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February 10, 2020

Hon. Kathleen H. Burgess, Secretary NYS Public Service Commission Empire State Plaza Agency Building 3 Albany, New York 12223-1350

# RE: Case 14-M-0101 – Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision ("REV Proceeding") – Demonstration Projects

Dear Secretary Burgess:

Pursuant to the New York State Public Service Commission's February 26, 2015 Order Adopting Regulatory Policy Framework and Implementation Plan in the referenced proceeding, Consolidated Edison Company of New York, Inc. submits the attached REV Demonstration Project Implementation Plan: New York City Curbside Electric Vehicle Charging Network.

If there are any questions, please contact me.

Respectfully submitted,

/s/ Raghusimha Sudhakara Director REV Demonstration Projects

Attachment



New York City Curbside Electric Vehicle Charging Network

Filing Date: February 10, 2020

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REV Demonstration Project Implementation Plan New York City Curbside Electric Vehicle Charging Network

# **Executive Summary**

This Project Implementation Plan describes the design, roles and responsibilities, work plan, budget, and reporting plan for the approved Consolidated Edison Company of New York, Inc.'s ("Con Edison" or the "Company") New York City Curbside Electric Vehicle Charging Network, a Reforming the Energy Vision ("REV") Demonstration Project ("project"). Con Edison is partnering with the New York City Department of Transportation ("DOT") and AddEnergie to provide Level 2 electric vehicle ("EV") charging to drivers across the City's five boroughs.<sup>1</sup> The demonstration includes 60 dual-charger posts for a total of 120 EV plugs. Of the total, 20 chargers are exclusive to NYC fleet vehicles and the rest will be open to the public.

The partners' fundamental goal is to increase adoption of EVs in New York City. The lack of publicly available charging is a barrier to consumer adoption of EV. As a response, charging-as-a-service ("CaaS") is an emerging business being tested in several markets. This project tests how EV charging in public parking spaces can satisfy EV drivers, host communities, and charging network developers.

The demonstration will test strategies to integrate EV charging into host communities so that it is welcomed by both EV drivers and non-drivers alike; determine the role curbside charging plays in NYC EV charging infrastructure; and quantify the business opportunity of Level 2 curbside EV charging. The business model demonstrated is the use of public rights-of-way to host a franchised Level 2 CaaS network. The partners believe that EV drivers will use these chargers as part of their growing portfolio of charging options, that host communities will accept the chargers as an innovative use of public space, and that, as EV use increases, a business case will develop for public long-dwell chargers.

<sup>&</sup>lt;sup>1</sup> The Project Proposal, dated May 1, 2019, was assessed by the Department of Public Service Staff ("Staff") to be in compliance with the Ordering Clause 4 of the Public Service Commission's Order Adopting Regulatory Policy Framework and Implementation Plan. On May 21, 2019, DPS Staff issued an assessment of the Project Proposal and included a discussion of the Project Implementation Plan to be filed by Con Edison. (see

http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={AC393E5F-A88C-48ED-9A56-EA9908925C7E})

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# Section 1: Demonstration Design

## A) Test Statements

This demonstration will evaluate the potential for curbside Level 2 EV charging in New York City.<sup>2</sup> A successful curbside charging network will provide charging services to EV drivers, will be accepted in the neighborhoods hosting the chargers, and will meet the business requirements of the charging network owner/operator. A successful demonstration project will yield insights that enhance the curbside charging business model and advance the market for EV charging. The hypotheses below capture the project goals. Success may prove or disprove these hypotheses.

Test Statement	Hypothesis
	If chargers are installed in locations based on thoughtful siting guidelines <sup>3</sup>
We believe Community stakeholders will accept	<b>And</b> host communities are engaged and informed during the siting process
curbside EV charging stations.	<b>Then</b> public chargers will be welcome in host neighborhoods

## **Table 1: Demonstration Hypotheses**

<sup>2</sup> See May 1, 2019 Project Proposal.

<sup>3</sup> DOT analyzed New York City neighborhoods for EV registration density, housing and land use characteristics (i.e., off-street parking availability), travel destinations, and anchor institutions, such as educational campuses and medical centers to determine where to locate the demonstration chargers. Within target neighborhoods, DOT further identified street locations that would provide high public visibility, high likelihood of parking turnover, and potential for overlapping use cases such as day/night shift work, and/or overnight residential parking. These locations were vetted through a public engagement process including elected officials, community boards, and private citizens. The guidelines were based on the report *Curb Enthusiasm: Deployment Guide for On-Street Electric Vehicle Charging* from WXY Architecture + Urban Design and Barretto Bay Strategies, commissioned by New York State Energy Research and Development Authority ("NYSERDA"), New York State Department of Transportation, in partnership with the New York City Mayor's Office of Sustainability and the New York City DOT, published in September 2018.

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We believe Curbside EV charging stations have a significant role in the EV charging ecosystem	<ul> <li>If public EV charging options are made available and visible in New York City</li> <li>Then EV drivers will add them to their portfolio of charging solutions</li> <li>Then public awareness of EVs and charging options will encourage more consumers to consider EV adoption</li> </ul>
We believe Curbside EV charging is financially viable and scalable.	<ul> <li>If marketing and customer engagement approaches lead to sales growth</li> <li>And the charging network has an anchor customer</li> <li>And cost control and operational performance limits expenses</li> <li>Then curbside charging can be a profitable business opportunity</li> </ul>

Regarding the third Test Statement, related to financial viability of Curbside EV charging:

- The base pricing plan for the demonstration includes a \$2.50 per hour rate for EV charging.<sup>4</sup> Con Edison, in consultation with Staff, may direct AddEnergie to change the pricing plan during the demonstration. All applicable parking regulations, such as parking meter fees and time limits, also apply to the EV charging spaces.
- AddEnergie power sharing software will manage charging station demand to control operating costs. For example, at single-post stations, equipped with two 6.2kW chargers, the software will limit combined output to 10kW when both chargers are engaged, allowing the stations to be billed on non-demand rates. Con Edison, in consultation with Staff, may direct a change to this demand management strategy during the demonstration.

<sup>&</sup>lt;sup>4</sup> The partners estimate that \$2.50 per hour is equivalent to about \$0.40/kWh, given that one hour of charging will deliver 6.2 kWh. Assuming EV fuel efficiency is 3.5 miles per kWh, and conventional vehicle fuel efficiency is 28 mpg, the equivalent gasoline price is \$3.20 per gallon.

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#### **B)** Test Populations

Three target populations will participate in the demonstration:

- 1. *EV drivers* including two customer groups:
  - NYC Fleet Customers. The NYC Fleet includes over 2,200 plug-in electric and plug-in hybrid EVs.<sup>5</sup> The demonstration will deploy 20 Level 2 EV chargers for exclusive use by NYC Fleet. In addition, NYC Fleet will have access to the other 100 public charging units.
  - **Public EV Charging Customers.** New York City residents, commuters and other visitors will be eligible to join AddEnergie's "Flo" branded EV charging network and access 100 public curbside charging stations.
- 2. *Potential EV drivers* enabled and/or encouraged by the availability of public charging options and related messaging to convert to an EV.
- 3. *Host Communities* including drivers and non-drivers that will live near the chargers during the demonstration period. For example, private citizens and local business owners that will be affected by the EV chargers in their neighborhoods.

Con Edison and AddEnergie are developing a plan to engage these target populations. The first phase of the plan includes primary customer research to develop effective messages that build support for the project, and the second phase is implementation of those messages in a project launch campaign. Customer research includes conducting surveys and stakeholder interviews to understand customer preferences and charging behavior as well as community concerns regarding the chargers. The intent is to encourage positive perception of the project, as well as EV and EV charging generally. The launch campaign will begin prior to the operation phase (i.e., Spring 2020) and will cover multiple engagement channels including customer communications, social media campaigns, and community in-person events. Effectiveness of the launch campaign will be measured by the metrics noted in Section D.

Con Edison will survey residential and commercial customers in EV charger host communities. The survey has not yet been designed, but the conceptual intent is to get broad public opinion

<sup>&</sup>lt;sup>5</sup> This fleet is managed by the NYC Department of Citywide Administrative Services ("DCAS") and operated by agency staff across the City.

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on the look and feel of the chargers, the impact on local parking, and the effect of the demonstration on awareness and perception of EVs and EV charging. Con Edison will discuss the survey content and process with Staff.

## C) Test Scenarios

The demonstration hypotheses will be tested in two scenarios. While each scenario is distinct, some test variables are constant. The partners may decide to change some of these common variables over the course of the demonstration as appropriate, in consultation with Staff. For example, at the beginning of the demonstration, all users will have the same cost structure but the price to charge could vary if, for example, to attract EV drivers and increase charger utilization or to address dwell times.

#### Test Scenario 1: Commercial Fleet Curbside Charging

This scenario will test the strategy of partnering with a Commercial Fleet customer on a curbside EV charging network. The NYC Fleet is the test population.

Test Scenario 2: Public Curbside Charging

This scenario will test the viability of publicly accessible curbside EV chargers. Partners will market the demonstration to EV drivers in New York City, including residents and visitors, and will use the demonstration to encourage further EV adoption.

## D) Checkpoints

Con Edison and partners will collect data on several metrics to evaluate project implementation:

Metric (Hypothesis)	Description	
Community Satisfaction (Hyp. #1)	Satisfaction Score & Net Promoter Score ("NPS")	
	Target: 50% (Yr1), 60% (Yr2), 80% (Yr3) satisfaction; equivalent NPS	
	Median Utilization (i.e., hours per day that EVSE is engaged in a	
	charging session), expressed as a percentage.	
Utilization (Hyp. #2)		
	Target:	
	NYC Fleet – 5% (Yr1) / 8% (Yr2) / 12% (Yr3)	
	Public – 8% (Yr1) / 10% (Yr2) / 12% (Yr3)	
User Satisfaction	Satisfaction Score & Net Promoter Score	
(Hyp. #2)		

	Target: 80% (Yr1) / 85% (Yr 2) / 90% (Yr3) satisfaction; equivalent NPS	
Financial viability (Hyp. #3)	Sales Revenue / Operating Expenses for top quintile stations as defined by utilization.	
	Target: 30% (Yr1) / 60% (Yr2) / 100% (Yr3)	
Station uptime defined as operating hours over total hours in period.(Hyp. #3)		
	Target: Station median uptime 95% per quarter, maintained through demonstration.	

Con Edison will provide checkpoint status on these metrics in quarterly reports, explained in Section 4. Reports will propose applicable remedies and strategy modifications, and Con Edison will adjust as needed, in consultation with Staff.

#### Table 2: Checkpoints

Checkpoints	Description	
	Measure: Satisfaction Score & Net Promoter Score	
Community Satisfaction (Hyp. #1)	<ul> <li>How: Con Edison will send an email survey to its residential and commercial customers that are in proximity of the charging stations to collect data on the impact of the project on public awareness and perception of EV and EV charging. Other survey media, such as telephone or in-person, will be considered only if email does not return a sample of significant size and community representation.</li> <li>Targets: 50% Positive Satisfaction Score (Yr1), 60% (Yr2), 80% (Yr3), equivalent NPS</li> </ul>	
	<b>Strategy if Results are Below Expectations:</b> The Partners will develop an action plan to mitigate anticipated customer and community issues, drawing on intelligence gathered during customer research and outreach prior to operations and AddEnergie's experiences in other cities. The Partners will revise the action plan during the demonstration as needed and will review changes with Staff.	
Utilization (Hyp. #2)	<b>Measure:</b> Median Utilization (i.e., hours per day that EVSE is engaged in a charging session), expressed as a percentage.	

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	How: AddEnergie will measure charging session duration and report	
	utilization to Con Edison. AddEnergie can measure utilization per EVSE unit, station, and network.	
	<b>Targets:</b> NYC Fleet – 5% (Yr1) / 8% (Yr2) / 12% (Yr3) Public – 8% (Yr1) / 10% (Yr2) / 12% (Yr3)	
	<b>Strategy if Results are Below Expectations:</b> The partners will adjust marketing efforts to use more effective channels to reach customers. Partners can also use limited promotions, such as charging credits, variable pricing, and collaborations with vehicle manufacturers and/or other partners to attract new users.	
	Measure: Satisfaction Score & Net Promoter Score	
	<b>How:</b> AddEnergie will survey users to collect data on satisfaction, behavior, and preferences during the demonstration. This includes an initial survey to network participants followed by semi-annual surveys, deployed to customer emails through its mobile application and customer contact list.	
User Satisfaction (Hyp. #2)	<b>Target</b> : 80% Positive Satisfaction Score (Yr1) / 85% (Yr 2) / 90% (Yr3), equivalent NPS	
	Strategy if Results are Below Expectations: AddEnergie will adjust call scripts for customer service representatives based on user feedback, for example updating a list of frequently asked questions. The partners will adapt operations as appropriate e.g., Partners will share feedback on enforcement of EV Charging Only with DOT and NYPD Traffic Enforcement Agencies.	
	<b>Measure:</b> Sales Revenue / Operating Expenses for top quintile stations as defined by utilization	
Financial viability (Hyp. #3)	<b>How:</b> The partners do not expect return on investment within the demonstration period, but positive operating margin is an indicator of financial viability. Con Edison will observe the metric of Sales Revenue / Operating Expenses for top quintile stations as defined by utilization.	

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	Target: 30% (Yr1) / 60% (Yr2) / 100% (Yr3)
	<b>Strategy if Results are Below Expectations:</b> The partners can change the base pricing plan if necessary to encourage utilization and manage charging session behavior in a way that is acceptable to users.
	<b>Measure:</b> Station uptime defined as operating hours over total hours in a period.
Station Uptime	<b>How:</b> AddEnergie's EVSE units are designed to withstand weather, vandalism, and other threats to station uptime. EVSE units report diagnostic data to AddEnergie's operations center and users will report maintenance issues through the Flo customer portal. Con Edison is procuring a partner to assist with maintenance of site conditions throughout the project.
(Нур. #3)	<b>Target:</b> Station median uptime 95% maintained through demonstration.
	<b>Strategy if Results are Below Expectations:</b> AddEnergie will diagnose and remedy significant EVSE performance issues. Con Edison will work with AddEnergie's and the project O&M partner on performance issues related to other station components, including charge post, service interconnection, etc.

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# Section 2: Project Structure & Governance

## A) Project Team

The Project is a partnership between Con Edison, DOT, and AddEnergie.<sup>6</sup> Con Edison will manage three contractor teams during implementation:

- a Site Design consultant will complete a package of construction drawings and layouts for each charging station location,
- an Installation Contractor will construct each site and install the charger units, and
- a Maintenance Contractor will conduct regular visual inspections of the stations and conduct non-warranty maintenance as needed (e.g., physical repairs, vandalism mitigation, snow removal, etc.).

Each partner will provide key skills and is responsible for certain Project functions to achieve a successful demonstration project. Con Edison will maintain overall responsibility for Project execution; AddEnergie maintains relationship with the charging customer, including providing EV charging billing, revenue collection, customer service, etc.



Figure 1: Team Leadership/Organization

<sup>&</sup>lt;sup>6</sup> Roles and Responsibilities of each project partner are included in partnership agreements signed between the parties.

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Table 5: Othicy and Partner Expertise			
Con Edison	AddEnergie	DOT	
<ul> <li>Project management</li> </ul>	<ul> <li>Product development</li> </ul>	<ul> <li>Program management</li> </ul>	
<ul> <li>Regulatory and Legal</li> </ul>	<ul> <li>Installation and commissioning</li> </ul>	<ul> <li>Regulatory and legal</li> </ul>	
<ul> <li>Engineering, design, and construction</li> </ul>	<ul> <li>Network services including customer- facing applications</li> </ul>	<ul> <li>Site analysis and selection</li> <li>Community</li> </ul>	
<ul><li>Site Maintenance</li><li>Safety mitigation</li></ul>	<ul> <li>EVSE Operations and Maintenance</li> </ul>	stakeholder outreach	
and response	Customer service	• Media	
Procurement	Billing & Collections	communications	
<ul> <li>Marketing and Outreach</li> </ul>	<ul> <li>Data reporting and analysis</li> </ul>	and outreach	
<ul> <li>Data reporting and analysis</li> </ul>	<ul> <li>Marketing and Outreach</li> </ul>		

#### Table 3: Utility and Partner Expertise

#### **B)** Project Staffing

Con Edison has created a REV demonstration program team dedicated to identifying, developing, and implementing new projects related to REV. From this team, two project managers have been identified to co-lead the Project. In addition, Con Edison will provide the necessary internal and external resources in key areas (*e.g.*, marketing, information resources, legal, procurement, and engineering) to augment and support demonstration activities and objectives. Con Edison's team members are listed in Table 4 along with their functional areas and current duty titles. Additional Project team members will be identified and recruited as necessary during the course of Project execution.

Team Member	Title	Functional Area	
Con Edison			
Ari Kahn	Project Specialist, Demonstration Projects	REV Project Management	
Brian Ross	Project Specialist, Demonstration Projects	REV Project Management	

#### Table 4: Project Team

John Shipman	Department Manager, Demonstration Projects	Project Oversight (REV Demonstration Program)
Raghusimha Sudhakara	Director, Demonstration Projects	Project Governance
	Project Partner	s
Eric Boisvert, AddEnergie	R&D Hardware manager & Project manager	EVSE design and production
Daniel Nguyen, AddEnergie	Marketing	Marketing & outreach
Susan McSherry, DOT	Director, Alternative Fuels Program	Project management
Thomas P Stein, Jr., P.E., Burns McDonnell	Project Manager	Site design partner
TBD <sup>7</sup>	TBD	Station installation partner
TBD <sup>8</sup>	TBD	Maintenance partner

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## C) Roles & Responsibilities

The Project implementation team has developed a work plan (**Error! Reference source not found.**) with specific tasks and activities aligned to the Project timeline and overall success. The breakdown of roles and responsibilities is provided in this section. Some phases and tasks will take place concurrently as depicted in Section 5.

## Phase 0 – Project Planning

The initial stages of the demonstration are focused on finalizing the agreements between Con Edison and project partners.

<sup>&</sup>lt;sup>7</sup> Con Edison will procure an installation partner during the project to construct project sties and install EVSE after site design packages are complete.

<sup>&</sup>lt;sup>8</sup> Con Edison will procure a maintenance partner during the project to maintain physical integrity of the stations throughout the demonstration term.

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Lead Responsibilities	Con Edison	AddEnergie	DOT
Partnership Agreements			
<b>Con Edison</b> signed an agreement with <b>AddEnergie</b> in April 2019 to collaborate on the demonstration of curbside chargers in New York City.	X	х	
<b>Con Edison</b> and <b>DOT</b> signed a demonstration agreement in September 2019 to allow for installation of curbside chargers in public rights-of-way for a three-year term of operation with DOT option to extend to four years.	X		X

Table 5Phase 0 – Roles and Responsibilities

#### Phase 1 – Product Design, Fabrication, and Delivery

AddEnergie will lead the design and fabrication of the integrated charge post and charger product for the demonstration. Project partners will obtained necessary approvals of the product design from the New York City Public Design Commission. Phase 1 will run parallel to Phase 2 described below.

Lead Responsibilities	Con Edison	AddEnergie	DOT
Product Design			
<b>Con Edison</b> and <b>AddEnergie</b> will collaborate on a Product Requirements Document ("PRD") that includes the requirements of the SmartTwo unit re-designed for use in New York City.	X	Х	
AddEnergie will develop an engineering concept for review and acceptance by Con Edison. The final concept will satisfy the executed PRD and include detailed specifications.		х	
Fabrication and Delivery			
<b>AddEnergie</b> will develop a process to build the units and will provide a pre-production prototype unit, arrange for necessary product certifications, and arrange for delivery of units according to project schedule.		Х	

#### Phase 1 – Roles and Responsibilities

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Lead Responsibilities	Con Edison	AddEnergie	DOT
<b>Con Edison</b> will provide technical expertise as needed and will review and provide comments on the pre-production prototype unit.	х		

### Phase 2 – Site Selection, Design, and Installation

Site selection has already started and, in the case of the City Fleet sites, locations have been identified and final approvals obtained. DOT has identified public EV sites and the approval process continues with public engagement in potential host neighborhoods. Phase 2 will run parallel to Phase 1 described above.

#### Phase 2 – Roles and Responsibilities

Lead Responsibilities	Con Edison	AddEnergie	DOT
Selection of City Fleet sites			
<b>DOT</b> and <b>DCAS</b> will identify parking spaces currently designated for "Agency Vehicle Only" parking at locations with significant NYC Fleet passenger EV usage.			Х
<b>DOT</b> will manage all necessary interagency approvals to re-assign 20 parking spaces to "Agency Vehicle Only" and "EV Charging Only"			х
Selection of Public EV sites			
<b>DOT</b> will identify parking spaces appropriate for EV charging, and will lead a public engagement process to build support to site chargers in public parking spaces designated.			Х
<b>Con Edison</b> will maintain an advisory role in site selection to evaluate their appropriateness for the demonstration and likelihood to meet project goals.	x		
Site design and EVSE installation			
<b>Con Edison</b> engaged Burns McDonnell to develop site surveys, construction drawings, permit applications, utility service requests, and other information needed to	Х		

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provide an installation partner with the means to install at approved locations			
<b>Con Edison</b> will solicit proposals to engage an installation partner that can build charging station sites, interconnect to utility service, and install the EVSE equipment	х		
<b>AddEnergie</b> will support installation as needed including advising on EVSE interconnection and commissioning.		Х	

#### Phase 3 – Network Operations and Maintenance

Project partners will share responsibilities for operating and maintaining the charging network according to their skills sets. These responsibilities are included in the partnership agreements. Con Edison is ultimately responsible for success of the demonstration project.

Lead Responsibilities	Con Edison	AddEnergie	DOT
Network and customer operations			
AddEnergie will provide the FLO network charging management platform to manage all aspects of the charging experience, including customer-facing aspects, such as notifications, mobile application, and customer service, and back-end services such as billing and collections.		Х	
Station maintenance			
<b>Con Edison</b> plans to procure a maintenance partner to conduct visual inspections and routine upkeep at charging stations, such as repairs for vandalism, snow clearing, street maintenance, and related issues.	Х		
<b>AddEnergie</b> is responsible for regular maintenance and upkeep to chargers as covered by their standard product warranty.			
		х	

#### Phase 3 – Roles and Responsibilities

## New York City Curbside Electric Vehicle Charging Network

Lead Responsibilities	Con Edison	AddEnergie	DOT
Parking regulation enforcement			
<b>DOT</b> will promulgate parking rules designating demonstration network spaces for EV charging only, develop parking regulation signs to install at the sites, and will coordinate with the New York City Police Department to enforce these parking rules.			Х
<b>AddEnergie</b> will share user reports of mis-used EV charging spaces to Con Edison and DOT.		Х	

## Phase 4 – Reporting

During the demonstration, the partners hope to collect data from which to draw insights on the test hypotheses.

Lead Responsibilities	Con Edison	AddEnergie	DOT
Data collection			
AddEnergie will collect data from the activity of the Charging Stations:		Х	
<ul> <li>A. Per user monthly information (without any Personally Identifiable Information) including but not limited to:</li> <li>Customer identification #</li> <li>Date enrolled</li> <li>Number of sessions</li> <li>Charge session locations, date, start and end time, energy (kWh) sold</li> <li>Vehicle make &amp; model</li> <li>Member account billing zip code</li> </ul>			
<ul> <li>B. Per unit monthly information including, but not limited to:</li> <li>Unit demand (kW) by time of day (15-min interval)</li> </ul>			

### Phase 4 – Roles and Responsibilities

#### New York City Curbside Electric Vehicle Charging Network

Lead Responsibilities	Con Edison	AddEnergie	DOT
<ul> <li>Unit energy (kWh) by time of day (15-min interval)</li> <li>Total time connected</li> <li>Total time dispensing energy (kWh)</li> <li>Station uptime, monthly</li> <li>C. Monthly report of field service interventions as a result of vandalism</li> </ul>			
D. Customer satisfaction surveys	х		
<b>Con Edison</b> will administer host community surveys measuring attitudes toward curbside chargers and EVs.			
Reporting			
<b>Con Edison</b> will report project data and/or research insights from the demonstration appropriately to <b>DOT</b> and the New York State Public Service Commission ("PSC"), as described in Section 4.	X		

#### D) Governance

The Con Edison Project Managers and Project Management team will have day-to-day execution responsibility for managing the project, coordinating tasks and activities, and conducting overall project management. The team will continuously coordinate activities throughout the project. Team meetings will be held in person, via conference calls, WebEx, or other communication means, as needed. The Project Managers will be responsible for coordination, drafting and submission of quarterly reports to the PSC. Con Edison's Vice President, Energy Efficiency and Distributed Resource Planning, will have final governance oversight of all team activities and will be kept apprised of progress through regular team meetings.

## Section 3: Work Plan & Budget

## A) Project Plan

The Project team has developed a work plan with specific tasks and activities to implement construction and operations of the charging stations, and overall success of the demonstration project. The summary project timeline including key milestones is included below:



#### B) Project Budget

The budget below includes Con Edison's forecasted costs and revenues for the curbside charging project.<sup>9</sup> Con Edison and AddEnergie have agreed to cost and revenue sharing terms in their partnership agreement. Because revenue sharing is different for different types of customers and is based on actual consumption, the actual sharing during the demonstration depends on the number of each type of customer (i.e., City Fleet vs. Public EV) and the actual use of the EVSE. The budget below includes four operating years, although the term of the agreement between Con Edison and DOT is for three years with DOT's option to continue for a fourth year.

	2019				2020				2021				2022			
Timeframe	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Expected Cash-In (\$)	\$-	\$-	\$-	\$-	\$-	\$5,500	\$27,400	\$27,400	\$27,400	\$30,700	\$36,100	\$36,100	\$36,100	\$40,500	\$46,000	\$46,000
Expected Cash-Out (\$)	\$61,800	\$64,200	\$392,200	\$612,600	\$726,700	\$4,388,900	\$4,313,700	\$226,100	\$231,100	\$228,200	\$216,500	\$215,600	\$221,000	\$218,100	\$223,500	\$222,000

	2023				2024
Timeframe	Q1	Q2	Q3	Q4	Q1
Expected Cash-In (\$)	\$46,000	\$54,700	\$60,200	\$60,200	\$60,200
Expected Cash-Out (\$)	\$230,000	\$228,300	\$233,200	\$232,200	\$208,700

<sup>&</sup>lt;sup>9</sup> Project budget has been rounded.

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# **Section 4: Reporting Structure**

#### A) Reporting Expectations

Quarterly reports will be filed with the PSC during the Project. The reports will provide an update on implementation progress according to the work plan and budget (see Figure 2), detailing deviations, and noting task and activity progress. In addition, each quarterly report will capture, to the extent available, key project information, including charging station and network performance data. As they become available, generally semi-annually, Con Edison's quarterly reports will include the results of charging station customer surveys and charging station host community surveys. The quarterly report template will be as follows:

1.0	Execut	tive Summary				
2.0	Quarte	Quarterly Progress				
	2.1	Demonstration Highlights				
		2.1.1 Major Tasks Completion				
		2.1.2 Activities Overview				
		2.1.3 Sub-Activities Overview				
		2.1.4 Key Metrics				
		2.1.4.1 Station-level charging session metrics				
		2.1.4.2 Network-level charging session metrics				
		2.1.4.3 Customer survey results				
		2.1.4.4 Host community survey results				
	2.2	Next Quarter Forecast				
		2.2.1 Checkpoints/Milestone Progress				
		2.2.2 Planned Activities				
		2.2.3 Expected Changes				
	2.3	Work Plan and Budget Review				
		2.3.1 Phase review				
		2.3.2 Updates				
	2.4	Conclusion				
		2.4.1 Lessons Learned				
		2.4.2 Recommendations				
3.0	One-Pa	age Project Summary				

#### Figure 2: Quarterly Report Outline

The quarterly report will focus on the phase(s) occurring within the previous quarter or scheduled to occur within the next two quarters, providing a focus on current progress while providing Staff insight into the near future.

Checkpoint, milestone, and activity progress will provide detailed status information to inform the Commission of implementation progress and highlight issues, such as changes in scope, incremental cost, or shifts in the timeline. A stoplight chart will be used to detail progress for activities in the quarterly reports. Con Edison will provide narrative information to support the progress report.

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The One-Page Project Summary will be included as an appendix to the Quarterly Report. The Summary will follow the template developed by DPS Staff for other REV Demonstration Projects. It will serve as a dashboard summary of the project goals, progress, lessons learned, milestones, and other useful project information.

The Project management team will conduct a quarterly phone call with project partners and Staff to review the quarterly report and respond to questions. Con Edison and partners will maintain contact with Staff through the duration of the project to share information and respond to inquiries, as appropriate.

#### **B)** Reporting metrics

In section 1 (D) of its Project Proposal, Con Edison described reporting metrics related to the demonstration hypotheses. During the demonstration, Con Edison may identify additional metrics and/or alter reporting metrics as appropriate. If performance metrics fail to meet targets, then Con Edison will collaborate with its project partners and DPS staff to adapt strategies as needed.