

Direct Current Fast Charging Per-Plug Incentive Program and New York Electric Vehicle Infrastructure Make-Ready Program

ANNUAL REPORT



Case 18-E-0138

Submitted by: Rochester Gas and Electric

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SUMMARY

Direct Current Fast Charging Per-Plug Incentive Program (DCFC PPI) and New York Electric Vehicle Infrastructure Make-Ready Program (EV Make Ready)

1.1 BACKGROUND

Rochester Gas and Electric Corporation (“RG&E”) submits this annual report (“Report”) as required by the February 7, 2019 Order Establishing Framework for Direct Current Fast Charging Infrastructure Program¹ and the July 16, 2020 Order Establishing Electric Vehicle Infrastructure Make-Ready Program and Other Programs² (“Order”) in Case 18-E-0138. This report covers the period ending December 31, 2021.

The Direct Current Fast Charging (DCFC) Per-Plug Incentive Program is available to new qualifying DCFC infrastructure placed into service after March 1, 2019. The DCFC Program provides an annual declining per-plug incentive to qualifying DCFC station operators through 2025. The Commission has directed the utilities to provide an annual report on the DCFC Program to inform and evaluate the success of the program.

The Electric Vehicle Infrastructure Make-Ready Program is available to Level 2 and DCFC infrastructure where construction had not commenced prior to the release of the Order on July 16, 2020. The Make-Ready Program provides an incentive to cover eligible infrastructure costs required to prepare a site for EV charging. To evaluate the performance of the program as well as potentially make modifications to the program, the Commission directed the utilities to provide this annual report. Confidential information from both programs has been redacted in the public version of this report.

¹ Case 18-E-0138, Proceeding on Motion of the Commission Regarding Electric Vehicle Supply Equipment and Infrastructure, Order Establishing Framework for Direct Current Fast Charging Infrastructure Program (issued and effective Feb. 7, 2019) (“DC Fast Charger Order”).

² Case 18-E-0138, Proceeding on Motion of the Commission Regarding Electric Vehicle Supply Equipment and Infrastructure, Order Establishing Electric Vehicle Infrastructure Make-Ready Program And Other Programs (issued and effective July 16, 2020) (“Make Ready Order”).

Information contained in this Report is prepared by the Company and its data collection vendor, Atlas Public Policy (“Atlas”). Report information prepared by Atlas contains data collected from all EV charging ports active during the reporting period. Report information provided by the Company contains data that is only related to eligible plug counts as defined by the Order.

1.2 DEFINITIONS

Throughout this Report the following terms are used as defined below:

Active Plug: a plug at which at least one valid charging Session occurred

Active Site: a site at which at least one valid charging Session occurred

All or Some Data Received and Validated: status that indicates data was received and validated for a site or sites, but does not guarantee that the Site(s) recorded utilization

Charging Duration: the timeframe within a charging Session over which energy is delivered from the charger to the vehicle

DCFC: Direct Current Fast Charger

Eligible plugs: the number of plugs capable of charging simultaneously at an Operational Site³

L2: Level 2 charger

No Valid Data Received: data was not received for a site due to no response, or data provided was not provided in a valid format and therefore unusable

Operational site: EV charger installations which were operational and approved for incentives from one of the Companies as of December 31, 2021

Participant⁴: an entity that applies for and receives incentives available through a Company’s Make-Ready or Per-Plug Incentive Program.

³ At some charging stations there are multiple plugs. In both the Make-Ready and DCFC Per Plug Incentive Programs the number of eligible Plugs at a given Station is the number of Plugs that are able to deliver energy simultaneously. In some cases, a charging station may have two Plugs that are not able to deliver energy at the same time, so together those Plugs are considered one Eligible Plug. In these cases, this report provides the charging data for both Plugs where Plug-level data are reported.

Plug: the piece or subdivision of the charging equipment that physically interfaces with a single vehicle in a one-to-one connection, usually 1 or 2 plugs are present on a station

Session: a single charging event which is initiated when a vehicle connects to a Plug and concludes when the vehicle disconnects from the Plug

Session data: data collected about a single Session, including start time, stop time, total energy dispensed, and peak demand recorded in a session

Session interval data: charger power output recorded over the course of a session⁵

Session duration: the duration of a charging session

Site: the physical location where one or more Stations are installed

Station: the single piece of charging equipment (e.g., kiosk) that administers charge to a vehicle

Unmatched Utility ID: The unique identifier for Operating Costs and Fee Structure data could not be matched sufficiently because submissions were completed manually by program participants using an Atlas ID and not Utility ID numbers.

1.3 ATLAS METHODOLOGY

As part of the data collection for the EV Make-Ready and Per-Plug Incentive programs, RG&E provided Atlas Public Policy with a list of the projects that were considered complete and paid out, for Atlas to collect data on. Atlas worked directly with program participants to request the required charging session and operating costs and fee structure data, while also establishing direct relationships with EV charging networks, to collect the data. Atlas thus had data submitted by program participants and received data directly from select EV charging networks. Atlas excluded data submitted by program participants when that data was also provided by their EV charging network. Once data was collected, Atlas normalized, reviewed, and validated

⁴ For the Make-Ready Program, the Participant may be (1) an RG&E electric account holder or customer, (2) a developer, (3) an approved contractor, (4) an equipment owner, or (5) the owner or operator of a site. The Participant receives the incentive and takes on the reporting responsibilities of the program. For the Per Plug Incentive Program, the Participant must be the account holder or customer.

⁵ Charging stations typically report session interval data in 15-minute intervals.

the charging session, 15-minute session interval, and load curve data, along with the operating costs and fee structure data for the confidential and public report.

To prepare the public report, Atlas applied the 15/15 standard as detailed in the March 9, 2017 REV Order. The Order specified: "[T]he 15/15 standard states that an aggregated data set may be shared only if it contains at least 15 customers, with no single customer representing more than 15 percent of the total load for the group." For the purposes of the EV Make-Ready and Per-Plug Incentive program, the 15/15 rule is applied at the project (charging site) level, where no data is surfaced in the public report when there is no more than 15 sites and no single customer is more than 15 percent of utilization.

The steps to review and validate the data are described in brief here, with detailed definitions and specification provided in the Appendix.

Once data is normalized, there are three batches of data that Atlas validates and identifies using automated errors or flags. The first batch is the station registrations, the second is the session and interval data, and the third is operating costs and fee structure. Atlas defined errors as problems with the session/EVSE itself or a failure to follow required reporting standards, and excluded data found to be erroneous. Flags are items for evaluation that could represent a problem with the session/EVSE or simply be an unusual session; data should be considered on a case-by-case basis. For this report, validated (data considered complete and without errors) and flagged data is included. Once data tables and reports are produced, at least two Atlas staff members conduct a manual review to ensure data is correctly associated to the right utility, and required reporting measure, to be considered final.

1.3.1 Data Collection Limitations

Enumerated below are the limitations and hindrances that arose while attempting to collect, manage, and process data for the EV Make-Ready and Per-Plug Incentive programs:

- 1. Participant non-response and non-compliance.**

At least two attempts by Atlas Public Policy and two attempts from each utility's program manager to reach program participants were made for this report. Program participants

were instructed to work with their EV charging network to produce a session data report, and to fill out a template on their site's operating costs and fee structure and then upload each report through a web link provided by Atlas. Atlas has notified each utility of program participants that failed to submit data session data and/or operating costs and fee structure.

2. Incomplete and missing data.

Among those who were able to submit data, many did not include required fields, which necessitated inference and estimation or, in acute cases, rejection of the data as submitted. Inferred fields are substantially less reliable than their counterparts.

3. Poorly formatted data.

While poor formatting of data (unexpected data types, non-standard) can be mitigated via the validation process, large scale poorly formatted data required either normalization—which carries the risk of data loss or misunderstanding the original intent—or exclusion from an already limited dataset.

4. EV charging network technical issues.

EV charging networks have different technical capabilities or software in place to provide site, session, or interval data in a timely manner. For interval data in particular, many EV charging networks were not prepared to report on active interval session data from the past year, resulting in a large set of missing data.

DCFC PPI

Ordering Clause No. 5 of the DCFC Order directed RG&E to file a detailed annual report by March 1st, after completion of each program year as described in the body of the DCFC Order. On February 28, 2022, the Joint Utilities of New York (“JU”) received a 45-day extension from the New York State Public Service Commission. The annual report must detail:

- A. the cumulative number of plugs for which the utility has received applications
- B. the number of plugs in service and their geographic siting
- C. the number of plugs under construction and their estimated in-service dates
- D. station equipment type
- E. installation costs
- F. energy usage data including kWh dispensed, start/stop times, peak kW per charging station, amount of time each vehicle is plugged in, amount of time each vehicle is actually charging, and load curves
- G. comparisons of peak DCFC station demand with local peak demand and system peak demand,
- H. usage fees
- I. technologies used to manage demand

2.1 SITE INFORMATION FOR OPERATIONAL STATIONS

As of December 31st, 2021, RG&E had no operating stations in the DCFC PPI program.

2.2 CUMULATIVE APPLICATIONS

[REDACTED]

This data contains confidential commercial information and is therefore redacted from public disclosure

2.3 PLUGS IN SERVICE

There are no plugs in service in the RG&E operating areas.

2.4 PLUGS UNDER CONSTRUCTION

[REDACTED]

[REDACTED]

This data contains confidential commercial information and is therefore redacted from public disclosure

2.5 STATION EQUIPMENT TYPE

As of December 31, 2021, there were no stations operating within the RG&E service areas.

2.6 INSTALLATION COSTS

As of December 31, 2021, there were no stations operating within the RG&E service areas.

2.7 ENERGY USAGE DATA

As of December 31, 2021, there were no stations operating within the RG&E service areas.

2.8 PEAK DEMAND COMPARISON

As of December 31, 2021, there were no stations operating within the RG&E service areas.

2.9 USAGE FEES

As of December 31, 2021, there were no stations operating within the RG&E service areas.

2.10 TECHNOLOGIES USED TO MANAGE DEMAND

As of December 31, 2021, there were no stations operating within the RG&E service areas.

EV MAKE READY

The Make Ready Order directed RG&E to file a detailed annual report by March 1 after completion of each program year as described in the body of the Make Ready Order. On February 28, 2022, the Joint Utilities of New York (“JU”) received a 45-day extension from the New York State Public Service Commission. The annual report must detail:

A. Reporting period program participation information:

1. the percent of service applications that have matured into operating stations
2. number of station owners participating
3. the number of sites for which incentives were issued
4. the number of plugs installed
5. infrastructure costs incurred. Infrastructure costs are to be differentiated by equipment and installation costs for customer-owned assets equipment and installation costs for company-owned assets. The cost details for company-owned assets must be broken out into costs that are considered make-ready and costs that are considered new business
6. site information

B. Utility system and billing information for each station:

1. 15-minute interval data
2. load profiles for the stations for the top ten demand days of each year
3. utility bills, to be differentiated by delivery service-related costs and energy-related costs

C. Plug and charging session data: 1. the number of sessions daily

2. start and stop times of each charge
3. the amount of time each vehicle is plugged in per session
4. peak kW per charging session
5. kWh per charging session

6. plug outage information. Plug outage information is to include the number and duration of outages and is to be differentiated by expected outages (for maintenance) and unexpected outages

D. Financial information:

- 1. fee structure (structure of fee to the end-use customer, i.e. cost per minute, cost per kWh, cost per session and whether the station owner is providing charging for free)
- 2. charging revenues derived
- 3. operating costs, which should include energy-related costs and non-energy-related costs separately identified

The information presented in the following sections was compiled by the Company and represents eligible plugs as defined by the Order.

3.1 APPLICATIONS MATURED INTO OPERATING STATIONS

Through year-end 2021, RG&E had 23.1 percent of applications mature into operating stations.

Total Applications	78
Operating	18
Percentage	23.1%

3.2 STATION OWNERS PARTICIPATING

Through year-end 2021, RG&E has 13 station owners participating.

3.3 INCENTIVES ISSUED

Through year-end 2021, RG&E has issued incentives to 18 participants.

	Sites Issued Incentives	DAC Count	NYPA Count	NYPA & DAC Count	Other Count
L2	18	2	0	0	16
DCFC	0	0	0	0	0
Total	18	2	0	0	16

3.4 SITE INFORMATION



This data contains confidential commercial information and is therefore redacted from public disclosure

3.5 PLUGS INSTALLED

Through year-end 2021, RG&E has a total of 93 plugs installed .

	Plugs Installed	DAC Count	NYPA Count	NYPA & DAC Count	Other Count
L2	93	14	0	0	79
DCFC	0	0	0	0	0
Total	93	14	0	0	79

3.6 INFRASTRUCTURE COSTS

Infrastructure costs are differentiated by installation costs for customer-owned assets and installation costs for company owned assets to be broken out by make-ready costs and new business costs.

3.6.1 Customer Owned Assets

[Redacted]

[Redacted]

This data contains confidential commercial information and is therefore redacted from public disclosure

3.6.2 Utility Owned Assets

[Redacted]

[Redacted]

This data contains confidential commercial information and is therefore redacted from public disclosure

3.7 UTILITY BILLING AND SYSTEM INFORMATION

Utility billing and system information includes 15-minute interval data, load profiles for the stations for the top ten demand days of each year, and utility bills, to be differentiated by delivery service-related costs and energy-related costs.

3.7.1 15-Minute Interval Data

The vast majority of L2 stations installed in the Company's service are not separately metered (e.g. have not elected to take new service for the Company). Those L2 stations that are separately metered do not meet Company tariff requirements for interval metering based on demand. As discussed in the DCFC PPI section of this Report, all DCFC stations installed in the Company's service area, while separately metered, also have not met the Company's tariff requirements for interval metering, except for one station. Therefore, the Company has worked with its participants and Atlas to collect 15-minute interval data from charging stations directly where available. The 15-minute interval data collected by Atlas is shown in Exhibit 4.

3.7.2 Load Profiles

[REDACTED]

This data contains confidential commercial information and is therefore redacted from public disclosure

3.6.3 Utility Bills

[REDACTED]

This data contains confidential commercial information and is therefore redacted from public disclosure

3.8 PLUG AND CHARGING SESSION DATA

Plug and charging session data including:

- a. the number of sessions daily,
- b. start and stop times of each charge,
- c. the amount of time each vehicle is plugged in per session,
- d. peak kW per charging session,
- e. kWh per charging session, and
- f. plug outage information. Plug outage information is to include the number and duration of outages and is to be differentiated by expected outages (for

maintenance) and unexpected outages

3.8.1 Data Availability Summary

Table 1 shows the total RG&E stations, sites, and plugs activated as part of the EV Make-Ready program. It also summarizes the number of charging sites and plugs where data was considered received or not received from program participants or EV charging networks, and whether the site and plug’s data showed usage, or no usage. No usage in this case could mean it was considered invalid or the station did not have usage data. Table 2 provides more specific details on the data that was submitted by program participants or EV charging networks, and our Definitions section explains each category.

Table 1: RG&E Summary

Station Type	Program	Total Stations	Total Sites	Sites with Use	Sites with No Use	Sites Not Received	Total Plugs	Plugs with Use	Plugs with No Use	Plugs Not Received
DCFC	Make Ready					0				0
L2	Make Ready	82	18	10	6	2	93	45	40	8
Total		82	18	10	6	2	93	45	40	8

Table 2: Receipt of Data by Site(s)

Item		Fee Structure		Interval Data		Operation Costs		Session Data		Total	
Station Type	Status	Total Sites	Total Plugs	Total Sites	Total Plugs	Total Sites	Total Plugs	Total Sites	Total Plugs	Total Sites	Total Plugs
L2	Total	18	93	18	93	18	93	18	93	18	93
	All or Some Data Received and Validated	18	93	6	40	6	26	16	85	18	93
	No Valid Data Received			12	53	12	67	2	8	16	83
Total		18	93	18	93	18	93	18	93	18	93

3.8.2 Daily Charging Sessions



[Redacted]

This data contains confidential commercial information and is therefore redacted from public disclosure

3.8.3 Start and Stop Times

[Redacted]

[Redacted]

This data contains confidential commercial information and is therefore redacted from public disclosure

3.8.4 Charging Sessions

[Redacted]

This data contains confidential commercial information and is therefore redacted from public disclosure

3.8.5 Peak kW

[Redacted]

[Redacted]

This data contains confidential commercial information and is therefore redacted from public disclosure

3.8.6 Energy Consumption

[Redacted]

[Redacted]

[Redacted]

[Redacted]

This data contains confidential commercial information and is therefore redacted from public disclosure

3.8.7 Plug Outage Information

There were limitations to reporting on plug outages and this data was not submitted nor captured as part of this reporting period.

3.9 FINANCIAL INFORMATON

Financial information includes:

- a. fee structure (structure of fee to the end-use customer, i.e. cost per minute, cost per kWh, cost per session and whether the station owner is providing charging for free)
- b. charging revenues derived
- c. operating costs, which include energy-related costs and non-energy-related costs separately identified

3.9.1 Fee Structure

[Redacted]

This data contains confidential commercial information and is therefore redacted from public disclosure

3.9.2 Charging Revenues

[Redacted]

This data contains confidential commercial information and is therefore redacted from public disclosure

3.9.3 Operating Costs

[Redacted]

This data contains confidential commercial information and is therefore redacted from public disclosure

APPENDIX A

4.1 QUALITY CONTROL

Individual charging sessions are evaluated against two sets of criteria—potential errors and potential flags. *Errors* are generally problems with the session/EVSE itself or a failure to follow required reporting standards. *Flags* are items for evaluation that could represent a problem with the session/EVSE or simply be an unusual session. Errors were excluded from reporting, while flagged data were included.

4.1.1 Registration Validations

Errors

Validation Name	Description
Site – No Duplicate Site Ids	No sites share a duplicate ID
Site – No Duplicate Site Address	No sites share an address
Station – No Duplicate Station Ids	No stations share a duplicate ID (usually, the serial number)

4.1.2 Session Data Validations

Errors

Validation Name	Description
Session Date — Null	The plug start or plug end date-times for this session are missing
Session Date — Out of Bounds	The plug start or plug end date-times are outside the reporting period (the session begins or ends prior to the start of the year OR the session begins or ends after the end of the year)
Session Duration — Null, Zero, or Negative	The total duration of the session (plug end time – plug start time) or charging duration (when applicable) is either missing, equal to zero, or a negative number
Session Energy Delivered — Null, Zero, or Negative	The total energy delivered during of the session (in kWh) is either missing, equal to zero, or a negative number

Flags

Validation Name	Description
Session Duration — Less Than 1 minute	The session duration (plug end time – plug start time) or charging duration (when applicable) is less than 1 minute long
Session Energy Delivered — More Than 250 kWh	The total energy delivered during of the session (in kWh) is greater than 250 kWh. For reference, the largest available consumer battery (in the 2022 GMC Hummer EV Pickup) is estimated to hold 200 kWh
Session Energy Delivered — More Than 0.5 kWh	The total energy delivered during of the session (in kWh) is less than 0.5 kWh
Session Duration — Multiple Days	The charging duration (plug end time – plug start time) is greater than 1,440 minutes (1 day) or idle duration (session duration – charging duration, when applicable) is greater than 2,880 minutes (2 days)
Session — Power Above Rating	For L2 stations, average power, defined as Energy (kWh)/Charging Duration, does not exceed 25 kW. For DCFC stations, average power, defined as Energy (kWh)/Charging Duration, does not exceed 400 kW.

4.1.3 Session Interval Data Validations

Errors

Validation Name	Description
Interval – Negative Energy Delivered	The total energy delivered during this interval (in kWh) is less than 0 kWh
Interval Date — Out of Bounds	The Interval start or Interval end date-times are outside the reporting period (the Interval begins or ends prior to the start of the year OR the Interval begins or ends after the end of the year)
Interval – Negative Power Delivered	The Peak kW or Average kW delivered during this interval (in kWh) is less than 0 kWh
Interval - Start Time after End Time	The reported start time of the interval occurs after the reported end time of the interval.

Flags

Validation Name	Description
Interval — Power Above Rating	For L2 stations, Peak kW or Average kW (defined by Energy (kWh)/Charging Duration) does not exceed 25 kW. For DCFC stations, Peak kW or Average kW (defined by Energy (kWh)/Charging Duration) does not exceed 400 kW.

4.1.4 Operating Cost and Fee Structure Validations

Errors

Validation Name	Description
Costs – Empty Entry	This operating cost entry is blank for all cost-related fields

Flags

Validation Name	Description
Costs – Missing/Incorrect ZIP Code	The ZIP code for this operating cost entry is either missing or greater than 5 characters
Costs – Low Costs	The total costs for this entry are less than \$10
Costs – High Costs	The total costs for this entry are greater than \$100,000