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Valuing commercial solar photovoltaic arrays - by Curtis and Friel

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Some perspective from Karen Friel, MAI on Valuing a Commercial Solar photovoltaic (PV) Array.

The Massachusetts and Rhode Island Chapter alongside the Massachusetts Clean Energy Center will be hosting “Residential & Commercial Valuation of Solar” with Sandy Adomatis. The two-day

seminar will take place on November 4th and 5th at Worcester Cleantech Incubator at 44 Portland St. in Worcester. This program is being offered through a grant from the Massachusetts Clean Energy Center, so the two-day course is only $150. The course is approved for 14 hours of continuing education (CE) in Massachusetts and 15 hours in Rhode Island.

For this month's New England Real Estate Journal article, I have asked Karen Friel, MAI of Friel Valuation Advisors, LLC to share her insights on solar.

As a commercial appraisal reviewer, Karen often reviews appraisals of commercial properties with a solar component. Solar is becoming commonplace within appraisals–ground mounted or roof mounted on commercial buildings and solar farms. Here are a few keypoints that Karen recommends keeping in mind on the commercial side of solar appraisals:

• Don't try to reflect the value of the array by simply eliminating electrical expenses in the Direct Cap. This is the ultimate cop-out and I am not even going to address all the shortcomings in that method.

• Don't value the electricity savings/electricity sold by "loading a real estate cap rate" for the shorter life of the solar array. This doesn't account for mid-term costs like inverter replacement or the declining output of the panels over their useful life. Moreover, a real estate cap rate bears no meaningful relationship to the risk profile of a solar array.

• Don't add the solar array electrical sale revenue to the real estate revenue in the direct cap. Aside from the shorter useful life issues, solar array revenue is not subject to a vacancy and collection loss. Solar arrays work whether or not a tenant is occupying the space.

• Don't ignore the lease payments and purchase price options if the array is leased. These costs must be applied against any revenue projections. This is hard to do in a Direct Cap analysis. (By now, it should be clear that Direct Cap has limited usefulness when it comes to solar photovoltaic (PV).)

• Don't try to estimate the output of a solar PV array. Leave that to the experts. Make all the extraordinary assumptions you would like around this.

• Isolate the value of the solar PV from the building value. (You can add them together later if that's what you and your client decide.) There are canned Solar PV DCF programs that are pretty reliable. They tap directly into local utility prices and can save a lot of research. Some can also estimate output based on a limited number of variables.

• Electricity generation is pretty low risk. Sunlight is free and the sun rises daily. That's pretty dependable. Consider that in selecting a discount rate.

• Consider the value of solar incentives and understand whether or not your client intends to lend against them. Massachusetts arrays sometimes benefit from SREC's (Solar Renewable Energy

Credits) or SMART (Solar Massachusetts Renewable Target) program that pay array owners a separate income stream for a finite period to encourage solar production. Other states offer similar programs. Are these payments separately salable apart from the real estate? Is there risk higher or lower than the income stream associated with the electricity generation? Discuss these factors in selection of the discount rate. Isolate the value of the incentives apart from the electricity generation.

• The federal income tax credit for solar PV is just that; an income tax credit. But unlike other real estate related tax credits (LIHTC's, historic tax credits and New Market tax credits) it only has value to the party to whom the credit is issued. It can't be sold to a third party and I don't believe there's any way for a lender to put a lien on it. Moreover, it disappears after April 15th. The tax credit is useful to make the system financially feasible, but does not have a market value. The solar PV income tax credit should not be included in the appraised value.

Karen, thank you for sharing your insights on solar valuation. We look forward to seeing everyone at "Residential & Commercial Valuation of Solar" with Sandy Adomatis on November 4th and 5th.

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