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# Developing a Model Program Evaluation Guide

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# The Problem

- There are widely recognized protocols for the measurement of energy savings from single projects:
  - IPMVP
  - FEMP M&V Guideline
  - ASHRAE Guideline 14
- Similar widely accepted protocols or guidance documents for measuring energy savings from programs do not exist.

# Why M&V Protocols Aren't Enough

Examples of programs where project M&V isn't enough:

- Programs where equipment rebates are paid based on documentation of the sale
- Programs that lead to small levels of energy savings from multiple practices and measures among large numbers of small customers.
- Programs where free rider savings should not be counted as program effects

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# Methods Unique to Program Evaluation

- Use of good statistical samples for sites and expansion of sample analysis results to the program population
- Use of inexpensive and readily available site energy consumption and program tracking data
- Regression analysis of energy use/savings
- Analysis of attribution (free ridership, spillover, program effects)

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# Previous U.S. Attempts to Standardize

- Advocacy by the Consortium for Energy Efficiency and other multi-state organizations
- Acknowledgement that wide adoption of uniform approaches would strengthen credibility of savings estimates
- Inability to overcome the inertia of differing perceived needs of stakeholders.

# Progress in Europe

- 2005 International Energy Agency Guide on Evaluating Energy Efficiency Policy Measures & DSM Programmes

<http://dsm.iea.org/Publications.aspx?ID=18>.

- European Commission action on energy efficiency goals and plan for some sort of EM&V guidance:

[http://ec.europa.eu/energy/demand/index\\_en.htm](http://ec.europa.eu/energy/demand/index_en.htm)

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# New Policies and Mechanisms in the U.S.

- New state policies for reducing and measuring greenhouse gas (GHG) emissions
  - with federal policies likely to follow
- Forward capacity markets that allow bids from energy efficiency programs to reduce peak load
  - example: New England ISO
- Efficiency portfolio or resource standards
- White tag mechanisms

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# The New Imperatives for Consistent Energy Efficiency Program Measurement

- Energy efficiency (EE) may be the most cost-effective way to meet the goals of these new policies and mechanisms

(especially GHG)

. . . But EE and its emissions/peak reductions must be consistently estimated to be allowed to compete with alternative resources

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# Responses to the New Imperatives

- Evaluation Outreach Initiative – initiated by Commissioner Dian Grueneich of the California Public Utilities Commission
- National Action Plan for Energy Efficiency Guideline, facilitated by US DOE and EPA
- Any other EE program evaluation guideline/protocol responses?

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# Purposes of a Uniform Guide

- A nationally recognized guide will provide basic process, technical and policy guidance on evaluation issues and requirements for EE resource programs
- It should be “policy-neutral,” to be useful to entities with different EE and GHG program purposes and structures
- It would aim to provide a structure for consistent approaches and definitions--and potentially consistent requirements--which would ease “cross-border” acceptance of each jurisdiction’s energy and GHG reductions.

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# National Action Plan for Energy Efficiency

- Saw that to promote EE, the benefits of EE programs need to be accurately documented with minimal transaction costs.
- Has selected development/promotion of a model guideline for EE program evaluation as an early project.
  - Create a model guide that states, cities, utilities, nonprofits, and businesses can use as a framework to define their organization-specific or program-specific evaluation requirements.

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# The Guide Development Process

- The National Action Plan has assigned CPUC Commissioner Dian Grueneich and Diane Munn of Edison Electric Institute as co-chairs of the project.
- EPA has funded a contract to hire Steve Schiller of Schiller Consulting to carry out the work.
- The National Action Plan has created an advisory committee to oversee the work and advocate for widespread adoption of the end product.
- The advisory committee will begin this process on March 29.

# Writing the Guide

- The guide will largely use and reference existing evaluation/analysis protocols.
- A committee of experts in EE program evaluation and emission reduction analysis will provide input and review on specific issues in the guide throughout development.
- A broader review committee of industry professionals with experience in energy efficiency evaluation and/or emissions analyses will be asked to review a final draft for input and comment.

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# Scope and Approach of the Guide

- Focus on downstream, resource acquisition programs
- Estimation methods for gross program energy savings
- Methods to convert gross to net savings
- Methods to apply appropriate emissions factors to determine avoided emissions.

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# Achieving Guide Adoption

- Industry input: through advisory group, technical input panel, and draft review.
- Presume adoption of Guide by the National Action Plan in Fall 2007
- National Action Plan and its guide advisory group will advocate for its endorsement by other entities.

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# Ultimate Goal of the Guide

- To enable and encourage the maximum cost-effective use of energy efficiency programs in reducing GHG emissions, reducing peak demand, and other policy objectives.
- Questions and Comments? Contact . . .  
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# Issues to Ponder

- What are the critical steps or features in the proposed process and content of the National Action Plan's Evaluation Guide that will help it gain widespread acceptance?
- Are there additions or changes that you think would increase its chances for widespread adoption?