



Innovation for Our Energy Future

DOE Technical Assistance Program & RE-Powering America's Lands



New Partners for Smart Growth

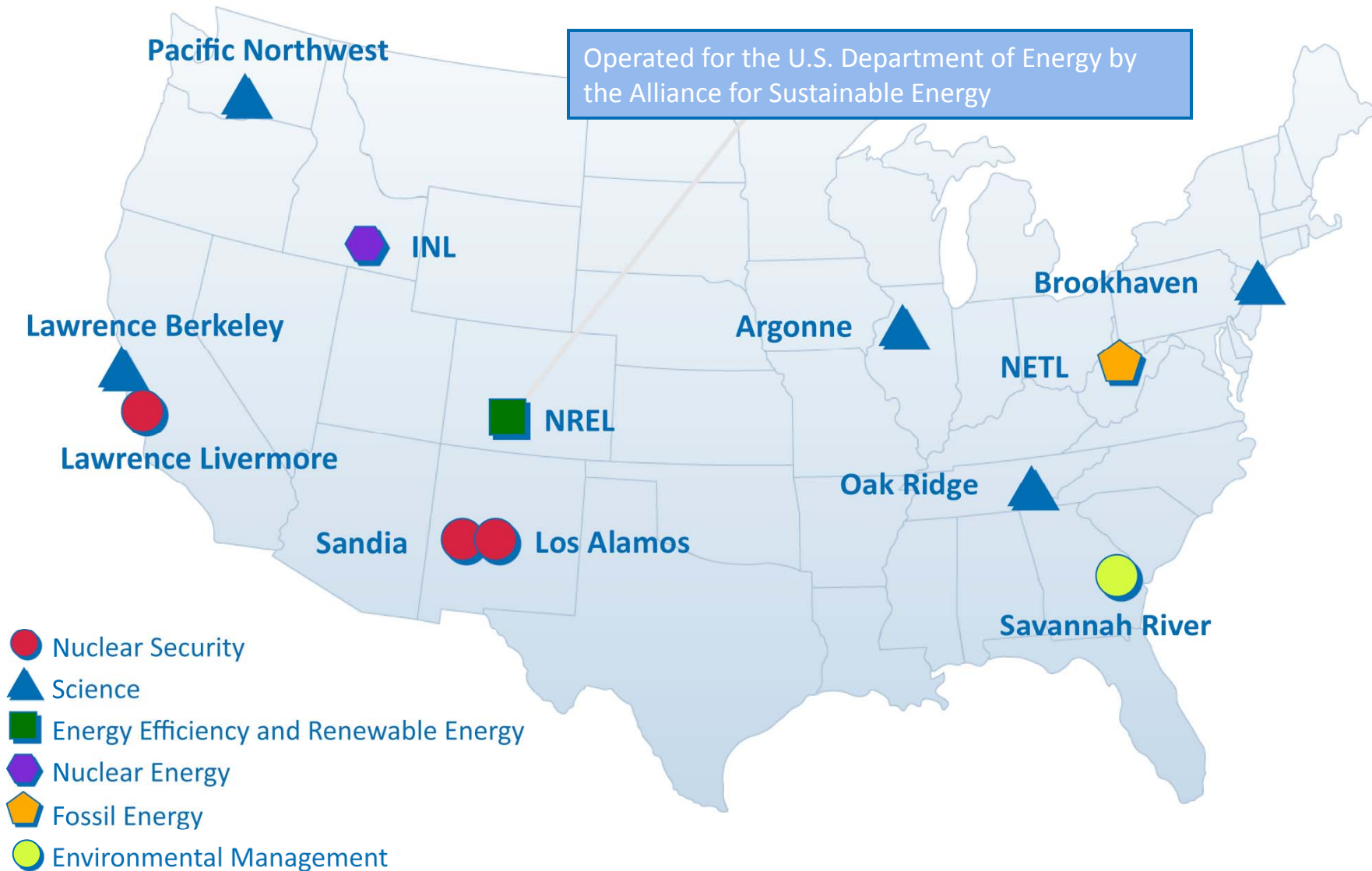
Charlotte, NC

February 5, 2011

Courtney Welch

National Renewable Energy Laboratory

The U.S. DOE Laboratory System



National Renewable Energy Laboratory

- Only national laboratory ***dedicated*** to renewable energy and energy efficiency R&D
 - Fundamental ***science*** to ***technology*** solutions
 - ***Collaboration*** with industry and university partners
 - Research programs ***linked*** to market opportunities
- Originally the Solar Energy Research Institute, July 1977
- Designated a U.S. Department of Energy National Lab, Sept. 1991
- Current staff of ~2000 and budget of ~\$400 million/year



Mission: What We Do



Provide comprehensive implementation expertise to deliver sustainable energy solutions and accelerate market adoption.

What is TAP?

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 Provider Network



How Can TAP Help You?

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

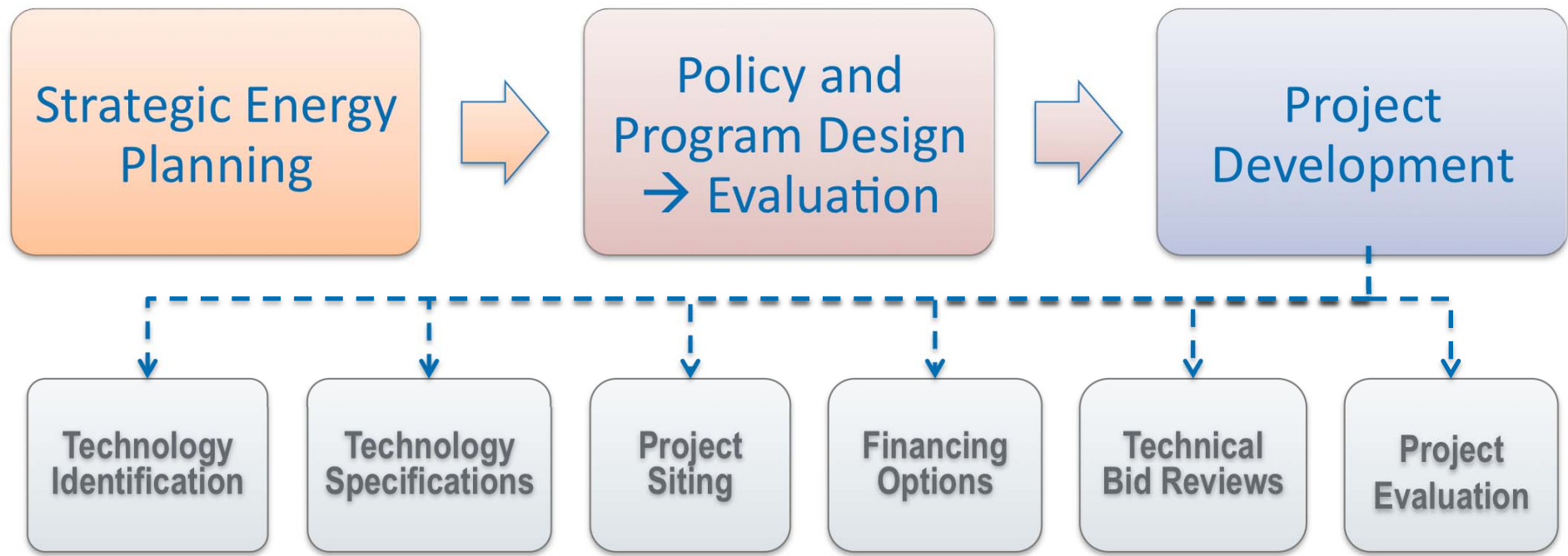
On topics including:

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

Laboratory Technical Assistance



Giving state and local governments direct access to lab expertise, providing energy efficiency and renewable energy assistance that is technology neutral in the following areas:



The TAP Blog

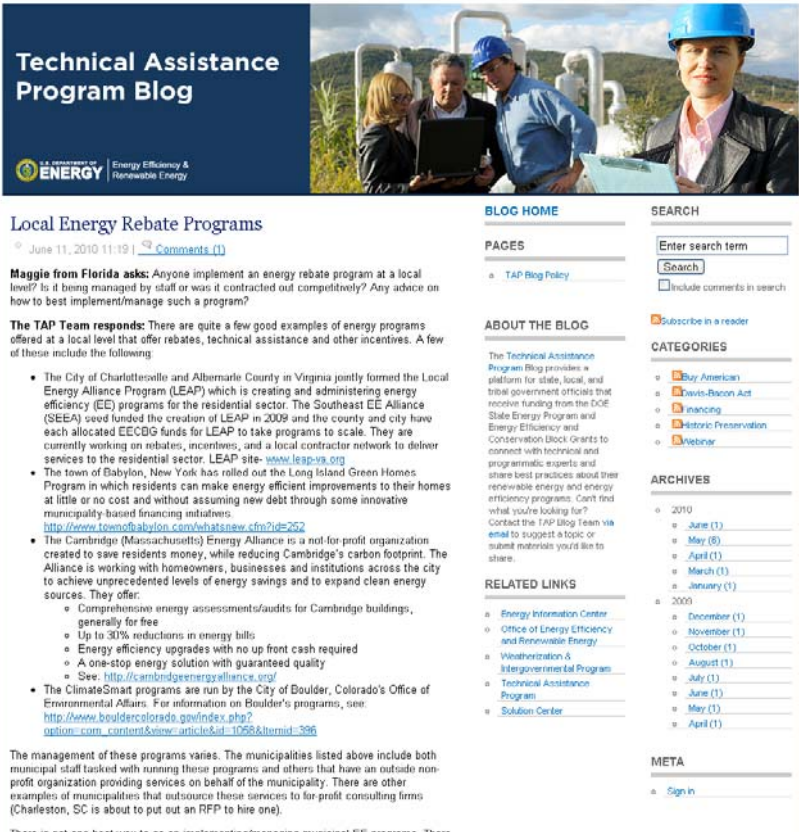
Access the TAP Blog

<http://www.eereblogs.energy.gov/tap/>

Ask questions of webinar presenters, enter comments about the presentation topic, and share your thoughts with others.

Connect with technical and programmatic experts

Share best practices about your renewable energy and energy efficiency programs.



Technical Assistance Program Blog

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

Local Energy Rebate Programs

June 11, 2010 11:19 | [Comments \(1\)](#)

Maggie from Florida asks: Anyone implement an energy rebate program at a local level? Is it being managed by staff or was it contracted out completely? Any advice on how to best implement/manage such a program?

The TAP Team responds: There are quite a few good examples of energy programs offered at a local level that offer rebates, technical assistance and other incentives. A few of these include the following:

- The City of Charlottesville and Albemarle County in Virginia jointly formed the Local Energy Alliance Program (LEAP) which is creating and administering energy efficiency (EE) programs for the residential sector. The Southeast EE Alliance (SEEA) seed funded the creation of LEAP in 2009 and the county and city have each allocated EECBG funds for LEAP to take programs to scale. They are currently working on rebates, incentives, and a local contractor network to deliver services to the residential sector. LEAP site: www.leap-va.org
- The town of Babylon, New York has rolled out the Long Island Green Homes Program in which residents can make energy efficient improvements to their homes at little or no cost and without assuming new debt through some innovative municipality based financing initiatives. <http://www.townofbabylon.com/whatsnew.cfm?id=252>
- The Cambridge (Massachusetts) Energy Alliance is a not-for-profit organization created to save residents money, while reducing Cambridge's carbon footprint. The Alliance is working with homeowners, businesses and institutions across the city to achieve unprecedented levels of energy savings and to expand clean energy sources. They offer:
 - Comprehensive energy assessments/audits for Cambridge buildings, generally for free
 - Up to 30% reductions in energy bills
 - Energy efficiency upgrades with no up front cash required
 - A one-stop energy solution with guaranteed quality
 - See: <http://cambridgeenergyalliance.org/>
- The ClimateSmart programs are run by the City of Boulder, Colorado's Office of Environmental Affairs. For information on Boulder's programs, see: http://www.bouldercolorado.gov/index.php?option=com_content&view=article&id=1058&Itemid=386

The management of these programs varies. The municipalities listed above include both municipal staff tasked with running these programs and others that have an outside non-profit organization providing services on behalf of the municipality. There are other examples of municipalities that outsource these services to for-profit consulting firms (Charleston, SC is about to put out an RFP to hire one).

There is not one best way to go on implementing/managing municipal EE programs. There are good reasons and justifications for each of these three models. If the municipality is

BLOG HOME

PAGES

- TAP Blog Policy

ABOUT THE BLOG

The Technical Assistance Program Blog provides a platform for state, local, and tribal government officials that receive funding from the DOE State Energy Program and Energy Efficiency and Conservation Block Grants to connect with technical and programmatic experts and share best practices about their renewable energy and energy efficiency programs. Can't find what you're looking for? Contact the TAP Blog Team via email to suggest a topic or submit materials you'd like to share.

RELATED LINKS

- Energy Information Center
- Office of Energy Efficiency and Renewable Energy
- Weatherization & Intergovernmental Program
- Technical Assistance Program
- Solution Center

SEARCH

Enter search term

☐ Include comments in search

CATEGORIES

- Buy American
- Davis-Bacon Act
- Financing
- Historic Preservation
- Webinar

ARCHIVES

- 2010
 - June (1)
 - May (6)
 - April (1)
 - March (1)
 - January (1)
- 2009
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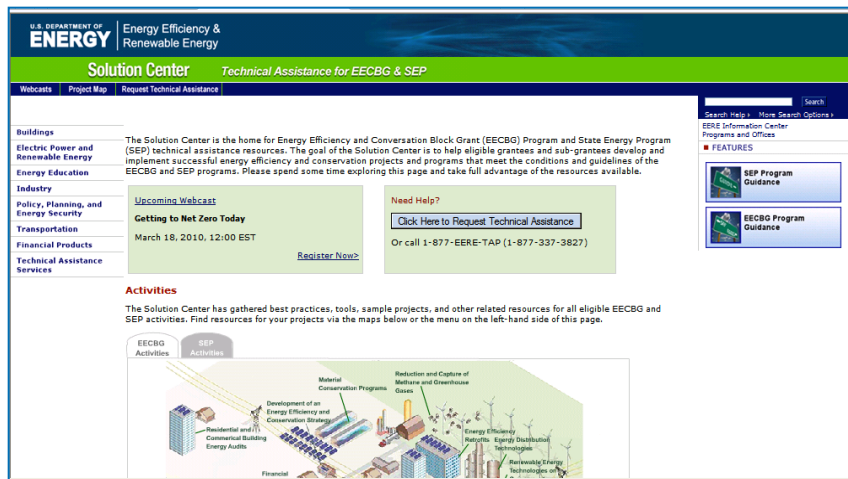
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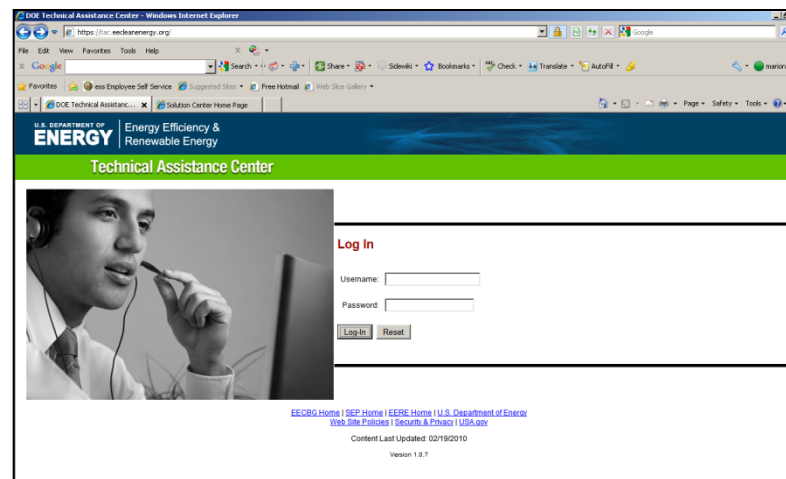
Accessing DOE TAP Resources

We encourage you to:

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



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



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

Why Renewable Energy?

- ✓ Existing infrastructure
- ✓ Increase economic value of the property
- ✓ Reduce the stress on greenfields
- ✓ Improved public support
- ✓ Provide clean energy for use on-site, local use, and/or to utility grid
- ✓ Create local jobs



Preliminary Screening: Resource Availability

Free online resource assessment tools

EPA Renewable Energy Interactive Mapping Tool

- Allows user to search by renewable energy type and/or contaminated land type, and site location
- http://www.epa.gov/oswercpa/mapping_tool.htm



In My Back Yard (IMBY)

- Web-based software tool that estimates electricity produced by a photovoltaic array and wind turbines
- <http://www.nrel.gov/eis/imby/>

RETScreen

- RE and energy efficiency technologies
- Training opportunities
- www.retscreen.net/ang/home.php



Other tools available from NREL:

www.nrel.gov/analysis/analysis_tools.html

Level 1 Considerations: Solar PV

1. On the “Built Environment” where unshaded—size to capacity (pipes & wires) and load (kWh & thermal)
 - a) On roofs of existing buildings that are less than 5 years old and can accept added load. Reduces solar load on building. NEPA categorical exclusion.
 - b) On ALL new buildings —all new buildings should be “solar ready”, see <http://www.nrel.gov/docs/fy10osti/46078.pdf>
 - c) Over parking areas, pedestrian paths, etc. —energy generation, dual purpose, and nice amenity.
2. On compromised lands such as landfills, brownfields, abandoned mine sites. Saves green fields for nature.
3. IF installed on green fields minimize site disturbance, plant native low height vegetation as needed.

Level 1 Considerations: Wind

- Turbines need to stand out
- Wind resource far more site-specific than solar
- For larger turbines, 30 meters or taller meteorological (MET) towers erected to determine site's resource
- MET studies often one year or longer



NREL's involvement in siting renewables on contaminated lands



RE-Powering America's Lands

Brownfields

Federal Facilities

RCRA Sites

Superfund Sites

Underground Storage Tank Site



TAP: Richmond, CA

Requestor:	City of Richmond in coordination with EPA R9
Site:	Richmond's entire inventory of contaminated land sites
Request:	Develop a decision tool and guidance on determining high potential sites for redevelopment with renewables.
Deliverable:	<p>Decision matrix that walks users through various considerations for determining priority sites for redevelopment with renewables</p> <ul style="list-style-type: none">• Pre-Screening: Resource and Site Evaluation• Site Characteristics• Power Demands, System Size, and Costs• Economic Feasibility: Policy Support, Financial Incentives• Additional Considerations:<ul style="list-style-type: none">• Ownership• Finance Structures

TAP: Puerto Rico

Requestor:	Puerto Rico Environmental Quality Board
Site:	Six landfill sites in Puerto Rico
Request:	NREL to assess the potential of 6 landfill sites for solar power generation and prepare a feasibility study
Deliverable:	An on-site visit to assess each site, followed by feasibility studies for each of the six landfills in Puerto Rico. The studies describe the landfills, their potential for solar power renewable energy generation and the economics associated with solar generation at each landfill.

TAP: Carroll County, MD

Requestor: Carroll County Government

Site: Two closed landfill sites in Carroll County, MD

Request: Assist the County's efforts to install solar on 2 closed landfills in Carroll County, MD

Deliverable: Solar resource assessment and mapping, estimate usable acreage, economic feasibility assessment (consider federal/state incentives, electricity rates, and financing options)



TAP: Templeton Gap Landfill, CO

Requestor:	The Colorado Department of Public Health & Environment in collaboration with Colorado Brownfields Foundation
Site:	A closed 43 acre landfill located within a business park at edge of Colorado Springs in El Paso County.
Request:	NREL assistance with design and implementation support through financial modeling of renewable energy technology development on a closed landfill in El Paso County, Colorado.
Deliverable:	NREL to develop a financial model for redeveloping the Templeton Gap Landfill site using one or more renewable energy technologies.

How to access NREL directly

State and local agencies/officials can submit a TA request directly.

EPA regional offices can also utilize TAP through cooperation with state or local offices and can request a TAP on behalf of the state or locality.

To apply email the following info to tech.assist@nrel.gov

- Brief request overview
- Contact in community
- Timeline requested
- Lab expert requested (optional)

www.nrel.gov/state_local/

Thank You!

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Website: www.nrel.gov/state_local/

TA Email: tech.assist@nrel.gov

