Pragmatic Environmentalist of New York Summary Update August 21, 2023 to September 3, 2023

This is the latest summary update of my recent posts at Pragmatic Environmentalist of New York. 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. If you do not want to be on this mailing, list then let me know. Previous updates and a pdf copy of the following information are also available.

Climate Act Conundrums

Since the last update I published two articles addressing the ideological positions of the environmental justice, climate justice, and equity-related shareholders that are the preferred constituency of the Hochul Administration's implementation of the Climate Act. The problem covered by the two articles is that the positions that are considered non-negotiable by the more vocal proponents are incompatible with reality.

Reliability vs. Advocacy Dogma – Climate Act Conundrum

A dogmatic concern of New York City Environmental Justice advocacy organizations is peaking powerplants which are alleged to be a primary air quality problem in disadvantaged communities. Unfortunately, those generating facilities fulfill a critical reliability service so the New York Independent System Operator (NYISO) has been warning that premature shutdown of the facilities will cause reliability problems.

The peaking power plant issue is misunderstood by the advocacy organizations. The problem boils down to the fact that there are short periods with so much load that generating units dedicated by intent or circumstances to provide power during peak load demand in specific locations. While some of those facilities are in disadvantaged communities and they do have emit air pollution there already are safeguards in place that limit air quality impacts and there is a process in place to further reduce their emissions. The presumption of egregious harm from peaking facilities is based on selective choice of metrics, poor understanding of air quality health impacts, and ignorance of air quality trends. This is not as dire a problem as it is portrayed.

The post highlights a relevant NYISO filing that concisely summarizes their reliability concerns relative to the calls for closures as soon as possible. The following is an excerpt of the letter's comments section (without footnote references):

> Reliable, dispatchable electric generation is in jeopardy as generation retires faster than new resources become operational. Electric system margins have decreased to unprecedentedly low levels. In fact, the NYISO's Short-Term Assessment of Reliability for 2023 Quarter 2 concluded that the New York City locality is deficient by as much as 446 MW for a duration of nine hours on the peak summer day under expected weather conditions, after accounting for forecasted economic growth and policy-driven increases in demand for electricity. The deficiency would be

> significantly greater if New York City experiences a heatwave or an extreme heatwave. The narrowing margins and the identified deficiency in New York City demonstrate that the addition of new resources is timely and critical.
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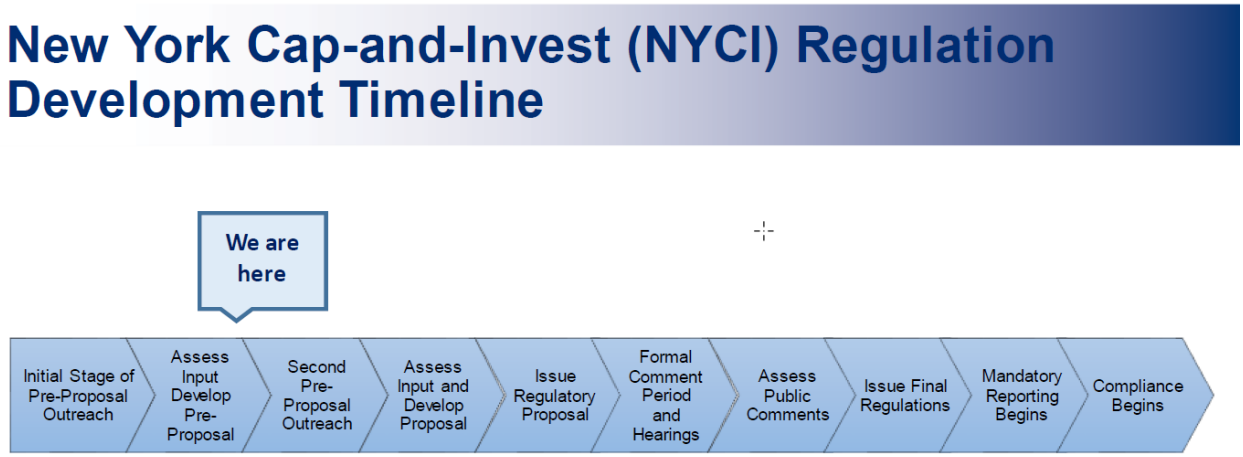
> NYISO's ability to facilitate a reliable electric system, including delivery to consumers, requires that the introduction of new resources be coordinated with and occur prior to the orderly retirement of any existing generators. This order of operations is critical for maintaining reliability after such retirements. Electric system reliability margins are already close to minimum reliability requirements in certain areas across New York and continue to tighten, as discussed above. If these margins are totally depleted, the reliability of the grid would be at risk and power outages could disrupt normal life or negatively impact public health, welfare, and safety.

Two opposing viewpoints must be reconciled to resolve the direction of Climate Act implementation. On one hand, there are ideologues who have so far been setting Climate Act policy. Despite their lack of energy system qualifications, they argue that the Climate Act mandates require zero emissions and that the existential threat of climate change requires immediate action. On the other side NYISO says that introduction of new resources to get to zero emissions must be coordinated with and occur prior to the orderly retirement of any existing generators. In my opinion, the ideologues will not accept compromise so rational resolution will result in outrage from the EJ advocates.

New York Cap-and-Invest Update and Another Conundrum

One of the proposed implementation components of the Climate Act is a cap-and-invest program that sets a price on Greenhouse Gas (GHG) emissions. The first round of stakeholder comments were due in early July and this post provides an update on the process. The article also notes that advocates are demanding removal of certain components that are the basis of any emissions trading program

The basis of the post was a NYS Department of Environmental Conservation (DEC) update on the status of the New York Cap-and-Invest (NYCI) program process at the Equity & Climate Justice Roundtable (Equity and Climate Justice Roundtable Presentation [PDF] and Session Recording). Jonathan Binder showed the following regulation development timeline that shows that DEC is near the end of the "assess input and develop pre-proposal phase" shown. I think there are two takeaways from this update. To date DEC has not given any indication of any particulars regarding implementation and there will be an opportunity to provide comments on the preproposal details in another round of stakeholder input. This is important because once the official regulatory proposal is released the agencies can no longer discuss the contents. The other point is that this timeline confirms that there is no way this program is going to be issued this year. Binder said the goal is to have revenue coming in during 2025.



In the other portion of the article, I went through a list of topics that DEC heard in the comments submitted in the initial stage of pre-proposal outreach. Binder described following points that they have been hearing from environmental justice, climate justice, and equity-related shareholders:

- Prohibit or limit emissions trading solutions
- Set caps with timetables
- Minimize cost, emissions, and other impacts on Disadvantaged Communities (DACs)
- Ensure adequate investments
- Ensure emission reductions are verifiable & enforceable
- Track GHG and co-pollutant emissions from all sources
- Provide transparent demonstration of emissions and investments
- Ensure Disadvantaged Community representation in oversight and program review
- Consider burdens and job impacts on businesses located in or near DACs

The primary point I wanted to make is that there are tradeoffs that I do not think the environmental justice, climate justice, and equity-related shareholders understand when they demand limits on emission trading. The fundamental basis of any emissions market program is trading of the permits to emit (allowances). EPA notes that this is a key component of any market-based program. Binder admitted that allowance trading is a key to ensure "overall affordability and cost effectiveness of the program". Obviously if there is no trading then this cannot be called a cap-and-invest program and it won't work as expected.

Another stakeholder demand is preferential treatment of the allowances in DACs. DEC noted that there could be limitations on sources in DACs. For example, they could prohibit DAC sources from purchasing allowances from outside of the DAC. The problem is that all the suggestions face accounting challenges, implementation hurdles, and would likely cause unintended market impacts. If the program includes these limitations, it makes addressing all the other points raised by the stakeholders much more difficult.

I concluded that implementation NYCI is going down the same path as the Scoping Plan. The Scoping Plan electric system recommendations are based on the ideological belief that existing technology is sufficient for the transition. The Hochul Administration allowed a few ideologues to push that narrative despite conflicting information in the Integration Analysis and arguments from the New York Independent System Operator to the contrary. The New York State Public Service Commission (PSC) recently initiated an "Order initiating a process regarding the zero-emissions target" that will "identify innovative technologies to ensure reliability of a zero-emissions electric grid" that recognizes a new technology that can be dispatched without generating emissions is necessary if the state is to not go nuclear. Failing to acknowledge this requirement means that there is no "Plan B" if this new resource cannot be developed and deployed as needed to maintain the Climate Act schedule.

The Hochul Administration appears to be doing it again in the cap-and-invest process. Presuming that past performance of emissions trading programs would be indicative of future reduction success and establishing an arbitrary emissions target that is incompatible with realistic emission reduction trajectories has established a very difficult challenge. Addressing ideological concerns about emissions trading programs and trying to incorporate social justice concerns makes the challenge that much more difficult. The environmental justice, climate justice, and equity-related shareholders are demanding removal of certain components that are in every emissions trading program and that were essential to past success. Deferring to ideology rather than historical precedent can only end in failure.

Renewable Electricity in New York State Review and Prospects

This post discusses the findings of the New York State Comptroller's Office recent Renewable Electricity in New York State Review and Prospects ("Comptroller Report") that addressed progress and prospects for attaining New York's Climate Act 2040 mandate for a zero-emissions electric grid.

My overarching concern with the Comptroller Report is that it underestimates the technological challenges of the net-zero transition. Not surprisingly this political document proposes political solutions. The acknowledged problems of the timeline can be resolved if "the projects currently under contract to sell RECs to the State and the projects in the NYISO's interconnection queue are able to move through the interconnection and construction process and needed transmission and distribution infrastructure is completed in a timely way, the CLCPA's goal of generating 70 percent of the State's electricity with renewable technologies appears to be in reach." The Comptroller's Report falls back on the "it is only a matter of political will" faith-based creed. Reality is very likely to make that impossible.

In addition to political will, the report suggests that we can resolve issues by throwing more money at projects. The State's prior poor performance is chalked up to inconsistent funding commitments. At the same time, it acknowledges that "mechanisms to hold down the cost of meeting its goals on the State's electric consumers" are necessary. It would have been useful for the Comptroller to recommend limits on costs and work with NISO to highlight the technological challenges.

Against the background that New York's contribution to global GHG emissions is less than the rate of increase in global emissions my frustration is unbounded. Is it too much to ask Albany politicians to document the expected costs, the potential risks to reliable energy, and the environmental tradeoffs of the net zero transition called for in the Climate Act when the benefits are so minimal?

Climate Act Coercion

In a follow up to the preceding report I prepared a post that addresses the following quote from that report: "the Enacted Budget for SFY 2023-24 included a provision to hold the electric bills of low-income customers to six percent of household income if the customers participate in State programs to electrify home heating and appliances and undertake efficiency upgrades."

In order to address this, I had to research the budget bill provisions and the six percent electric burden criterion. The FY24 Enacted Budget included the Energy Affordability Program that, in part, allocates $200 million an energy affordability guarantee to residential customers participating in home electrification efforts through the New York State Energy Research and Development Authority (NYSERDA)'s EmPower Plus Program such that EmPower Plus participants pay no more than 6% of household income on utility bills for the duration of the estimated useful life of an EmPower Plus electrification project.

From the start of the Climate Act implementation process there has been inadequate evaluation of all the programs needed to achieve a net-zero transition to ensure that they do what they are supposed to do without unintended consequences. In this instance, I object to the implicit coercion that there will be a guarantee that the energy burden will not exceed six percent only if customers participate in State programs to electrify home heating and appliances and undertake efficiency upgrades. It appears the authors of the law did not consider the fact that Scoping Plan Integration Analysis admits that not all residences can be electrified effectively and safely or that there are limitations on efficiency upgrades. If there are no relevant caveats to implementation, then needy low-income citizens will be adversely affected.

Even if my interpretation is wrong and this is not a potential issue, there is a serious shortcoming in the implementation process. There is no official energy poverty metric that covers all energy use and there is no status data available for the frequently referenced six percent electric bill target. How will we know if there are increasing energy poverty issues associated the transition unless someone is tracking it?

Update on Micron Electric Needs

In early March I posted an article about the addressed the energy needs of Micron Technology's planned semiconductor fabrication plant. The takeaway message was that, when fully complete, the facility will consume more energy than the State of Vermont. As part of their environmental impact analysis, it was recently revealed that more electric power will be needed. More as in add the electric load of New Hampshire. This post references an article by James Hanley at the Empire Center that describes other potential ramifications.

James Hanley made sme compelling points:

> Micron will need to draw 1.85 gigawatts of power from the grid continually, 24 hours a day, to power its operations. The New York Power Authority has offered Micron 140 megawatts (0.14 gigawatts) of hydropower. It may not have that much to spare, except at night when statewide electricity demand drops. But even if it can steadily provide Micron that much power, that's just over 7 percent of the company's needs.

Micron has also signed a 178-megawatt (0.178 gigawatt) onshore wind power agreement. That will produce less than 467 gigawatt-hours annually, a mere three percent of Micron's needs. Add those together, and 90 percent of Micron's power demand remains to be determined. Even before Governor Hochul bribed Micron to come to New York, the state faced a 10 percent deficit in its energy supply by 2040, creating a risky future of probable blackouts due to insufficient power production.

The danger is caused by the state's climate policies. As consumers are mandated to buy electric cars, and households are forced to switch from natural gas to electric heat, electricity demand is expected to as much as double by midcentury. And 70 percent of that future electricity demand must be supplied by renewable energy.

Because hydropower output will not increase significantly, solar and wind power must increase from their current output of approximately 7,600 gigawatt-hours to as much as 185,000 gigawatt-hours by 2050. When Micron is added to the mix, the need will rise to almost 200,000 gigawatt-hours of wind and solar, a 2,600 percent increase from today.

That's a challenge New York simply has no real plan for achieving, because the state's renewable and clean energy goals are based more on wishful thinking than hard-headed analysis about the technical challenges of radically restructuring the state's power system.

Articles of Note Relevant to the Climate Act

I summarized articles related to the Climate Act in another post.

Bjorn Lomborg sends out a newsletter on a regular basis that I recommend. The latest newsletter included articles that exemplify the pragmatic approach to environmental issues such as climate change and addressed climate alarmism. One story explained that fear-mongering and the suppression of truly inconvenient truths are pushing us dangerously toward the wrong solutions.

I mentioned a couple of climate science articles. Anthony Watts describes a story ignored by the mainstream media in which a group of prominent scientists bullied a scientific journal into retracting an article they did not like. A new study explains global warming could be mostly an urban problem: "A new study published in the scientific peer-reviewed journal, **Climate**, by 37 researchers from 18 countries suggests that current estimates of global warming are contaminated by urban warming biases"

I also highlighted a couple of policy-related articles. Pierre Gosselin explains that Germany's so-called Energiewende promised green energies, primarily from wind and sun, would be cheap, plentiful and clean in the future but the reality is it is bringing economic pain as energy prices are projected to keep rising until 2040. Dennis Higgins explained why New York energy policy is dangerous and irresponsible.