

PEOPLE'S

Power & Light

Considering Community
Wind for your
Conserved Land



RIpower.org

Why Energy Matters: Environment

- Global warming
- Air pollution
- Acid rain
- Water pollution
- Mercury
- Radiation
- Mining
- Thermal pollution



Ninigret Pond after North Cape Oil Spill

How close are you to Millstone or Indian Point? **HOW SAFE ARE YOU?**

www.MothballMillstone.org

Population living within 10 miles of Indian Point
in 2000 census: **308,415**

INDIAN POINT
10 Miles
17 Miles
17 MILE PEAK FATALITY ZONE

MILLSTONE
10 Miles
17 Miles
17 MILE PEAK FATALITY ZONE

Population living within 10 miles of Millstone
in 2000 census: **139,205**

50 MILE PEAK INJURY ZONE

50 MILE PEAK INJURY ZONE

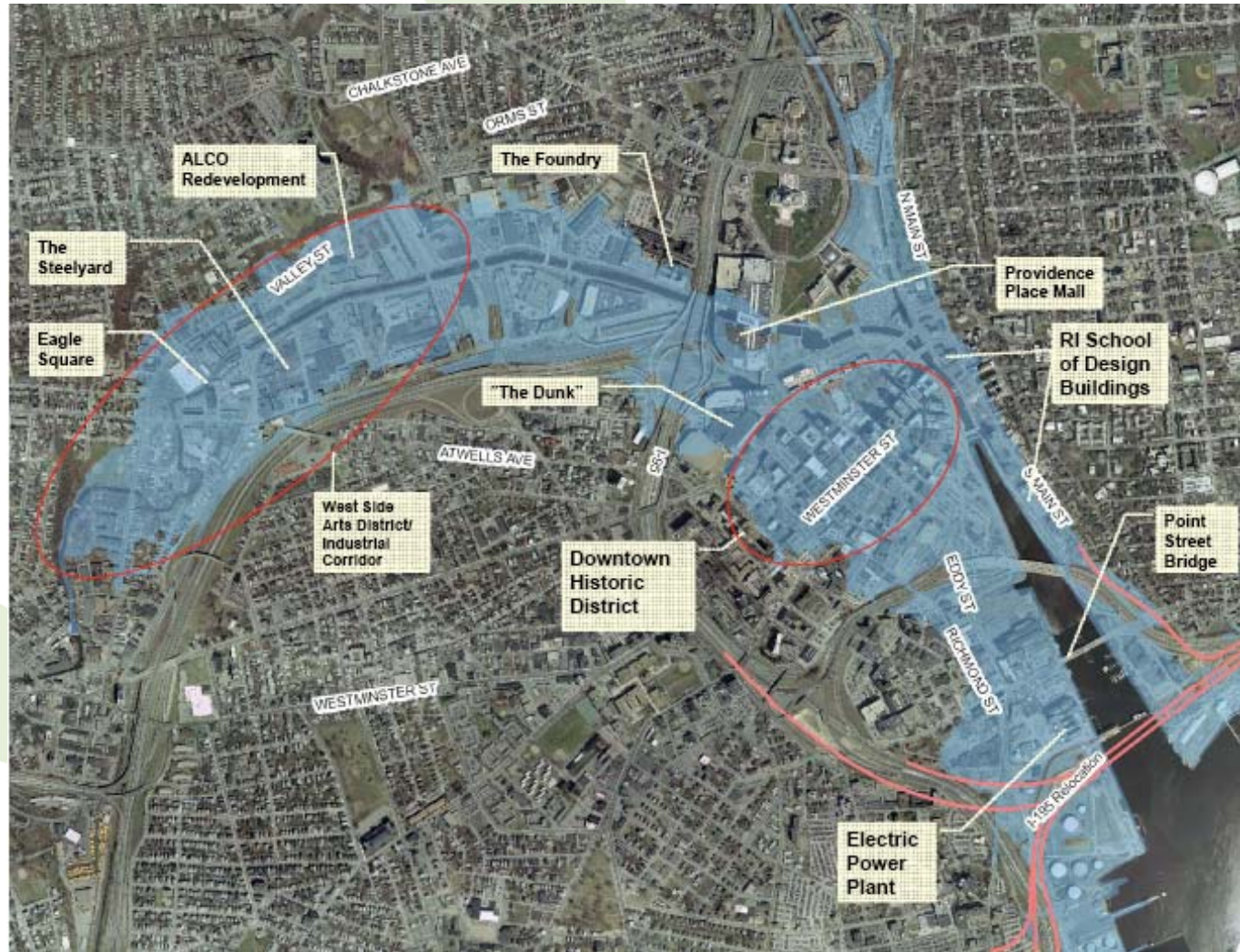


Our coast
if sea level rises about 20
feet (six meters)



Source: Jeremy Weiss and Jonathan Overpeck, The University of Arizona,
as per Mongabay.com

Providence with 6 meters sea level rise



Providence Plan: Jim Lucht and Haidee Janak

Small is Profitable

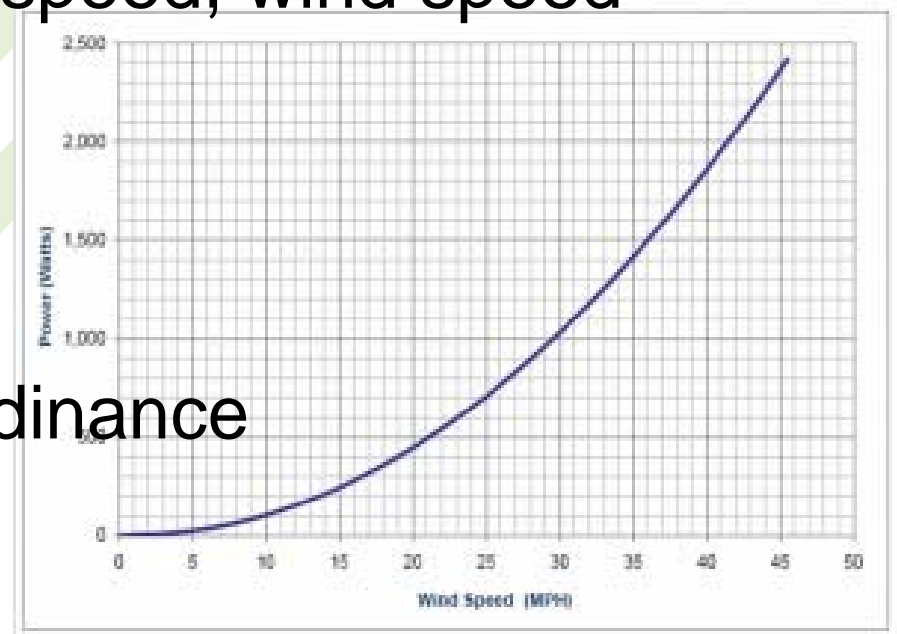
- Many environmental and social benefits of distributed generation of renewable energy



- Community-scale wind is the sweet spot in RI

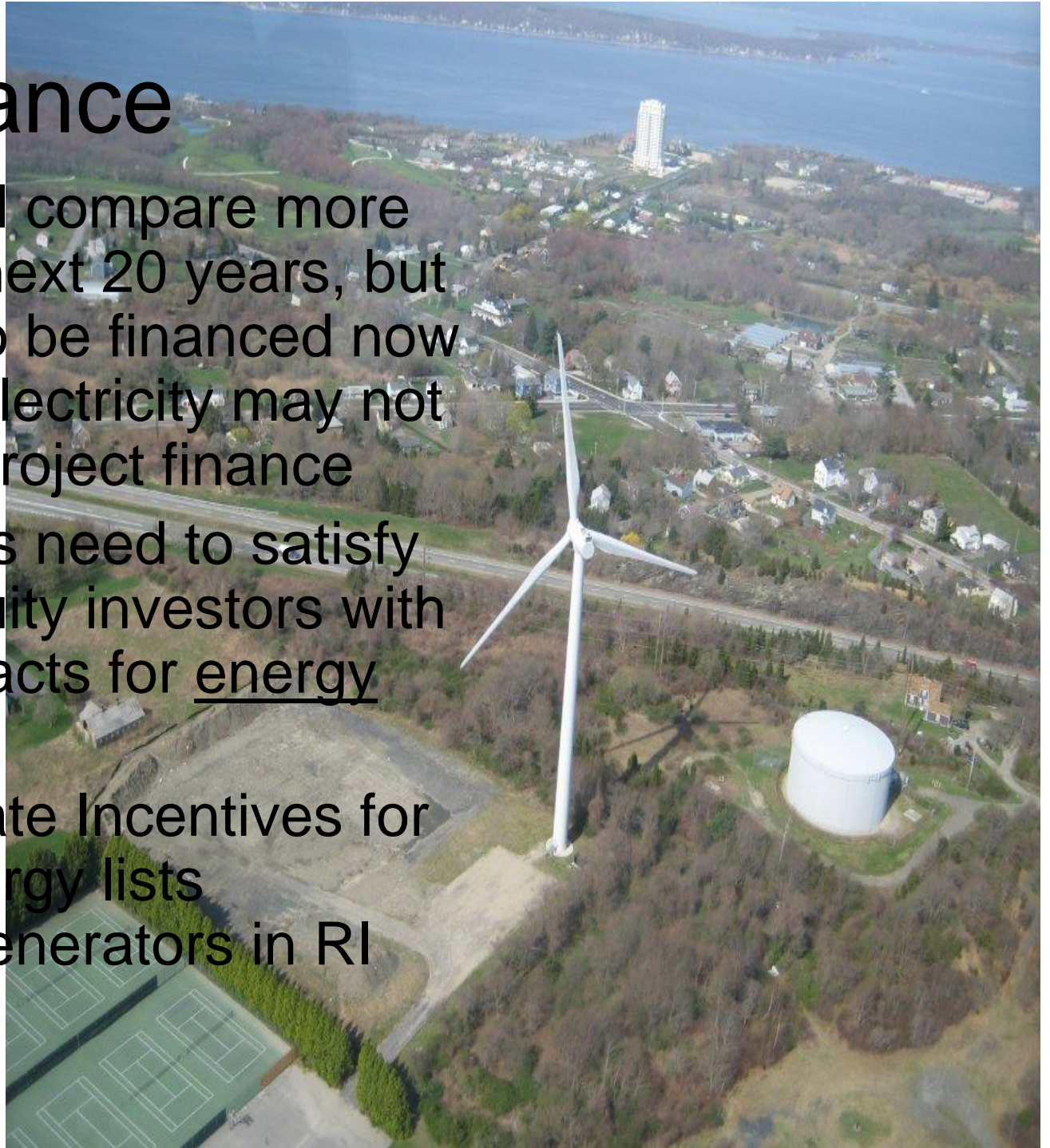
Is your site appropriate?

- Rules of thumb/first cut analysis
 - Wind speed, wind speed, wind speed
 - Set back
 - Wetlands/wildlife
 - FAA restrictions
 - Permitting/local ordinance



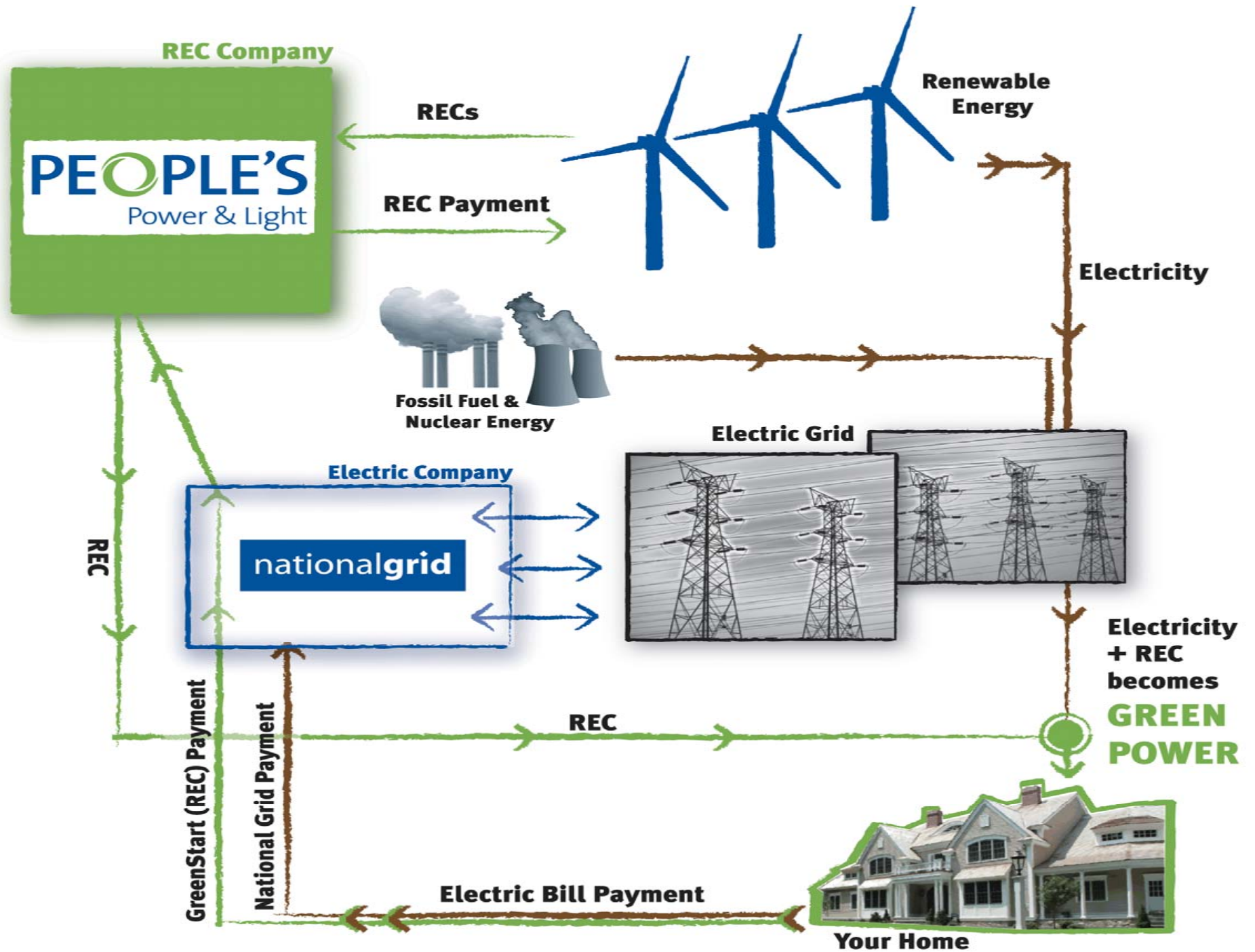
Project Finance

- Renewables will compare more favorably over next 20 years, but turbines need to be financed now when value of electricity may not be enough for project finance
- Most developers need to satisfy lenders and equity investors with long-term contracts for energy and RECs
- Database of State Incentives for Renewable Energy lists incentives for generators in RI
www.dsireusa.org



Measuring Success

- Every megawatt hour (MWh) of electricity delivered into New England's grid can be tracked by ISO-NE's "Generation Information System"
- Every MWh earns a tradable "Renewable Energy Certificate" (REC), detailing the non-energy attributes of that MWh
 - Location (Rhode Island vs. elsewhere)
 - Vintage ("old" versus "new," typically defined as post-1997)
 - Source (wind, solar, hydro, etc.)
 - Emissions
- Electricity suppliers complying with the state's Renewable Energy Standard or volunteers claiming greenness need the REC as proof



Examples of REC Deals

- Town of Portsmouth, \$4 million project
 - <http://portsmouthrienergy.com/schoolstudy9-07.htm>.
 - projected 3.55 cents levelized cost over 20 years
 - PP&L signed a 10-year, \$1.32 million REC deal
 - DON'T EXPECT THESE PRICES, they have come down considerably
- Barrington Wind
 - asked for indicative quote September 2008, RECs didn't make project viable because other projects have better wind

Princeton, Massachusetts

Energy ~ \$70/MWh
+REC ~ \$40/MWh
~ \$110/MWh

\$7.4 million project
RECs=\$1.5 million

8000 MWh/yr =
1330 homes

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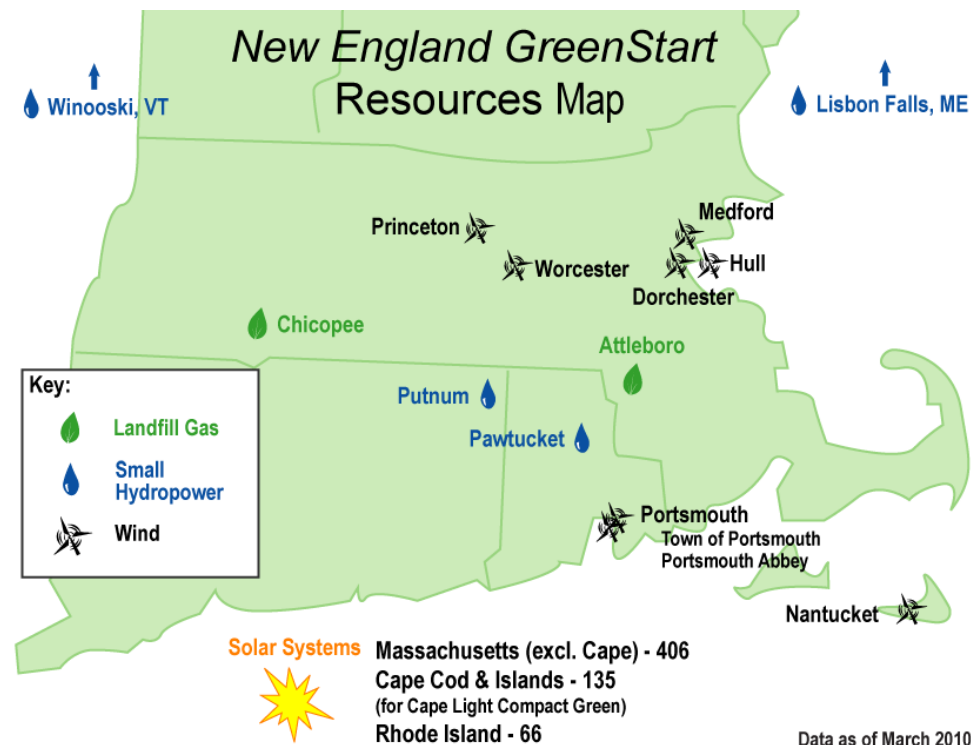


Computer Simulation

RIpower.org

We buy RECs

- Projects need financing
- RECs help with financing
- Long-term contracts also aid financing
- PP&L will pay what's needed to increase the percentage of renewables in our energy mix



-we prefer to pay the least amount necessary

Other Buyers of RECs

- See “Certificate Brokers and Exchanges” section of <http://apps3.eere.energy.gov/greenpower/markets/certificates.shtml?page=2>
- Distributed generation long term contract legislation would require RI utility to purchase RECs from distributed generation projects connected to the RI grid under long-term contracts.

PP&L Seeking a Partner

- Next: we want to give our members the hedge value of wind power too
- Seeking non-public partner
- We bring “REC appetite”
- Want to pay it forward for public benefit



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