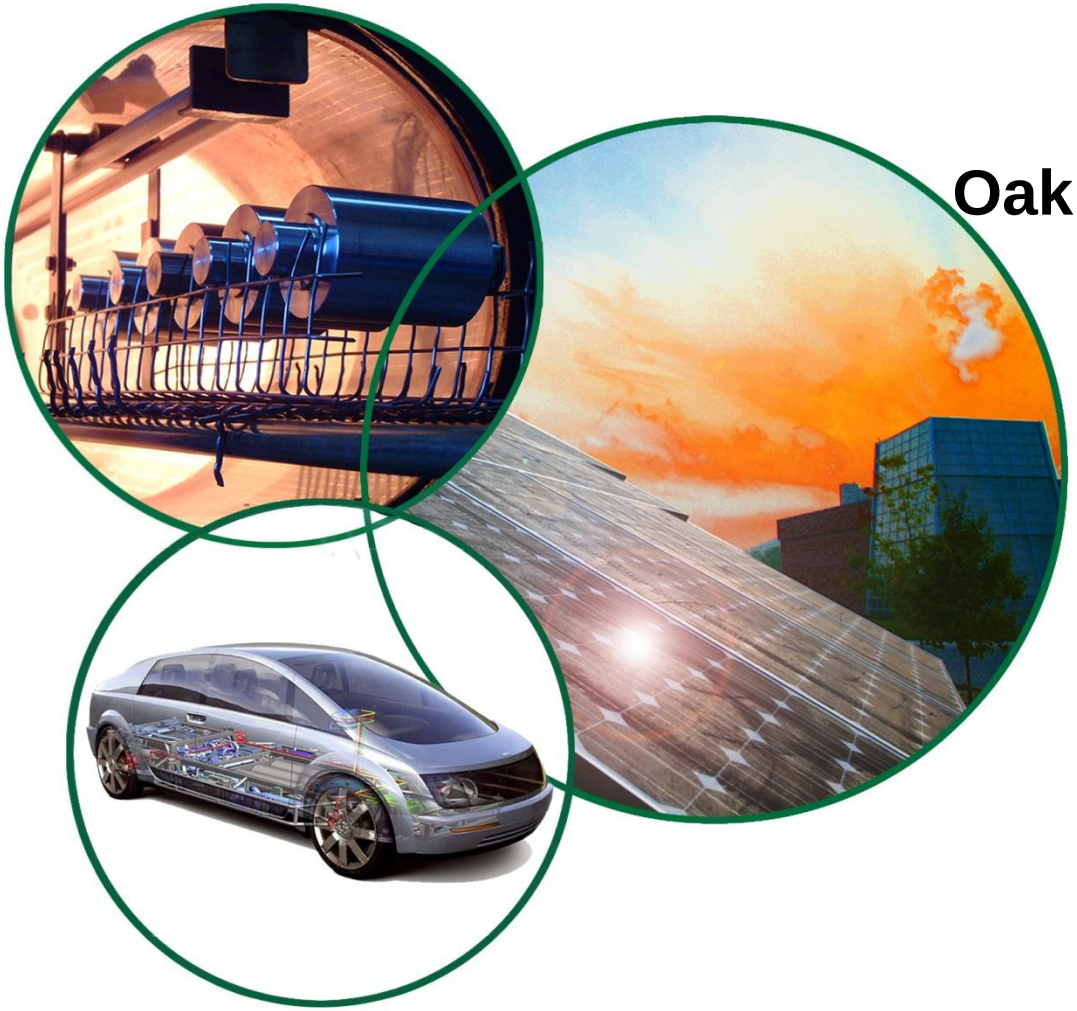
# SEP National Evaluation Update for STEAB



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# Introduction

- State Energy Program (SEP) National Evaluation is well underway
- This study will quantify key program outcomes for program year 2008 and ARRA period
- Study is being performed by independent evaluation team (DNV KEMA and subcontractors) and managed by ORNL
- Final report expected in early 2014

# Key Program Outcomes to Measure:

- **Energy and cost savings**
- **Job creation**
- **Renewable energy generation**
- **Reduction in carbon emissions**

# Brief History of SEP Evaluation

- **In 2007, OMB noted that SEP's reported performance was not supported by independent evaluation**
- **DOE committed to rigorous independent evaluation, beginning with white paper by Experts Panel**
- **ORNL involvement with planning and design began in late 2008**
- **Study scope and design reviewed by Network Committee of SEO representatives and Peer Review Panel of evaluation experts**
- **Independent evaluation team selected through competitive solicitation**



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# Important Uses of Study Findings

- **Provide rigorous, defensible quantification of key SEP outcomes**
- **Inform Congress, DOE, and Administration of program performance**
- **Identify relative accomplishments of different program types**
- **Provide a basis for future program design and resource allocation decisions**
- **Findings will be available to STEAB to disseminate as desired**



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# Budget for SEP National Evaluation

- **$12 million total over five years**

  **-$2.3 million for ORNL design and management**

  **-$9.7 million for DNV KEMA contract**

- **This level of funding allows scope and rigor of study to accurately document outcomes and benefit future Program operations**

# General Approach for SEP National Evaluation

- Do in-depth studies of 82 representative programmatic activities (PAs) from most heavily-funded program areas
- Examine 53 PAs from PY 2008 and 29 PAs from ARRA period
- Report findings for PY 2008 and ARRA period separately -- for each broad area alone and cumulatively for all areas studied



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# Explanation for Distribution of PAs among PY 2008 and ARRA Study Periods

- Mix of project types, total funding, and amount per PA in PY 2008 more similar to future years
- Greater number of broad program areas needed in PY 2008 to account for same percentage of total expenditures
- Number of PAs studied per broad program area similar for both periods
- Findings from PY 2008 study likely to be more helpful in informing key decisions on future operations

# Selection of Representative Sample of Programmatic Activities

- **Stratified sample selected for each study period from those broad program areas representing ~80% of SEP funding**
- **Each broad program area consists of several subcategories, from which PAs are selected**
- **Probability sampling used to allow valid inferences to be made about each program type studied**
- **Final sample comes from 46 states and territories**



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# Expansion of Findings to Broad Program Area Categories (BPACs)

- **Outcomes will be estimated for each of the 82 programmatic activities sampled**
- **Findings will be expanded to each BPAC subcategory using ratio estimation approach**
- **Findings from all relevant subcategories will be summed to yield total for each broad program area**

# Broad Program Areas to Examine

- Building Codes and Standards (PY 2008/ARRA)
- Building Retrofits (PY 2008/ARRA)
- Clean Energy Policy Support (PY 2008)
- Loans, Grants, and Incentives (PY 2008/ARRA)
- Renewable Energy Market Development (PY 2008/ARRA)
- Technical Assistance (PY 2008)



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# Capacity-building Effects of SEP

- **DOE funded TecMarket Works study of capacity-building effects of SEP, published in 2010 and available on NASEO website**
- **Current evaluation examines outcomes from target BPACs in PY 2008 and ARRA period**
- **Magnitude of outcomes measured in current study will be influenced by state expertise, capacity, and efficiencies built by SEP support throughout the years**

# Data Collection and Analysis Methods Used to Estimate Energy Savings Include:

- Surveys of program participants
- Review and validation of records of actions taken
- Engineering-based and statistically-adjusted engineering-based analysis
- On-site verification and spot measurement, where applicable, of installed measures for sampled retrofit projects

# Attribution of Effects

- **Because multiple funding sources are common, impacts must be attributed to SEP and other sources**
- **Attribution of effects will be performed separately for each individual PA studied**
- **Purpose is to determine what market actors would have done in the absence of the program**
- **Multi-step attribution approach will use logic models, model validation, direct questioning of participants and market observers, and cross sectional analysis techniques**



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# Key Milestones - 1

- **Received final OMB approval for all data collection instruments: Dec. 2012**
- **Began large-scale data collection for individual programmatic activities: Feb. 2013**
- **Complete data collection: June 2013**
- **Finish analyzing data for individual PAs: July 2013**

# Key Milestones - 2

- **Complete BPAC-level analysis: Oct. 2013**
- **Prepare draft report on overall findings: January 2014**
- **Hold Peer Review Panel meeting to review draft findings: January 2014**
- **Produce final report: Feb. 2014**