Synapse
Energy Economics, Inc.

Integrating Energy Efficiency into System Planning

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The electric “machine”

- Interconnected electric systems are a single, large “machine”
- Generation, transmission lines, and loads are all components of the electric machine
- Control centers maintain the balance within the regional machine and, as applicable, with other interconnected machines
- Eastern Interconnection and Western Interconnection are the two largest machines ever engineered

Modeling load forecasts

- Econometric models
- Standards and codes
- State/Federal policies and goals
- Forward capacity markets
- DSM program results

Federal Policies

- Carbon legislation
- EPA air regulations
- EIPC planning process
- FERC NOPR on transmission planning

RM10-23 Transmission NOPR

"[W]e propose to require each public utility transmission provider to coordinate with its customers and other stakeholders to identify public policy requirements established by state or federal laws or regulations that are appropriate to include in its local and regional transmission policies."

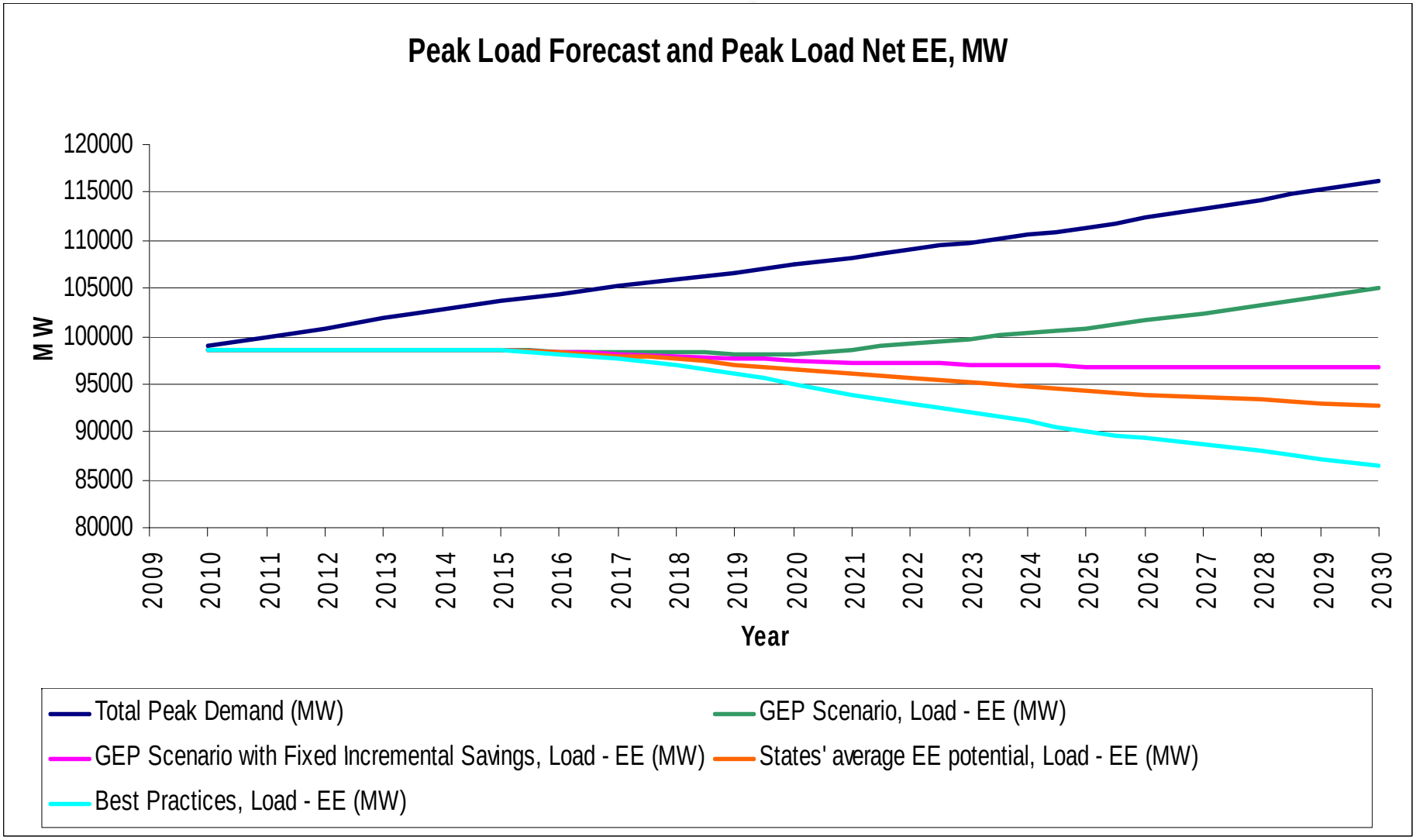
NOPR, ¶ 65

Eastern Interconnection Planning Collaborative

- Two-year process to develop three future scenarios (through 2030) and then model the bulk power system for each future
- June 2012 delivery date
- Current work is develop a 2020 Rollup of current regional plans
- How to include EE in this process?

State policy goals

State	EE Savings, % of Energy	State	EE Savings, % of Energy
Vermont	30	Indiana	14
New York	26	Rhode Island	14
Massachusetts	26	Hawaii	14
Maryland	25	California	13
Delaware	25	Ohio	12
Illinois	18	Colorado	12
Connecticut	18	Utah	11
Minnesota	17	Michigan	11
Iowa	16	Pennsylvania	10
Arizona	15	Washington	10

2020 Cumulative Electricity Savings Targets by State, ACEEE June 2010

MISO Estimates