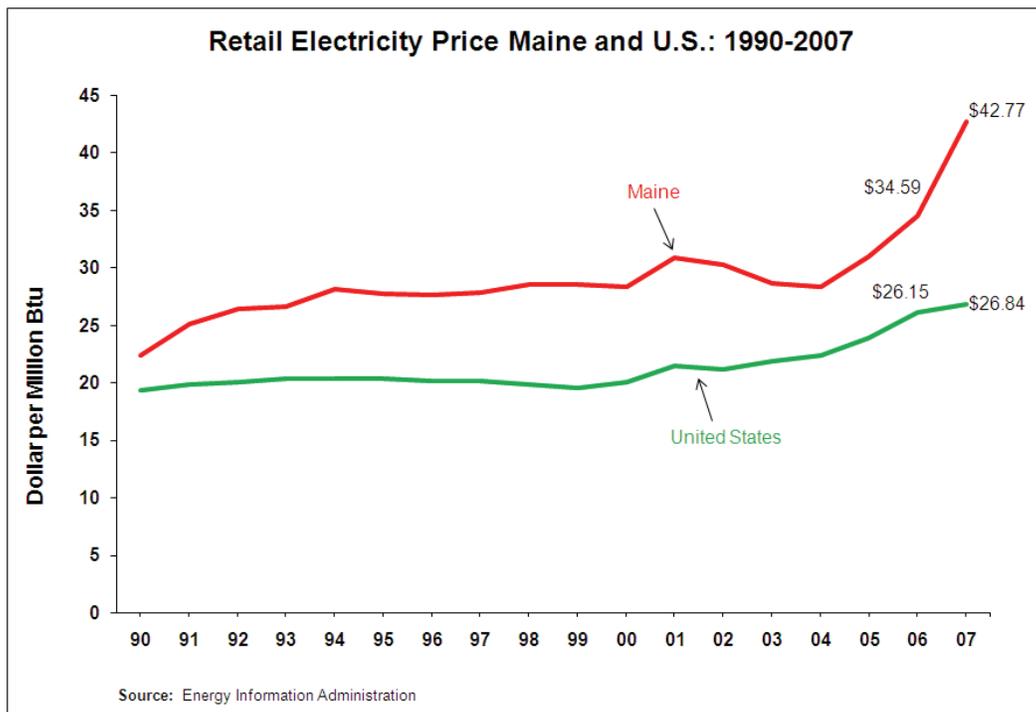


Energy

“In comparison to other metropolitan areas in the U.S., energy costs were found to be the most significant difference in cost of doing business, a far larger factor than taxes.”

Charles Colgan, Sam Merrill and Jonathan Rubin, Energy Efficiency, Business Competitiveness, and Untapped Economic Potential in Maine, 2008

Affordable energy remains an area of great concern for Maine and the New England region. Because of a disproportionate dependence upon oil and natural gas for electricity production, home heating, and transportation, we are particularly vulnerable to petroleum price fluctuations and changing world politics. The high costs of energy not only burden Maine’s residents, but put our businesses at a severe disadvantage when competing with regions that use lower cost fuels such as coal, nuclear, and large-scale hydro-power. As the graph illustrates, retail electricity prices in Maine have separated from U.S. prices in recent years, rising to a level 60% above the national average.



Facts and Findings

High dependence on petroleum products for electricity generation, heating, and transportation makes Maine vulnerable to price volatility and geo-political forces.

According to Charles Colgan, Sam Merrill and Jonathan Rubin, Energy Efficiency, Business Competitiveness, and Untapped Economic Potential in Maine, 2008:

- Fossil fuels (all imported) accounted for nearly three-quarters of all energy use in Maine in 2005
- Businesses account for half of state's energy use in their buildings alone, well over half if transportation is included

According to the U.S. Energy Information Administration:

- Approximately 80% of Maine residents heat their homes with fuel oil

According to the Maine Development Foundation, The Difference is Night and Day – Why Investing in Highways and Bridges is an Investment in Prosperity, 2009:

- 85% of freight and 95% of all passenger movement happens via trucks and cars on Maine roads

High energy prices in Maine have risen sharply and are much higher than the national average and neighboring provinces putting us at a competitive disadvantage.

According to the Maine Economic Growth Council, Measures of Growth in Focus, 2010:

- Maine's 2007 average electricity prices were 60% higher than the U.S.
- Maine utility prices range from 25% to 65% higher than neighboring Canadian firms, Hydro Quebec and New Brunswick Power

Energy policy and programming responsibilities in Maine have historically been dispersed across many state agencies due to a lack of a coordinated state effort.

According to Energy Advisors, LLC, Maine Energy Policy: Overview and Opportunities for Improvement, 2003:

- Maine's energy policy is comprised of components found in nearly 100 statutes, regulations, executive orders, and department and agency initiatives

According to Mainewatch Institute, Energy for Maine's Future: A Call for Leadership, 2002:

- Maine had no serious energy planning for more than a decade, and no recognized authority to coordinate energy policy

Maine is already advancing areas of conservation and renewable energy development, identified as critical to our nation's energy future and is putting the public sector pieces together to lead the state's energy policy and programming.

According to Popular Science, The Future of Energy: A Realist's Roadmap to 2050, July 2009, the following are critical to solving our energy problems:

- Developing bio-fuels from organic materials
- Installing deepwater wind turbines
- Investing in new high-voltage power lines to link renewable energy sources to population centers and provide consistent, reliable power from renewable sources

Activity in Maine...

- The Governor and Legislature tasked special study groups to look into the energy and business potential for:
 - Tidal power
 - Wind power (on- and off-shore)
 - Bio-fuels (farm products and wood)
 - Establishing an energy corridor to increase the high-voltage transmission capacity in the State and linking to Canada
- The State began participation in the Regional Greenhouse Gas Initiative (RGGI) and directs the proceeds to fund conservation programming for electricity and heating
- Central Maine Power Company was recently awarded federal stimulus money to upgrade the electric grid to accommodate smart meters to control energy use based on price and other market signals
- The Governor established the Efficiency Maine Trust (as of July 1, 2010) to:
 - Administer alternative energy and efficiency programs in Maine
 - Weatherize 100% of residences and 50% of businesses by 2030
 - Achieve 30% electric energy and natural gas savings and 20% heating fuels savings by 2020
 - Capture all cost-effective energy efficiency resources available for electric and natural gas ratepayers
 - Reduce greenhouse gas emissions from heating and cooling loads in Maine to at least 10% below 1990 levels by 2020, and then 75-85% below 2003 levels

Maine will need adequate transmission infrastructure to move the power from the generators to the population centers.

According to ISO New England, Maine 2010 State Profile:

- Maine is a member of a non-profit regional transmission organization called ISO New England, responsible for ensuring the reliability of the regional transmission system for the New England states
- Maine accounts for 9% of the regional population and 9% of energy consumption

- Renewable energy projects (primarily wind) will require transmission expansions to bring power to market
- Projected increases in demand (southern Maine primarily) will require transmission upgrades

According to Peter Mills, Megawatts from Mountain Tops: Parts 1 and 2, 2008:

- True costs and benefits are unknown regarding proposed grid expansions by Central Maine Power and Maine Public Service
- Construction costs would be spread out over all ISO NE members and customers but Maine customers may not need the power

Survey Says

MDF worked in partnership with several Maine trade and professional associations to distribute a survey to their members to understand their experiences with investment and policy issues in the state. 1,039 business leaders responded to the survey. The following is a summary of responses concerning energy.

Energy Costs are one of the most pressing issues for Maine's businesses and organizations:

- 78% of respondents identified the cost of energy as the second strongest negative impact on businesses and organizations
- Cost of energy ranked as the second most important issue for the next Governor and Legislature

Follow-up interviews reveal deeper-seated concerns regarding energy:

- Dependent on petroleum products for transportation, heating, and electricity, businesses feel the effects of oil price volatility and are looking for alternatives
- Many, if not most, are skeptical that the rush to implement conservation efforts, build wind turbines, and transmission wires will yield any cost savings
- Many remember the promises of reduced prices when the electric markets were deregulated and are worried the trends of increased prices will continue

Experts Recommend

The following is a summary of key recommendations from various reports, committees, and efforts around energy over the past few years.

Charles Colgan, Sam Merrill and Jonathan Rubin, Energy Efficiency, Business Competitiveness, and Untapped Economic Potential in Maine , 2008:

“Perhaps the single most effective action to enhance Maine’s business climate and economic competitiveness is to aggressively increase the energy efficiency of Maine’s economy.”

- Incorporate enforceable energy efficiency standards into new or modified building codes and expand funds to assist businesses with efficiency investments
- Fund weatherization and other non-electric efficiency measures in low and moderate-income houses with a system benefits charge and a weatherization bond
- Establish a program through Finance Authority of Maine to finance commercial and industrial energy efficiency projects
- Research and provide better information for consumers
- Encourage institutions of higher education to offer instruction in energy efficient technologies
- Better align incentives to ensure that parties bearing the costs of energy use are the ones who benefit from reducing use
- Adopt a statewide energy code for new single-family residential construction
- Support alternative passenger and freight transportation

Joint Select Committee on Future Maine Prosperity, Time for Change, 2008:

- Governor should develop a comprehensive energy policy and recognize energy production as an economic development opportunity
- Encourage cap and trade policies
- Focus energy policies on conservation, renewable, and streamlining permitting process for renewable development

LD 1485, An Act Regarding Maine’s Energy Future, enacted 2010:

- Support Efficiency Maine Trust long-term targets and triennial plan (see specific benchmarks listed in previous facts and findings section)

Governor’s Office of Energy Independence and Security, State of Maine Comprehensive Energy Plan 2008-2009:

- Aggressively provide opportunities for state and local governments, families, business, and industry to invest in energy efficiency, conservation, and weatherization through federal and state programs, grants, loans, etc.
- Support and implement energy audits for businesses and state facilities
- Work with state government to set overall energy reduction and renewable power generation goals at state facilities
- Maine should install at least 2,000 MW of wind power by 2015 and 3,000 MW by 2020 - at least 300 MW of the 2020 goal being off-shore wind
- Develop corporate wind, community wind, and offshore wind development through investment and financial incentives

- Promote tidal power in Maine
- Support University of Maine work on wood-based ethanol development, expand bio-fuel research and implementation, advance co-generation statewide
- Support development of electrical transmission projects to increase reliability and accommodate new wind power projects, and energy from Northern Maine and Canada
- Expand natural gas infrastructure statewide
- Promote awareness of alternative transportation options, including passenger and freight rail, and promote low-carbon fuel standard and fuel efficient vehicles

Central Maine Power, On-going Economic Benefits of the Maine Power Reliability Program (MPRP), 2009:

- Support the MPRP transmission upgrade and expansion to provide a reliable transmission grid necessary for planned and future renewable energy projects

Governor's Task Force on Wind Power Development, Finding Common Ground For a Common Purpose Report, 2008:

- Continue to assess transmission network and needed improvements

Investment Imperatives

Both the Governor and Maine State Legislature must make reducing the cost of energy a top economic development priority. Current trends will make energy, in all its forms, more expensive for individuals and business alike. Energy dependent industries such as manufacturing and the natural resource-based entities particularly feel the pressure as they try to compete with businesses that have access to cheaper energy.

Recommendations

Lower the burden of high energy costs in the near term

- Fund and complete weatherization targets for housing stock and industrial/commercial plants
- Support the Efficiency Maine Trust and leverage additional dollars from entities like utilities and fuel suppliers to reach the Trust targets
- Use efficiency funds to upgrade Maine manufacturing and natural resource industry infrastructure (ex: replace boilers, generators, etc.) through financing tools like low to no-interest loans or competitive grants
- Incorporate enforceable efficiency standards into building codes
- Enter into agreements to purchase less expensive Canadian power

Develop new sources of energy to lower reliance on oil, to protect against price volatility, and to provide new jobs

- Approve and build liquefied natural gas (LNG) depot on Maine coast

- Invest in and expand development of renewable energy: bio fuels (agriculture products and wood), tidal power (R&D, commercialization and implementation), and on- and off-shore wind power
- Investigate nuclear power as a long-term development option – meets the need for cheaper energy and clean emissions as well as job creation and economic development

Invest in technology and infrastructure upgrades

- Set a short-term goal of getting smart meters installed and operational. This would include consumer education as to how to use the technology to control cost.
- Build necessary transmission infrastructure to enable expansion, hookups for new energy development (ex: wind projects) and to open up our ability to better export and import energy (ex: cheaper Canadian electricity)
- Expand natural gas lines to and throughout service center communities