

Introduction to Solar Utilization in Higher Education Networking & Information Sharing Group

EPA Green Power Partnership



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Speakers and Agenda

- Speakers
 - Anthony Amato, ERG, contractor to EPA
 - Christopher Kent, EPA Green Power Partnership
 - James Critchfield, EPA Green Power Partnership
- Agenda
 - Introduction to Green Power Partnership
 - Background on new federal initiative
 - Solar Utilization in Higher Education Networking and Information Sharing Group
 - Objectives
 - Who should participate
 - How EPA will utilize the Networking Group
 - Questions and Answer session
 - Next Steps



EPA GREEN POWER PARTNERSHIP



Green Power Partnership Overview

- Summary
 - The U.S. EPA's Green Power Partnership (GPP) is a free, voluntary program that encourages organizations to use green power as a way to reduce the environmental impacts associated with conventional electricity use.
- Objectives
 - Reduce emissions and air pollution
 - Expand the voluntary green power market
 - Standardize green power procurement as part of best practice environmental management
 - Provide recognition platform for organizations using green power in the hope that others follow their lead
- Current Status
 - 1,300 Partners using more than 31 billion kWh of green power annually, equivalent to the electricity use of more than three million average American homes.



Partner Snapshot



Current Status

- EPA's Green Power Partnership
 - 134 College and University Partners
 - 81 REC contracts
 - 62 Utility supply contracts
 - 86 onsite solar systems (35,554,856 kWh, 77 owned, 9 through PPAs)
 - 13 off-site PPAs
 - Green power use totaling nearly 2.7 billion kWh
 - Equates to nearly 4% of the voluntary green power market (8.5% of the green power used by Green Power Partners)
 - Equivalent to the annual electricity use of 245,000 average American homes

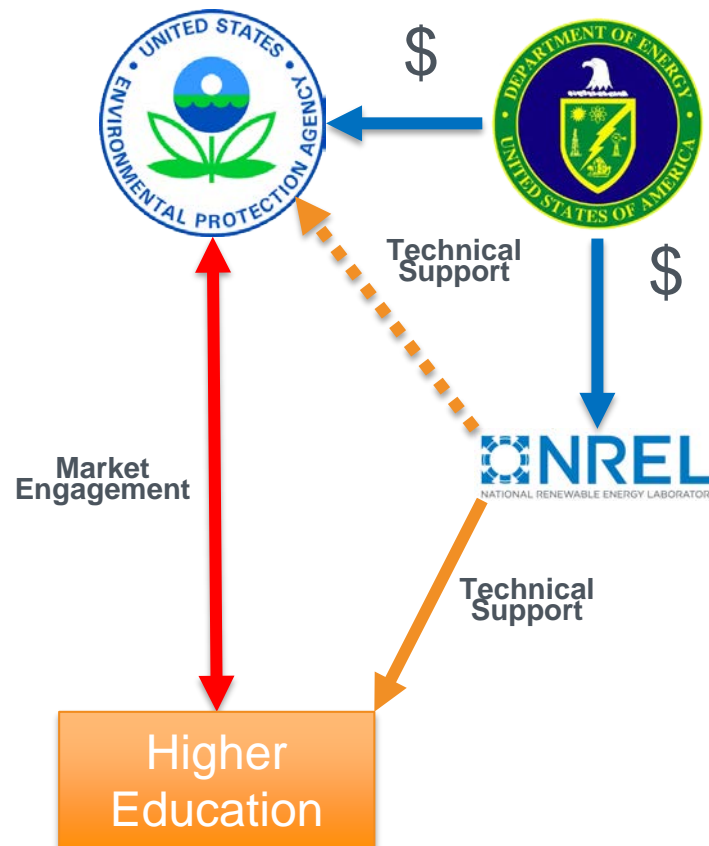




WHY FOCUS ON SOLAR IN HIGHER EDUCATION

Background

- This collaboration is born out of a joint effort between EPA, DOE and the National Renewable Energy Lab to focus on mid-scale solar opportunities
- EPA role is to convene stakeholders, facilitate networking opportunities and disseminate both new and existing resources in an effort to address market barriers
- The National Renewable Energy Laboratory (NREL), funded through a DOE SETO SUNLAMP award, will provide technical support to EPA on tools and resources development, engagement and deployment activities undertaken through this initiative

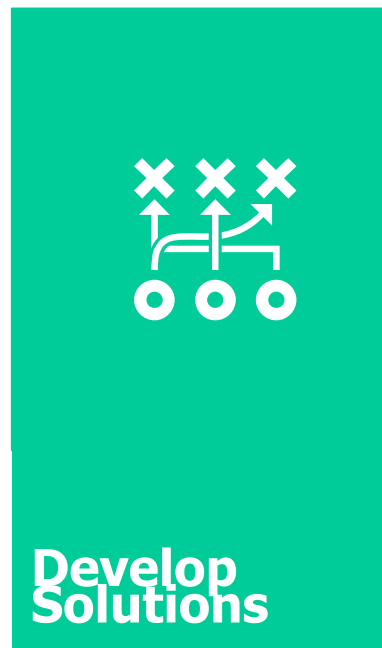


EPA's 18-month Approach

Phase I



Phase II



Phase III



Why Higher Education?

- Higher Education offers great potential:
 - **Homogenous cohort** of identifiable stakeholders
 - Long time and **respected pillars of local communities**
 - **Long-term view** on energy and sustainability issues
 - **Public commitments** of nearly 700 College and University Presidents to do more related to climate and RE
 - Clearly **identifiable set of financing options** including, third-party ownership, revolving loan funds, endowments, student funded initiatives etc.
 - **Tie-ins to educational mission**; training tomorrow's leaders regarding sustainability and renewable energy issues and opportunities
 - Natural **inter-institutional competitive spirit** in the areas of academia and college sports can be extended to and leveraged into solar energy use





HIGHER EDUCATION NETWORKING & INFORMATION SHARING GROUP



Objectives

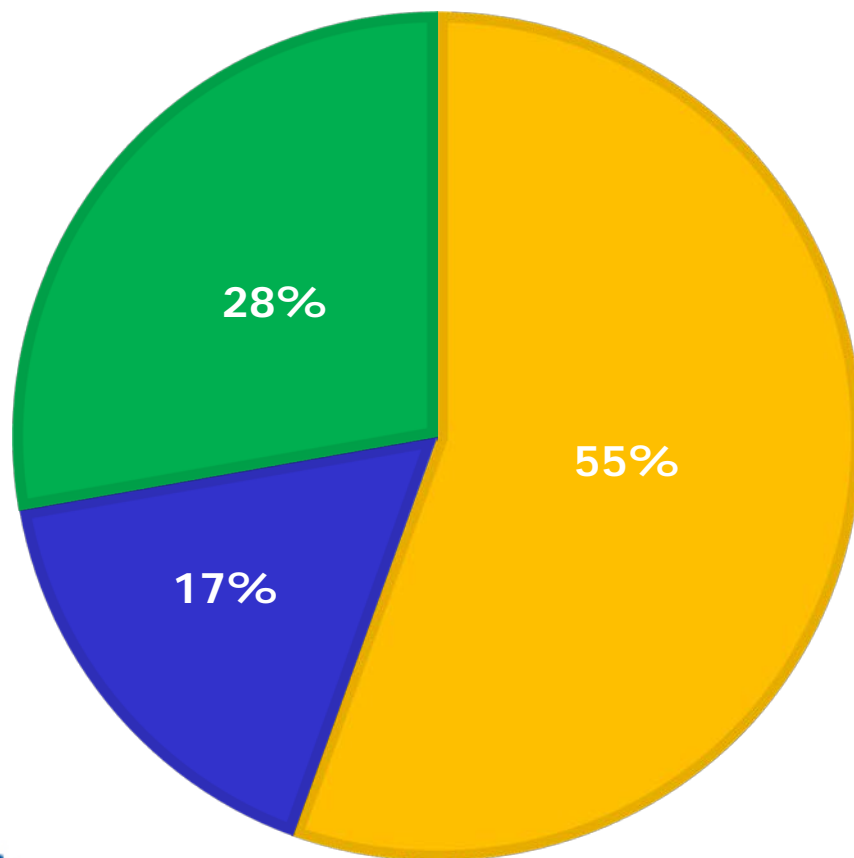
- EPA endeavors to provide targeted solutions that address common market barriers
- Discuss and identify common project development barriers unique to on- and off-campus solar project opportunities at institutions of higher education
- Validate solar development needs of individual attendees
- Exchange information related to individual experiences and practices
- Identify and discuss technical and non-technical solutions to common barriers



Who Should Participate

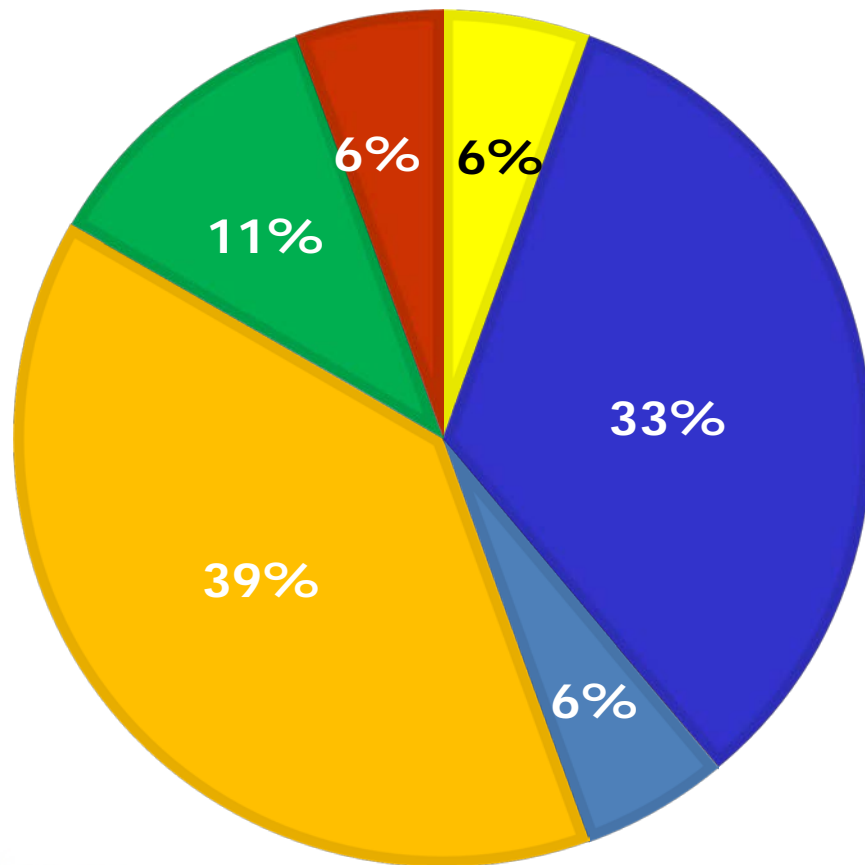
- Stakeholders seeking information on solar development
 - Public and private colleges and universities
 - 4-year and 2-year
 - experienced and novices with solar
 - from different regions
 - from regulated and competitive markets

Range of Experience



- Some direct experience
- Some knowledge, but no direct experience
- Very experienced with solar project development

Known Barriers or Challenges



- Administrative
- Financing
- Other
- Policy
- Site assessment
- Understanding the basics

Focus of this Collaboration Group

- Purpose: present on issues related to solar project development, share experiences about obstacles faced by individual attendees, and deliver potential solutions to these obstacles
- Arranged around 3 topic areas:
 - EPA Webinar 1: Policy Issues (week of 2/22)
 - EPA Webinar 2: Financing Issues (week of 2/29)
 - EPA Webinar 3: RFP, contract and administrative issues (week of 3/7)
- Individuals are invited to attend one or more topic webinars
 - Opportunity to select webinar of interest at end of presentation



Down the Road

- EPA will disseminate solutions, tools, and resources to stakeholders on specific barriers or issue areas over next 18-months
 - Online Resource Directory
 - Basic information and guidance
 - Trainings
 - Templates
 - Case Studies
 - Tools



COMMON ISSUE AREAS

Poll Question #1

- Are you interested in solar opportunities for on-campus, off-campus or both
 - On-campus only
 - Off-campus only
 - Both

Poll Question #2

- What **policy** challenges to solar deployment have you experienced and/or need additional information on?
 1. Availability of 3rd-Party ownership
 2. Regulated market issues
 3. Level/certainty of state incentives
 4. Net-metering policies
 5. Interconnection
 6. Standby charges
 7. RECs / SRECs markets
 8. GHG inventory guidance
 9. Solar claims issues/guidance
 10. Dodd-Frank
 11. State RPS policies
 12. ITC extension
 13. Other (please specify)

Poll Question #3

- What **financial** challenges to solar deployment have you experienced and need additional information on?
 14. Understanding PPA models
 15. (both physical and virtual)
 16. Financial feasibility assessments
 17. Access to tax benefits
 18. Credit rating
 19. Project aggregation
 20. Monetization strategies of RECs (SRECs prices, REC arbitrage)
 21. Accessing alternative financing (endowment, alumni, student)
 22. Long-term contract issues
 23. PPA escalation rates
 24. Financial assumptions
 25. Speaking CFO language
 26. Other (please specify)

Poll Question #4

- What **RFPs, contracts, and administrative** challenges to solar deployment have you experienced and/or need additional information on?

- 27. Understanding best practices
- 28. Access to standardized templates
- 29. Risk/benefit tradeoffs
- 30. Evaluating/comparing proposals
- 31. Site evaluations
- 32. Feasibility assessments
- 33. Capacity and ancillary service benefits
- 34. Negative pricing events
- 35. Curtailment
- 36. Availability guarantees
- 37. O&M
- 38. Other (please specify)

Poll Question #5

- Do you have any lessons learned that would helpful to share with other colleges and universities?
 - Yes
 - financing lessons learned
 - administrative lessons learned
 - policy lessons learned
 - site assessment lessons learned
 - No

Poll Question #6

- What future webinar topic areas are you most interested in being involved?
 - Financing issues
 - Policy issues
 - Request for Proposal (RFP), contract, and administrative issues

Next Steps

- Following this webinar we will contact you about the upcoming webinar sessions for the topic areas you selected.
- We look forward to your participation moving forward and solving your most immediate issues!



Smart and Sustainable Campuses Conference

- April 4-5th in Baltimore, MD
- EPA is holding 3-mini conference workshops
 - Covering: financial issues; RFP, contract and administrative issues; and policy issues
 - Will discuss findings from Networking group webinars in February and March
 - Unique learning opportunity
 - Each workshop will include expert technical speaker(s) and higher education perspectives, each providing a basic level of understanding on key topics to all attendees



Questions?

Contact:

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