

Maine's Electricity Industry

Briefing for the Energy, Utilities and Technology
Committee by

Thomas L. Welch, Chairman
Maine Public Utilities Commission
January 22, 2013

Electricity Components

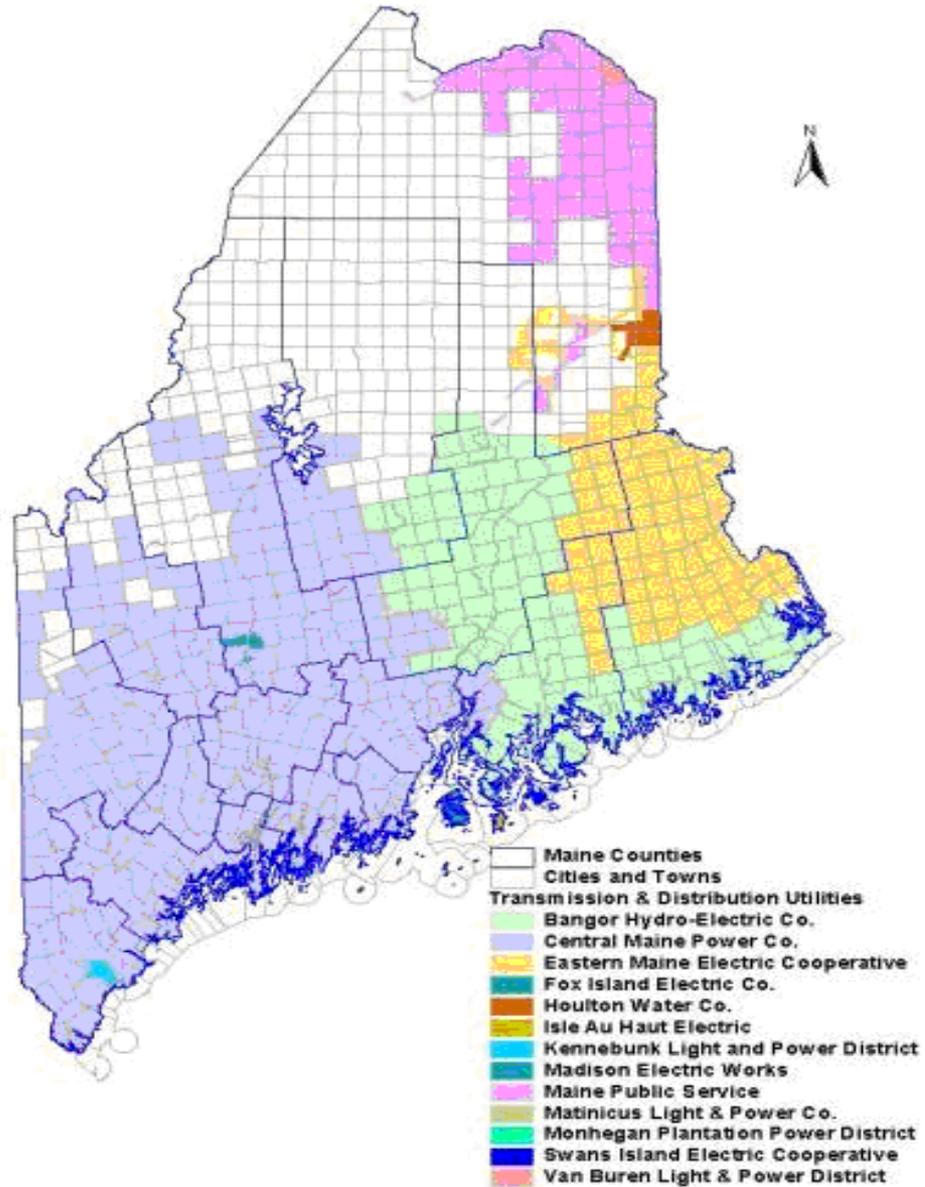
- Delivery Service
 - Transmission, distribution and customer-related services
 - Provided by regulated utilities such as CMP and BHE (Transmission and Distribution utilities or “T&D utilities”)
- Power Supply
 - Generation and sale of power (energy and capacity)
 - Regional wholesale power market administered by the New England Independent System Operator (ISO-NE)
 - Generators throughout the region sell to and consumers (ultimately) purchase from this market
 - Wholesale market is not subject to state rate regulation, although there is some federal oversight by the FERC

Thirteen Electric Delivery (T&D) Utilities in Maine

- Three investor-owned utilities (IOUs)
 - CMP, BHE and MPS
- The three IOUs serve about 95% of Maine's load
- Cont...

- Ten consumer-owned utilities (COUs)
 - Eastern Maine Electric Coop.
 - Fox Islands Electric Coop.
 - Houlton Water Co. (Elect. Dept.)
 - Isle-Au-Haut Electric Power Company
 - Kennebunk Light & Power Company
 - Town of Madison
 - Matinicus Plantation Electric
 - Monhegan Plantation Power
 - Swans Island Cooperative
 - Van Buren Light & Power District

Maine Transmission & Distribution Utilities



Commission Oversight of T&D Utilities

- Service availability
- Service quality
- Safety
- Rates (but not transmission)
- Other
 - CPCN for transmission lines
 - Mergers/acquisitions

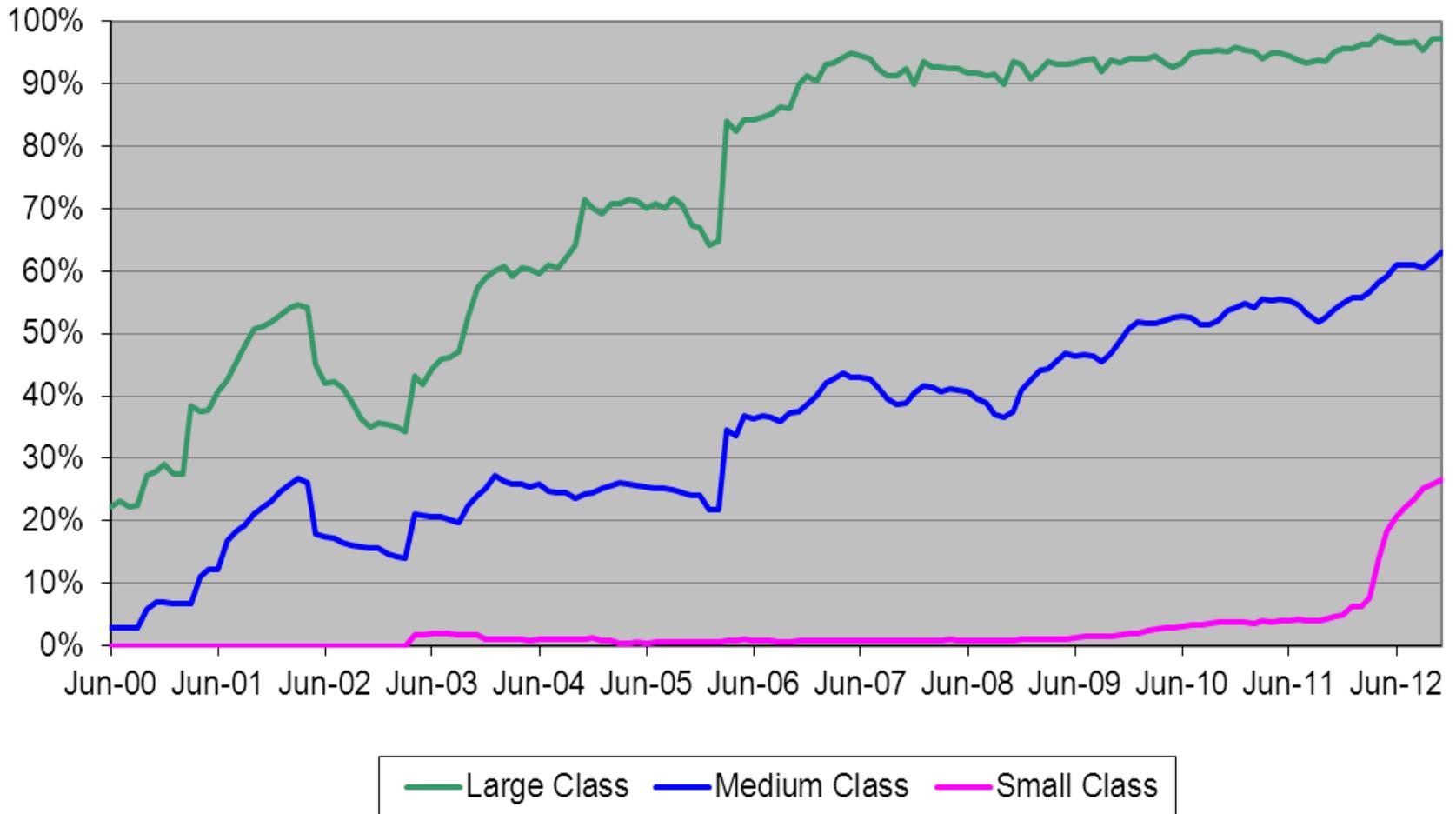
Commission Oversight of Retail Electricity Suppliers

- Competitive Energy Providers (CEP) – sell directly to consumers, or facilitate sale
 - Maine law requires CEPs to be licensed by the Commission
 - About 150 currently licensed
 - Standard Offer Service
 - Electric Service
- Commission's oversight of CEP includes:
 - Licensing
 - Consumer protection
 - General market oversight
- Compliance with state statutes and Commission rules
 - RPS for example

Retail Market in Maine

- Large C&I consumers
 - Typically arrange for their own electricity supply from a CEP
 - Some purchase directly from spot market
- Medium C&I consumers
 - Mix of both
- Residential and other small consumers
 - Options to shop for their own electricity developed over last year
 - Green product to be available per Commission process beginning in 2013
- Medium C&I consumers
 - Mix of both

Percentage of Maine Load Served by Competitive Electricity Providers (CEPs) (Statewide Average)



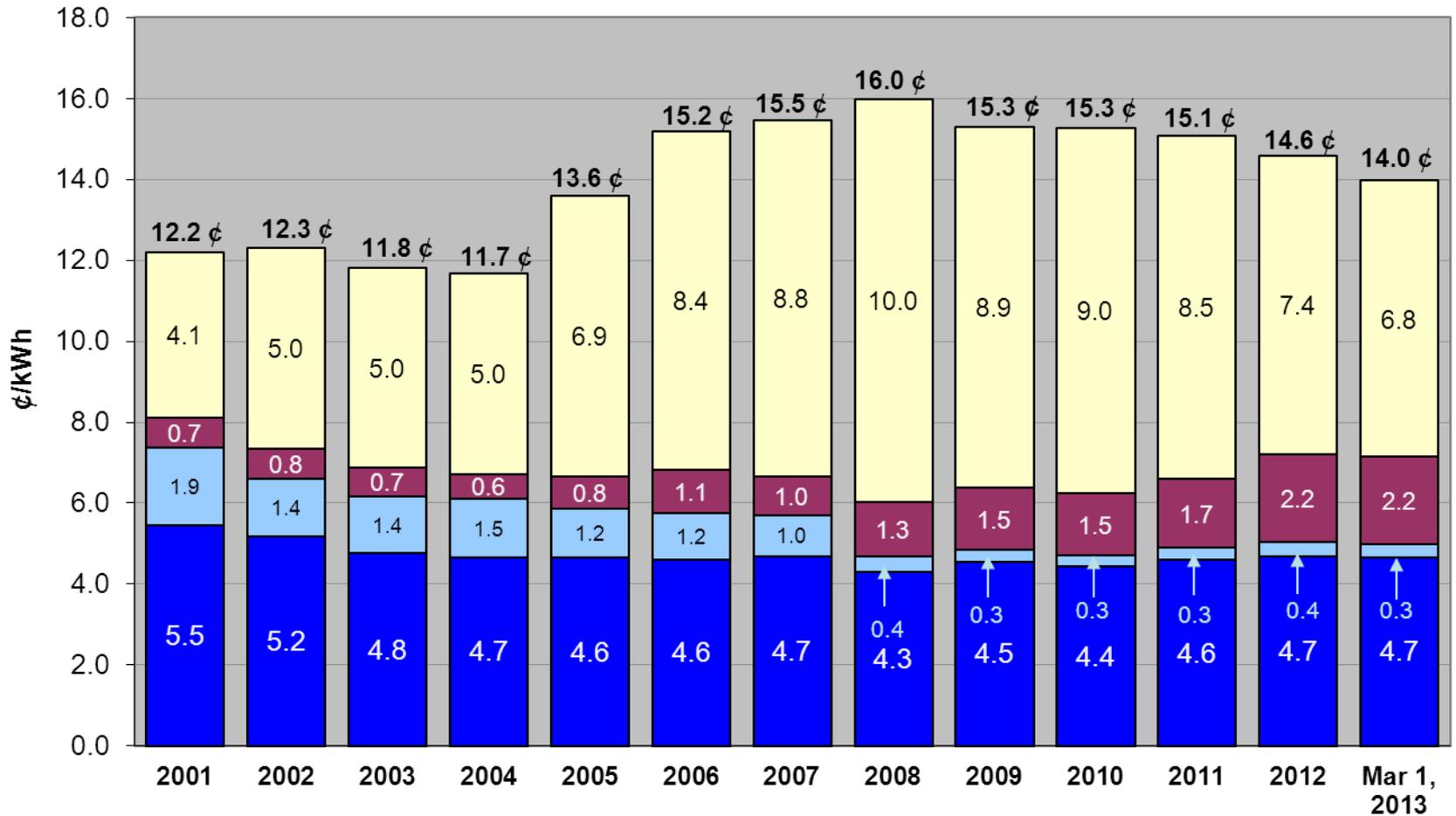
Components of Electricity Prices

- Supply (e.g., standard offer service)
 - Supply includes energy, capacity, ancillaries.
 - Retail vs. wholesale
- Distribution
- Transmission
- Stranded Costs

Standard Offer Service

- Standard offer service is the supply customers receive if they don't have their own arrangement with a CEP
- The Commission runs periodic competitive bid processes to procure standard offer service
- New standard offer service prices and other components are summarized in the following charts

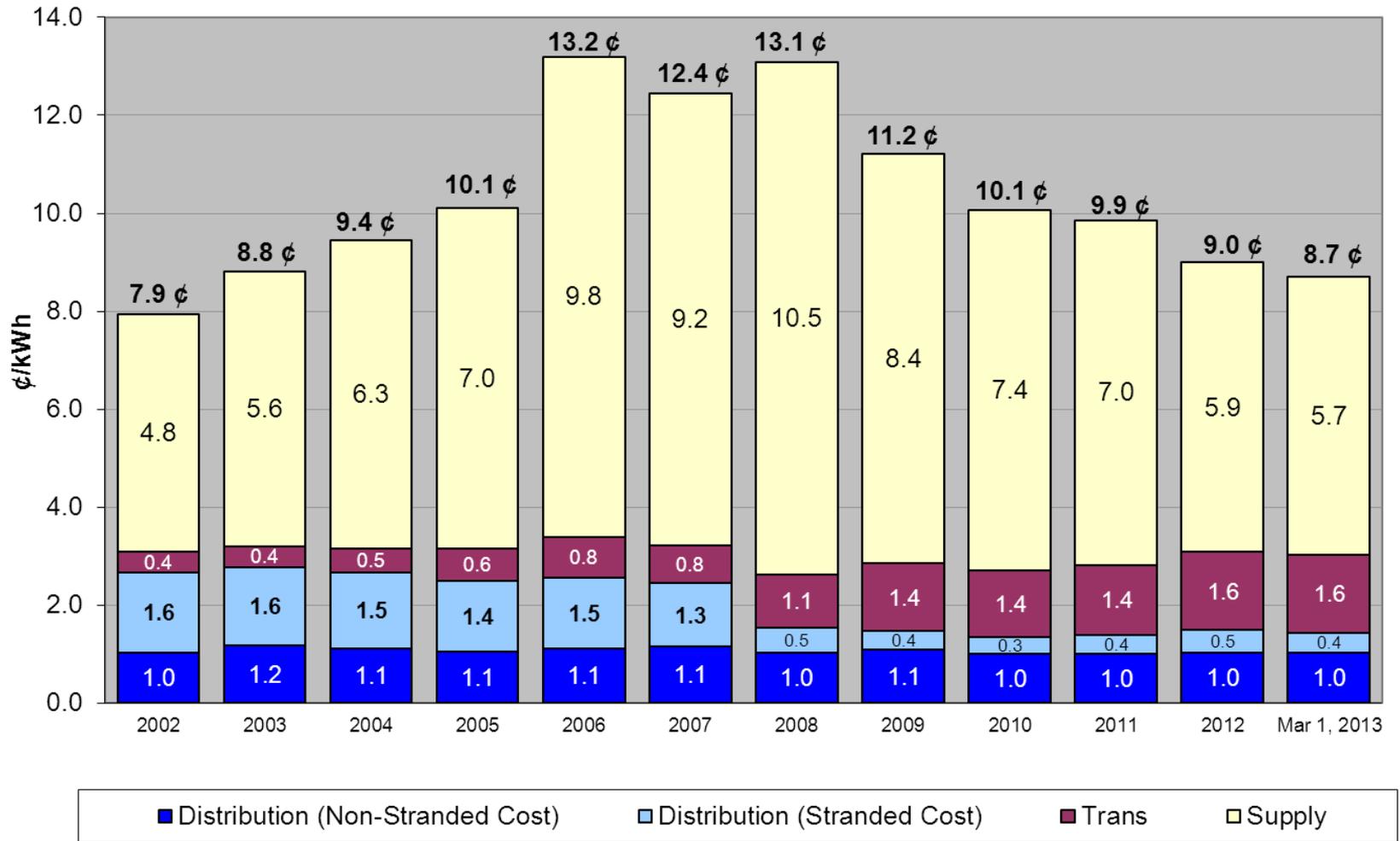
Central Maine Power Company Residential Rates (¢/kWh)



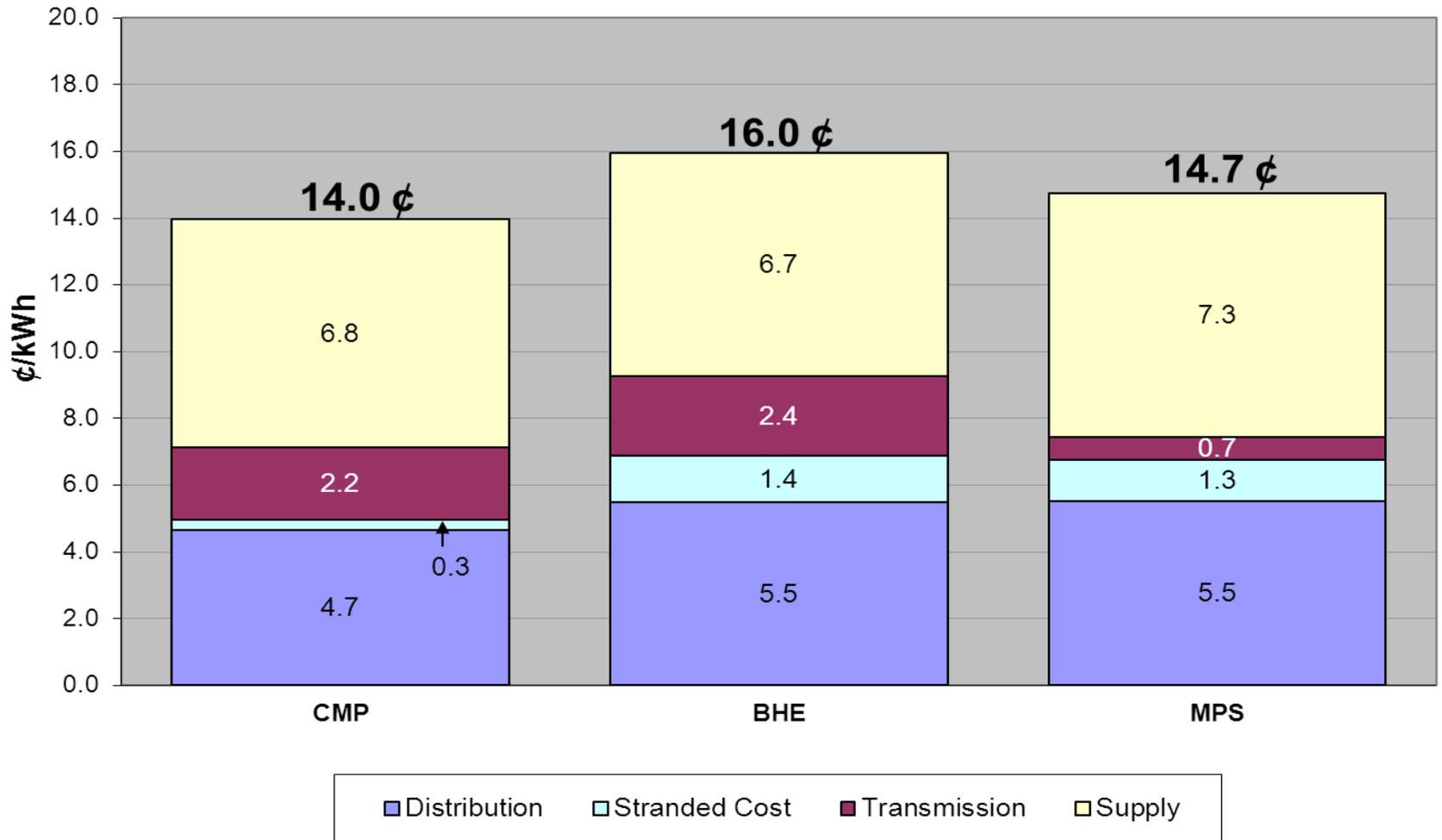
■ Distribution (Non-Stranded Cost)
 ■ Distribution (Stranded Cost)
 ■ Trans
 ■ Supply

Central Maine Power Company Commerical/Industrial Rates

(¢/kWh)



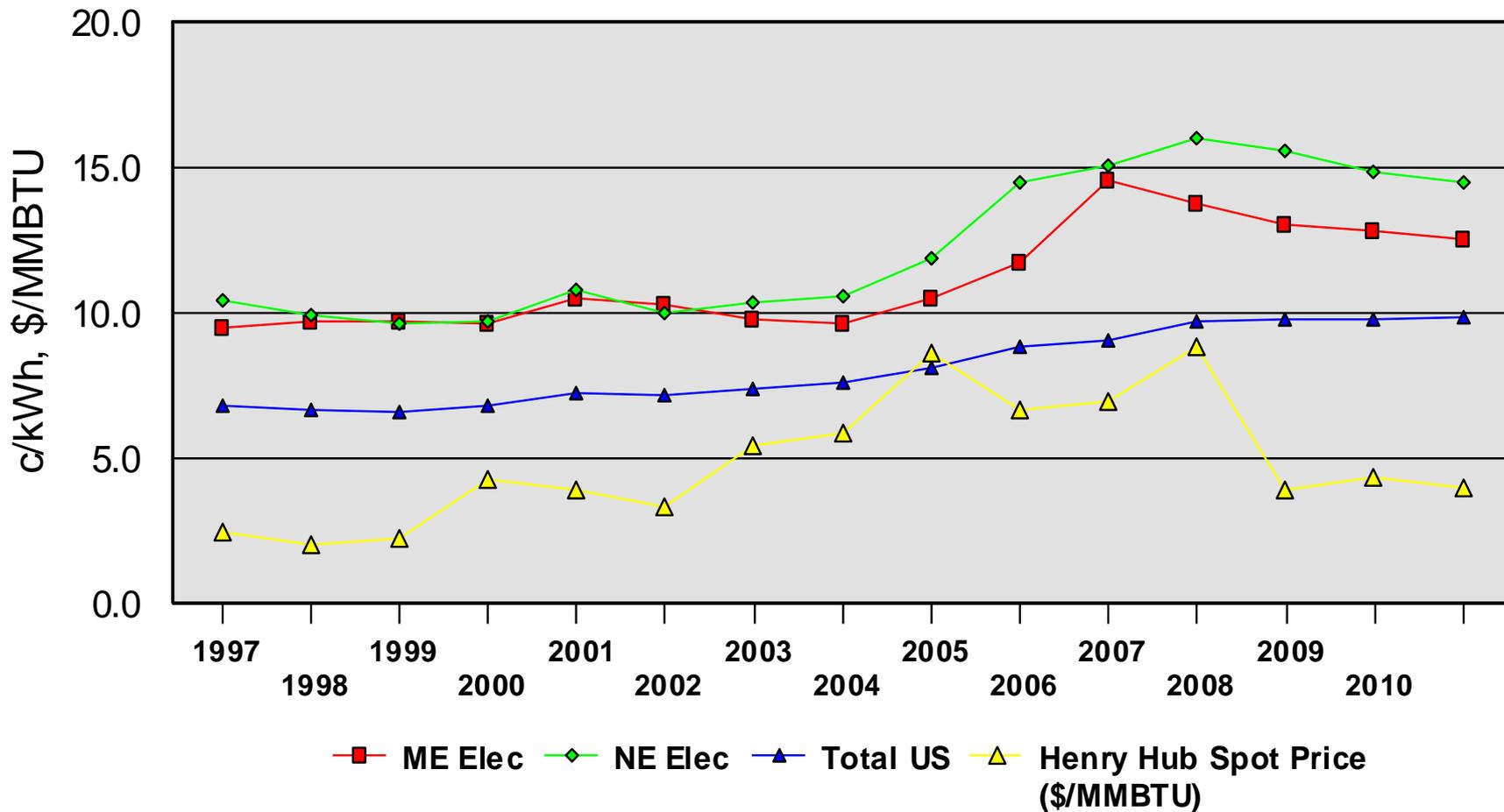
**Maine's Investor-Owned Utilities
Residential Rates as of March 1, 2013
(¢/kWh)**



Natural Gas is the Primary Driver of Energy Prices

- The wholesale market in New England is dominated by natural gas
 - Natural gas generators set the market clearing price
- Translates directly into prices Maine consumers pay for electricity

Comparison of Total Average Electricity Prices and Henry Hub Natural Gas Spot Prices



Wholesale Market Structure

- Most of Maine is part of the New England Regional Market (ISO-NE)
 - ISO-NE operates the regional bulk transmission system and administers the wholesale competitive markets for energy, capacity and ancillary services
 - ISO-NE is responsible for regional system reliability (planning and day-to-day operations)
 - FERC has jurisdiction over the ISO-NE tariffs and market rules
 - The Commission participates in ISO-NE and FERC proceedings to advocate for Maine interests

Wholesale Market Structure (cont.)

- Northern Maine is not electrically connected to New England and is not part of the ISO-NE
 - Includes the territories of Maine Public Service, Houlton, Van Buren, and EMEC
 - Part of the Canadian Maritimes Balancing Authority area (includes New Brunswick, Nova Scotia, Prince Edward Island); New Brunswick System Operator (NBSO) has regional reliability responsibilities
 - Northern Maine Independent System Administrator (NMISA) administers the system and market

Major Current Issues

- Transmission
- Natural gas
- Smart Grid/AMI meters
- Renewable power development

Transmission

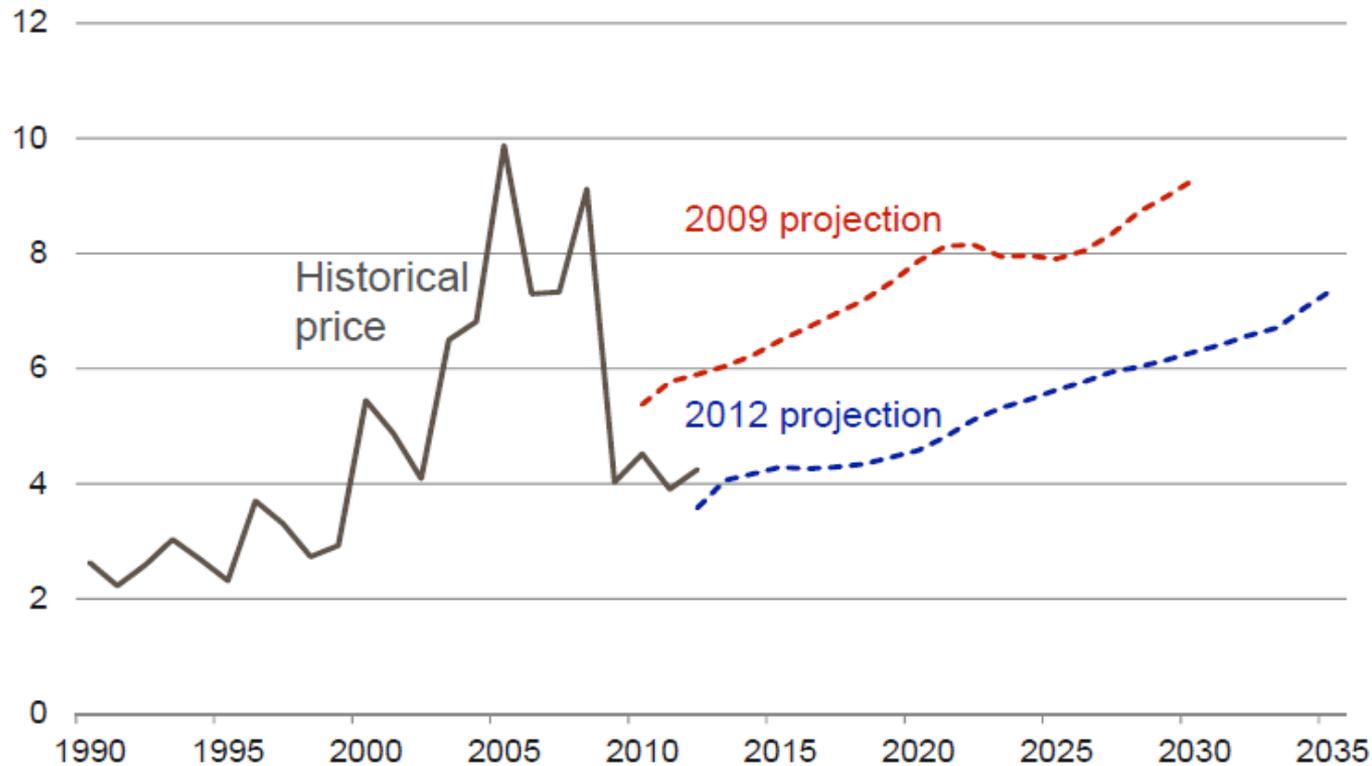
- MPRP
 - CPCN granted in 2010
- Pending cases
 - Lewiston Loop
 - Lakewood
 - Rangeley
- Regional investment; rate implications
- Regional/national issues; renewable resource development



Current and projected U.S. natural gas prices have declined

Henry Hub spot price

2010 dollars per million Btu

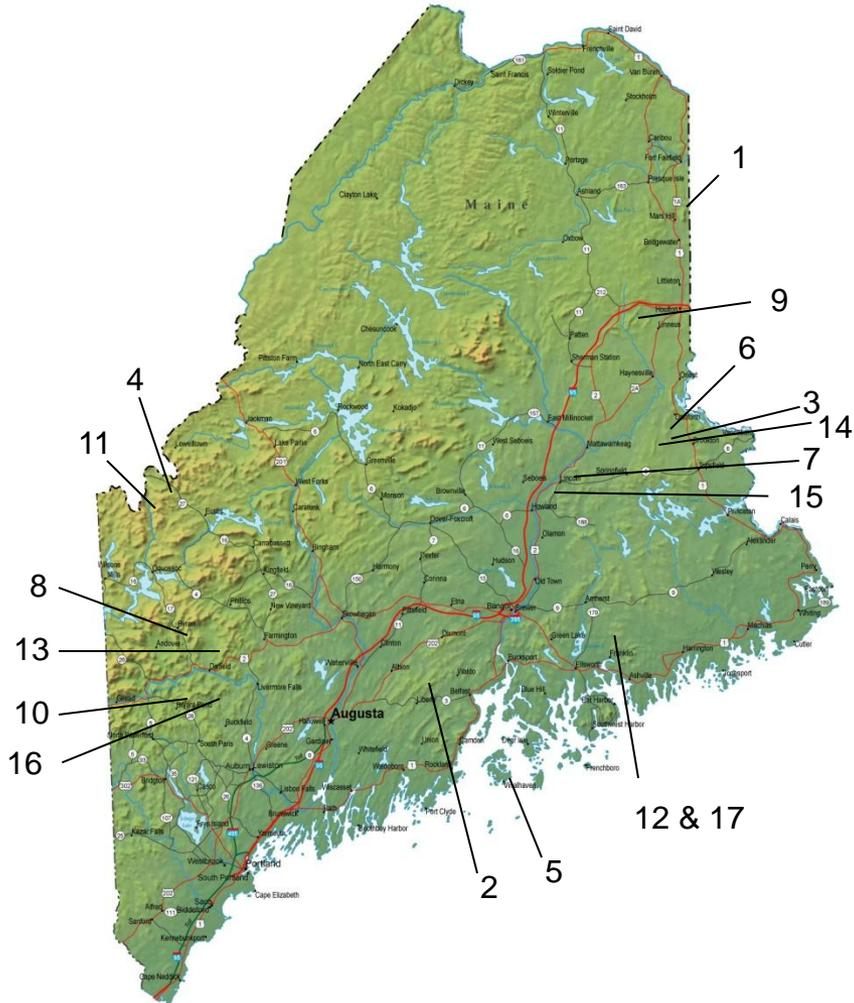


Data source: U.S. Energy Information Administration, Annual Energy Outlook 2009 (updated) and 2012, Reference case.

CMP Advanced Metering Project

- Smart meters and related systems (AMI)
- DOE grant ~ \$95 million
- Commission approval
 - Overall ratepayer savings
 - Operational efficiency
 - Supply market savings (e.g., from dynamic pricing, load shifting)
- Subsequent customer complaints:
 - Health issues
 - Other safety concerns
 - Privacy
 - Opt-out program
 - Current proceeding

Map of Pending and Approved Maine Wind Power Projects



1. **Mars Hill Wind Project**, Aroostook County
2. **Beaver Ridge Wind Project**, Waldo County
3. **Stetson Ridge I Wind Project**, Washington County
4. **Kibby Mountain Wind Project**, Franklin County
5. **Vinalhaven Wind Project**, Knox County
6. **Stetson Ridge II Wind Project**, Washington County
7. **Rollins Wind Project**, Penobscot County
8. **Record Hill Wind Project**, Oxford County
9. **Oakfield Wind Project**, Aroostook County
10. **Spruce Mountain Wind Project**, Oxford County
11. **Kibby Expansion Wind Project**, Franklin County
12. **Bull Hill**, Hancock County
13. **Saddleback Ridge Wind Project**, Franklin County
14. **Bowers Mountain**, Penobscot & Washington County (pending)
15. **Passadumkeag Mountain**, Penobscot County (permit denied, appeal pending)
16. **Canton Mountain**, Oxford County (pending)
17. **Hancock Wind**, Hancock County (pending)