May 25, 2006

Thank you for the opportunity to comment on the Draft EIS for the Canandaigua Power Partners project.

I am Rick Bolton, a former resident of North Cohocton. I went to Wayland CS K-12 and have very fond memories of growing up here and developed a strong liking for the magnificent hills in the area. I have relatives in the area and come back through frequently, always enjoying the scenery, as I always have.

I find it ironic that many people in the area were formerly employed by Foster Wheeler in Dansville. As you know Foster Wheeler built "steam generators" - "boilers". Steam is produced by combustion of coal ground to dust, or natural gas, or fuel oil. Foster Wheeler made them all and made them well. These very large plants are all over the U.S. and provide a lot of electrical power today. Now Foster Wheeler is gone-welders, pipe benders, machinists, drill operators, engineering - all the well paying jobs have left. Why? For many years power plants were not built for many years and the Dansville plant could not survive.

Now, knocking at the door are numerous companies wanting to "harvest the wind" from the plateau and ridges. There is no precedence for even a single industrial wind turbine in the area, never mind hundreds. It's a very serious proposition with very serious potential consequence and will literally affect generations of residents to come.

The Draft Environmental Impact Statement submitted by Canandaigua Power Partners is supposedly ready for mandatory public comment, but it is not.

In reviewing the Draft EIS it is found that the project proposal is not procedurally correct, the information presented is inaccurate and does not adequately address the host of serious environmental issues in any analytic or verifiable method. I would also like to remind the Planning Board of SEQR Part 617.13 Fees and Costs.

> (a) When an action subject to this Part involves an applicant, the lead agency may charge a fee to the applicant in order to recover the actual costs of either preparing or reviewing the draft and/or final EIS.

There may be some misunderstanding over how Dan Ruzow's firm is paid and their involvement with this review and I just wanted to make this clear.

First there is the problem of "Segmentation". According to the SEQR rules (617.2 Definitions (ag)) "Segmentation means the division of the environmental review of an action such that various activities or stages are addressed under this Part as though they were independent, unrelated activities, needing individual determinations of significance." Then it goes on to say that (617.3 General Rules (g)(1) "Considering only a part or segment of an action is contrary to the intent of SEQR."

Canandaigua Power Partners is a subsidiary of UPC Wind, a co-sponsor of the Prattsburgh Wind Park project in nearby Prattsburgh. A glance at any area map shows that together these projects are related and should be evaluated together. Also, UPC Wind wants to do a second project, Dutch Hill and that project needs full consideration now. Together UPC Wind is sponsoring some 90 turbines in the geographic vicinity more than twice those being considered here.

UPC Wind has further segmented its review by virtually no consideration or discussion of the associated extensive roadwork and associated construction activity, noise and potential significant road damage. These issues have been put off to the future submission of highway plans and is "segmentation".

- There are other numerous and simultaneous projects in the area that have the potential in their combined effect to radically alter the "environment". No large scale wind projects have been built so the precedence is nonexistent. "Cumulative impacts" are likewise to be evaluated, whether by a single sponsor or in conjunction with other related projects. Hence all the UPC Wind projects should be evaluated with the Ecogoen and perhaps other Western NY projects because of the widespread impact.

Second there are numerous factual corrections, which I have references for and will cite in a subsequent detailed letter to this Board.

"The Project would meet the electrical needs of approximately 28,700 homes."

- This is FALSE: Electrical energy is delivered to the NY power grid and used for industry, shopping malls, street lighting and other uses besides home power. Average usage:
  - -NY Residential customer = 700 kWhr/month
  - -NY Commercial customer = 483,000 kWhr/month
  - -NY Industrial customer = 17,532,000 kWhr/month

The DEIS "Purpose Need and Benefit" says the farm "significant source of renewable energy." This is absurd. NY has large hydro plants, extremely important to NYS supplying 26 million MWHr/yr (2003), so the 0.2 MWhr/yr average of this farm is extremely insignificant.

These misstatements are throughout.

- There is no "storage" of power, it's used when generated or wasted. The large "base load" plants - large coal, nuclear & hydro are on "all the time", providing a 30% power "base", since the NYS consumption never drops below 30% of the installed capacity.

- Power flows from the west and north to the east: NYC, Long Island and New England, to feed the massive east coast infrastructure.

- The "installed capacity" of NY is 38,000 MWhr (MegaWatts = million watts), divided among some 600 major generating stations, large and small across NY. Not all is useable due to repairs and maintenance.
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• Gas/Oil	35%	
• Gas only	15%	
• Hydro	15%	350 plants (1/2 of total)
• Nuclear	14%	6 plants
• Coal	10%	22 coal-only plants, all but 1 are at Buffalo & western tier.
• Oil/Kero only	10%	107 plants, 90% are downstate Hudson, NYC,LI, few newer than 35 yr old
• Other	1%	(biomass, refuse, wind)

- The top 9 plants – Niagara & Massena hydro, 6 nuclear and 1 coal plant produce over ½ the entire NYS output of 143 Trillion watts in 2003.

- NY Average "load" on the "installed capacity" is 19,000 MW, giving a 50% "capacity factor". There is plenty of excess capacity except in the hot summer months when extra power is needed for air conditioning NYC.

Delivery

- All the electric grid east of the Rockies, outside Texas, are interconnected. Turn a light on and a generator "somewhere" has to work a little harder to supply the wattage.

- No one can buy "green power", all the electric power is shared. Its like taking a scoop of water from Canandaigua Lake and saying it came from the Naples Creek inlet.

- Transmission of power to downstate is hampered in the summer due to not enough transmission line capacity, hence the controversial new 200 mile line from Oneida to Orange counties.

Economics

- Energy is "Traded" Like "Futures" (pork bellies) about 5% on the spot market to the highest bidder to fill the hourly need.

- Utilities don't like to run the newer natural gas plants, with high fuel prices.
- NYC area pays high prices for locally produced electricity and prefer cheaper imports from upstate.
- Deregulation induced more efficient competition:
  - By improving the efficiency of keeping the several nuclear plants in NYS operating (was 60%, now 90%) the energy produced is equal to about 17,000 wind turbines.

<u>WNY and Wind plants</u>

- Wind is an intermittent source, so when wind blows and power is delivered a fast-acting turbine or piston generator somewhere else idles back. No coal is saved, no air is cleaned of NOx or SO2 pollution, and little or no oil is not imported.
- Bigger is better. Today's 400' high units with a 20 year lifespan may be replaced by 700' units.
- Wind maps that show WNY is useful for wind turbine locations are hypothetical computer models, not verified. All the installed wind farms under produce their 30% capacity factor: Fenner 26%; Madison 23%; Wethersfield 27%

  Even G.E., who makes turbines, agrees. From The Effects of Integrating Wind Power on the Power Transmission System" Planning Reliability and Operations, Report on Phase 2: System Performance Evaluation (prepared by General Electric Energy Consulting)

  "2.4.1 Effective Capacity of Wind Generators
  The effective capacity of wind generation in the study scenario was quantified using rigorous loss-of-load probability (LOLP) calculations with the Multi-Area Reliability Simulation (MARS)program. The results show that **the effective capacities, UCAP, of the inland wind sites in New York are about 10% of their rated capacities**, **even though their energy capacity factors are on the order of 30%. This is due to both the seasonal and daily patterns of the wind generation being largely "out-of-phase" with NYISO load patterns. The offshore wind generation site near Long Island exhibits both annual and peak period effective capacities on the order of 40% - nearly equal to their energy capacity factors. The higher effective capacity is due to the daily wind patterns peaking several hours earlier in the day than the rest of the inland wind sites and therefore being much more in line with the load demand."**
  (My emphasis)

  Analysis of the attached map, which I've annotated shows that the Downstate area, Yonkers, Westchester and south to NYC and Long Island are to consume a peak 19,852 Kwhr of the 33,000 state total, or 60%, yet produce only 3% by wind, far less than the upstate average. Only offshore Long Island wind sites are allowed, no wind turbines are to be placed in NYC or the northern NYC suburbs.

Third, the relevant information has not been thoroughly analyzed, and there are severe understatements of impacts. Perhaps the largest is the widespread permanent visual impact. In this DEIS the sponsors check the turbine's visibility in comparison to some helium filled balloons, whether they could be seen or not. I submit that a helium filled balloon is not a wind turbine.

- Noise. The turbines reside on ridgelines of elevated hills, unlike Fenner or Tug Hill. Sound carries far from elevations and reverberates off hillsides. This is well known and indicated in the DEC's "Sound and Mitigation" policy and was not fully discussed in the DEIS.

- Shadow flicker. Many turbines are located on the crest of north to south hills, for example Pine Hill adjacent to Rt. 471 between North Cohocton and Cohocton. The sun rises in the east and will strike the turbines first at sunrise in the morning and sunset at night. Large blades atop tall towers cast long shadows and will easily cast shadows all along Rt. 471, on the homes and farms. What is the effect? Thorough analysis is required and can be obtained through new virtual reality tools.

- Construction: necessary road rework for 1,000 dump truck trips, 1,200 cement truck trips, 230 long tractor trailers trips and supporting equipment plus destruction of woods taking many years to re-grow have not been thoroughly analyzed. The effects of construction can be extremely significant and must be

thoroughly discussed now during a comprehensive review of environmental impacts. The DEIS merely tries to put off these concerns because they've not done their work yet.

From the DEIS: "Prior to construction, a transportation routing plan and final roadway improvement plan will be developed and provided to state, county, and local Highway Department officials. These plans will identify proposed travel routes, existing highway limitations, planned work schedules, required road and intersection widening, utility re-locations, and bridge reinforcement." Also, "The required improvements will be defined when the final transportation routing plan is developed. An engineering and improvement plan will be developed in coordination with state, county, and local highway departments, and undertaken by the Project developer/contractor (at no expense to these departments) prior to the arrival of oversize/overweight vehicles onsite."

This is not proper environmental review. These issues may have serious environmental consequences and must be discussed thoroughly now, not put off to some indefinite future plan.

"Construction- related impacts to vegetation include cutting/clearing, removal of stumps and root systems, and increased exposure/disturbance of soil. Along with direct loss of (and damaged) vegetation, these impacts can result in a loss of wildlife food and cover, increased soil erosion and sedimentation, and a disruption of normal nutrient cycling. Impacts to vegetation will result from site preparation, earth-moving, and excavation/backfilling activities associated with construction/installation of staging areas, access roads, foundations, and buried electrical interconnect. Based on the area of impact assumptions described in Section 2.5 (Project Construction), these activities will result in disturbance to approximately 285 acres of agricultural land, 10 acres of successional old field, 16 acres of successional shrubland, and 67 acres of forest." This is severe environmental alteration affecting much of the Town, what are the mitigation tradeoffs?

"3.10.1.5 Lightning Strikes. Due to their height and metal/carbon components, wind turbines are susceptible to lightning strikes. Statistics on lightning strikes to wind turbines are not readily available, but it is reported that lightning causes four to eight faults per 100 turbine-years in northern Europe, and up to 14 faults in southern Germany (Korsgaard and Mortensen, 2006). Most lightning strikes hit the rotor, and their effect is highly variable, ranging from minor surface damage to complete blade failure. All modern wind turbines include lighting protection systems which generally prevent catastrophic blade failure."

Analysis of this information shows for 14 strikes/100 turbine years that this predicts 6 strikes/year for this wind farm. Blades are composite carbon fiber and are conductive. More comprehensive study is needed.

Fourth, Mitigations

Existing and Approved Projects

From the DEIS: "CPP is not aware of any other existing or approved projects within the Town or surrounding area that do, or if constructed, would, have environmental effects that would interact with those of the Project." CPP knows full well of its other projects, related projects and the cumulative effect they may have. Further analysis is mandated here.

Fifth, Uncertainties

Does the analysis adequately consider a range of deviations from the predicted outcome, the "What if" risk analysis for the Town.

- Mistakes have already been made. Newer electric plants were built with plentiful and cheaper natural gas for power. What happened? Is is magic that the prices would go up when power plants started using huge quantities? None of the 10 NYC natural gas plants operate to even 25% capacity now due to cheaper upstate fuel imports.

- With 350 or more wind turbines spread out throughout WNY what happens to the tourism industry and land/home values? When the novelty wears off and if tourists decide the wind farms are indeed a blight to be avoided, then what? Some residents come because the love the scenery, will new residents move in deliberately to be near wind turbines?

- The de-regulated energy industry creates and disposes of corporations very, very quickly (Enron business model again). What happens if the WNY wind turbines are abandoned? Remember the Rochester refuse recycling debacle?

- There is no need at present for more capacity. Hypothetical projections of economic growth downstate are creating the illusion of need. Many conditions can change – slowed economic growth, new sources, changes in political leadership and emphasis. There are nearly 100 other projects presently in the NYISO queue for connection approval.

- NYS has "mandated" 20% renewable energy by 2010. Already 18% is renewable hydro power, so only a very small increase is needed. Other renewables are competing as well, such as ethanol plants using corn.

Who is this sponsor? UPC Wind is a foreign corporation involved in many wind farm projects around the world. It likely will sell the project as soon as practical after or during construction. How do we know this? A check of the corporate officers, the 7 executives in charge reveal:

Chairman, Brian Caffyn; President & CEO, Paul Gaynor; VP, Environmental Affairs, Dave Cowan; General Counsel & Managing Director; Peter Gish; VP, Finance & CFO, Tim Rosenzweig; VP, Engineering & Construction, Scott Rowland; VP, Risk Management, Steve Vavrik.

> "Summary: Mr. Vavrik brings a range of skills and experience to UPC. While at Enron in London, Mr. Vavrik traded natural gas forward contracts and negotiated structured power deals."

Much further analysis of the entire DEIS is called for and a second, Amended Draft submitted for another review prior to the Final EIS submission.

I would like to suggest using a "Neighbor Impact Assessment" consultancy study to provide each affected homeowner in the area with an individual rundown of how the wind turbines will affect them. I would further suggest further hearing and informational sessions with the Town and interested residents to more fully discuss the pros and cons of these wind farms prior to committing the Town to such a momentous decision.

Thank you,
Rick Bolton