



U.S. DEPARTMENT OF
ENERGY

Energy Efficiency &
Renewable Energy

Tools for Designing & Implementing Better Finance Programs

November 21st, 2013

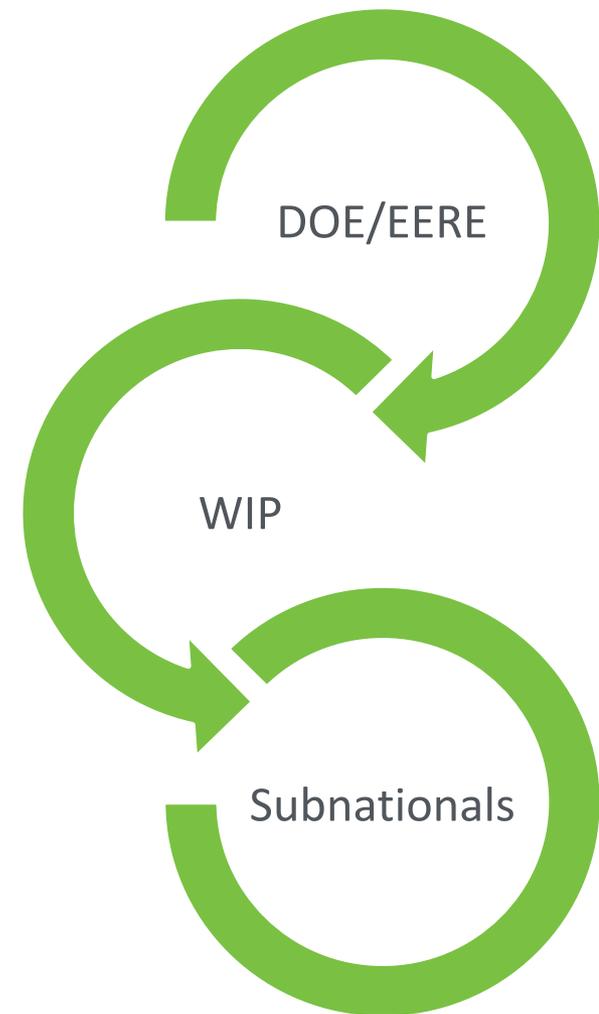
Molly Lunn
U.S. DOE's State and
Local Policy & Technical
Assistance Team

Agenda

- Introduction to DOE Finance Resources for Local & State Governments – Molly Lunn, U.S. DOE
- New Resources – Glenn Barnes and Jennifer Weiss, Environmental Finance Center at The University of North Carolina
 - *Clean Energy Finance Program Structure Options*
 - *Clean Energy Finance Program Return on Investment Modeling Tool (Residential Energy Efficiency)*
- Q&A

The State & Local Opportunity

- DOE & EERE cannot achieve its clean energy goals alone
- State and local policies and actions are critical to advancing our mission, and in many instances these entities are already leading the way
- *One avenue through which DOE supports and accelerates state and local government leadership, and in turn its own mission, is by capitalizing on the unique mix of roles that WIP can play as convener, unbiased technical resource, and innovation enabler*



DOE's State & Local Technical Assistance



Finance Resources Available Now

- ✓ [State & Local Solution Center Finance Portal](#) (includes pages for RLFs, QECBs, PPAs, ESPC)
- ✓ [Financing Clean Energy Upgrades in K-12 Schools](#) (very relevant for local govts – covers internal cash, bonds, lease purchase, and other clean energy mechanisms)
- ✓ [Clean Energy Finance Guide for Residential and Commercial Sectors](#) (covers range of topics including credit enhancement, commercial PACE)
- ✓ [Guide to Federal Finance Facilities for Clean Energy](#) (includes programs at DOE, USDA, HUD, and Treasury)

The screenshot shows the 'State and Local Solution Center' website. At the top, it identifies the U.S. Department of Energy's Energy Efficiency & Renewable Energy division. The main navigation includes Home, About, Technical Assistance Resources, Events, and One-on-One Assistance. A featured banner promotes 'Request One-on-One Technical Assistance!', stating that TAP provides targeted assistance to help state, local, K-12 school, and tribal officials advance successful, high-impact, long-lasting clean energy policies, programs, and projects. Below the banner is a 'PROGRAM HIGHLIGHTS' section with a sign-up form for TAP Alerts and five categories: Strategic Energy Planning, Policies & Programs, Data Management & Evaluation, Financing Solutions, and Energy Technologies. The right sidebar contains 'EVENTS' (listing 'The Energy-Water Nexus' and a 'Webinar: Sources of Energy Efficiency Program Savings for Air Regulators') and 'FEATURED PUBLICATIONS' (listing 'Partnering with Utilities and Other Ratepayer-Funded Program Administrators', 'Financing Energy Upgrades for K-12 School Districts', 'Designing a Benchmarking Plan', and 'Commercial Property Assessed Clean Energy Financing').

www.eere.energy.gov/wip/solutioncenter/financing.html

New Resources Coming This Year

- Facelift to the *Finance Portal* in process now – December
- Finance 101 briefs – December & January
 - *Working with Financial Institutions* (webinar 12/5)
 - *EE Finance Primer*
 - *Credit Enhancement Primer*
 - *Internal RLFs*
- ***Getting the Biggest Bang for the Buck: Exploring Rationales and Experimental Design Options for EE Finance Programs – December***
- ***On-Bill Financing Program Design Analysis & Case Studies – January***
- ***Recovery Act RLFs, LLRs, & IRBs: Analysis, Best Practices, and Recommendations for the Future – Spring 2014***

DOE Peer Exchange & Training

- 1-3 finance *webinars* offered each quarter
 - Typically focused on new resources or trends
 - Archived on Solution Center (including many 101s):
www.eere.energy.gov/wip/solutioncenter/webinar_archives.html
- *Better Buildings Finance Strategies Project Team*
 - States & locals work w/DOE and peers to develop strategies for financing energy efficiency projects in their jurisdiction – members are asked to identify a desired energy efficiency finance outcome to work toward
 - DOE/LBNL leads monthly, web-based discussions, focusing on possible options and best practices in design and implementation
 - Learn more: www.eere.energy.gov/alliance/activities/public-sector-teams/finance-strategies

DOE One-on-One Assistance

- Accept applications for *targeted* one-on-one assistance
- Applications are reviewed and evaluated to determine the *level of effort* we will be able to provide based on:
 - Near-term and long-term impacts
 - Replicability for other jurisdictions
 - Demonstrated need for federal technical assistance due to lack of other available resources
- Examples include:
 - Comparing finance/funding options for a new or existing program
 - Design and implementation guidance for specific mechanisms, e.g., QECBs, on-bill finance, commercial PACE, RLFs, LLRs

How to Tap into These Offerings

- Visit the ***State and Local Solution Center***
www.eere.energy.gov/wip/solutioncenter/
- Submit an ***application*** for assistance
www.eere.energy.gov/wip/solutioncenter/technical_assistance.html
- Sign up for ***TAP Alerts***, our newsletter and mailing list, for updates on our latest and greatest
TechnicalAssistanceProgram@ee.doe.gov

Presenters



Glenn Barnes
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Environmental Finance Center
The University of North Carolina
at Chapel Hill



Jen Weiss
Senior Finance Analyst
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The University of North Carolina
at Chapel Hill



Mission Statement

We work to enhance the ability of governments and other organizations to provide environmental programs and services in fair, effective and financially sustainable ways.

- Upcoming Events**
- [NCAWWA-WEA U-Pick Training: Understanding the Right Steps to Take When Planning for Future Investments of Your Utility's Infrastructure](#)
Introduction to the User-Friendly C.I.P. Tool
Tuesday, December 3, 2013
 - [AWWA/WEF Utility Management Conference](#)
Rate Approval Process Communication Strategy and Toolkit: A Working Workshop and Peer2Peer Exchange
Tuesday, February 25, 2014
- [View all events](#)



Featured Work



Welcome to the New Environmental Finance Center Website!

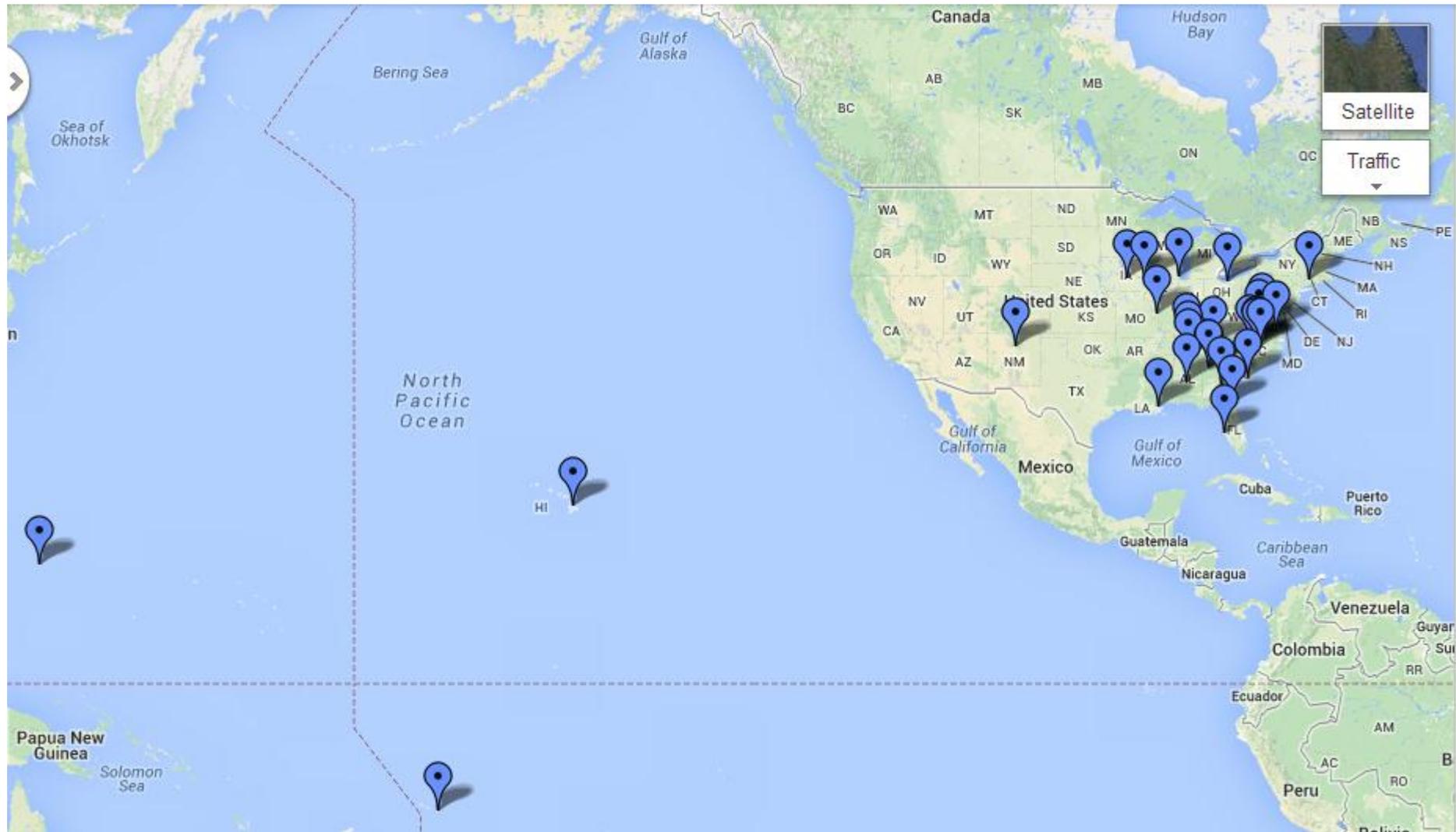
The EFC at UNC is very pleased to launch our new website. Our new content management system is designed to make accessing EFC tools, publications, and other resources quick and easy.



A Guide to Customer Water-Use Indicators for Conservation and Financial Planning

This guide published by the American Water Works Association (AWWA) is an

About our Energy Technical Assistance



Session Objectives

- Learn about the key decisions in building a clean energy finance program
- Understand how to calculate expected returns on investment
- Review potential flows of funds for clean energy finance program

What Developing a Program Structure is NOT

- A simple multiple choice question:
 - Program Design A
 - Program Design B
 - Program Design C

What Developing a Program Structure is

- A series of choices

The Choices

- Program Sponsorship
- Suite of Services Offered
- Program Administration
- Geographic Scope of Program
- Sustainable Program Designs

Program Sponsorship

Sponsor	Potential Advantages	Potential Disadvantages
Governments	Stable institutions; Neutral audience; Access to low cost capital	May lack energy finance experience; Restricted geographically; Stricter procurement rules
Non-Profits	Flexible in terms of customer base, services offered; No procurement rules; May enjoy greater level of trust	Limited access to start-up funds and debt financing
For-Profits	Flexible in terms of customer base, services offered; No procurement rules; May have good access to capital	May lack name recognition; Motives may be questioned
Utilities	Literally in the energy business; Large, stable organizations (IOUs); Access to customers	Munis and Coops have limited geographic scopes; Munis have procurement rules

Suite of Services Offered

- Focus could be only on the activities of the program sponsor itself (internally-focused programs)
 - Ad hoc energy improvements
 - Based on results of an audit or energy plan
 - Policy to do a limited number of projects each year
 - Investment in a large suite of energy improvements at one time

Suite of Services Offered

- **Energy audits and project identification**—using the energy expertise of the program to make recommendations on potential energy improvements at a facility;
- **Public education**—teaching members of the community about the value of energy improvements;
- **Targeting Recruitment**—meeting with facility owners and operators to encourage them to request energy audits and consider participation in the energy program that is offered;

Suite of Services Offered

- **Rebates**—one time or periodic payments that cover some or all of the cost of energy improvements on a facility;
- **Loans**—funds provided to pay for the cost of energy improvements. Typically these funds are offered at more favorable terms (lower interest rate, longer payback period) than loans from traditional lending institutions;
- **Energy concierge services**—providing individual consultations for parties that are implementing energy improvements.

Suite of Services Offered

- **Quality assurance of completed projects**—evaluating the work of contractors to ensure that energy improvements have been installed correctly and that they lead to expected energy savings;
- **Workforce development**—training contractors in the skills necessary to identify and install energy efficiency and renewable energy improvements and/or providing opportunities for contractors to receive energy-related certifications.

Program Administration Tasks

- Program marketing
- Public Education
- Identifying appropriate projects to receive program funding
- Approving a network of qualified contractors
- Training contractors and others in the workforce
- Reviewing work on completed projects for quality assurance;
- Loan underwriting and collection
- Providing customer service and concierge services to program participants
- Reporting, if necessary, for grants and other sources of seed funding

Program Administration

- Should sponsors administer their own programs? Hire an external program administrator? Hire multiple external program administrators?
- Depends on both the ability of the sponsor to provide the services and its willingness to do so

Geographic Scope of the Program

- Programs that serve a larger pool of potential customers have a better chance of covering ongoing costs
 - Economies of scale
 - Reduces duplication of effort
 - Easier for contractors and lending partners

Sustainable Program Designs

- All programs require
 - Start up funds to establish program structure, recruit partners and administrators, etc.
 - Seed funding for financial offering
 - Funds for ongoing administration
- Some program designs allow for seed funds to be used more than once and/or generate revenues

Internal Programs

Seed Funding Reused

- Internal revolving energy funds

Seed Funding Not Reused

- Ad hoc improvements
- Guaranteed energy savings contracts

External Programs

Seed Funding Reused

- Revolving loan funds
- Loan loss reserves

Seed Funding Not Reused

- Rebates
- Interest rate buy-down

** Use of fees and interest can generate funds for ongoing program administration even if the seed funding is not reused*

ROI Tool

Flows of Funds—Standard

- Taxes
- Enterprise fees
- Rate-payer capital
- Transfers from reserves
- Private donations
- Grants
- Debt from banks, government programs, or bonds

Flows of Funds—Unique to Energy Programs

- Avoided energy costs
- Power Purchase Agreements
- REC sales
- Rebates
- Tax credits
- System benefit charges
- Cap and trade credits
- P&I on loans
- P&I on assessments
- Fees for projects—contractor, loan origination, building owner
- Charges for services—audits, concierge, QA, workforce development

Questions?

Please join us for the next TAP webinar:

**Show Me the Money! Raising Investment Funds for Clean
Energy Programs & Working with Financial Institutions**

Thursday, December 5, 2013; 2-3:30 p.m. EST

Learn more at:

www.eere.energy.gov/wip/solutioncenter/webinars.html