

An Innovative Community Powers Itself and the City of South Burlington with Renewable Energy

A 150kW solar array currently under construction in South Burlington, Vermont, will soon be generating electricity for an uncommon consortium of users including a farm, a residential community and the City of South Burlington. This net metered solar array is a proof-of-concept project associated with a farm and a community energy venture program being created by Vermont entrepreneur Will Raap and Encore Redevelopment of Burlington, Vermont (encoreredevelopment.com). The 528 panels are being installed on a 10-acre organic vegetable farm in South Burlington called the Farm at South Village which is a part of South Village Communities LLC (southvillage.com), a 220 acre conservation development located at the intersection of Spear Street and Allen Road, approximately 10 minutes from downtown Burlington. South Village Communities is currently in Phase 1 of construction, with 20 units to be completed by the end of 2011.

The Farm at South Village is at the center of the South Village community in both location and spirit. Now in its third year of operation, the farm has approximately 5 acres under cultivation, with the remaining land being prepared for additional vegetable crops, berries, orchards and greenhouses. The Farm at South Village CSA, which is open to the local community as well as to South Village residents, offers members weekly shares of the farm's produce. The CSA has grown steadily from 30 members in its first year of operation to 80 members in 2011. A pick-your-own herb and cutting garden, laying hens and beehives are some of the other amenities provided by the Farm. By clustering the housing into a compact village footprint, more than 70% of the land at South Village has been forever conserved for agriculture, wildlife and recreation. With 165 acres of open space, residents are able to enjoy 180-degree views of the Green Mountains, Lake Champlain, and the Adirondacks.

A residential development that connects homeowners to the food they eat – and now to the electrical power they consume – is a model whose time has come. Local, regional and national interest in South Village is at an all-time high, with recent articles appearing in local media, Vermont Life and the New York Times. When the carbon-free electricity begins flowing in early June, it will power the entire infrastructure associated with the Farm at South Village, including greenhouse ventilation, lights, heat, irrigation pumps, refrigeration and cooling for a future farm store. A portion will also power all of the streetlights and sewer pumps for the South Village community while the rest of the electricity produced by the Farm at South Village solar array will be used by the City of South Burlington to power essential infrastructure including stoplights and sewer pump systems.

For Will Raap, South Village has provided an opportunity to connect his background in urban planning with his long-time commitment to land conservation, local food production and renewable energy. He has played a leading role in the South Village development, the Farm at South Village, and now in the on-site solar project.

“Our first energy crisis in the 1970’s was a wake up call that the pattern of sprawling suburban developments far from jobs with long commute times and consuming valuable farmland was not sustainable. Village-style developments closer to commercial centers that preserve open space and can produce food and energy for residents is just plain smart.”

The Farm and Community Energy Ventures program aims to provide farm and communities with reduced electrical costs by constructing farm-based renewable energy systems. Farmers, communities and non-profits can begin a path to energy independence through a lease-to-own model for renewable energy systems that is similar to the financing used for other more commonplace equipment and structures.

Under this program, Encore Redevelopment and its investors will design, permit, construct and own renewable energy systems that will provide electricity at below current market rates through a Power Purchasing Agreement (PPA). Added revenue from the Green Mountain Power Corporation’s SolarGMP program make the project feasible. Recognizing the value to ratepayers of distributing excess power to Vermont’s grid at times of peak demand on sunny days while also reducing transmission and distribution costs, SolarGMP provides owners of solar net metering systems in the GMP service area with a \$0.06 payment adder on top of the retail rate for every kilowatt-hour generated. Reduced electricity costs are an immediate benefit for host sites and a hedge against future increases in energy costs. Moreover, these financial benefits come with no up-front costs to the host.

At the end of the PPA term, the farmer has the right of first refusal to purchase the system at a depreciated fair market value. If he/she elects not to purchase the system, he/she will have the option of either renegotiating the lease with the original investors or entering into a new lease agreement with a separate third-party investor/owner. In any of these cases, this means the farmer will ultimately gain possession of a system that will provide them with many years of clean energy to support their operations.