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Solar power on steroids - by Brian White

March 12, 2021 - Appraisal & Consulting

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Grid-tied solar systems have been multiplying over the past decade in New Hampshire, and throughout all of New England, as solar technology and the financial feasibility of installing a system have both improved. A solar array can be either a rooftop system or a ground-mounted system, but the game changer may be to install a ground-mounted dual-axis, dual-use solar tracker with real time light sensing and bifacial solar panels. A solar tracker is typically a fixed concrete and steel post with a galvanized or MAC steel (magnesium alloy coated steel) frame supporting from 24 to 48 solar panels. Solar arrays produce direct current (DC) power that is inverted to alternating current (AC) power that can be used to off-set the electric usage for a residential or commercial property and used to send AC power to the grid for Net Metering credit. Output is generally calculated based on the number of SRECs (Solar Renewable Energy Credits) produced by the solar array system. One SREC equals 1,000 kilowatt hours. In N.H., a residential property owner is able to take advantage of several programs that could make it financially feasible to install a solar tracker system.

1. In 2021, the federal residential energy efficient property credit for solar allows for a 26% (through 2022) dollar-for-dollar reduction in the amount of income tax you would otherwise owe.
2. The N.H. Public Utilities Commission offers a rebate of \$0.20 for each watt installed.
3. Net metering in N.H. requires the electricity company provide a credit for every surplus kilowatt hour generated. The credits can be carried forward as a credit or they can be paid out at the avoided cost rate which is lower than the retail rate for electricity.
4. The N.H. renewable portfolio standard allows for property owners to sell their SRECs to a utility or to an SREC aggregator.
5. Lastly, many municipalities exempt solar arrays from property taxes.

While there are many solar programs that can make installing a residential solar array feasible, there

are even more financial benefits of installing a solar tracker on commercial property. Packy Campbell, owner of RSA Realty LLC, is a Seacoast N.H. area real estate broker and developer who is also a New England distributor for Sun Action Trackers. Bright Spot Solar LLC is a new solar construction company, started by Campbell, which sells and installs solar trackers along with providing sales and training to existing solar companies. This company promotes dual-use tracker systems that allow for land to be used for a commercial or farming use along with having the solar trackers to provide cash flow. Campbell owns several commercial developments (retail properties, car washes and self-storage facilities) that he has added, or has plans to add, solar trackers. Campbell indicates that “a solar tracker array of 3 trackers with a total of 96 solar panels is currently outperforming a 400-panel roof mount project.” Mark Boulanger, CPA and partner at Raiche and Company, CPAs explains that, with recent tax code modifications, solar arrays are now considered equipment eligible for depreciation. The Trump era tax reform and the extension of the 26% solar tax credit allows for over 50% of project cost to be offset in first year filing. Boulanger did stress that the exact tax savings is based on the individual’s or business’s tax bracket. In addition, commercial projects are eligible for USDA REAP (Rural Energy for America Program) Grants which is when cash is paid to owner at 25% of the total project costs. Taking all of these factors into account, a commercial solar project can see as much as 75% of the initial investment effectively recouped within the first year.

Campbell says that “by using land on existing commercial properties, mostly over vehicle parking areas or on unused surplus land areas, the land opportunity cost is eliminated.” Most towns treat trackers, which are non-pervious and have a pad base of 30 inches in diameter, like a light post, sign or telephone pole and are not subject to building setbacks. Campbell recently obtained approvals from two Strafford County towns that will allow for the solar trackers to extend through the proposed self-storage buildings. The galvanized roof can reflect the sun to the “bifacial” or back side of the solar panels adding another significant increase in production. Bright Spot Solar has designed solar trackers that maximize the new solar technology resulting in more than a two-fold increase in solar power production as compared to a fixed-panel array. Given the increased power production and financial feasibility of these ground-mounted solar trackers with bifacial solar panels, you should expect to see them coming to your market area soon.

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