

Template CAMPUS PV DEVELOPMENT ROADMAP

Opportunity Summary

With support from the U.S. Department of Energy's SunShot Initiative, the Midwest Renewable Energy Association (MREA) is offering free technical assistance to university teams pursuing campus investment in solar energy. Teams will meet one-on-one with technical experts at the [Smart and Sustainable Campuses Conference](#) and pre-conference events in Baltimore, MD, April 3-5, 2016 to further define solar photovoltaic (PV) investment opportunities for their campus. In addition, MREA is offering ongoing assistance and access to the [Campus PV Development](#) online course to help teams develop their own Campus PV Deployment Roadmaps.

Teams that submit a qualified campus roadmap will receive \$500 reimbursement stipends for up to four individuals per university team and will also be eligible for free [PV Design and Sales Training](#) with potential for industry internships.

To be deemed qualified, roadmaps must demonstrate significant progress in each outlined topic area in addition to identifying strategies for roadmap completion as well as areas where technical assistance is required. It is MREA's intention that roadmaps will be submitted after the Smart and Sustainable Campuses Conference and teams have received sufficient guidance and technical assistance.

Overview

The Campus PV Development Roadmap serves as the guiding framework for solar photovoltaic (PV) development for the university campus and associated properties. The roadmap is designed to:

1. Aggregate all necessary information for the development of a solar PV project
2. Engage key project partners in defining a shared vision for PV development and investment
3. Communicate information about PV project development to campus stakeholders

Content

The Campus PV Development Roadmap will include the following elements:

- A narrative including an executive summary in a .doc file
- A project overview slide deck in .ppt or similar file
- An appendix including all supportive documentation

The roadmap should contain the following information:

1. Campus PV Development Team

Describe the team of faculty, staff, students, and other stakeholders that will lead the development of the roadmap. This should include, at minimum:

- Identification of key points of contact
- Description of size and organization of team, including roles and responsibilities of team members who will need to perform the following:
 - Origination – policy and incentive analysis, energy analysis, site selection, economic analysis, feasibility design layout, permitting and interconnection qualification
 - Development – land development studies, permitting, interconnection, stakeholder confirmation, financing confirmation
 - Financing – confirmation of financing structuring and direction, procuring financing, financing company negotiations
- Description of potential student engagement and retention strategies

2. Decision-Making Process and Key Stakeholders

Describe the process for decision-making to receive the appropriate support and approvals needed to advance PV projects. This should include, at minimum:

- Identification of key offices, positions, committees, and individual contacts
- Identification of key concerns and responsibilities of priority decision makers
- Description of relationships of parties, including hierarchies, committee compositions, and influential players

3. Descriptions of Priority PV Development Sites

Identify and describe the priority sites for PV deployment on the campus and association properties. This should include, at minimum:

- Site descriptions for potential sites with aerial and street view maps as appropriate
- Evidence of initial inquiry into current site use and development plans with copies of related documents including legal description, liens, and development plans
- Preliminary description of relevant electrical infrastructure with details on suitable points of interconnection and location of substations

Resources:

- University master plans
- University map(s)
- Copies of target land and/or building lease or ownership contracts
- Copies of electrical and structural drawings for target facilities
- Utility rate tariff and incentive options
- Solar production models by NREL PV Watts (free online), PV Syst software, or other
- AutoCAD or Google Sketch Up software for design layouts

4. Costs and Risk: Approvals and Legal/Regulatory Considerations

Identify the rules, regulations, procedures, and other risk factors that influence the design, siting, and financing of a PV project on the campus and associated properties. This should include, at minimum:

- Utility interconnection requirements and fees
- Evidence of initial inquiry into permitting and inspection requirements and fees
- Evidence of initial inquiry into planning and zoning restrictions
- State and local incentives, financing opportunities, and policies (including, but not limited to interconnection rules, standby charges, third-party ownership, solar easements and rights laws, and renewable energy credits (RECs))
- Evidence of initial inquiry into utility tariffs and incentive programs
- Evidence of initial inquiry into campus rules and procedures

Resources:

- Utility interconnection application and process forms
- City and/or County jurisdictional zoning and permitting forms and requirements
- Federal, state and/or local government incentives and laws for solar
- Utility rate tariff and incentive options
- Campus architecture and facility operating standards and requirements
- MREA / TurningPoint Energy PowerPoint presentations and/or guest presentations

5: Project Financial Goals and University Investment Opportunities

Define the possible financial structures and model financial performance for the proposed PV projects, including potential models of direct university investment. This should include, at minimum:

- Preliminary description of proposed financial models, including legal, tax, and liability considerations
- Preliminary description of budget, priorities, and process for university capital investments

Resources:

- MREA Financial Model for net metered systems and simple PPAs
- University finance model for investment decisions (existing per guidance from CFO or created by finance class to meet the CFO requirements / evaluation criteria)
- NREL System Advisory Model (SAM)

6: Project Executive Summary and Timeline

Develop a draft project summary that succinctly outlines a process for campus PV deployment and investment. This should include, at minimum:

- Introduction and overview of project
- Project goals and leadership
- Description of project benefits and risks
- Key considerations for maximizing project benefits
- Preliminary recommendations for priority development sites
- Preliminary recommendations for project financial structure
- Timeline and benchmarks for project implementation