Pragmatic Environmentalist of New York Summary Update – April 21, 2025 - May 4, 2025

This is a summary update of posts at Pragmatic Environmentalist of New York over the last two weeks. I have been writing about the pragmatic balance of the risks and benefits of environmental initiatives in New York since 2017 with a recent emphasis on New York's Climate Leadership & Community Protection Act (Climate Act). This summary describes each of my recent posts with minimal technical jargon and includes links if you want to read the entire post. If you do not want to be on this mailing list, then let me know. A pdf copy of the following information and previous summaries are also available. The opinions expressed in these articles do not reflect the position of any of my previous employers or any other organization I have been associated with, these comments are mine alone.

Senate Energy & Telecommunications Hearing

On March 18, 2025 Senator Mattera invited Richard Ellenbogen to Albany to address the NY State Senate Energy & Telecommunications Committee regarding NY State's energy situation. I published three articles about it.

NY State Senate Energy and Telecommunications Committee Meeting

The first article described the meeting. Senator Mattera invited Richard Ellenbogen to Albany to address the NY State Senate Energy & Telecommunications Committee on March 18, 2025 regarding NY State's energy situation. Senator Kevin Parker, the committee chair, was extremely gracious and essentially gave him an unlimited amount of time to describe his thoughts on utility decarbonization using existing technologies. There is a video of the hearing available. Ellenbogen's presentation starts at 12:40.

Ellenbogen's presentation argued that there is a better way to reduce GHG emissions that "adheres to reality". He believes that repowering existing fossil-fired power plants with combined cycle gas turbines gives a significant carbon reduction. Replacing the old units also reduces co-pollutant emissions, decreases reliability risks because the old units are so old that they are more likely to fail, and because the combined cycle plants are more efficient, they would burn less fuel to produce the same amount of electricity.

The meeting was encouraging for several reasons. Just the fact that the Energy Committee agreed to the meeting suggests that there is a growing realization that it may be time to re-consider some aspects of the Climate Act. Ellenbogen criticized fundamental aspects of the Climate Act and his concerns about the results of Ignoring science. He argued that physics makes the reliance on wind and solar an impossible proposition. Those are heretical views in Albany, but I was heartened that the Committee heard him out for over an hour. Chairman Parker admitted that we are not on track for a variety of reasons. More importantly he also said that at the end of the day NY is not going to solve the climate crisis. He noted that we can still provide leadership even if we cannot solve the problem. At one point during the meeting Republican Senator Mattera and Democratic Senator Parker agreed on the need to be more flexible which Richard Ellenbogen noted was the equivalent of seeing a unicorn. All this suggests that there might be bipartisan support for a course correction of the Climate Act.

NY State Senate Energy and Telecommunications Committee Meeting Emission Status

During the meeting Parker requested emission numbers for Ellenbogen's pragmatic proposal. Knowing that is a niche skill of mine he asked me to prepare an analysis. Following the meeting I sent Ellenbogen material to send on to Senator Parker. The evaluation of observed electric generating unit carbon dioxide (CO2) emissions for selected New York power plants that represent the current state-of-the-art compared with other existing units included the information requested. My submittal included a detailed description of the analysis as well as the spreadsheet that generated the data in each table in the report.

I found that a future electric system that uses nuclear power as the backbone and natural gas-fired combined cycle combustion turbines for backup support resolves the reliability risks and overall costs of a wind, solar, and energy storage system. It could reduce emissions from about 30 million tons per year today to less than 2 million tons per year in the future. I also noted New York GHG emissions are less than one half of one percent of global emissions and global emissions have been increasing on average by more than one half of one percent per year since 1990. Finally, I pointed out that New York's impact on global warming is unmeasurable. These three points lead to the inescapable pragmatic conclusion that nuclear power as the backbone combined with combined cycle combustion turbines is good enough for environmental risks even if there are some GHG emissions and co-pollutant emissions are not zero.

NY State Senate Energy and Telecommunications Committee Air Quality Considerations

The final article put the emissions of current New York electric generating units in context. Organizations like the New York City Democratic Socialists of America believe that the peaking power plants in New York City "spew toxic fossil fuels into our air, burning the planet, and sending asthma rates sky-high in communities". I have been an air quality meteorologist for 45+ years. A foundational presumption in my career is that if the ambient air quality effect of any polluting source is lower than the National Ambient Air Quality Standards then public safety and welfare is protected. There are two additional levels of air quality security. When the NYPA peaking power plants were permitted NYPA had to demonstrate that the increase in pollution due to the facilities was less than the Prevention of Significant Deterioration increment put in place to assure that new sources of pollution do not meaningfully worsen the air quality. In addition, the facilities had to install Lowest Achievable Emission Rate air pollution control equipment which is as good as it gets. My point is that the facilities that New York politicians are forcing to close may not have zero impacts, but they are close enough to no impacts, that they cannot possibly adversely affect health outcomes.

A state-of-the-art combined cycle natural gas-fired turbine provides great grid support, and it has significantly lower CO2 emissions than existing fossil-fired units in New York. To correctly consider the value of this technology for New York's electric system it is necessary to use appropriate comparison metrics, have a comprehensive understanding of air quality health impacts, and consider air quality trends. I included an analogy that puts this in perspective. Think of power plant controls like cleaning the kitchen floor. Power plants have different levels of control equipment just like we all have different options to clean the floor. Keeping the kitchen floor clean is necessary for food safety. In my opinion, sweeping the floor daily and mopping it regularly is "good enough". Many don't think that mopping the

floor is good enough now because there are more sophisticated options like steam mops. For some once-a-week mopping is not good enough and they may want to do that daily. The point is that there is a tradeoff between time and money for cleaning the floor "good enough". In my opinion, the NYPA peaking power plants in New York City are equivalent to using a steam mop several times a day. Demands to shut down the NYPA power plants is equivalent to deciding not to use the kitchen because it is not clean enough even when using a steam mop several times a day.

Reasons to Pause Implementation

I added a couple of more articles to my Reasons to Pause the Climate Act page. Evidence continues to mount that issues associated with every component of the Climate Act transition plan are so great that a pause to re-assess the plan is necessary. New York Public Service Law § 66-p (4). "Establishment of a renewable energy program" includes safety valve conditions for affordability and reliability that have not been acknowledged. The failure of the Hochul Administration to establish criteria for those safety valves and provide public tracking of the status must be corrected before implementation proceeds.

Wind Energy Reasons to Pause

This post referenced recent articles that described wind energy issues: Wind curtailment costs in Ontario will eventually occur in NY, the European experiences with wind subsidies suggests that the industry cannot survive without subsidies, recent analysis shows that turbine wakes decrease performance, there was a report describing wind lull impacts on United Kingdom prices, Rafe Champion suggests that a book called "How Wind Droughts Almost Destroyed Civilization" might be appropriate, David Wojick published an article explaining how eagle kill offset rules eagle are unacceptable, and France shutdown a wind farm for killing an eagle, but in the US laws to protect whales are being ignored.

Spain and Portugal Blackout – Another Reason to Pause the Climate Act

On April 29, 2025 there was a massive blackout that started in Spain. This article described the blackout and projected 2-4 billion euro cost. The important question is whether renewable energy resources played a role in starting the blackout. This is a breaking story so articles have been published since I posted my article. I recommend this Energy Bad Boys description for background.

It is too soon to determine what happened but Net Zero Watch described a potential problem:.

> Grid analysts have suggested a high likelihood that the extent of yesterday's blackout in Iberia was a result of the Spanish grid operating almost entirely on renewables at the time. The stability of power grids depends on so-called 'inertia', a resistance to rapid change that is an inherent feature of large spinning turbines, such as gas-fired power stations, but not of wind and solar farms. Too much renewables capacity on a grid can therefore mean inadequate inertia. As a result, in grids dominated by wind and solar, faults can propagate almost instantaneously across grids, leading to blackouts.

An article by Robert Bryce quotes a paper that has important ramifications to New York:

> The best explanation of grid inertia and its importance was published in 2016 by University of Queensland professor Simon Bartlett. In a paper written for the Energy Policy Institute of

> Australia, "The 'Pressure Cooker' Effect of Intermittent Renewable Generation on Power Systems," Bartlett declared that the "practical upper limit for renewables is around 40% of total electricity generated." He continued, "The scale-up of intermittent renewables not only diminishes the robustness of a particular power system but can also magnify the short and long-term risk of investing in non-renewable generation assets and the power grid itself."

This blackout could confirm that the concerns of Bartlett are real limitations to any electric system that relies on wind and solar. We simply don't know if the proposed zero-emissions system that relies so much on wind and solar will work. The Scoping Plan implementation outline proposes such a system. Before proceeding with that approach, the Hochul Administration must reconcile its projected energy system operations with the Bartlett practical upper limit. If the plan projects renewables greater than 40% of total electric plan then a major reassessment is necessary. If New York decides that the future electric system must be zero-emissions, then this limitation might force the conclusion that the only safe approach is to use nuclear power as the primary source of electric power.

New York Creatively Hides the Costs of the Climate Act

On April 23, 2025 Governor Hochul announced that State University of New York (SUNY) Oneonta will be the first school in the SUNY system to purchase Tier 1 Renewable Energy Certificates (REC) from the New York State Energy Research and Development Authority's (NYSERDA) voluntary sales program. A REC represents the attributes of one megawatt hour of electricity generated from a renewable source like solar or wind. They are used by utilities to fulfill their renewable energy obligations and jurisdictions like New York City to comply with commitments. They are also purchased voluntarily to meet internal sustainability targets, claim environmental benefits, and demonstrate climate leadership.

I do not support the State University voluntary purchase of REC from NYSERDA. If all the SUNY institutions follow suit and purchase REC there will be a dependable funding steam for more NYSERDA renewable development. On the other hand, the primary goal of SUNY is education and not the societal goal of emission reduction. When colleges squander money on support of renewable energy development the only benefit is virtue signaling. I conclude that this is simply an inter-agency transfer of funds prompted by a decision to obscure costs and postpone the inevitable political reckoning when the extraordinary transition costs can no longer be hidden. A college education is expensive enough today without foisting students and parents with hidden costs that do not provide tangible benefit to their education.