Master Fund") and Akeida Environmental Fund Ltd. ("Akeida Environmental Ltd."), a fund owned by a group of foreign investors. DX 480; Tr. 174. Akeida Onshore and Akeida Environmental Ltd. collectively own 100 percent of Akeida Master Fund. Tr. 171-74; DX 480.

The Facilities' History

The Facilities have had a long and complicated history. Tr. 30. Constructed by California Agricultural Power Corporation Energy ("CAPCO Energy") in the late 1980s, Merced and Chowchilla were first operated in October 1988 and February 1990, respectively. Jt. Stip. ¶ 15; DX 483 at 4. CAPCO Energy sold the Facilities to San Joaquin Valley Energy Partners in 1992, who then shut down and "mothballed" them in 1995. Tr. 24; Jt. Stip. ¶ 15. By 2005, the Facilities were owned by Global Common, LLC ("Global Common"). JX 19.

On January 4, 2007, Global Common sold its membership interest in the Plaintiff LLCs to Global Ampersand, LLC, a holding company created and owned by a private equity fund, Ampersand California Biomass Fund I, LLC ("CalBio"). Tr. 192-

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[5] Mr. Kandolha and Mr. Abrahams appeared as corporate representatives of Chowchilla LLC and Merced LLC, respectively. Tr. 4. Mr. Kandolha is also a limited partner in Akeida Environmental Fund LP. Tr. 203.

93; Jt. Stip. ¶16. CalBio was created by employees of London Economics International, LLC ("London Economics")[6] in the spring of 2006, as an investment vehicle for the refurbishment and future operation of the Chowchilla and Merced facilities. Tr. 1642, 1650-51; DX 121-15. During CalBio's ownership, the Facilities were run by CalBio's managing partner and London Economics' president, A.J. Goulding,[7] along with CalBio's chief operating officer, Eric Shumway. Tr. 1648-49.

In January 2007, when CalBio acquired the Facilities, they were "inoperable" and had been since 1995. Tr. 1653; Jt. Stip. ¶ 15. When power-generating facilities are restarted after an extended period of idleness, the owner needs to engage support personnel, "whether it be construction or maintenance-type contractors," to "go through the power plant from end to end, break it down into systems, identify[] what needs to be repaired or replaced, put[] together a planned approach as well as . . . getting any permitting that is required." Tr. 347; JX 02 at 3-4. According to A.J. Goulding, Chowchilla and Merced faced additional challenges, as the original plans were not available, and one facility had been looted for copper causing extensive damage. Tr. 1665.

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[6] London Economics is an economic and financial consulting firm that specializes in energy and infrastructure. Tr. 638-39.

[7] Although not admitted as an expert in this case, A.J. Goulding has testified as a regulatory economics expert in the electricity and natural gas industries. Tr. 1644-45.

After acquiring the Facilities, CalBio set out to secure financing for their refurbishment. Tr. 1652. On June 29, 2007, Global Ampersand received a $26,500,000 convertible senior secured note from D.E. Shaw Synoptic Acquisition VII, LLC ("D.E. Shaw"), an investment vehicle created by D.E. Shaw & Co. for the specific purpose of investing in Chowchilla and Merced. Tr. 1191, 1655-57; JX 07.[8] The D.E. Shaw note was amended several times, with its principal amount increasing to $39,509,999, with accrued interest of $17,968,269 by December 15, 2010. JX 12-2.

CalBio Enters into Refurbishment and Operations & Maintenance Agreements

On April 3, 2007, CalBio, through Global Ampersand, engaged Crown Engineering and Construction, Inc. ("Crown"), to refurbish the Facilities. DX 258. Crown abandoned the project, and Global Ampersand terminated its contract for cause. Tr. 1500, 1649. Mr. Goulding testified that Crown's nonperformance and bankruptcy required the Facilities to find and negotiate with a new provider, which had to repeat some of the work, "so the impact was to really delay the schedule and increase the cost . . . ." Tr. 1755-56.

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[8] Jeffrey Hoover, a vice president and executive director of D.E. Shaw & Co., L.P., from 2005 through June 2012, testified that his primary function at D.E. Shaw was to identify power generation facilities with power purchase agreements that D.E. Shaw could acquire and stabilize with cash infusions. Tr. 1484-86. D.E. Shaw reviewed the Facilities' PPAs when conducting due diligence before investing in the Facilities. Tr. 1497.

CalBio, through Global Ampersand, subsequently hired NAES Power Contractors, Inc. ("NPC") in December 2007, to complete the refurbishment. Tr. 1649; JX 40-1. In an evaluation report dated December 3, 2007, NPC noted that the condition of the Facilities was "generally poor," and identified certain conditions that made refurbishment very challenging, including "the condition of some of the plant components, the lack of equipment and material for completion (including the absence of comprehensive documentation regarding material/equipment ordered), the partially completed nature of some of the work (particularly the electrical work at [Merced]), and the budget and time constraints." JX 02-4.

The December 19, 2007 construction contract stated that Global Ampersand's intent was to refurbish the Facilities "so as to return their respective 12.5 MW units to full service for the purpose of generating electricity for sale." JX 40-1. The NPC Construction Contract estimated that it would cost $2.34 million to complete refurbishment of the Chowchilla facility, and $3.92 million to complete refurbishment of the Merced facility. JX 40-1. Under the construction contract, NPC's refurbishment services were divided into "work packages," for a particular system or subsystem. JX 40-1. Once NPC completed a work package, it turned that package over to Global Ampersand and project completion would only be declared following final acceptance of these work packages. JX 40-5. NPC agreed that Chowchilla would be ready for commissioning on March 4, 2008, and ready for

commercial operation on April 14, 2008, while Merced would be ready for commissioning on April 14, 2008, and commercial operation on May 9, 2008. JX 40-1; JX 02-4.

When it contracted with NPC to refurbish the Facilities, Global Ampersand had already engaged North American Energy Services Company ("NAES") to take over maintenance and operation of the Facilities, once refurbishment was complete. Tr. 25. That arrangement is memorialized in an Operations & Maintenance Agreement ("O&M Agreement") dated March 27, 2007. JX 01. NAES provided operation and maintenance services to Merced and Chowchilla from 2007 through 2014. JX 01.

Interconnection Agreement with PG&E: Facilities Cleared to Sell Electricity

The Facilities' owners have sold the electricity produced at Chowchilla and Merced to PG&E and CAISO. Tr. 220-21. PG&E required any facility intending to sell electricity via its transmission grid to enter into an interconnection agreement. DX 227-6; DX 228-6; Tr. 856. On March 24, 2008, CalBio entered into interconnection agreements with PG&E with respect to the Facilities. DX 227-36; DX 228-36. Under these agreements, the Facilities were required to pass "pre-parallel testing," to ensure that they could operate at the same frequency and in the same phase as the transmission grid so that the Facilities would not damage the grid and could operate safely. Tr. 869-70.

PG&E completed its pre-parallel testing and cleared Chowchilla to generate and sell electricity at its full rated output on June 17, 2008, and Merced, on August 24, 2008. DX 153-2; DX 151-1. The Facilities' passage of pre-parallel testing and subsequent interconnection with the grid was a "milestone achieved" and indicative of completing "the requirements of PG&E." Tr. 1658-59; DX 153-2.

Power Purchase Agreements

On September 14, 2005, Global Common—the Facilities' then owner—entered into a Master Power Purchase and Sale Agreement with PG&E under which PG&E agreed to purchase electricity produced by the Facilities. JX 19; JX 20; JX 21. By the time CalBio acquired the Facilities in January 2007, there were two sets of minor amendments to the PPAs,[9] and on March 30, 2007, CalBio and PG&E agreed to a third set of amendments. DX 80-2; DX 87-3.

Under the 2005 PPAs between CalBio's predecessor, Global Common, and PG&E, and all amended versions, the Facilities were to provide PG&E with baseload electricity. JX 20-1; JX 21-1. The Master Power Purchase Agreement defines

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[9] Global Common and PG&E amended Chowchilla's and Merced's PPAs, in July and November 2006, to increase the contract price, extend the Guaranteed Commercial Operation Date, and add terms relating to the California Renewables Portfolio Standard, a California state program requiring certain electricity-generating entities to procure a specified amount of renewable energy resources. DX 78-1, 5; DX 79-1, 7; DX 85-1, 5; DX 86-1, 7.

baseload as "a Product for which Delivery levels are uniform for all Delivery Periods." Tr. 399; JX 19-37. Facility-specific PPA Confirmation Agreements provided that "'baseload' means unit-contingent firm energy delivered with the applicable Capacity Factors provided herein." Tr. 400; JX 20-2; JX 21-2.

The PPAs provided that the "Contract Capacity" for each facility was "at any time . . . the lower of 9.0 MW or the Net Rated Output Capacity" of each Facility, which was approximately 10.5 MW. Tr. 401; JX 20 at 2, 8; JX 21 at 2, 8. The PPAs established performance penalties that CalBio would incur if the Facilities did not produce at the following capacity factors, depending on the time of year and time of day:

TOD ["Time of Delivery"] PERIOD

Period	**1. Super-Peak [weekdays, 1 pm-8 pm]**	**2. Shoulder [weekdays, 7 am-1 pm, 8 pm-10 pm; weekends, 7 am-10 pm]**	**3. Night [11 pm-7 am]**
A. June – September	95%	90%	80%
B. December & January	90%	90%	80%

C. Feb. – May, Oct. & Nov.	80%	80%	60%

* * *

> For each TOD Period, if the applicable Capacity Factor is less than the applicable Performance Requirement, then the Performance Penalty for such TOD Period shall be calculated as follows:
>
> **Performance Penalty = (Performance Requirement – Payment Capacity Factor) x Performance Penalty Factor x Maximum Monthly TOD Payment.**
>
> . . . For the purposes of illustration, the Performance Requirement in Period A2 is 90 percent Capacity Factor and the Performance Penalty Factor for Period A2 is 2.0. If the actual Capacity Factor in Period A2 were 88.5 percent, then Seller would pay Buyer the following Performance Penalty = (90% - 88.5%) x 2.0 = 1.5% x 2.00 = 3.00 percent of the Maximum Monthly TOD Payment for TOD Period A2.

JX 20 at 6-7; JX 21 at 6-7; Tr. 1170-71.

Eric Bomgardner, NAES' plant manager for the Facilities from June 2009 until 2014, understood that CalBio intended Chowchilla and Merced to be baseload-producing facilities, which he defined as

"continuous operating facilit[ies] subject to intermittent demands of increase, decrease or don't produce at all . . . [at] levels . . . identified further [in] the PPA." Tr. 399-400.[10] Chad Curran, PG&E's energy contract manager, oversaw the PPAs and described each Facility as "a baseload facility [that] would operate more or less continually . . . [m]ost hours of the day, often at near—at or near the full capability of the facility." Tr. 845, 862.[11] David Kandolha testified that as baseload facilities, Chowchilla and Merced were "designed to . . . operate at or near capacity at all times." Tr. 105. CalBio's managing partner, A.J. Goulding, understood the Facilities to be "baseload continuous production plants" and that the target production "would have been expressed in the [PPAs]." Tr. 1620, 1703.

Producing baseload electricity is to be distinguished from producing "peaking" and "dispatchable" electricity. Tr. 2122-23; JX 20-1; JX 21-1. A peaking facility would operate only during

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[10] Mr. Bomgardner has worked in the power generation industry for approximately 33 years. As the plant manager from 2009 to 2014, Mr. Bomgardner was responsible for day-to-day operations of Chowchilla and Merced. Tr. 335-39.

[11] Chad Remley Curran was PG&E's Rule 30(b)(6) representative. Tr. 847. As a PG&E contract manager from 2008 through 2016, Mr. Curran managed "PG&E's contract manager from 2008 through 2016, Mr. Curran managed "PG&E's contracts to purchase energy from third parties," ensuring that "both parties adhere to the terms and conditions of the contract, resolving disagreements, verifying completion of milestones under power purchase agreements, interpreting contract language." Tr. 844-46. Mr. Curran has a joint MBA from Berkeley and Columbia. Tr. 847.

peak hours and would only require a capacity factor of two to eight percent. A dispatchable facility would operate at PG&E's request. Tr. 862; JX 19 at 37. Unlike a baseload facility, peaking and dispatchable facilities must be able to ramp operations up and down quickly and do not need to be able to produce electricity on a continual basis. Tr. 2122.

Activation of the PPAs

Under the PPAs, PG&E's obligation to purchase electricity from the Facilities for a 15-year period was to begin on the "Initial Delivery Date." JX 20-1; JX 21-1. Establishment of the Initial Delivery Date depended upon the parties declaring that the Facilities met three conditions: (1) achievement of the "commercial operation date;" (2) PG&E's receipt of a "Performance Assurance" payment of $2,281,000 from Global Ampersand; and (3) approval of the PPAs by the California Public Utilities Commission ("CPUC"). JX 20 at 1-2; JX 21 at 1-2; DX 78-3; DX 85-2. Obtaining approval of the PPAs from CPUC meant issuance of a final, nonappealable order approving the PPAs and a finding by the Commission that the procurement was "from an eligible renewable energy resource for purposes of determining Buyer's compliance with any obligation it may have to procure eligible renewable energy resources pursuant to the California Renewables Portfolio Standard." Tr. 867; JX 19 at 10, 34.

Meeting the commercial operation date had two requirements. First, CalBio needed to declare "commercial operations," which the PPA defined as

operating and being able "to produce and deliver energy to Buyer pursuant to the terms of this Agreement." Tr. 854; JX 19-9. PG&E's contract manager explained that "the purpose of the commercial operation date is for both of the parties to agree and for PG&E to accept that the facility is prepared to begin the delivery term." Tr. 857-58. Second, PG&E needed to accept the results of the facility's Initial Capacity Demonstration Test. JX 19 at 9, 40. PG&E's Initial and Annual Capacity Test principles, attached to the PPAs, required that the Facilities demonstrate that they could meet the "performance requirements specified in [the PPA] . . . for a duration of 336 consecutive hours," i.e., 14 days. Tr. 868; JX 19-40.

Mr. Curran testified that compliance with local permitting was "not something that PG&E considered in accepting the Commercial Operation Date." Tr. 902. Nor did PG&E consider whether the Facilities had installed and were operating with all of the equipment required under their permits. Id.

Chowchilla's Fourth Amended PPA

On December 8, 2008, CalBio and PG&E agreed to a Fourth Amendment to Chowchilla's PPA: (1) extending the Guaranteed Commercial Operation Date from December 31, 2007, to December 12, 2008, and waiving the "Daily Delay Damages" for failure to achieve Commercial Operation by the 2007 deadline; (2) allowing Chowchilla to announce the Initial Energy Delivery Date on December 12, 2008, without upfront payment of the $2,281,000 Performance

Assurance and providing a less rigorous alternative to the Initial Capacity Test requirements; and (3) waiving all performance penalties for three months following the December 12, 2008 Commercial Operation Date. DX 81 at 2, 5, 7, 8, 9.

PG&E's energy contract manager, Mr. Curran, testified that PG&E frequently extended contract deadlines for the procurement of renewable energy around the time of CalBio's 2008-09 contract negotiations because PG&E, as an investor-owned utility, had to purchase a certain percentage of electricity from renewable resources or be subject to fines by the State of California. Tr. 865-66. [12] Procuring electricity from renewable resources proved difficult for PG&E in 2008 and 2009 because, as Mr. Curran described, the facilities using renewable resources were "newer" and the industries supporting them were "nascent." Tr. 866. As a result, PG&E "often found that [renewable-energy] facilities were unable to meet the deadlines to deliver energy to [PG&E] by the date . . . agreed to in the power purchase agreements" and "amended contracts to

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[12] California established the Renewable Portfolio Standard ("RPS") Program in 2002. Cal. Pub. Util. Code § 399.11 (2003). Under the RPS Program, electricity-generating corporations had to increase their purchase of eligible renewable energy resources to an amount that equaled 20 percent of their total retail sales or be forced to procure additional renewable resources in subsequent years to compensate for the shortfall. Id. The state-mandated 20 percent target for purchase of renewable energy by electricity-generating corporations, originally intended to take effect in 2017, was accelerated to 2010 by the state legislature in a 2006 amendment. Cal Pub. Util. Code § 399.11 (2006); see S.B. 1078, 2001-2002 Sess. (Cal. 2002).

either reduce performance requirements or allow extensions of the dates by which the facilities needed to begin delivering the energy." Tr. 866-67.

CalBio's predecessor, Global Common, had negotiated a Guaranteed Commercial Operation Date of December 31, 2007 for Chowchilla in the First Amendment to the PPA, executed on July 27, 2006. DX 78-2. Although Section 3.8(d) of the Master PPA authorized PG&E to assess "Daily Delay Damages" and retain monies from the security deposit as liquidated damages for each day that the Commercial Operation Date was delayed, PG&E did not impose Daily Delay Damages and instead worked with CalBio to set a new Guaranteed Commercial Date. DX 81-8. By the time that CalBio negotiated this Fourth Amendment to the PPA, Chowchilla had not met its Guaranteed Commercial Date for over a year.

In addition, PG&E agreed to amend the original Initial Capacity Test which required Chowchilla to demonstrate that it met the PPA's performance requirements for a duration of 336 consecutive hours, or 14 days. JX 19-40. Under the Fourth Amendment, PG&E opted to review Chowchilla's meter data instead of requiring a two-week performance test "[i]n order to start deliveries as soon as possible." Tr. 873-74; JX 18; DX 81-7. Ultimately, PG&E determined that Chowchilla passed the Initial Capacity Test, finding that Chowchilla "would have met the test requirements during several periods of time during August and September 2008." JX 18; Tr. 875.

The Amendment described CalBio's financial issues as the impetus for PG&E's waiver of the requirement that CalBio pay the $2,281,000 Performance Assurance upfront. The Fourth Amended PPA stated in the "Whereas" clause that CalBio could not post the Performance Assurance "due to liquidity challenges." DX 81-1. PG&E extended this payment deadline from December 12, 2008 to July 31, 2009, and authorized a payment plan. DX 81 at 5-6. Under the payment plan, PG&E retained 10 percent of the balance it owed on Global Ampersand's invoices from the first four months of performance and 25 percent for the next four months. Id. at 5.

Finally, the Fourth Amended PPA provided Chowchilla a three-month grace period from performance penalties following the Initial Delivery Date because the Facilities were having difficulty meeting the performance requirements under the PPA, and PG&E needed renewable energy sources to meet its renewable energy goals. Tr. 865; DX 81-8.

Merced's Fourth Amended PPA

On February 18, 2009, CalBio and PG&E agreed to a Fourth Amendment to Merced's PPA, incorporating most of the modifications in Chowchilla's Fourth Amended PPA but granting an extended, four-year reduction in performance penalties. DX 88. PG&E agreed to: extend the Guaranteed Commercial Operation Date from September 30, 2007 to March 1, 2009, waive the "Daily Delay Damages" that would accrue if Merced

failed to achieve Commercial Operation by the 2007 deadline, allow Merced to announce the Initial Energy Delivery Date without upfront payment of the Performance Assurance, relax the Initial Capacity Test requirements, and waive performance penalties following the March 1, 2009 Commercial Operation Date. DX 88 at 2, 5, 7, 8, 9. For the Initial Capacity Test, PG&E opted to look at Merced's meter data from the third and fourth quarters of 2008, instead of requiring Merced to undergo a two-week test. Tr. 872-73.

In Merced's Fourth Amended PPA, PG&E granted a more generous multi-year, tiered exemption from performance penalties. For the first contract year, PG&E eliminated performance penalties entirely and reduced them for the next three years:

Contract Year	**Performance Penalty Reduction**
1	100%
2	75%
3	50%
4	25%
5 onwards	0%

DX 88-8.

Chowchilla's Fifth Amended PPA

On September 23, 2009, CalBio and PG&E agreed to a Fifth Amendment to Chowchilla's PPA, incorporating the four-year performance penalty reduction in Merced's Fourth Amended PPA and granting another extension for payment of the $2,281,000 Performance Assurance from July 21, 2009, to June 30, 2011. DX 82. This Amendment, like the Fourth Amendments to the PPAs, acknowledged that CalBio could not post the Performance Assurance "due to liquidity challenges" and gave the Facilities some relief from the performance requirements. Tr. 865; DX 82-1.

Defendant's expert, Todd Filsinger, testified that the performance penalty modifications reflected the parties' understanding that "regular operation" for the Facilities did not mean the kind of consistent operation that could be achieved, for example, by a nuclear power plant. Tr. 2014. "[PG&E was] giving the plant . . . a break . . . in understanding what it takes to get . . . power into the grid for this type of facility." Id.

2007-2008: Initial Refurbishment Activity and Production

Refurbishment of Chowchilla and Merced began shortly after CalBio purchased the Facilities on January 4, 2007. Tr. 192-93; Jt. Stip. ¶ 16.

Permits Required for Refurbishing the Facilities

Chowchilla and Merced are located in the San Joaquin Valley, which the United States Environmental Protection Agency ("EPA") has designated as a "nonattainment area"—an area that exceeds emissions standards mandated by the Clean Air Act. Tr. 371, 377, 591-92; JX 13-1. Under the Clean Air Act, states which have nonattainment areas must establish a "state implementation plan" to achieve federal air quality standards. Tr. 1900-01; JX 13-3. The San Joaquin Valley Air Pollution Control District enforces California's implementation plan through its local rules and permit process. Tr. 24, 586; JX 48 at 18-19.

The District requires one such permit, an Authority to Construct ("ATC"), for facilities that will have "equipment that may emit air pollution" or equipment used for controlling air pollution. Tr. 485-86. The ATC is an "initial permit" that grants an owner permission to construct a facility in accordance with applicable conditions that enable it to meet the District's and EPA's emissions standards. Tr. 436-37, 486, 1902. The District may issue a facility-wide ATC comprised of individual ATCs governing different components of the facility. Tr. 1940-41. The ATCs are not Permits to Operate ("PTO"), but, as happened here, facilities may generate and sell electricity under an ATC. PX 13.

After a facility has complied with all ATC conditions, the facility may apply to have its ATC

converted into a PTO. Tr. 1905. The PTO encompasses a set of permits containing the conditions set forth in the ATCs and any modifications. Tr. 435-36. It is possible that a facility could receive a PTO for one component, such as the boiler, but not others that remain noncompliant with ATC conditions. Tr. 1940-41.

A District inspector confirms that a facility is complying with its ATC by performing various tests, including a source test, a Relative Accuracy Test Audit ("RATA"), and a seven-day drift test. Tr. 146-47. In a source test, an independent testing company measures emissions to determine compliance with standards for emissions of NOx, SO2, CO, and PM10. Tr. 147. In a RATA test, a facility's Continuous Emissions Monitoring Systems levels are compared to readings from independent testing equipment to ensure the CEMS is producing reliable emissions-measurement data. Id. A seven-day drift test determines whether the CEMS can stay calibrated by running for a set period of time and assessing how far the system "drifts" between calibrations. Tr. 148.

Biomass facilities, such as Chowchilla and Merced, have more difficulty passing these tests than a typical electricity-producing facility. The Facilities' former compliance and operations manager testified:

> It's more difficult for a biomass plant to pass a RATA test or a source test compared to a gas-fired power plant. . . . Natural gas . . . [is] consistent in quality, it doesn't vary much,

> whereas biomass material fuel that is being [used] as fuel comes from different sources. So its quality varies very, very widely. And with that quality of fuel going into the combustor, it makes it very difficult to have consistent operations. It swings up and down. And so frequent adjustment has to be made to be able to maintain operations in compliance with all the permits.

Tr. 925, 935.

If the facility successfully passes these tests and proves compliance with the remaining ATC conditions, the District converts the facility-wide ATC into a facility-wide PTO. Tr. 719, 1905; DX 201-2. After the District has granted a facility-wide PTO, facilities such as Chowchilla and Merced must apply for a Title V permit, required under the federal Clean Air Act, for "major sources of air pollution." Tr. 428-29, 1906-07; see 42 U.S.C. §§ 7661a, 7661(2), 7412(a)(1).

When a facility is operating outside of its permit conditions or District rules, the District has disciplinary options: (1) issuance of a Notice of Violation ("NOV") which carries monetary penalties and typically additional oversight or testing; (2) for a willful violation, an abatement order—a rare occurrence; and (3) rescission or revocation of the ATC or PTO, which is also rare. Tr. 487-88, 481-82, 1942.

In the event a facility is violating, or expects to violate, the conditions of its ATC or PTO, the owner can apply for a variance, which permits it to lawfully operate outside of those conditions for up to a year from issuance. Tr. 487, 494. The District prefers to work with biomass facilities through the NOV process to bring them back into compliance, rather than shut them down and cause more agricultural waste to be burned in open fields. Tr. 483-84, 487. Failure to comply can also subject the operator to enforcement action from the EPA. 42 U.S.C. § 7413(a)(1); 40 C.F.R. § 52.23.

The Facilities' ATCs

The District granted ATCs for Chowchilla on April 19, 2007, while Merced, which had been granted ATCs in October 2005, was issued revised ATCs on February 5, 2007. PX 13-1; PX 23-1.

2008 Operations: Passage of Pre-Parallel Testing, Turnover of Facilities from Construction Contractor to Owner, Commencement of Commercial Operations, and Sale of Electricity to CAISO and PG&E

Refurbishment progressed to the point where Plaintiffs "restarted" the Chowchilla plant on April 24, 2008, and the Merced plant, on July 5, 2008. Tr. 1864 (stating that these dates marked when the Facilities had their "initial fire"); JX 137 at 2. As of June 17, 2008, Chowchilla had "completed the requirements of PG&E" after passing its pre-parallel

inspection, operating at 12.5 MW, and first selling at that capacity on the grid. DX 178; DX 180-2. The Facilities were still experiencing emissions problems, and Chowchilla failed a RATA test in August 2008, and a source test in September 2008. PX 108; PX 109; PX 142-20. Mr. Goulding understood Chowchilla to be commercially operational as of August 2008, because the Facility had "completed the testing," was under the PPA**,** and was "released to generate at full capacity." Tr. 1514-15.

In September 2008, NPC advised PG&E that it had completed all work packages for Chowchilla and Merced and that the plants were ready to begin their capacity performance tests. DX 35; DX 174. Defendant's expert, Todd Filsinger, testified that these September 2008 dates were important dates for Section 1603 purposes, because they signaled when NPC finished its work and were a good estimate of **"**when [NPC] felt it was there." Tr. 1965.

The Facilities experienced outages in 2008, including one at Chowchilla that lasted six weeks in October 2008, due to an overheated transformer. Tr. 2067; PX 103-6.

2008 Emissions Problems, NOVs and Variances

Soon after Chowchilla and Merced restarted in April and July 2008, the San Joaquin Valley Unified Air Pollution Control District and the United States Environmental Protection Agency began issuing Notices of Violation to the Facilities. See e.g., DX 197. Chowchilla failed an inspection on June 3, 2008, and

received six NOVs in August 2008, for failing to install a truck tipper (part of the fuel handling system), various vent filters, an NH3 flow rate indicator, and a fly ash silo filter as well as for exceeding emissions limits. Tr. 372-74, 151-52; JX 05-5; DX 197-1. It then received another NOV in November 2008, for operating without a certifiable CEMS. Tr. 414. On October 20, 2008, the District issued Merced three NOVs—for operating without a truck tipper, and an ammonia injection system, and for operating a diesel fire pump driver without a Permit to Operate. Tr. 600-04; JX 03-3; JX 04-1. For the entirety of its 2008 operations, Chowchilla continued to operate without the truck tipper, the vent filter, as well as with exceedances for NOx, SOx, CO, and PM10. Tr. 411-12; JX 48.

Faced with emissions exceedances, CalBio in late 2008, submitted an application to the District seeking a variance for each Facility. Specifically, CalBio sought permission to operate Chowchilla from December 17, 2008, to April 30, 2009, with excess NOx, SOx, CO, ammonia slip, and visible emissions "until the ammonia injection system [could] be managed properly to bring the plant into compliance." Tr. 498-99; JX 45 at 2-4. The District granted this request and found that closing Chowchilla "would be without a corresponding benefit in reducing air contaminants, because the closing of this facility would cause more farmers to burn their agricultural wastes in the open, uncontrolled.'" Tr. 513; JX 45 at 3-4. Under the December 17, 2008 variance, Chowchilla was required to operate at a reduced

capacity to maintain emissions below the permitted limits, except when testing. Tr. 502; JX 45-3.

On December 2, 2008, CalBio sought a variance to operate Merced from December 2, 2008, through March 15, 2009, with excess NOx emissions and without conducting tests by dates required by its ATC. PX 24 at 1-2, 10. The District denied CalBio's request for a variance for Merced, finding that Plaintiff Merced LLC "demonstrated an unwillingness to comply with District Rules and permit conditions by failing to contact the District for a start up inspection prior to operation," "commencing operation without an ammonia injection system," and "operating without a certified or properly working CEMS." PX 25 at 3; see Tr. 511-12, 732. Despite their lack of compliance with emissions requirements in 2008, the Facilities continued to operate and sell electricity.

The Facilities Generate Approximately $2.26 Million in Revenue in 2008

In 2008, Chowchilla generated 20,553 Megawatt Hours ("MWh") of energy, resulting in revenue of $1,408,941, and Merced generated 14,306 MWh in 2008, resulting in revenue of $851,152. PX 103-7. A.J. Goulding testified that this revenue was a "big deal" because CalBio had finally reached the point where it "[got] paid after a long process." Tr. 1659. Because the Facilities "provided power to the system" and "got paid" in 2008, Mr. Goulding deemed the Facilities commercially operational. Tr. 1754.

While the Facilities had the option in 2008 to sell electricity to PG&E at a reduced or test price under their PPAs, CalBio decided to sell to third parties on the CAISO spot market at higher prices. Tr. 1552-53, 1576. When Chowchilla achieved its Initial Energy Delivery Date under its PPA on December 12, 2008, all of its sales then went to PG&E, accounting for $170,659 in revenue. PX 103-7. During this time, the Facilities were also selling Renewable Energy Credits ("RECs"). Tr. 1996; see Tr. 866-67, 1613.

CalBio's Inability to Monetize PTCs Via a Tax Equity Transaction

CalBio and D.E. Shaw had originally planned to create additional revenue by monetizing production tax credits generated by the Facilities through a tax-equity transaction. Tr. 1687. As CalBio expected the Facilities' Production Tax Credits to exceed CalBio's tax liability in 2008, CalBio and D.E. Shaw worked together to secure a tax-equity transaction before 2009. Tr. 1555-56. CalBio fielded tax-equity offers from State Street Bank and G.E. Energy Financial Services, Inc. (General Electric). Tr. 1614, 1724-25. Negotiations with General Electric progressed to the point that CalBio and D.E. Shaw thought a deal was possible, but on July 10, 2008, General Electric pulled out of the project. Tr. 1725-26; PX 90. According to CalBio, General Electric's unexpected pullout caused "liquidity challenges, which among other things, ma[de] it impossible for [CalBio] to fund the Delivery Term Security [the

Performance Assurance] required under the existing PPA." JX 23.

CalBio Takes PTCs and Recognizes Depreciation in 2008

CalBio did not find a tax equity investor in 2008, and, after consulting with its accountants, took $347,855 in PTCs for the energy produced by both Facilities. Tr. 793, 1673, 1691-92; DX 160 at 1, 27. Mr. Goulding testified, "[i]n 2008, we provided power to the system and we got paid. From a tax perspective, we believe that that was sufficient to qualify for the production tax credits. . . ." Tr. 1754. In addition to claiming PTCs, CalBio recognized depreciation of assets for both Facilities on its financial statements and tax returns in 2008. Tr. 1603; DX 59; see also DX 115-13; DX 122-9; DX 160-1, 9; DX 168-4; DX 186-1. In its May 25, 2010 financial statements submitted to Akeida and D.E. Shaw, CalBio stated, "Ultimately, the continuation of the company is dependent upon its ability to negotiate new PPAs and achieve a level of operation sufficient to meet cash flow requirements." DX 122-7.

At the time CalBio took these PTCs on its 2008 tax return, it was the parent of Plaintiffs here—the LLCs that owned the Chowchilla and Merced facilities then and now. As Plaintiffs were disregarded entities in 2008, CalBio reported the PTCs on its tax return Form 1065 on a consolidated basis without segregating out or separately identifying Plaintiffs, and reflected the PTCs in Form

8835 (Renewable Electricity Production Credit). JX 39-15.

By late 2008, the Facilities were suffering from serious cash flow problems. In its December 2008 report, NAES noted continued issues with "start-up, testing and troubleshooting for all systems," and stated that cash flow issues would impact operations more severely as vendors declined to provide materials and services to the plants. PX 84-3. The Facilities also experienced increased operating costs because the price of biomass rose. DX 121 at 12-13.

2009: More Milestones, Operational Problems, and NOVs

CalBio and the Plaintiff LLCs entered 2009 with the Facilities producing electricity, albeit without properly-functioning emissions-control equipment and in excess of emission limits imposed by their ATCs, District rules, and federal law. Operating in this manner led to NOVs from the District for each Facility. JX 45-2; PX 24; PX 17. Chowchilla received relief via a variance giving it until April 29, 2009 to reach compliance. JX 45. Merced was denied a variance, and therefore faced monetary penalties. Tr. 13; PX 25.

Despite these continuing compliance problems, the Facilities moved forward with respect to milestones in their O&M Agreement and their PPAs. CalBio declared that the "takeover date" under the O&M agreement occurred on January 1, 2009. Tr. 410-11; JX 06-1. Global Ampersand and PG&E had declared Chowchilla's PPA Initial Delivery Date to be

December 12, 2008, signaling that the plant had begun "commercial operations," which meant it was able to deliver baseload power in accordance with the PPA. PG&E and Global Ampersand declared Merced's Initial Delivery Date to be February 21, 2009. Tr. 259; DX 241.

The Facilities Enter the Operational Phase Under the O&M Agreement in January 2009

According to the January 2009 report Global Ampersand sent to D.E. Shaw, if it were not for fuel shortages, the Facilities' boilers would have been running 96 percent of the time that month. Tr. 1533; PX 104-17. Additionally, capital shortages resulted in temporary employees at the Facilities no longer working during the early months of 2009 because they were not being paid. Tr. 1533-34; PX 104-29. In January 2009, neither Facility had resolved its emissions issues and, even if fuel had been available, were prohibited from producing at a 96 percent capacity factor until those issues were resolved.

In January 2009, Chowchilla's capacity factor was 63.7 percent and Merced's capacity factor was 37.9 percent. Tr. 418-19. Although the Facilities should have been producing in the 80 to 90 percent range for baseload as of January 2009, penalties were waived for Chowchilla for another month. See DX 81-8. Merced did not begin to deliver power to PG&E under its PPA until March 1, 2009, with penalties reduced for four years. See DX 88-8. Instead, Merced was generating electricity for sale to CAISO and third parties until that time.

The District Converts Chowchilla's ATC to a PTO in April 2009

On April 21, 2009, the District converted Chowchilla's facility-wide ATC into a facility-wide Permit to Operate, indicating that Chowchilla was compliant with its ATC conditions. Tr. 1939, 1979; DX 437. Around that time, the EPA also deemed Chowchilla's Title V permit application administratively complete. PX 105. Chowchilla was granted a Title V permit in August 2009. Tr. 1908. Merced did not complete its Title V application until August 2010, and received its Title V permit in 2011. Tr. 1907-08; PX 125.

On April 15, 2009, CalBio filed a second variance application for Chowchilla for the period from April 30, 2009, to December 16, 2009, as Chowchilla was still experiencing problems with the ammonia injection system and with continued exceedances of emission limits on NOx, PM10, and ammonia. PX 17 at 3, 10; Tr. 503-05.

Continuing Environmental Problems in 2009

On March 25, 2009, the EPA, pursuant to the Clean Air Act, submitted an information request to Plaintiff, identifying emissions exceedances and asking about the Facilities' testing and results. Tr. 597-98; PX 101. CalBio responded to the EPA's request on May 7, 2009, stating that "emission testing has been and continues to be an ongoing process." Tr. 425; PX 101 at 8-9. CalBio stated that although emissions exceedances were substantial, the

emissions were offset by CalBio's procurement of Emission Reduction Credits ("ERCs") through a California state program and the Facilities' disposal of agricultural wood waste that otherwise would have been burned in open fields. PX 101 at 2. CalBio also reported that the project continued to face severe financial hardship, which caused operating performance to suffer and "limited [CalBio's] ability to proactively address several mechanical issues." Id. at 2, 6.

On July 23, 2009, the EPA issued Chowchilla and Merced their first federal NOVs identifying eight violations of District rules that had been occurring since startup. JX 13 at 8-9; see Tr. 586. Similar to the findings made by the District in issuing its NOVs in 2008, the EPA found that Chowchilla and Merced had violated federal emissions limits and failed to install required equipment such as a CEMS. Tr. 149-50.

Regarding testing, the Facilities struggled for most of 2009. Still operating with a malfunctioning and uncertified CEMS and DAHS, [13] Chowchilla passed a source test on May 14, 2009. Tr. 394, 728. Chowchilla completed its initial certification for its CEMS on August 28, 2009, but then failed source tests in September and October 2009. PX 144-15. Chowchilla successfully completed the seven-day drift test in approximately September or October 2009. Tr. 393. Merced failed source tests on March 17 and 18 and June 26, 2009, and failed a RATA test on June 29, 2009. PX 123. Merced's Continuous

[13] The DAHS is a computer system that helps generate environmental compliance reports. Tr. 394.

Opacity Monitoring System was not tested and certified until September 14, 2009, and issues with Merced's CEMS were not resolved until 2011. Tr. 342, 409-10, 729-30.

The Facilities' Production and Revenue in 2009

In 2009, Chowchilla generated 50,905 MWh of electricity, resulting in revenue of $4,624,942, and Merced generated 48,591 MWh, resulting in revenue of $4,223,825. DX 214-9. In 2009, Chowchilla had an average capacity factor of 53.9 percent, with a monthly high of 77.1 percent (April), and Merced had an average capacity factor of 51.2 percent, with a monthly high of 64.2 percent (December). DX 214-3

CalBio's Continuing Financial Problems in 2009 and the May 25, 2009 Loan from ACM 4 Secured by the Facilities

On February 17, 2009, Congress passed the American Recovery and Reinvestment Act of 2009 ("ARRA"), to address the financial crisis that had come to the fore the previous year. Recognizing that many entities had severely diminished cash flows as a result of the crisis that made tax credits of dubious value, Congress established a mechanism for entities to receive Section 1603 grants in lieu of tax credits when investing in certain renewable energy facilities. See Alta Wind I Owner Lessor C v. United States, 897 F.3d 1365, 1368 (Fed. Cir. 2018).

Having failed to monetize the PTCs in 2008, CalBio and D.E. Shaw were still looking for capital and struggling with cash flow problems. CalBio and D.E. Shaw did not believe the Facilities qualified for a Section 1603 grant. D.E.

Shaw's Kyle Bethancourt and Justin Chan determined that it would be "an uphill battle" for Chowchilla and Merced to secure grants because the Facilities were regularly selling power, even on the spot market, and had been connected to the grid in 2008. Tr. 1552-54; DX 182-3; see also Tr. 1560-66; DX 166. D.E. Shaw did not obtain a formal determination from counsel as to the Facilities' eligibility for Section 1603 grants because it did not believe it likely the Facilities would receive awards due to "placed-in-service issues." Tr. 1624-26. Mr. Goulding agreed that the Facilities were not eligible for a Section 1603 grant. Tr. 1683. Mr. Goulding testified that CalBio "believed it would have been to [CalBio's] benefit to be able to attain the cash grant and explored it, you know, as much as we could and felt that it was not—not possible." Tr. 1684; see DX 166-1; Tr. 1544.

CalBio's search for funding eventually led it to Akeida Capital Management, and discussions between CalBio and Akeida Capital began in February 2009.[14] Tr. 1668-69; DX 111. On March 12, 2009, Global Ampersand and Akeida Master Fund signed a draft term sheet. Tr. 208; DX 112-9. On March 17, 2009, as part of Akeida's due diligence, Akeida requested and received Global Ampersand's audited financial statements, which showed that CalBio recognized depreciation on Chowchilla in May

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[14] Akeida Capital Management had three funds. Mr. Kandolha ran the Akeida Environmental Fund LP and Akeida Environmental Master Fund Ltd. Tr. 41. Akeida Environmental Fund LP owned 100 percent of the membership interest in ACM California LLC, which in turn owned 100 percent of the membership interest in Global Ampersand. Id.

2008, and on Merced in September 2008. Tr. 1968; DX 115-13; DX 122-9.

On May 25, 2009, ACM Corp. 4, LLC ("ACM 4"), a Cayman Islands entity wholly owned by Akeida Master Fund and represented by Mr. Kandolha, provided a $9,000,000 secured term loan to Global Ampersand backed by the Facilities. Tr. 45-46, 164, 177-78. The loan was signed by Mr. Kandolha as lender. Tr. 235.

Section 5.20(b) of the Loan Agreement, "Incentives and Tax Credits," expressly stated that "[t]he Borrower and/or the Facilities [was] eligible to receive, and/or participate in . . . the Incentives and Tax Credits listed on Schedule 5.20," and the only tax credits listed on Schedule 5.20 were Production Tax Credits. JX 30 at 57-58, 122. Mr. Kandolha testified that it was important to ACM 4 that the Facilities qualified for Production Tax Credits at that time because CalBio intended to monetize the PTCs in exchange for an equity investment that would allow it to service its loans. Tr. 76. According to Mr. Kandolha, taking PTCs was a condition of ACM 4's loan because "[t]he understanding under the loan [was] that [CalBio] would get a tax equity investor to take those PTCs and pay them so that they could pay us back." Id.; see also Tr. 256; Def.'s Cross-Mot. for Summ. J., Ex. 5 at 16.

> The Loan Agreement between ACM 4 and Global Ampersand provided:
>
> No Borrower shall, until satisfaction in full of the Obligations and termination of the Commitments:
>
> * * *

> 7.18: Incentives and Tax Credits
>
> (a) Take any action (or fail to take any action) or permit any event or circumstance to occur (excluding events or circumstances beyond its control after the exercise of reasonable diligence) which would result in any of the Facilities ceasing to qualify as an open-loop biomass facility as defined in Code Section 45(d)(3).
>
> (b) Take any action (or fail to take any action) or permit any event or circumstance to occur (excluding events or circumstances beyond its control after the exercise of reasonable diligence) which would result [in] any Borrower and/or Facility becoming ineligible to receive and/or participate in any Incentive or Tax Credit or Incentive or Tax Credit Program listed in Schedule 5.20 . . . .

JX 30 at 65, 70.

The Loan Agreement also expressly stated that "production tax credits [were] currently being distributed to [Global Ampersand] and its shareholders." Tr. 234; JX 30-122. Mr. Goulding explained that this was an "acknowledgment that production tax credits [were] being earned" and "[were] sitting on the tax returns of the individual investors." Tr. 1687; see Tr. 1587.

Simultaneously with ACM 4's loan to Global Ampersand, on May 25, 2009, D.E. Shaw agreed to subordinate its loan to ACM 4's loan. Tr. 1200-02, 1217; JX 09. CalBio, through Global Ampersand, used the funds to

refurbish the Facilities. Tr. 1722. Despite the cash injection from the ACM 4 loan, as of September 2009, Global Ampersand had still not paid PG&E the $2,281,000 Performance Assurance.

On October 27, 2009, Global Ampersand was in default on the ACM 4 loan, and the default had not been cured by December 15, 2009. Tr. 83; DX 245.

2010: Environmental Violations Continue, the Facilities Cease Operations Due to Financial Issues, and Akeida Onshore Purchases the Facilities

The joint monthly operations report for the month ending June 30, 2010, showed that Chowchilla had an average capacity factor of 35.8 percent for the first six months of 2010 and that Merced had an average capacity factor of 15.7 percent, for this timeframe. DX 222-4.

In May 2010, the United States Department of Justice ("DOJ"), at the request of the EPA and the District, sent a letter to Global Ampersand raising several issues with emissions controls, stating that the Facilities "exceeded permitted [emissions] levels several fold, and in some instances greater than ten-fold," and that both lacked an operational Selective Non-Catalytic Reduction ("SNCR") system. Tr. 615-16; PX 97-2; PX 94-2. DOJ stated that the Facilities' failure to install these systems alone would support penalties of $32,500 per day and proposed $1.6 million in penalties to settle the Facilities' alleged violations of the Clean Air Act. Tr. 614; PX 94-2. DOJ and Akeida, CalBio's successor, ultimately settled for $835,000 in penalties. JX 41 at 6-7; JX 42 at 6-7.

Due to funding issues, Merced ceased operations temporarily in April 2010, and Chowchilla temporarily in May 2010, both at Global Ampersand's direction. DX 218-6; DX 220-5. In June 2010, CalBio made the decision to suspend operations completely, also due to funding issues. Tr. 277; DX 222 at 5-6.

2010: Continuing Financial Problems

CalBio's financial struggles with the Facilities continued in 2010. In May 2010, Akeida Master Fund, through ACM 4, accelerated the due date of its May 25, 2009 loan to Global Ampersand, because no payments were being made. Tr. 85-87; JX 31 at 2. By July 2010, CalBio, lacking funds for refurbishment, was exploring options to sell the Facilities while attempting to negotiate another amended PPA with PG&E, to no avail. Tr. 99-100; 567-68.

In 2010, CalBio was still looking to sell or recapitalize the Facilities with the assistance of its creditors, D.E. Shaw, and Akeida Master Fund. As part of those efforts, CalBio retained Shaw Consultants International, an independent engineering firm, to write a technical evaluation study that presented a fulsome picture of the state of the Facilities. Tr. 99, 2005-06; JX 32-33. After assessing the Facilities, Shaw Consultants International issued its report on December 1, 2010, finding that the Facilities had experienced poor operational performance since 2008, directly resulting from the lack of funding for maintenance and CAPEX projects. DX 249-11; Tr. 2005. The report identified deficiencies affecting production and emissions compliance, and detailed a lengthy list of projects that would enable the Facilities to "significantly improve both plant capacity factor and fuel heat rates in addition to

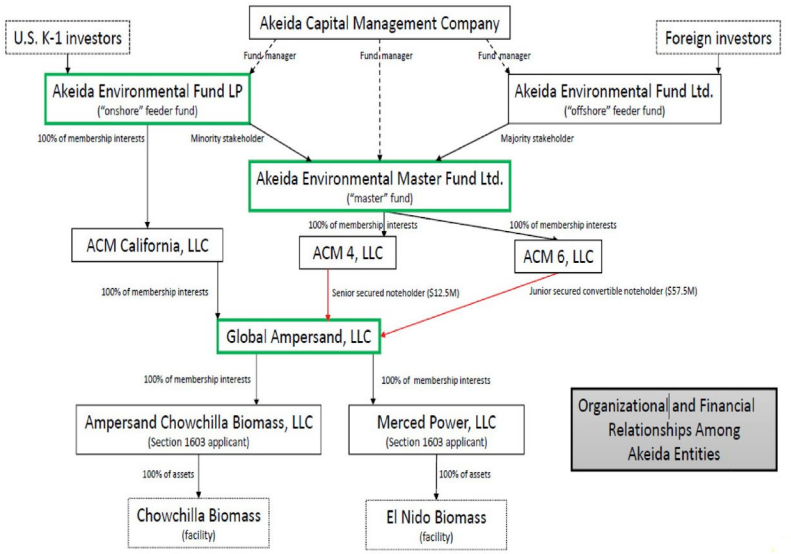
allowing plant personnel to stay ahead of the curve in terms of maintenance." DX 284 at 24-30; Tr. 443-44.

After accelerating Global Ampersand's loan, Akeida Capital, which managed Akeida Master Fund, considered a few options—finding a buyer for the Facilities, foreclosing on the Facilities, or buying the Facilities itself. In a September 2010 memorandum, Akeida Capital's Travis Windholz positively assessed the viability of purchasing the Facilities, stating the Facilities had the permits needed for ongoing operations, that construction had been substantially completed in 2008, and that the expenditures needed to reach "optimal levels" of performance were "limited." JX 31 at 5-6 (estimating about $3 million in capital expenditures and deferred maintenance). Mr. Windholz expected Akeida Capital would pay no more than $2 million to acquire Global Ampersand: $500,000 in cash and $1.5 million in contingent payments. JX 31-4. The memo also reflected that, as a part of its plan to acquire the Facilities, Akeida intended to purchase D.E. Shaw's debt. JX 31-3; Tr. 1358.

On December 15, 2010, ACM Corp. 6, LLC ("ACM 6"), a special purpose LLC wholly owned by Akeida Master Fund, paid $350,000 to D.E. Shaw for the outstanding debt related to D.E. Shaw's construction loan. Tr. 29; JX 11-2; JX 12. At the time, the loan had a principal amount of $39,509,999, plus accrued interest of $17,968,269. JX 12-2; see Tr. 1207-09, 1221.

Akeida's Acquisition of CalBio

On December 28, 2010, twelve days after the LLC owned by Akeida Master Fund purchased the D.E. Shaw debt, a different Akeida Capital managed fund, Akeida Onshore, through a wholly owned special purpose LLC, ACM California LLC, acquired 100 percent of CalBio's membership interest in Global Ampersand, pursuant to a Membership Interest Purchase Agreement ("MIPA"). Tr. 95, 190, 532; JX 33. The following diagram represents the ownership structure of the Akeida entities at the time of Akeida Onshore's purchase of the Facilities on December 28, 2010:



DX 480 ("El Nido Biomass" refers to the Merced facility). CalBio recognized a sales price of $74.4 million on its 2010 tax return along with a taxable gain of $26 million. JX 39-12; Tr. 1432. Akeida Onshore treated the acquisition as an

asset acquisition for tax purposes because "both CalBio and ACM California are pass-through entities" and disregarded for tax purposes. Tr. 532.

According to the MIPA, which was signed by Akeida Capital's principal, David Kandolha, ACM California paid $100,000 up front and agreed to $1.3 million in additional payments. JX 33-19; see Tr. 535. The MIPA expressly stated that PTCs were "currently being distributed to Ampersand California Biomass Fund I, LLC [i.e., CalBio] and its members" as of December 28, 2010. JX 33-90; see also Tr. 539, 1700. As part of the December 28, 2010 transaction, ACM California LLC assumed Global Ampersand's liabilities. Tr. 95; see JX 33.

Akeida Onshore did not take depreciation or PTCs in 2010. Tr. 96.

2011: The Facilities Enter A Consent Decree with EPA and District

On February 14, 2011, due to the Facilities' history of NOVs and failed emissions-related tests, the United States Department of Justice and the District jointly filed an 18-count Complaint against Plaintiff Merced LLC and a 20-count Complaint against Plaintiff Chowchilla LLC, seeking injunctive relief to stop operations at both Facilities, though Global Ampersand had already ceased operations in June 2010. JX 47, JX 48. The United States and the District alleged that the Facilities failed to install necessary equipment such as a certified CEMS, SNCR system, failed to utilize other required equipment (such as a bin bent filter and truck tipper), and exceeded emissions limits. Tr. 1912-13; JX 48; JX 47 at ¶¶ 88, 164, 174, 181.

On the same date that suit was filed, Chowchilla LLC and Merced LLC entered consent decrees with the EPA and the District. Tr. 157; JX 41-34; JX 42-34. The consent decrees required the Facilities to install, test, and certify certain equipment, notify the EPA and the District of any potential violations, and pay stipulated penalties of $835,000 for violations. Tr. 157-58. Akeida Onshore was ultimately responsible for those penalties. Tr. 158-59.

Prior to the acquisition closing on December 28, 2010, David Kandolha had received the December 1, 2010 technical evaluation report issued by Shaw Consultants International, and Akeida Onshore hired Shaw Consultants International to oversee the implementation of the report's recommendations. Tr. 99. Improvements made by Akeida Onshore cost $7.56 million for Chowchilla and $7.39 million for Merced. PX 87-4; PX 88-4. Akeida Onshore replaced a variety of equipment: automated ammonia injection systems were installed and certified in June 2011, and the CEMS and flow monitor were certified on August 11, 2011, along with the CEMS quality assurance and control program. DX 272; DX 273; DX 299; DX 300; DX 354. With new emissions equipment, Chowchilla and Merced were able to pass the source test, RATA test, and seven-day drift test on August 2 and 5, 2011, respectively. Tr. 668-70, 1152-53; PX 155-6.

2011: Global Ampersand Obtains Amendments to the PPAs and Applies for State and Federal Grants

On February 3, 2011, Global Ampersand entered into another set of PPA amendments with PG&E, the sixth for Chowchilla and the fifth for Merced. Tr. 864; DX 83; DX 89. In these PPA Amendments, the parties expressly

recognized two circumstances: (1) that both the Chowchilla and Merced Facilities would be "unable to continue to operate" without additional revenue from the PPAs and (2) that PG&E and Global Ampersand desired "to amend the PPA[s] to enable Global to continue to operate . . . producing RPS-eligible energy, and contributing to [PG&E's] achievement of its RPS compliance requirements." DX 83-1; DX 89-1. These Amendments increased the contract price and the Performance Assurance, created a new formula to calculate performance penalties, waived all performance penalties previously incurred, and waived all performance penalties for the rest of the year. Tr. 864-65, 904; DX 83 at 2,5,6,14; DX 89 at 2, 5, 6, 14.

On January 26, 2011, Global Ampersand submitted an application to the California Energy Commission seeking funding under the Commission's Existing Renewable Facilities Program ("ERFP") and anticipated receiving $2.3 million in incentive payments per Facility, by December 31, 2011. Tr. 813-14; JX 51-3; DX 29-3. However, as Mr. Kandolha testified, "the [ERFP] program was discontinued in 2011. So there again I think we got a few hundred thousand from this program." Tr. 814.

The Section 1603 Grant Applications

In early 2011, Akeida Capital decided to apply for Section 1603 grants and retained Novogradac & Company LLP, a public accounting firm, to act as independent auditor and certify Global Ampersand's Section 1603 applications. Tr. 127; PX 87; PX 88. Nathaniel Eng, a California-licensed CPA and the Novogradac manager responsible for the Facilities' audits agreed that the sales

price listed by CalBio in its 2010 tax return of $74.5 million was the correct acquisition price. Tr. 688-90.

Novogradac determined that Chowchilla had an eligible cost basis of $40,943,280, which would yield a 30 percent Section 1603 grant of $12,282,984. Tr. 687; PX 87-4. Novogradac concluded that Merced had an eligible cost basis of $40,999,077, yielding a Section 1603 grant of $12,299,723. Tr. 687; PX 88-4. In October 2011, Plaintiffs applied for grants in these amounts and indicated on their applications that their properties were placed in service on August 11, 2011. Tr. 116-17; see Tr. 1428-32; PX 87; PX 88.

2012-2015 Operations

After August 2011, the Facilities still had some operational issues. According to their submissions to the EPA and the District, the Facilities exceeded emission limits in some respects for limited periods in 2012. Tr. 642; see DX 303 at 39. The Facilities continued to receive NOVs, but most were for "procedural violations," i.e., for "submitting incorrect information in certain reports." Tr. 738-39. Ryan Hayashi, the District's Director for Compliance, testified that at this time the Facilities were no more on his "radar" than other facilities under his jurisdiction. Tr. 739; see also Tr. 446-47.

In the 2012 report covering August 2011 through August 2012 regarding Chowchilla, Mr. Kandolha represented that the Facility produced approximately 52.7 million KWh, although he had estimated in his Section 1603 application that annual production would be 93 million KWh. Tr. 780; DX 28; DX 142-3. In its 2013 report covering August 2012 through August 2013 regarding Chowchilla, Mr. Kandhola represented that the Facility

produced approximately 64.6 million KWh. Tr. 405; DX 143. In subsequent reports, Chowchilla stated that annual production for the Facility was approximately 82.6 million KWh in 2014, approximately 68.7 million KWh in 2015, and approximately 78.7 million KWh in 2016. Tr. 787; DX 144-3; DX 145-3; DX 435. In all these reports, Chowchilla stated that there were no "interruptions in production during the year, other than routine maintenance[.]" DX 142-3; DX 143-3; DX 144-3; DX 145-3; DX 435. Merced similarly represented from 2012 through 2016 that it did not experience "any interruptions in production" during these years, other than routine maintenance. DX 138-3; DX 139-3; DX 140-3; DX 141-3; see also Tr. 787.[15]

The only penalty assessed against the Facilities from 2011 to 2014 was associated with a failed 2013 source test for visible emissions that was imposed by the District. Tr. 561; DX 303-39. The consent decrees were terminated in 2015. Tr. 159.

The Denial of the Section 1603 Grant and Continuing Financial Problems

On September 10, 2012, Treasury issued Merced LLC, a Section 1603 grant of $1,136,519, and on January 10, 2013, Chowchilla LLC, a grant of $1,136,207. DX 467; DX 468. In the award letters, Treasury stated:

> We have determined that most of the property which is the subject of the application was placed in service in 2008

[15] The Government vigorously disputes that there were no interruptions in production at these times with respect to both Chowchilla and Merced. Def.'s Am. Post-Trial Br. 55.

> and is ineligible for payment. Of the remaining costs indicated as eligible in the cost certification, we adjusted the construction loan interest expense to more closely reflect the interest incurred on the portion of the eligible cost between December 28, 2010 and August 11, 2011.

Tr. 1789; DX 467; see also DX 468.[16]

Ms. Ellen Neubauer, Treasury's Section 1603 Program Director, explained that Treasury denied the remaining grant amounts because "the prior owners of the project company treated the project, for federal tax purposes, as having been placed in service in 2008" and "[t]he Section 1603 program is not in a position to revisit that treatment." Tr. 1776; PX 160-1. In Treasury's view, if a facility had received PTCs, it was ineligible to receive a grant, regardless of whether the prior award of PTCs was appropriate. Tr. 1778. Treasury did not evaluate whether the prior owner's determination was correct because "the

[16] The Treasury Department's Office of Housing and Energy oversees the Section 1603 program. Tr. 1762. Grants may be given for both refurbished facilities and new facilities, although more grants were provided for the latter. Tr. 1786. As part of its administration of the Section 1603 program, Treasury had an interagency agreement with the Department of Energy ("DOE"), and a DOE subdivision, National Renewable Energy Laboratory ("NREL") reviewed Section 1603 grant applications to determine eligibility, including an analysis of the placed-in-service date. Tr. 1763. NREL would then make a recommendation to Treasury, which would decide whether the application should be granted. Tr. 1772, 1788. Treasury and NREL primarily focused on electricity production and testing relating to electricity, with a lesser focus on emissions testing. Tr. 1764-65.

Section 1603 program doesn't make tax determinations" or amend an erroneous return. Tr. 1776-77.

On December 28, 2012, after Treasury denied Merced the bulk of the grant, ACM 6 and Global Ampersand agreed to write down the ACM 6 loan by $25,820,044. DX 02-2. On December 30, 2013, Akeida Master Fund wrote down the D.E. Shaw loan by an additional $16,500,000 and reduced the interest rate on the note to 0.1 percent on any remaining debt. Tr. 546, 758; DX 02-2.

On March 26, 2014, Mr. Kandolha contacted Congressman Jim Costa of California's 16th Congressional District in an effort to understand why Treasury denied the grants. Tr. 144. On June 5, 2014, Representative Costa wrote a letter to urge Treasury to "reevaluate its decision." PX 45; Tr. 144, 1108.

After Mr. Kandolha's efforts failed, Akeida Master Fund agreed to write down the D.E. Shaw loan by an additional $8,000,000 on December 30, 2014. DX 02-2; Tr. 757-58. Then on December 30, 2015, Global Ampersand and Akeida Master Fund agreed to write down the ACM 6 loan by an additional $5,000,000. DX 02-2. Akeida Master Fund recognized the forgiven debt as income on its tax returns in all relevant years. DX 02-2; DX 06-8; DX 07-2; DX 08 at 10, 28; Tr. 545, 1442.

In December 2013, Global Ampersand entered negotiations with LightBeam Electric Company ("LightBeam") to sell the Facilities as part of LightBeam's potential initial public offering ("IPO"). Tr. 540, 975; see Tr. 963, 966, 971-72. LightBeam submitted its Form S-1

Registration Statement to the Security and Exchange Commission ("SEC") on January 13, 2015. Tr. 965, 968-69. In conjunction with the potential IPO, Deloitte & Touche LLP ("Deloitte") rendered an audit opinion regarding Global Ampersand and its subsidiaries for the years ended December 31, 2014 and 2013, and concluded that there was substantial doubt as to the company's ability to continue as a going concern, due in large part by the company's inability to pay its debts, most of which were "related party debt that was forgiven." Tr. 1005, 1014; DX 147 at 288, 294. Deloitte determined that both ACM 6 and ACM 4 were related parties to Global Ampersand for audit purposes. Tr. 1016-17; DX 147 at 300-01. The audit report stated that no principal payments had ever been made on the ACM 4 note as of that time, April 2015, and that the note had originally matured on May 25, 2011. DX 147 at 301.

The S-1 listed total losses of $7,724,000 derived from the audited financial statements. Tr. 981; DX 147-93. Lightbeam's James Lavelle explained: "As we understood, [Global Ampersand] had had some operating difficulties in advance of our becoming involved with them; that they had retained an operations and maintenance engineering firm that was providing them with advice and management activities to upgrade the operating condition and performance of both projects." Tr. 981-82. The S-1 further indicated that Global Ampersand incurred losses of $9,635,000 in 2013. DX 147-28. According to the S-1, the plants required an extensive ramp up and testing period extending into 2013, and maintenance and repair costs were high. Tr. 998; DX 147-133. LightBeam never purchased Chowchilla and Merced, and the IPO was withdrawn in December 2015. Tr. 995-96.

Expert Testimony

Plaintiffs called Mr. Anthony Foster, a professional engineer who has worked in the biomass power industry for the past 30 years, to render an expert opinion regarding the Facilities' placed-in-service dates. Tr. 1051-52, 1057-58.[17] The Court accepted Mr. Foster as an expert in engineering, plant operations, and testing with respect to biomass burning, electricity-generating facilities. Tr. 1096.

Defendant orally moved to exclude Mr. Foster's expert report, PX 185. Tr. 1109-10. Defendant contended that significant passages of the expert report precisely mirrored the language in a letter sent by Mr. Kandolha to Congressman Costa on March 26, 2014. Tr. 1100-09. This language in Mr. Kandolha's letter and Mr. Foster's expert report states:

Mr. Kandolha's Letter	**Mr. Foster's Expert Report**
Under the District rules, the date that the facilities first complied with their ATCs and were lawfully able to operate under the	Under the District Rules, the date that the facilities first complied with their ATCs and were lawfully able to operate under the

[17] Mr. Foster received an undergraduate degree in aeronautical engineering from California Polytechnic State University in 1969 and attended graduate courses at Carnegie Mellon University, New York University, and the University of Pittsburgh. Tr. 1051, 1068. In the 1970s, Mr. Foster designed a system to incinerate wood waste while correcting air emission issues. Tr. 1052. From approximately 1975 to 1985, Mr. Foster worked for Koppers Company as the assistant manager of engineering for the forest products division, where he developed designs for, and oversaw the conversion of approximately 20 power facilities. Tr. 1052-53, 1074-75.

California Health and Safety Code was August 11, 2011 when the District accepted the results of the plants' successful testing and all required pollution control and plant control equipment had been installed.	California Health and Safety Code was August 11, 2011 when the District accepted the results of the plants' successful testing and all required pollution control and plant control equipment had been installed.
In order for a power plant to be placed in service, it must pass all of its critical preoperational testing. Merely synchronizing to the grid and producing electric is not enough. It is also not enough to test some of the components. The entire, integrated unit must be tested.	In order for a power plant to be placed-in-service, it must pass all of its critical preoperational testing. Merely synchronizing to the grid and producing electricity is not enough. It is also not enough to test some of the components. The entire, integrated unit must be tested.

DX 484; PX 185 at 10-11; see also PX 185 at 12.

Mr. Foster testified that while he had received language to consider for his report from Plaintiffs' counsel, he independently considered whether that language was appropriate to include in his report and stood by it as accurate, and "wrote every word" in his report. Tr. 1114-15, 1118.

The Court denied Defendant's motion to exclude Mr. Foster's report, and noted that the issues Defendant raised affected the weight of Mr. Foster's testimony—not its admissibility. Tr. 1118-19.

Mr. Foster opined that the Facilities were placed in service on August 11, 2011, and no earlier. Tr. 1158; see also PX 185 at 13. Mr. Foster testified that he arrived at his opinion by applying the IRS definition of "placed in service" as "delineated by five factors," to the facts in the case. Tr. 1083, 1085. He reviewed a significant number of the NOVs the Facilities had received between 2008 and 2010, as well as the PPAs, but he did not review a comprehensive record of power generation at the Facilities between 2008 and 2010. Tr. 1097-98.

Defendant called Todd Filsinger, a licensed mechanical engineer and a senior accredited appraiser with the American Society of Appraisers, who has been qualified as an expert approximately 10 or 20 times before, and has previously served as the Government's expert on issues relating to Section 1603. Tr. 1814-15; DX 22 at 136.[18]

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[18] Mr. Filsinger received a bachelor's degree in mechanical engineering from Colorado State University in 1985, and a master's degree in business administration from the University of Colorado, with an emphasis on finance and management in 1990. Tr. 1795-96. Mr. Filsinger worked for R.W. Beck, an engineering consultancy, for approximately 13 years, and for PHB Hagler Bailly, where he worked with numerous utilities and power companies, analyzing assets, revenue requirements for acquisitions, and refurbishment costs. Tr. 1798-1801, 1805. Mr. Filsinger served as COO for Calpine Energy. Tr. 1806-09. Mr. Filsinger started Filsinger Energy Partners ("FEP") in 2010, where he and his 25 employees provide consulting services, including valuations of power stations and equipment in the energy sector. Tr. 1809-10.

The Court admitted Mr. Filsinger as an expert in plant management, management and financing of energy companies and facilities, energy company and asset restructuring, and valuation of energy companies and assets. Tr. 1833-34.[19] Mr. Filsinger opined that Chowchilla and Merced were placed in service in May and August 2008, respectively and testified on the valuation of the Facilities. Tr. 1876.

Discussion

Jurisdiction and Legal Standards

The Court has jurisdiction over this action pursuant to the Tucker Act, 28 U.S.C. § 1491 (2012). The Tucker Act provides this Court with jurisdiction over specific categories of claims against the United States, including those claims "founded either upon the Constitution, or any Act of Congress or any regulation of an executive department . . . in cases not sounding in tort." § 1491(a)(1). A plaintiff who brings suit under the Tucker Act must "demonstrate that the source of substantive law he relies upon 'can fairly be interpreted as mandating compensation by the Federal Government for the damages sustained.'" United States v.

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[19] Plaintiffs opposed Mr. Filsinger's admission as an expert on two grounds. First, Plaintiffs argued that Mr. Filsinger's application of his industry experience to determine the placed-in-service date was irrelevant to the tax law analysis under Section 1603. Tr. 1828. Second, Plaintiffs argued that Mr. Filsinger's testimony regarding fair market value of the Facilities as of January 1, 2011, was irrelevant to the calculation of basis for a grant under Section 1603. Tr. 1829-1832. The Court overruled both objections. Tr. 1833.

Mitchell, 463 U.S. 206, 216-17 (1983) (quoting United States v. Testan, 424 U.S. 392, 400 (1976)).

Because Section 1603 of the American Recovery and Reinvestment Tax Act of 2009 ("ARRA") requires the Secretary of the Treasury to provide a grant, upon application, to individuals who "place[d] in service specified energy property" between January 1, 2009 and December 31, 2011, for a portion of the expense of such property, it is a money-mandating statute. Pub. L. No. 111-5, Div. B, tit. I, § 1603, 123 Stat. 115, 364-66 (2009); id. § 407(d)(3); W.E. Partners II, LLC v. United States, 119 Fed. Cl. 684, 690 (2015); LCM Energy Sols. v. United States, 107 Fed. Cl. 770, 772 (2012); ARRA Energy Co. I v. United States, 97 Fed. Cl. 12, 21-22 (2011).

The Court reviews claims for tax refunds and claims predicated on Section 1603 on a de novo basis. W.E. Partners II, 119 Fed. Cl. at 690. Plaintiffs have the burden of proving entitlement to additional Section 1603 payments and the quantum of any such payments. WestRock Va. Corp. v. United States, 941 F.3d 1315, 1318 (Fed. Cir. 2019); WMI Holdings Corp. v. United States, 891 F.3d 1016, 1021 (Fed. Cir. 2018).

Plaintiffs Have Not Demonstrated Entitlement to Additional Section 1603 Grants

In this action, Plaintiffs challenge Treasury's denial of over $22,000,000 in grants—the bulk of the Section 1603 grants they sought.

At the outset, the Court addresses Defendant's legal argument that the Internal Revenue Code bars Plaintiffs outright from receiving Section 1603 grants because the

prior taxpayer, CalBio, claimed depreciation and PTCs in 2008, which were "allowable" as a matter of law because the IRS did not challenge CalBio's depreciation deductions and PTCs. In so arguing, Defendant quotes dicta from Virginian Hotel Corp. of Lynchburg v. Helvering, 319 U.S. 523, 527-28 (1943), stating:

"Under our federal tax system there is no machinery for formal allowances of deductions from gross income. Deductions stand if the Commissioner takes no steps to challenge them." Def.'s Am. Post-Tr. Br. 77 n.31. In Virginian Hotel, the Supreme Court recognized, however, that the precept of a deduction being "allowed" when unchallenged by the IRS does not universally apply. Id. at 526. The Court in Virginian Hotel continued: "Income tax returns entail numerous deductions. If the deductions are not challenged, they are certainly 'allowed' since tax liability is determined on the basis of the returns. Apart from contested cases, that is indeed the only way in which deductions are 'allowed.'" Id. at 527 (emphasis added). Here, where Plaintiffs are challenging these deductions and claiming the PTCs their predecessor, CalBio, took in 2008 were wrong, Defendant's broad and unusual construction of allowability has no place. The fact that CalBio's tax position was unaudited does not establish the allowability of the depreciation and PTCs vel non or prevent this Court from reviewing de novo whether these tax positions were proper.

At issue in this action is whether the Facilities were "placed in service" within the 2009 to 2011 statutory window authorized for Section 1603 grants. Plaintiffs claim the Facilities were placed in service in 2011, and that they are entitled to the full amount of grants. Defendant

contends that Treasury correctly concluded that the Facilities were placed in service in 2008.

When Were the Facilities Placed In Service?

The Fifth Circuit has instructed that the "appropriate method for determining the year that an electric generating facility is placed in service is to analyze a taxpayer's fact situation, using a common sense approach in the context of the policy behind the investment tax credit, the Treasury Regulations determining 'placed in service,' and the Revenue Ruling factors." Sealy Power Ltd. v. Comm'r, 46 F.3d 382, 393 (5th Cir. 1995). The parties agree that the Facilities are open-loop biomass facilities that would qualify for the Section 1603 program if they were placed in service between 2009 and 2011. Under Treasury Regulation 1.46-3(d)(1)(ii), facilities are "placed in service" in the year when they are "placed in a condition or state of readiness and availability for [their] specifically assigned function." See also JX 45 at 5. It is a question of fact whether the Facilities "were ready and available for specifically assigned functions" within the timeframe permitted by Section 1603. Armstrong World Indus., Inc. v. Comm'r, 974 F.2d 422, 429-30 (3d Cir. 1992).[20]

The Court must first determine what the Facilities' "specifically assigned function" was, in order to decide when the Facilities were "in a condition or state of readiness and availability" to perform that function.

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[20] In Sealy, the Fifth Circuit disagreed with the Tax Court's legal standard for defining when an asset is placed in service, and therefore characterized the issue as a question of law. 46 F.3d at 393.

The Facilities' Specifically Assigned Function

Plaintiffs contend that under both CalBio's ownership from June 29, 2007 until December 28, 2010, and under Akeida Onshore's ownership (and Akeida Capital's management)[21] from December 28, 2010 until the present, these electricity-producing biomass Facilities had a multifaceted function that would require certain outputs, type of sales, contractual performance, and standards of environmental compliance. In Plaintiffs' view, the Facilities' specifically assigned function was "to produce electricity on a baseload basis for sale to PG&E at the quantities required under the [Power Purchase Agreements], reliably, and in compliance with applicable law." Pls.' Post-Tr. Br. 3. In contrast, the Government argues that the Facilities' specifically assigned function was simply "to produce and sell electricity." Def.'s Am. Post-Tr. Br. 82.

The Court finds that the Facilities' specifically assigned function was to produce and sell electricity. The record here, viewed against the requirements of the Treasury Regulations and the Revenue Ruling factors, does not support a finding that the Facilities' function was to generate electricity at the capacity levels stated in their PPAs for sale to a single buyer, PG&E, meeting manifold environmental compliance requirements.

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[21] Plaintiffs Ampersand Chowchilla Biomass, LLC and Merced Power, LLC are wholly owned subsidiaries of Global Ampersand, LLC, an entity wholly owned by ACM California, LLC, which in turn is wholly owned by Akeida Environmental Fund LP ("Akeida Onshore"). DX 480. Akeida Capital Management ("Akeida") controls Akeida Onshore.

To be sure, the PPAs were the cornerstone of the Facilities' functioning as ongoing businesses concerns, as these agreements guaranteed an income stream and contemplated their long-term supply of electricity to PG&E.[22] But the PPAs were not as rigid and inflexible as Plaintiffs portray them to be. They did not, as Plaintiffs argue, require continuous operation at specified capacity levels as a condition of performance, and the parties negotiated amendments to these PPAs to permit the Facilities to operate at lower levels.

Indeed, Plaintiffs' detailed articulation of the Facilities' function is very close to the characterization of an electricity-generating facility's specifically assigned function the Sealy Court rejected as being unduly restrictive, i.e., "consistently sustaining generation levels near its rated capacity." 46 F.3d at 392. In Sealy, the Fifth Circuit found that achieving ideal or near ideal production levels was not required for a facility to achieve its specifically assigned function. 46 F.3d at 393. To the contrary, the Sealy Court found that the legislative history of the investment tax credit—which applies the same

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[22] The PPAs were also important to investors. A June 15, 2007 due diligence report by BayernLB—an early candidate for a tax equity investment—stated that Global Ampersand "has entered into a 15-year [PPA] to sell all electricity produced by the plants to Pacific Gas and Electric Company." DX 248-1. A September 2008 Confidential Memo created "for the solicitation of tax equity investors to monetize the section 45 production tax credits . . ." states the same intention to sell electricity under the PPAs in the "investment considerations" section of the memo. DX 254 at 2, 6. A February 2011 memo singles out the Facilities' PPAs as the reason for "strong project cash flows." DX 127-2. D.E. Shaw reviewed the Facilities' PPAs when conducting due diligence before investing in the Facilities. Tr. 1497.

definition of "placed in service" as Section 1603—indicates that "Congress did not intend to impose the stringent requirement of regular achievement of anticipated production levels when it created the credit." Id. The Sealy Court reasoned:

> In defining 'placed in service,' Treasury Regulation § 1.46-3(d)(1)(ii) neither states nor implies that the property must produce an anticipated or projected amount before it may be considered ready and available for a specifically assigned function. Neither do the examples in Treasury Regulation § 1.46-3(d)(2)(ii) and (iii)— illustrating when property acquired for use in a trade or business or for the production of income is placed in service—support the . . . unduly strict construction of the statute.

Id. at 394.

As the Sealy Court recognized, Treasury Regulation § 1.46(d)(2)(iii) provides an example illustrating "placed-in-service" equipment that is operational but still undergoing testing to eliminate defects. Id. The Sealy Court explained: "This example acknowledges that defective performance—presumably performance below that which was anticipated or projected—does not bar an asset's 'placed in service' designation." Id. For the purpose of the "placed in service" test, it is sufficient that the "property be ready and available to play its role in an operating facility, regardless of the level of production attained." Id. at 397.

While purchasing the Facilities' electricity under these PPAs, PG&E accepted performance at less than the capacity factors stated on the face of these agreements. Both at the time ACM 6, a special entity owned by Akeida Environmental Master Fund Ltd., made a loan to CalBio in May 2009, and at the time Akeida Onshore purchased the Plaintiff LLCs in December 2010, Akeida was aware that the PPAs had been amended and that PG&E was not demanding performance at the stated capacity levels and was willing to waive or reduce performance penalties. In February and September 2009, for example, PG&E and CalBio entered into amendments incorporating a four-year penalty reduction in the event of the Facilities' failure to meet capacity requirements—eliminating penalties entirely for 2009 to 2010 and waiving penalties if the Facilities performed at 25 percent, 50 percent, and 75 percent of their target capacity factors in 2010-11, 2011-12, and 2012-13, respectively. DX 88; DX 82.

Permitting the Facilities to generate electricity at these lower capacity factors was not all bad for PG&E as it enabled these biomass Facilities to continue their contractual performance and entitled PG&E to Renewable Energy Credits under California law for procuring electricity from a renewable energy source, which was hard to come by at those times. The California state Renewables Portfolio Standard program established targets for investor-owned utilities like PG&E to procure a certain percentage of their energy from "renewable" sources including biomass, and if PG&E did not meet its RPS, it was subject to fines. At the time, there was not a large supply of renewable energy for PG&E to buy. So PG&E and CalBio (and later, Plaintiffs' parent) mutually agreed to amend the PPAs to waive performance penalties for failure

to achieve baseload capacity, increase revenue to the Facilities, and contribute to PG&E's achievement of its RPS requirements. From a contractual perspective, it was in PG&E's interest to maintain the viability of the Facilities so PG&E could acquire Renewable Energy Credits. From an environmental perspective, it was better to have biomass processed in a facility rather than being burned in open fields which yielded higher levels of toxic emissions. Thus, the parties' course of dealing under the PPAs evinces a flexible contractual relationship permitting less than consistent baseload production.

Akeida's David Kandolha described the Facilities' specifically assigned function in terms of their PPAs, stating, "[each Facility's] financial purpose [was] to sell power to PG&E under its PPA." Tr. 194. Further, Mr. Kandolha believed the Facilities were "supposed to produce at a steady, consistent rate, which is close to their capacity—rated capacity of these facilities is 10.6 megawatts. And with a baseload facility, your objective is to produce as close to that base load amount as you can." Tr. 103. But this taxpayer's desire to produce as close to baseload as possible did not mean, as Plaintiffs argue, that if the Facilities fell below this capacity, they could not be deemed to have been ready and available to perform their function. As the parties' course of dealing under the PPAs indicated, compliance with the capacity factors stated in the PPAs was not "required" in order for the Facilities to be "in a condition or state of readiness and availability to perform" under their contracts. The history of the PPA amendments, PG&E's willingness to accept less than baseload and waive penalties, indicate that the Facilities would do their best to achieve baseload production, but that baseload production

was a target, not a mandatory minimum performance requirement. See Tr. 1657-58.

Finally, the Court does not add the heightened requirement Plaintiffs suggest to the Facilities' specifically assigned function—that they had to be operating in accordance with environmental laws and regulations—and that their failure to do so—receiving NOVs and fines—was equivalent to operating "illegally," preventing them from meeting their specifically assigned function.

The PPAs unsurprisingly required compliance with law and regulation. But Plaintiffs' contention that CalBio's receipt of NOVs, emissions violations, and its successor's entry of consent decrees in civil lawsuits in December 2010 and April 2011, meant that the Facilities were operating "illegally" such that they were not performing their specifically assigned function, goes too far. Achieving compliance with environmental law was not part and parcel of the Facilities' function to produce electricity using biomass. Rather, producing electricity using biomass even with emissions violations avoided burning waste in open fields—a circumstance local environmental authorities viewed as more problematic than operating with emissions violations. According to the testimony, emissions issues were common for biomass plants at that point in time, and it was preferable from an environmental standpoint to keep these plants going and avoid wood and agricultural waste being burned in open fields.

The PPAs do not support Plaintiffs' contention that environmental considerations were paramount with respect to, or even integral to, the Facilities' function. In the context of administering the PPAs, PG&E's energy contract

management team would not typically require information regarding a plant's pollution control equipment capabilities and status. Tr. 913. Generally, PG&E would not review tests required by the San Joaquin Valley Unified Air Pollution Control District as part of determining whether a facility had commenced commercial operations. Tr. 897. While it is true that these biomass plants had hefty emissions violations and were under scrutiny by the federal and local environmental compliance agencies, they paid for the exceedances and continued operating at reduced levels to reduce emissions. See Tr. 1749-51.

In sum, the Facilities' specifically assigned function while operated under both CalBio and Akeida Onshore was to produce and sell electricity.

Placed-in-Service Date

To determine when Chowchilla and Merced were "in a condition or state of readiness and availability to" produce and sell electricity, the Court applies the five-factor test set forth in Oglethorpe Power Corp., et al. v. Commissioner and IRS Revenue Rulings. See Oglethorpe Power Corp., et al. v. Comm'r, 60 T.C.M. (CCH) 850 (1990); Rev. Rul. 84-85, 1984-1 C.B. 10; Rev. Rul. 79-98, 1979-1 C.B. 103; Rev. Rul. 76-256, 1976-2 C.B. 46; Rev. Rul. 76-428, 1976-2 C.B. 47. While the Federal Circuit has not directly addressed this issue, the appellate courts that have addressed a property's placed-in-service date for tax purposes have applied these factors. Sealy, 46 F.3d at 394-95; Armstrong, 974 F.2d at 434-35.

The Oglethorpe factors for determining when property is placed in service are:

1. The necessary permits and licenses for operating have been obtained.

2. All critical tests necessary for proper operation have been performed.

3. The unit has been placed in the control of the taxpayer by the construction contractor.

4. The unit has been synchronized with the transmission grid.

5. Daily operation of the unit has begun.

Oglethorpe, 60 T.C.M. (CCH) 850 (1990).

No single factor is dispositive, and the weight given to a specific factor depends on the facts of the case. Oglethorpe, 60 T.C.M. (CCH) 850 (1990) (requiring a "consideration and balancing of all the factors"); Green Gas Del. Statutory Tr. v. Comm'r, 147 T.C. 1, 51 (2016) ("Application of this multifactor test requires balancing the factors as applied to the specific facts of a case."); see Sealy, 46 F.3d at 395 (stating that the Oglethorpe factors "are only indicative of 'placed in service' or 'operational' status" and all need not be met to find that a facility had been placed in service). The IRS has cautioned that these factors are only "guideposts" and that determining when property was placed in service requires examining the totality of the circumstances. I.R.S. Tech. Adv. Mem. 201113025 (Apr. 1, 2011). Moreover, as recognized by the IRS in Technical Advice Memoranda, "one cannot simply take a 'snapshot' at a moment in time, as events before and after the key date must be considered to determine [when] the facilities . . .

were placed in service . . . ." Id.; I.R.S. Tech. Adv. Mem. 200537034 (Sept. 16, 2005).

Plaintiffs argue that both Chowchilla and Merced were placed in service on August 11, 2011, when the Facilities produced baseload electricity at capacity factors required by their Power Purchase Agreements and in compliance with applicable law and the terms of their ATCs.

Plaintiffs acknowledge that Oglethorpe factors three and four do not support their proposed August 11, 2011 placed-in-service date, as it is undisputed that Chowchilla and Merced were in CalBio's control by 2009, at the latest, and that both Facilities were synchronized to the transmission grid in 2008—Chowchilla in May 2008 and Merced in September 2008. Tr. 48-49; see also Tr. 1087-88. Plaintiffs instead rely on Oglethorpe factors one, two, and five, arguing these factors support a placed-in-service date of August 11, 2011 for both Facilities. The Court addresses these three factors in turn.

Necessary Permits and Licenses

With respect to the first factor, Plaintiffs argue that the necessary permits and licenses for operating the Facilities were not obtained by 2008. PX 13; PX 23. Plaintiffs argue that the ATCs that the Facilities obtained in 2007, only gave them permission to operate conditionally and therefore do not indicate a readiness and availability to produce baseload electricity. Moreover, Plaintiffs contend that even though the Facilities had ATCs in 2008, and Chowchilla received its facility-wide PTO in April 2009, the

Facilities never complied with the terms of those ATCs and did not obtain Title V permits until 2011.

Defendant contends that the only permit necessary to begin generating power was an ATC from the District, which Chowchilla received on April 19, 2007, and Merced received on February 3, 2007. Tr. 1881; Def.'s Am. Post-Tr. Br. 87; PX 13 at 2; PX 23 at 2.

The record supports Defendant's position. It is undisputed that the Facilities received ATCs in 2007. The ATCs were the only permits necessary for the Facilities to begin producing electricity under the PPAs, and they began producing electricity under those permits in 2008. The Facilities notified the EPA in 2008 that they had begun initial operations. DX 34; DX 200. PG&E's energy contract manager testified that compliance with local permitting was not something that PG&E considered in accepting the Commercial Operation Date, nor did PG&E consider whether the Facilities had installed and/or were operating with all of the equipment required under their permits. Tr. 902; see also JX 19-12. Defendant is correct that the ATCs and interconnectedness with the grid sufficed to render the Facilities "in a condition of readiness and availability" to produce and sell electricity.

While Plaintiffs contend that the Facilities were not in compliance with conditions in their ATCs and local and federal environmental requirements, this did not mean that they were not "placed in service." The ATCs were never revoked, and the receipt of NOVs did not nullify the ATCs. Rather, such violations were a fact of life for biomass plants at that time and the District permitting them to operate in the face of these NOVs was environmentally preferable to

shutting down the Facilities and having agricultural and wood waste burned in open fields. Tr. 483.

Plaintiffs' suggestion that the Facilities cannot be deemed to have obtained the requisite permits because they failed to meet all of the ATCs' conditions does violence to the legal regime in place: the District's oversight of the Facilities via the ATCs, NOVs, and variance process, and its assent to the Facilities' continued operations under their ATCs. Plaintiffs' position ignores the reality that the permits remained in place, allowed operations, and were eventually converted into PTOs. Once the Facilities received and implemented their ATCs, they were ready and available to generate electricity and revenue. This occurred in 2008.

Critical Tests Necessary for Proper Operations

With respect to factor two, the parties differ as to what constitute "critical tests." Plaintiffs contend that environmental tests required by the ATCs were critical. Defendant argues that the critical tests necessary for the Facilities to produce and sell electricity were "pre-parallel testing, which ensures that the Facility operates at the same frequency and phase as the electrical grid," as well as testing under the O&M agreement, and testing under the PPAs. Successful pre-parallel testing allowed the Facilities to synchronize to the grid and begin selling electricity, which occurred on June 17, 2008, for Chowchilla and on August 24, 2008, for Merced. Tr. 1883-85, 1989-90; DX 178, DX 151. The PPA testing regime required the Facilities to pass Initial Capacity Demonstration Tests by demonstrating that they could meet the PPA performance requirements for a duration of 336 consecutive hours. JX

19-40. In 2008, PG&E accepted meter data demonstrating the Facilities' ability to meet the PPAs' performance requirements for specific months in lieu of successful capacity test results. JX 17; JX 18. The Court finds that the critical tests necessary for proper operation were pre-parallel testing and those specified in the PPAs, and that the Facilities passed these tests by 2008.

Plaintiffs overstate the role that environmental compliance and testing have in the placed-in-service analysis, arguing that all critical tests necessary for proper operation included "operating legally and not emitting excessive amounts of pollution." Pls.' Post-Tr. Br. 6. Plaintiffs contend that tests that were critical for operation included those required by California law and by their ATCs: a source test, RATA test, and seven-day drift test. Chowchilla did not pass a source test until August 28, 2009, and continued to exceed the ATC's maximum emissions for certain chemicals until 2011. Id. Chowchilla had not conducted a RATA test as of February 2011. Id. Merced was unable to pass a source test until October 20, 2009, and unable to pass a RATA test until September 25, 2009, and like Chowchilla, continued to exceed its emission limits in 2009 and 2010. Id. Additionally, Plaintiffs argue that in 2008, neither Facility had critical systems that would have permitted environmental testing (including a CEMS system and an SNCR system). Id. at 20. While the Facilities clearly had environmental compliance issues, the record demonstrates that, in California, a biomass facility's noncompliance with emissions requirements did not prevent that facility from being ready and available to perform its specifically assigned function of generating and selling electricity.

Mr. Filsinger, Defendant's expert in engineering, plant operations and testing for biomass facilities, persuasively opined that the environmental tests required by the ATCs were not critical, given that environmental compliance for a biomass facility was always "difficult" because of the significant variance in the makeup of the fuel used—biomass which was a "very inconsistent product," as it "varie[d] hour by hour, day by day, week by week, month by month." Tr. 1889, 1987, 1999-2001; see also DX 197 at 29, DX 483 at 22. Mr. Filsinger testified that if the fuel was inconsistent, the fuel may be "wetter" and "more difficult to burn," which would, for example, affect the Facilities' "NOX profile." Tr. 1986.

Because the Facilities' specifically assigned function did not include compliance with environmental law, the environmental testing requirements Plaintiffs emphasize were not "critical tests necessary for proper operation." Passage of these tests was not necessary for the Facilities to generate and sell electricity. Indeed**,** under IRS regulations, examples of when a property "shall be considered in a condition or state of readiness and availability for a specifically assigned function[,]" include instances where "[e]quipment is acquired for a specifically assigned function and is operational but is undergoing testing to eliminate any defects." Treas. Reg. § 1.46-3(d)(2)(iii).

Daily or Normal Operations

With respect to the fifth factor indicating that a Facility has been placed in service, that daily or normal operations had begun, Plaintiffs argue that neither Facility began daily operations until August 2011, as the Facilities

suffered from repeated shutdowns and environmental compliance issues before that time. Tr. 2299-300. However, it is uncontroverted that the Facilities were generating and selling electricity in 2008, and that they generated revenue of $2,260,093 that year, and $8,866,767 in 2009. PX 103-7; DX 214-9. On its tax returns filed on June 1, 2009, CalBio designated Chowchilla's placed-in-service date as May 15, 2008, and Merced's, as July 1, 2008. Tr. 1539; DX 59. According to D.E. Shaw's Mr. Hoover, these dates represented "[t]he first instance that the projects came online." Tr. 1539. Here, as in Sealy, CalBio's activities operating these electricity-generating Facilities and performing under their long-term agreements with PG&E constituted the operation of a business even though they experienced some operational and financial problems. See 43 F.3d at 397.

In arguing that the Facilities were not conducting daily operations in 2008, Plaintiffs point to various pieces of emissions equipment that were either missing or ineffective—the Continuous Emissions Monitoring System, Continuous Opacity Monitoring System, and DAHS—and the fact that the Facilities were not producing electricity at the capacity factors required by the PPAs. Because emissions compliance was not integral to the Facilities' function, those emissions compliance issues did not prevent the Facilities from operating. Although the capacity factors that Chowchilla and Merced achieved in 2008-10 were below the range stated to be required in the PPAs, PG&E accepted this level of performance, amended the PPAs to waive or reduce performance penalties, and continued to work with CalBio to keep the Facilities operational. The Court finds that daily operations began at

both Facilities in 2008, when they first produced and sold electricity.

Passage of Control and Synchronization to the Grid

As Plaintiffs recognize, Oglethorpe factors three and four do not support a placed-in-service date of 2011. Rather, the evidence is clear that control passed to the Facilities' owners in 2008, and it is uncontroverted that the Facilities were synchronized to the grid in 2008, had passed pre-parallel testing, and were released under their Interconnection Agreements with PG&E to sell electricity in the summer of 2008. The construction contractor, NPC, left the Facilities in September 2008, work packages were turned over to the owner that year, and the owner declared commercial operations that year and was receiving revenue that year—all indicia that control of the Facilities had passed to the owner. Tr. 1964-65; DX 168, DX 174.

Conclusion

In this Court's view, all five Oglethorpe factors indicate that the Facilities were placed in service in 2008, while CalBio owned them. While some evidence suggests that Merced was not placed in service until early 2009, this does not help Plaintiffs. In an alternative argument, Plaintiffs attempt to have Akeida reap Section 1603 benefits for a time frame when Akeida had nothing to do with the Facilities and CalBio owned the Plaintiff LLCs that in turn owned the Facilities. Plaintiffs argue that even if this Court were to find that the Facilities were placed in service on or after January 1, 2009, before Akeida acquired the property in December 2010, Plaintiffs, as subsidiaries of Akeida at the time the grant applications were filed in

2011, would be entitled to the Section 1603 grants even though the Facilities had been placed in service by an unrelated entity, CalBio. Pls.' Post-Tr. Rebuttal at 9-10. The Section 1603 Program was intended to encourage construction of alternative energy facilities and investment in renewable energy sources and provided grants to entities that placed such renewable energy facilities in service. Back in 2009, Akeida had no role whatsoever with respect to the Facilities—it did not refurbish or place the Facilities in service at that time—CalBio did. In any event, the weight of the evidence indicates that both Facilities were placed in service in 2008.

Plaintiffs' position that the Facilities should not be deemed to have been placed in service until August 2011—when they operated at or close to capacity and passed their environmental testing, is dependent upon their characterization of the Facilities' specifically assigned function as operating at the capacity factors stated in the PPAs and in compliance with environmental law. But neither operating at these production levels nor achieving compliance with environmental laws was necessary for these Facilities to meet their specifically assigned functions of generating electricity and revenue.

As Plaintiffs have failed to demonstrate entitlement to additional Section 1603 grants, the Clerk of the Court is directed to enter judgment for Defendant.

s/Mary Ellen Coster Williams
MARY ELLEN COSTER WILLIAMS
Senior Judge

APPENDIX C

In the United States Court of Federal Claims
No. 14-841 C
Filed: October 30, 2020

AMPERSAND CHOWCHILLA BIOMASS, LLC and MERCED POWER, LLC

v. **JUDGMENT**

THE UNITED STATES

Pursuant to the court's Opinion and Order, filed October 30, 2020,

IT IS ORDERED AND ADJUDGED this date, pursuant to Rule 58, that judgment is entered in favor of defendant.

Lisa L. Reyes
Clerk of Court

By: s/Debra L. Samler

Deputy Clerk

NOTE: As to appeal to the United States Court of Appeals for the Federal Circuit, 60 days from this date, see RCFC 58.1, re number of copies and listing of all plaintiffs. Filing fee is $505.00.

APPENDIX D

STATUTORY AND REGULATORY PROVISIONS

American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, Div. B, tit. I, § 1603(a), 123 Stat. 115, 364 (2009)

(a) IN GENERAL.—Upon application, the Secretary of the Treasury shall, subject to the requirements of this section, provide a grant to each person who places in service specified energy property to reimburse such person for a portion of the expense of such property as provided in subsection (b). No grant shall be made under this section with respect to any property unless such property—

(1) is placed in service during 2009 or 2010, or

(2) is placed in service after 2010 and before the credit termination date with respect to such property, but only if the construction of such property began during 2009 or 2010.

Treas. Reg. § 1.46-3(d)(1)-(2)

(d) Placed in service.

(1) For purposes of the credit allowed by section 38, property shall be considered placed in service in the earlier of the following taxable years:

(i) The taxable year in which, under the taxpayer's depreciation practice, the period for depreciation with respect to such property begins; or

(ii) The taxable year in which the property is placed in a condition or state of readiness and availability for a specifically assigned function, whether in a trade or business, in the production of income, in a tax-exempt activity, or in a personal activity.

Thus, if property meets the conditions of subdivision (ii) of this subparagraph in a taxable year, it shall be considered placed in service in such year notwithstanding that the period for depreciation with respect to such property begins in a succeeding taxable year because, for example, under the taxpayer's depreciation practice such property is accounted for in a multiple asset account and depreciation is computed under an "averaging convention" (*see* § 1.167(a)–10), or depreciation with respect to such property is computed under the

completed contract method, the unit of production method, or the retirement method.

(2) In the case of property acquired by a taxpayer for use in his trade or business (or in the production of income), the following are examples of cases where property shall be considered in a condition or state of readiness and availability for a specifically assigned function:

(i) Parts are acquired and set aside during the taxable year for use as replacements for a particular machine (or machines) in order to avoid operational time loss.

(ii) Operational farm equipment is acquired during the taxable year and it is not practicable to use such equipment for its specifically assigned function in the taxpayer's business of farming until the following year.

(iii) Equipment is acquired for a specifically assigned function and is operational but is undergoing testing to eliminate any defects.

(iv) Reforestation expenditures (as defined in § 1.194–3(c)) are incurred during the taxable year in connection

with qualified timber property (as defined in § 1.194–3(a)).

However, fruit-bearing trees and vines shall not be considered in a condition or state of readiness and availability for a specifically assigned function until they have reached an income-producing stage. Moreover, materials and parts acquired to be used in the construction of an item of equipment shall not be considered in a condition or state of readiness and availability for a specifically assigned function.