Market-Based Investigation of Residential Solar Installation Values in the Portland and Bend, Oregon Metropolitan Areas

Background

For a considerable time, the solar community has pondered the question of the market value of solar thermal (h2o) and solar Photovoltaic (PV) arrays. This is due, in part, to the developmental state of the industry. In many areas, most solar h2o and PV installations are carried out by governmental and/or industry groups that subsidize the installations in some way, usually a combination of rebates on the purchase price and tax credits.

With the rise in energy costs over the past several years and the clearer understanding of the issue of climate change on an international level, citizens, utilities, and governments have increased efforts to harness solar power and conserve energy. This has led to the increase in residential solar installations in recent years and a commensurate amount of spending on solar. However, while the number of installations has grown greatly recently, the total amount of installations versus the number of residential properties is still quite low. This explains both the desire by many in the industry to understand the market value of solar installations as well as the relative lack of data available on which to base the value.

This study uses market data and the appraisal process to estimate the market value of solar h2o and PV systems.

Key Findings

- From the 10 properties analyzed in this study, 8 of which have PV arrays, one of which has solar thermal, and one that has both systems, an average contributory value opinion of $6,580 to $9,480 was found.
- The values in this report also appear to rise over time, from lower apparent market values for the installations in 2005 to higher values in 2008.

Recommendations

- ETO check the number of properties with solar installations for transfers on an annual basis. If a property has transferred on which ETO has installed a solar system, then it should be analyzed for applicability to this study and included in this study if appropriate.
- ETO should study the overall housing markets in the Portland and Bend, Oregon areas to determine the rate of transfer of residential properties with solar installations compared to the general residential real estate markets in those areas
- ETO should continue to monitor all residential valuation studies nationally that are related to green building and/or energy efficiency for the most current information related to solar measures.

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MEMO

Date: January 19, 2010
To: Board of Directors
From: Kacia Brockman, Senior Solar Program Manager
Brien Sipe, Evaluation Project Manager
Subject: Staff response memo to Residential Valuation of Solar Study

In an effort to explore what contributory value, if any, residential solar PV and thermal systems have on real estate transactions in Oregon, Energy Trust contracted with Watkins & Associates to explore recent transactions involving homes where these systems have been installed. The study included two phases, the first beginning in early 2009 which focused on property transfers in the Portland Metro area, yielding four transactions. The scope was widened to include the Bend area, yielding a total of ten properties for which appraisals were conducted. All initial appraisals were reviewed by third parties, with re-appraisals occurring in situations where significant differences in value arose.

Staff is very interested in quantifying non-energy benefits for solar energy systems to help consumers make educated purchasing decisions and to inform program design. Currently, studies have focused on the added value of energy efficiency in the California market and could not be translated to solar energy systems or to the Oregon market with any certainty.

Staff feels that the current sample size limits the findings to being indicative: study transactions demonstrated measurable positive added value for solar systems. A sample of 20-30 homes would yield a more conclusive estimate, and therefore Energy Trust has decided to revisit the program database for additional real estate transactions (this is scheduled to occur in June 2010) in an effort to expand the sample.