



Demand Side Management in a New Era Of Utility (Re)regulation

September 22, 2008



What is Demand Side Management



Includes both:

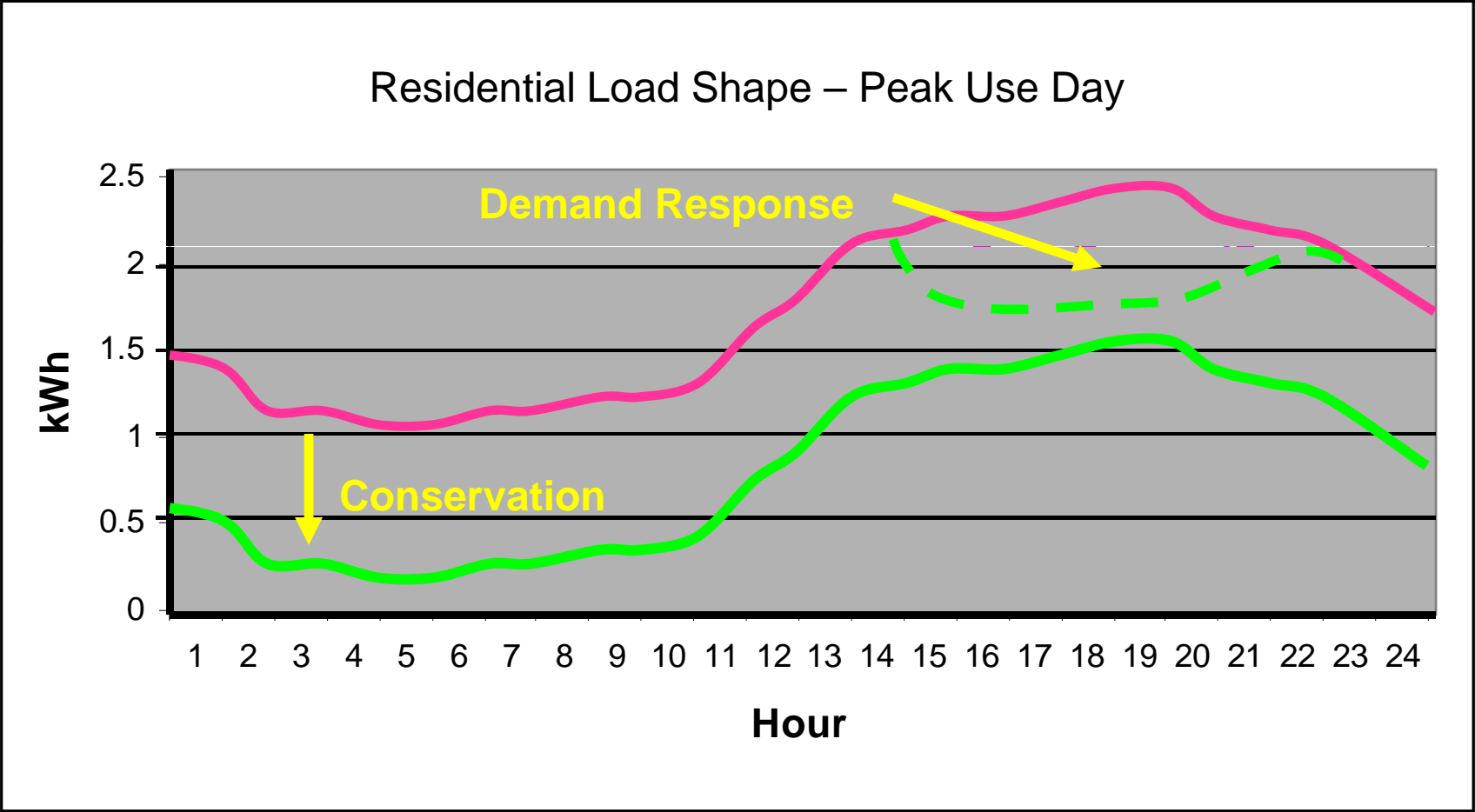
Energy conservation measures

- Actions that conserve energy over a broad range of conditions
- Long-term measures such as lighting retrofits, appliance and equipment upgrades and building insulation

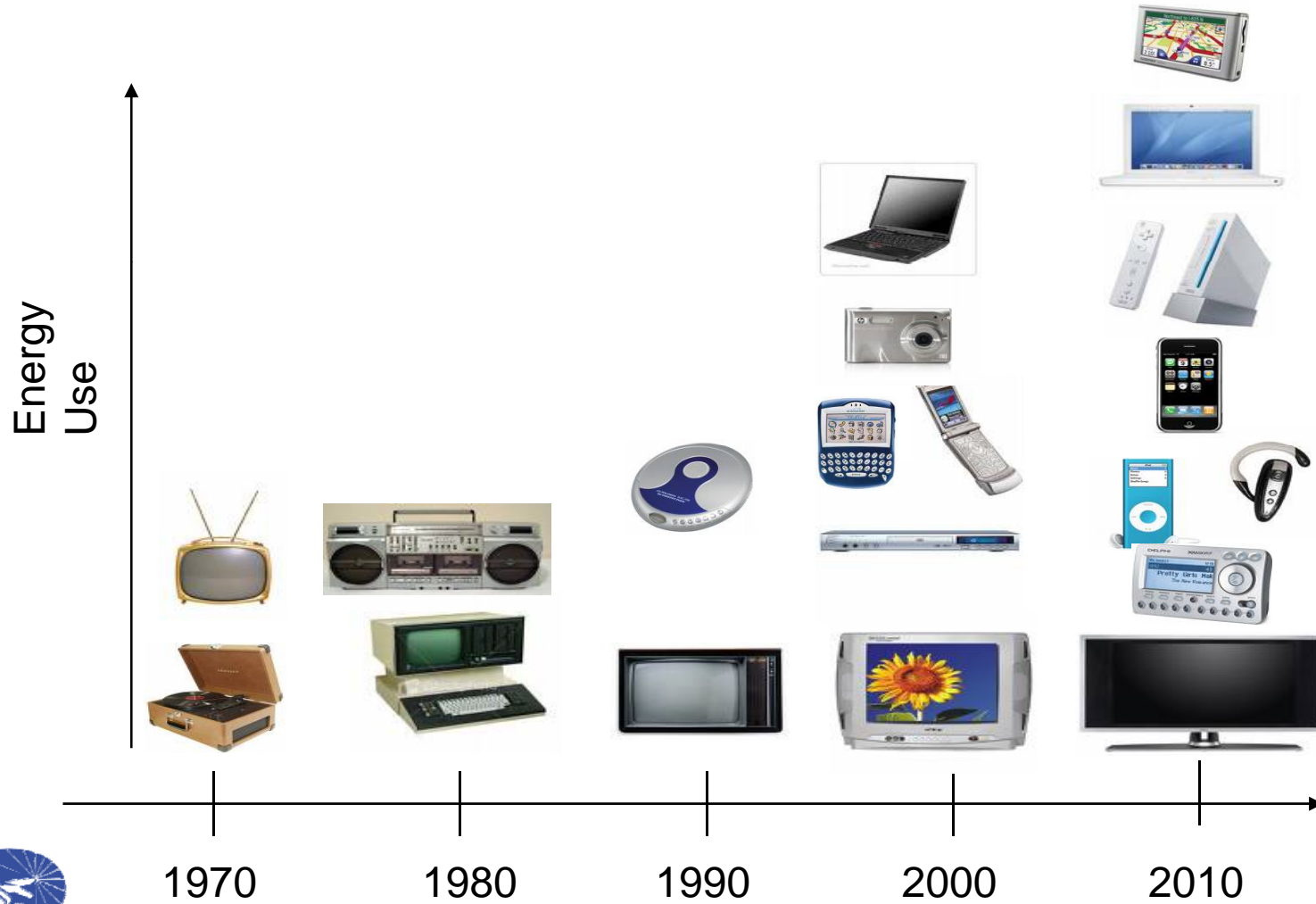
Demand response measures

- Actions that reduce peak demand on the electrical grid system
- Short-term measures such as thermostat changes, HVAC cycling, lighting reductions, industrial process reductions and on-site generation

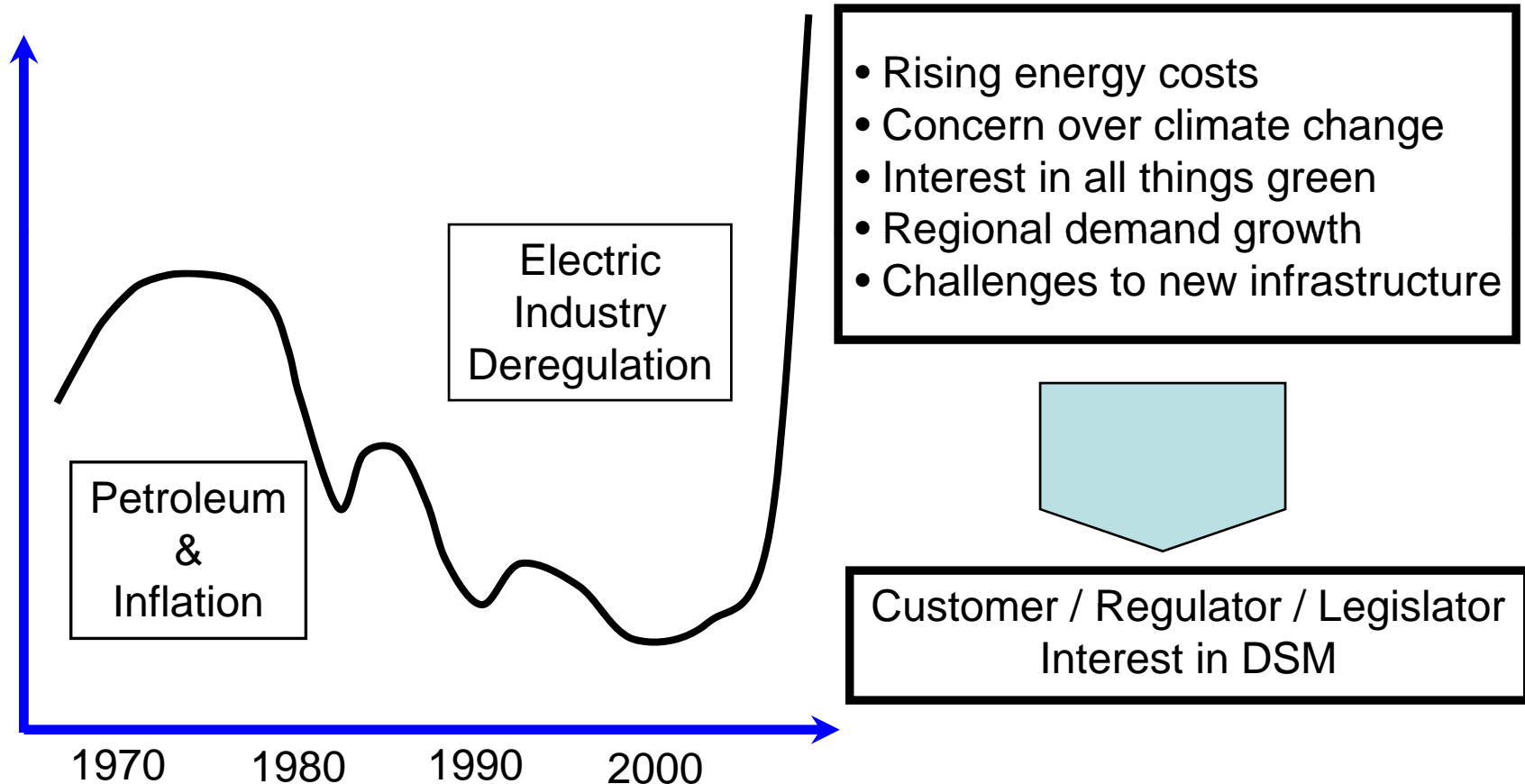
Conservation vs. Demand Response



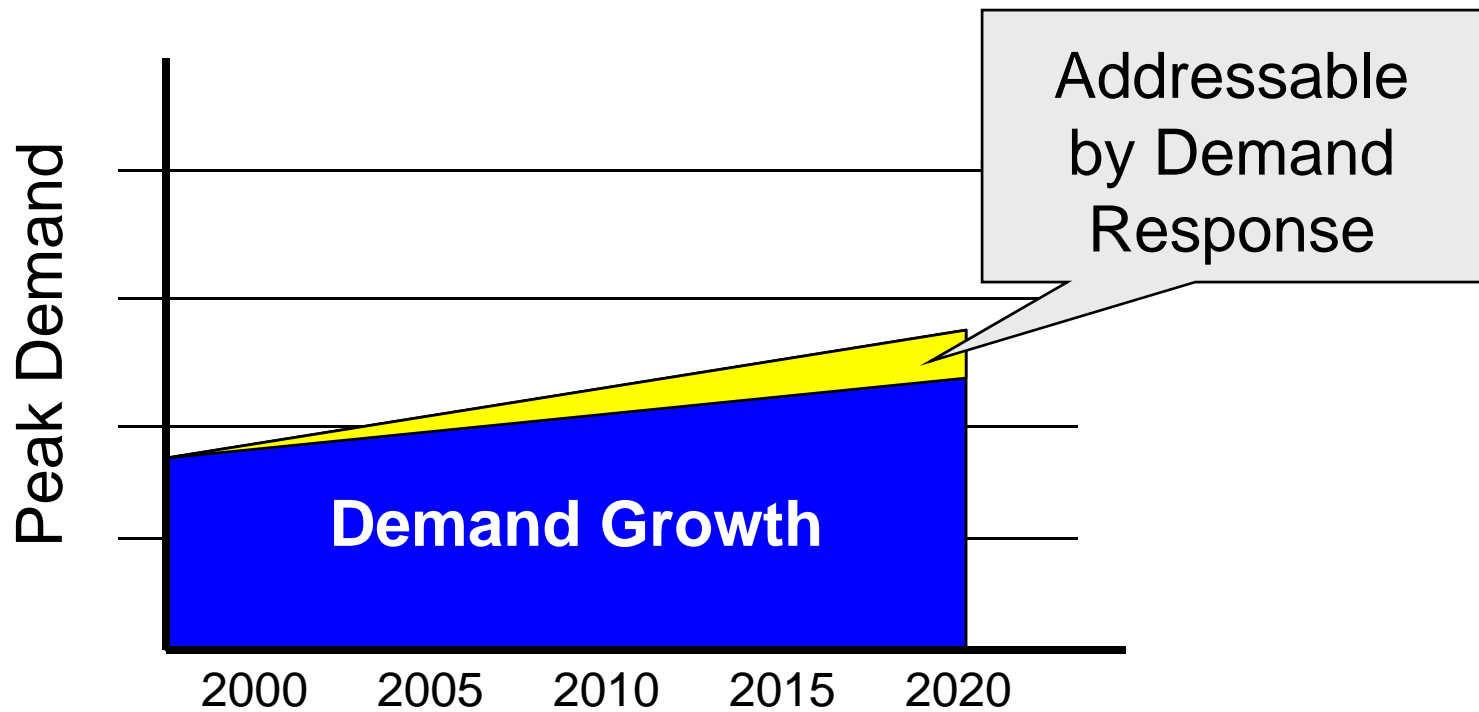
Increasing Energy Use



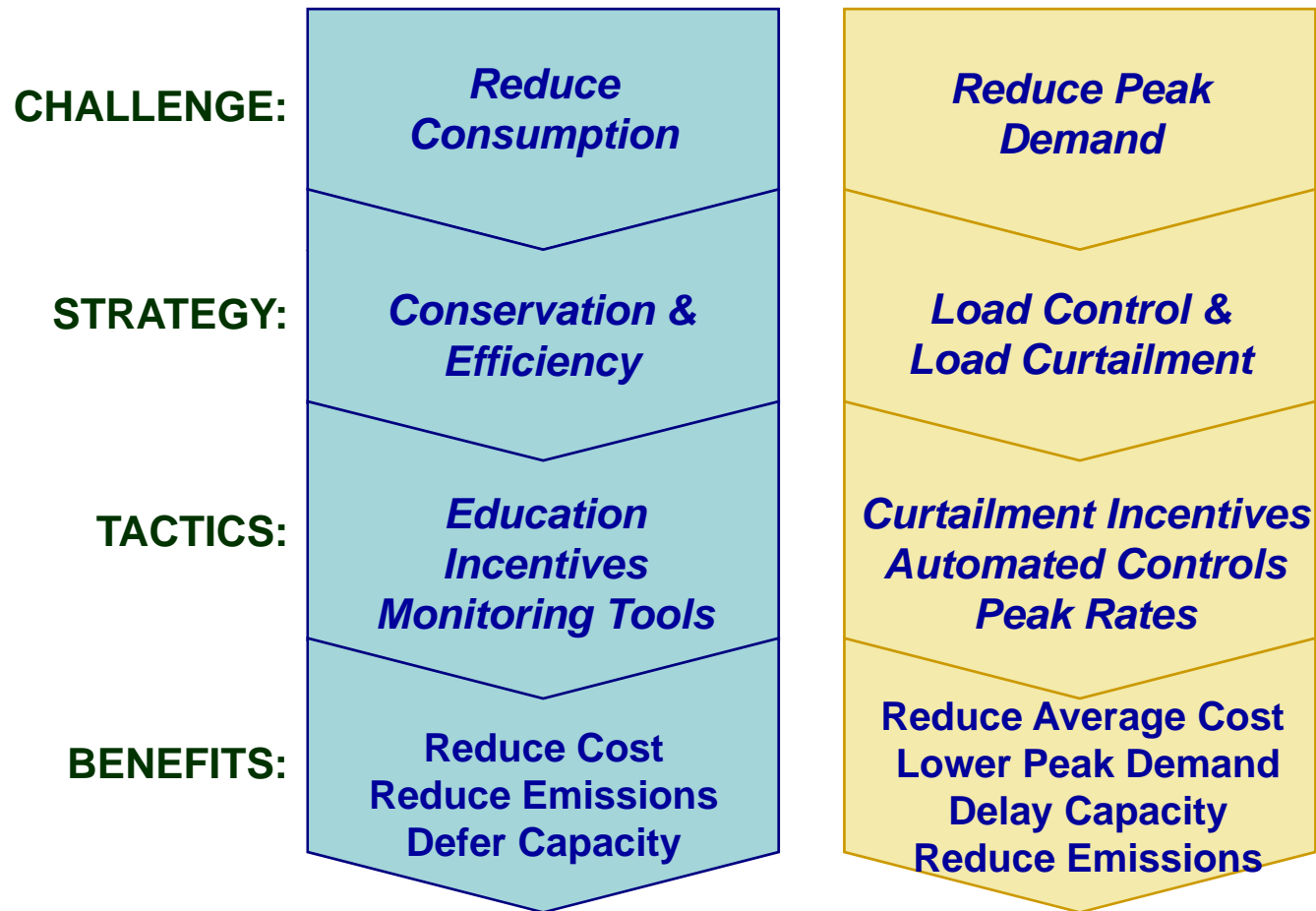
Renewed Interest in DSM



Demand Growth



Two-Prong Approach To Increase Efficiencies



Dominion's Approach



- Roll out pilot energy conservation / demand response programs in 2007
- Apply for expanded programs in 2009
- Expand renewable generation portfolio
- Offer customers renewable energy options

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in total costs over
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Pilot Implementation Schedule



Pilot	Percent Enrolled		Percent Installed		Completed Installations
	0%	100%	0%	100%	
Direct Load Cycling – Programmable Thermostats	100%		100%		✓
Home Energy Audits	100%		100%		✓
Energy Efficiency Welcome Kits	100%		100%		✓
PowerCost Monitor	100%		100%		✓
Small Commercial Energy Audits	100%		100%		✓
Direct Load Cycling – Switches	100%		99%		
Advanced Metering Infrastructure & Critical Peak Pricing	100%		18%		
ENERGY STAR® Homes	43%		42%		
Distributed Generation	27%		9%		

How does this affect air quality planning?



- Regional net emission reductions over time



Regulatory Questions



- How to quantify the emission reductions?
MWh to emissions
- How credible are the emission reductions?
Integrated Resource Plans / PUC filings
- How to model the emissions change?
Deferred plants or adjustments in growth
projections

Utility DSM in the SIP?



- Not a revolutionary idea – applied in other contexts, but not universally applied
- EPA guidance available
- Very much worth exploring / should not be overlooked
- Detailed analyses of DSM potential used to support PUC / SCC filings support credibility of projections
- Extensive measurement & verification required by PUC / SCC after the fact
- Caveat: DSM success depends upon customer participation