Evaluating Cost Basis for Solar Photovoltaic Properties[1]

The review of applications for payment under the Section 1603 program includes a determination as to whether the applicant has properly represented and calculated its cost basis. Each application is evaluated to determine whether the cost basis includes only eligible items and that it represents the applicant's actual costs or, in certain cases, fair market value for the eligible property. This document, intended to assist with preparing Section 1603 applications, outlines the process used by the Section 1603 team to evaluate basis and the principles that guide this process. These principles are consistent with tax concepts used to determine basis for federal tax purposes.[2]

Basis

As described in various Internal Revenue Service (IRS) publications, basis is the amount of a business' investment in property for tax purposes. Basis is generally the cost of the property[3] and may also include the capitalized portion of certain other costs related to buying or producing the property (e.g. permitting, engineering, and interest during construction).[4] However, as described in Bryant v. Commissioner of Internal Revenue (790 F.2d 1463), "the courts have determined that in certain circumstances, a taxpayer's stated cost for an asset does not reflect the true economic cost of that asset to the taxpayer and will be ignored for purposes of determining the basis of the asset." For example, a stated cost may be inconsistent with the eligible property's true basis "where a transaction is not conducted at arm's-length by two economically self-interested parties or where a transaction is based upon 'peculiar circumstances' which influence the purchaser to agree to a price in excess of the property's fair market value."[5]

In order to ensure that a Section 1603 applicant's claimed cost basis reflects the eligible property's fair market value, basis is more closely scrutinized in cases involving related parties, related transactions, or other unusual circumstances. Similar to the authority of the IRS in the context of investment tax credits, in making cash payments under Section 1603, the Treasury Department has authority to decide that "an applicant has miscalculated or misrepresented the basis of its property."[6]

The first step the review team takes to evaluate the claimed basis for solar photovoltaic (PV) properties is to compare the claimed basis to certain benchmarks. The benchmarks used by the review team for solar PV cost basis are predicated on an open-market, arm's-length transaction

[1] Although this paper addresses only solar PV properties the methods used to evaluate cost basis described herein apply to all types of properties
[2] This document has been developed by the Office of the Fiscal Assistant Secretary in consultation with the Office of Tax Policy
[3] 26 U.S.C. 1012
[4] 26 CFR 1.263A-1
[5] Lemmen v. Comr., 77 T.C. 1326, 1348 (1981).
[6] ARRA Energy Company I et al. v. U.S., 97 Fed.Cl. 12 (2011).

between two entirely unrelated parties with adverse economic interests, specifically with respect to setting the eligible property's price.

Benchmarks considered by the 1603 review team are continuously updated (as warranted) drawing on relevant publicly available information and analyses by various experts, data from existing 1603 applications and other confidential sources, and the 1603 review team's experience with solar PV properties.[7] As of the first quarter of 2011, benchmark solar PV market expectations are as follows:

	Residential	Residential/ Small Commercial	Commercial	Large Commercial/ Utility
Size Range	< 10 kW	10 - 100 kW	100 – 1000 kW	> 1 MW
Typical Size	5 kW	25 kW	250 kW	2 MW
Turnkey Price per W	+/- $7	+/- $6	+/- $5	+/- $4

These prices reflect a high quality of equipment (modules, inverters, racking) installed by reputable companies across the United States and include profit.

The review team understands that each system is different. Technology choice affects cost, as do regional market differences and differences in size within the above categories. A property may have specific characteristics that increase (or decrease) eligible costs. Such factors are considered in evaluating how a given application's basis compares with benchmark prices.

If claimed basis is deemed consistent with benchmark prices, the review team typically focuses the remainder of its cost review on examining line items provided in the detailed cost breakdown to ensure that only eligible items have been included and that no costs have been inappropriately attributed to the property. If there are no ineligible items, the basis reflects only items appropriately attributable to the eligible property, and there is adequate documentation to support that the costs reflect actual costs, the cost basis is accepted.

The review team may ask the applicant to provide additional detail if a cost breakdown line item is defined too generally. If ineligible items are identified, they are removed, and the payment is based on the corrected amount. For example, although a project may necessitate a fence for security or a building for operations and maintenance, such costs are not eligible.

Applications with a claimed basis that is materially higher than benchmarks will receive closer scrutiny. In addition to ensuring that only eligible costs are included, the review team looks at whether there are related party considerations, or other unusual circumstances, such as where the transaction determining basis may be influenced by other related transactions. One example of related transactions would be a case in which the benefits of a power purchase agreement are acquired at the same time the Section 1603 eligible property is acquired.

[7] For example, some sources include: the U.S. Department of Energy's $1 per Watt Study, the California Solar Initiative, Tracking the Sun report, and confidential interviews with nationally-recognized solar industry officials.

Common examples of related party or other unusual circumstances include:

1. Owner/applicant is related to the developer, installer, or supplier (collectively referred to as the "developer"). The developer may be a separate, legally-organized business, but there is common ownership/control.

2. Owner/applicant is a party to one or more related transactions with the developer such that economic interests in the specific transaction determining basis may not be adverse. For example, the owner/applicant purchased the energy property from the developer and leased the property back to the developer.

Where such circumstances are present, the review team evaluates whether the claimed basis is consistent with the property's fair market value.[8] As one aspect of this evaluation, where related transactions or other unusual circumstances are present, the review team will consider the applicant's allocation of the cost to the eligible property, relative to other ineligible assets, rights, or contracts that may have been explicitly or implicitly conveyed in the transaction(s). In this context, the owner/applicant may be asked to submit a more detailed cost breakdown. Specifically, original manufacturer's invoices/costs to the developer should be provided for major equipment, subsequent markups by the developer should be enumerated, and any markups by the owner identified. The owner may also submit a detailed and credible third-party appraisal (discussed below) demonstrating that the claimed basis is consistent with a market transaction between unrelated parties with adverse economic interests.

Ultimately, the review team determines whether or not the claimed basis was properly calculated and/or properly represented fair market value, taking into account market expectations, the specifics of the application in question, and supporting documentation provided by the applicant. If the review team determines that the basis was not properly calculated or represented, the review team may adjust the basis on which a 1603 payment is made to a level consistent with the review team's view of the property's true cost, as informed by documentation provided by the applicant and other relevant information and analysis. This is no different than what might take place upon examination by the IRS if the applicant elected the Section 48 tax credit rather than the Section 1603 payment.

Fair Market Value

The IRS generally defines fair market value (FMV) as "the price at which property would change hands between a buyer and a seller, neither having to buy or sell, and both having reasonable knowledge of all necessary facts."

[8] An evaluation of the property's fair market value is also relevant in the context of applications by lessees of leased property, where the applicant has chosen fair market value as the basis.

The review team does not prepare appraisals for energy property. Rather, the review team evaluates appraisals provided by applicants and prepared by independent, certified appraisers with expertise in solar PV properties. There are three broad and interrelated methods that are used in valuation efforts: the cost approach, market approach, and income approach.

Cost Approach

Based on the actual cost to build the property. This approach should clearly show the cost buildup, including hard costs, soft costs, and profit. Because the 1603 program only applies to energy property placed in service after December 2008, properties are new, and the actual costs should be readily available. Because cost data for PV systems is increasingly timely and available, this approach tends to be the most concrete and supportable analysis and is favored by the review team.

The Section 1603 review team will accept a cost approach that includes only eligible property and a markup that is consistent with industry standards and with the scope of work for which the markup is received. While appropriate markups are case-specific and can depend on the ultimate transaction price, the 1603 review team has found that appropriate markups typically fall in the range of 10 to 20 percent. A cost approach that includes a markup should explicitly address the appropriateness of the selected markup in light of the activity, capital investment, and risk for which that markup is compensating.

Market Approach

Based on sales of comparable properties. Thousands of solar PV properties have been installed in the last two years, and market data are readily available. However, consideration must be given to ensuring that the prices of chosen comparables reflect only the value of eligible property.

Income Approach

Based on the discounted value of future cash flows generated by and appropriately allocable to the eligible property. Numerous assumptions must be made, including forecasts of all relevant project revenue and cost streams, cost of capital (debt and equity), rates of inflation and taxes, number of periods of income, and residual value. The review team has found this to be the least reliable method of valuation given the number of variables that are subject to speculation and open to debate.

Importantly, an income approach also often requires careful consideration of the appropriate allocation of value to the eligible energy property. In cases where the income approach yields a value that exceeds the cost to build the property by a significant margin, this raises a question of whether a portion of the claimed value should, in fact, be allocated to other ineligible assets, rights, or contracts associated with the production of income from the eligible property, such as a power purchase agreement. In such instances, applicants can accelerate reviews of their applications by ensuring that appraisals adequately address the issue of appropriate allocation of basis to the eligible property. For example, appraisals should address the FMV of the eligible property specifically, and not the “project” in which that property is being used.

For purposes of Section 1603, a credible income approach to valuation will consist of a detailed spreadsheet model showing annual revenue and expenses over the term of the contract with a reasonable residual value at contract termination.

Key Assumptions include:

- Inflation rates should be supported by credible sources.
- Discount rates should reflect an appropriate risk premium above the risk-free rate.
- Speculative revenue (i.e., revenue that is not specifically contracted and guaranteed by a credit-worthy customer) will be closely scrutinized and must be well-supported and documented. Projected revenue beyond contracted periods should be based on conservative, publicly-available data.
- All expenses must be included, both annual ordinary operating expenses and major maintenance (e.g., inverter replacement).
- All depreciation, taxes, and other considerations should be incorporated into the model.

These and all other assumptions should be well-reasoned and sufficiently documented, and should reflect market expectations. Moreover, the income approach should explicitly address the allocation of the estimated discounted cash flows to the eligible property.

Questions related to cost basis may be directed to 1603questions@treasury.gov .