# Settlement Year 2 – Fourth Quarter Progress Report to California Public Utilities Commission Electric Vehicle Charging Station Project

# PUBLIC, NON-CONFIDENTIAL VERSION

For the period September 6, 2014 through December 5, 2014 (the Reporting Period) Submitted January 23, 2015 by NRG EV Services LLC on behalf of the Dynegy Parties<sup>1</sup>

#### **EXECUTIVE SUMMARY**

As of December 5, 2014 (the Reporting Date), NRG EV Services LLC (NRG) had a total of over 107 fast charging ports operating across California. 106 Freedom Station sites are either constructed or under development. During the Reporting Period, NRG completed construction on 10 additional Freedom Station installations, for a total of 56 completed sites.

Despite delivery delays, Freedom Stations are now being upgraded with charging equipment supporting the new SAE Combo Charging Standard (CCS). As of the Reporting Date, nearly half of the Freedom Stations (22 sites) were installed and serving drivers, with the remainder anticipated to be upgraded by the end of the next quarter.

Californians have embraced the charging infrastructure developed under the Agreement. Utilization of the charging infrastructure continued to increase in the past quarter – with 107% more sessions and 100% more energy dispensed at those sessions than the previous quarter.

Additionally, to help meet this growing need for fast charging capacity, NRG eVgo is installing and networking publicly available, standalone DC fast chargers across the state and at EV dealerships, e.g. Nissan.

11 out of the 56 Freedom Station sites are located in qualified low-income areas (PUMAs), meeting the 20% commitment.

NRG also added 28 contracted Make-Readies Sites representing 222 Make-Ready Stubs, for a total of 132 Make-Readies Sites and 1,052 Make-Ready Stubs under contract. The total number of installed sites and installed stubs increased to 77 and 585, respectively.

The Technology Demonstration process is proceeding with design, prototyping, and development. The site License Agreement was executed in January 2015.

#### INSTALLATION OF PUBLIC EV CHARGING STATIONS (FREEDOM STATIONS)

As of the Reporting Date, a total of 106 Freedom Station sites were either completed, under construction, or in the permitting process. See maps attached as <u>Appendix A</u> showing the Freedom Station locations and development sites, identifying those that are in low-income

<sup>&</sup>lt;sup>1</sup> Capitalized terms not otherwise defined herein shall have the meaning ascribed to such terms in the Long-Term Contract Settlement Agreement (the "Agreement").

PUMA locations. The maps demonstrate broad regional coverage, enabling drivers to cover nearly every region in the Agreement.

In addition, standalone DC fast chargers contribute to a total of over 107 eVgo fast charging ports across California as of December 5, 2014.

#### **Installations**

During the Reporting Period, NRG completed construction on 10 additional Freedom Stations, for a total of 56 Freedom Stations, one of which received final city approval but has not been energized. Completed Freedom Stations are listed below, with new stations **in bold**. Weather delays, holiday black-outs, and utility interconnection hampered completions, extending the average construction timeline.

	Completed Freedom Stations	City	Low- income PUMA	SAE Support
SF Bay Area				
1	Westlake Shopping Center	Daly City		
2	Whole Foods Fremont	Fremont		
3	Whole Foods San Francisco	San Francisco		
4	Vacaville Premium Outlets	Vacaville		X
5	Livermore Premium Outlets	Livermore		X
6	Walgreens San Francisco	San Francisco		
7	Public Market	Emeryville	X	
8	The Mall at Northgate	San Rafael		X
9	Whole Foods Novato	Novato		
10	Villages at Corte Madera	Corte Madera	X	
11	Whole Foods Berkeley-Telegraph	Berkeley		
12	Whole Foods Cupertino	Cupertino		X
13	Great Mall	Milpitas		X
14	Sywest Crossroads	Pleasant Hill		
15	Whole Foods Los Altos	Los Altos		
16	Nob Hill Foods Mountain View	Mountain View		X
17	Petaluma Outlets	Petaluma	X	X
18	Linda Mar	Pacifica		
19	Coddingtown Mall	Santa Rosa	X	X
20	Rose Pavilion	Pleasanton		X
21	Whole Foods Berkeley- Gilman	Berkeley		X
22	Santa Rosa Plaza	Santa Rosa	X	
23	Whole Foods Lafayette	Lafayette		
24	Whole Foods San Jose	San Jose	X	X





Whole Foods San Jose

Rose Pavilion

	Whole Foods San Jose	Rose Pavilion		
	San Diego County			
25	Fashion Valley Mall	San Diego		X
26	Las Americas Premium Outlets	San Diego	X	
27	Flower Hill Promenade	Del Mar		
28	Carlsbad Premium Outlets	Carlsbad		X
29	Broadway Plaza	Chula Vista	X	
30	Energy Innovation Center	San Diego		X
31	Del Norte Plaza	Escondido	X	
32	Rancho Penasquitos Towne Center	San Diego		
	LA Basin			
33	Camarillo Premium Outlets	Camarillo		
34	Warner Center	Los Angeles		X
35	Stonewood Center	Downey		
36	Larwin Square	Tustin		
37	Outlets at Orange	Orange		X
38	Walgreens Tarzana	Tarzana		
39	Pacific View Mall	Ventura		
40	Cabazon Outlets	Cabazon	X	
41	Brea Mall	Brea		
42	Oaks Mall	Thousand Oaks		X
43	County Fair SC	Chino		
44	Shops at Mission Viejo	Mission Viejo		X
45	Westminster Mall	Westminster		X
46	Inland Center	San Bernardino	X	
47	Los Cerritos Center	Cerritos		
48	City of Hermosa Beach	Hermosa Beach		X
49	Walgreens Huntington Beach	Huntington Beach		
50	Corona Hills Plaza	Corona		
51	Dunlap Huntington Beach	Huntington Beach		

52	Tarragona Plaza	Los Angeles	
53	Pavilions Place	Westminster	
54	Bristol Plaza	Santa Ana	X
55	8000 Sunset	Los Angeles	
	8000 Sunset	Pavilions	s Place
	San Joaquin Valley		
56	Applegate Ranch	Atwater	X
	nrg eVgo		

# Site Development

As of the Reporting Date, 16 additional Freedom Station sites were under construction, 17 more were fully permitted and another 17 sites had been submitted for permitting.

Applegate Ranch

# San Joaquin Valley

The first operational Freedom Station site in the San Joaquin Valley, at Applegate Ranch in Atwater, was completed on October 28, 2014.

#### Low-Income PUMA Distribution

Eleven of the 56 Freedom Stations are located in low-income PUMAs: 6 in the San Francisco Bay Area, 2 in the Los Angeles Basin, 3 in San Diego County. They represent 20% of all operational sites, achieving the goal of 20% in this category.

#### SAE Combo Rollout Status

NRG has begun the process of upgrading its Freedom Stations to support the SAE combo standard (CCS), as required by the Agreement. During the Reporting Period, 19 ABB dual hose chargers – which can support both CHAdeMO and CCS – were installed into existing or new Freedom Station sites, resulting in 22 total CCS chargers available to the public. Additionally, NRG completed the purchasing of all chargers necessary to retrofit all Freedom Stations. Delivery delays continue to impact deployment, but all stations should be upgraded by the next quarterly report.

#### Credit Card Payment Upgrades Rollout Status

Software upgrades and credit card payment systems are being installed at all stations. Quality assurance and security testing revealed some difficulties. Five percent of stations have received upgrades as of the Reporting Date. Equipment for additional installations is in hand and work is moving forward.

#### INSTALLATION OF MAKE READY STUBS AND MAKE READY ARRAYS

Status of Make-Readies Sites

Overall, NRG has 132 Make-Readies Sites under contract, representing 1,052 Make-Ready Stubs. Of these, 585 Make-Ready Stubs have been installed at 77 sites, as set forth in confidential <u>Appendix A</u>.

Pursuant to Section 4(b)(vi)(B) of the Agreement, NRG has established a website which identifies each installed Make-Ready Array's location and Start-Up Period expiration date. See <a href="http://www.nrgevgo.com/california-rev-progress/">http://www.nrgevgo.com/california-rev-progress/</a>.

NRG has conducted a total of 600 site assessments. Of these sites, 324 are Multi-Family Housing Sites, 195 are Workplace Sites and 81 are Public Interest sites, and they would equate to approximately 4,000 Make-Ready Stubs.

#### Mixed-Income Multi-Family Housing Sites

Two San Diego based community housing providers have expressed interest and are currently reviewing the make-ready installation contract. Together these providers represent nearly 100 properties in California. Additionally, new site assessments have been scheduled in January with new community housing providers.

#### **DEMONSTRATION PROGRAMS**

#### **Technology Demonstration Program**

The objective of the Technology Demonstration Project is to demonstrate how micro-grid components (including power storage, conversion, generation, and dispensing) can reduce the cost of developing, constructing, and operating DC Fast Chargers when deployed as modules that are custom combined with the chargers to meet the needs and characteristics of individual properties.

During the Reporting Period, NRG has accomplished the following:

- Finalized our site License Agreement with UCSD. The agreement was fully executed on January 7, 2015.
- Site Design Completed initial construction design and have engineering approval from UCSD. Construction expected to start January 2015.
- Battery Pack Initial design concept completed for a 25kw battery pack utilizing used Mini E batteries. Working with UCSD engineering and fire protection engineer to meet all requirements.
- Dispenser technology Initial prototype of the dispenser has been completed. Full integration with power module expected to be completed February 2015
- Power Converter We have engaged 2 companies to develop power converters which can be used with the dispensers. Initial integration testing has been completed with second vendor. Several issues have been uncovered which the development team is working through.

#### **EV OPPORTUNITY PROJECTS**

Two new opportunities have arisen for EV Opportunity Projects and plans to CPUC staff are forthcoming.

#### USAGE DATA

NRG eVgo completed 36,766 charging sessions in the fourth quarter at Freedom Station sites, a 100% increase, and dispensed over 397,000 kilowatt-hours of electricity, an 89% increase.

This translates to 1,200,000 miles driven on electricity in this quarter alone, displacing 40,000 gallons of gasoline (assuming 30mpg).

See confidential Appendix C for the original raw usage data for the Reporting Period.

# Appendix A

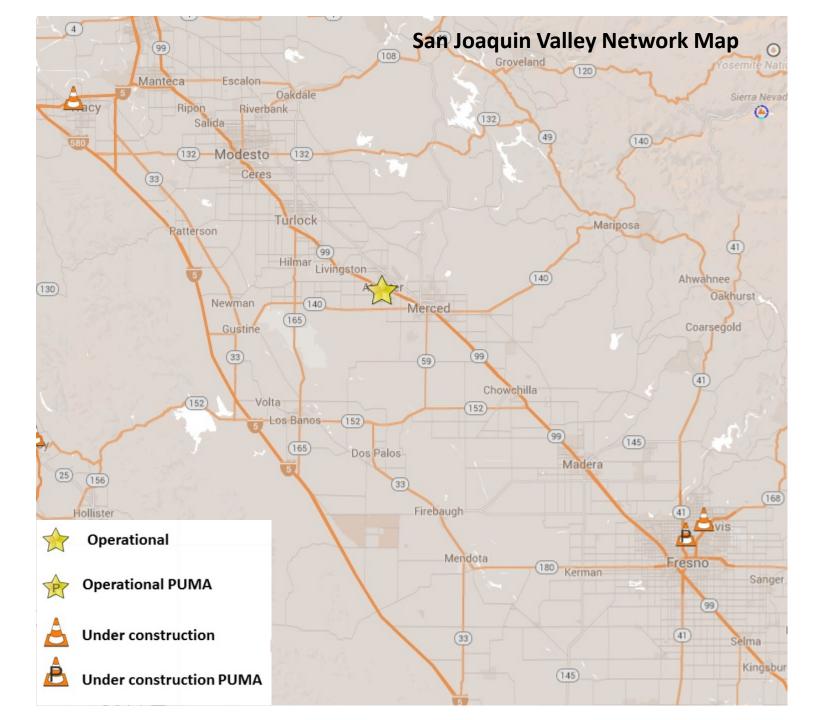
# **Freedom Station Maps**

See attached.









#### Appendix B

#### **Make-Readies Detail**

## See attached [CONFIDENTIAL].

The following information is confidential and protected material and may only be provided to those parties and their Eligible Reviewers that have executed a protective order in the FERC proceeding approving the Agreement and the settlement of the EL02-60/62 Proceeding. NRG retains an exclusive, non-public, proprietary right to such information for eighteen (18) months after the date of submittal to the CPUC, and during such time such information shall not to the extent permitted by law be subject to disclosure under FOIA or CAPRA.

Material Redacted in Public, Non-Confidential Version

### **Appendix C**

## Raw Usage Data

# See attached [CONFIDENTIAL].

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