New York State Department of Public Service

EVIIWG Meeting

May 8, 2024

Agenda

1. EVIIWG updates - Matter Number: 24-00339
    - Straw Proposal Edits Reminder
2. SIR Process - Jason
3. Comparison of SIR and Straw Proposal – Katie
4. Discussion on the questions posed at last meeting
5. Next Steps
    - Identifying Interconnection and queuing issues
6. Next meeting scheduled for June 7th from 1:00-3:00

- 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

The EVIIWG Webpage Reminder

The webpage includes all EVIIWG related documents such as:

- Dates of future meetings and meeting materials
- Recordings
- Meeting registration links
- Agendas
- The Straw Proposal
- Other relevant information

https://dps.ny.gov/electric-vehicle-infrastructure-and-interconnection-working-group-eviiwg

Distribution Level Interconnection in New York

Standardized Interconnection Requirements (SIR)

- Standardized Interconnection Requirements and Application Process For New Distributed Generators (DG) and/or Energy Storage Systems (ESS) **5 MW or Less** Connected in Parallel with Utility Distribution Systems **(SIR)**

- SIR provides application, review, approval and minimum design/installation requirements for DG/ESS interconnection projects 5 MW or less.

- SIR also includes standardized interconnection contract forms and associated requirements.

- Latest version of the SIR is from 2/1/24, Case 22-E-0137

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SIR – Section I – Application Process

A. Introduction

B. Application Process Steps for Systems 50 kW or Less (Residential)

Exceptions 1-3:

Step 1: Initial Communication from the Potential Applicant

Step 2: The Inquiry is Reviewed by the Utility to Determine the Nature of the Project

Step 3: Potential Applicant Files an Application

Step 4: System Installation

Step 5: The Applicant's Facility is Tested in Accordance with the Standardized Interconnection Requirements

Step 6: Final Acceptance

SIR – Section I – Application Process

Section C. Application Process Steps for Systems above 50 kW up to 5 MW (Non-Residential)

Step 1: Initial Communication from the Potential Applicant.
Step 2: The Inquiry is Reviewed by the Utility to Determine the Nature of the Project.
Step 3: Potential Applicant Files an Application
Step 4: Utility Performs Preliminary / Supplemental Screening Analysis and Develops a Cost Estimate for the Coordinated Electric System Interconnection Review (CESIR) if required
Step 5: Applicant Commits to the Completion of the CESIR
Step 6: Utility Completes the CESIR
Step 7: Applicant Commits to Utility Construction of Utility's System Modifications
Step 8: Project Construction
Step 9: The Applicant's Facility is Tested in Accordance with the Standardized Interconnection Requirements
Step 10: Interconnection
Step 11: Final Acceptance and Utility Cost Reconciliation

SIR – Section I – Application Process

D. **Payment and Construction Milestones**

E. **Application Process for Energy Storage Systems (ESS)**

Step 1: The Application

Step 2: Protection and Control Review

Step 3: Contract and Payment for Utility Construction Costs

F. **Rules for Combining DG Applications**

G. **Interconnection On-Line Application Portal (IOAP)**

H. **Modifications**

SIR – Section II – Interconnection Requirements

A. Design Requirements

1. Common
    - Voltage Response
    - Frequency Response
    - Reconnection to the Utility System
2. Synchronous Generators
3. Induction Generators
4. Inverters
5. Minimum Protective Function Requirements
6. Metering

SIR – Section II – Interconnection Requirements

B. Operating Requirements
C. Dedicated Transformer
D. Disconnect Switch
E. Power Quality
F. Power Factor
G. Islanding
H. Equipment Certification
I. Verification Testing
J. Interconnection Inventory

SIR – Section III – Glossary of Terms

SIR – Appendices

APPENDIX A -	Standard Contract
APPENDIX A-1 -	Standard Contract for Use with Federal Agencies
APPENDIX A-2 -	Standard Contract for Use with State Agencies
APPENDIX B -	Standardized Application Inverter Based
APPENDIX C -	Standardized Application Non-Inverter Based
APPENDIX D -	Pre-Application Report
APPENDIX E -	Cost Sharing for System Modifications
APPENDIX F -	Application Package Checklist
APPENDIX G -	Application Screening
APPENDIX H -	Acknowledgement of Property Owner Consent
APPENDIX I -	Standard Moratorium Attestation Form
APPENDIX J -	Standard Site Control Form
APPENDIX K -	Energy Storage System Application Requirements
APPENDIX L -	Project Construction Schedule

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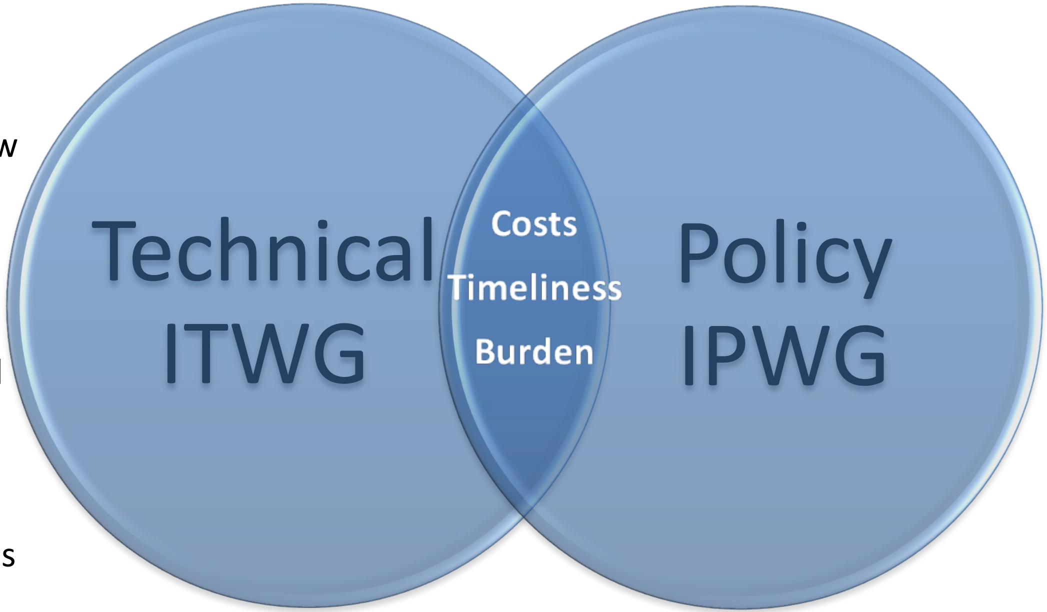
SIR – Modifications & Adoption

- Since its inception in 1999, the SIR has been updated and modified multiple times to keep up with and adapt to changes in State/PSC policy and the overall Distributed Energy Resources (DER) industry
- Beginning in 2016, developers and utilities have proposed amendments through a collaborative process involving the Interconnection Policy and Technical Working Groups (IPWG & ITWG)
- Any changes to the SIR require the Public Service Commission's (PSC) approval – approved amendments become part of the utilities' tariffs
    - Utilities have very little discretion to vary the rules or grant extensions
    - State and utility ombudspersons are available to assist in navigating the rules

Interconnection Working Groups

<u>Technical</u>

- Technical barriers & new technologies
- SIR screening
- Islanding Protection
- Monitoring and Control
- Voltage Flicker
- Energy Storage
- Metering Configurations
- Smart Inverter Functionality
- Flexible Interconnection



<u>Policy</u>

- Queue management
- Communication
- Federal/State queue coordination
- Material modifications
- Cost sharing

Policy Working Group (IPWG)

- Goal: develop consensus-based solutions and recommendations on policy issues related to the interconnection of DG/DER on a State-Wide basis
- Monthly meetings, stakeholder-driven agenda
- Includes utilities, project developers, trade associations, non-governmental organizations, and customer representatives
- Topics: Queue Management / Material Modifications / Integration of ESS/ Queue Coordination/Construction issues / Cost Sharing
- More information on IPWG at:

  https://dps.ny.gov/interconnection-policy-working-group

Technical Working Group (ITWG)

- Goal: identify, discuss, and resolve technical barriers and challenges affecting the interconnection of DG/DER on a State-Wide basis
- Includes representatives from State agencies, utilities, and DG developers
- Technical consultant (EPRI / Pterra) to assist evaluation process and technical document development
- Initial Topics: Ground Fault Over Voltage (3Vo) / Anti-Islanding Protections (DTT) / Monitoring & Control
- Current Topics: Updated Flicker Screening / Flexible Interconnection / Energy Storage Systems / Smart Inverter Functionality
- More information on ITWG at:

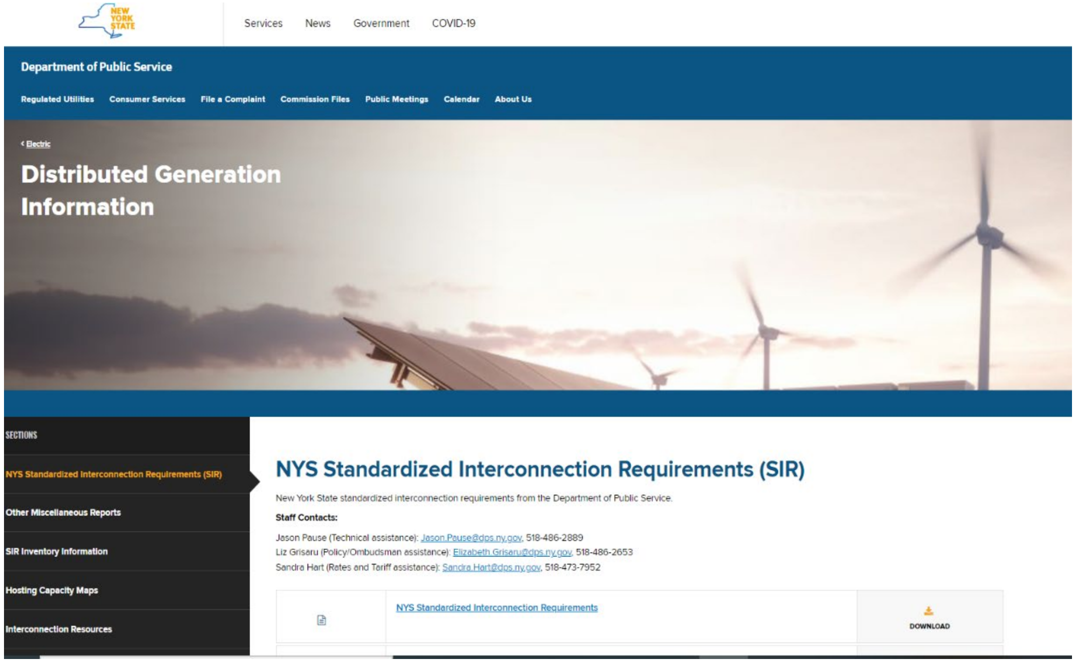
  https://dps.ny.gov/interconnection-technical-working-group

DPS Website for DG / DER

Department of Public Service – DG Page

https://dps.ny.gov/distributed-generation-information

More Info



DPS Website for DG / DER

- Latest version of SIR
- IPWG & ITWG Pages
  - Meeting information (dates/links/agenda’s/etc.)
  - Specific reports and documents associated with each group's efforts
- Contacts – Ombudsman
- SIR Inventory (Queue) for each utility
- Hosting Capacity Maps for each utility
- UL 1741 equipment certification lists
- Other SIR / DER related information

DPS Interconnection Team - Complaints

- Address applicant/developer complaints associated with a specific utility and DER interconnection project
- Encourage applicant/developers to use utility ombudsman contacts first
- If applicant/developer is still unsatisfied, DPS staff intervene and try to work collaboratively between utility and applicant/developer to resolve issues/concerns within the rules of the SIR (shorter/unofficial process)
- If DPS staff can’t help resolve the issue or concern through our internal collaborative process, then applicant/developer may need to file petition/declaratory ruling with the Commission for an official determination (longer/official process)

NYS Interconnection Team

Interconnection Technical Working Group Issues:

Jason Pause (DPS)
518-486-2889
jason.pause@dps.ny.gov

Michael Razanousky (NYSERDA)
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Interconnection Ombudsperson(s) & Policy Working Group Issues:

Liz Grisaru (DPS)
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Jim Hastings (NYSERDA)
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jim.hastings@nyserda.ny.gov

- Thanks to Shahriar Chowdhury & Brad Malmberg (ESR) for their continued help & support.

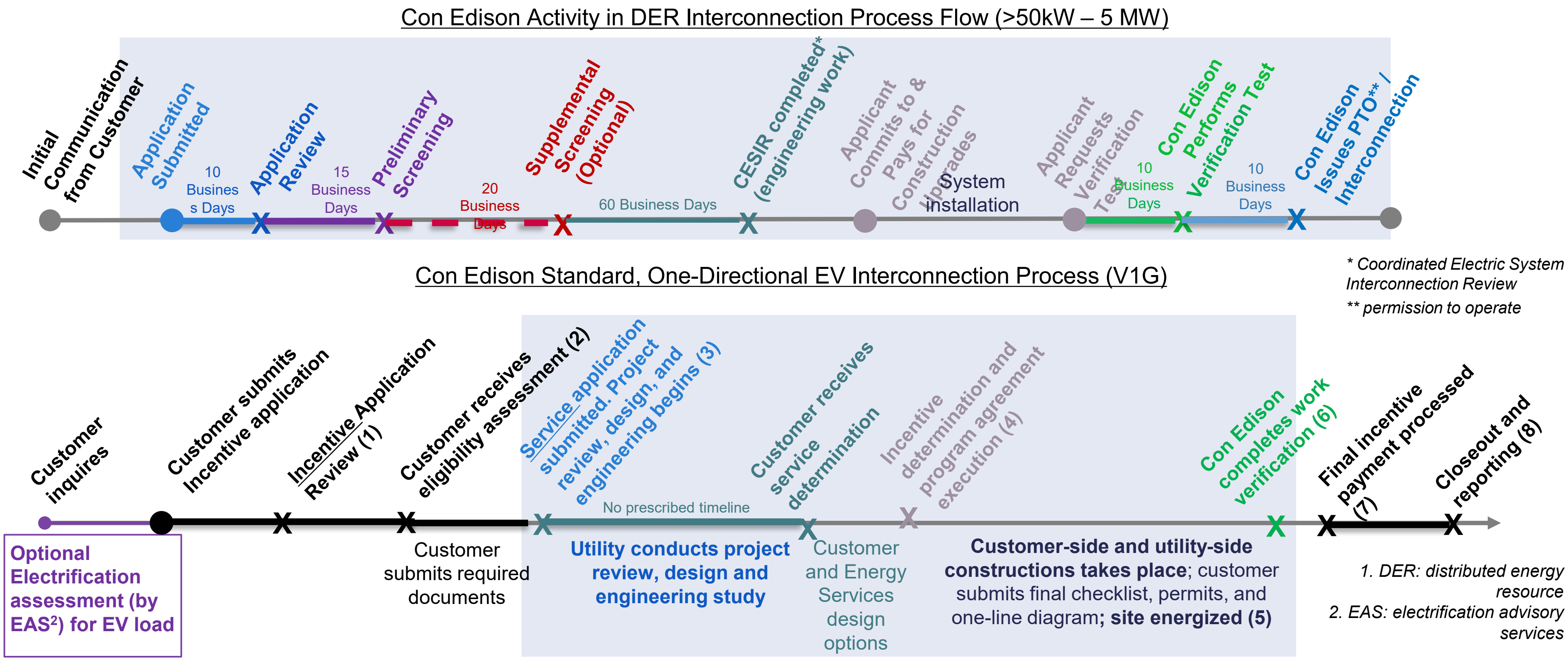
SIR – Straw Proposal Comparison

DER* Interconnection vs Standard (V1G) EV Interconnection

**DER: distributed energy resource*

Comparison: DER[1] and Standard (V1G) EV interconnection flows

Reflects standard V1G interconnection mapped in Queue Management Straw Proposal



** Coordinated Electric System Interconnection Review*

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1. DER: distributed energy resource

2. EAS: electrification advisory services

Select EV Interconnection Illustrative Scenarios

- **Recap of Electrification Advisory Services (EAS) for EV Load**
- **Scenarios**
  1. Service adequate for EV load, no battery
  2. Service adequate for EV load when paired with a battery (V2G* considered with battery)
  3. Service inadequate for EV load

**V2G: vehicle-to-grid*

Recap of Electrification Advisory Services (EAS) for EV load + pre-engagement tools from the Straw Proposal for Queue Management

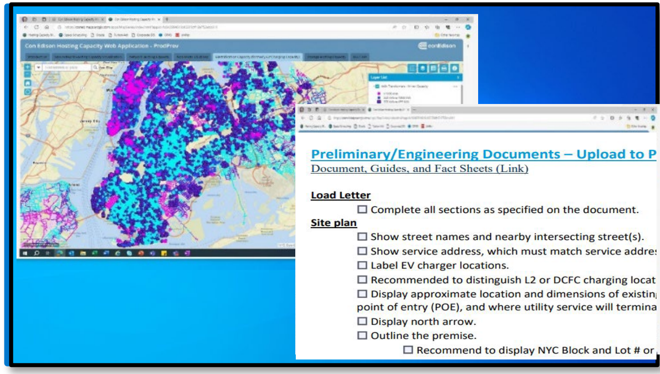
Electrification Advisory Services

- **Includes a site assessment** with preliminary review of grid capacity and can help participants determine site viability before investing resources
- Prepares Participant for Service Determination, improving speed to goal & customer experience
- Supports Participants as they prepare required documents
- Saves times and educates and Participants through site assessments

Service determination self-service tools

- **Includes…A publicly available list of required documents**, with examples and clear guidance on what constitutes an acceptable document
- **…an EV charging rate calculator**
- **..a hosting capacity map**
- Helps the Participant plan for their projects
- Pairs well with a conversation with the Program Team

Illustration of hosting capacity map, required document checklist

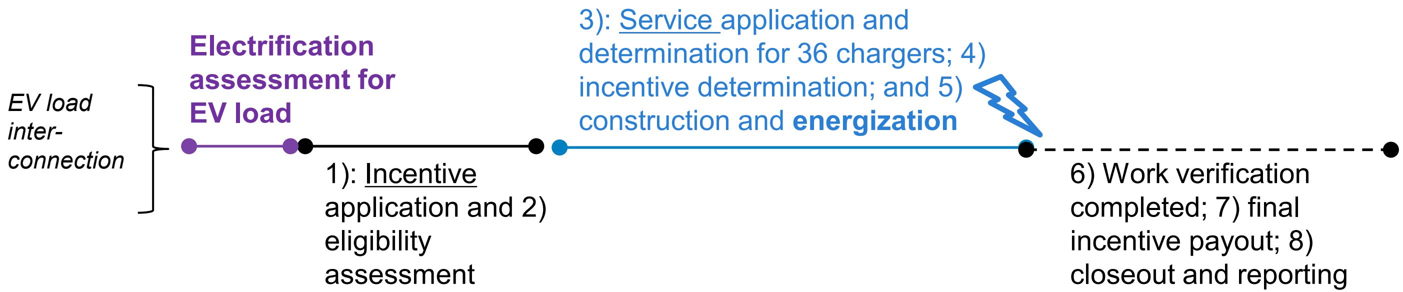


EV load site assessment shows site is service adequate for EV load; customer chooses to install standard V1G chargers.

Scenario

- Customer: private parking
- Objective: install 36 L2 charges
- Site electrification assessment for EV load only with Electrification Advisory Services (EAS): site is service-adequate for all chargers
- Priority: ease of implementation
- Outcome: chargers installed

Sample study alignment to meet customer priorities

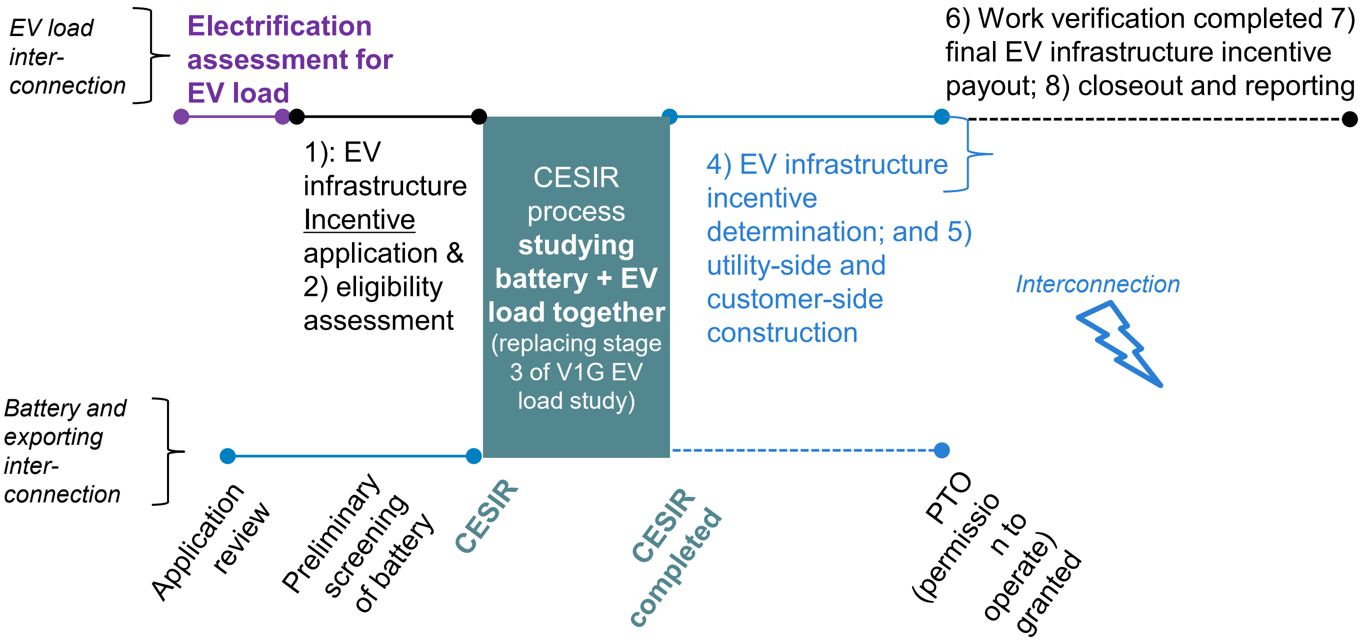


Site is <u>not</u> service adequate for EV load in EV load site assessment. Project follows SIR to consider battery with EV load. After CESIR, customer chooses to install battery.

Scenario

- <u>Customer</u>: business with light-duty fleet
- <u>Objective</u>: electrify fleet and install 10 DCFC chargers
- <u>Site electrification assessment for EV load by EAS</u>: site is service inadequate
- <u>Priority</u>: interconnection cost containment and earning opportunity through exporting to grid
- <u>Outcome</u>: all chargers energized after battery was in operation

Sample study alignment to meet customer priorities

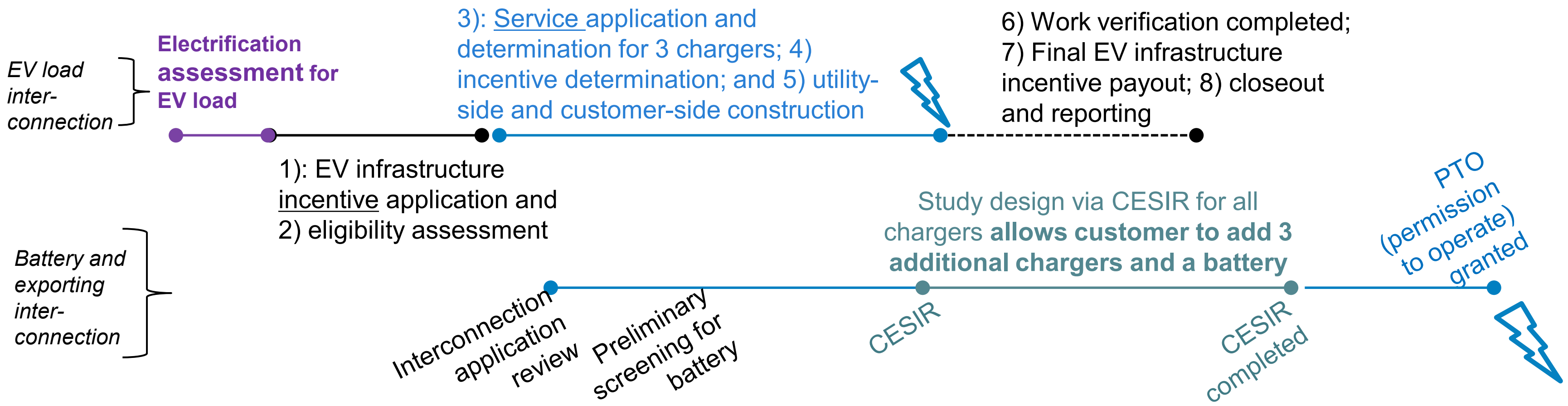


Site assessment shows capacity is adequate for ½ of EV load (phase 1). Phase 2 includes battery and additional chargers. Customer chooses to phase in EV load for publicly accessible station.

Scenario

- Customer: municipal government
- Objective: install 6 publicly available DCFC plugs
- Site electrification assessment for EV load only with EAS: site is service-adequate for 3 DCFC chargers only
- Priority: speed; energize a fraction of chargers for public use ASAP
- Outcome: 3 DCFC chargers approved for interconnection with limited infrastructure upgrades; CESIR is completed to design the addition of 3 additional chargers + battery, which applicant elects to pursue

Sample study alignment



Questions

Discussion on questions posed at April 4 meeting

- Suggestions on the format and organization of the EVIIWG.
- Ideas from other jurisdictions.
- Should the interconnection process for EVs be separate from or added as a modification to the current Standard Interconnection Requirements process for distributed energy resources?
- How should changes in EV technology and policy be incorporated into the EV specific interconnection process?
- Are there billing and crediting issues to anticipate?
- Are there any other considerations that should be taken into account?

Next Steps

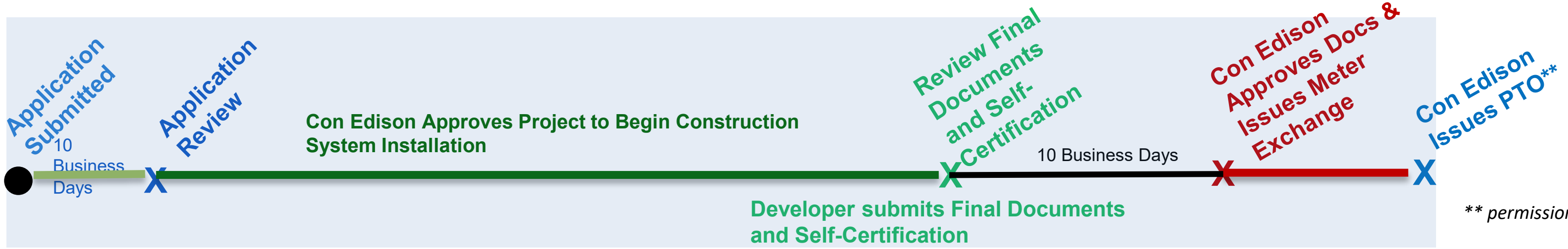
Next Steps

- Continue to edit straw proposal, as necessary
  - The Straw Proposal can be found on DMM under Case 18-E-0138 and on the EVIIWG webpage at https://dps.ny.gov/electric-vehicle-infrastructure-and-interconnection-working-group-eviiwg
  - Continue to send comments and proposed edits to Lisa.Rosi@DPS.NY.gov or EVSE@dps.ny.gov or post to Matter Number: 24-00339
  - Staff will modify the Proposal based on stakeholder feedback and discuss it at the following EVIIWG meeting, planned for June 7th, 2024
- For future discussion: EVIIWG members will provide a list of any issues and barriers encountered when interconnecting EVs

Appendix

Comparison: DER[1] (<50kW) and Standard (V1G) EV interconnection flows

Con Edison Activity in DG Interconnection Process Flow (<50kW)



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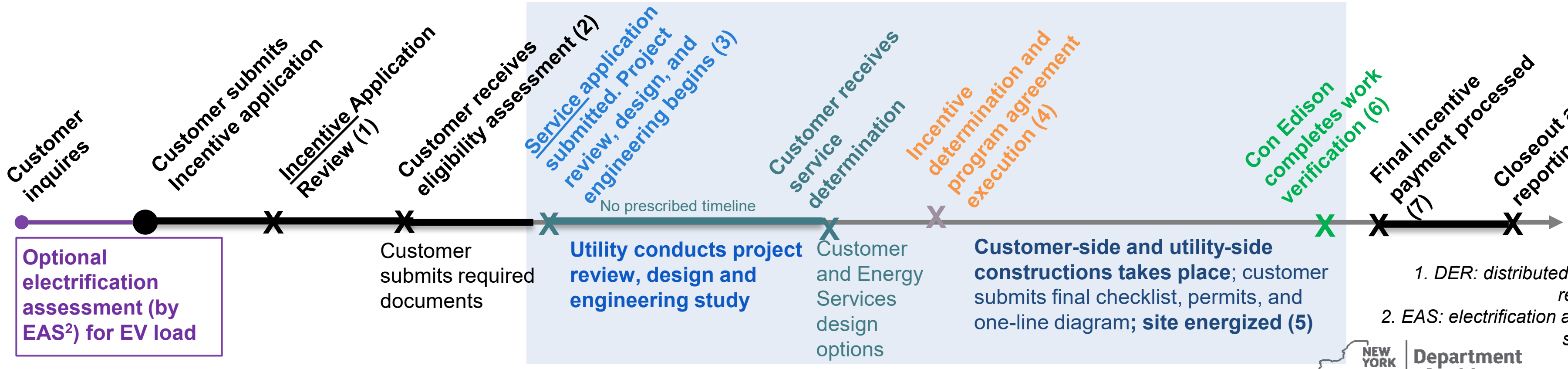
Con Edison Standard, One-Directional EV Interconnection Process (V1G)



1. DER: distributed energy resource
2. EAS: electrification advisory services