The Changing Energy Services Delivery Model

The Public Interest Framework Surrounding Climate Change

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The broad policy framework for carbon is still evolving

Mounting scientific evidence – GHG emissions impact global climate conditions

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Public and political support for curtailing GHG emissions

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Binding international agreements thus far unattainable

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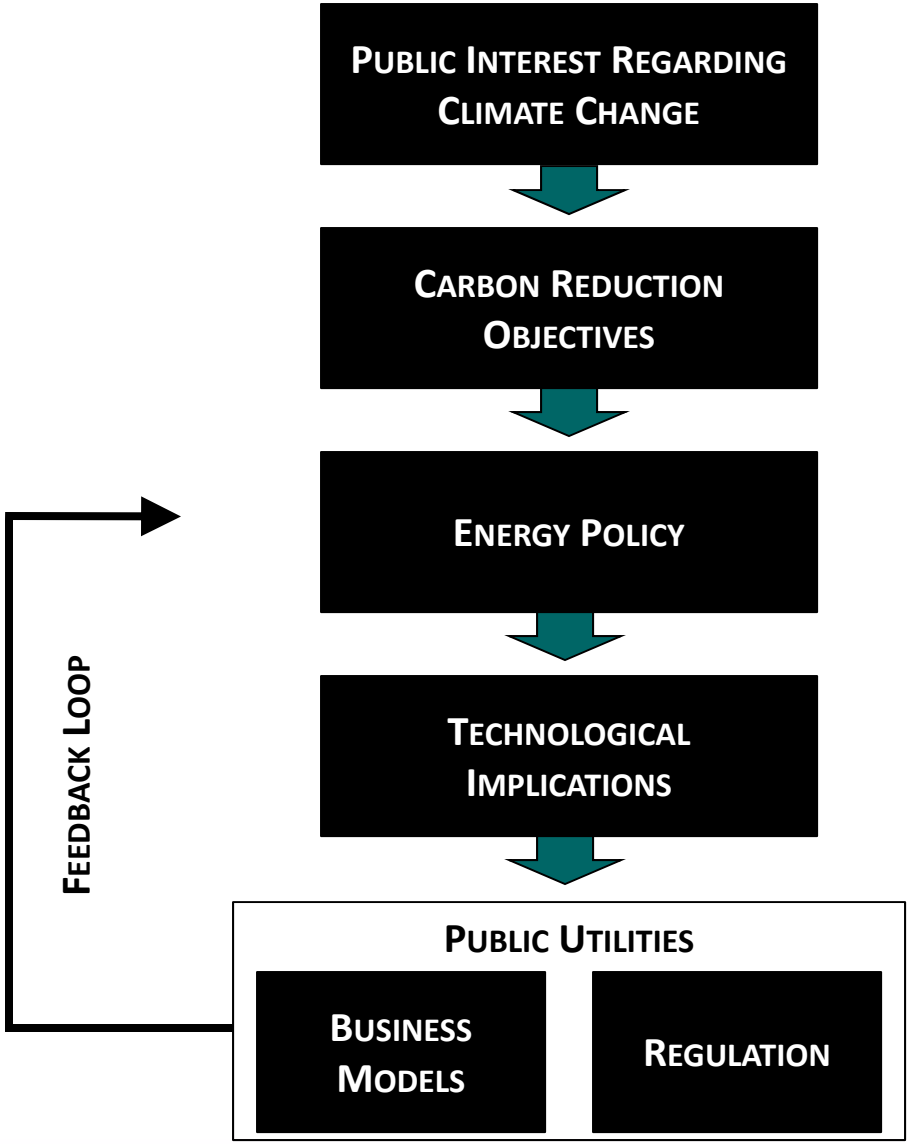
Patchwork of evolving federal, regional, provincial and state policies

Requiring an adaptive approach by utilities and regulators



The new world order

The Old World

Revenues
− Cost of Goods Sold

= Gross Profit

The New World

Revenues
− Cost of Goods Sold
− Costs to Society

= Gross Profit

Source: PepsiCo CEO Indra K. Nooyi, from Davos, January 29, 2010.

Utility business models must evolve to meet the pressures and opportunities created by lower carbon policies

Traditional

- Revenue and earnings growth
- Growing customer base
- Growing commodity volumes
- Growing rate base

Progressive

- Revenue and earnings growth
- Growing customer base
- Integrated resource plan
- Proactive DSM
- Flat use/customer

Aggressive

- Revenue and earnings growth
- Growing customer base
- Value-added energy service solutions
- Technological innovation and integration
- Diversified revenue streams
- Declining use per customer
- Declining network deliveries??

FOCUS:	**Energy Delivery**	**Energy Delivery/Conservation**	**Efficiency/Carbon Alternatives/Energy**

Regulatory models must also evolve

Regulatory Approach

Tool	Traditional	Progressive	Aggressive
Primary Objective	Energy Savings	Energy Savings; Manage Demand Growth	Energy Savings; Manage Demand Growth; Carbon Reduction
Cost Effectiveness Test	Ratepayer Impact; Utility Cost	TRC	Societal; Modified TRC
Avoided Costs	Commodity	Commodity/Capacity	Commodity/Capacity/Externalities/ Carbon reduction
Input Assumptions	Utility costs	Utility costs; Participant costs	Utility costs, participant costs; Externalities
Adjustment Factors	Free ridership; Persistence; Attribution	Plus free drivership; Spillover and; Proportional attribution	Secondary concern (tradeoff theory)
DSM Program Design	Prescriptive	Flexible	Proportional reduction
DSM Budget	Fixed $ Amount	% of Revenues	Objective Driven
DSM Metrics/Targets (Measuring Success)	Energy Saved/DSM $	Short term and long term energy savings	Market Transformation; DSM Penetration; Carbon Reduction
Financial Incentive (Utilities)	Limited	Tied to Energy Savings	Tied to Societal Goals/Climate
Compensating for Lost Revenue	Minimal	LRAM	Revenue Decoupling
Conservation Impact Evaluation	Utility report, prudence review	Independent review and verification	Evaluate whether DSM results achieve program objectives
Filing and Reporting	Progress Report /Evaluation Report	Audited Program Results	Broad Evaluation Measures
Stakeholder Input	Limited/Informal	Formal/Advisory	Proactive Consultation; Direct Involvement
Integration of Gas/Electric	Limited/None	Encouraged	Mandated

How do we measure satisfaction of the public interest?

Total Resource Cost Test

- Measures net costs of a resource option based on total costs of the program
- Includes both participants' and the utility's costs

Societal Cost Test

- Extension of the Total Resource Cost Test
- Includes the effects of externalities and uses a societal discount rate

Participant Test

- Measures the costs and benefits to the customer

Ratepayer Impact Measure

- Measures impacts on customer bills and rates

Program Administrator Cost Test

- Measures the net costs/benefits to the utility or program administrator
- Excludes any net costs to the participant

Cost effectiveness tests used in different jurisdictions

Jurisdiction	TRC	Societal	Participant	Ratepayer	Utility	Program Admin
United States						
California	**X**					X
Colorado	X					
Connecticut	X				X	
Iowa		**X**	X	X	X	
Maine		X				
Massachusetts	X					
Minnesota		**X**	X	X	X	
New Jersey	X	X	X	X		X
New York	X					
Oregon		X			X	
Washington*						
Wisconsin	X					
Canada						
Alberta*						
British Columbia	X			X		
Manitoba	X	X				
Nova Scotia*						
Quebec	X					
Countries outside North America						
Great Britain	X*					
New Zealand*						
Australia*						

Key regulatory issues to be addressed

- Energy demand implications
  - ❑ Overall level of demand
  - ❑ Demand for new/emerging energy services
- Carbon regulatory compliance and cost recovery implications
- New competitive challenges to the traditional LDC business/loads
- New businesses areas (regulated/unregulated) for LDCs
- Reductions in traditional natural gas loads
- Rate design options to address these potential reductions
- Reliability implications