

The background of the entire page is a photograph of a rural landscape. In the foreground, there is a field of dry, golden-brown crops. In the middle ground, several white wind turbines are visible against a clear blue sky. To the right, there is a large, two-story barn with a blue roof and a tall, cylindrical silo with a domed top. A few green trees are scattered in the middle ground.

# **NYS CITIZENS' WIND ENERGY QUESTIONS**

**for the NYSERDA Sponsored**

**“Environmental Stakeholder  
Roundtable on Wind Power”**

**(June 16, 2009)**

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## BRIEF HISTORY —

For the last few years, NYSERDA has held an annual year-end meeting to give a synopsis of their current projects. These meetings were graciously setup by Dr. Liz Thorndike a NYSERDA board member, and a professor at Cornell. The title of these get-togethers was “Partnership for Environmental Improvement.”

Most of the attendees were from well known environmental groups (e.g. The Nature Conservancy). To Dr. Thorndike’s credit, several environmentally concerned citizens with looser affiliations were also permitted to participate. These people came primarily as they were concerned about the state’s energy policies, and the impacts these were going to have on their communities.

The format of the meeting was generally the same: **1)** attendees would introduce themselves, **2)** Dr. Thorndike would ask each participant what their main concern was (she kept track of the numbers), **3)** a half dozen or so presentations were given by NYSERDA staff (each 30± minutes, and each followed by a Q&A), and **4)** in the remaining time left, general questions were taken by Dr. Thorndike and/or NYSERDA staff on the issues voted most popular in #2 (above). [Lunch fell somewhere in #3 and was hospitably provided by NYSERDA.]

Each year in anticipation of the meeting we sent written notices to the NYSERDA coordinators that we wished to discuss various aspects of wind power. In each of the last two years, wind power was the most popular item of interest based on what the attendees indicated. Interestingly, none of these meetings had wind power scheduled as a presented topic.

So, near the end of the day we finally got the chance to ask wind energy related questions. The responses were polite but vague. A typical answer amounted to “Sorry we don’t know that so we will have to get back to you.” In most cases no responses were received, and those that were sent didn’t answer the questions.

After the meeting followup questions emailed to NYSERDA staff almost always went unanswered. One senior technical person was an exception in that he did respond to most of my questions. His answers, though, weren’t what I was expecting from a person in that capacity.

For instance, I asked him what scientific data did NYSERDA have that wind power was a technically, economical and environmentally viable source of electrical power. His answer was that wind power had been around for several thousand years, so none was needed. So it went.

It was disturbing that despite dozens of technical questions sent in prior to the meetings (and asked at the meetings), that Dr. Thorndike initially characterized these as being about “birds and bats,” and then the next year “aesthetics.” These are gross misrepresentations, and hopefully were not purposeful.

In response to the frustrations evident at the inadequate responses, in 2007 Dr. Thorndike said that NYSERDA would put on an all day forum where all wind power questions would be answered by technically competent objective people. She reiterated this promise a year later at the 2008 meeting.

The June 16th meeting is finally supposed to be that convocation.

When we were first informed about this proposed meeting (mid May) our first concern (based on our extensive experience with NYSERDA) was the makeup of the panel of “experts.” We asked for the names and were told that they hadn’t been finalized. In response to that we sent in the names of about a dozen energy experts who are independent parties that have done objective assessments about various aspects of wind power. [None of these ended up being included.]

About two weeks later we were informed of the organizations and state agencies that would be represented on the panel. *Each and every one of them have taken a very public pro-wind position.* Mark Watson (the NYSERDA meeting coordinator) was asked to identify a single one of these who had written a critical article about wind power. He was unable to provide a single one.

This arrangement follows NYSERDA’s established format for dealing with such technical matters: *only present the side that promotes their political agenda.* A careful review of NYSERDA’s Wind Power Toolkit page shows the same strategy.

**This meeting was not about public relations or to hear green agendas. As such we STRONGLY protest this abdication of NYSERDA’s commitment to have a balanced and objective treatment of this critically important matter.**

Despite this deception we are still going to do our part: *submit a representative list of questions from environmentally concerned NYS citizens.*

The method for composing these was as follows: a request for questions was sent to the citizen organizations (ref page 23) and/or some of their members. (Note: these groups represent many thousands of NYS citizens).

Several hundred replies were received which were then sorted and categorized. The “better” questions are presented on the following pages. “Better” was a subjective determination as which questions had the highest impact on the most NYS citizens. Despite the length here (60+ queries), **some eleven pages of additional questions didn’t make the cut, and are not included.**

It was decided to include a one page list of names and communities of people who submitted questions, or who supported the questions listed. There were many more who asked to be included, but page 22 is that list.

We have asked NYSERDA that this entire document be posted on their Wind Power Toolkit webpage, along with the answers to the questions posed herein.

## INTRODUCTORY OBSERVATIONS —

The citizens of NYS can not depend upon the assertions of ANY industry that has an extraordinary financial stake in the outcome of NYS energy policy decisions. Additionally, the primary obligation of such businesses is to their investors and partners — not the citizens of NYS.

NYS consumers must rely on the dispassionate, comprehensive and scientific adjudication of industry technical claims, by those who are employed to serve ONLY the public interest (e.g. NYSERDA). This is particularly important when such businesses not only desire enormous public financial support, but also when the stakes (i.e. Global Warming) reportedly involve our very survival as a species. *This is the situation we have today with industrial wind energy.*

The **key** element of our concerns is the degree of compliance NYSERDA has with its own mission statement (<<<http://tinyurl.com/pzuvjp>>>), particularly this section (emphasis added):

“NYSERDA strives to facilitate change through the widespread development and use of innovative technologies to improve the State’s energy, economic, and **environmental** well-being. In fulfilling its mission, NYSERDA’s workforce reflects its public service orientation, **PLACING A PREMIUM ON OBJECTIVE ANALYSIS** and **collaboration**, as well as reaching out **to SOLICIT MULTIPLE PERSPECTIVES** and share information.”

The quantity and scope of the following pages of questions should send two very clear messages:

- 1 - this is not a NIMBY issue to most NYS citizens, and
- 2 - that NYSERDA’s website and support materials are seriously deficient concerning wind energy information.

We are NOT against renewable energy.

We ARE against business as usual in the electrical energy sector.

We ARE against palliative political pablum.

We support **Sound Scientific Solutions** to the energy, environmental and economic issues facing our state today.

We hope NYSERDA will join us to support sound scientific solutions to these pressing matters.

## A. SOME POLICY QUESTIONS

**Question #A1:** What is NYSERDA's methodology for assessing political directives to assure that they are **technically, economically** and **environmentally** sound (per NYSERDA's mission statement)?

**Question #A2:** What is NYSERDA's policy when asked to execute a political directive that is *not* **technically, economically** or **environmentally** sound?

*Note:* Questions #A1 & #A2 ask whether NYSERDA believes that they are primarily employed to serve the public interest ("public service orientation") — or do they view themselves more as an agent to execute political edicts?

**Question #A3:** Does NYSERDA believe in and advocate using *scientific methodology* in assessing the validity of new alternative energy technologies?

*Note:* Although the mission statement says "NYSERDA strives to facilitate change through the widespread development and use of innovative technologies," we assume that NYSERDA is not advocating change for the sake of change — but correct us if we are wrong here. Change can be good or bad. We (again) assume that NYSERDA would only be advocating changes that are transparently, objectively, independently, and conservatively proven to have a net benefit. Thus the question.

**If NO:** what procedures does NYDSERDA utilize to ascertain whether NYS energy policies are **technically, economically** and **environmentally** sound?

**If YES:** then please provide the **scientific methodology** evidence that objectively and comprehensively proved that industrial wind energy is **technically, economically** and **environmentally** sound.

**Question #A4:** What are NYSERDA's criteria for allowing an "innovative technologies" source onto the grid?

*Note:* This is a corollary to the prior question, as we citizens would expect that the only "innovative technologies" that would be approved by NYSERDA as public electrical energy sources, would be those that **met or exceeded the standards of existing electrical energy sources**. (The obvious criteria would be reliability, predictability, dispatchability, cost, environmental impact, etc.) *Is that NYSERDA's benchmark for approving these?*

**Question #A5:** As a followup to the prior question, please identify for us exactly which of the current documents on NYSERDA's *Wind Power Toolkit* page (<<<http://www.powernaturally.org/Programs/Wind/toolkit.asp>>>) were created by *objective* independent parties, and consist of *scientific* information?

*Note:* NYS citizens rightfully expect that what is on the state's energy agency site is an objective and balanced presentation of this complex technical topic.

**Question #A6:** What does it take to correct major oversights and omissions on NYSERDA's website, especially the *Wind Power Toolkit* page?

*Note:* For instance, eighteen months ago, a senior NYSERDA staff manager was informed that the extremely important "Model Ordinance" listed on the *Toolkit* page (<<<http://tinyurl.com/m8vw4j>>>) had multiple deficiencies. As examples, two serious omissions were identified: **1)** There was no recommendation for the community to do a SEQOR (it simply wasn't brought up), and **2)** decommissioning was not even mentioned.

Although this senior person acknowledged these oversights, **no changes have since been made to this significant document.** Both aspects of this — the omissions and the resistance to fix errors when identified — seem to be indicative of a systemic failure on NYSERDA's part.

**Question #A7:** Which of the 60± documents on the Toolkit page reflect NYSERDA's mission statement's objective of presenting "multiple perspectives" by showing unmitigated negative aspects of wind energy? (This is a question of balance.)

**Question #A8:** What are NYSERDA's relationships with wind industry businesses?

*Note:* Full disclosure of all legal and financial agreements with: **a)** Wind Industry Organizations (AWEA, Windustry, etc.), **b)** Wind Energy Marketers (Iberdrola, CEI, etc.), **c)** Wind Equipment Manufacturers (GE, Vesta, Gamesa, Suzlon, etc.), **d)** Wind Equipment Installers (Noble, Horizon, Reunion, etc.), **e)** Wind Energy Investors (Goldman Sachs, Chase Bank, GE, BPG, etc.) , and **f)** Energy providers (National Grid, Central Hudson, etc.)

**Question #A8:** Are people with direct connections to the renewable industry allowed to be on NYSERDA's Board of Directors?

**Question #A9:** Why are there no panelists at this meeting that are against industrial wind power?

*Note:* As explained in the History section, this meeting was requested by environmentally concerned Citizens of NYS, who were unable to get technical, economical and financial questions answered by NYSERDA. NYSERDA promised to have an all day gathering where all such questions would be fully answered by a **balanced** panel of **competent** and **objective** parties.

Considering that not a single panelist has gone on record to state that wind power is a bad idea, the plan for balance and objectivity has been abandoned. The Citizens supplied a sample list to NYSERDA of some dozen technically competent independent energy experts. None of them are on the panel.

This is indicative of our multi-year experiences with NYSERDA: their main interest is to preserve their cash cow and one of their main *Raison d'êtres*.

## B. SOME RPS QUESTIONS

*Background:* The Renewable Portfolio Standard (RPS) is the driving force behind wind power implementation in NYS. This 2004 political edict by the Governor mandated a major change in the traditional sources of electrical power in NYS.

This decree required that 25% of NYS's electrical power come from "renewable" energy sources by 2013. (E.g. <<<http://www.nyserda.org/rps/index.asp>>>.)

Governor Paterson has subsequently asked that this be increased to 30% by 2015 with a program he has dubbed "45 by 15" (<<<http://tinyurl.com/ngckwl>>>).

When it was initially established, the NYS Public Service Commission (PSC) was charged with reviewing the RPS in 2009, to see if the benefits justified the cost and efforts exerted. [Public comments are currently being taken on this.]

In anticipation of this review, in 2008 NYSEDA hired two consulting firms (Summit Blue and KEMA) to analyze different aspects of the RPS. Both of these firms are closely aligned with the renewable industry, so their ability (and interest) to perform a critical analysis of the RPS program comes into question.

NYSEDA, of course, was well aware of this conflict of interest, and hired them anyway. A cynic would say that they were hired *because* of this conflict.

(To see these lengthy technical reports [380 and 280 pages] see the PDF versions at <<<http://tinyurl.com/pmynab>>> and <<<http://tinyurl.com/qxp9yv>>>.)

Despite the almost 700 pages of technical jargon, for all intents and purposes the bottom line is found on page 52 (5-19), Table 16 of the KEMA report. This summarizes both reports' conclusions that it is their contention that the RPS results in three economic returns to NYS (over a 24 year period): **1)** general economic benefits, [e.g. employment related; they call this "GSP"], **2)** "price suppression" of electricity costs, and **3)** environmental (e.g. CO2 reductions).

Before looking at these closer, make sure that you have a clear understanding of the purpose of the RPS. Essentially ALL statements made by our political representatives are similar to what is said here: (<<<http://www.ceere.org/rerl/>>>):

The electricity we use every day produces air pollution and greenhouse gases with serious consequences on our environment and health, globally and locally. Generating electricity through wind power and other renewable energy technologies can greatly reduce that damage.

The heading of NYSEDA's RPS webpage says "The New York Renewable Portfolio Standard — A Clean, Green Tomorrow Starts Today". Does it say "Lower Cost, More Reliable Energy Starts Today"? No.

So the number one reason for imposing the RPS on the citizens of NYS is item #3 in the reports above: **Environmental**. So what do the reports say about the environmental value of the RPS?

When adding up **all** the projected benefits to NYS citizens (see Table 16), the environmental part amounts to about **.00005 of the total!** That's 1/20,000... [This is consistent with independent analyses: <<<http://tinyurl.com/n3cdx9>>>.]

*Carefully think about this: **the main reason for doing the RPS has resulted in a projected benefit of \$129,000 — at a NYSERDA cost of \$440,000,000.***

Continuing on, item 2 (“price suppression”) was reported to account for 72% (over 2 billion dollars over 24 years) of the economic benefits of the RPS.

But how valid is that? Here's a key thought: to assess the benefits of forcing renewable energies on NYS citizens, an accurate calculation **should** be based on comparing the cost and benefits of:

- 1) adding renewable energy sources, vs
- 2) adding equivalent generation of conventional energy sources.

***That is NOT what was done in these reports!***

So if we wade through the data that is used to come up with the “price suppression” amounts, and this time say, OK let's add an equivalent amount of nuclear power generation (instead of the renewables generation used in the report), what “price suppression” is there from the “renewables” option?

The answer is **ZERO**. (The Summit report data confirms, e.g. in figures 44 & 45.)

OK, finally we can look at item #1: general economic benefits. These are reported to account for about 28% of the total purported RPS benefits.

The primary basis for this calculation is a computer model called JEDI. This came about as a way to quantify the benefits of adding wind power. This was never intended to be a *comprehensive, independent* tool to *objectively* look at real economic effects for adding new energy sources. It's about promotion.

This computer model has several positive assumptions built into it, *and* it ignores many negative economic consequences of renewable implementation. To get a good idea of JEDI's limitations and omissions read this critique by an independent energy expert: <<<http://tinyurl.com/mwdfse>>>.

Additionally, there have been numerous **independent** studies that have challenged the “green jobs” political assertions made by promoters of renewable energies. (None of that is dealt with by JEDI.) Here is a *small* sample:

- 1 -<<<http://tinyurl.com/cpmwrj>>>
- 2 -<<<http://tinyurl.com/cb2u7w>>>
- 3 -<<<http://tinyurl.com/dhlvm5>>>
- 4 -<<<http://tinyurl.com/lt9ero>>>

When taking this all into account, the general economic benefits to NYS citizens (item #1 in KEMA report) is likely to be **ZERO**. (Some contend that it is negative.)

This is a citizen-based document, so we have purposely done a quick overview here. Our basic premise is that to accurately assess a complicated program like the NYS RPS, only **competent consultants** who have **no financial stake in the outcome** should be hired to evaluate it.

That is not the case with Summit Blue and KEMA, so the observations we made above then should come as no surprise. It appears these reports have been initiated with the intent of justifying the RPS — **not** to do a conservatively critical examination of it's true costs and benefits.

Why wouldn't KEMA/Summit do such an analysis of these matters? Clearly that would result in a failing grade for the NYS RPS, which would make NYSERDA (the agency who hired K/S) look bad. Word would get around about K/S's objectivity which would insure that no other state or federal agency would hire K/S. So being honest would have a serious economic impact on K/S's business.

An objective conclusion would likely be that NYS citizens will spend something like \$500,000,000 on RPS related matters (which includes nominal costs ancillary to NYSERDA), and have essentially nothing to show for it.

Hopefully the PSC will not only see through this obfuscation, but have the courage to declare the NYS RPS a failed political idea. If the state genuinely wants to reduce air pollution, and in a cost effective manner, it needs to go back to the drawing board and come up with a sound scientific solution.

*With these thoughts in mind, let's continue on with our questions...*

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**Question #B1:** What scientific assessment (e.g. re the 20% portion, the goal year of 2013, the types of sources defined to be included, etc.) was done by NYSERDA (or other NYS agencies) **before** NYS decided to mandate a RPS ?

*Note:* If such an independent scientific study was done (i.e. to ascertain the technical, economic & environmental effectiveness of a RPS), then the results should be on NYSERDA's website. We don't see it.

**Question #B2:** One high level NYSERDA staff person wrote (in a correspondence) that without the state's RPS edict, there would be no wind power projects in NYS. *Is this the official position of NYSERDA?*

*Note:* Whether yes or no the underlying question is: **if wind energy makes good sense to utilities, rate payers and tax payers, it should rapidly flourish on its own, without any mandates — so why is an RPS needed?**

**Question #B3:** Which is more important to NYSERDA - **1)** the success of Renewable Energies, or **2)** the preservation of the four most important non-Renewables we citizens have: our health, our families, our homes, and our communities?

## C. SOME GENERAL QUESTIONS

**Question #C1:** Please identify for us the number one, two and three reasons for NYS supporting industrial wind energy, in order of priority.

*Note:* The marketers of wind power have a chameleon like talent for changing the reasons for wind power based on the prevailing political breeze. That's why we want to be perfectly clear about NYSERDA's official reasons.

**Question #C2:** When determining industrial wind power rules and regulations, how does NYSERDA isolate itself from the well funded lobbying of those who stand to gain financially from subsidized wind energy development to protect the environment, and health, safety, and financial concerns of NYS citizens?

**Question #C3:** Why doesn't NYSERDA make full adherence to the state Attorney General's Ethics Code of Conduct a *mandatory* requirement for wind power developers to do business in NYS?

*Note:* The Attorney General's suggested General Ethics Code of Conduct for industrial wind developers is intended to protect NYS citizens — the very people NYSERDA is employed to serve. Considering the adverse social effects that industrial wind power has had on various NYS communities, this is a MAJOR matter. Specifically what is NYSERDA doing to assure that ethical standards are maintained by all wind developers authorized to construct wind power projects in NYS?

**Question #C4:** Specifically what does NYSERDA do to protect NYS citizens by assuring that state-subsidized wind developers honor terms of their contracts, PILOT agreements, and permits?

**Question #C5:** What does NYSERDA do to assure that NYS citizens do not lose their legal rights during a wind project development?

*Note to questions #C4 & #C5:* For NYSERDA to act in the best interest of their employers (the citizens of NYS), they should establish *mandatory* requirements to assure that developers: **a)** meet all of their legal and financial obligations, *and* **b)** that they are prohibited from imposing any "gag" type terms or conditions on participants (e.g. leaseholders) in any NYS project.

**Question #C6:** What is NYSERDA doing to protect NYS citizens and their towns from the fact that most wind development companies are shielded from financial and/or legal liability responsibility?

*Note:* Most wind companies form an LLC for a particular project. If there is a violation or a lawsuit, the parent company (e.g. Invenergy) is protected by the LLC, which has no tangible assets to sue. In their approval process of these developers NYSERDA should require that all approved developers have full legal and financial accountability throughout the life of the project.

**Question #C7:** What is NYSERDA doing about collusion between wind developers?

*Note:* It is a rare event where a NYS town is approached by two or more developers with proposals for local wind projects. Clearly competition between such developers would result in a better deal for these communities. That this rarely happens gives the appearance that there is some behind the scenes arrangements between these developers to not compete. NYSERDA should go to lengths to assure that this is not the case.

**Question #C8:** What is NYSERDA's official position about the proposed Article 10?

*Note:* Article 10 appears to be an attempt to circumvent the constitutionally granted Home Rule rights of NYS citizens, for the purpose of achieving political goals. If NYSERDA has public service as its top priority, it would openly oppose such a measure. Additionally, reviews of proposed energy projects would be significantly sped up if NYSERDA had a more independent science-based presentation of energy choices on their *Wind Power Toolkit* website and in their other materials supplied to communities. Would NYSERDA use Article 10 to support only renewable energy sources?

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**The remaining questions are broken down into the three most important categories for evaluating the validity of ALL alternative electrical energy power sources:**

**Technical, Economic and Environmental...**

## D. SOME TECHNICAL QUESTIONS

**Question #D1:** Please identify what the Capacity Value of wind projects are in NYS. (Please identify all assumptions made and use only real world data.)

*Note:* Capacity Value is defined as the ability to produce specified amounts of energy at a specified rate at a given time. Please provide verifiable evidence from existing NYS wind projects (not computer models) showing that industrial wind power produces the kind of Capacity Value comparable to conventional electrical energy sources. If such data is not available, then explain why not and when it will be. If the data available indicates only marginal Capacity Value for industrial wind projects, please explain as to how this justifies the extraordinary amount of time and money involved in supporting an inferior source of electrical power.

**Question #D2:** As a corollary of the preceding question, considering the relatively small amount of highly variable energy actually produced per square mile of permanently disfigured landscapes, how many industrial wind turbines, scattered over how large an area, would it take to collectively deliver a Capacity Value equivalent to a 1 GW conventional (e.g. nuclear) generating system?

**Question #D3:** What has NYSERDA done to identify and address harmonic power distortions caused by industrial wind turbines?

*Note:* The operation of wind turbines has an impact on the power **quality** at the connected electric network. Harmonic distortion is one of the most important phenomena which affect the grid performance. For more info see this IEEE paper: <<<http://tinyurl.com/qy8qcb>>>.

**Question #D4:** Where can consumers find out the amount of electricity consumed by wind turbines: e.g. to heat or cool generators, to heat (de-ice) turbine blades, to initiate blade rotation, to run operating lights, etc.?

*Note:* In NYSERDA's effort to ensure full transparency of this business, all NYS wind developers should be required to publicly and clearly report this amount of usage, on a monthly basis.

**Question #D5:** If a wind project is built but there isn't enough availability, then what happens to its electricity and what are the costs to the citizens of NYS?

*Note:* We have heard that there are problems with grid capacity where wind projects have connected — and that periodically their power is refused or sold at a loss. For example, NYISO has stated that it cannot take into the grid any of the electricity currently being generated at the Cohocton Wind Farm, and won't be able to do so until December 2009 or later.

*[Notes for Question #D5 continued on next page.]*

This raises several questions: **a)** specifically where and how is all that Cohocton Wind Farm high voltage electricity being grounded? **b)** Thus far, how many dollars has NYSERDA paid in exchange for Renewable Energy Certificates for electricity generated at the Cohocton Wind Farm? **c)** How much RPS money has NYSERDA paid out to the owner of the Cohocton Wind Farm thus far?

**Question #D6:** Why is it that on NYSERDA's "Power Naturally" page (<http://www.powernaturally.org>) **Geothermal isn't even mentioned?**

*Note:* Compared to wind energy, industrial Geothermal actually makes sense. (E.g. it's renewable, reliable, predictable, dispatchable, economical, produces no CO<sub>2</sub>, environmentally friendly.) Per MIT's comprehensive analysis (<http://tinyurl.com/q8a9ql>), Geothermal is available essentially **anywhere**. Considering this, one would expect a full *Geothermal Toolkit* page — but nothing! How is this oversight of a major GOOD renewable source consistent with NYSERDA's claim to support "innovative technologies"?

**Question #D7:** If NYSERDA is truly trying to reduce greenhouse gas emissions — while providing low cost reliable electricity — where is NYSERDA's strong public support for improving **electrical delivered efficiency**?

*Note:* Several studies have been done that show that delivered efficiency is only about 30% — and has changed very little over the last 50 years. (E.g. Tom Casten <http://tinyurl.com/389k3o>.) This efficiency can be improved by policy changes and support for such solutions as distributed power sources (e.g. mini-nuclear). Where is NYSERDA's aggressive support of "innovative technologies" designed to meaningfully address this major issue?

**Question #D8:** Is the relationship of wind penetration to whether or not there is a burden on the grid a threshold phenomenon or a power factor relationship?

*Note:* In other words is the second, say 5% of wind on a grid equal to, less than, or greater than the first 5% in terms of impact? Has NYSERDA done any analysis of the diminishing (beneficial) returns of increasing levels of wind? [E.ON Netz (which operates the largest collection of wind turbines in the world) in their 2005 Wind Report says: "Wind energy cannot replace conventional power stations to any significant extent... The more wind power capacity [on] the grid, the lower the percentage of traditional generation it can replace."]

**Question #D9:** Does NYSERDA have any independent studies that assess at what point the diversity of the grid begins to diminish its reliability?

*Note:* An argument that politicians make for adding wind power is to increase supply "diversity." Since NYS already has hydro (large and small), gas (several types and sizes), nuclear, coal, oil, and biomass, how many more are needed before diversification is satisfied?

## E. SOME FINANCIAL QUESTIONS

**Question #E1:** Why doesn't NYSERDA tie all incentives, subsidies and rate guarantees available for wind developers to actual measured reductions in CO<sub>2</sub> directly attributable to their project?

**Question #E2:** At what point will wind power developments stop getting such generous incentives, subsidies and guarantees?

*Note:* Even after several decades of technical development, wind energy remains economically unviable. The federal government recently calculated that wind energy gets over ten times as much in the way of subsidies per MWH generated, compared to conventional sources.

**Question #E3:** Exactly how are "Credits" calculated for wind energy projects?

*Note:* These come into play for Cap & Trade type schemes. The question is how is it determined the amount a particular NYS wind development "earns" in credits that they can then resell. Please identify all assumptions made. Since it is likely that wind developers will sell these credits on the Chicago market to coal fired plants, they are making it cheaper for the polluters to buy credits instead of reducing pollution. Since the net avoided burning of coal due to wind power is very small, this program likely results in **increased** pollution due to wind power. How is this consistent with NYSERDA's objectives?

**Question #E4:** As a corollary to one of the environmental questions, what is the full cost per ton of CO<sub>2</sub> saved by wind energy in NYS? [Show all assumptions.]

*Note:* The fact that many of wind's liabilities can be overcome if enough money is thrown at it, is irrelevant. We could generate electricity out of beer if we had a few hundred billion dollars to waste on it. The real questions are:

- 1) does wind power make economic sense compared to other options, and
- 2) what are the environmental (including health) costs in the process?

**Question #E5:** What are the actual thermal/financial costs in NYS to integrate wind's volatile variability?

*Note:* Since wind (*supply*) "flux" is in addition to existing *demand* fluctuations, clearly there are extra costs incurred here to keep the system in balance.

**Question #E6:** What are the costs to NYS ratepayers when estimated future performance of wind energy is not met?

*Note:* NYSERDA's reliance on a 20%± Capacity Credit for wind (which assumes accurate forecasting techniques) would have significant implications for increasing the use of "Spot Market Generation" if that 20% figure proved too optimistic. This cost would be passed on to NYS ratepayers.

**Question #E7:** We understand that NYSERDA listed 16 mph as the average minimum wind speed for a project to be viable — yet it funds projects in the state where winds are less than that. WHY?

**Question #E8:** Since wind developers are using considerable public money to fund their projects, why are they allowed to withhold performance and economic information as "proprietary"? NYSERDA should make it a contractual requirement that their use of public funds necessitates full public disclosure.

**Question #E9:** If it is NYSERDA's position that the real estate values of properties near wind development projects are not adversely affected, then why doesn't NYSERDA offer a Property Value Protection Plan?

*Note:* Common sense (and several studies by independent parties) say that locating industrial turbines near homes will have a negative impact on these property values — which for many represent the fruits of a lifetime of work. Since NYSERDA apparently disputes this, they should offer a guarantee.

**Question #E10:** Regarding decommissioning, it can be a problem for a security bond to stay in place after the development is sold — which can happen multiple times during the life of wind projects. The final owner will likely be a shell corporation that will simply fold. This leaves the leaseholder and the town exposed to the decommissioning expenses. How is NYSERDA protecting the leaseholder and citizens in those communities in this regard?

**Question #E11:** On a related matter, what is NYSERDA's official position about using Eminent Domain to take property from owners who do not want to participate in a wind power project?

**Question #E12:** How many miles of wind energy necessitated transmission lines are there in NYS, what is their cost, and who is paying for them?

**Question #E13:** Has any NYS generated wind electricity been sold to other states?

*Note:* NYSERDA pays out RPS money for wind power projects in NY State with the stated purpose that NY generated wind electricity can stay in NY for the benefit of NYS citizens. If sales are made to other states, please give a full accounting of exactly how much occurred (e.g. in 2008), from where, and the full financial cost of this to NYS taxpayers and ratepayers.

**Question #E14:** Does NYSERDA allow wind farms in NY State to issue Renewable Energy Certificates (RECs) based on wind electricity multi-year contracts they have with a corporate customer for wind electricity that has not yet been generated nor delivered to that corporate customer?

*Note:* In other words, does NYSERDA ever payout money for Renewable Energy Certificates for any wind electricity estimated to be produced but which has not yet been generated nor delivered? If yes, specifically what unit of electrical measurement is used being that there is not any MWH amount for contracted electricity that has not yet been produced nor delivered?

**Question #E15:** Please breakdown exactly where every REC dollar bought in NYS goes (e.g. what % to wind developers, NYSERDA, marketing, brokerage, etc.)

**Question #E16:** Is it true that Iberdrola-owned power marketer Community Energy Inc. (CEI) is, through utility companies and ESCO's, having CEI marketed windpower products sold to residential customers in NYS under several different brand names, many of which omit CEI's name and its "New Wind Energy" logo?

*Note:* The wind power product line offered to residential customers in NYS appears to be skewed heavily to one company's product, giving the public a false belief that they are being offered competitive brands of wind electricity.

**Question #E17:** Is NYSERDA paying any RPS money to out-of-state wind projects? If yes, please provide full details.

*Note:* Rumors are that NYS RPS funds are assisting some PA and NJ projects. If any RPS money is used out-of-state, please accurately identify all such projects, the full amounts expended and planned to be spent, and the full financial cost of these activities to NYS taxpayers and ratepayers.

**Question #E18:** Does NYSERDA payout RPS funds to wind farms based on wind-industry reported capacities or are payments based only on actual electricity produced and sold to the NYISO grid in MWHs?

**Question #E19:** Are there any NYS wholesale markets that have energy/capacity market contracts that are indexed to (or otherwise tied to) fossil fuel prices?

*Note:* This is important to know as one of the justifications for using "renewables" is to provide independence from fossil fuels, and their cost.

**Question #E20:** If a property owner owns the resource rights to their land, do they not also own the rights to the air above their property in the same way they own the mineral rights underneath it?

*Note:* If so, then it follows that since turbines extract energy from the air stream and thus diminish the value of that resource to neighbors, NYSERDA should require that wind developers make whole the land owners adjacent to their development.

**Question #E21:** Why should farmers renting some of their land to a for-profit business be entitled to an agricultural property tax exemption for that portion of their property?

*Note:* Agricultural tax exemptions in NY were designed to subsidize farmers to use their land to grow food more inexpensively for the public. In some cases farmers are making sufficient profit from leasing land to wind developers that they have ceased all agricultural operations. The effect of this is that wind developments result in less agriculture products in NYS, which in turn means higher costs to consumers. Why should NYS taxpayers subsidize this?

## F. SOME HEALTH & ENVIRONMENTAL QUESTIONS

**Question #F1:** How does NYSERDA determine the net environmental contribution of an alternative energy source that has known (as well as several potential) negative environmental effects?

*Note:* For example, wind facilities significantly alter the natural and cultural heritage of rural areas that are otherwise protected from industrial development. Does NYSERDA actively represent the protection of such assets — and if not, then why not and who does?

**Question #F2:** What amount of money & effort is NYSERDA expending towards researching possible health effects of industrial wind turbines on its citizens?

*Note:* Why should it be left to private medical professionals (e.g. Dr. Nina Pierpont) to do this research at their own expense? NYSERDA is being paid to represent the citizens' interests regarding energy matters, and researching health effects of policy decisions should be a top priority.

**Question #F3:** Please identify the independent research studies which prove that large industrial wind turbines do not adversely effect the health of residents whose home is within a 2500 foot radius of the turbines.

*Note:* As it is now, the citizens in hundreds of NYS towns have to investigate whether or not an industrial development is bad for them. In the spirit of SEQRA and the idea that anyone proposing to make changes that might negatively impact citizens, their homes, and wildlife, the shoe should be on a developer's foot to prove they are not doing harm. NYSERDA should insist on independent & comprehensive evidence before any subsidies are granted.

**Question #F4:** How much CO<sub>2</sub> is saved per MWH of operation of wind projects in NYS? Please identify all assumptions made and use only actual data.

*Note:* Enlightened public policy — as well as responsible public stewardship — would require transparent, independently verifiable measurement of this savings, quantified over time, with the ongoing results placed in the context of the total carbon emissions produced throughout the NYISO. Rate payers, tax payers and environmentally concerned citizens deserve a scientific accounting showing precisely how RPS and their renewables surcharge are reducing emissions in NYS.

For example, does the NYISO do hourly (or more frequent) chronological load dispatch modeling to measure CO<sub>2</sub> (and/or other emissions) offsets — or some other realtime and veridically falsifiable method, since the reduction of carbon emissions is now mandated? If not, why not?

*[Notes for Question #F4 continued on next page.]*

This calculation should include how much carbon dioxide is emitted during the manufacture, shipping, construction, operation, maintenance, and decommissioning of wind energy facilities.

Since NYS is burdened by a RPS, this calculation should take into account that some “acceptable” renewable MUST be utilized, so wind energy savings would be how much better they are versus other renewable alternatives.

**Question #F5:** What is the average amount of concrete in the base of the largest size industrial wind turbines used in NYS?

*Note:* Concrete (cement) is listed by the EPA as the third highest source of CO2 emissions in the US. If NYSERDA is concerned about lowering CO2, they should know this — and factor it into any reported CO2 savings.

**Question #F6:** Does NYSERDA put the health and safety of NYS citizens before the financial interests of developers when recommending turbine setbacks?

*Note:* Other communities have determined that setbacks of .5+ mile are recommended for the protection of human health. U of Illinois has a comprehensive Wind Power program (<<<http://tinyurl.com/qhbajy>>> generally supportive of wind energy. Section “Safety of Wind Systems” lists international setbacks from homes, e.g. “US NRC = .5 mi, Germany = 1 mi, France = 1 mi”, etc. *When it comes to protecting NYS citizens shouldn't NYSERDA be conservative?*

**Question #F7:** What research has justified the choice of 50 dBA as an appropriate noise criteria, particularly for rural areas of the state?

*Note:* Why doesn't NYSERDA conform to the NYS DEC Noise Policy guidelines that are used for all types of projects throughout NY's diverse settings? A standard of 5 dBA above ambient (measured properly) would be much more sensitive to human concerns. Such a statewide standard is critical as wind developers typically do not hire unbiased engineers to produce their DEIS SEQR studies. These hirees often do not realistically measure the existing noise ambients in rural NYS, especially at night.

**Question #F8:** What studies has NYSERDA done (or researched) that identify the low frequency sounds (infra sound) from wind turbines, and their effects on humans and animals?

*Note:* For an excellent scientific and objective discussion of this and other acoustical issues, see (<<<http://tinyurl.com/krbrzd>>>) “*The ‘How To’ Guide To Criteria For Siting Wind Turbines To Prevent Health Risks From Sound*”.

**This document should be on the Toolkit page!**

**Question #F9:** What is NYSERDA doing about NYS not protecting its residents by regulating the fire safety of turbines?

*Note:* NYS fire codes apparently do not cover wind turbines (e.g. regarding minimizing oil fires, lightning strikes, etc.). Is NYSERDA working to fix that? And wind turbines introduce new issues to rural areas, e.g. vertical rescues, helicopter landing effects, compliance in ICS (Incident Command System), do they have multi agency response plans, etc. *Who is paying for all this?*

**Question #F10:** Why has NYSERDA, with all of its resources and experts, lagged behind in identifying and addressing the full spectrum of environmental concerns that exist with wind turbines?

*Note:* For example, the small town of Bethany NY, with citizen *volunteers*, did a fine job of identifying and discussing a wide range of some 21 concerns (see PDF: <<<http://tinyurl.com/63pdzj>>>) including: earthquakes, groundwater impact, aviation hazards, security, stray voltage, lightning, etc. Few, if any of these are mentioned any more than in passing at NYSERDA's website. **None** are mentioned in NYSERDA's recommended "Model Ordinance".

**Question #F11:** If NYSERDA is truly trying to reduce global warming emissions — while providing low cost, reliable electricity — where is NYSERDA's strong public support of nuclear power: a *scientifically sound solution* for electrical power that has **zero generating CO2 emissions**?

**Question #F12:** What are NYSERDA's efforts in regard to educating the politicians that nuclear should be considered a **renewable** in the RPS?

*Note:* Looking at the whole picture, there is a strong case to be made that nuclear power is more renewable than wind energy is. For example, reference these articles <<<http://masterresource.org/?p=1643#more-1643>>> and <<<http://tinyurl.com/qe7oyk>>>.

**Question #F13:** What are NYSERDA's efforts regarding the promotion of advanced nuclear, like mini-nuclear?

*Note:* Reference these sample articles <<<http://tinyurl.com/5fqwh4>>>, <<<http://www.energytribune.com/articles.cfm?aid=948>>>, and <<<http://world-nuclear.org/info/inf33.html>>>.

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## SUMMARY —

Since a lot of ground has been covered in this document, we need to recap what was stated in the beginning. The quantity and scope of the questions listed here should send two unequivocal messages:

- 1** - wind power is not a NIMBY issue to most NYS citizens, and
- 2** - how seriously deficient NYSERDA's site and support materials are concerning wind energy information.

We are for **Sound Scientific Solutions** (i.e. not political schemes) to the energy economic and environmental issues facing our state today.

We support all options (including renewables) that have been **proven** to be scientifically sound solutions.

We favor the state and NYSERDA taking appropriate measures that support scientifically sound solutions.

We insist that the health and welfare of the citizens in NYS take precedence over the economic benefits of any business, or the political agenda (no matter how well-intentioned) of any organization.

We expect that NYSERDA employ **scientific methodology** in assessing the alternative electrical energy options presented by businesses, investors, and other opportunists.

We expect that the main areas of this assessment be the **technical, economic** and **environmental** soundness of the proposed source.

We expect that the assessment and the results be fully transparent.

All this amounts to the fact that we expect our elected and appointed representatives to be acting in the best interests of all the citizens of NYS, and in a professional, objective, comprehensive, and open-minded manner.

Since very little of this has yet to happen in the area of wind energy, we request that **NYSERDA take a public position that a one year moratorium on wind developments in NYS is necessary.**

[Interestingly this same request was made (but ignored) three years ago (<<<http://tinyurl.com/2wdhd6>>>). Consider how much further along we would be on the path to genuine energy progress had the state heeded that proposal.]

A moratorium will give NYSERDA the time to do a **comprehensive, objective,** and **independent** assessment of the viability of wind energy as a meaningful solution to the significant energy issues facing the citizens of New York State.



## **Some Environmentally and Economically Concerned Citizens Groups in NYS –**

Advocates for Arkwright  
Advocates for Cherry Valley  
Advocates For Prattsburgh  
Advocates For Stark  
Alliance for Bovina  
Alliance for Meredith  
Bethany Preservation Group  
Citizen Power Alliance  
Citizens for a Healthy Rural Neighborhood (Perry)  
Citizens For Responsible Energy Development (Castile)  
Clear Skies Over Orangeville  
Cohocton Wind Watch  
Concerned Citizens of Allegheny  
Concerned Citizens of Cattaraugus County  
Concerned Residents of Hammond  
Delaware County Wind Alliance  
Environmentally Concerned Citizens Organization of Jefferson County  
Finger Lakes Preservation Association  
Friends of Italy  
Hamlin Preservation Group  
Helderberg Community Watch  
Naples Valley Bristol Hills Association  
North Country Advocates (Burke)  
Sardinia Preservation Group  
Save Jones Beach AD HOC Committee  
Save Western NY  
Schoharie Valley Watch  
South Bristol Views  
Springwater Preservation Committee  
Stafford Preservation Group  
Western Catskill Preservation Alliance  
Wind Energy Ethics Group of Cape Vincent

6/8/09

[To: Mark Watson — [Emep@nyserda.org](mailto:Emep@nyserda.org) and [mwl@nyserda.org](mailto:mwl@nyserda.org)]

Dear Mark:

As you know, for some time now a wide coalition of environmentally concerned NYS citizens has been asking NYSERDA for a comprehensive, open and objective discussion of the pros and cons of industrial wind energy in NYS.

NYSERDA's proposed response is the "Environmental Stakeholder Roundtable on Wind Power" scheduled for June 16, 2009. Thank you for your efforts at coordinating this.

Your initial correspondence with us indicated that there would be a panel of qualified persons to answer any and all questions. Per our original communications, we requested that any such group be a **balanced** selection of objective individuals who are energy competent. **Both sides of this matter must be fairly represented for this meeting to have true value.**

Rather than this discussion be spontaneous, you asked that we submit all of our questions in writing, at least one week in advance of this meeting. Although our belief is that if these panel people are truly knowledgeable on this topic, they should have no problem answering questions from the floor, we have fully complied with your condition.

**It is important that NYSERDA respond in kind, and that within one week after the meeting you post this entire document, with the full answers to the questions we have posed, on your Wind Power Toolkit webpage.**

To come up with questions, we polled over 1000 NYS citizens who have indicated an interest in energy and industrial wind power. The attached document represents a representative cross-section of the concerns expressed.

The purposes of collecting these into one document include: **1)** avoiding duplication, **2)** organizing the material into logical topics, **3)** more consistent technical phrasing, **4)** focusing on the questions of more general importance and interest, etc.

The people whose names appear at the end are a sample of these citizens. If you like, feel free to assign each of the sixty or so questions to one of these people.

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We believe in putting our cards on the table — and expect to the same full disclosure from each of your panelists, in advance.

Despite doing voluminous research on industrial wind power, we have been unable to find **independent scientific proof** that this is a worthwhile addition to the electrical grid in NYS. The KEMA and Summit Blue reports verify this.

Our view is that this phantom solution, though backed by some well-intentioned people, is primarily being promoted by those with a political (not scientific) agenda.

*Here is a simple analogy as to how we look at this situation:*

Our society has much the same dependence upon power from fossil fuel combustion as a three-pack-a-day Marlboro™ smoker has with nicotine. Although each gets a “lift” from the experience, the evidence for both demonstrates dire health and quality of life risks resulting from this behavior.

Attempting to utilize industrial windplants to reduce dependence on fossil fuels is similar to the situation where the smoker seeks to mitigate the dangers of smoking by switching to three daily packs of Marlboro Lites™.

If the wind industry were fully deployed in New York (with 20,000 or so turbines), an **increasing** number of fossil fuel facilities will still be puffing away!

This failure to appreciably reduce CO2 emissions will be in addition to these industrial wind turbines killing wildlife, fragmenting native habitats, degrading natural sanctuaries, depreciating historically significant locations, desecrating aesthetically pleasing views, devaluing nearby property, and creating major irritants (including health effects) for proximate neighbors.

After enduring all this, NYS citizens and businesses will then be awarded soaring utility costs, even higher taxation, and minuscule reductions in CO2.

**This is not enlightened public policy!**

Intelligent solutions to the problems of global warming and air quality DO exist, and can be ferreted out by using **scientific methodology**.

To politicians, bureaucrats and activists who are afflicted with the quick fix, silver bullet mentality, using scientific methodology is very heavy lifting. However, since we are likely the most wasteful culture in the history of the planet, palliative fixes just won't cut it anymore.

We contend that the wind industry is a **placebo solution** to these problems, distracting from the necessary level of discourse — and political action — for achieving genuinely functional responses.

We support provably **meaningful** solutions that are genuinely **cost effective**. We hope NYSERDA agrees, and will take action consistent with this belief.

Sincerely,

john droz, jr.  
physicist and environmental activist  
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