

Patrick Administration Clean Energy Overview

Greg Watson

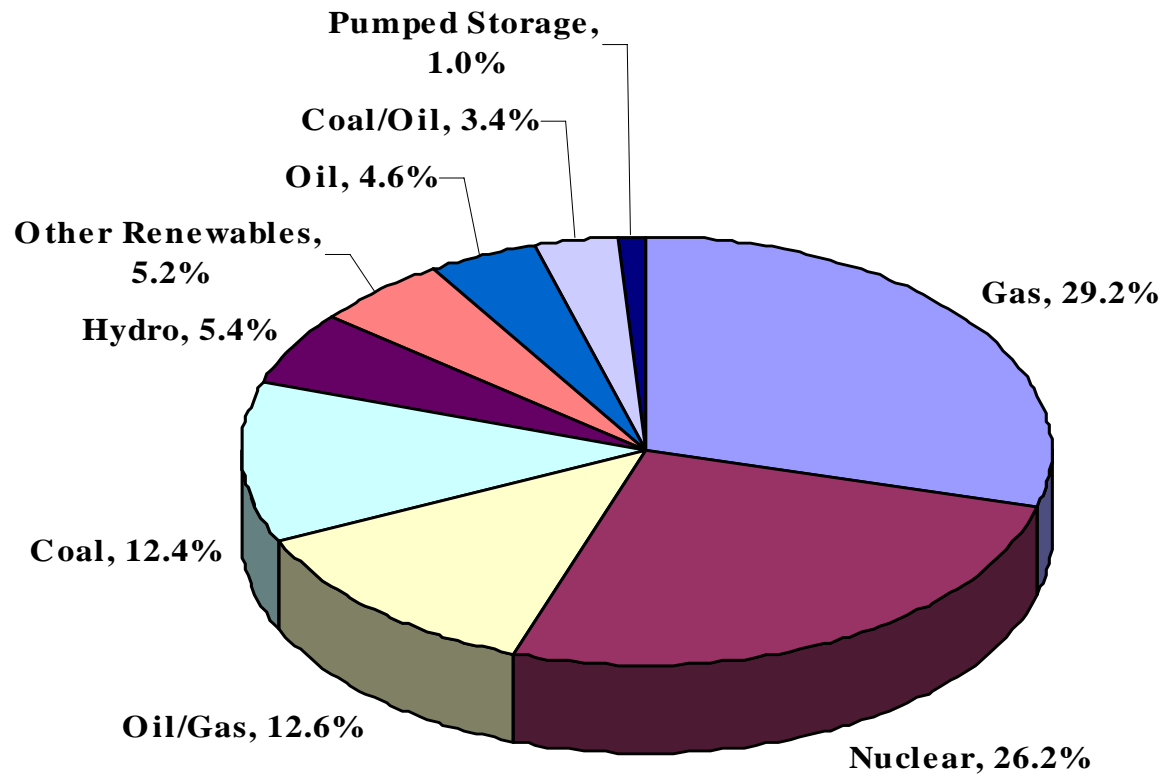
Senior Advisor for Clean Energy Technology
MA Executive Office of Energy & Environmental Affairs.
Vice President for Sustainable Development'
Massachusetts Technology Collaborative

Boston Area Solar Energy Association

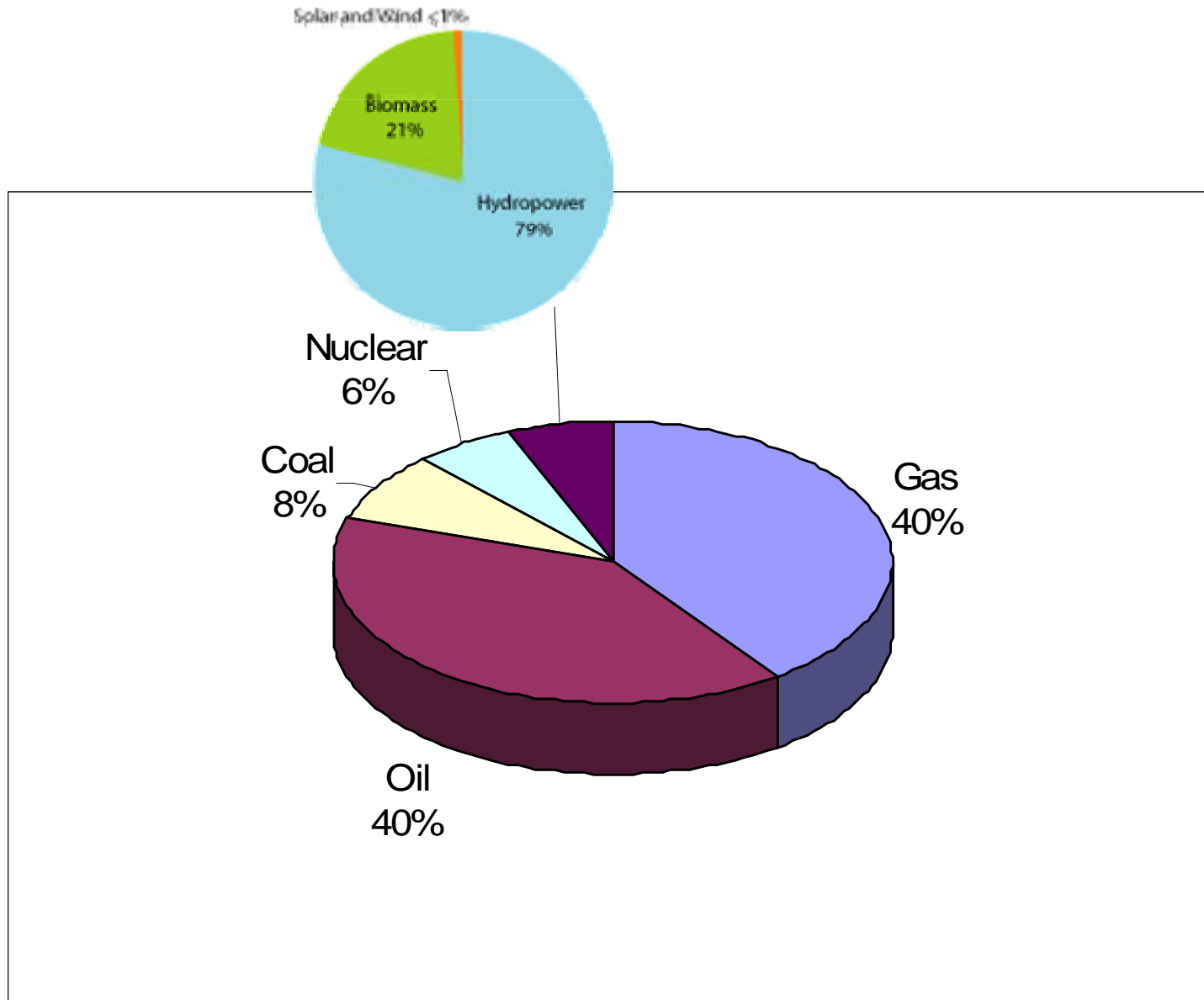


September 6, 2007

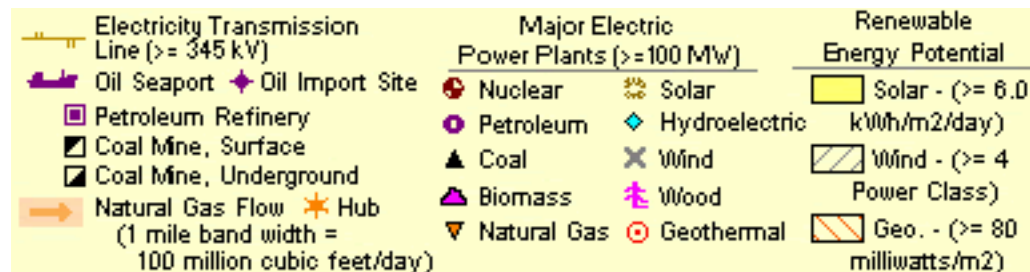
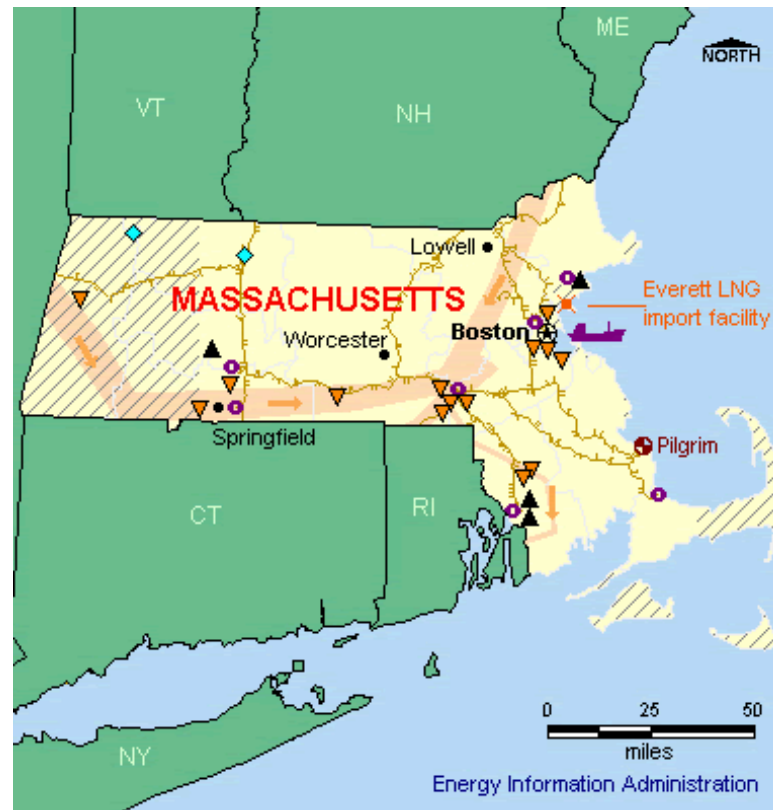
N.E. Electricity Production (% by fuel – 2005)



Massachusetts Energy Sources



Energy and Equity



Energy Efficiency Goal

- Meet all growth in electricity demand by energy efficiency/conservation, rather than new power generation within three years
- Decoupling
 - Disassociation of a utility profit's from its sales of the energy commodity
 - Performance-based

Clean Energy Goals

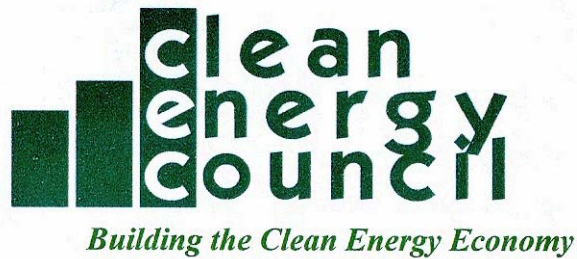
- Strengthen renewable energy incentives to help replace dirtiest generating plants with clean energy generation
 - RPS
 - Feed-in Tariff
- Strengthen and grow the state's clean energy cluster

Mass Initiatives

- **MA Renewable Portfolio Standard**
 - Requires that electricity suppliers provide retail customers with minimum levels of electricity generated from "new" renewable energy sources
- **Energy Efficiency Fund**
 - Demand side management
- **Renewable Energy Trust Fund**
 - Bring new renewable energy technologies and systems to the market

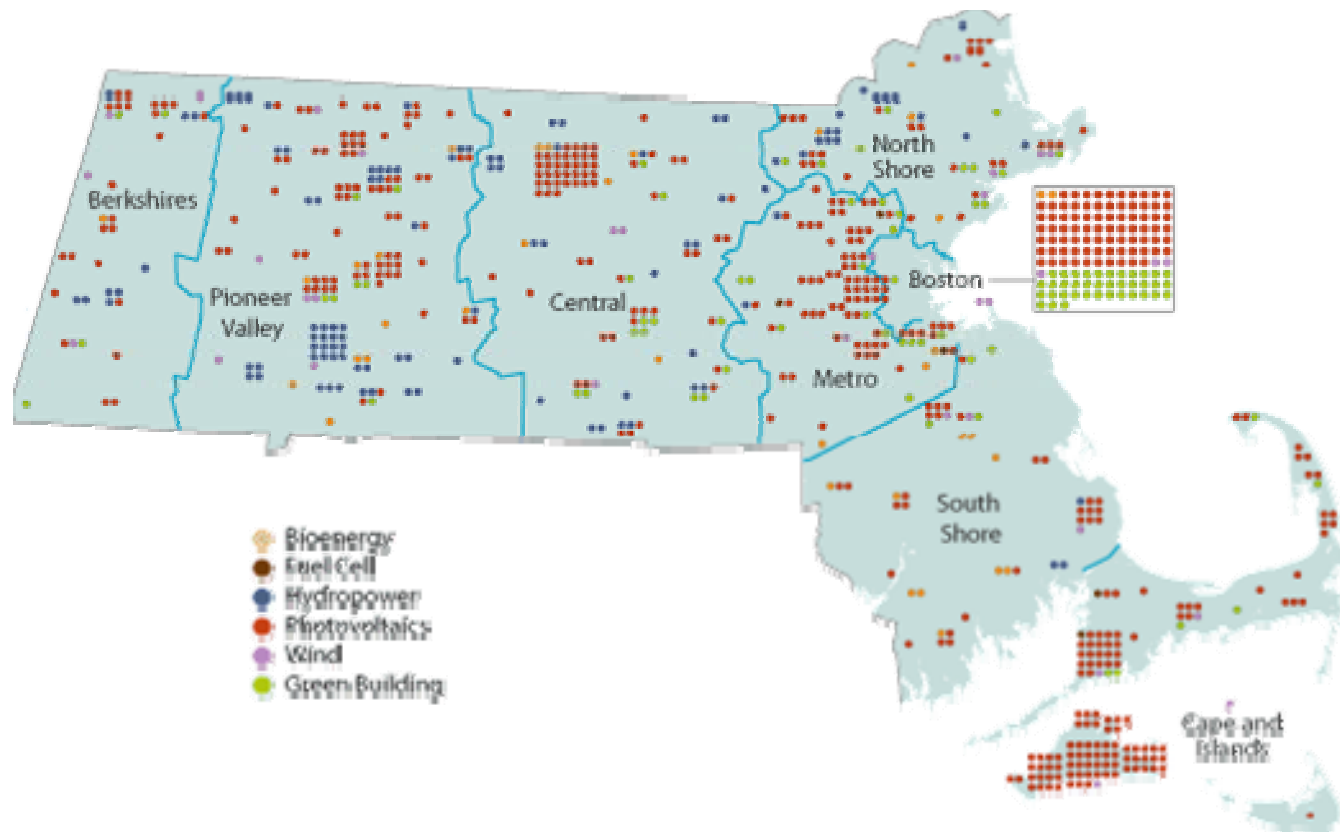
Administration Activities

- MA Office of Energy & Environmental Affairs
- RGGI – promulgation of final regs 01/08, auction allowances next spring
- NE Governor's Conference & Eastern Canadian Provinces
- Signed Cape Wind MEPA Certificate of Adequacy
- Leading by Example: state conservation & energy efficiency goals
- MassEfficiency modeled after Cambridge Energy Alliance (public/private partnerships)
- National Wind Blade Test Facility



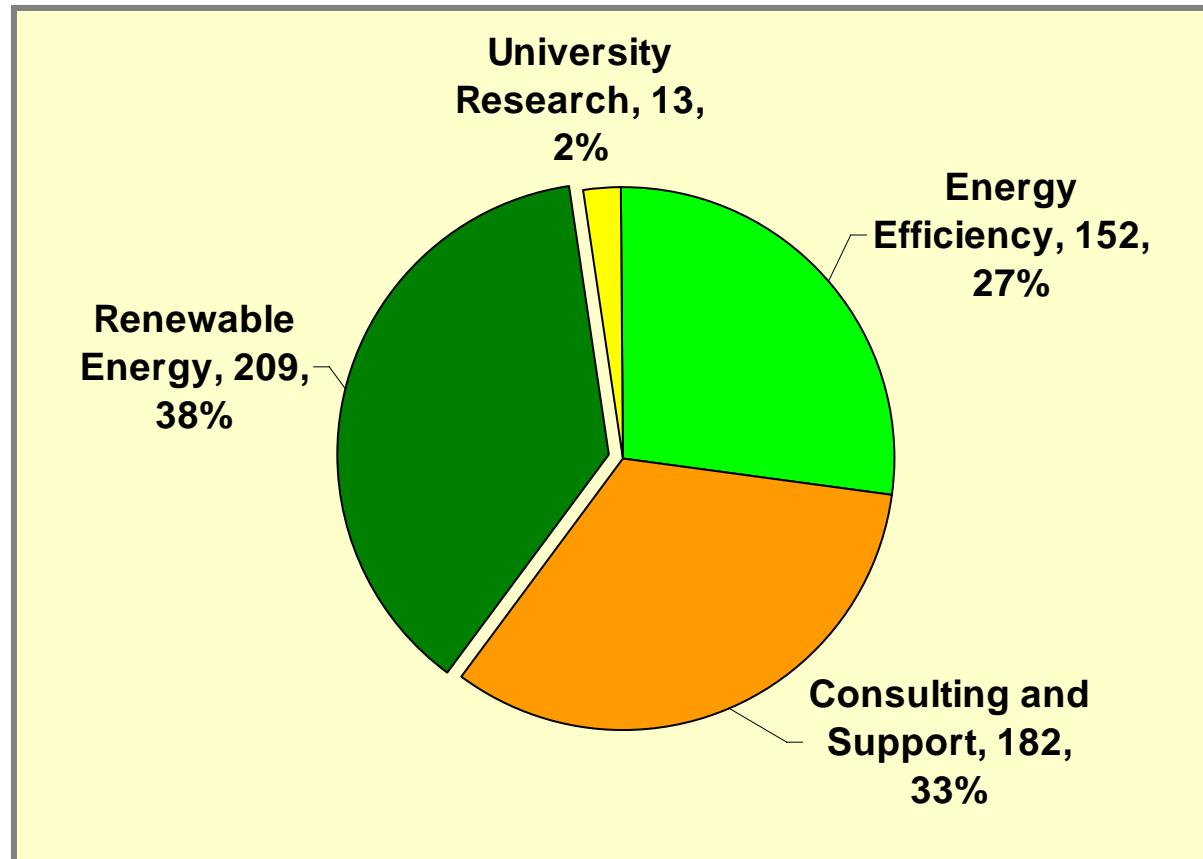
- A strong and coherent voice advocating on behalf of the state's clean energy cluster
- Governor met with Clean Energy CEO's on June 11, 2007
- Over 100 people attended clean energy cluster forum on June 15, 2007

Clean Energy Census

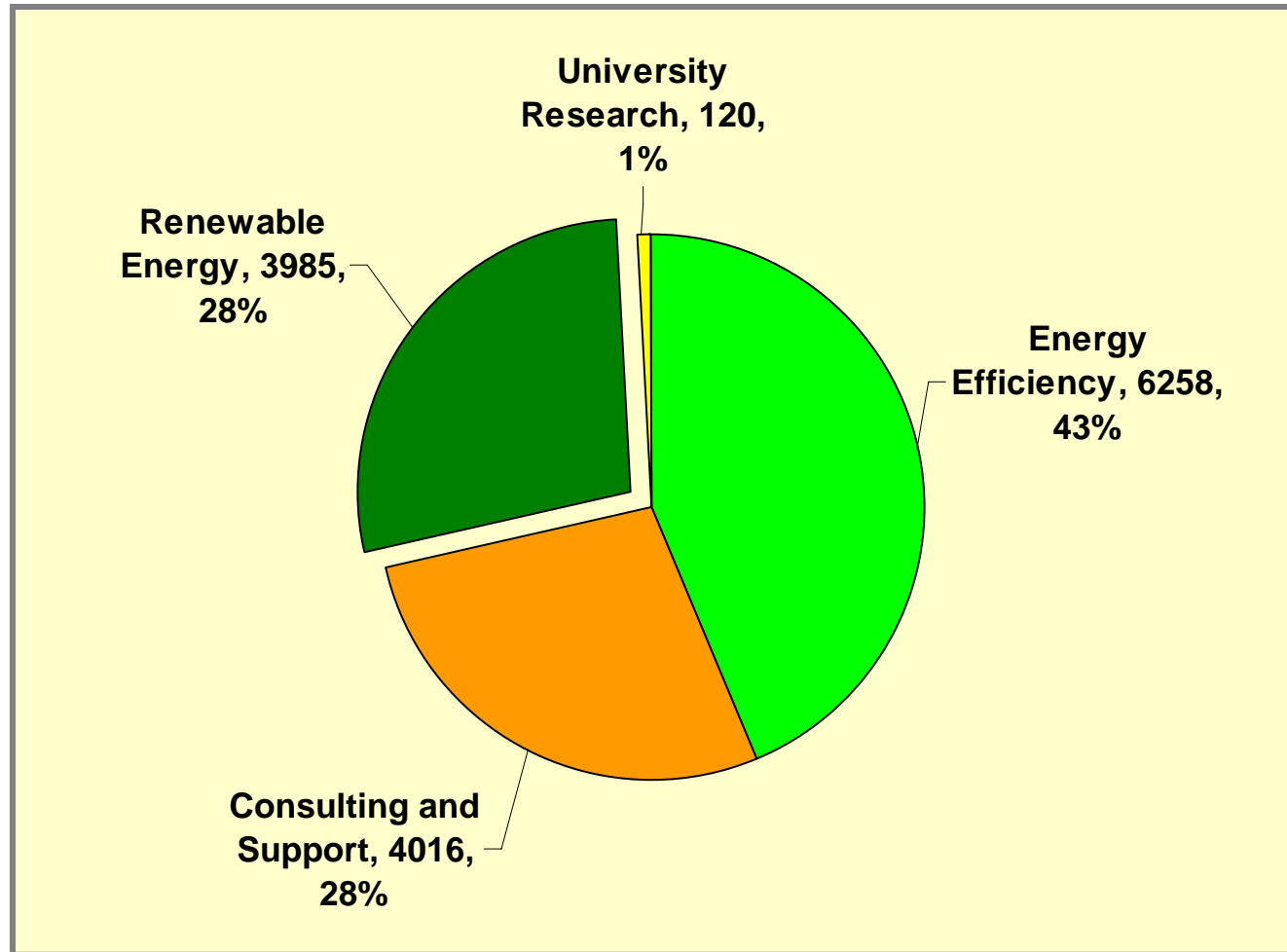


556 Companies

556 Clean Energy companies identified in MA

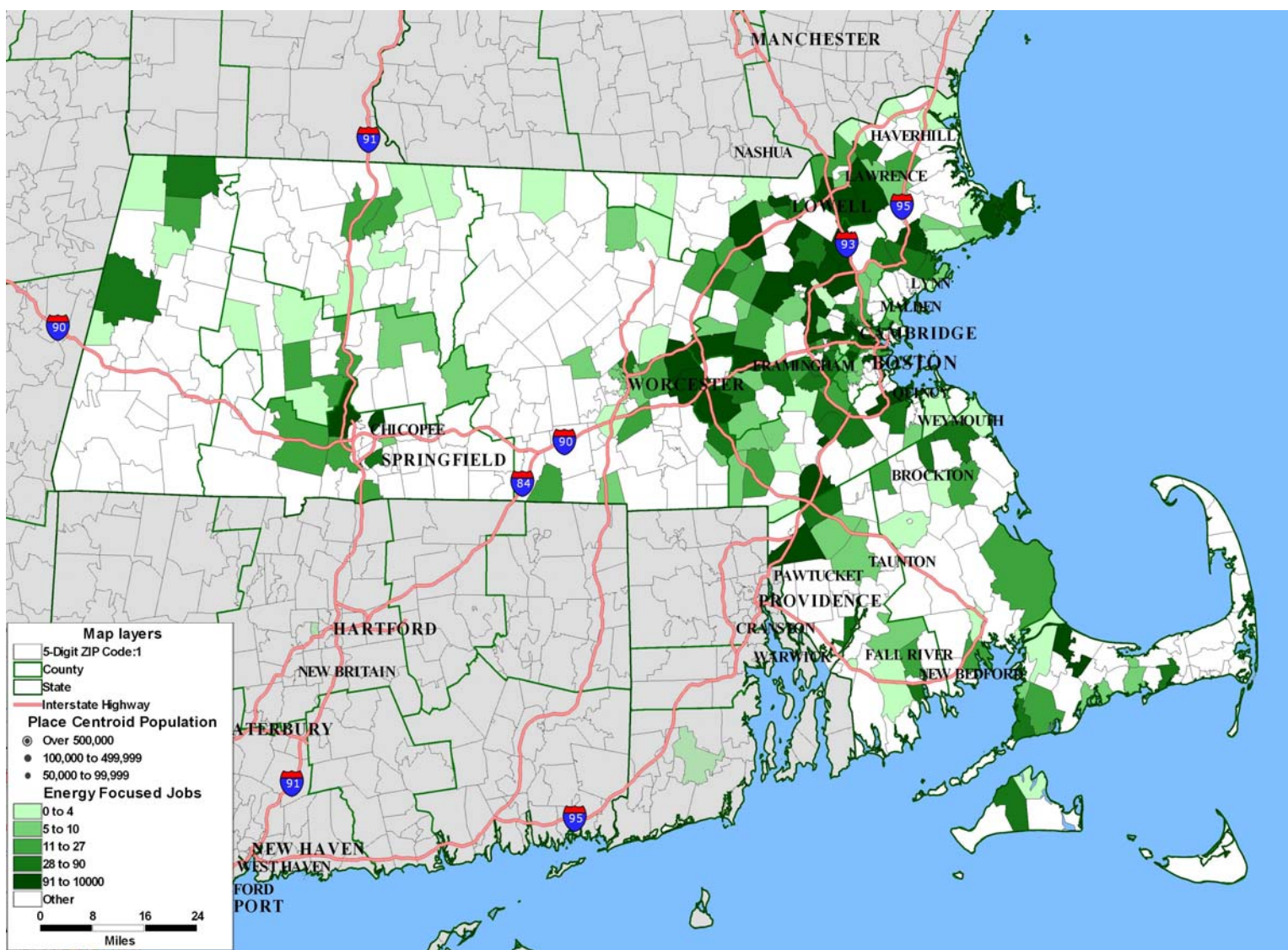


14,400 Clean Energy Jobs



Total = 556 Companies, Organizations and University Centers

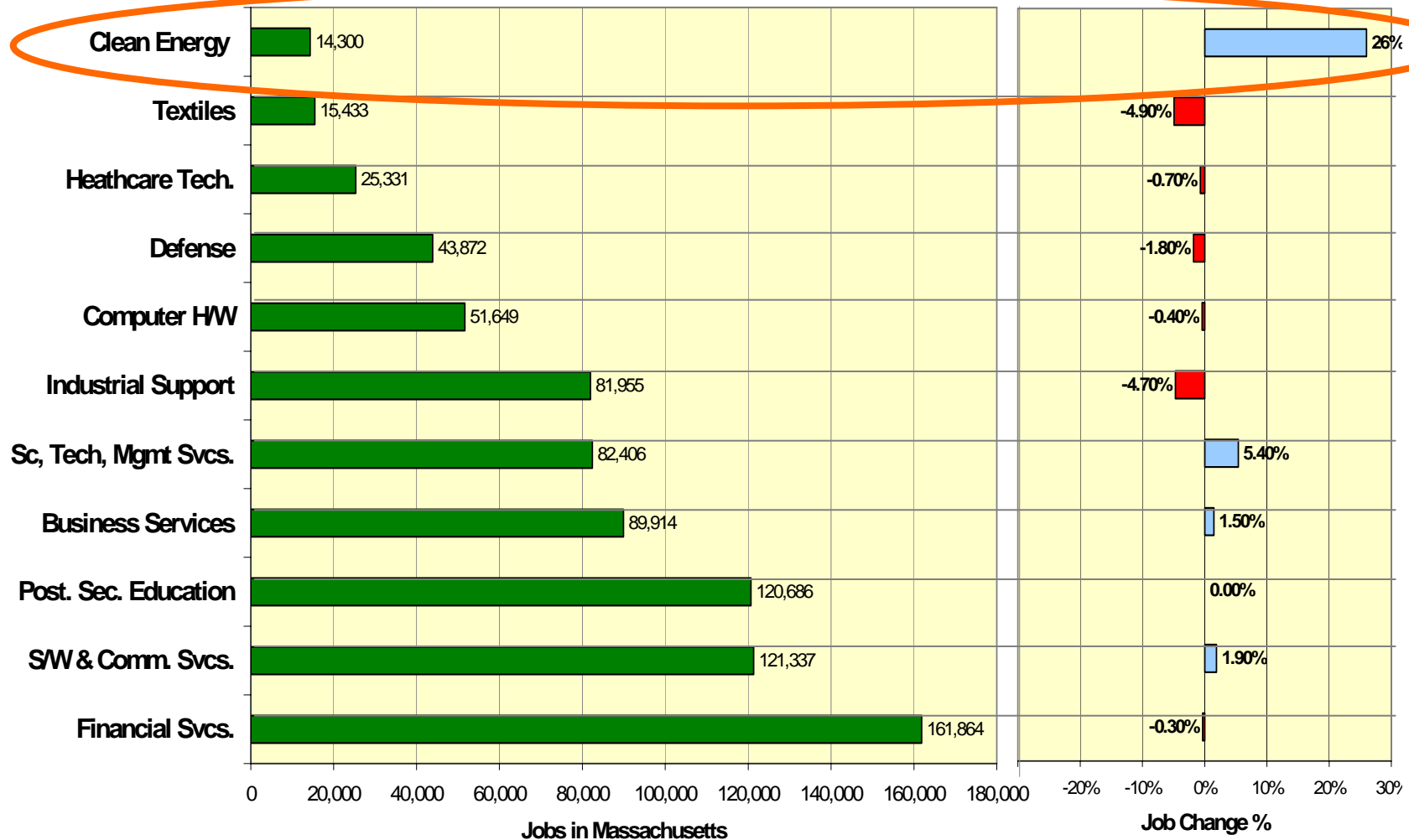
Massachusetts Job Locations



Who Benefits?

- **Workforce Development**
- **Clean Energy Services & Technology Program**
 - Cape Cod Community College
 - Berkshires Community College
 - Middlesex Community College
- **Clean Energy Workforce Summit/Fall'07**

In 2007, Clean Energy will be in the Top 10



Sources: John Adams Innovation Institute 2006 Index; Clean Energy Census 2007

Clean Energy Technologies

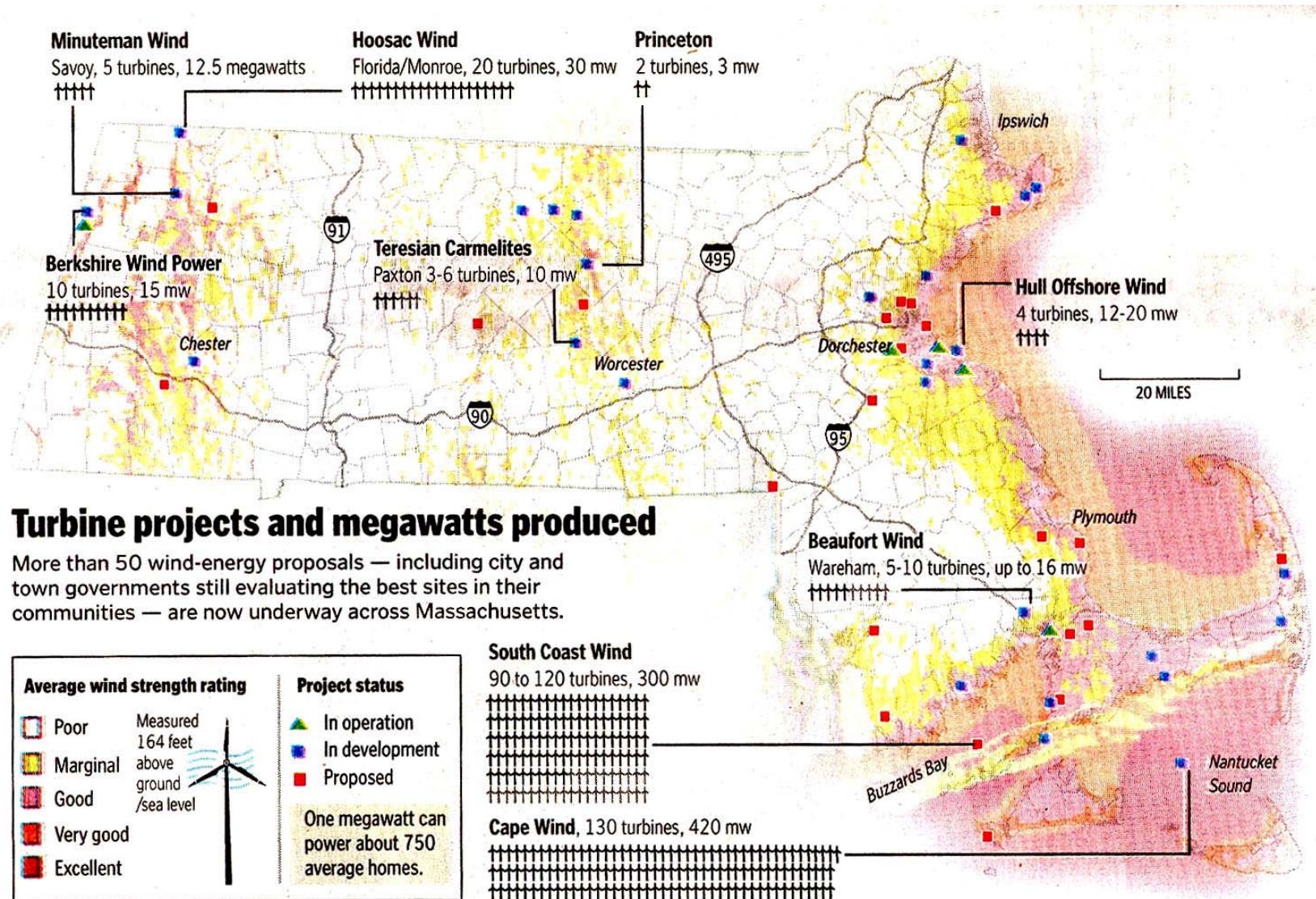
- Solar
- Wind
- Wave
- Tidal
- Biofuels
- Biomass
- Fuel Cells



Solar (Industry Strength)

- Succeeded in keeping Evergreen Solar here in MA and establish manufacturing facility
- Commitment to develop 250 MW of solar capacity
- Exploring options to reach that goal
 - Solar rebates
 - Feed-in tariff

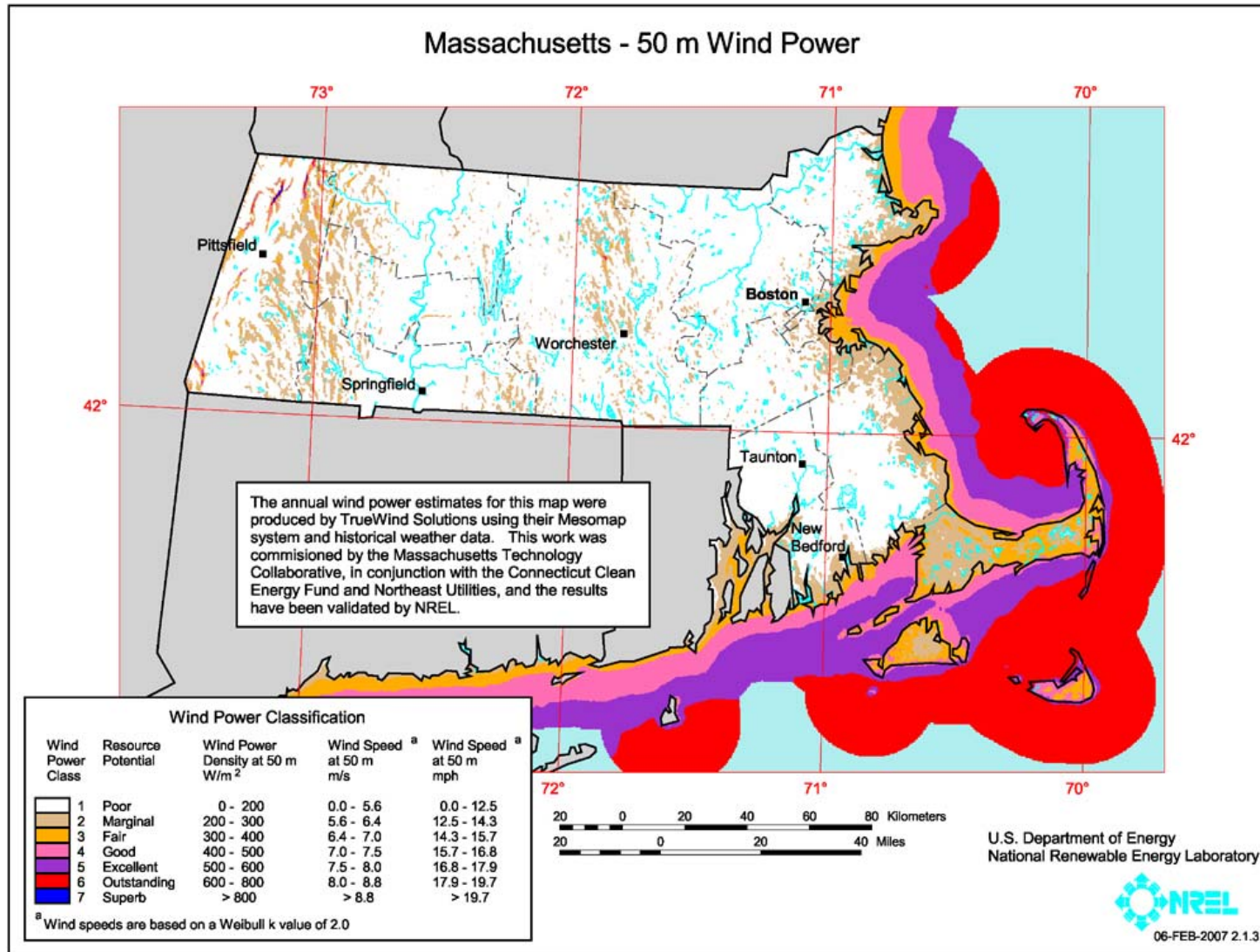
Wind (Resource Strength)



Turbine projects and megawatts produced

More than 50 wind-energy proposals — including city and town governments still evaluating the best sites in their communities — are now underway across Massachusetts.

Offshore Wind Collaborative



“Super Smart” Grid

- Smart Grid
- Analog to digital switching
- Micro-to-Macro transformation of the grid
- Smart meters
- Real-time meters
- “Renewables friendly”
- Plug-in vehicle storage

