



Center on
Global Energy Policy
at COLUMBIA | SIPA



Generator Interconnection Survey: Request for Participation

Abe Silverman • August 2023

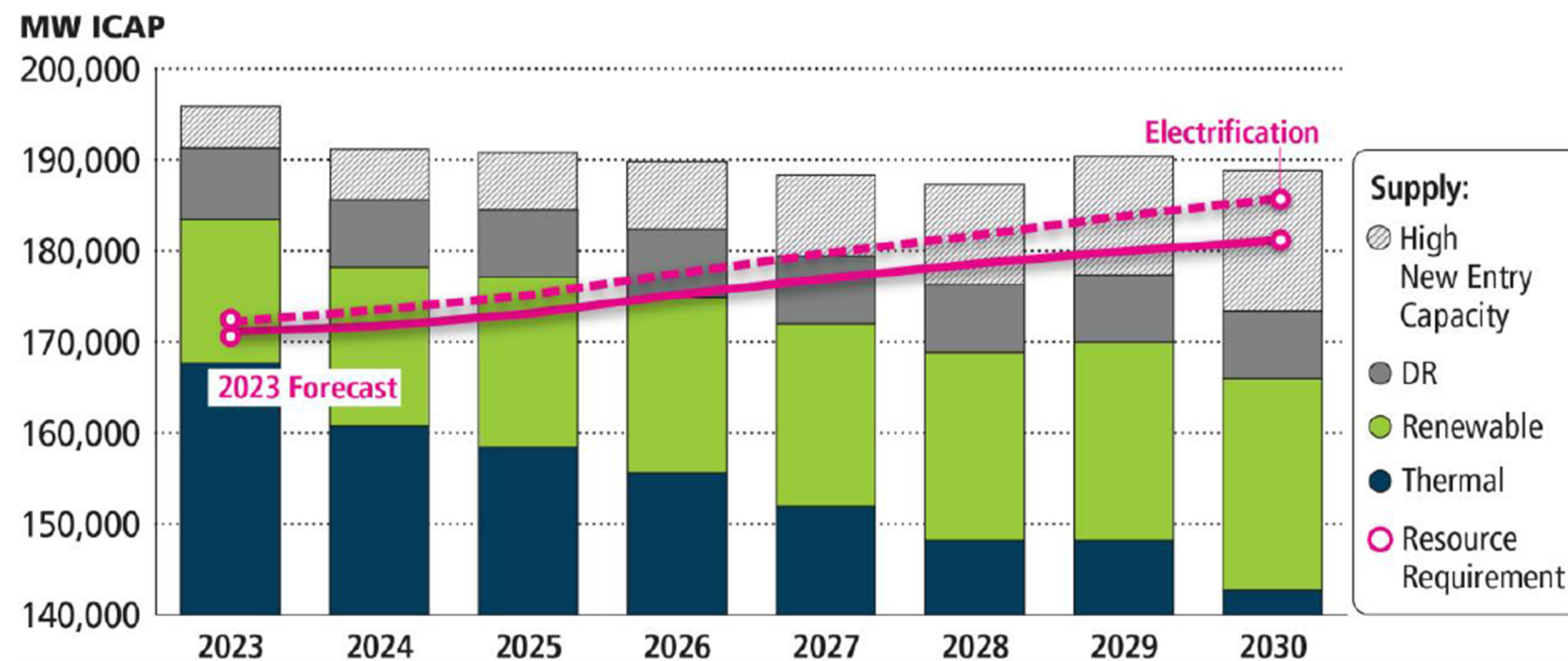
Director of the Non-Technical Barriers to the Clean Energy Transition

Initiative at Columbia University

Interconnection Research:

Premise: we can't meet our climate goals or maintain grid reliability without an expeditious interconnection process.

Figure 7. The Balance Sheet



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Despite the sizable nameplate capacity of renewables in the interconnection queue (290 GW), the historical rate of completion for renewable projects has been approximately 5%.

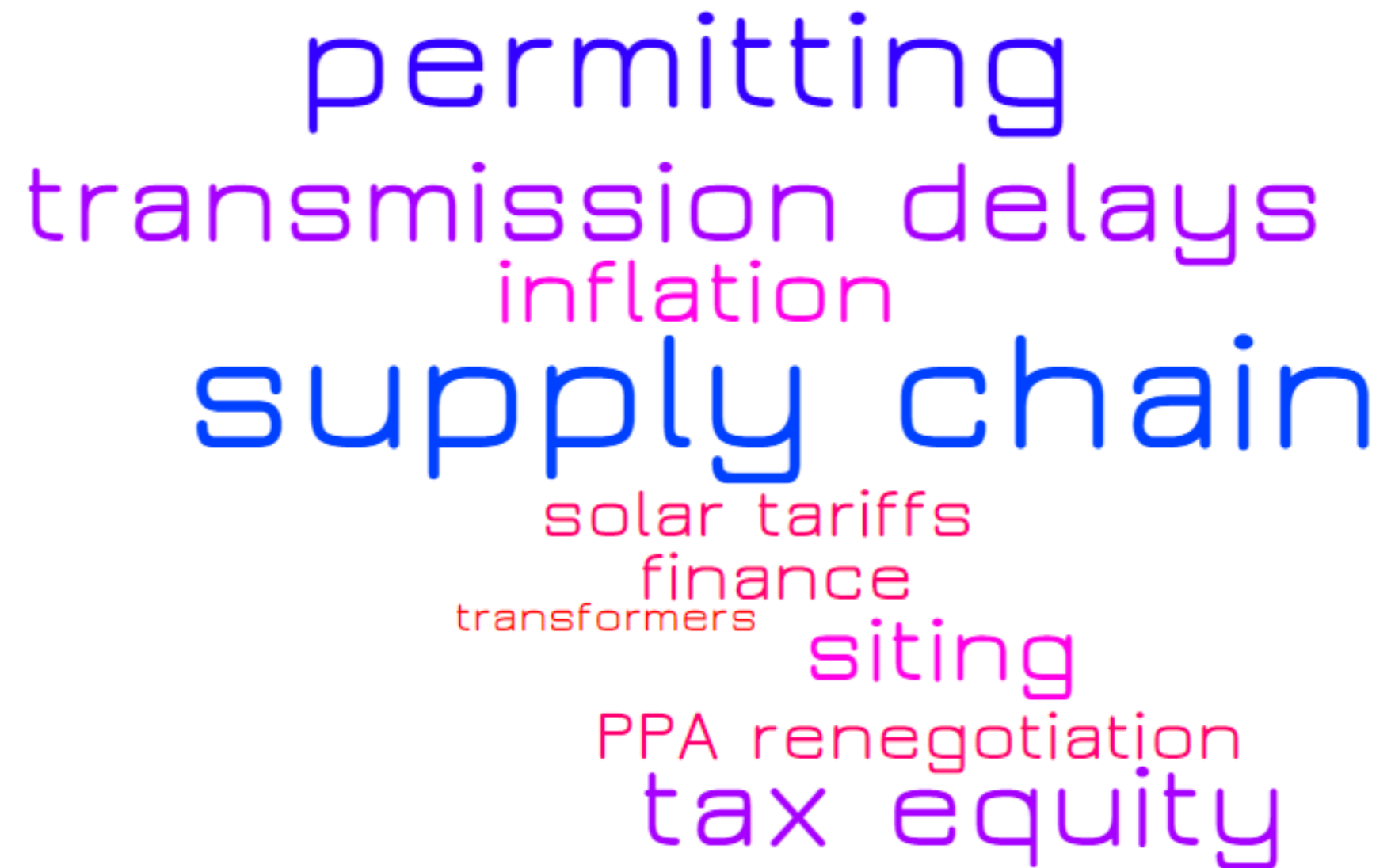
-- PJM Interconnection

Energy Transition in PJM: Resource Retirements, Replacements & Risks

Survey Focused on Late-Stage Projects

Seeking to understand the major challenges facing project developers.

- ❖ Focused on projects that entered the queue between 2017 – 2022 and have an executed Facilities Study or Interconnection Service Agreement
- ❖ Ask project developers about challenges for projects in the medium/late stage of the interconnection process. Are those projects likely to reach DOC? If not, why not?
- ❖ Collect information in a confidential manner, subject to Columbia University research protocols.



A word cloud of project challenges. The words are arranged in a roughly rectangular shape, with 'supply chain' and 'transmission delays' being the largest. Other words include 'permitting', 'inflation', 'solar tariffs', 'finance', 'transformers', 'siting', 'PPA renegotiation', and 'tax equity'.

permitting
transmission delays
inflation
supply chain
solar tariffs
finance
transformers
siting
PPA renegotiation
tax equity

Sample Survey Question

Again thinking about your projects that are **actively in development**, please rate the following factors associated with **project finance or economics** on how much of a challenge they are to the project(s).

You can drag the slider to the number corresponding to the following scale:

1 = The factor has no impact on the development of project(s).

2 = The factor has a small impact on the development of project(s).

3 = The factor has a moderate impact on the development of project(s).

4 = The factor has a major impact on on the development of project(s).

5 =The factor has a decisive impact on the development of project(s).

1

2

3

4

5

Ability to win a competitive solicitation or comparable process.



Project was developed without a specific offtake arrangement and no offtake materialized.



Inflationary pressures related to equipment procurement costs.



Sample Survey Question

Thinking about the **major challenges associated with the interconnection process, siting, permitting and supply chain** that your projects in active development face, please rank the challenges identified in terms of greatest to least impact.

Note: Please move the challenges listed below into the ranking order reflecting greatest to least impact. You can move the bars up or down by clicking on them with your mouse and rearranging. If only one option appears, please proceed to the next page.

Siting or permitting considerations at the federal, state, or local level.


Length of the interconnection study process (not including construction of network upgrades or interconnection facilities).

Length of the construction timeline for network upgrades or interconnection facilities or uncertainty around that timeline.

Supply chain concerns not related to solar tariffs or import restrictions.

Supply chain concerns related to solar tariffs or import restrictions.





To understand the development timeline, we need developers to participate!

Generic Link:

https://sipacolumbia.co1.qualtrics.com/jfe/form/SV_8uFBXni3r6JWQce

- Participation takes ~20 minutes.
- We sent an email to each company representative on file with PJM.
- But, you can also participate via a generic link so that if emails get lost/mis-directed we can still get good data!
- Looking to have as many surveys completed by early September.
- Share results in mid-September / early October.



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Thank you!

Feel free to reach out to me or other members of the team with questions on the survey or thoughts about interconnection generally.

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