NEW YORK STATE | Department of Public Service

Electric Vehicle Infrastructure & Interconnection Working Group Meeting

Next Steps

December 13, 2024

Agenda

1. Flexible Service Connection - VGIC
2. EVIIWG Presentation - EDF
3. Summary of modifications to Proposal – JU
4. Straw Proposal Edits and Steps to Finalization - Staff
5. Next meeting tentatively scheduled for February 12, 2025

- All attendees will remain muted
- Use chat or raise hand function to ask a question
- Presentation materials and recording link will be posted on DMM and on EVIIWG webpage
- Please email EVSE@dps.ny.gov for further questions
- This session is being recorded

Finalizing Draft Straw Proposal

- Staff will issue the draft straw proposal via Secretary's Notice Soliciting Comments December 16, 2024
  - 30-day period for comments ending January 15, 2025
  - 15-day period for reply comments ending January 31, 2025
  - Comments to be submitted via DMM
- February 12 EVIIWG meeting (Tentative) - depending on comments received in DMM
- Document to be SAPA'd for 60-day additional comment period

VGIC
VEHICLE-GRID INTEGRATION COUNCIL

Flexible Service Connection Context for EVIIWG

Zach Woogen, Interim Executive Director, VGIC

December 13, 2024

EVs represent **untapped potential** as flexible, distributed energy resources to support an affordable and just energy transition

Vehicle-Grid Integration Council is focused on unlocking the value of **flexible charging, discharging, and DER-paired charging.**

VGIC

VGIC MEMBERS / 2024

LEADERSHIP CIRCLE

BORGWARNER

Fermata Energy

Ford

gm

HONDA

NISSAN
GROUP OF NORTH AMERICA

GENERAL MEMBERS

BIDIRECTIONAL ENERGY

Customized Energy Solutions
Analyze · Simplify · Implement

dcbel

EATON
Powering Business Worldwide

emporia

EnergyHub

ev.energy

FLUX

GridBeyond

Gridwiz

HYUNDAI CRADLE

KALUZA

Landis Gyr+

leap

NUVVE

ORANGE

PEAK POWER

powerflex
EDF Renewables

qcells

STELLANTIS

SUMITOMO ELECTRIC
Connect with Innovation

TESLA

THE MOBILITY HOUSE

TOYOTA

WeaveGrid

ASSOCIATE MEMBERS

CPA CLEAN POWER ALLIANCE

HOLY CROSS ENERGY
ESTABLISHED 1939

HOOSIERENERGY

LA DWP Los Angeles Department of Water & Power

PENINSULA CLEAN ENERGY

SMUD

Developing a *Flexible Service Connection Framework*

- **Challenge:** historical approach to processing utility customer requests for new or upgraded service are not well suited for the pace and scale of transportation electrification.
  - Utilities often add up nameplate ratings of all EVSE on site, and then size the grid connection to that total, regardless of the customer's ability to manage load across EVSE (or install on-site generation and/or energy storage)
  - Progress has been made on flexible *generator/storage* interconnection, but few efforts have focused on flexible *load* connection

Developing a *Flexible Service Connection Framework*

- Our understanding of the current state-of-play in NY:
  - **Ad-hoc, site-specific conversations** between utilities and site developers to design multi-charger sites *may* lead to oversubscribing electrical connection in one-off demonstrations
  - **Load Management Technology Incentive Program** directly supports the deployment of technology that could be operationalized to support flexible service connections
  - **Lack of clarity on next procedural steps** to address these topics (e.g., EVIIWG, ITWG, Grid of the Future, EV Make-Ready dockets)
  - **Gap:** scalable approach that provides certainty to customers, site developers, and technology providers. This approach would likely include the following design elements…

Developing a *Flexible Service Connection Framework*

- **Needs:**
  1. **Immediate:** based on traditional planning assumptions, backlogged new service would require a distribution system upgrade that would extend timeline by >1 year. Customer is willing to manage demand to avoid constraint while upgrade is completed.
  2. **Long-Term:** based on traditional planning assumptions, new service would require a distribution system upgrade. Customer is willing to manage demand to avoid constraint.

- **Technology eligibility:**
  - **Technology options include:**
    - Traditional controls (protective relays, internal smart inverter settings, probabilistic methods)
    - Power control systems and other load management strategies
    - Co-located generation and/or storage
  - **Control architecture:**
    - Autonomous localized load management
    - Centralized communications-based load management

Developing a *Flexible Service Connection Framework*

- **Program design:**
  - **Static and dynamic limit options:**
    - Single-value limit
    - Daily/seasonal peak vs off-peak limits
    - 24-hour profile for each month (288-value limited load profile)
    - 8760 operating envelope
  - **Hard cap vs soft cap:** firm import limit that a customer cannot exceed vs soft cap that customer can exceed for additional cost.
  - **Capacity allocation methodology for multiple flexible connections on same circuit**
  - **Process options:**
    - Tools for customer-led election:
      - Proactive customer marketing, education and outreach by utility
      - Hosting capacity maps as enablement tool
      - Utility pre-load assessment, on request
      - Customer election in load request
    - Tools for utility-led deployment:
      - Filter applied to all load request to find candidate sites
    - Regardless of process leader, in-flight site design changes should be permitted

Developing a *Flexible Service Connection Framework*

- **Transparency:**
  - Utility reporting and accountability
  - Policy evolution and balancing force for emerging proactive planning framework
  - Alignment with local AHJ/permitting and NEC
- **Fair compensation:**
  - Shared savings model for avoided costs
  - Technology incentive
- **Case studies:**
  - Control architecture options: CA SCE Load Control Management Systems (LCMS) Pilot
  - Process and customer engagement: CA PG&E Flex Connect Pilot
  - Incentives: NY Load Management Technology Incentive Program
- **Recommended Next Steps**
  - **Overcome procedural ambiguities and establish clear, ongoing venue to collect evidence and adopt each element**
  - Start with simple program design and unambiguous technology eligibility

Thank you!

Vehicle Grid Integration Council (VGIC) is a national 501(c)(6) membership-based trade association committed to advancing the role of electric vehicles and vehicle-grid integration through policy development, education, outreach, and research.

VGIC VEHICLE GRID INTEGRATION COUNCIL

vgicouncil.org

Developing a *Flexible Service Connection Framework*

- **Appendix – Foundational literature/practices:**
  - US DOE Flexible DER & EV Connections
    - Planning and operating parameters
    - Flexible connections methods
    - International insights (Australia, UK, Europe)
  - IREC BATTRIES Export-Controlled Storage Systems
    - Identify acceptable export control methods
    - Update screening/study processes to account for controls
    - Allow for system design changes during review
  - TMH ALM Technical Guide for Fleets
  - Enphase Petitions to Adopt UL 3141 Power Control Systems
  - AEU EV Ready Grid Guidebook, Section 4: Maximizing Existing Built Infrastructure

EDF, IREC, and VGIC Flexible Interconnection Recommendations for EVIIWG

Cole Jermyn
Attorney, Energy Transition

Environmental Defense Fund

Two Recommendations for the EVIIWG

1. Include phased interconnection as a standard interconnection option in the initial Queue Management Proposal
2. Continue the work of the EVIIWG to identify and implement flexible interconnection solutions

Phased Interconnection

Customer allowed a fixed maximum demand below their theoretical maximum load while utility completes grid upgrades

Recommended Update for Queue Management Proposal

Customers making interconnection requests above available grid capacity would be given two options:

1. Wait for the utility to complete necessary grid upgrades before request is fulfilled
2. Receive partial service up to the level of available capacity now, receive full requested service after grid upgrades are in place

Phased interconnection solutions can be low-tech and implemented through process improvements alone

A customer may also choose to receive partial service indefinitely if it is meeting their needs

Flexible Interconnection

Customer allowed a fixed or variable maximum demand below their theoretical maximum load; utility may defer, downsize, or avoid grid upgrades

Recommendation for EVIIWG

EVIIWG's work should continue following adoption of the final Queue Management Proposal to consider:

- Which forms of flexible interconnection are acceptable to customers and can be implemented by the utilities
- The marketing, education, and outreach are warranted to support deployment of flexible interconnections
- The load forecasting and system planning implications of flexible interconnections
- Reporting requirements to show the impacts of flexible interconnections

Thank you!

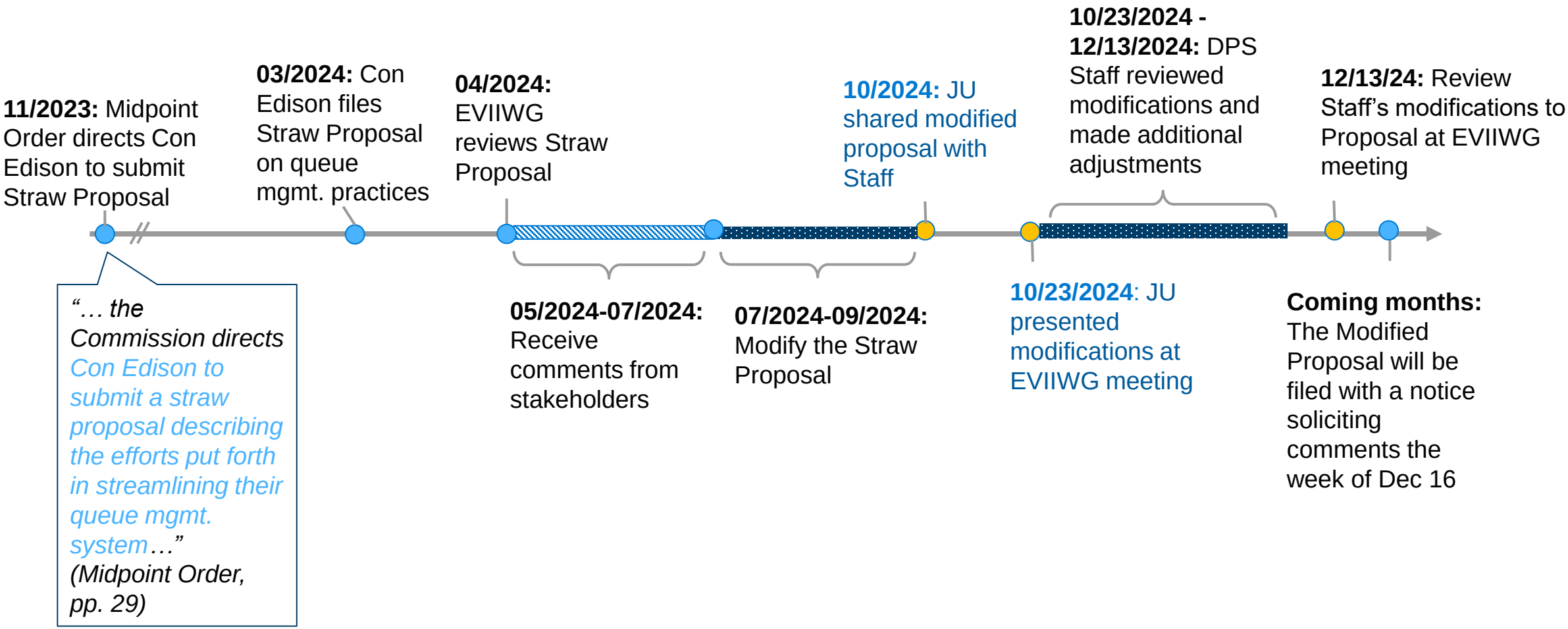
Cole Jermyn, cjermyn@edf.org

Environmental Defense Fund

Summary of DPS Staff's modifications to Joint Utilities' Queue Management Proposal

conEdison

Department of Public Service (DPS) Staff edited the Joint Utilities' modified proposal ahead of proposal filing



DPS Staff's modifications fall into two categories: clarification on utility adoption of proposal's best practices and formatting changes

Example modifications (not exhaustive)

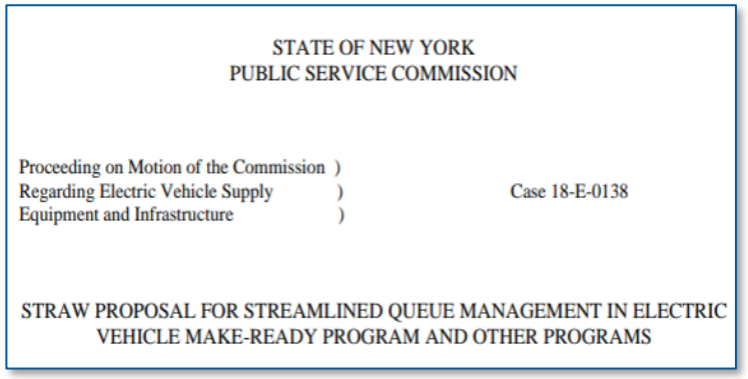
Section Affected in Joint Utilities' Proposal	Updated Proposal Reflecting DPS Staff Edits	Rationale
Section 2.1: Pending available Program Team resource and budget availability, **expand advisory services from only fleet customers to other types of MRP customers…**	Clarified that all Joint Utilities offer fleet advisory services but that only Con Edison was resourced to expand beyond fleet customers and include regular site assessments for non-fleet customers	Clarification on utility implementation
Section 2.3: **Develop a Make-Ready Program (MRP) Participant portal…**	Clarified that all Joint Utilities offer a Participant portal	Clarification on utility implementation
Section 4.2: **Positive performance incentives drive innovation, enterprise alignment…**	Clarified that the MRP Share-the-Savings Earning Adjustment Mechanism (EAM) is applicable to all Joint Utilities	Utility attribution
Table of contents	Table of contents now precedes definitions section instead of following definitions section	Formatting and organization
Acronym and abbreviations	Added this section	Formatting and organization
N/A	All footnotes now follow punctuation	Formatting

Appendix: Summary of Joint Utilities Changes to Con Edison's Queue Management Straw Proposal

The Straw Proposal was modified to reflect the Joint Utilities' attributes and processes (and not just Con Edison's).

Straw Proposal Modification Process:

Original Con Edison Straw Proposal on Queue Management

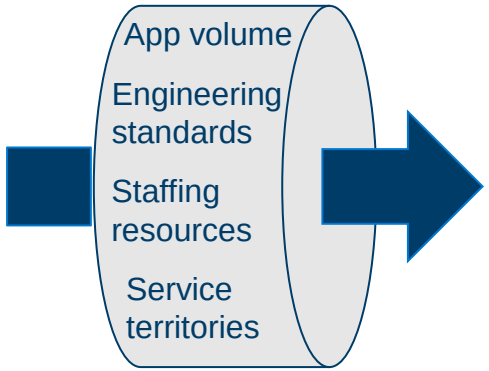


STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

Proceeding on Motion of the Commission)
Regarding Electric Vehicle Supply)
Equipment and Infrastructure) Case 18-E-0138

STRAW PROPOSAL FOR STREAMLINED QUEUE MANAGEMENT IN ELECTRIC VEHICLE MAKE-READY PROGRAM AND OTHER PROGRAMS

Modified to consider differences across Joint Utilities



Modified Proposal on Queue Management

Types of changes made:

Structural:
E.g., Revised operational measures section to include sub-sections: (1) General app mgmt.; (2) High-volume app mgmt.; (3) Innovations.

Content:
E.g., Removed internal forecasting measure as Upstate Utilities complete incentive eligibility review and service determination review in parallel and, therefore, program team cannot forecast during eligibility review.

Other modifications incorporate stakeholder feedback and provide clarity to Make-Ready Program Participants.

Example modifications (not exhaustive)

Original Straw Proposal	Modified Joint Utilities Proposal	Rationale
Queue management for **EV charging station projects**	Queue management for **V1G EV charging station projects**	Aligns with scope of EVIIWG
n/a	The operations innovations section was added to support Participants looking to **implement load mgmt. and V1G phased deployment of chargers**	Clear stakeholder interest (e.g., IREC) in strategies to support grid-constrained areas
Downstate Make-Ready Program flow chart only	**Downstate and Upstate** Make-Ready Program flow charts included	Provides Participants with high-level resource for the entire JU
n/a	Appendix added to **summarize comments** from stakeholders	Creates record of key comments made by stakeholders during modification process

*Interstate Renewable Energy Council