

Energy Efficiency Resource Standards -- Status and Issues

International Energy Program Evaluation Conference

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The Regulatory Assistance Project

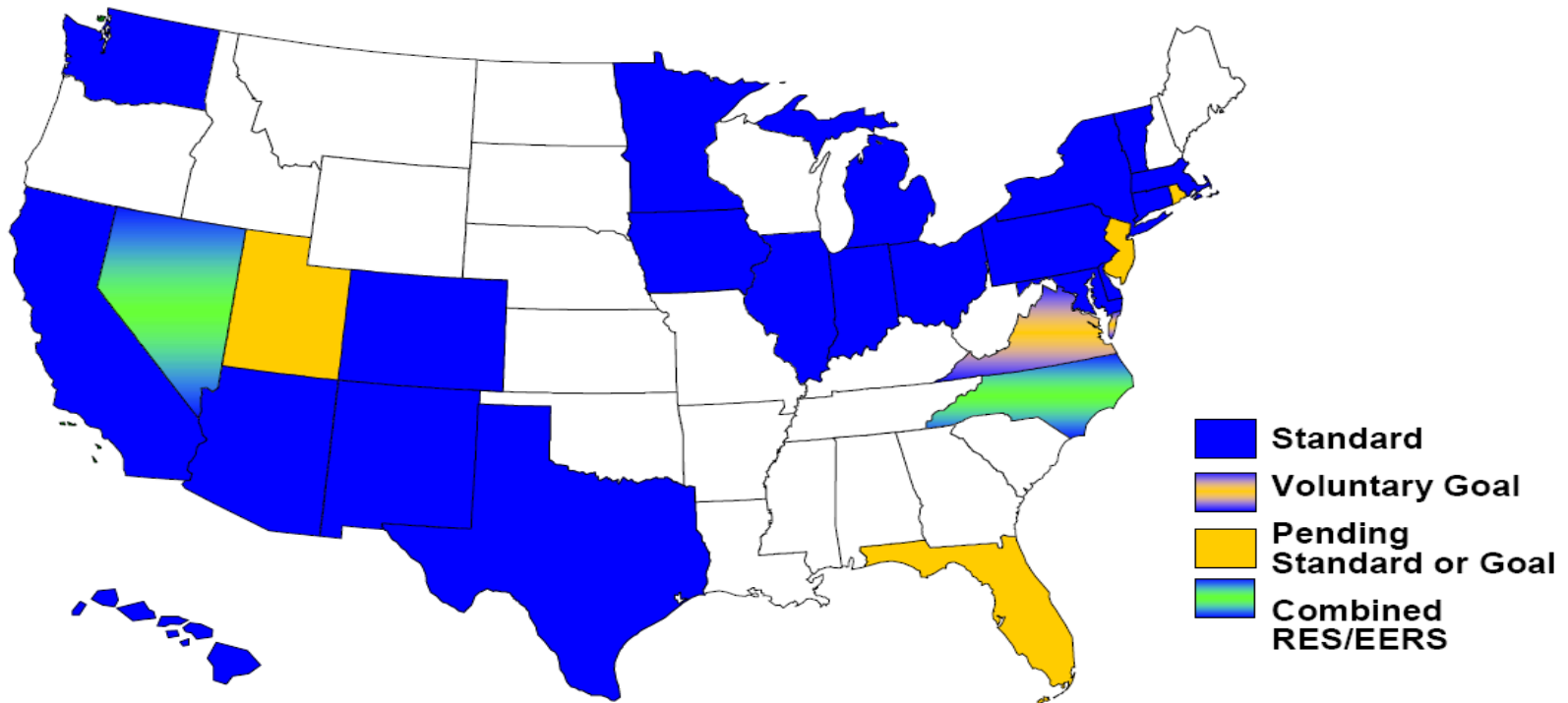
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23 states with (some sort of) EE Resource Standards

State EERS
as of December 2009



Source: ACEEE (2009)



Delivery Mechanisms Vary –

at least 5 options now used in US

1. **Obligation on distribution utility**

- ❖ Most states, including CA

2. **Obligation borne by a state agency**

- ❖ E.g., New York, Oregon

3. **Energy Efficiency Utility**

- ❖ *Efficiency Vermont* is the leading case

4. **Performance contracts with 3rd parties**

- ❖ Texas

5. **Bidding into regional capacity market**

- ❖ New England ISO Forward Capacity Market

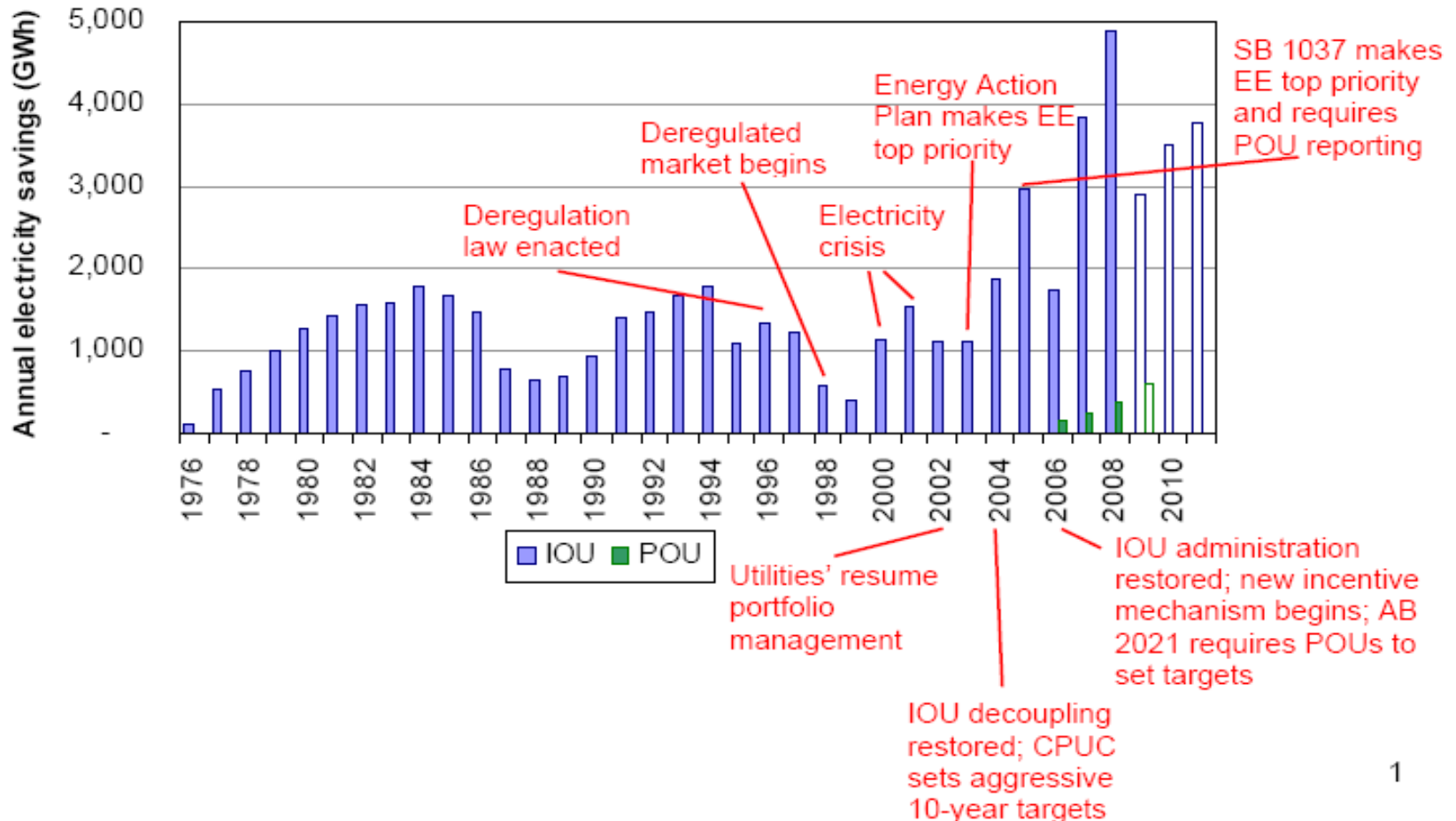
Who Should be the Portfolio Manager(s)?

US Experience Shows a Range of Successful Choices

State	Efficiency Portfolio Manager Structure of Top 10 (ACEEE)
California	Regulated Utility (e.g., DNO)
Massachusetts	Regulated Utility (e.g., DNO)
Connecticut	Regulated Utility (e.g., DNO)
Vermont	Contracted Private Entity
Wisconsin	Contracted Private Entity
New York	Unit of Government
Oregon	Sole-Purpose Public Corporation
Minnesota	Regulated Utility (e.g., DNO)
New Jersey	Contracted Private Entity
Washington	Regulated Utility (e.g., DNO)

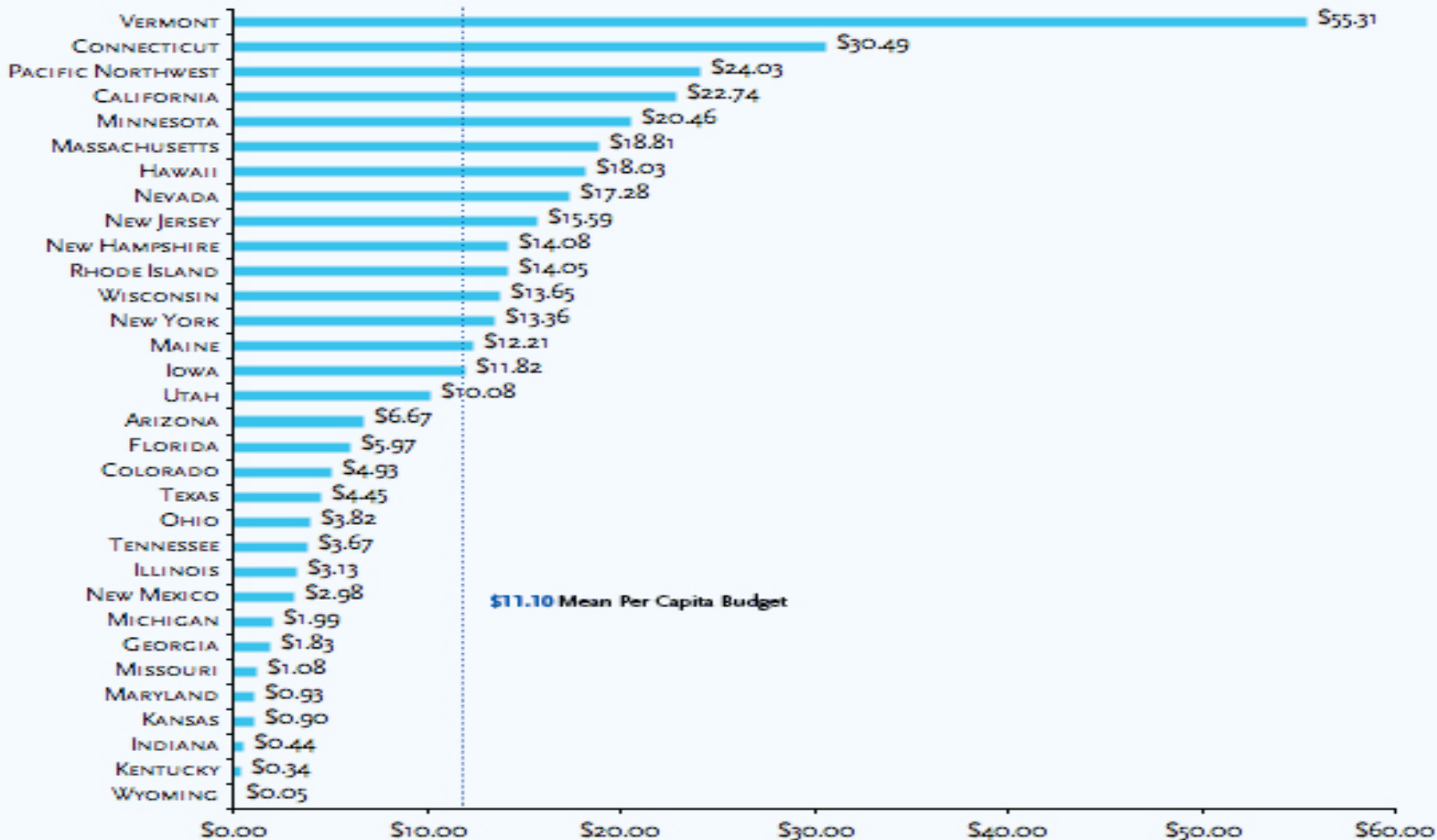
Why long-term EERS goals would help -- History of savings in CA

Figure 1: Annual Electricity Savings From California Utility Efficiency Programs



2008 Per Capita Budgets, Electric Programs

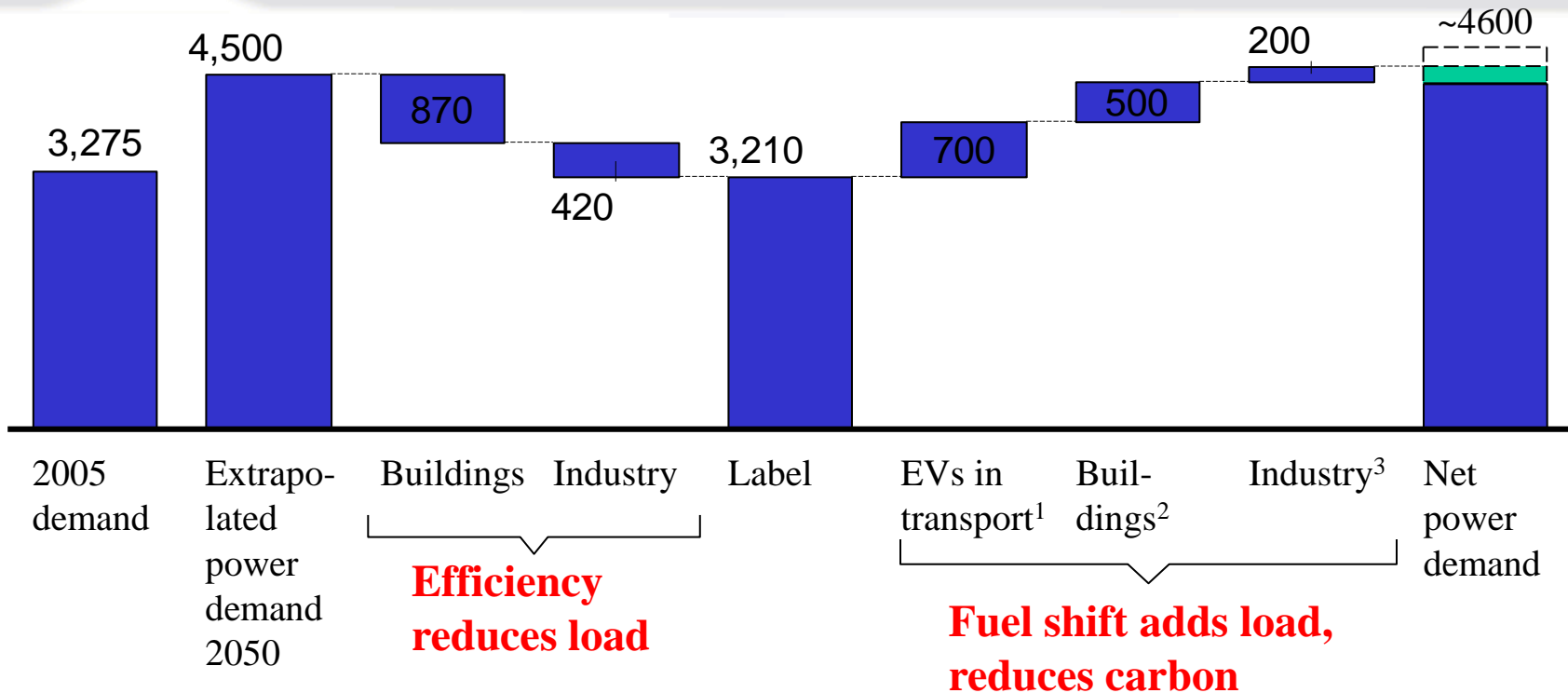
EXCLUDING LOAD MANAGEMENT



A new view of what's needed: Deep energy efficiency needed to meet EU climate goals

EU-27 possible net power generation in 2050

TWh per year



1 Assumption: electrification of 100% LDVs and MDVs (partially plug-in hybrids)

2 Assumption: 95% of remaining primary energy demand converted to electricity usage in Buildings for heating/cooling from heat pumps; assumed to be 2.5 times as efficient as primary fuel usage; lower case: electric heat pumps assumed to be 4 times as efficient as primary fuel usage

3 Assumption: 15% fuel switch of remaining primary energy demand converted to electricity in industry for heating from heat pumps; assumed to be 2.5 times as efficient as primary fuel usage; lower case: electric heat pumps assumed to be 4 times as efficient as primary fuel usage



EERS discussion

- Should states retain an “all cost-effective” mandate or use fixed targets (or both) ?
- Where does the obligation lie? Disco? Retailer? State?
- If we require distribution utilities to deliver EE, should we also use decoupling and performance rewards?
- Should reductions from codes, education, market transformation, etc. count as EERS-qualified savings?
- Best balance of deemed savings and detailed M & V?
- Should “prospecting” by ESCOs be rewarded through a feed-in tariff or standard contract offer?
- Should EE trade against RE in a combined low-carbon standard?
- Should programs be expanded to use white tags and trading ?
- How to integrate EE mandates and CO2 cap and trade?