

T.C. Memo. 2021-41

UNITED STATES TAX COURT

PRESTON OLSEN AND ELIZABETH OLSEN, Petitioners v.
COMMISSIONER OF INTERNAL REVENUE, Respondent

Docket Nos. 26469-14, 21247-16.

Filed April 6, 2021.

Paul W. Jones, for petitioners.

Skyler K. Bradbury and David W. Sorensen, for respondent.

MEMORANDUM FINDINGS OF FACT AND OPINION

LAUBER, Judge: These cases involve investors in a solar power tax shelter scheme. More than 200 cases involving other investors in the same scheme are being held pending the outcome of these cases. The promoters of the scheme sold petitioners light-concentrating lenses that were supposedly going to be used as components of a system to generate electricity. The promoters told petitioners that

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[*2] they could zero out their Federal tax liability by claiming energy tax credits and depreciation deductions on the lenses. The solar power project never got past the research and development (R&D) stage, and the lenses were never placed in service to produce energy.

Petitioners claimed substantial depreciation deductions and tax credits attributable to the lenses on their Federal income tax returns for 2010-2014. For each year petitioners thus reduced their taxable income to zero (or close to it) and claimed substantial refunds. They used the refunds to purchase more lenses, for which they claimed more deductions and credits to generate more refunds. This process continued until the U.S. Department of Justice (Justice Department) sought, and eventually secured, an injunction to shut down the tax shelter. See United States v. RaPower-3, LLC, 343 F. Supp. 3d 1115 (D. Utah 2018), aff'd, 960 F.3d 1240 (10th Cir. 2020).

The Internal Revenue Service (IRS or respondent) disallowed the claimed deductions and credits and determined deficiencies and accuracy-related penalties under section 6662(a) as follows:¹

¹All statutory references are to the Internal Revenue Code (Code) in effect at all relevant times, and all Rule references are to the Tax Court Rules of Practice and Procedure. We round all monetary amounts to the nearest dollar.

[*3]	<u>Year</u>	<u>Deficiency</u>	<u>Penalty</u>
	2010	\$30,760	\$6,152
	2011	22,089	4,418
	2012	26,097	5,219
	2013	26,718	5,344
	2014	20,668	4,134

Respondent has conceded the accuracy-related penalties because the IRS did not secure timely supervisory approval for them.² See sec. 6751(b)(1); Clay v. Commissioner, 152 T.C. 223 (2019), aff'd, ___ F.3d ___, 2021 WL 968621 (11th Cir. Mar. 16, 2021). The questions remaining for decision are whether petitioners are entitled to depreciation deductions reported on Schedules C, Profit or Loss From Business, and whether they are entitled to energy tax credits reported on Forms 3800, General Business Credit. We hold that they are entitled to none of the claimed tax benefits.

FINDINGS OF FACT

These findings are based on the parties' joint stipulation of facts, the exhibits attached thereto, and the exhibits and testimony presented at trial. Petitioners, who are husband and wife, resided in Utah when they filed their petitions. Absent

²Respondent has also conceded a portion of the 2010 deficiency. In view of this concession a Rule 155 computation will be necessary.

[*4] stipulation to the contrary, venue for appeal of these cases would be the U.S. Court of Appeals for the Tenth Circuit. See sec. 7482(b)(1)(A).

A. The Solar Power Project

The story begins with International Automated Systems, Inc. (IAS), and its founder, Neldon Johnson. Mr. Johnson incorporated IAS to investigate super-market checkout systems, but he later redirected the company's focus to solar energy. Although he had no background in engineering, he aspired to design a new method of converting concentrated solar power into electricity. To pursue that goal and to promote his project to investors, Mr. Johnson formed at least four passthrough entities that he controlled: RaPower3, LLC (RaPower), and three limited liability companies (LLCs) that we will refer to collectively as LTB.

Mr. Johnson surrounded himself with friends and family who, like him, had no experience in the energy industry. His son, Randale Johnson, nominally served in a technical development capacity, but he admittedly "wore many hats." Greg Shepard, a friend, served as RaPower's "director of operations" and led its promotional outreach to investors. At no time did RaPower or any of its affiliates employ any full-time engineers.

Mr. Johnson's concept was to install, on metal towers, arrays of "Fresnel lenses" that would be used to concentrate sunlight. The Fresnel lens was invented

[*5] in 1822 by French physicist Augustin-Jean Fresnel for use in lighthouses. Fresnel lenses were originally made of glass and were extremely heavy. But by the 1960s plastic versions of these lenses had become available. Mr. Johnson selected plastic Fresnel lenses for his project, citing their light weight and low production cost. The lenses arrived as large rectangular plastic sheets stacked on pallets; the sheets had to be cut into triangles and have frames attached before they could be installed on a tower.

Mr. Johnson designed a “dual axis tracker” that was supposed to follow the Sun’s path during the day, with the goal of rotating the lenses to maximize their exposure to solar radiation. The lenses would concentrate the Sun’s rays onto a receiver that would warm a “heat transfer fluid”; Mr. Johnson experimented with various fluids (including water, molten salt, and oil) but never settled on any one. The fluid would be pumped to a “heat exchanger” that would boil water to create steam. The steam would spin a turbine that would ultimately (it was hoped) generate electricity.

In 2006 IAS constructed 19 towers at a testing site in Delta, Utah (Delta site). IAS represented to investors that it would install on each tower an “array” of triangular-shaped Fresnel lenses formed into a circle, like slices of a pizza pie. By 2015, however--the year following the last tax year at issue--only one of the 19

[*6] towers had been equipped with a full array of lenses. Some lenses were broken; thousands of others sat untouched in a warehouse. Mr. Johnson's project never got past the R&D stage. Although his equipment was capable of generating small amounts of electricity in tests, it never came close to commercial production.

Despite these failures, Mr. Johnson's project generated tens of millions of dollars in revenue. This revenue came not from producing solar power but from selling lenses to investors seeking tax benefits. Mr. Johnson established for each lens a purchase price that vastly exceeded its modest production cost. Investors made a downpayment equal to one-third of the purchase price; the balance would be due if and only if the lenses were actually used to produce electricity.

After devising this plan, Mr. Johnson directed Mr. Shepard to circulate marketing materials to prospective investors. Referring to the plastic lenses as solar-energy "systems," Mr. Shepard explained: "Your objective in purchasing your systems is to zero out your taxes." To help prospective investors understand how to "zero out" their taxes, Mr. Shepard supplied a law firm memorandum outlining the tax benefits that can be derived from energy credits and depreciation deductions.

[*7] If prospective investors expressed interest, Mr. Shepard would help them calculate (by reviewing their tax records) the number of lenses they would need to buy in a particular year to “zero out” their tax liability. As he explained:

The RaPower3 program is set up so that prospective new members calculate the taxes they expect to pay in the current year and as an option add that to what they paid in federal taxes the previous year. Once this [is] known, the correct number of lenses to maximize the tax benefits can be purchased. Then when the refund comes, you have enough to pay off your lenses and plus put money in your pocket. Simple. * * *

Messrs. Johnson and Shepard recommended accountants and attorneys who could assist investors with preparation of tax returns. Investors who signed up were supplied with a law firm opinion that addressed only the tax benefits of the transaction.³

In 2015 the Justice Department filed a civil complaint against IAS, RaPower, and Messrs. Johnson and Shepard, seeking to enjoin them from promoting “the ‘solar energy scheme’ * * * or any other [tax-evading] plan or arrangement.”

After a two-week trial the U.S. District Court for the District of Utah found that the defendants had committed a “massive fraud” and (1) permanently enjoined them from promoting the solar energy scheme, (2) ordered them to disgorge more

³The law firms apparently did not know that their documents would be used to promote the sale of lenses, so they sent Mr. Johnson cease-and-desist letters. See RaPower-3, LLC, 343 F. Supp. 3d at 1167.

[*8] than \$50 million, and (3) appointed a receiver to seize their assets. RaPower-3, LLC, 343 F. Supp. 3d 1115. The Tenth Circuit affirmed that decision in June 2020. RaPower-3, LLC, 960 F.3d 1240.

B. Petitioners' Investment in the Scheme

1. Background

Preston Olsen (Mr. Olsen or petitioner) and Elizabeth Olsen are husband and wife. Petitioner grew up in Utah, earned a B.A. in economics, and graduated in 2003 from the University of Chicago Law School. After practicing for a year in New York, he returned to Utah to work for Ballard Spahr, LLP. He worked primarily in the firm's public finance group, advising clients about the tax aspects of bond transactions. He later became a partner at the firm.

After returning to Utah, petitioner reconnected with Mr. Shepard's son, Matthew, who was helping his father sell lenses. In 2009 Matthew invited petitioner to review promotional materials, urging him to “[b]uy our solar units with your tax money instead of giving it away to the IRS.” Although these tax benefits were alluring, petitioner expressed some skepticism, noting that aspects of the deal “seem[ed] too good to be true.”

Petitioner also expressed concern that his purchase of lenses would “be viewed as a passive investment,” leading the IRS to deny deductions and credits

[*9] under the “passive loss rules.” See sec. 469. Mr. Shepard suggested that this problem could be obviated by creating an LLC and designating him (Mr. Shepard) as the LLC’s representative. As long as the “representative” logged enough hours, petitioner was supposedly “free to work as little * * * as he would like in his solar business.”

Petitioner purchased his first lenses in 2009. Following Mr. Shepard’s advice, he formed PFO Solar, LLC (PFO Solar), of which he was the sole member, to be the nominal holder of the lenses. He did not negotiate over the price of the lenses or any other material term of the transaction. Rather, IAS provided him with a form contract containing blanks for him to fill in, e.g., specifying the number of lenses he wished to buy. He filled in that blank by estimating his tax liability and the number of lenses he would need to zero it out.

2. Purchase and Lease Agreements

On July 23, 2009, petitioner signed an “Equipment Purchase Agreement” with IAS. He thereby agreed to purchase \$60,000 worth of lenses, to which the contract referred as “alternative energy systems.” Petitioner cut a check for the \$18,000 downpayment when signing the agreement. The \$42,000 balance was due in annual installments beginning five years from the date (if any) when the project began generating electricity. Petitioner had no obligation to make any

[*10] further payments unless the lenses were installed and produced electricity at a specified rate.

The contract provided that petitioner's downpayment would be refunded if IAS failed to "install and startup" the lenses at the Delta site by December 31, 2009. IAS did not install petitioner's lenses at the Delta site by December 31, 2009 (or subsequently), and the lenses never produced energy at the specified (or any other) rate. Nonetheless, petitioner did not request a refund of his downpayment or otherwise seek to terminate or renegotiate the agreement.

Petitioner never expected to possess (or engage in any activity with respect to) the lenses. To the contrary, the agreement designated LTB as the "Operations and Management Company," with nominal responsibility for ensuring that the lenses were installed at the Delta site. LTB was not a signatory to the agreement.

Petitioner did not purchase any lenses in 2010 but carried forward to his 2010 tax return his unused credits from 2009. In May 2011 Matthew urged petitioner to purchase more lenses. As an incentive he explained that Mr. Johnson had recently revised the payment structure to make the cashflow even more compelling: "You now only need to pay 10% of the down payment * * * [i.e., 3% of the nominal purchase price] and the rest of the down payment isn't due until after you get your money back from the Dept. of Treasury." Although petitioner found

[*11] these terms attractive, he declined to “buy systems * * * this week,” as Matthew recommended. Rather, he deferred the purchase to December 2011 because “wait[ing] until the end of the year” enabled him “to see what * * * [he] thought * * * [his] taxes would be.” After estimating his tax liability for 2011, he opted to buy \$49,000 worth of lenses.

This time the agreement identified RaPower as the seller, with Mr. Johnson signing as the director of the company. The terms were substantially similar to those of the 2009 agreement but reflected the new payment structure. Petitioner paid \$1,470 when executing the agreement in December 2011 and agreed to pay \$13,230 by June 30, 2012. The remaining balance of \$34,300 was to be paid in annual installments beginning five years after the date (if any) when the project started producing electricity. The agreement provided that, if the tax laws subsequently changed in a way that “materially reduce[d] any tax benefit,” petitioner could retroactively reduce the number of lenses he purchased.

Petitioner concurrently executed an “Operation and Maintenance Agreement.” By this agreement he purported to lease the lenses to LTB, the entity referenced in the 2009 contract. But while LTB was denominated the “lessee,” the agreement was printed on RaPower letterhead and signed by Mr. Johnson on behalf of RaPower.

[*12] The purported lease agreement provided that LTB would provide, for a fee of \$1 per year, “a structure that holds the Owner’s Alternative Energy Systems [i.e., the lenses] and a receiver to collect the energy.” LTB represented that, after IAS installed the lenses on a tower, it would operate and maintain the lenses. In exchange LTB agreed to pay petitioner an annual rental fee of \$150 per lens. But rent payments would start only if and when the lenses began producing revenue from the generation of electricity, an event that never occurred. Petitioner admitted that he never received a single rent payment from LTB. Nonetheless, he did not consider leasing the lenses to any other entity because he believed that LTB was “the only entity that * * * [he] had an option to go with.”

Separately, petitioner executed in December 2011 a “Referral Fee Contract” with RaPower. This contract--which RaPower neglected to sign--stated that RaPower would pay petitioner, as a “bonus,” a percentage of its first billion dollars in gross sales. Mr. Shepard explained that the bonus program “shoots down the IRS theory that you became involved only for the tax benefits.” Needless to say, petitioner received no bonus payments.

Petitioner entered into substantially identical purchase and lease contracts in 2012, 2013, and 2014. He bought \$45,500 worth of lenses in 2012, \$52,500 worth of lenses in 2013, and \$35,000 worth of lenses in 2014. The aggregate nominal

[*13] purchase price for all the lenses he acquired was thus \$242,000. He made the required downpayment for each year's supply of lenses, but he made no payments toward the balance of the nominal purchase price. At trial he explained that he does not intend to pay the balance because "the whole thing is falling apart."

3. Petitioner's Activities

During 2009-2014 petitioner spent most workdays advising clients in his busy law practice. His then employer, Ballard Spahr, paid him an annual salary ranging from \$140,000 to \$183,000. In 2015 the firm elevated him to partnership.

Petitioner testified that he occasionally read email updates from Mr. Shepard to stay apprised of progress (or the lack of it) at the Delta site. He admitted that he did "not [do] much" with PFO Solar, the LLC that nominally held and leased the lenses. PFO Solar did not maintain any business records, hire any employees or contractors, or have its own bank account. Petitioner characterized his administrative responsibilities as "renewing the LLC each year," "maintaining PDF copies of the documents," and "just trying to determine how many lenses to purchase" to maximize his tax benefits.

Petitioner testified that he visited the Delta site roughly once a calendar quarter. But he maintained no travel logs and documented no travel expenses, and we did not find his testimony on this point credible. When he did visit the site, he

[*14] saw towers and numerous pallets stacked with rectangular plastic sheets. He had no way of knowing whether his lenses were installed on a tower or even cut into triangular form and framed. An employee of RaPower explained that, because the lenses were “all the same” and “fungible,” the lenses petitioner had purchased could not be identified. Petitioner never observed a lens produce electricity.

In 2011, nearly two years after purchasing \$60,000 in lenses, petitioner asked Mr. Shepard to explain the “nuts and bolts” of the project. Petitioner acknowledged that “people ask me what it is specifically that they will be purchasing and I don’t know.” He later relayed concerns to his sister, stating that the solar equipment “looks a little like junk.” But despite skepticism about the project, petitioner continued to purchase lenses because “it was a way that * * * [he] could use a tax liability” to his advantage. Although he never saw his lenses in operation, he claimed deductions and credits annually on the basis of letters he received from IAS and RaPower. Those letters asserted that his lenses were “put into service,” thereby qualifying him for a “solar energy tax credit.”

C. Tax Filings and IRS Examination

For 2009 petitioners timely filed a joint Federal income tax return that was prepared by Bryan Bolander, a certified public accountant who had prepared re-

[*15] turns for other lens purchasers. On that return they reported wages of \$140,443 but total tax of zero. On the Schedule C they identified PFO Solar as a “solar energy” business and claimed \$30,600 in depreciation expense on the lenses. They reported no income and no other expenses on the Schedule C. They attached a Form 3800 claiming an energy credit of \$18,000, computed as 30% of the lenses’ nominal purchase price (\$60,000). They characterized the lenses as “property using * * * solar energy placed in service during the tax year” and as eligible for the credit for that reason. Their allowable credit for 2009 was limited to \$4,629, leaving the \$13,371 balance to be carried to 2010. Petitioners thus eliminated their income tax liability for 2009 and sought a refund of \$21,245.

Mr. Bolander also prepared petitioners’ return for 2010. On that return they reported wages of \$145,518 but total tax of zero. On the Schedule C they identified PFO Solar as a “solar energy” business and claimed \$8,160 in depreciation expense on the lenses. They reported no income on the Schedule C and no other expenses apart from \$425 for legal and professional fees. They carried forward an energy credit of \$10,306 from 2009, leaving a balance to be carried to 2011. Petitioners thus eliminated their income tax liability for 2010 and sought a refund of \$20,191.

[*16] Mr. Bolander prepared petitioners' return for 2011 as well. On that return they reported wages of \$161,474 but total tax of zero. On the Schedule C they identified PFO Solar as a "solar energy" business and claimed \$46,546 in depreciation expense on the lenses. They reported no income on the Schedule C and no other expenses apart from \$325 in legal and professional fees. They attached a Form 3800 claiming an energy credit of \$14,700, computed as 30% of the nominal purchase price (\$49,000) of the lenses purchased in 2011. Their allowable credit for 2011 was limited to \$7,531, leaving the balance to be carried to 2012. Petitioners thus eliminated their income tax liability for 2011 and sought a refund of \$24,862.

Mr. Bolander declined to prepare petitioners' return for 2012, evidently because IRS audit activity had begun to heat up. The promoters referred Mr. Olsen to a different accountant, Kenneth B. Riter, who picked up where Mr. Bolander had left off. On their 2012 return petitioners reported wages of \$173,439 but total tax of zero. On the Schedule C they identified PFO Solar as a "solar energy" business and claimed \$23,242 in depreciation expense on the lenses. They reported no income and no other expenses on the Schedule C. They attached a Form 3800 claiming an energy credit of \$13,650, computed as 30% of the nominal purchase price (\$45,500) of the lenses purchased in 2012. They claimed an allowable credit

[*17] of \$19,136 (including a carryover). Petitioners thus eliminated their income tax liability for 2012 and sought a refund of \$27,695.

In 2013 RaPower referred petitioners to a different return preparer, Richard Jameson, who prepared their returns for 2013 and 2014. On their 2013 return they reported wages of \$181,408 but total tax of zero. On Mr. Jameson's advice, they changed their Schedule C description of PFO Solar's business from "solar energy" to "equipment rental services." They claimed \$33,715 in depreciation expense on the lenses but reported no income and no other expenses on the Schedule C. They attached a Form 3800 claiming an energy credit of \$15,750, computed as 30% of the nominal purchase price (\$52,500) of the lenses purchased in 2013. They claimed an allowable credit of \$16,540 (including a carryover). Petitioners thus eliminated their income tax liability for 2013 and sought a refund of \$29,301.

On their 2014 return petitioners reported wages of \$183,344 and total tax of \$1,538. On the Schedule C they again identified PFO Solar's business as "equipment rental services" and claimed \$29,975 in depreciation expense on the lenses. They reported no income and no other expenses on the Schedule C. They attached a Form 3800 claiming an energy credit of \$10,500, computed as 30% of the nominal purchase price (\$35,000) of the lenses purchased in 2014. They claimed an

[*18] allowable credit of \$11,581 (including a carryover). Petitioners thus reduced to \$1,538 their income tax liability for 2014 and sought a refund of \$27,973.

For each year petitioners reported their lens-related deductions and credits on the basis of “placed in service” letters received from IAS or RaPower. These letters, signed by Mr. Johnson or Mr. Shepard, stated that the lenses had been “put into service” in December of each year, thereby qualifying petitioners for depreciation deductions and energy credits. Mr. Olsen did not question the accuracy of these letters even though he had never actually seen one of his lenses on a tower.

In 2012 Mr. Johnson’s scheme became the subject of an IRS tax shelter investigation. As part of this investigation the IRS selected petitioners’ 2010-2014 returns for examination. When petitioner and other purchasers notified Mr. Shepard that their returns were under audit, he suggested detailed arguments for them to make and documents to submit to the IRS. He repeatedly assured purchasers not to worry, stating that “[w]e have the tax code on our side.”

Following its examination the IRS determined that petitioners were entitled to no depreciation deductions or energy tax credits for any year and that they had failed to substantiate the deductions for legal and professional fees claimed on their Schedules C for 2010 and 2011. (Petitioners have conceded that they cannot substantiate the latter deductions.) In July 2014 and July 2016 the IRS issued

[*19] petitioners timely notices of deficiency for 2010-2012 and 2013-2014, respectively. The notices explained that the IRS had disallowed all lens-related deductions and credits because the lenses were not used in a trade or business, held for the production of income, or placed in service during the relevant tax year. Petitioners timely petitioned with regard to each notice.

D. Expert Testimony

At trial respondent presented testimony from Thomas Mancini, whom we recognized as an expert in concentrated solar power. Dr. Mancini earned a Ph.D. in mechanical engineering from Colorado State University. He worked for more than 20 years at Sandia National Laboratories, where he managed the Government's concentrated solar power program. He now runs a consulting business that advises clients in the solar energy industry. He has been recognized as an expert in at least four cases involving solar energy. See, e.g., RaPower-3, LLC, 343 F. Supp. 3d 1115.

Dr. Mancini visited the Delta site twice to evaluate Mr. Johnson's technology and determine whether it could produce electricity. He met with Mr. Johnson and reviewed materials he supplied. Those materials, Dr. Mancini discovered, contained "no tests, no test reports, [and] no documentation of any type." Dr. Mancini found "no information that even indicated that all the[] components have

[*20] been assembled into a system to produce electricity.” Dr. Mancini was puzzled that, after 17 years, IAS still “didn’t know what they were developing.”

When Dr. Mancini toured the Delta site, he saw individual components (e.g., lenses, receivers, and concentrators) that Mr. Johnson proposed to use in his system. But Dr. Mancini opined that these component parts were “not designed to work together, and do not work together” in any operational sense. He did not see a single concentrator “in working order.” “None of the lens assemblies were fully populated with lenses” and “most of the lenses that were on the concentrators were broken.” He found the ground littered with broken lenses and saw electrical wires soaked in “pools of water.” He described the site as “dirty and disorganized,” with no evidence that it had “been recently used for any test activity and certainly not to generate electricity.”

Following examination of all the evidence, Dr. Mancini opined that the “IAS Solar Dish Technology does not produce electricity or other useable energy from the sun.” And he concluded that the technology was not and would never be “a commercial-grade dish solar system.”

Petitioners presented testimony from Ken Gardner, whom we recognized as an expert in solar power with a particular concentration in photovoltaic projects. Mr. Gardner testified that he toured the Delta site in 2015. He also saw broken

[*21] lenses and debris on the ground and observed that only one of the 19 towers had a “full array of lenses.” A “full array,” he said, required about 70 triangular slices. As he acknowledged, this meant that “thousands of lenses had not been installed.”

Mr. Gardner opined that Mr. Johnson’s system was “technically viable to generate electricity,” but he acknowledged that he did not actually observe any electricity being produced. He testified that Mr. Johnson “activated the system” for a 30-minute period, but the system “wasn’t connected to anything” and “wasn’t putting anything on the [electric] grid.” However, he said he was impressed by Mr. Johnson’s “creativity.”

OPINION

I. Burden of Proof

The IRS’ determinations in a notice of deficiency are generally presumed correct, and taxpayers bear the burden of proving them erroneous. See Rule 142(a). Deductions and credits are a matter of legislative grace, and taxpayers must prove entitlement to all deductions and credits claimed. See ibid.; INDOPCO, Inc. v. Commissioner, 503 U.S. 79, 84 (1992). Taxpayers are required to identify each deduction and credit, show that they have met all relevant require-

[*22] ments, and keep books or records to substantiate the amounts claimed. See sec. 6001; sec. 1.6001-1(a), Income Tax Regs.

Under certain circumstances the burden of proof on factual issues may shift to respondent. See sec. 7491(a). But petitioners introduced little (if any) “credible evidence,” and they did not “maintain[] all records required” by the Code. See sec. 7491(a)(1), (2)(B). They thus bear the burden of proof on all issues.⁴

II. Petitioners’ Entitlement to Deductions and Credits

A. Governing Legal Principles

For 2010-2014 petitioners claimed substantial depreciation deductions and “energy credits,” which are allowable as investment credits under sections 46(2) and 48(a). Section 167(a) allows as a depreciation deduction a reasonable allowance for the exhaustion and wear and tear of “property used in the [taxpayer’s] trade or business, or * * * of property held for the production of income.” If the

⁴Petitioners contend that respondent bears the burden of proof on the question whether petitioners “participated in an abusive tax avoidance scheme” because this question raises a “new matter.” See Rule 142(a)(1). Petitioners misapprehend respondent’s position. Respondent does not contend that petitioners are allowed no deductions or credits because of any abusive behavior. Respondent’s position at trial and on brief is that petitioners are allowed no deductions or credits because their lenses were not used in a trade or business, held for the production of income, or placed in service. This position is identical to the determinations made in the notices of deficiency.

[*23] taxpayer does not use the property for either of these purposes, the property is not depreciable.

Section 48 allows an “energy credit” equal to 30% of the taxpayer’s basis in certain “energy property,” defined to include “equipment which uses solar energy to generate electricity.” Sec. 48(a)(1), (2)(A)(i), (3)(A)(i). However, property qualifies as “energy property” only if (among other things) it is property “with respect to which depreciation (or amortization in lieu of depreciation) is allowable.” Sec. 48(a)(3)(C). If no depreciation is allowable during the year in question, the property cannot constitute “energy property.”

“The period for depreciation of an asset shall begin when the asset is placed in service.” Sec. 1.167(a)-10(b), Income Tax Regs. The energy credit is likewise available only with respect to “energy property placed in service during such taxable year.” Sec. 48(a)(1). Thus, assuming that the taxpayer uses property in his trade or business or holds it for production of income, the property qualifies for depreciation deductions and energy credits only if it has been “placed in service.”

Section 469(a) provides, in the case of an individual, that neither “the passive activity loss” nor “the passive activity credit” shall be allowed for any year. A “passive activity” includes any activity “in which the taxpayer does not materially participate” and generally includes “any rental activity.” Sec. 469(c)(1)

[*24] and (2). A taxpayer is treated as “materially participating” in an activity only if he is involved in its operations on a basis that is “regular,” “continuous,” and “substantial.” Sec. 469(h)(1).

B. Trade or Business

The first question is whether Mr. Olsen engaged in a “trade or business” with respect to the lenses he purchased. “[T]o be engaged in a trade or business, the taxpayer must be involved in the activity with continuity and regularity and * * * the taxpayer’s primary purpose for engaging in the activity must be for income or profit.” Commissioner v. Groetzinger, 480 U.S. 23, 35 (1987). To satisfy the “trade or business” requirement, the taxpayer must show extensive business activity over a substantial period. See Snyder v. United States, 674 F.2d 1359, 1364 (10th Cir. 1982). Sporadic activities do not rise to the level of a “trade or business.” See Commissioner v. Groetzinger, 480 U.S. at 35. And managing one’s own investments does not constitute a “trade or business.” See Higgins v. Commissioner, 312 U.S. 212, 216 (1941). Determining whether a taxpayer is engaged in a “trade or business” requires that we examine all the facts in the case. Id. at 217.

[*25] 1. Purported Solar Energy Business

On his Schedules C for 2010-2012 Mr. Olsen claimed that he engaged in a “solar energy” business. But he did not possess the skills, education, or experience to conduct such a business. And petitioners wholly failed to establish that he engaged in any such business on a regular, continuous, and active basis. His activities consisted almost exclusively of writing checks to IAS and RaPower, signing a few form documents each year, and engaging in email correspondence with the promoters of the tax shelter. Mr. Olsen kept no business records, received no gross income, and reported no expenses apart from depreciation (plus legal fees he conceded he could not substantiate).

At Mr. Shepard’s suggestion, Mr. Olsen formed an LLC to create the appearance of a trade or business, but he supplied no evidence that he used the LLC to conduct any business activity. PFO Solar had no business records or employees and did not even maintain its own bank account. When pressed on what he actually did with PFO Solar each year, he answered “not much.” He described his responsibilities as “renewing the LLC each year,” “maintaining PDF copies of the documents,” and “just trying to determine how many lenses to purchase.” Indeed, Mr. Shepard pitched the LLC to him on the theory that he would be “free to work as little * * * as he would like in his solar business.”

[*26] Mr. Olsen purchased lenses from IAS and RaPower, but he did not use the lenses to conduct any business activity. He signed documents by which he purported to lease the lenses to LTB, an entity controlled by Mr. Johnson. Those documents stated that LTB would manage and maintain the lenses, leaving Mr. Olsen with nothing to do. The prospect of receiving profits was thus out of his hands completely: Any success would derive “not from his own trade or business but from that of” IAS and LTB. See Whipple v. Commissioner, 373 U.S. 193, 202 (1963).

Mr. Olsen apparently visited the Delta site a few times. But he never saw one of his lenses (or any lens) generate electricity. Indeed, he could not establish that he had ever seen his lenses at all. There is no evidence that his lenses were installed on a tower or even unloaded from a pallet.

In 2011, nearly two years after purchasing \$60,000 in lenses, Mr. Olsen asked Mr. Shepard to explain the “nuts and bolts” of the project. He admitted that “people ask me what it is specifically that they will be purchasing and I don’t know.” He later relayed concerns to his sister, stating that the solar equipment “looks a little like junk.” These are not the observations of someone engaged with continuity and regularity in a genuine trade or business.

[*27] Despite his concerns Mr. Olsen continued to purchase lenses because “it was a way that * * * [he] could use a tax liability” to his advantage. To be conducting a trade or business “the taxpayer’s primary purpose for engaging in the activity must be for income or profit.” Commissioner v. Groetzinger, 480 U.S. at 35. “[P]rofit’ means economic profit, independent of tax savings.” Surloff v. Commissioner, 81 T.C. 210, 233 (1983). We find that Mr. Olsen’s primary purpose in purchasing lenses was to benefit from tax savings, not to derive profit from the conduct of a genuine business enterprise.⁵

2. Equipment Rental Services Business

On his Schedules C for 2013 and 2014 Mr. Olsen claimed that he engaged in an “equipment rental services” business. He contends that he began his rental business in 2011 by entering into what was basically a sale-and-leaseback transaction. After he agreed to purchase lenses, Mr. Johnson presented him with pre-drafted purchase and lease agreements. Both documents were printed on RaPower letterhead and signed by Mr. Johnson.

⁵Mr. Olsen’s participation in the “bonus program” does not evidence a profit motive. The notion that RaPower would ever earn a billion dollars in revenue was far fetched, to say the least. Indeed, Mr. Shepard explained that RaPower created the program to “shoot[] down the IRS theory that you became involved only for the tax benefits.”

[*28] The annual lease agreements provided that LTB--an entity that Mr. Johnson controlled, but which did not sign the contract--would lease each lens for \$150 per year. But LTB never made a rent payment because its payment obligation arose only if the lenses produced revenue--a condition that never occurred and was entirely out of petitioner's control in any event. For the tax years at issue Mr. Olsen was essentially leasing the lenses to Mr. Johnson's affiliates for free. Petitioner wholly failed to establish that his "primary purpose for engaging in th[is] activity * * * [was] for income or profit." Commissioner v. Groetzinger, 480 U.S. at 35.

There is likewise no evidence that Mr. Olsen engaged in rental activity with "continuity and regularity." Ibid. He did not advertise or promote his supposed rental business and did not seek (or have) any customer other than LTB. Indeed, he believed that LTB was "the only entity that * * * [he] had an option to go with." He never possessed any of his lenses and (assuming they existed) he could not identify them at the Delta site.

In short, Mr. Olsen's course of conduct was entirely inconsistent with that of a person engaged in an equipment rental business. He showed no regular or active involvement in any rental activity. He supplied no evidence that PFO Solar had a bank account, books and records, business plans, or marketing strategies. And he presented no evidence--in the form of time logs, calendars, or diaries--to

[*29] show that the time he devoted to his supposed “business” exceeded the few minutes necessary to sign one predrafted lease contract a year. This plainly does not rise to the level of a “trade or business.” See Jafarpour v. Commissioner, T.C. Memo. 2012-165 (disallowing depreciation deductions where taxpayers failed to show active involvement in rental business).⁶

C. Property Held for the Production of Income

In the case of an individual section 212 allows as a deduction ordinary and necessary expenses paid or incurred “for the production or collection of income” or “for the management, conservation, or maintenance of property held for the production of income.” Sec. 212(1) and (2). For purposes of this inquiry, sections 162 and 212 “are considered in pari materia, requiring * * * [the taxpayer] to engage in those activities with a profit-seeking motive, independent of tax savings.” Collins v. Commissioner, T.C. Memo. 2011-37, 101 T.C.M. (CCH) 1171, 1172 (citing Beck v. Commissioner, 85 T.C. 557, 569-570 (1985)). Depreciation and

⁶Petitioners err in asserting that “the issue to be addressed by this Court is whether leasing activities can ever be deemed a trade or business.” Respondent does not contend (and could not plausibly contend) that leasing activities never constitute a trade or business. Rather, respondent contends that Mr. Olsen failed to prove that he engaged in any business activity--be it solar energy or equipment leasing--on a regular, extensive, and continuous basis with the primary purpose of earning a profit.

[*30] amortization are allowed with respect to property held by the taxpayer only if the property is “held for the production of income.”⁷ Sec. 167(a)(2).

The Code limits deductions by individuals “[i]n the case of an activity not engaged in for profit.” Sec. 183(a) and (b). In that event deductions are allowable only to the extent that (1) they would be allowable (e.g., as itemized deductions) regardless of whether the activity was engaged in for profit or (2) the deductions do not exceed the taxpayer’s gross income from the activity (less any deductions allowed by subsection (b)(1)). Sec. 183(b). Petitioner received no gross income from the lenses during 2010-2014, and his claimed depreciation deductions would not otherwise be allowable under the Code. Thus, he is allowed no deductions unless holding the lenses was an activity that he “engaged in for profit.” Sec. 183(b)(1); see Collins, 101 T.C.M. (CCH) at 1172 (“The profit-objective analysis under section 183 governs particular [tax] shelter investments.”).

In determining whether a taxpayer had a profit motive, we consider (among other things) the time and effort he devotes to the activity; the manner in which he

⁷We assume without deciding that petitioner “held property” within the meaning of secs. 167 and 212. Petitioner never possessed the lenses; the lenses he purchased could not be identified; and he could not establish that those lenses actually existed at the Delta site. Under these circumstances it could be argued that the entire transaction was a sham, i.e., that petitioner never purchased or held property but simply paid cash in exchange for tax benefits. Given our disposition, we need not decide that question.

[*31] carries it on; the expertise of the taxpayer and his advisors; the taxpayer's history of income and losses from the activity; any expectation that property used in the activity will appreciate in value; and the financial status of the taxpayer. See sec. 1.183-2(b), Income Tax Regs. The taxpayer's profit motive must be actual and honest; in discerning that motive we give more weight to objective facts than to self-serving statements. See Dreicer v. Commissioner, 78 T.C. 642, 645 (1982), aff'd without published opinion, 702 F.2d 1205 (D.C. Cir. 1983). Whether a taxpayer has a genuine profit motive is a question of fact to be determined from all the relevant evidence. See ibid.

Mr. Olsen provided no evidence, other than his self-serving testimony, that he held the lenses "for the production of income" or that he purchased them with "the predominant, primary or principal objective" of realizing an economic profit independent of tax savings." See Giles v. Commissioner, T.C. Memo. 2006-15, 91 T.C.M. (CCH) 684, 688 & n.10 (quoting Wolf v. Commissioner, 4 F.3d 709, 713 (9th Cir. 1993), aff'g T.C. Memo. 1991-212). The lenses generated no income during 2009-2014. The only future income Mr. Olsen could expect to receive under the lease agreement was annual rent of \$150 per lens, but no rent would ever be paid unless the project actually produced electricity. Given the lack of any progress toward completion of the project and his own observation that the

[*32] equipment “looks a little like junk,” we do not believe that Mr. Olsen genuinely expected to receive any future rental income. And even if he did, he made no effort to show that the present discounted value of future rent payments would come close to \$242,000, the nominal purchase price of the lenses he acquired.⁸

Mr. Olsen had no expertise in solar energy or equipment leasing, and his only “advisors” were promoters of the tax shelter. His full-time job as an attorney limited his ability to participate meaningfully in either activity, and he in fact devoted virtually no time to either. Apart from cutting checks and visiting the Delta site once or twice, he conceded that his activities were limited to “renewing the LLC each year,” “maintaining PDF copies of the documents,” and “just trying to determine how many lenses to purchase.” He had no expectation that the lenses would appreciate in value. To the contrary, unless the project actually produced electricity at a commercial rate--an event very unlikely to occur--the lenses were essentially worthless.

⁸In 2011, for example, petitioner purchased 14 lenses for \$49,000. The lease agreement called for annual rent payments of \$150 per lens (or \$2,100), and these payments would not begin for many years (if ever). Ignoring the time value of money and the risk that the project would never produce electricity, it would take 24 years of rent payments for petitioner to recoup his investment.

[*33] Mr. Olsen's first purchase agreement, signed in 2009, provided that the \$18,000 downpayment would be refunded if IAS failed to "install and startup" the lenses by December 31, 2009. Mr. Olsen knew that IAS had failed to meet this deadline for 2009 (and every subsequent year). But he did not demand a refund or otherwise attempt to cut his losses as a profit-seeking investor would do. See sec. 1.183-2(b)(1), Income Tax Regs. ("[A]bandonment of unprofitable methods * * * may also indicate a profit motive."); see also Hoffmann v. Commissioner, T.C. Memo. 2016-69, 111 T.C.M. (CCH) 1314, 1320 ("Just as abandoning unprofitable methods can indicate a profit motive, * * * a continuing and unexplained failure to abandon an unprofitable activity evidences motives other than pursuit of profit[.]").

In assessing the "financial status of the taxpayer," we consider whether Mr. Olsen had "[s]ubstantial income from sources other than the activity (particularly if the losses from the activity generate substantial tax benefits)." Sec. 1.183-2(b)(8), Income Tax Regs. Mr. Olsen had substantial wage income during 2010-2014, ranging from \$145,518 to \$183,344. And the tax benefits he derived from buying lenses enabled him to reduce petitioners' taxable income essentially to zero. The tax benefits were thus "substantial."

[*34] We find that Mr. Olsen purchased the lenses primarily to secure tax benefits, not to earn a profit. The promoters induced him to purchase lenses by touting their ability to generate tax savings. They urged him to “[b]uy our solar units with your tax money instead of giving it away to the IRS.” Buying lenses, they said, would enable him to “double * * * [his] investment from the IRS in tax benefits.” They explained that “[y]our objective in purchasing your systems is to zero out your taxes.” And indeed, despite a slight miscalculation in 2014, which produced a tax liability of \$1,538, Mr. Olsen purchased just enough lenses to “zero out” his tax liability for every year at issue. This is strong evidence that he was seeking to maximize tax savings, not to generate economic profit.

Evaluating the facts overall, we conclude that Mr. Olsen purchased the lenses, not with an “actual and honest objective of making a profit,” Dreicer, 78 T.C. at 645, but rather to shelter his taxable wage income by claiming artificial losses. Petitioners therefore have no allowable deductions for depreciation during 2010-2014. See sec. 183(a) and (b)(1). And because petitioners have no allowable deductions for depreciation on the lenses, the lenses were not “energy property” upon which energy tax credits could be claimed. See sec. 48(a)(3)(C); sec. 1.48-9(a)(2), Income Tax Regs. (“Property is not energy property unless depreciation * * * is allowable[.]”).

[*35] D. Placed in Service

Even if Mr. Olsen could show that he used the lenses in a trade or business or held them for production of income, petitioners face another problem. To claim depreciation deductions and energy credits, a taxpayer must show that the property was “placed in service” during the year for which the amounts are claimed. See sec. 48(a)(1); sec. 1.167(a)-10(b), Income Tax Regs. An asset is “placed in service” when “placed in a condition or state of readiness and availability for a specifically assigned function.” Sec 1.167(a)-11(e)(1)(i), Income Tax Regs.; see sec. 1.46-3(d)(1)(ii), Income Tax Regs. (using the same definition of “placed in service” for energy credit purposes).

If the asset is “an individual component that is designed to operate as a part of a larger system [but] is incapable of contributing to the system in isolation,” the asset “is not regarded as placed in service until the entire system reaches a condition of readiness and availability for its specifically assigned function.” Green Gas Del. Statutory Tr. v. Commissioner, 147 T.C. 1, 52 (2016), aff’d, 903 F.3d 138 (D.C. Cir. 2018). Individual components, therefore, “are not to be considered placed in service separately from the system of which they are an essential part.” Sealy Power, Ltd. v. Commissioner, 46 F.3d 382, 390 (5th Cir. 1995), aff’g in part, rev’g in part on other grounds T.C. Memo. 1992-168; see Pub. Serv. Co. v.

[*36] United States, 431 F.2d 980, 984 (10th Cir. 1970) (holding that individual components of a power plant could not be considered separately because no component “would serve any useful purpose” on its own).

The lenses petitioners purchased were intended to operate as part of a complicated solar energy system and were incapable of performing any useful function in isolation. There is no evidence that petitioners’ lenses had been installed on a tower, much less that they contributed to a system that had reached an overall state of readiness. Petitioners’ own expert conceded that, as of 2015, IAS had equipped just one tower with a full array of lenses, meaning that “thousands of lenses had not been installed.” Both experts observed uninstalled lenses broken and scattered across the Delta site, with the balance remaining on pallets, still unwrapped, uncut, and unframed. Petitioners do not contend (and could not plausibly contend) that their lenses were capable of producing electricity on their own. The lenses accordingly were not “placed in service” because the solar energy system as a whole was not “in a condition or state of readiness and availability for a specifically assigned function.” Sec. 1.46-3(d)(1)(ii), Income Tax Regs.

The same conclusion follows under the analysis we have employed to determine whether an electricity-generating facility, in particular, has been “placed in

[*37] service.” See Green Gas Del. Statutory Tr., 147 T.C. at 51. We there considered five factors:

1) whether the necessary permits and licenses 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. * * * [Ibid. (quoting Sealy Power, Ltd., 46 F.3d at 395).]

Each of these factors weighs against petitioners. IAS and RaPower had obtained no permits for operation of a solar energy plant. There is no evidence that they had completed “critical preoperational testing.” Quite the contrary: Dr. Mancini in reviewing Mr. Johnson’s material discovered “no tests, no test reports, [and] no documentation of any type” and found no evidence that the Delta site had “been recently used for any test activity.” The solar plant had not “been synchronized with the transmission grid”; “daily or regular operation” of the facility obviously had not begun; and no one had assumed “control” of a functional power plant. Indeed, Dr. Mancini credibly testified that the project, even if completed, would never be capable of generating electricity on a commercial scale.

Petitioners appear to concede that their lenses were not “placed in service” in an operational solar energy system. Instead they contend that the lenses “were placed in service upon the date of acquisition,” because that was the date on which

[*38] they “put [the lenses] into use in * * * [their] leasing trade or business.”

Petitioners assert that their lenses were placed in service when initially “held out for lease.”

We are not persuaded. To begin with, Mr. Olsen was not engaged in a “leasing trade or business.” See supra pp. 27-28. Nor were the lenses ever “held out for lease.” Mr. Olsen did no marketing and sought no customers for his lenses; rather, he leased them back to Mr. Johnson’s affiliates the moment after he purchased them.

Petitioners err in relying on Cooper v. Commissioner, 88 T.C. 84, 113-114 (1987). The taxpayers there had purchased solar water-heating systems that were ready for installation by homeowners. Id. at 85-88. The taxpayers immediately leased the systems to a third party, who later subleased them to homeowners. Ibid. The taxpayers claimed investment credits in the year the systems were purchased and leased; the IRS disallowed the credits, contending that the systems were not “placed in service” until they were installed in individual homes. Id. at 113.

We sided with the taxpayers. At the outset we found that the transactions among the seller of the water-heating systems, the purchasers, and the lessee were “genuine multiple party transactions.” Id. at 104. The IRS contended that the transactions “were a series of shams,” urging that the parties in reality had “en-

[*39] tered into a sale-leaseback transaction * * * (i.e., a two-party transaction).”

Id. at 103. We rejected that characterization because it ignored the separate corporate existence of the lessee. Ibid.

On the merits we agreed with the taxpayers that the water-heating systems were “placed in service” when purchased and leased because they had been “placed in a condition or state of readiness and availability for a specifically assigned function.” Id. at 113 (quoting sections 1.46-3(d)(1)(ii) and 1.167(a)-11(e)(1)(i), Income Tax Regs.). Although the systems were “not in actual use during the year in issue,” they were “nevertheless devoted to the business of the taxpayer and ready for use.” Ibid. (quoting Clemente, Inc. v. Commissioner, T.C. Memo. 1985-367, 50 T.C.M. (CCH) 497, 504). We had previously held, in a case involving leased medical equipment, that “property which is held for leasing to others in a profit-motivated leasing venture is placed in service when it is first held out for lease.” Id. at 114 (citing Waddell v. Commissioner, 86 T.C. 848 (1986), aff’d, 841 F.2d 264 (9th Cir. 1988)). Following these precedents, we held in Cooper that the water-heating systems “were placed in service as of the date of purchase” because “the systems were available for use in * * * [the taxpayers’] profit-motivated leasing venture.” Ibid.

[*40] Petitioners' reliance on Cooper is misplaced for at least three reasons. First, Cooper involved "genuine multiple party transactions," whereas these cases involve a sale-and-leaseback transaction between a tax shelter investor and the tax shelter promoter. Second, the property in Cooper consisted of integrated water-heating systems that were ready for installation to discharge their designated function. Petitioners' lenses were mere components of a system, and (as far as the evidence shows) they remained unwrapped on pallets at the Delta site.⁹ Third, the equipment in Cooper was "available for use in * * * [the taxpayers'] profit-motivated leasing venture." 88 T.C. at 114. Mr. Olsen was not engaged in a leasing business and his venture was certainly not "profit-motivated." See supra pp. 27-34.

E. Passive Activity Losses

Finally, even if petitioners had met all of the foregoing requirements and had placed the lenses in service during 2010-2014, the Code disallows losses and credits connected to a "passive activity." Sec. 469. Congress enacted section 469

⁹See, e.g., Hudson v. Commissioner, 103 T.C. 90, 106 (1994) (holding that an audiobook "must be completed and be available for use before it can be placed in service"), aff'd, 71 F.3d 877 (5th Cir. 1995); Coit v. Commissioner, T.C. Memo. 1987-509, 54 T.C.M. (CCH) 816, 824 (holding that rental property must be constructed and be "available for occupancy" before it can be deemed placed in service).

[*41] to prevent taxpayers from reducing regular income (such as wages) by losses attributable to purely passive activities. See Hillman v. Commissioner, 118 T.C. 323, 329 (2002). Generally speaking, a taxpayer may deduct a passive activity loss, or claim a passive activity credit, only to the extent that he has passive activity income for the year in question.

Section 469 provides, in the case of an individual, that neither “the passive activity loss” nor “the passive activity credit” shall be allowed for the taxable year. Sec. 469(a)(1). A “passive activity” includes any activity “in which the taxpayer does not materially participate” and generally includes “any rental activity.” Sec. 469(c)(1) and (2). A taxpayer is treated as “materially participating” in an activity only if he is involved in its operations on a basis that is “regular,” “continuous,” and “substantial.” Sec. 469(h)(1).

The term “passive activity loss” means the amount (if any) by which the taxpayer’s aggregate losses from passive activities for the taxable year exceed his aggregate income from passive activities for that year. Sec. 469(d)(1). As relevant here, the term “passive activity credit” means the amount (if any) by which all general business credits (including energy credits) from passive activities exceed the taxpayer’s “regular tax liability * * * for the taxable year allocable to all passive activities.” Sec. 469(d)(2)(A)(i), (B); see secs. 38(b)(1), 46(2).

[*42] Mr. Olsen’s purported lens-leasing activity was a passive activity because it consisted of “rental activity” that did not involve a “real property business.” Sec. 469(c)(2), (7). In any event his lens-related activity was passive because he did not “materially participate” in it by devoting effort that was “regular,” “continuous,” and “substantial.” Sec. 469(h)(1); see supra pp. 24-28.

Petitioners had no “passive income” during 2010-2014, either from lens-related activity or any other endeavor. If the depreciation deductions claimed on their Schedules C had been allowable, the losses generated by those deductions would be nondeductible passive losses. And because petitioners had no regular tax liability allocable to passive activities for 2010-2014, see sec. 469(d)(2), any energy credits they might properly have claimed would be “passive activity credits” that would not have been currently allowable.

To reflect the foregoing,

Decisions will be entered under

Rule 155.