



American Council for an Energy-Efficient Economy

ENERGY EFFICIENCY: WE CAN SAVE MONEY AND SAVE THE PLANET

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Michigan Clean Energy Initiative

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by

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KEY POINT #1:

MICHIGAN HAS A HUGE ENERGY PROBLEM

- Michigan uses a lot of energy
 - Total cost over \$20 billion per year (in 2000)
(in 2008, well over \$30 billion)
 - 8th highest cost burden in the nation
- **Michigan is almost totally dependent on fuels imported from other states and countries**

We import:

- 100% of the coal and uranium we use
- 96% of oil & petroleum products
- Three-fourths of the natural gas

COST OF MICHIGAN'S ENERGY IMPORTS

- Before the new 'high energy cost' era (circa 2000), roughly \$12 billion per year was leaving Michigan to pay for fuel imports
- **At 2008 market prices, this dollar outflow is over \$24 billion per year**

THIS IS A HUGE ECONOMIC DRAIN ON OUR STATE ECONOMY!

EFFECTS ON HOUSEHOLDS

- In 2002, the average household nationally spent about \$3,000 on energy
[half for transportation, half for home uses]
- By 2006, that amount was up to \$4,600 per year ... an increase of over 50%,
....or \$1,600 taken out of every household's annual disposable income

EFFECTS ON THE STATE ECONOMY

This **additional \$12 billion** annual drain on Michigan's economy is roughly equivalent to the lost payroll from **closing 120 major manufacturing plants.**

Even the Wall Street Journal has written about the unprecedented transfer of wealth, calling it a “bonanza” and “windfall” for the handful of big energy producing states (i.e., AK, NM, WY and TX) and countries (e.g., OPEC).

Bottom line: Michigan is in an economic war regarding energy costs...and we are losing!

POLICY PRIORITY #1: UTILITY SECTOR ENERGY EFFICIENCY PROGRAMS

- Substantial **utility-funded** energy efficiency resource programs are the cornerstone of the policy efforts of every leading state on energy efficiency
 - States don't spend tax dollars on this...they are all broke
 - Utilities spend \$billions on energy every year (\$10 billion in Michigan). Just direct 3% or 4% to energy efficiency

RATIONALE FOR ENERGY EFFICIENCY AS A UTILITY SYSTEM RESOURCE

SIMPLY STATED:

- Utility systems need to have adequate supply resources to meet customer demand
- To keep the system in balance, you can add supply resources, reduce customer demand, or a combination of the two
- In virtually all cases today, it is cheaper to reduce customer demand than to acquire new supply resources

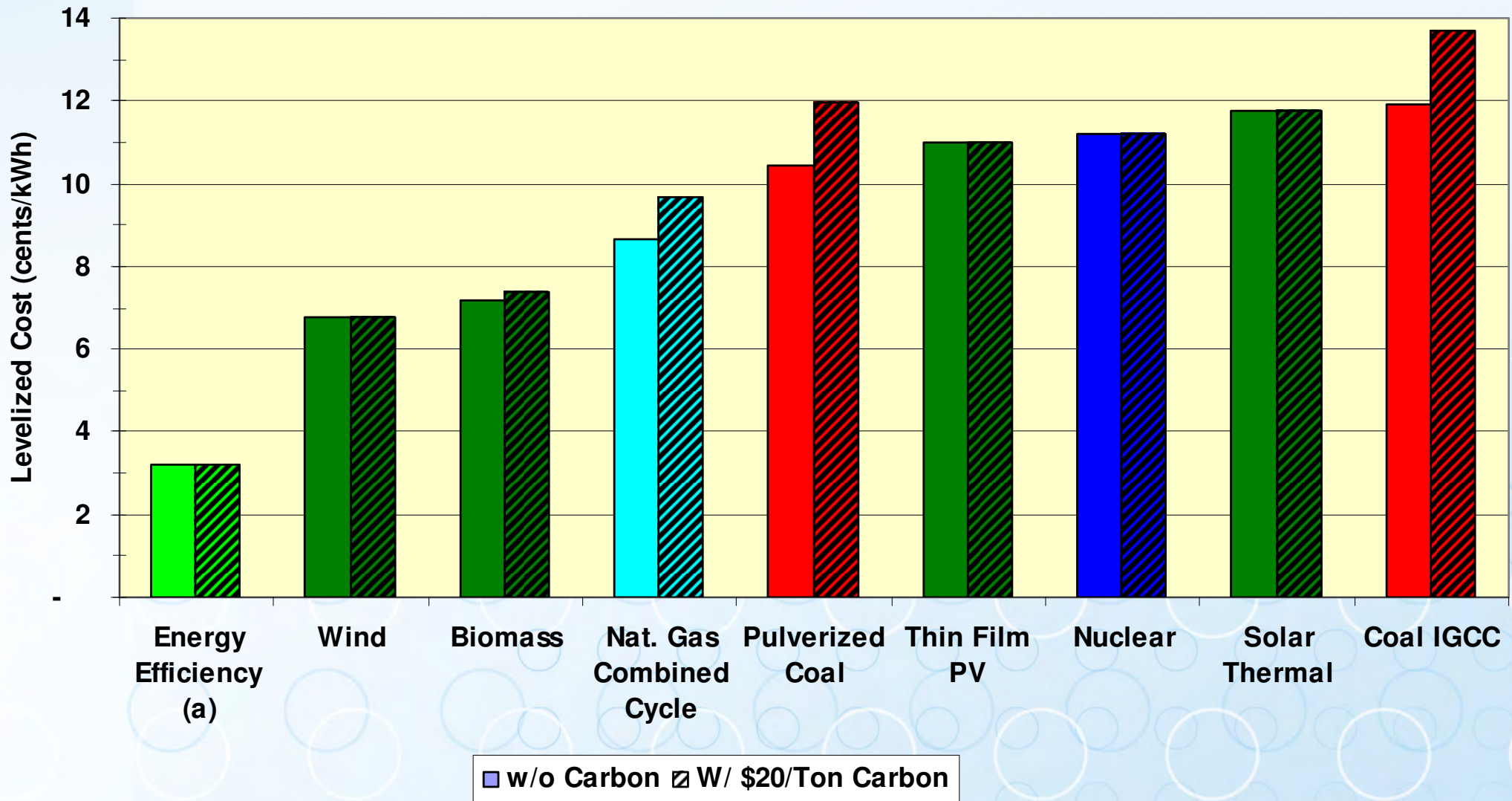
[True for electricity and natural gas]

KEY POINT #2

*It is much cheaper to save energy
than it is to produce it.*

[We can save electricity for about one-third the cost of producing it through a new power plant
.... With no carbon (CO₂) emissions]

Cost of New Electricity Resources



ENERGY EFFICIENCY ON A “POWER PLANT” SCALE

- Some leading state examples
 - ❖ Minnesota has saved over 2,300 MW since 1990
 - ❖ The Pacific Northwest has saved over 1,600 MW over a similar timeframe
 - ❖ California has saved over 1,500 MW in the last 5 years
- At least ten states have EE programs on a scale large enough to displace power plants (i.e., save 0.4% to over 1.0% of load each year)
 - CA, CT, IA, MA, MN, NY, OR, RI, VT, WI

THE PACIFIC NORTHWEST (ID, MT, OR, WA)

- Best electric resource planning process in the U.S.
- 25 years of energy efficiency program experience
- Planning to meet all new electricity resource needs through 2013, and two-thirds of new needs thru 2025

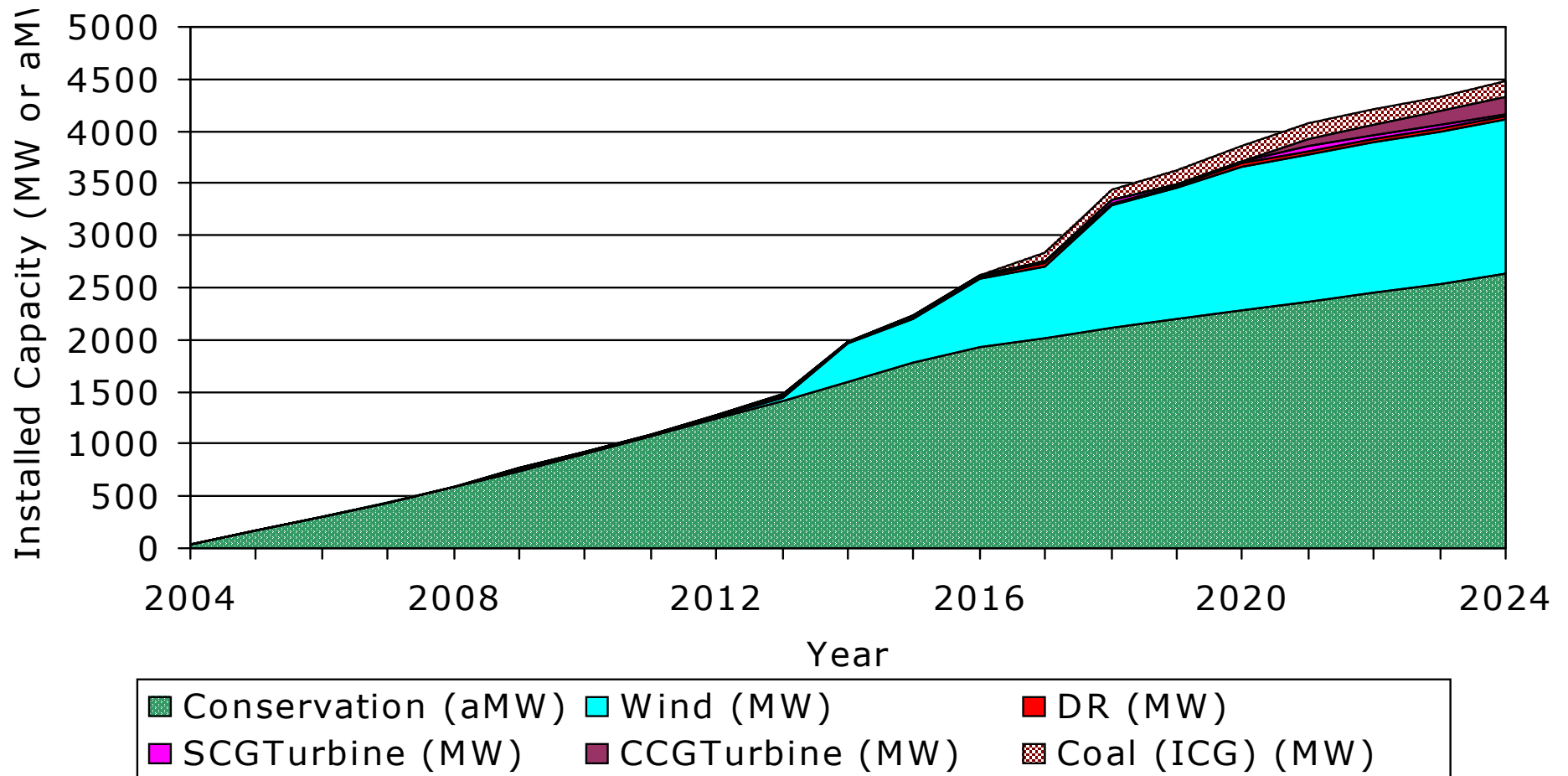
....And all at a levelized cost of 2.4 cents/kWh

The Fifth Northwest Electric Power and Conservation Plan

Northwest Power and Conservation Council, May 2005.

[<http://www.nwcouncil.org/energy/powerplan/plan/>]

NW Plan Relies on Conservation and Renewable Resources to Meet Load Growth



KEY POINT #3

The argument that it is

“too costly to take action on climate change”

is exactly backwards

We can make big reductions in CO₂ emissions
and *reduce* total energy costs at the same time!

NOT acting on climate will *cost more!*

ONE MAJOR CHALLENGE

Utilities do not voluntarily engage in “serious” customer energy efficiency programs

[“Conservation tips” don’t count as “serious” energy efficiency]

The fundamental problem: Under traditional regulatory approaches, utilities have strong economic incentives to seek greater energy sales and avoid declines in sales

STATES MUST HAVE STRONG POLICIES IN ORDER TO ACHIEVE SUBSTANTIAL ENERGY EFFICIENCY!

UTILITIES HAVE 3 KEY ECONOMIC CONCERNS REGARDING ENERGY EFFICIENCY PROGRAMS

[In order of importance]

- **Cost recovery** for the direct costs of a program
- **Addressing the disincentives** of “lost revenues” resulting from energy efficiency improvements that reduce customer energy use
- **Providing an opportunity for earnings** from energy efficiency program activity (to reflect the fact that they can generate earnings from supply-side investment)

WHAT ARE STATES DOING?

- **Cost Recovery** – At least 25 states have operating utility sector energy efficiency programs. All of those states have some type of approved cost-recovery mechanism
- **Shareholder Incentives** – At least 10 states have incentive mechanisms in place, several more are developing them
- **Decoupling/lost revenues** – At least 5 states have decoupling mechanisms approved, and at least another 5 states are actively considering it.

MICHIGAN'S POLICY STATUS

- **Cost Recovery** – PA 295 re-established utility EE programs in Michigan and authorized cost-recovery through a surcharge. [Problem: charge is capped at 2% of revenues. Will need somewhat more in order to reach very high savings levels.]
- **Shareholder Incentives** – PA 295 did create incentive mechanism for utilities that exceed savings goals. [Concern: may need enhanced incentives for new, very high savings targets]
- **Decoupling** – PA 295 allowed for gas utilities, did not address for electric. [Status: under consideration before MPSC now. Will be crucial in convincing utilities to achieve very high EE savings levels.]

LOOKING AHEAD: MOMENTUM TOWARD EE IS BUILDING RAPIDLY

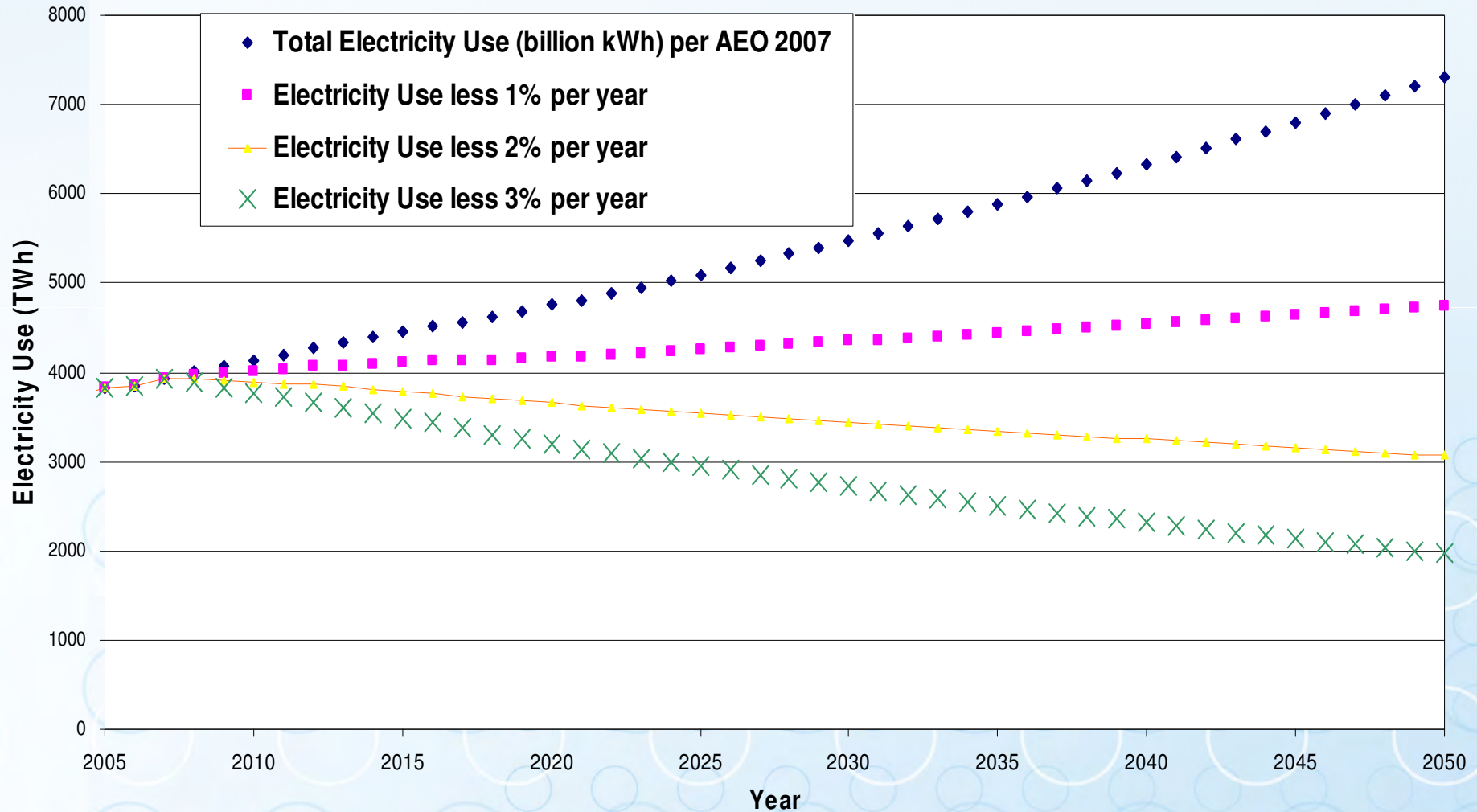
Many factors are converging to make energy efficiency the top priority electric system resource

- High and volatile fuel prices
- Customer/political dissatisfaction with high costs
- ‘NIMBY’ issues re: power plants and transmission lines
- Rising power plant construction costs
- Power plant cost recovery risks
- Environmental policy objectives (esp. global warming)
- Environmental cost risks

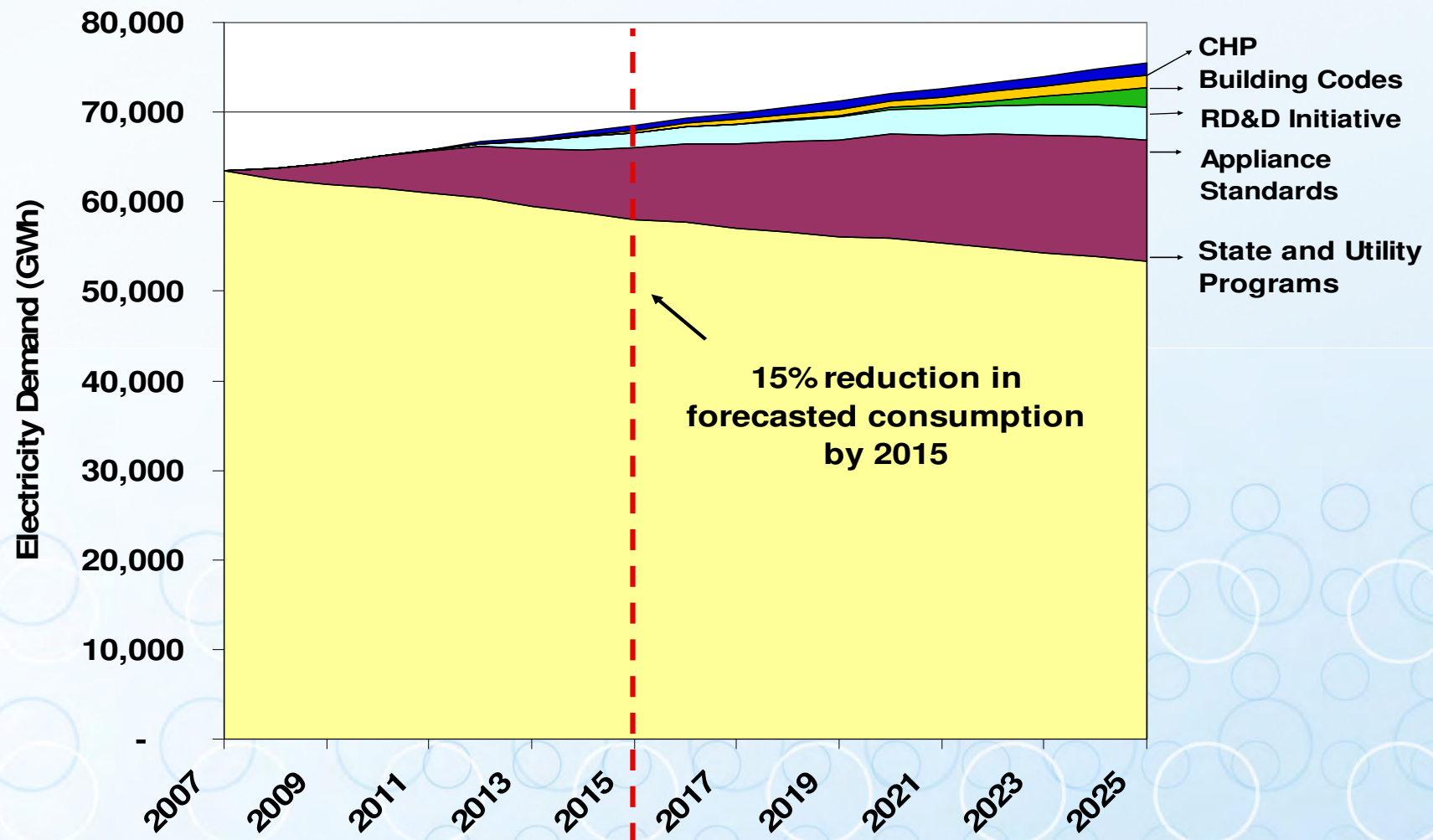
A number of states are aggressively expanding their utility-sector energy efficiency efforts.

FOR A UTILITY CEO, THE FUTURE AIN'T WHAT IT USED TO BE

Electricity Use as a Function of Annual Savings Rate



Share of Maryland Electricity Sales That Can Be Met by Efficiency Policies



CONCLUSION:

WE MUST DEVELOP A 21ST CENTURY BUSINESS MODEL FOR OUR UTILITIES

- For 80 years our electric (and natural gas) utility system has been premised upon...and designed to achieve.... continual growth in energy sales
 - Cost recovery
 - Rate design
 - Cost allocation for system expansions
 - Utility earnings
- Given the realities we face in the 21st Century, it is imperative that we develop a new “business model” for utilities
- A utility must be economically viable under conditions where their gross throughput of energy is declining
- **Moreover....they must become willing partners in *facilitating* that decline!!!**