

## **FRIENDS OF MAINE'S MOUNTAINS**

**O Box 60 Weld, Maine 04285**

[www.friendsofmainesmountains.org](http://www.friendsofmainesmountains.org)

### **Conservation Group Announces Opposition to Electricity Mandate Referendum**

The state's leading sustainable energy & conservation group has echoed Governor Paul LePage's voicing opposition to a possible statewide referendum. Friends of Maine's Mountains (FMM) denounced the measure in its 7th radio address.

"This would be an environmental and economic disaster for Maine," said Chris O'Neil, President of Friends of Maine's Mountains (FMM), which is focused on protecting Maine's mountains and forests from the impacts of grid-scale industrial wind turbine developments.

Among other shortcomings in the legislation, FMM sees its passage as a de facto mandate for an unsustainable buildup of wind turbines and costly transmission systems on Maine's mountains. O'Neil asserted that "markets would not support any wind power at all if not for a complicated brew of subsidies, incentives, grants, mandates, tax breaks, surcharges, and other government created gimmicks. This is just one more gimmick, and it's a huge one."

O'Neil said, that renewable power sounds good to lay people, but lay people should not be asked to vote on such technical and critical matters that are presented as simple and benign. "Requiring more wind power will probably sound great to most people; but to throw additional unrealistic mandates on utility companies like Bangor Hydro and CMP will cost real dollars for everyone in Maine. And construction will cause further harm to our wild areas with the construction of unnecessary infrastructure. Putting wind turbines on our mountain ridges and hundreds of miles of new transmission lines cutting through our forests," O'Neil said.

Maine has the highest RPS mandate in the nation, presently at 35%. Yet Maine law excludes hydro generators (like Canadian Hydro) and favors others (like wind) such that "for all intents and purposes, 'new renewable' in Maine means wind," O'Neil said. The referendum would double the amount of wind which the RPS now escalates, and it will raise the ultimate percentage mandated from 40% to 80%.

"If Maine is an outlier now, this would put us off the charts." O'Neil said. "We will be urging voters to think about facts like these before they vote for this feel-good legislation."

Maine's electricity generation mix is already very clean. More than half of our generation comes from renewable biomass and hydro, while most of the other half comes from clean, modern natural gas generators. Some states get as much as three quarters of their electricity from coal plants. While a proponent of introducing coal to Maine's electricity generation mix, but the group insists that any generation be sustainable, affordable, clean, and necessary. "Wind power has never proven to meet any of these criteria," O'Neil said. "We have many layers of environmental regulation in place now. And, we in Maine have a strong environmental ethos. There is no need to handcuff our energy options."

harm ratepayers by choosing winners, losers, and favorites."

"This referendum is driven by an unfortunate public belief that wind power can reduce greenhouse emissions, displace base load generators, and reduce our already high electricity costs, when in fact we can do none of these," O'Neil said. "The future of Maine's environment and economy depends on more than mandated policies which are based on a belief in presumed benefits, rather than providing a path forward with high impact - low benefit infrastructure that we neither want nor need."

O'Neil said FMM sees red flags with other provisions in the legislation, like how it would take power from elected officials and give policy making authority to unelected officials.

The following documents have been included for references.

Friends of Maine's Mountains, P.O. Box 60, Weld, Maine 04285 (207)585-

###

## The 20 Facts about Wind Energy Development in Maine

**When asked if they think wind generated electricity is good, affordable, green, useful, and safe, most people will say "Yes, of course." But the fact is, none of the above has ever been proven. Wind generated electricity has been effectively shielded from scrutiny by marketing and lobbying. It has an obligation to verify its claims. But despite popular belief, wind generated electricity has had a net cost and low benefit to Maine's economy and environment. Following are 20 reasons to take a closer look.**

**1. Wind generated electricity will not "get us off of oil."** Less than 2 % of the electricity in Maine and in the U.S. comes from oil-fired generators. We use oil for transportation. Switching to electric vehicles and electric heat would certainly reduce oil usage, but it would sharply increase electricity consumption. So ratepayers would more urgently need to require affordable electricity rather than expensive wind electricity.

**2. Maine has 4300 megawatts of electricity generation capacity, though we only use 1000 megawatts on average.** There is no shortage of electricity and the grid forecasts 1.5 percent annual growth in demand for the next decade. No urgent need exists to use our unique resources using ratepayer and taxpayer money to produce a small amount of surplus electricity.

**3. Even without wind turbines, Maine is already one of the cleanest states in the country.**

**electricity generation.** According to the National Renewable Energy Laboratory, first in non-hydro renewable electricity generation per capita, per gross state product percentage of total electricity generation. We also have the highest renewable standard in the U.S.

**4. By necessity, conventional sources of electricity (nuclear, biomass, and hydropower) will remain the primary suppliers of electricity to the New England into the future.** Wind-generated electricity cannot, by its nature, replace or displace "baseload" generators. Intermittency and low power density restrict it to a role as a supplier of electricity.

**5. Maine's 2700 megawatt "goal" for land-based wind generating capacity would require the construction of 1200-1700 wind turbines, each around 400 feet tall, spaced a mile apart, sprawled across 300 miles of rural Maine's mountains and ridgelines.**

**6. The expansive conversion of rural Maine to industrial wind development could provide no more than 5% of New England's electricity needs under even the most optimistic scenarios.** It would have no meaningful impact on New England's fossil fuel consumption. The intermittency of Maine's 2700 megawatt (MW) wind power goal gives it, at most, an average output that is around 30% of its listed capacity, or about 800 MW. On New England's 100,000 MW grid, this is a drop in the bucket - especially, when considering the infrastructure needed to achieve this "goal."

**7. Wind generated electricity is high impact and low benefit.** The entirety of the 2700 MW goal could be provided by the construction and operation of a SINGLE, modern, conventionally fueled (e.g. natural gas) generation plant, at 10-15% of the cost.

**8. Placing wind turbines on Maine's mountains will not enhance our energy security.** Almost all of the fuels used to produce our electricity are sourced from North America and are readily available in North America.

**9. Placing wind turbines on Maine's mountains will not reduce coal consumption or the need for mountaintop removal mining.** Coal is used in other parts of the country as a relatively "dirty" base load fuel, with some states deriving 75% or more of their electricity from coal. Comparatively speaking, New England is a minor user of coal. Maine has only one coal-fired generator, powering a Rumford paper mill. It accounts for about 1/2 percent of the state's electricity.

electricity generation.

**10. Erecting wind turbines on Maine's mountains will not improve Maine's air** figures indicate that the burning of fossil fuels in Maine is a minor source of particulate pollution. Most fossil fuel pollutants blow into Maine from population centers miles away.

**11. If CO2 is a problem, wind power is not a solution.** Placing wind turbines on mountains will have no impact on climate change. Using the wind lobby's optimistic 2700 MW of installed wind capacity in Maine could only reduce total U.S. CO2 emissions by less than five one-hundredths of one percent (0.05%.) Globally, there would be no benefit since 98% of atmospheric CO2 is from sources *other than* electricity generation.

**12. Wind turbines require sources of NEW conventional generating capacity.** New England Wind Integration Study stated that *"Wind's intermittent nature will require increased reserves, ensuring that there are other generation options when the wind is not blowing."* Even when wind *does* blow, baseload generators continue to operate, while wind generators operate inefficiently as they ramp up and down, which *increases* emissions.

**13. New wind power integration will require an unprecedented expansion of transmission capacity.** The president and chief executive of ISO-New England, said in 2010 that the integration of wind power into the New England grid *"would require spending \$19 billion for new transmission lines."* This cost would be passed along to our electric bill.

**14. Wind generated electricity will not guarantee lower electricity rates.** Wind lobbyists often state that they cannot compete with low natural gas prices, which are expected to remain low and stable for decades. The wind lobby's insistence on a federal Energy Standard and other government subsidies are proof that wind-generated electricity cannot compete with other sources.

**15. It is said that wind should be a "part of the mix" but its part would be insignificant.** Demand for wind generated electricity is created not by the market, but by state government policy. Without favoritism from government policies, wind power cannot survive.

**16. Wind projects are heavily subsidized at an exorbitant rate.** Not accounting for

incentives, ratepayer mandates, and various policies, wind generated electricity is subsidized by federal taxpayers. According to the U.S. Energy Information Administration, wind generators take federal subsidies at a rate of \$56.29 per megawatt hour (MWh). Compared to the subsidy totals for reliable generators like natural gas and coal, which receive 64 cents, Hydro: 82 cents, Nuclear: \$3.14, and Geothermal: \$12.85/MWh.

**17. Wind developments create notoriously few jobs.** Despite boasts of creating jobs, wind projects produce mostly construction jobs lasting less than 6 months. Wind is NOT long-term investments in jobs. Construction jobs are always welcome, but public construction jobs should produce necessary and useful projects, like roads, bridges, and infrastructure. Moreover, state mandates to purchase higher priced wind-generated electricity could lead to *lost jobs or fewer available jobs* in Maine.

**18. Most of a wind project's expenditures leave Maine - primarily overseas.** The valuations of most new wind developments in Maine are sheltered by tax incentives and accelerated depreciation. Under the terms of these deals, Mainers' tax savings are passed on to developers to help finance wind projects.

**19. EVERY operating, multi-turbine, grid scale wind facility in Maine that has been built near people has significant unresolved disputes over noise emissions and shadow flicker.** Continuing to site wind turbines using the same standards that have caused problems assures that the problems will grow in number and that more Mainers will be affected by disputes with wind developers in the future.

**20. "Charting Maine's Future," the 2006 Brookings Institute report, warned against rural sprawl in order to protect its "quality of place" and its "brand."** Maine's wind development policy actually *encourages* rural sprawl, threatening Maine's unique character and future prosperity. Fairly weighing the massive impacts to Maine's economy and environment versus the minimal benefits from wind power, the facts lead us to conclude that the costs exceed the benefits. Maine must pursue more sensible and sustainable energy policies.

**Friends of Maine's Mountains**

**PO Box 60 Weld, Maine 04285**

[www.friendsofmainesmountains.org](http://www.friendsofmainesmountains.org)

## Friends of Maine's Mountains

PO Box 60 Weld, Maine 04285

[www.friendsofmainesmountains.org](http://www.friendsofmainesmountains.org)

The Governor caused a stir last week when he urged citizens NOT to sign the citizens referendum p being circulated by a "coalition" of special interests. That coalition is seeking to pull Maine off an energy/environmental/economic cliff with the measure that would radically increase mandates for e users. Among other shortcomings in this legislation, Friends of Maine's Mountains (FMM) sees its de facto mandate for an unsustainable buildup of wind turbines and transmission lines on Maine's m

As you surely know, almost everyone unwittingly begins with feelings of favorability toward wind that favor wanes once they learn wind power's low benefits and high impacts to the economy and environment. While FMM categorically opposes what the referendum seeks to do, we actually see campaign as an opportunity for educating more Maine citizens with the truth about wind power's high benefits.

Anticipating that the "coalition" will reach its signature requirement before the January 30, 2012 deadline, we will soon be involved in a campaign to oppose the question, we have assembled below some th

Please feel free to contact me for more information.

Chris O'Neil, President  
Friends of Maine's Mountains  
(207) 590-3842  
[cponeil22@gmail.com](mailto:cponeil22@gmail.com)

-----

### **Maine's Renewable Portfolio Standard (RPS) Mandate, and the referendum attempt to increase it.**

Maine already has a statutory "goal" to build out 2700 megawatts (MW) of wind capacity, not counting additional 5000 MW eventually from offshore wind capacity. The 2700 MW goal alone will not happen because people hope or wish it would. As we know, markets would not support any wind power at

complicated brew of incentives, grants, mandates, tax breaks, surcharges, and other government cre

The gimmick apparently headed for the 2012 ballot is the RPS. We prefer to call it RPM (M for *mandatory* of *standard*) but for this memo, let's call it RPS. Simply stated, an RPS dictates that a state's utilities (and sell their ratepayers) a mix of electricity that is X amount renewable. Our existing RPS mandate articulated as a percentage of overall electricity sold. In case you wondered, Maine's RPS mandate is highest in the nation, and approving the referendum question would send it even higher.

Why are we so critical of the wind power goal that was enacted into law? Simply stated it is unnecessary, unaffordable, unsustainable, and it undoes Maine's Quality of Place. Remember, the 2700 MW installed goal (25% capacity factor) will effectively add only 675 MW to our 33,000 MW New England grid. 675 MW could far more easily and reliably be produced at one medium sized conventional plant without thousands of turbines across Maine. That one new plant (which we don't need because we already have 675 MW capacity) could run smoothly as a base load generator instead of backing up intermittent wind with inefficient balancing, and spinning reserve, necessitating inefficient and polluting starts and stops.

The public relations justification for this rush to wind power has been **jobs**...we've proven that claim specious. **Get us off oil**...people now realize we don't use oil to generate electricity. **Reduce electricity** think again.

But the primary justification with RPS is to REDUCE CARBON. We know this is fallacy from numerous studies on how wind and the grid work. Wind won't close Maine's three new natural gas plants just like it did coal plants in Denmark. While New England has several dirty generation plants that could be closed in the next decade, they are primarily base load generators producing a steady flow of electrons 24/7. If they are closed they will be replaced by base load generation. Wind power boosters have a naive belief that renewables can replace conventional generation, with a commensurate reduction in carbon. So let's just switch to wind.

Not so easy. Government, believing or wishing that renewable electricity is necessary and useful, has had the need to manipulate the marketplace so that renewables can have a chance. For several years there have been unsuccessful efforts to impose a national RPS, a cookie cutter approach to renewable energy goals across the country, for example, 20%. For the foreseeable future that effort does not show much chance of passing in Washington DC. So some states have created their own renewable mandates.

We are not against effective methodologies that reduce greenhouse gas emissions. We do not oppose market-based approaches. We do oppose the Maine policy that hand picks renewable winners and losers, and then manipulates the market for generation, capacity, and consumption. All renewables are not created equal. Hydro and biomass can provide reliable and affordable base load electricity. But they do not benefit equally from all the government subsidies which wind power gets. So wind power is essentially guaranteed a meal ticket if the referendum passes.

As we enter this referendum debate we must be mindful that Maine has an RPS calculation better suited than other states, a higher percentage standard than all of them, and a very clean electricity mix today; Maine is a model carbon citizen.

Maine's indigenous electricity generation mix is very clean: about half from new natural gas plants 1

after the closure of Maine Yankee. We all know that gas is not only abundant and likely inexpensive but that it burns much cleaner than other fossil fuels. The other half of our generation is predominantly hydro. Maine's *capacity* mix is a little less clean, but that is due to the presence of our biggest gas plant, the Wyman station in Casco Bay. That is a large oil-fired plant with 620 MW of capacity. Market forces rendered it a generator of last resort. Despite the fact that Wyman could power every home in Maine, it is called upon by the grid operator for peak load moments, typically those 90 degree days in August when the available generation sources on the grid are required to produce.

An aside here: note that our utilities - like Bangor Hydro and Central Maine Power - do not buy all the electricity that Maine generates. Nor does all the electricity that they buy for / sell to us come from Maine generation. The New England grid is fluid, and Maine utilities regularly purchase a portion of their electricity from out-of-state nuclear generators, neither of which exist in Maine.

Looking at US Department of Energy figures for electricity generation, Maine's tons of CO2 per square acre of carbon sequestering forest is only 192. The same calculation for Texas is 13,556. In fact Maine is the best nation at this metric. Yet some people would have us falling over ourselves to proliferate ineffective wind generation when we don't need it, shouldn't want it, and will see no benefit from it.

It is imperfect to compare the states. But as I noted, Maine already has the highest renewable portfolio standard in the nation. That's right. The *highest* now. 29 states have some variation of an RPS, and none is even close to Maine's. Do not confuse the RPS with either Maine's generation **output**, generation **capacity**, or generation **consumed**. All are different animals. The RPS mandate is on the utility. It tells CMP how much renewable power they must sell to us, therefore it is a mandate on generation **consumed**. Some states in the Northwest (e.g. where federally funded dams enabled civilization to proliferate) have higher percentages of their electricity capacity, generation, and consumption than we do. Other states, like Alabama, get three quarters of their generation from coal generators. (They enjoy rates less than half of ours incidentally, and we get their emissions.)

About a decade ago, the Maine Legislature set our RPS at 30%. A few years later, as we were entering a renewable bandwagon era, Maine's RPS was amended with an annual 1% automatic escalator. In 2012 it is scheduled to automatically escalate from 35% to 36%. This escalating mandate essentially disregards the 30% benchmark and requires utilities to buy (and then sell to us) 1% MORE "renewable" electricity per year from "new" sources. The 1% annual escalation enacted in statute is presently scheduled to top out in 2017 at 40%.

The early spin from the referendum's proponents is that *Maine will gradually come to using 20% renewable energy*. Such a benign characterization, which has been repeated in early press reports, is incomplete and misleading. In fact the proposed referendum doubles the escalation rate to 2% "more new renewable" electricity per year until Maine hits a 50% renewable mandate. This is like telling me that 360 pounds is too skinny and more so I will get to 500 pounds. Or that I have to get half of my groceries at the donut shop. If enacted, the mandate will put unprecedented pressure on Maine to not only allow, but *push* wind power development.

Why? Remember, 3000 MW of installed wind **capacity** is NOT 3000 MW of delivered or **consumed** electricity.

Maine ratepayers (via our utilities) would need to purchase 800 to 1000 MW of "renewable" electricity. This would create a disadvantageous supply/demand equation for us buyers, necessarily raising costs. This is a major drag on Maine's economy.

We often say that wind power is a two-headed monster that gets its sustenance dually from Washington and Augusta. So the proposed referendum is a Thanksgiving feast of *state* sustenance. If the federal government, which we hope, continues its recent inclination to curtail the *Washington* sustenance, and we keep escalating mandates, then Maine will get the worst of both monsters: environmental degradation from state-mandated wind turbines, at an even greater cost because of the reduced federal maintenance of monetary effort.

We do not often wade into the "global warming" and "climate change" debates. It is a fact that the atmospheric CO<sub>2</sub> level is at a historic high, and still trending upward. But we also know that only about 50% of atmospheric CO<sub>2</sub> is man made, with only a small percentage of that man-made CO<sub>2</sub> coming from electricity generators. So if we want to reduce atmospheric CO<sub>2</sub>, why focus so much radical reform on a tiny CO<sub>2</sub> source like electricity? It is moreover a waste of time, money, and natural resources to hope that CO<sub>2</sub> will be reduced by *wind* electricity, which cannot provide any measurable CO<sub>2</sub> benefit. If we close a 1000 MW coal plant in Connecticut and replace it with 1000 MW of hydro from Newfoundland, now that would give us a 1000 MW reduction in CO<sub>2</sub> and other emissions. But remember, in the overall schemes of global CO<sub>2</sub>, reducing the CO<sub>2</sub> from electricity generation is barely going to budge the needle. OK to do it, and perhaps advisable. But let's not overstate the benefit.

Some of us have more and less urgency in our concern for CO<sub>2</sub>. But regardless of whether we think we are going to melt next week, or if we see things the other way, and think that global warming is fiction, we all agree that today's panic approach to curing CO<sub>2</sub> ills by eschewing how we generate electricity is both a poor diagnosis and prescription.

### **A final and different thought about cookie cutter approaches to carbon and renewables:**

The average % forest coverage of land in the world is 29.6% according to the United Nations' "State of the World's Forests." The % forest cover of land in the U.S. is 24.7%. Spain and Denmark, two countries that are examples of wind power proliferation, have forest covers of 28.8% and 10.7% respectively.

Trees are carbon sinks. They store carbon. They *are* carbon. Importantly, Maine, at 90% forest cover, is well above the world and U.S. averages. In terms of our forest cover (largely a function of nature, but certainly also a function of cultural and economic practices, such as our forest products industry), we are well above almost everyone. Moreover, because we have a relatively low population density, our low ratio of population to forest would likely be even more remarkable. We are a VERY LOW net carbon state, even with our current vehicle and heating oil usage.

It thus seems that cookie cutter solutions suggested to all the states, such as RPS mandates, may be a poor size fits all solution not applicable to a low population, high forest CO<sub>2</sub> sequestration state like Maine. We should not burn oil or coal for electricity! Also, consider our hydro and biomass are already reliable renewable energy sources.

Some of the states with greater wind power penetration such as Texas have below 10% forest cover.

their relatively low carbon sequestration levels have led to overlooking the importance of forests and forest based industries rather than subsidizing industrial wind.

Add to this, the fact that Maine RPS law excludes big hydro and foreign hydro from qualifying as "renewable" means we can do even better than we do if we would simply lift that artificial barrier. Furthermore, general hydro and big/foreign hydro are similarly excluded from being considered "renewable" for the purposes of receiving subsidies via RGGI/Renewable Energy Credits. Provincial utilities in Labrador and Quebec are providers of electricity and renewable demand at population centers south of us, but their product is financially captured by Maine and other states because of these two isolationist policies. They must be repealed, allowing us, which has relatively low demand - to tap into the "pipelines" of electricity that are headed around us. Maine is geographically situated to leverage that northern supply against the demand from population centers south of us.

As several dirty generators to our south move closer to decommissioning, we could use sustainable hydro to reduce our carbon quotient and clean up other harmful emissions that now drift to us. These sustainable hydro renewables can come from Maine or outside Maine. But we should not mandate any kind of power, certainly should not mandate wind power.

FMM sees red flags with other provisions in the legislation, like how it would take authority from elected officials and give policy making authority to unelected officials.