



The Parker Ranch installation in Hawaii

Community Renewables Projects

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DOE Technical Assistance Program

- Technical Assistance Project (TAP) Overview
- Introduction / Barriers to Individual Renewable Projects
- Resources for Community Solar Projects
- Resources for Group Buy Projects
- Permitting Guidelines
- Q&A

DOE's Technical Assistance Program (TAP) supports the Energy Efficiency and Conservation Block Grant Program (EECBG) and the State Energy Program (SEP) by providing state, local, and tribal officials the tools and resources needed to implement successful and sustainable clean energy programs.



TAP offers:

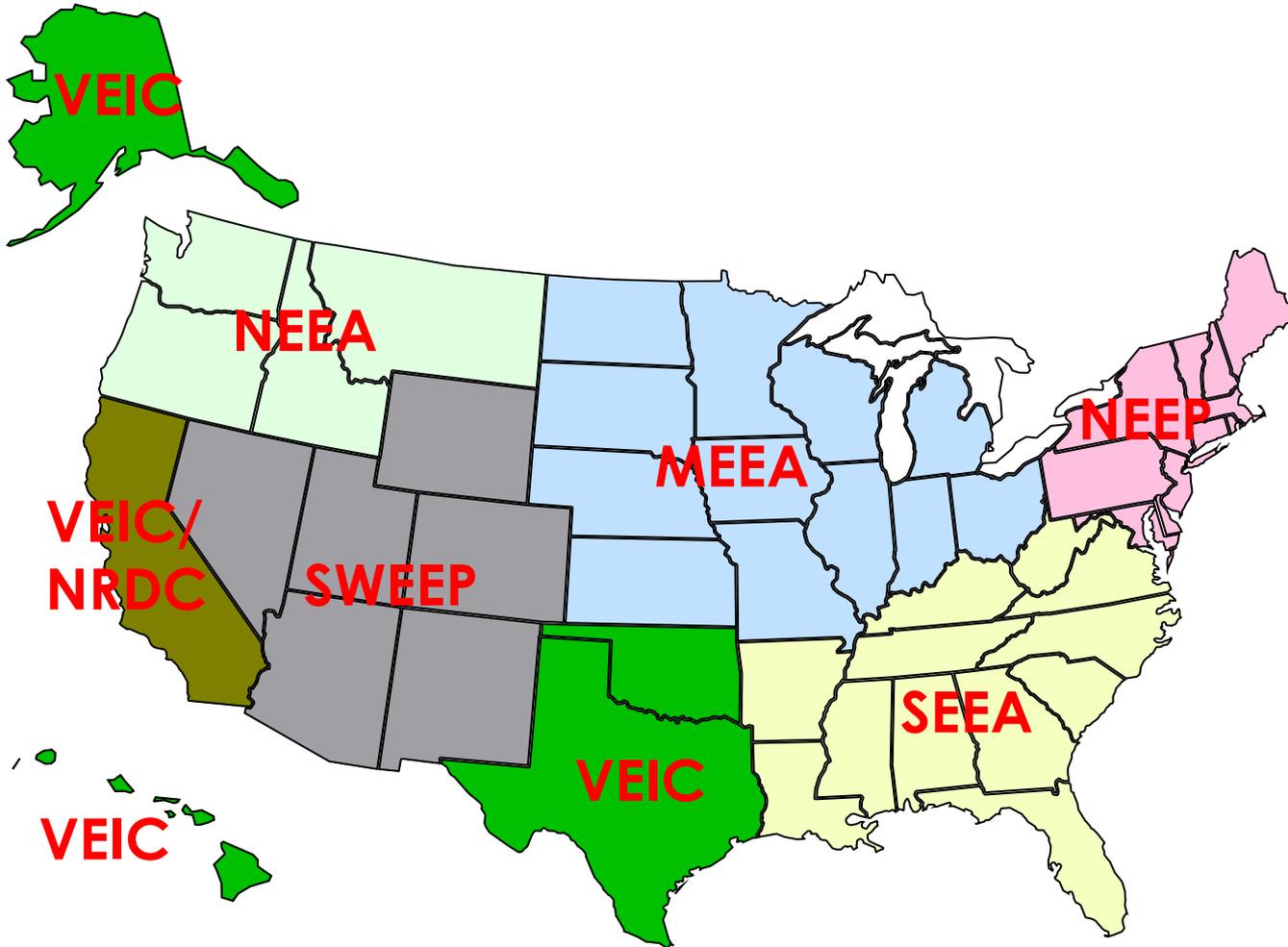
- One-on-one assistance
- Extensive online resource library, including:
 - Webinars
 - Events calendar
 - TAP Blog
 - Best practices and project resources
- Facilitation of peer exchange

On topics including:

- State and local capacity building
- Energy efficiency and renewable energy technologies
- Program design and implementation
- Financing
- Performance contracting

<p>State and Local Capacity Building</p>	<ul style="list-style-type: none"> • Trainings • Workshops • Peer-to-peer matching
<p>Technical</p>	<ul style="list-style-type: none"> • Renewable energy siting and development • Review of technical specs for RFPs • Strategic planning, energy management, and conservation strategies • Green building technologies • Building codes
<p>Program Design and Implementation</p>	<ul style="list-style-type: none"> • Policy and program development • Coordinating rate-payer funded dollars with ARRA projects and programs • Sustainable community and building design • State and regional EE and RE assessments and planning • EE and RE portfolio program design elements
<p>Financial</p>	<p>Program design support and guidance on financing mechanisms such as:</p> <ul style="list-style-type: none"> • Revolving loan funds (RLFs) • Property-assessed clean energy (PACE) • Loan loss reserves and enhanced credit mechanisms
<p>Performance Contracting</p>	<ul style="list-style-type: none"> • Designing and implementing a performance contract • Leveraging private investment • Reducing institutional barriers • Tracking and comparing programs

Who We Are: Team 4



ACEEE, NRDC: National Support

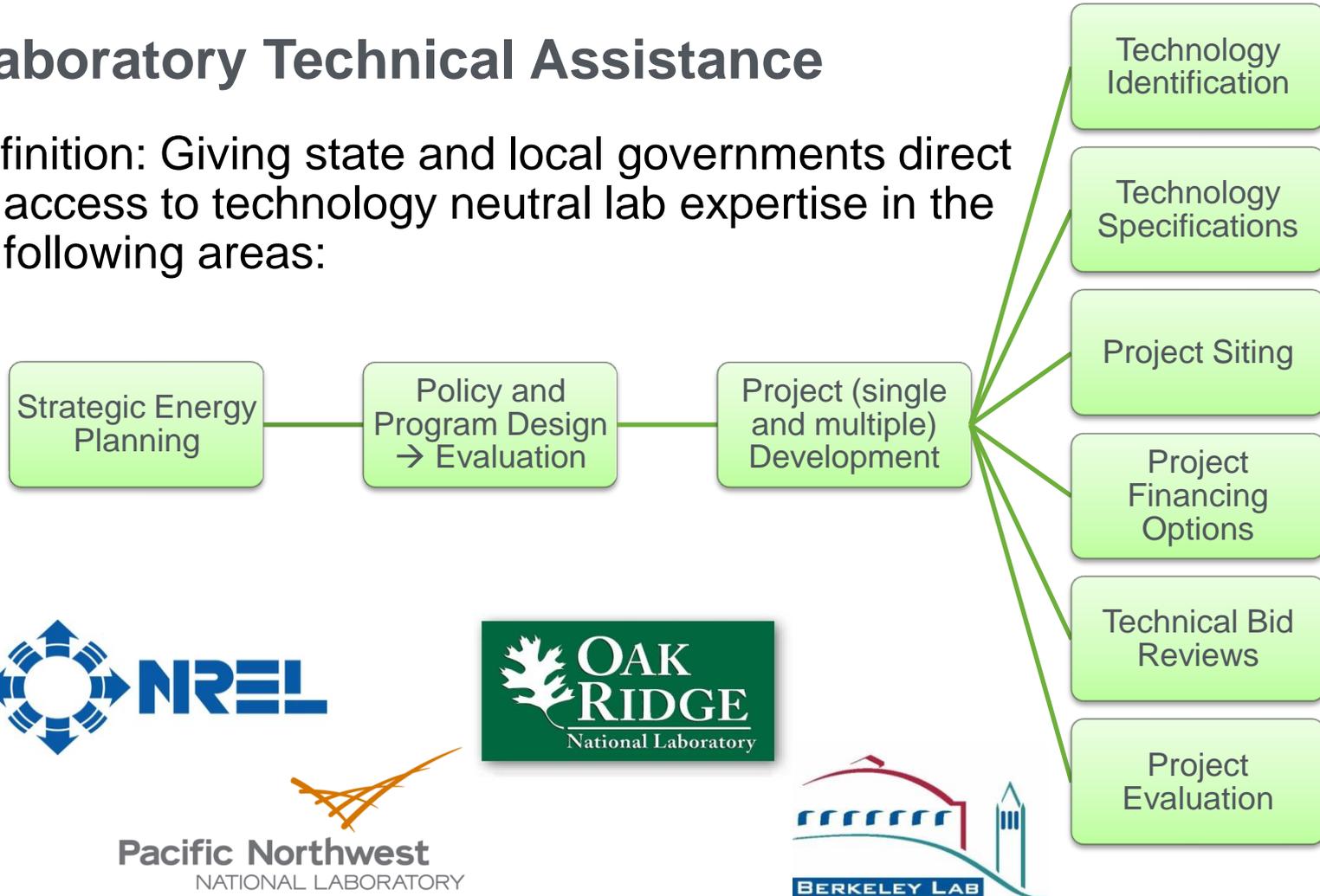


NORTHWEST
ENERGY
EFFICIENCY
ALLIANCE



Laboratory Technical Assistance

Definition: Giving state and local governments direct access to technology neutral lab expertise in the following areas:



- There is increasing interest in effective and financially appropriate ways to develop renewables projects
- Local support for renewable energy projects can fit into a comprehensive approach to an Energy Efficiency and Conservation Strategy
 - Develop and recommend community-wide efficiency and renewable energy activities that reduce greenhouse gas (GHG) emissions, stimulate local economic development, and create jobs

- Site-specific limitations
 - Shading, structural concerns, limited space, etc.
 - Poor perception of renewable system aesthetics
 - Split incentives
- Market conditions
 - High up-front costs (actual or perceived)
 - High transaction costs
 - Lack of information and awareness
 - Commercial & institutional requirements for lowest-cost solutions
 - Inadequate financing options
 - Limited installer market
- Local permitting issues
 - Lack of adequate codes, interconnection guidelines
 - No group net metering

- Well-designed projects undertaken jointly at the community level can address many of these issues
- Strategies, actions, and resources described here can help provide a framework for ongoing energy efficiency and conservation planning at the community level

Resources for Community Solar Projects

What do we mean by “Community Projects”?

- **Community Solar**
 - One PV system - many participants
 - Various ownership and metering options

- **Community Purchase Programs**
 - Many systems – many participants
 - Concept of a “Group Buy”

There are many potential interested buyers of solar who are unable to install a PV system on their roof

Why?

- They rent
- They own a condo
- Their roof is shaded
- Their roof does not have the proper orientation
- They are not allowed (HOA restrictions)
- They can't afford an entire system
- They want to “dip their toe in the water”



Source of photo: <http://www.smud.org/en/residential/trees/Pages/index.aspx>

To date, most installed projects are sponsored by municipal utilities

- SMUD's SolarShares program
- Ellensburg, Washington
- Ashland, Oregon – Solar Pioneers
- St. George, Utah's SunSmart program
- Seattle City Light (in development)

However, beginning to see the emergence of private community solar projects

- Clean Energy Collective, LLC (CEC) – Colorado
- University Park, Maryland

[Links to these projects can be found in the Guide to Community Solar](#)



Picture of 1 MW PV System installed by the Sacramento Municipal Utility District (SMUD)
Photo is from the Guide to Community Solar

Examples of Community Solar



Picture of 78 kW PV System installed by the Clean Energy Collective, LLC, Colorado
Photo is from the Guide to Community Solar

Collaborative effort

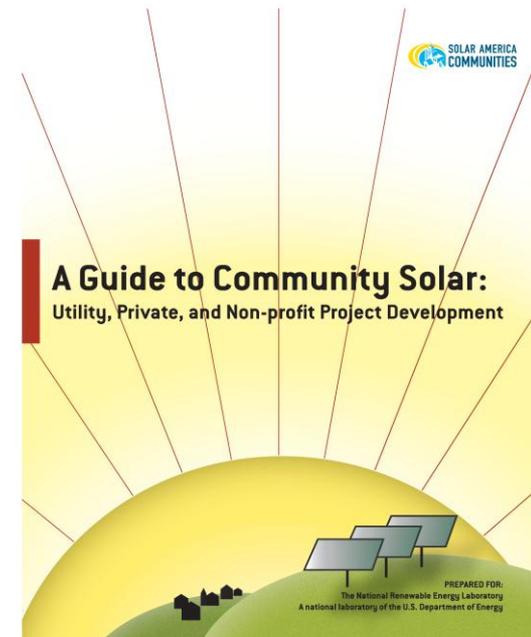
- U.S. Department of Energy Solar America Communities program
- NREL
- Bonneville Environmental Foundation
- NWSEED
- IREC
- Stoel Rives, LLP.

Focus

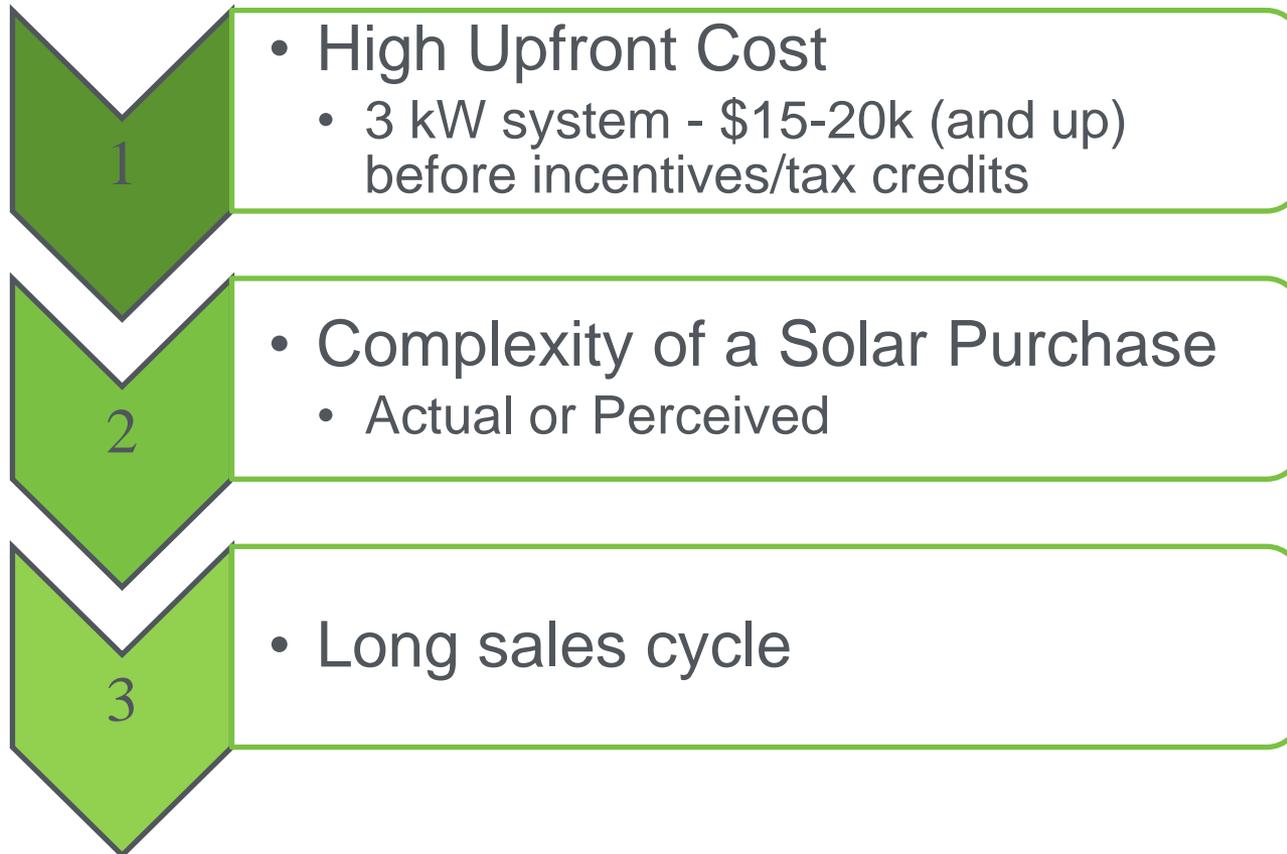
- Project Structures
- Tax and Legal Implications
- Case Studies
- Worksheets
- IREC Model Community Energy Rules

Where to find it:

- U.S DOE's Solar America Communities website
- <http://www.solaramericacommunities.energy.gov>

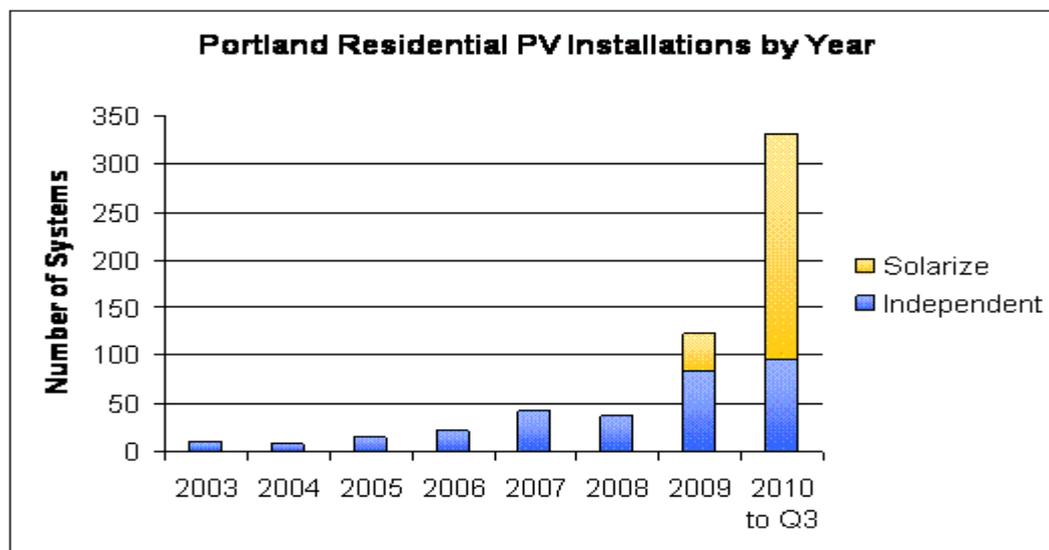


Group Buy Programs for Renewables





Strong neighborhood associations taking the lead with Support from the Energy Trust of Oregon and the City of Portland



Source: The Solarize Handbook: A Guide for Community-Aggregated Purchases of Residential Photovoltaic Installations (Draft)

Solarize Northeast

- January – September 2010
- Installer: Solar City
- 1000 registrants
- 180 installations (459 kW)
- 2.55 KW average system size
- 21 new jobs

Solarize Southwest

- February – October 2010
- Installer: Mr. Sun Solar
- 700 registrants
- 168 installations (437 kW)
- 2.6 KW average system size
- 22 new jobs

Building off of the experience of Portland, the City of San Jose and the Credit Union launched a solar group buy program.

- Competitive RFP process
- Both Solar PV and Solar Hot Water
- 130 participants in 1st round
- City employees and retirees in California
- Competitive home equity financing (3.99-5.51%)
- Term: 5 to 15 years



San Jose Credit Union: <http://www.sjcu.org>
City of San Jose: <http://www.sanjoseca.gov/>

Solarize Salem (OR)

- Non-profit led
- Incorporates a small fee per watt to cover administrative costs

Solarize Pendleton (OR)

- City-sponsored, zero interest loans
- Project managed by AmeriCorps Volunteer

Minnesota Renewable Energy Society “Make Mine Solar H2O” campaign

- Solar hot water focus with a goal of 1000 installations by 2012
- Up to a 20% discount in equipment costs

1 Block off the Grid (1BOG)

- For-profit model
- Negotiates with installer for a bulk purchase discount

Source: The Solarize Handbook: A Guide for Community-Aggregated Purchases of Residential Photovoltaic Installations (Draft)

The Solarize Handbook: A Guide for Community Aggregated Purchases of Residential Photovoltaic Installations

Details

- Will be available on the Solar America Communities website (January 2011)
- Authored by NWSEED for the City of Portland under the auspices of the DOE's Solar America Communities program.

Content

- Background on the Group Buy Concept
- Case Studies
- Lessons Learned and Considerations
- Step by Step "How To" Guidelines
- Additional Resources

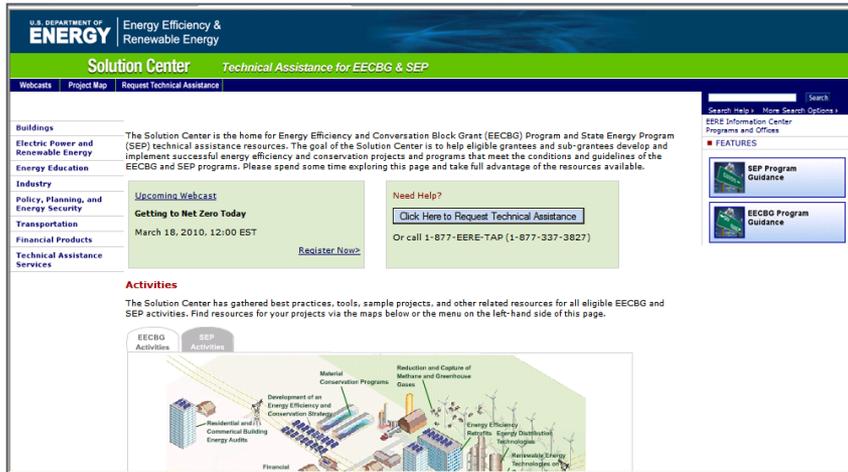
City of Portland, OR Solar Energy Program: <http://www.portlandonline.com/bps/index.cfm?c=43478&>
Northwest Sustainable Energy for Economic Development (NWSEED): <http://nwseed.org/>

- Net Metering
 - IREC Net Metering Model Rules:
http://irecusa.org/fileadmin/user_upload/ConnectDocs/IREC_NM_Model_October_2009-1.pdf
 - “Group” rules: See examples from VT, CA, MA, ME, WA at DSIRE:
<http://www.dsireusa.org>
- Model Interconnection Procedures
 - IREC: <http://irecusa.org/wp-content/uploads/2010/01/IREC-Interconnection-Procedures-2010final.pdf>
 - EPA: http://www.epa.gov/statelocalclimate/documents/pdf/guide_action_chap5_s4.pdf
- Model Ordinances
 - Oregon: <http://www.oregon.gov/ENERGY/SITING/local.shtml>
 - Pace Law Library:
<http://libraryguides.law.pace.edu/content.php?pid=47949&sid=1022374>
 - DSIRE: <http://www.dsireusa.org>

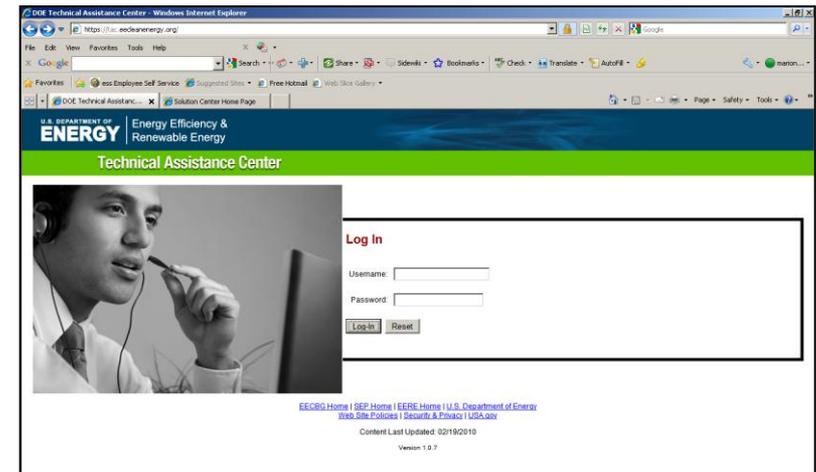
We encourage you to:

1) Explore our online resources via the [Solution Center](#)

2) Submit a request via the [Technical Assistance Center](#)



The screenshot shows the 'Solution Center' website for Energy Efficiency & Renewable Energy. The header includes the U.S. Department of Energy logo and the text 'Energy Efficiency & Renewable Energy'. Below the header, there are navigation tabs for 'Webcasts', 'Project Map', and 'Request Technical Assistance'. The main content area is titled 'Solution Center Technical Assistance for EECBG & SEP'. It features a search bar, a 'Need Help?' section with a 'Click Here to Request Technical Assistance' button, and a 'Register Now' button. There are also links for 'SEP Program Guidance' and 'EECBG Program Guidance'. The page includes a sidebar with categories like 'Buildings', 'Energy Education', 'Industry', 'Policy, Planning, and Energy Security', 'Transportation', and 'Financial Products'. A large diagram at the bottom illustrates various energy efficiency and conservation strategies, including 'Material Conservation Programs', 'Reduction and Capture of Methane and Greenhouse Gases', 'Energy Efficient Networks, Energy Distribution, and Storage', and 'Renewable Energy Technologies on the Grid'.



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3) Ask questions via our call center at 1-877-337-3827 or email us at solutioncenter@ee.doe.gov

Please join us again:

Title: Defining and Establishing the Role of a Sustainability Manager

Host: Harrison Rue & Katherine Gajewski - ICF

Date: December 2, 2010

Time: 12:00 – 1:30 EST

Title: Building Actionable Climate Action Plans

Host: Jennifer Clymer, ICF

Date: December 6, 2010

Time: 2:00 – 3:30 EST

Title: Overcoming Barriers to Solar PV and Solar Water Heating Implementations

Host: Kimberly Owens - ICF

Date: December 8, 2010

Time: 1:00 – 2:30 EST

Title: ESPC pricing and Financing

Host: Meg Giuliano – ICF/SENTECH

Date: December 16, 2010

Time: 1:30 – 2:30 EST

For the most up-to-date information and registration links, please visit the Solution Center webcast page at www.wip.energy.gov/solutioncenter/webcasts

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