

Energy Landscape For Maine and the Region

Presentation to Wind Power Task Force

August 3, 2007

By John Kerry, Director

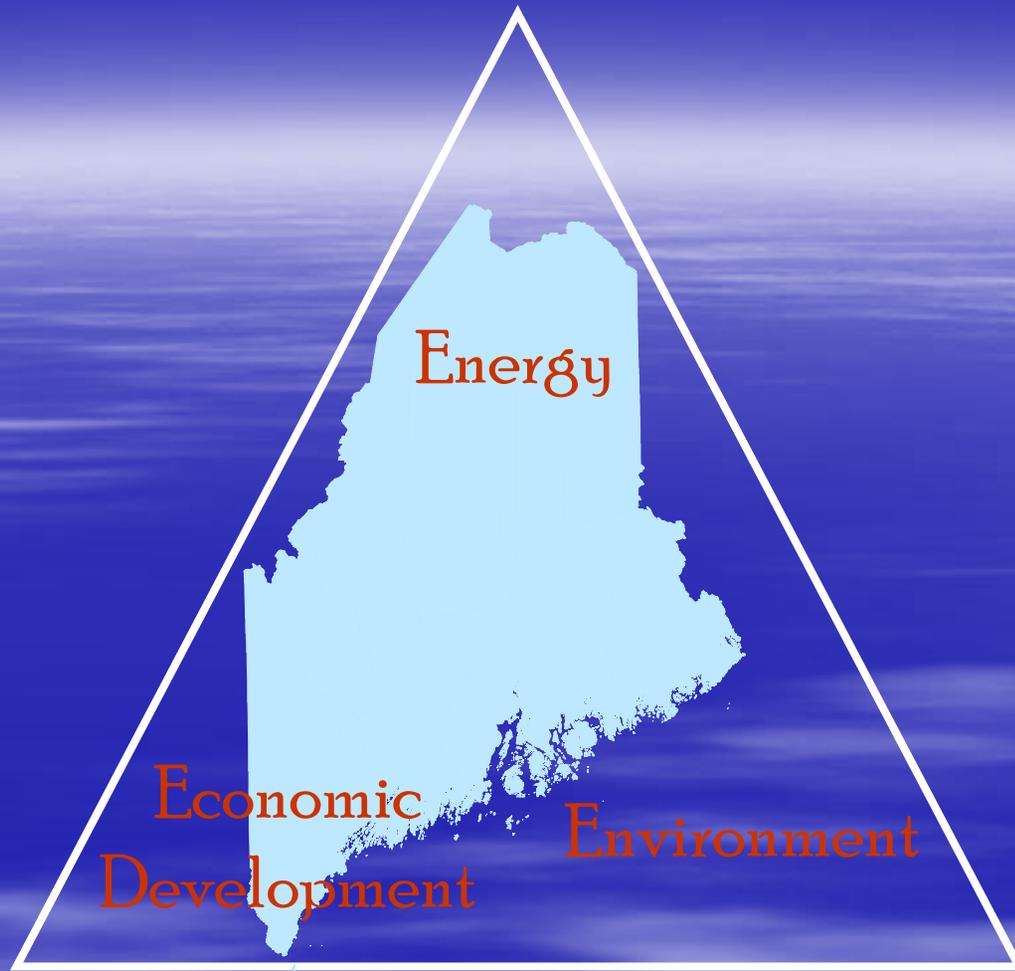
Governor's Office of Energy Independence &
Security



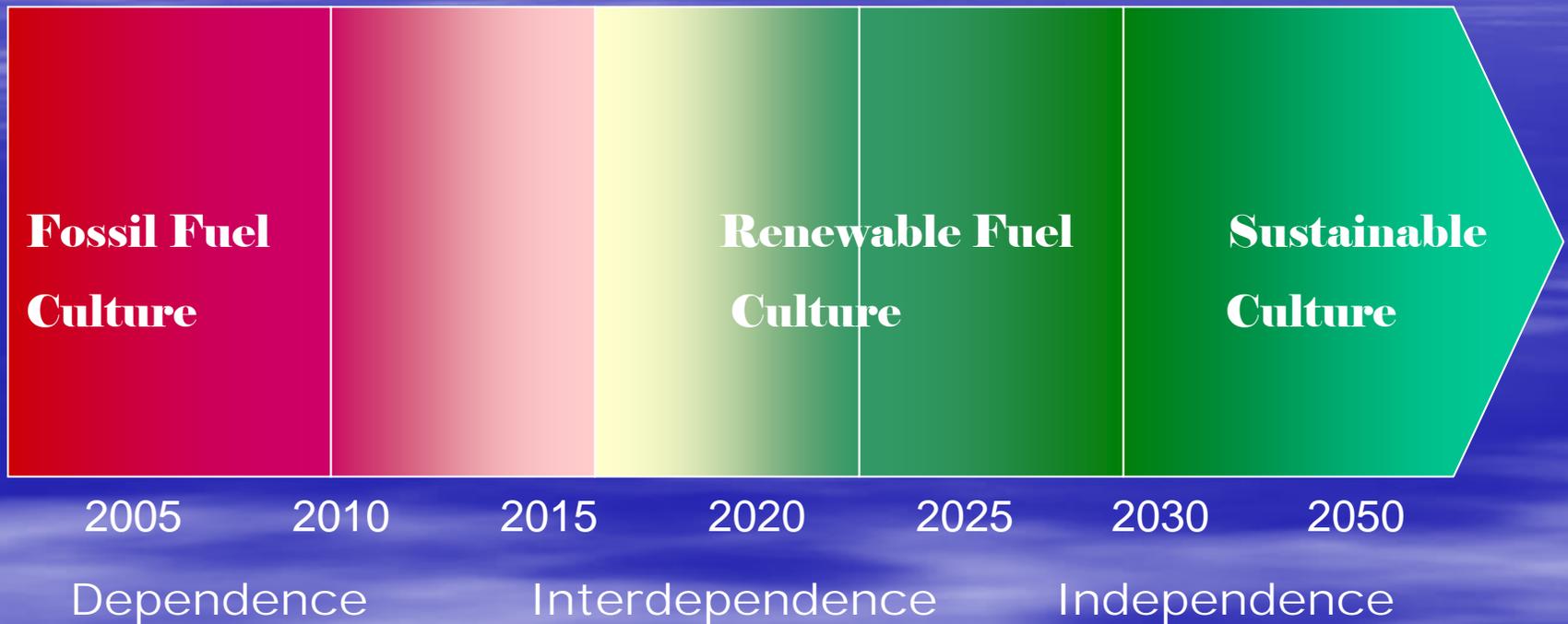
“There is nothing more critical to Maine’s prosperity than energy independence, economic development, and environmental health.”

—Governor John E. Baldacci

Governor Baldacci Creates Wind Power Development Task Force by Executive Order May 2007



Energy Independence for Maine by 2050



Office of Energy Independence and Security

Facilitating Public and Private Partnerships in Energy,
Environmental Health and Economic Development

Towards Independence

Vision

- To provide vision, leadership, and assistance in the development of public and private partnerships to achieve the State of Maine's goal of energy independence and security with clean, reliable, affordable, sustainable, indigenous, and renewable resources by 2050.

Mission

- In conjunction with the Energy Resources Council, provide an open and collaborative decision-making environment to create effective public and private partnerships that advance the achievement of energy independence by 2050 while optimizing Maine's energy security, economic development, and environmental health.

Why Does Maine Need Wind?

- To meet new RPS requirements of 10% by 2017 (35-A MRSA Section 3210)
- In response to RGGI
- To mitigate causes of climate change
- In response to ISO-NE scenario analysis
- To foster a voluntary market while advancing diversified state energy policy

Would new wind power in Maine be
consistent with the State's energy
policies?

YES!

The Maine Legislature, through the Maine Wind Energy Act, adopted a policy on wind power which states:

The Legislature finds that it is in the public interest to explore opportunities for and encourage the development, where appropriate, of wind energy production in the State in a manner that is consistent with high environmental standards and that achieves reliable, cost-effective, sustainable energy production on those sites in the State that will attract investment and permit the development of viable wind energy projects. The Legislature finds that the development of the wind energy potential in the State needs to be integrated into the existing energy supply and transmission systems in a way that achieves system reliability, total capital cost-effectiveness and optimum short-term and long-term benefits to Maine people.

Wind Policy Development Contexts

- Global
- North America
- United States
- Northeast
- Eastern Canadian Provinces
- New England
- Maine

*Regional Greenhouse Gas Initiative (RGGI) will play a leading role in reducing emissions with its innovative, regional, market-based program. To stay under the pollution cap set by RGGI, Maine must both increase electric efficiency and the proportion of clean power on the grid. Meeting the Renewable Portfolio Standard without new wind power would be impossible.

Northeast Canada Alliance

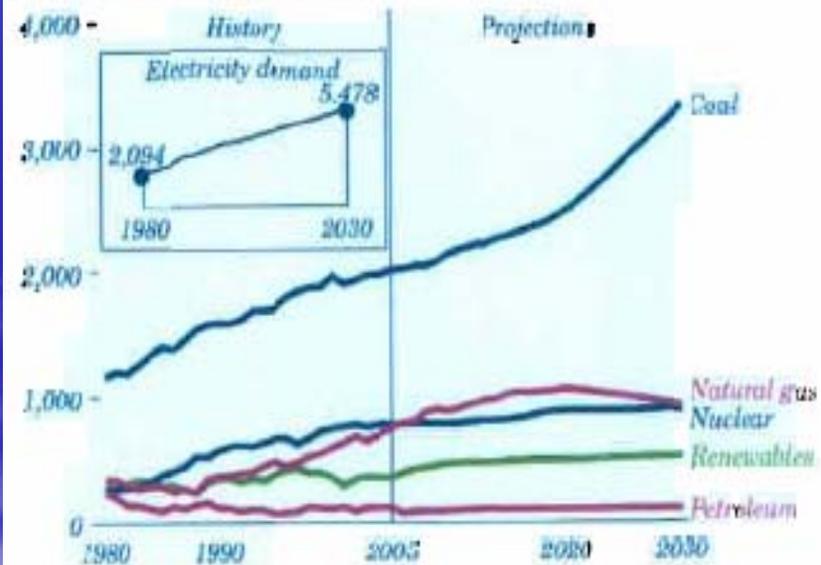
graphic courtesy of NEG/ECP Briefing Book



United States

2007 DOE/EIA Annual Energy Outlook

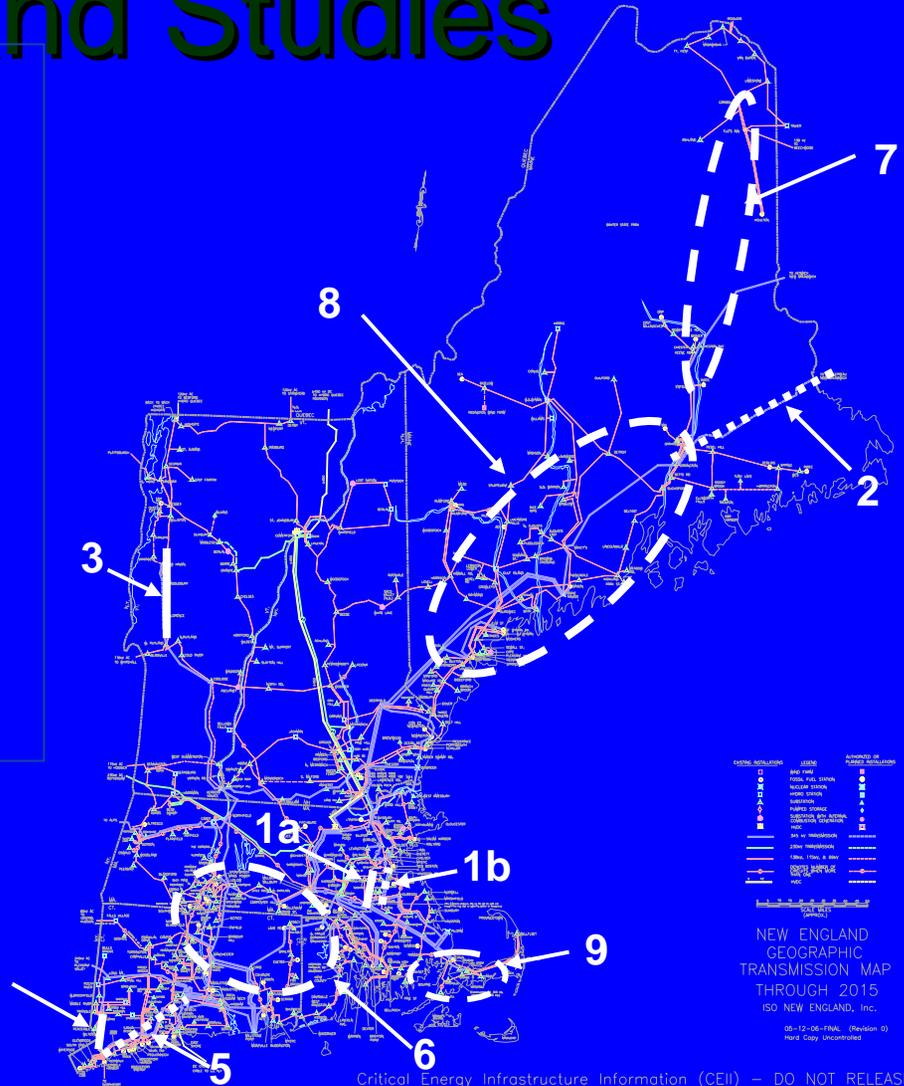
Figure 5. Electricity generation by fuel, 1980-2030 (billion kilowatthours)



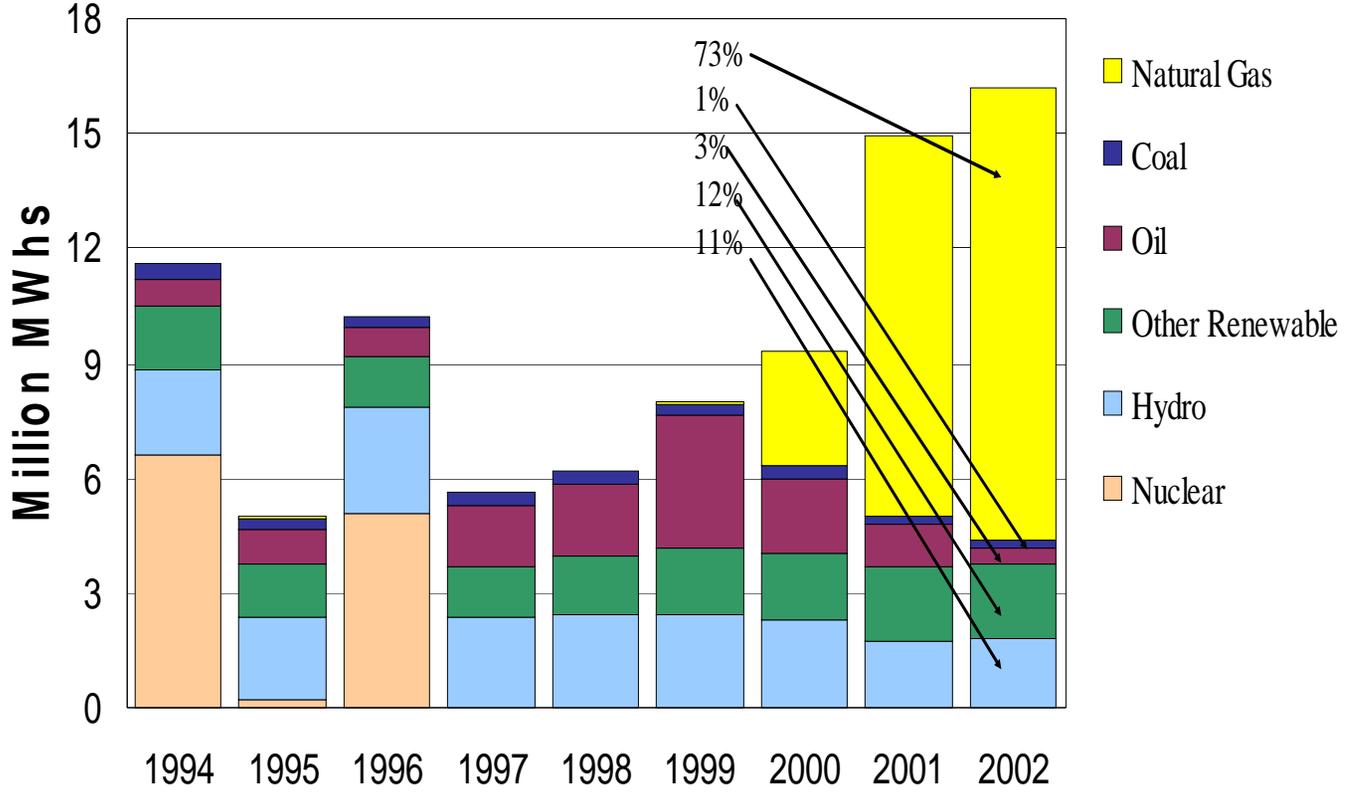
Major Transmission Projects and Studies

1. NSTAR 345 kV Project
 - a. Phase I
 - b. Phase II
2. Northeast Reliability Interconnect
3. Northwest Vermont
4. SWCT Phase I
5. SWCT Phase II
- 6a. NEEWS
- 6b. Greater Rhode Island
- 6c. Springfield 115 kV Reinforcements
7. Maine Power Connection
8. Maine Power Reliability Program
9. Southeast Massachusetts

-  In service
-  Under construction
-  Under study



Electricity Generated in Maine by Fuel Type 1994 - 2002



State of Maine Context

- “Through wise management and protection, the jurisdiction should achieve a balance of uses that provide for the continuation of traditional ways of life, sustainable economic opportunities and outdoor recreation for the people of Maine and its visitors” (Comprehensive Land Use Plan 1997)
- “Indigenous energy sources provide reasonably priced power and reduce the state’s reliance on energy imports.” (Comprehensive Land Use Plan 1997)
- Maine needs to pursue both energy efficiency and renewable energy resources more aggressively in order to achieve state and regional energy and environmental goals, to reduce energy prices and price volatility and to reverse the course of climate change.
- Maine’s de-regulated power sector engenders market driven choices about the kind of power plants that emerge. Decisions on wind projects have a significant impact on Maine’s electricity mix, market diversity and reliability. The electricity grid in New England needs diversity provided by renewable power sources.

An Act to Stimulate Demand for Renewable Energy (LD1920)

- LD 1920 implements the policy goal that the State increase its share of renewable capacity resources as a percentage of the total capacity resources in the State by 10% by year 2017 and does so by establishing portfolio requirements for new renewable capacity resources beginning at 1% for calendar year 2008 and increasing by one percentage point per year, ending at 10% in 2017.
- The bill allows competitive electricity providers to meet the portfolio requirements for new renewable capacity resources through the use of renewable energy credits (RECs) or alternative compliance payments to be set up by the PUC.
- It also allows the PUC to suspend increases in the portfolio requirements for new renewable capacity resources if it finds that investment in them is insufficient with the result that use of RECs is burdensome to electricity customers.

Would building new wind power facilities be consistent with this newly passed law which established requirements for new renewable power capacity?

Yes, developing new wind power projects would respond to the bill by;

- Increasing new renewable generating capacity in Maine by 10% by 2017
- Reducing electric prices and price volatility
- Reducing greenhouse gas emissions for electricity sector
- Meeting renewable resource capacity mandates

Development of wind power would also spur economic development by:

- Creating jobs
- Providing Property Tax Revenue
- Creating Infrastructure Investments
- Creating energy export markets
- Improving air quality by emission reduction
- Reducing Transmission Congestion

Many Routes to Meet Future ISO New England Electricity Needs

Northeast region most likely to choose a combination of these options

Seven Scenarios Identified

- **Current Mix of Energy Sources**
- **Demand Reduction Strategies**
- **Nuclear**
- **Coal**
- **Natural Gas**
- **Renewables**
- **Imports**

ISO New England Update, July 30, 2007, page 12 @ISO New England, Inc.



Charting the Course to Energy Independence

- 40-year Energy Independence and Security Perspective
- A series of 5-year State Energy Strategic Outlooks
- Two-year State Energy Action Plans
- State Energy Emergency Plan