

**WRITTEN COMMENTS OF
AEROPOWER SERVICES INC.
For
TC-25
GENERATOR INTERCONNECTION REFORM
March 30, 2023**

BPA started the TC-25 reform proceeding with several principles, among them going beyond FERC’s pro forma tariff for several purposes including:

“Prevent significant harm or provide significant benefit to BPA’s mission or the region, including BPA’s customers and stakeholders.”

And:

“Align with industry best practice when the FERC pro forma tariff is lagging behind industry best practice, including instances of BPA setting the industry best practice.”

Aeropower Services Inc (ASI) applauds BPA’s willingness to look beyond the pro forma tariff and attempt to match or better industry best practice. This is a key opportunity. The comments herein are intended to align with the above purposes and the following issues.

BPA has identified several problems needing resolution, namely:

‘A large ramp up in the number of interconnection queue applications which BPA is not staffed to handle in an efficient or expeditious manner.’

And:

‘Queue drop outs which lead to restudies.’

Consequently, BPA established interconnection process-related objectives in TC-25 including:

“Increase the speed of interconnection queue processing”

“Address queue backlogs and study delays”

For which BPA proposes to implement a first-ready, first-served (FRFS) cluster study process, because the current process cannot accommodate the large number of requests in the queue in a timely manner, which causes problems for all stakeholders in the process and it’s outcomes. This is not the first time BPA has

undertaken measures to ‘clear the queue.’ Core reform components of FRFS being discussed include various indicators of commercial readiness and increased deposits before or during the studies process. However, the FRFS concept is delicate to apply, the devil’s in the details, because the use of monetary deposits is a blunt proxy instrument at best, some criteria create ‘chicken ‘n egg’ issues, and an overly aggressive approach would reduce the availability of new resources and increase their prices.

ASI advises caution to carefully consider the context within which BPA’s process operates and contributes to regional benefit. The relevant context is the entire system of new resource development and procurement, the regional social and legal demands for new renewables MW by dates certain, and how the stakeholders on the demand and supply side operate. The overall process of bringing new project ideas all the way into commercial operation has multiple seams in it, with parties on both sides of each seam having unique needs and contributions to resource progress. BPA’s transmission-related services have seams with IPPs on one side and LSEs on the other. The potential for suboptimization within one link of this chain should be obvious. Therefore, it’s **crucial** to establish evaluation criteria for deciding various reform measures by how well they fit in this overall context, not merely whether & how a given measure contributes to solving the identified problems in BPA’s interconnection queue.

To illustrate the systemic nature of the context, let’s consider an example scenario, even if highly unlikely. In this all projects which enter the interconnection queue materialize, none drop out and there’s no restudies. This might appear to be the ideal situation, at least within BPA’s domain. What would be the necessary conditions for this to happen?

There would have to be alternative means of discovering the feasibility of a local interconnection and transmission to POD, the costs, the financing of those costs, the schedule to achieve it, and the risks involved. This discovery is needed by IPPs and their financiers, and by LSEs who would contract with them.

1. IPPs would need to verify the same feasibility issues as the current process’ first study, w/o being in the queue. The results of this step would minimally have to be as reliable as what BPA currently provides – w/o BPA’s participation and with the outside electrical engineering contractor’s access to the same BPA-internal grid information as BPA would have used.
2. IPPs or their 3rd party contractors would need to be able to study all relevant impacts on and within BPA’s network, including the same N-1 & N-2

studies as BPA currently runs. And identify affected systems and conduct those related studies.

3. Project financiers rely on the studies' results to start or continue underwriting project development and forward risks. The quit pro quo is BPA, LSE and affected systems accept all the studies – no restudies, rejections, delays, duplications, etc, their results are final.
4. NEPA studies would have to be independently done by 3rd parties, and BPA would need to accept them as final, no restudies, delays, rejections, etc. The associated public process requirements would be met by 3rd parties.
5. LSEs, from a broad range of regional opportunities/offers/bids, would need to be able to select the least cost, best fit, and timely projects to acquire or sign PPAs with in the absence of full cost, schedule and risk discovery, or in complete reliance of 1-4 above. This would all be done before the queue is entered, because every entry results in an operating project, on time and with adequate investor returns.
6. LSE regulators would need to accept LSE procurements as fair, non discriminatory, best efforts, and lowest ratepayer cost within the statutory RPS requirements.

Accordingly, the interconnection process has, among others, a very important discovery function, that everyone relies on. Changes to this process that don't equally or better serve on a timely basis discovery of constraints, feasibility, costs, schedule or risks would be detrimental to the region and all parties involved. Changes should not create or exacerbate chicken 'n egg problems anywhere in the overall supply process from project concept to operation. And changes should facilitate off take selection for their needs from an array of opportunities. Thus, reforms should not solely be evaluated by whether they reduce the queue workload or propensity for restudies.

The IPP industry is based on risk, reward and opportunity. These are different signals or standards than BPA or LSE's have, e.g., others primarily are responsible for meeting NERC system reliability standards, measures of resource adequacy and lowest ratepayer cost. If reforms increase project risk, the development community will either have to demand higher prices in compensation, or can easily reallocate development budgets elsewhere. If reform adds to on-line schedule, the completion risk profile changes. If reform narrows opportunity to a subset of the industry, higher costs and slower resource growth can be anticipated.

Also consider queue applicants are not the cause of the problems BPA is trying to address. The renewable energy IPPs in BPA's queues are responding to society's

policy, regulatory and environmental demands for these resources, along with various incentives. The first link in the chain of the problems in BPA's queues isn't the IPPs who are responding with project propositions, it's society acting through its institutions. From this perspective, it's not just to burden the IPP community with all the growing pains and costs associated with increasing their supply. I.e, it isn't just to put all the financial, schedule and risk burden associated with electric network upgrading and expansion onto queue applicants.

If poorly done, FRFS criteria can increase the cost of adding new renewables supply and contribute to failure to meet RPS goals. This can occur several ways. The criteria can price out the smaller developer organizations, to the benefit of only the top tier developers with highest risk appetite and internal capital - who are fewer and whose risk must be compensated by higher \$/MWh pricing. Also the development industry sites' food chain depends on many smaller developers to initiate projects, many of which are later absorbed into top tier companies' portfolios, so squeezing out smaller companies would decrease the supply of new sites and increase industry concentration.

Lastly, high numbers in the queue(s) demonstrate competition and choice for LSEs enabling them to acquire the least cost, least risk, best system match and on-schedule resources. The numbers in the queue(s) should reflect multiples of total regional forecasted MW & MWh demand - that indicates a robust marketplace. Equalizing it to forward demand 'clears the queue', but at a cost - this is fundamental supply-demand economics. All this leads to higher ultimate ratepayer costs to achieve clean energy on a slower schedule.

Aside from impacting the supply of new projects, the FRFS use of monetary deposits, way above costs actually incurred by BPA or necessary to acquire the same results from 3rd parties, is a poor proxy for commercial readiness. Consider development companies operating capital and the fact every cent spent in development is at risk until the project achieves commercial operation. Diversion of working capital into unproductive deposits which don't contribute anything toward advancement of the project toward commercial status undermines achieving materialization. And again, pushes development toward only the most highly capitalized companies with the greatest appetite for risk. Any reform process should incentivize devotion of at-risk resources toward achieving commercial status, instead of diverting those resources in unproductive ways. But if that's achieved in ways that stretch the overall completion schedule, squeezes out a segment of the industry, or creates chicken 'n egg problems, that also contributes to a suboptimized reform process.

There's already chicken 'n egg issues in various organizations' FRFS processes. The most obvious is requiring a PPA, a LOI for one or demonstrably be in negotiations for one as quid pro quo for queue entry. LSE's competitive procurements commonly and widely reward projects who are already in the queue (sometimes even as a bid qualification threshold), or better yet, have an LGIA. As long as this procurement practice persists, this kind of FRFS requirement for queue entry or studies progress creates an impossible situation. To get beyond it would require one or both parties to accept huge risks and potentially liquidated damages – to the detriment of offered supply, prices, on-line schedule and overall risk. Again, the reform's details should dovetail with the needs and process on both sides of BPA's seams.

It's been widely acknowledged that the region is in a very near term supply crunch between the nearest RPS deadlines and the time it takes to create & energize even basic new interconnections. The situation is even worse considering the network's constrained flow gates between areas with resources and LSEs' load centers. Projects commonly start with an interconnection application and later try to resolve the delivery issues – which will lead to interconnection queue drop outs, restudies, etc. So there's this linkage between the two queues and that points to potential reform measures that might address drop outs and restudies. BPA should study this linkage and propose ways to address it as one component of reform measures, for example:

It's long known firm TSAs are significantly underutilized along important paths needed by new resources. There's physical capacity and the constraint is it's all contracted. At this point there's processes for whole TSA assignment or a redirect, but there's no public marketplace for TSA holders to assign part of their TSA capacity on any kind of basis to others. The proxy for that marketplace is the size of one's rolodex, there's no transparency who's got what where and when. And no process to assign a portion of a TSA right to another. A transparent marketplace where these whole or partial rights can be transacted has potential for increasing utilization of current physical plant and providing new near term delivery to meet RPS goals while new network additions are brought to bear to enable later RPS goals.

Aside from considering contextual issues, there's additional steps that could be done to address the interconnection queue issues:

- A. Provide a process for better feasibility information ahead of queue applications.
- B. Require complete demonstration of site control as a quid pro quo for queue application.
- C. The above TSA marketplace idea.
- D. Initiate a dialogue with all entities on BPA's seams, the NPCC, LSEs, and the States' regulators focused on systemic solutions, accommodations and allocation of funding.
- E. Consider conducting area studies prospectively, wherever there's significant potential for new resource development.
- F. Provide more tools for IPPs and others to evaluate transmission-related issues and opportunities.
- G. Expand the review of interconnection queue reform ideas beyond what's already been done at FERC and across the country.
- H. Be prepared for no or only a modest reduction in the amount of queue applications going forward. The challenges of achieving the States' RPS goals are just beginning...

Summary

Focusing on using FRFS to 'clear the queue' makes it easy to achieve 'success' of that objective. However, that would be suboptimization unless the transmission-related process changes are coordinated and efficiently dovetail with offtake procurement processes, regulators' supervision, development industry structure & risk & financial capacity, policy & legal demands for RPS achievement, and project-related decision timelines. This is how BPA can "Align with industry best practice when the FERC pro forma tariff is lagging behind industry best practice, including instances of BPA setting the industry best practice." *This is crucial!*

Successfully resolving the current interconnection queue problems involves BPA using the correct goal posts and measures of reformation success, and going beyond pursuit of objectives to reduce the queue size and minimize restudies – even if that means increasing BPA's staff budget or others besides IPPs taking risks and underwriting some of the solutions.

ASI recommends BPA address the current issues iteratively, step-by-step and flexibly going forward. The reform issue right now is getting the measures of process success right, doing the obvious small steps, and starting the actions that will take longer to achieve.