

Solar Cooperatives

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Achieving economies of scale and improving market access are some of the key reasons for forming a cooperative. These rationales explain the increasing interest in solar cooperatives. Consumers are interested in solar electricity generation for a number of reasons including decreasing their carbon foot print, reducing electricity bills and investing in a hedge against future electricity price increases. In terms of “green” energy, solar power stacks up pretty well primarily because the seasons and times of day peak generation is fairly well matched with times of peak electricity use.

While rooftop installation of solar panels is becoming more common, it comes with several disadvantages. It’s obviously not open to individuals renting a home or apartment. The homes orientation or roof slope may not be optimum. The installation may detract from the homes aesthetics. The per-kilowatt cost is also likely much higher relative to a larger scale installation. Finally, from a utilities standpoint, a large number of independent generation devices make it difficult to maintain safe and constant voltage levels throughout the network.

A solar garden provides a means to overcome some of these barriers. A solar garden is a centrally located array of solar panels which are owned by multiple investors. Solar gardens are structured both as LLCs and as cooperatives. The basic structure is obviously a good fit for the cooperative business model. On a per kilowatt basis the capital cost is much lower than a rooftop system. Members can buy in at whatever level they desire. Renters and homeowners who are unable or unwilling to install a roof top unit could become members in a solar cooperative. The array can be sited in a logical location, and professionally installed and managed. The scale of the facility often makes it practical to include solar tracking technologies which move the panels to follow the sun.

All types of distributed energy generation create issues for utility companies and their concerns are legitimate. Utilities are more receptive to solar gardens because they are centrally managed and metered. Community scale solar projects occupy a middle ground between residential and utility scale generation. That can make them small enough to match to interested investors but large enough for the utility to work with.

In rural America we tend to think of cooperatives in terms of grain and farm cooperatives, cotton gins, rural electric cooperatives and Farm Credit entities. In reality the cooperative business model is dynamic and is being applied to new opportunities. Solar cooperatives could be a great addition to our cooperative family.