



Documents for Podcast 011
Let the Sun Shine In—Solar and Alternative Residential Credits
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This week we'll look at the credits created by new Section 25D added by the Energy Tax Incentives Act of 2005, effective for 2006 and 2007. For Arizona residents, we'll also review the Arizona credit for solar energy devices.

General Rules

New IRC §25D adds three new credits beginning in 2006. Those credits consist of:

- 30 percent of the qualified photovoltaic property expenditures made by the taxpayer during such year,
- 30 percent of the qualified solar water heating property expenditures made by the taxpayer during such year, and
- 30 percent of the qualified fuel cell property expenditures made by the taxpayer during such year.¹

The individual credits also face individual dollar amount limits. Those limits are:

¹ IRC §25D

- \$2,000 with respect to any qualified photovoltaic property expenditures,
- \$2,000 with respect to any qualified solar water heating property expenditures, and
- \$500 with respect to each half kilowatt of capacity of qualified fuel cell property for which qualified fuel cell property expenditures are made.²

Unused credits can be carried forward to the following year.³ The expenditure is treated as made when the original installation of the property is completed⁴ except that in the case of expenditures in connection with the construction or reconstruction of a structure shall be treated as made when the original use of the constructed or reconstructed structure by the taxpayer begins.⁵ Given the fact that the expenditure must take place within a narrow two year window, this provision will be important not just for the timing of the credit, but also for whether the taxpayer qualifies at all for the credit—a date the expenditure is treated as made under these rules before January 1, 2006 or after December 31, 2007 would eliminate the right to claim the credit.

As well, if the date can be pushed into that window, it would qualify for the credit. That may open up some planning opportunities this year if installation or use can be delayed until after January 1, even if the property was purchased prior to December 31, 2005.

Taxpayers cannot count any expenditures made from subsidized energy financing as defined by §48(a)(4)(C).

The credit does not offset the alternative minimum tax—so taxpayers who are subject to the alternative minimum tax will not see the benefits of these credits.

The various types of property and unique restrictions are described below.

Qualified Photovoltaic Property Expenditures

Qualified photovoltaic property expenditures are defined as “an expenditure for property which uses solar energy to generate electricity for use in a dwelling unit located in the United States and used as a residence by the taxpayer.”⁶ Note that there is no requirement that this expenditure be made for a taxpayer’s *principal* residence, unlike the §25C credits and the fuel cell credit under this section. So this expenditure (and ones for solar water heating) can apply to another property of the taxpayer, so long as it is used as a residence.

2 IRC §25D(b)(1)

3 IRC §25D(c)

4 IRC §25D(e)(8)(A)

5 IRC §25D(e)(8)(B)

6 IRC §25D(d)(2)

Labor costs can be included as part of the qualified expenditure⁷ and the property can be a structural component of the roof of the structure if it otherwise qualifies.⁸ Thus, the property can be incorporated into roofing materials. RIA explains this in their analysis of the law by noting that there exists thin film solar cells with semiconductors only a few millimeters thick that can be allow solar cells to be part of of the roofing materials.⁹

However, any “energy storage medium” that has a use in addition to storage does not count—for instance, swimming pools and hot tubs cannot be counted as part of an expenditure even if the system does make use of the pool or hot tub to store heat for use in its otherwise qualified purpose.¹⁰ According to the Committee Reports, the property must be used exclusively for purposes other than heating swimming pools and hot tubs¹¹, though the language of the Code itself doesn’t seem to impose that same exclusive limitation.¹²

Qualified Solar Water Heating Expenditure

A qualified solar water heating expenditure is defined as “an expenditure for property to heat water for use in a dwelling unit located in the United States and used as a residence by the taxpayer if at least half of the energy used by such property for such purpose is derived from the sun.¹³” Solar water heating property must also be certified either by the Solar Rating Certification Corporation or a comparable entity endorsed by the government of the State in which the property is installed.¹⁴

As with the photovoltaic property, for solar water heating expenditures, labor costs can be included as part of the qualified expenditure¹⁵ and the property can be a structural component of the roof of the structure if it otherwise qualifies.¹⁶ As well, the “energy storage medium” alternative use restriction applies to solar water heating property. Remember again that according to the Committee Reports, the property must be used exclusively for purposes other than heating swimming pools and hot tubs.

7 IRC §25D(e)(1)

8 IRC §25D(e)(2). Note that while the title of this provision refers to “solar panels” the text refers to solar panels *or other property*.

9 *RIA’s Complete Analysis of the Tax Provisions of the Energy and Transportation Acts of 2005*, (RIA, 2005), p. 26

10 IRC §25D(e)(3)

11 See the Senate amendment explanation in the *Joint Committee on Taxation Report—JCX-60-05* on Section 25D)

12 To me it seems likely that this potential “oversight” in the language is one that could very well be fixed in the inevitable technical corrections bill. But for now I believe you could argue that the plain language of the provision only seems to exclude the portion of the expenditure related to the pool, hot tub or similar item.

13 IRC §25D(d)(1)

14 IRC §25D(b)(2)

15 IRC §25D(e)(1)

16 IRC §25D(e)(2). Note that while the title of this provision refers to “solar panels” the text refers to solar panels *or other property*.

Qualified Fuel Cell Property

Qualified fuel cell property is defined by reference to a definition found at §48(c)(1)¹⁷ and is limited to property installed in the taxpayer's *principal* residence as defined by IRC §121.¹⁸ As noted before, for the items covered by Section 25D's credits, the principal residence requirement exists only for the qualified fuel cell expenditures.

Again, labor costs can be included as part of the qualified expenditure¹⁹ for this type of expenditure.

Joint Occupancy

As with the §25C's credits, for purposes of the limitations on the credits under §25D joint

17 IRC §48(c)(1) QUALIFIED FUEL CELL PROPERTY. --

(A) IN GENERAL. --

The term "qualified fuel cell property" means a fuel cell power plant which --

(i) has a nameplate capacity of at least 0.5 kilowatt of electricity using an electrochemical process, and

(ii) has an electricity-only generation efficiency greater than 30 percent.

(B) LIMITATION. --

In the case of qualified fuel cell property placed in service during the taxable year, the credit otherwise determined under paragraph (1) for such year with respect to such property shall not exceed an amount equal to \$500 for each 0.5 kilowatt of capacity of such property.

(C) FUEL CELL POWER PLANT. --

The term "fuel cell power plant" means an integrated system comprised of a fuel cell stack assembly and associated balance of plant components which converts a fuel into electricity using electrochemical means.

(D) SPECIAL RULE. --

The first sentence of the matter in subsection (a)(3) which follows subparagraph (D) thereof shall not apply to qualified fuel cell property which is used predominantly in the trade or business of the furnishing or sale of telephone service, telegraph service by means of domestic telegraph operations, or other telegraph services (other than international telegraph services).

(E) TERMINATION. --

The term "qualified fuel cell property" shall not include any property for any period after December 31, 2007.

18 IRC §25D(d)(3)

19 IRC §25D(e)(1)

occupants of a dwelling unit are treated as a single taxpayer, and any limitation is allocated based on the amounts paid by each joint occupant, applied separately for each type of expenditure.²⁰

Cooperatives and Condominiums

Again, the same rules apply to §25C apply to expenditures made under §25D by a cooperative housing corporation²¹ and condominium management association.²² Generally, an owner in either entity will be allocated his/her proportionate share of expenditures made by the corporation or association. And, again, it would appear that a homeowners' association that is not tied to a condominium project would end up "out in the cold" under these rules for an expenditure that would qualify for a condominium association or if made by a cooperative housing corporation.

Business Use

If less than 80% of the use of an item is for nonbusiness purposes, only the allocable portion used for nonbusiness purposes is taken into account.²³ So, once again, an office in home may impact this credit.

Arizona Solar Energy Credit

For those in Arizona, in addition to the federal credits, there is available a credit against Arizona taxes for certain solar energy expenditures—a credit that was in existence prior to federal rules. A credit of 25% of the cost of a solar energy device, up to a maximum credit of \$1,000 (limited to one half of the credit allowed if a married couple files separate returns), is available against Arizona taxes.²⁴ The credit is not refundable, but may be carried forward for up to five years.

Solar energy expenditures are defined by reference to ARS §42-5001(15) which provides that this means "a system or series of mechanisms designed primarily to provide heating, to provide cooling, to produce electrical power, to produce mechanical power, to provide solar daylighting or to provide any combination of the foregoing by means of collecting and transferring solar generated energy into such uses either by active or passive means, including wind generator systems that produce electricity. Solar energy systems may also have the capability of storing solar energy for future use. Passive systems shall clearly be designed as a solar energy device, such as a trombe wall, and not merely as a part of a

²⁰ IRC §25D(e)(4)

²¹ IRC §25D(e)(5)

²² IRC §25D(e)(6)

²³ IRC §25D(e)(7)

²⁴ ARS §43-1083. Note that while many Arizona credits were set up to be "fixed" to eliminate a marriage penalty over the next two years, this credit still works against married individuals—single individuals and married couples both end up with a maximum \$1,000 credit amount.

normal structure, such as a window.”

To qualify for the credit “ the solar energy device and its installation shall meet the requirements of title 44, chapter 11, article 11” of the Arizona Revised Statutes.²⁵

It is important to note that this definition is not the same as the federal definition, though it initially appears that most devices that qualify for the federal credit would qualify for the Arizona credit.

A separate credit is available for solar hot water plumbing stub outs and electrical vehicle recharge outlets under ARS §43-1090. A builder can elect to transfer these credits to the buyer of the house. The credit is limited to \$75 for each installation for each separate house or dwelling unit. Costs related to these items are not eligible for the solar energy device credit if the stub-out was installed by the builder prior to transferring title to the taxpayer.²⁶

²⁵ ARS §43-1083(F). The referenced provisions are ARS §§44-1761 and 44-1762 which provide standards for solar energy devices and those who install them.

²⁶ ARS §43-1083(G)