

Land use strategies in the solar age

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Renewable Portfolio Standard goals outlined in New Jersey's Energy Master Plan call for distributors to supply at least 30 percent of the State's electricity from renewable energy sources by 2020. Spurred by this mandate and fueled by current financial incentives, numerous large scale commercial solar installations are presently in the application pipeline – primarily on agricultural lands in southern New Jersey.

Substantive regulatory changes have been made to advance solar energy, due in part to the presumption that solar goals would not be adequately addressed by local master planning. Recent New Jersey legislation deems solar technology an “inherently beneficial use” and exempts photovoltaic panels from Stormwater Management Regulation impervious cover calculations, leaving some land use boards dazed and confused.

Sustainable energy planning should provide a balanced approach that allows for solar placement in appropriate locations in accordance with Master Plan objectives, while giving careful consideration to environmental and agricultural resources outlined within a town's Environmental Resource Inventory and Farmland and Open Space Preservation Plans.

Below is an overview of the workshop presented by Christopher J. Warren, Professional Planner, Alaimo Group, at the ANJEC Congress on Oct. 15. His slide presentation is available on the ANJEC web site at www.anjec.org/pdfs/Congress2010SolarLandUseStrategiesCWarren.pdf.

Solar by the numbers

New Jersey's goal for solar energy is 2,500 MW of solar energy by 2021. Assuming a yield of 1 MW per 4 acres, meeting this goal will require in excess of 10,000 acres of photovoltaic panels.

Solar Renewable Energy Credits (SRECs) are a marketable commodity currently selling at about \$650 per credit, with 1,000 kWh equal to 1 SREC. At this rate, a 1 MW system can produce about \$650,000 in revenue per year.

Solar energy developers are also eligible for a Federal Tax Credit equivalent to 30 percent of the cost of installing the system. For example, if the system costs \$30 million to install, the developer can earn a tax credit of \$9 million.

New Jersey is a leader in the solar energy initiatives that are sweeping the country. While few question the goal of renewable energy, there is a need to look at the initiative in a balanced way.

Classes of solar development

Warren outlined considerations and guidelines land use boards can use in evaluating site plans for various types of solar developments. Different financing options, incentives and restrictions exist for solar development based on type of use, including:

- Small scale accessory use for home, business or institutions;
- Agricultural accessory use;
- Principal use on publicly owned land or redevelopment areas;
- Principal use on private land (commercial).

The impervious cover exemption

Recent law (S921) specifies that the New Jersey Department of Environmental Protection shall not include solar panels “in any calculation of impervious surface or impervious cover” for State regulatory programs or in the review of subdivisions or site plans.

The State exemption is being interpreted as exempting these facilities from local stormwater management regulation due to the changed definition of impervious cover. Due to exemption, the impact of these facilities on actual runoff rate or on the time of concentration cannot be fully determined by municipalities. However, the stormwater impact of ancillary facilities such as substations or electrical equipment yards can be evaluated.

Inherently beneficial use

When the Municipal Land Use Law (MLUL) was amended to characterize wind and solar energy facilities as “inherently beneficial uses,” the New Jersey League of Municipalities opposed the change on the basis that it allows solar development to be located anywhere in the community without demonstrating community benefits and that the amendment represents another example of the interference of the legislature in the local planning process in New Jersey.

The question now becomes: How should renewable energy facilities be regulated now that they are considered “inherently beneficial?” Typically, alternative energy developers will contend that there is no “substantial detriment” to the public welfare or “substantial impairment of the intent and purpose of the zone plan” when they pursue variances or other relief. The onus of demonstrating the proofs has shifted to the public or to the land use board professionals to demonstrate the impact in an irrefutable fashion.

Use by right

The MLUL was also amended to permit renewable energy facilities as a use by right on at least 20 acres of contiguous

land under common ownership within every industrial district of a municipality. In the face of this amendment, municipalities have a number of regulatory options. They:

- Could be silent and rely on the use variance process to regulate;
- Could permit solar facilities in specific zoning districts to encourage their location in those districts, but this approach would not preclude the establishment of these facilities within other districts through the use variance process;
- Could define commercial solar energy facilities as a conditional use to define conditions under which it would be permitted.

Conditional use process

Land use boards should regulate commercial solar in a manner that recognizes the need for these facilities and the degree of visual or other impact. They should also consider whether an alternative use of the land may have a greater undesirable impact. In the current economic downturn, landowners are looking for revenue without major permitting or investment, which could lead to important tracts being committed to solar use for an extended period of time.

The conditional use process is the most appropriate mechanism for regulating commercial solar energy facilities for the following reasons:

- The conditions under which the facility would be permitted are defined and predictable which is important to the review board and the applicant;
- The impact on the alternative use of land is controlled (i.e., the impact on highly productive lands is minimized);
- It balances sustainable agriculture and sustainable energy objectives;
- The objectives of the zone plan with regard to commercial solar are established and must be recognized in the review of the negative criteria when variances are sought in other districts or when variances are sought from the conditional use standards themselves;
- It allows facility closure procedures and assurances to be specified;

- It may enable stormwater management performance standards to be applied.

The key is a well conceived set of conditional use standards that are reasonable in nature and that address bulk standards, visual and offsite impacts and facility location.

In the Pinelands

The Pinelands Commission is developing solar planning principles that will culminate in an amendment to the *Comprehensive Management Plan* later next year. The proposed regulation would be district specific and would permit solar facilities as an accessory use and as a conditional principal use.

Common conditions for principal solar use would be:

- screening of facilities in all districts;
- 200-foot scenic setbacks in Preservation, Forest, and Rural Development Areas;
- re-vegetation requirement when use is terminated;
- no offsite facilities in protected areas; and
- limits on pole height due to visual impact.

Additional proposed rules would apply in various areas of the Pinelands to protect ecological values, prime agricultural soils and agricultural production .

Key conclusions

- The State has made a major commitment to renewable energy;
- Regulations have been modified to support the capital investment in these facilities and to reduce the level of regulation;
- Balance has been tilted in favor of commercial solar developers in use variance procedures;
- The conditional use mechanism enables a municipality to support the sustainable energy objective while establishing appropriate and reasonable conditions;
- Conditional use regulation also increases the predictability of the decision and increases the risk for developers that do not follow local regulatory standards;
- Adopting a sustainability element to the Master Plan would help municipalities add strength to local regulation. 