Feeder & Substations Hosting Capacity Assessment, Industry Kickoff

Prepared by Industry for IWG-PSEGLI meeting 5 Nov 2019
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1. General Document Notes

a. All information and products referenced in this document presented on behalf of the PSEGLI-IWG industry only and do not represent any position or endorsement by PSEG Long Island.

2. Industry & Presentation Goal

a. Core industry goal to work with PSEG to increase hosting capacity by multiple factors. Paradigm shift in "available capacity" on Long Island grid.
b. Alignment between statewide goals and practical limitations
c. This presentation/discussion to kickoff the multi-phase process

3. Goals &/vs Current Situation, & Challenge

a. Governor goal summary
    i. 2040 100% carbon neutral, electric sector
    ii. 2050 100% carbon neutral, electrical & transportation (EV buildout)
    iii. Near term goal: 2026, 6 GW solar
b. Current state for solar
    i. Currently only ~1.6 GW at with ~350 MW/yr
    ii. At this rate by 2026
        1.6 + 0.350 * 6 =
        1.6 + 2.1 = 3.7 GW
    iii. In order to achieve 6 GW we need to install
        6 - 1.6 = 0.73 GW/yr
    iv. Need to install 2.1x faster than we are now!
c. Conclusions, Takeaways, Realizations...
    i. Industry belief that that NYS goal is not in alignment with practical realities and market economics
    ii. Regardless of what DER technology, we have tremendous work to do
    iii. Look at 6 year goal & look at 30 year goal
    iv. If we are to achieve the vision of 100% CN we need to think big and impacting
    v. This industry & utility team is where we must overcome the hard reality of engineering to achieve the greater vision

4. Hosting Capacity Map (HCM) Update Status Review

a. Current observations, issues & incentives
    i. https://www.psegliny.com/aboutpseglongisland/ratesandtariffs/sgip/maps
    ii. Existing map lacks meaningful data. Developers, property owners, local decision makers, etc would all benefit from having additional, meaningful data

about interconnection potential and that up-front data can reduce project delays, cancellations, and therefore costs to everyone involved.

iii. Currently have no insight as to reasons why a specific feeder or substation has "unfavorable conditions". At a minimum, pending new 3.0 standards currently provided by other JU's, please describe how exactly is "favorable" to "unfavorable" is defined?

iv. Notably without the actual feeders displayed, it's not possible to know what substation any project is even connected to. All those inquiring have to submit an email which bogs down the entire system and is an unnecessary task.

v. Existing map seems ~50% red, "Not Favorable Conditions"

vi. Industry/public goal: "Turn Red to Green"

vii. Additional goal: Reduce current risks of proposing projects in areas that would feed into substations at capacity (currently this can only be evaluated on a case by case basis, which is time consuming and burdens PSEG, since they have to review every project).

viii. Additional goal to help policy related decision making: That the tool enables some top level summaries of overall interconnection capability (capacity) for certain regions. For example, being able to look summary information for a particular town would help decision makers and citizens understand the technical constraints in their area, inform development of policies or strategies to encourage more solar generation, or help them advocate for funding/implementation of improvements for their area if needed. In other words, the usefulness of the map would be improved greatly if users can access and summarize information for areas or regions, not just on a site by site basis.

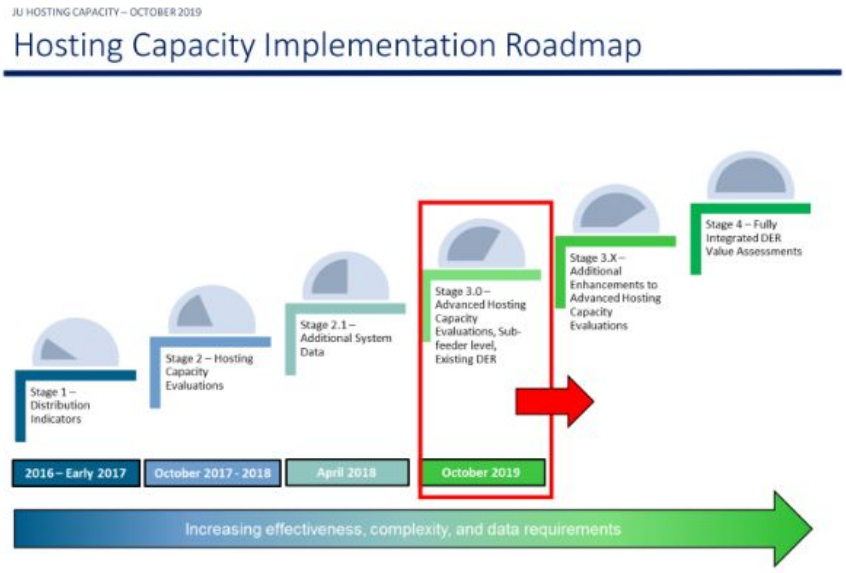
b. Questions for PSEG

i. What is the status of rollout of the new HCM?

ii. What platform is it built on? (EPRI Drive tool?)

iii. Has PSEG been participating in the JU HCM initiative? We recently had our 2nd meeting in Manhattan. "Stage 3 HCM Update"

https://drive.google.com/file/d/1qsEm4wVMZ49-qbsBrdFWevT44aueruDV/view



iv. Is PSEG planning to launch commensurate with Stage 3.0, like the rest of the JU did on 1 October 2019.
v. Highly recommend referencing the JU 3.0 launch presentation: https://drive.google.com/open?id=1smtjyWKT3iwBddlrOkF0TzHCcVjURec1
vi. Here is the follow-up JU presentation for 3+ focus items: https://drive.google.com/open?id=1xxjHBdaYHZHG8VmbzSOJp_5deW52OEHt
vii. What is the specific PSEG roadmap with milestone dates? What is actual progress relative to these milestones?
viii. Other updates on the map initiative at this stage?

5. Proposed Multi-Phase Process

a. P1: Launch updated hosting capacity map to be same as JU standard, and ensure its accuracy
b. P2: Review of all the reasons a substation or circuit may be limited or unable to host additional DER capacity, and subsequent review and importance/frequency ranking (current)
c. P3: Review each limiting factor/category in priority order to determine options for increasing hosting capacity
    i. Ex. Minimum loading scenario → (a) increase min daytime load, (b) enable ability for circuit & substation to accept reverse power
    ii. Ex. Examine the relevant formulaic limits in the SCOP-LDS (Screening Criteria for Operating in Parallel with LIPA's Distribution System)
    iii. Ex. Others...
d. P4: Review/acknowledgement of current infrastructure upgrade pathways. (Acknowledgement of current infrastructure improvement process for borne fully by project developer.)