Response to
"A National Efficiency Data Center: Removing the Curse of Invisibility"

Meredith Fowlie

University of Michigan

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There is a need for a more concerted, co-ordinated effort to collect, archive, and synthesize data related to energy efficiency programs and their impacts.

Who in this room will argue with that?

Encourage discussion on three points:

1. Externalities/public goods arguments cannot explain the EE gap.

2. The identification problem looms larger than the "invisibility" problem.

3. Can we refine proposed NEEDC objectives to more directly address the identification problem?

1. Characterizing the market failure

Presentation casts the problem in terms of public goods and externalities:

Consumption of a public good by one individual does not reduce the amount of the good available for consumption by others.

An externality occurs when a decision causes costs or benefits to stakeholders other than the person making the decision.

How much of the efficiency gap can be explained away by externalities and public goods?

- $0.60 purchase price
- $8 annual operating cost

- 75 kWh worth of environmental/health damages.
- 75 kWh worth of electricity infrastructure

- $11 purchase price
- $2.40 annual operating cost

- 20 kWh worth of environmental/health damages.
- 20 kWh of electricity infrastructure

2. The "curse of invisibility"

Refers to 3 distinct issues :

1. "Energy efficiency reserves largely unacknowledged and unseen"
2. "Large areas of the academic literature neglect the role that policy plays in shaping private sector energy use"
3. Omitted variable bias in OLS models.

Invisibility problem # 1: EE potential unacknowledged and unseen?

Pacala and Socolow's seminal Science paper on "stabilization wedges" (2004)

"Improvements in efficiency and conservation probably offer the greatest potential to provide 'wedges'."

Invisibility problem # 2: Academic research neglects the role of public policy in shaping private sector energy use?

Gillingham et al. (2006) review over 125 papers analyzing the impacts of EE policy. Over 100 have been published in the past 10 years.

" Taken together, the literature identifies up to 4 quads of energy savings annually from these programs- at least half of which is attributable to appliance standards and utility-based DSM."

# Invisibility problem # 3: Omitted variables bias

- Omitted variables biases standard errors positively.

- Bias in coefficient estimates can either cancel or reinforce this bias in standard errors in a t-test.

This seems to be the most easily remedied of all the identification problems that confound studies of energy consumption and EE program impacts..

Identification Problem

- Over-estimation of savings, and failure to deal with selection bias, in evaluation of DSM (e.g., Joskow and Marron 1992) has been a persistent criticism.

- Loughran and Kulick attempt to deal with the selection bias issue.

Challenge is to construct a relevant and credible counterfactual..
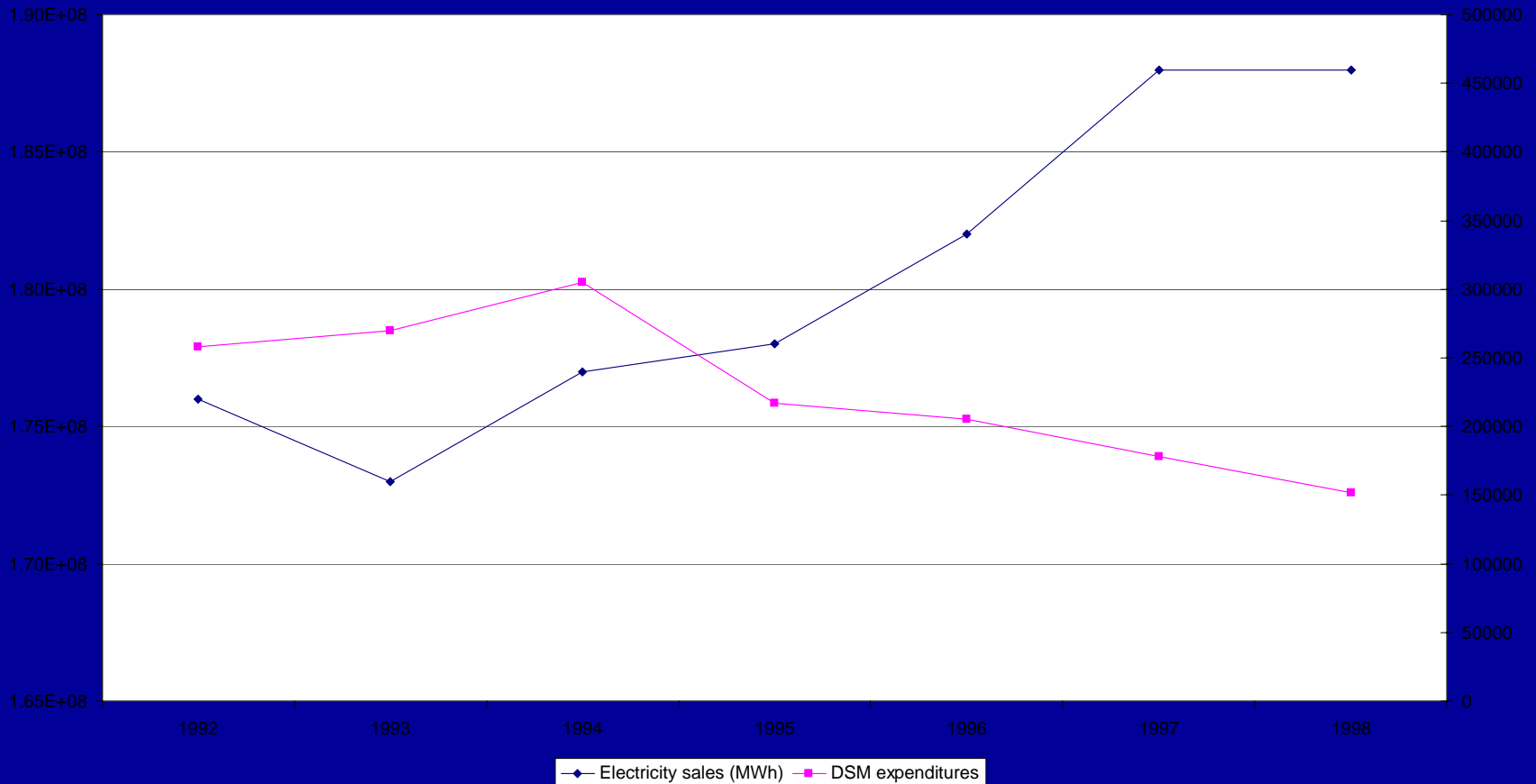
Data from the 11 CA utilities reporting positive DSM expenditures in all years

More refined goals?

- Identify policy-relevant questions that can be meaningfully addressed with data.

- Emphasize quality over quantity in data collection and synthesis.