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REV Demonstration Project:  
Smart Home Rate

Q4 2020 Quarterly Progress Report

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**Dated: February 1, 2021**

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## 1.0 EXECUTIVE SUMMARY

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Consolidated Edison Company of New York, Inc. (“Con Edison”) and Orange and Rockland Utilities, Inc. (“O&R”), (together the “Companies”), submit this third quarterly report for 2020 on the progress of the Smart Home Rate REV Demonstration Project (the “Project”) being implemented as part of the Reforming the Energy Vision (“REV”) proceeding, as required by the *Order Adopting Regulatory Policy Framework and Implementation Plan*, issued by the New York State Public Service Commission (“Commission”) on February 26, 2015.<sup>1</sup> Budget information is being filed confidentially with the Commission.

### 1.1. Project Background

On February 1, 2017, the Companies submitted the Project for review by Department of Public Service Staff (“DPS Staff”). On July 5, 2018, Staff issued a Demonstration Project Assessment Report. The Companies subsequently filed an implementation plan for the Project with the Commission on August 24, 2018.<sup>2</sup> On February 7, 2019, the Commission issued an Order Approving Tariff Amendments with Modifications.<sup>3</sup>

The Project is designed to demonstrate how alternative rate structures can provide price signals to customers to optimize value for the customer and the system. The Project recruits residential customers with Advanced Metering Infrastructure (“AMI”) meters to participate in a new electric rate and provides them with home energy management technologies to help them maximize savings on the new rate.

The Companies are implementing the Project with ICF and will deploy price-responsive home energy management platforms from Uplight and Sunverge. In Track 1, Uplight’s Orchestrated Energy platform will be deployed to automate central air conditioning (“AC”) loads in participants’ homes. In Track 2, Sunverge’s platform will be deployed to automate home battery systems coupled with rooftop photovoltaic (“PV”) systems.

The ongoing COVID-19 pandemic has resulted in delays in both Track 1 and Track 2, as activities paused in Q2 2020 for the Project team to adjust plans and approaches.

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<sup>1</sup> Case 14-M-0101, *Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision*, Order Adopting Regulatory Policy Framework and Implementation Plan (issued February 26, 2015).

<sup>2</sup> Case 14-M-0101, Smart Home Rate Demonstration Project Implementation Plan (August 27, 2018).

<sup>3</sup> Case 18-E-0548 (*Tariff Filing by Consolidated Edison Company of New York, Inc. to Modify Its Electric Tariff Schedule, P.S.C. No. 10, to Establish Rider AB-Smart Home Rate*) and Case 18-E-0549 (*Tariff Filing by Orange and Rockland Utilities, Inc. to Modify Its Electric Tariff Schedule, P.S.C. No. 3, to Establish Rider J-Smart Home Rate*), Order Approving Tariff Amendments with Modifications (issued February 7, 2019).

## 1.2. Project Overview

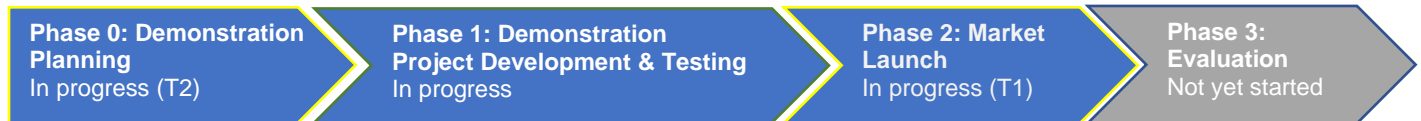


### Smart Home Rate REV Demo Project

The Smart Home Rate Demo Project (“Project”) will test how alternative rate structures can provide price signals to customers to optimize value for the customer and the system. The Project seeks to recruit residential customers with AMI meters to participate in a new electric rate and provide them with home energy management technologies to help them maximize savings on the new rate.

The Companies are implementing the Project with ICF and are deploying price-responsive home energy management platforms from Uplight and Sunverge. In Track 1, Uplight’s platform will be deployed to automate central air conditioning (“AC”) loads in participants’ homes. In Track 2, Sunverge’s platform will be deployed to automate home battery systems coupled with rooftop photovoltaic (“PV”) systems.

**Project Inception:** February 2017  
**Market Launch:** Track 1 - November 2019; Track 2 -Not started.  
**Project End Date:** December 2023  
**Budget:** \$14.5M [revisions in progress]  
**Q2 2020 Spend:** *Filed Confidentially*  
**Cumulative Spend:** *Filed confidentially (on budget)*



#### Lessons Learned: Customers

For Track 1, the availability of strong technical support via a virtual installation channel will be key to the success of the self-installation model.

#### Lessons Learned: Market

- Rapid evolution of smart home device business models presents risk during the program development phase.
- Environmental, health, and safety issues may cause delays during implementation of installation work in the field.
- Contracting for a unique business model among multiple stakeholders is complex and requires significant time to develop. Contracts with multiple vendors and subcontractors must be coordinated. Lead times when engaging internal resources have had significant impacts on timelines.

**Application of Customer Lessons Learned:** During the first two months of the thermostat deployment, a lower-than-expected number of customers installed and activated their thermostats.

The Project team determined that enrollments and thermostat activation rates would be sufficient to enroll the Rate A treatment group, but not the second treatment group for Rate B.

**Issues Identified:** Installation obstacles related to installing c-wires, incompatible HVAC systems, and other issues not easily addressed without virtual installation support have impeded customers from successfully completing installations.

**Solutions Identified:** The Project team adjusted the self-installation approach to identify compatibility issues and set up virtual installation appointments with customers prior to shipping out thermostats.

**Recent Milestones:** Completed all marketing outreach touchpoints. Began shipping out thermostats and tracking installations.

**Upcoming Milestones:** Track 1 installations will continue through Q1 2021.

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## 2.0 QUARTERLY PROGRESS

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### 2.1 Activities Overview and Updates

#### *Recruitment and marketing*

Track 1 program recruitment continued in Q4 2020. During this period, two rounds of marketing outreach, consisting of both email and direct mail, were deployed to the recruitment population, resulting in 631 newly enrolled customers and bringing the active marketing stage to a close. While marketing outreach has ended, the Project team will continue to accept enrollments on the online enrollment portal.

#### *Historic customer enrollments*

The Project team contacted customers who had previously enrolled in the program under the direct installation option to find out if they were still interested in participating and converting to self-installation. Control Group customers were also contacted to determine their interest in continued participation in the program. These customers were contacted by email and by phone. As of December 31, of 340 customers contacted, seven customers opted to continue in the program and 12 customers opted out. Final attempts to reach the customers that have not responded will be made in Q1 2021. Following the final attempts, customers that do not respond will be considered to have opted out of the program.

#### *Thermostat shipments and installations*

In October, the Project team began to ship thermostats to enrolled customers and closely monitor the thermostat installation rates. As of December 31, 405 customers had received thermostats and 121 of those customers had installed and activated their thermostats, reflecting a 30% conversion rate. This conversion rate is lower than expected due to challenges that are discussed in the Lessons Learned and Recommendations section below.

#### *Track 2*

Contracting for Track 2 remains on hold during Q4 2020 due to the COVID-19 pandemic. The Project team continues to assess the feasibility of resuming Track 2 activities based on the State's COVID-19 safety guidelines and continues to evaluate the timeline for bringing installers on board.<sup>4</sup>

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<sup>4</sup> <https://www.nyserda.ny.gov/ny/COVID-19-Response/Resources>

## **2.2 Key Metrics**

Track 1 total customer enrollments (i.e., customers that have signed up on the enrollment portal during September-December 2020, plus previously enrolled customers that have opted to continue): 859; with 582 Con Edison customers and 277 O&R customers.

Track 1 total active participants (i.e., customers that have installed and activated their thermostats): 121; with 103 Con Edison customers and 18 O&R customers.

Track 1 successful virtual installation appointments (i.e., virtual installation appointments that ended with an installed and activated thermostat): 36.

## **2.3 Lessons Learned and Recommendations**

The first two months of the thermostat deployment saw a lower-than-expected number of customers that installed and activated their thermostats. Enrolled customers were shipped thermostats and received email communications notifying them that thermostats had been shipped and delivered to their home. Program communications included a phone number to call to schedule a free virtual installation support appointment, if needed, and a reminder of the \$50 incentive for installing the thermostat. In addition, twenty days after delivery, an outbound call was placed to customers to schedule a virtual installation support appointment. With this approach, only 30% of customers that received the thermostats successfully completed installation and activation. To date, of the 121 active participants, 36 installations were completed with the assistance of a virtual installation support appointment.

The Project team identified several challenges that contributed to this result. During virtual installation appointments, technicians encountered obstacles related to installing the c-wire. For example, some customers had difficulty accessing HVAC equipment or encountered unusual wiring configurations that would have been challenging to resolve without virtual support. The Project team also encountered systems that were incompatible with the thermostat.

These findings suggest that a more direct, hands-on approach would be beneficial to increase the installation rate. Beginning in Q1 2021, the Project team will implement several changes to the customer journey beginning at the time of enrollment. Prior to thermostat shipment, outbound calls will be made to confirm HVAC system compatibility, and if the system is compatible, to schedule a virtual installation appointment. This will provide customers with a higher level of initial support during their installation journey, so that if c-wire related obstacles are encountered, they can be addressed by the virtual support quicker and more effectively. Proactively setting up the virtual installation appointments will also engage those customers who might have otherwise waited to act. Customers that have already received thermostats but

have not installed them will also be contacted to check system compatibility and to schedule appointments.

With these modifications, the Project team projects that the installation conversion rate will improve and move the active participant total toward the enrollment target set for the Rate A treatment group.<sup>5</sup> However, given the total number of enrollments at the close of the marketing outreach stage, the low response rate from the historical enrollments group, and the projected installation conversion rate, there will not be enough active participants to open the second treatment group for Rate B. As a result, there will not be an opportunity to evaluate Rate B. The Project will move forward with all participants enrolled in Rate A.

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<sup>5</sup> The Project design, as filed in the Implementation Plan, included two rate treatment groups: Rate A and Rate B, each with a target of 750 enrolled customers (i.e., customers who opted-in via the online enrollment portal). Subsequently, the targets were modified to 440 active participants (i.e., customers who opt-in and successfully install and activate the thermostats).

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## **3.0 NEXT QUARTER FORECAST**

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### **3.1 Planned Activities**

For Track 1, customer outreach and installation support will continue in Q1 2021, following the adjusted approaches described above. The Project team will closely monitor the installation rates and modify approaches, as necessary.

For Track 2, the Project team plans to resume contracting and establish a new Project timeline.



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## **4.0 APPENDICES**

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The following appendices are included at the end of this Quarterly Progress Report:

Appendix A: Work Plan

Appendix B: Checkpoints and Milestone Progress

Appendix C: Procedures and Policies

# Appendix A: Work Plan

## Track 1:

Act no	Activity Description	Lead	2018				2019				2020				2021				2022				2023			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1	Phase 0: Demonstration Planning	Con Edison																								
1.1	Partnership Agreement	Con Edison																								
1.2	Project Plan	Con Edison/ ICF																								
2	Phase 1: Project Development & Testing	ICF																								
2.1	Recruitment, Marketing and Communications Plan	ICF																								
2.2	Target Identification and Propensity Analysis	ICF																								
2.3	Sightline Setup/ Configuration	ICF																								
2.4	Enrollment Portal	ICF																								
3	Phase 2: Market Launch	ICF/ Uplight																								
3.1	Software	Uplight																								
3.2	Enrollment	ICF																								
3.3	Technology Installation	ICF																								
3.4	Customer Engagement	ICF																								
4	Phase 3: Evaluation	ICF/Nexant																								
4.1	Data Monitoring & Reporting	ICF/Nexant																								

## Track 2:

Timeline from Q2 2021 and beyond is TBD.

Act no	Activity Description	Lead	2018				2019				2020				2021				2022				2023			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1	Phase 0: Demonstration Planning	Con Edison																								
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2.4	Enrollment Portal	ICF																								
3	Phase 2: Market Launch	ICF/ Sunverge																								
3.1	Operator Training	Sunverge																								
3.2	Hardware	Sunverge																								
3.3	Software	Sunverge																								
3.4	Enrollment	ICF																								
3.4	Technology Installation	ICF																								
3.6	Customer Engagement	ICF/Sunverge																								
4	Phase 3: Evaluation	ICF/Nexant																								
4.1	Data Monitoring & Reporting	ICF/Nexant																								

## Appendix B: Checkpoints and Milestone Progress




### Track 1

Checkpoint/Milestone	Timing	Status
Bill impacts	T1 Phase 2 Midpoint	○ ● ○
Technology installation	T1 Phase 2 Start	● ○ ○
Technology performance	T1 Phase 2 Midpoint	○ ● ○
Recruiting and enrollment	T1 Phase 2 Start	● ○ ○
Customer satisfaction	T1 Phase 2 Midpoint	○ ● ○

### Track 2

Checkpoint/Milestone	Timing	Status
Bill impacts	T2 Phase 2 Midpoint	○ ● ○
Technology installation	T2 Phase 2 Start	○ ● ○
Technology performance	T2 Phase 2 Midpoint	○ ● ○
Recruiting and enrollment	T2 Phase 2 Start	○ ● ○
Customer satisfaction	T2 Phase 2 Midpoint	○ ● ○

### Legend

 <i>On Schedule</i>	 <i>Delayed w/out Major Impact</i>	 <i>Delayed or Stopped – Project Goals Impacted</i>
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## Track 1 Planned Activities

### *Bill impacts*

**Status:** Yellow

**Expected Target by Phase 2 Midpoint:** Calculate bill impacts from the first few months of the demo and compare average annual customer bill to what it would have been on their previously selected rate.

**Actual by Phase 2 Midpoint:** Not started.

**Solutions/strategies in case of results below expectations:** Plan to adjust messaging to enhance participants' understanding of bill impacts, such as providing them with a mid-program assessment report.

### *Technology installation*

**Status:** Green

**Expected Target by Phase 2 Start:** Complete technology installations at sufficient levels to meet enrollment targets.

**Actual by Phase 2 Start:** Thermostat installations began in October 2020.

**Solutions/strategies in case of results below expectations:** The Project team adjusted the self-installation approach to make outbound calls to confirm HVAC system compatibility and set up virtual installation appointments prior to shipping out thermostats.

### *Technology performance*

**Status:** Yellow

**Expected Target by Phase 2 Midpoint:** Monitor price communication and response capability of technology platforms.

**Actual by Phase 2 Midpoint:** Not started.

**Solutions/strategies in case of results below expectations:** Plan for continuous iteration and improvements to technology platforms in response to performance tracking.

### ***Recruiting and enrollment***

**Status:** Green

**Expected Target by Phase 2 Start:** Obtain enrollment levels sufficient to answer key research questions.

**Actual by Phase 2 Start:** Recruitment campaign restarted in September 2020.

**Solutions/strategies in case of results below expectations:** The Project team determined that targets for enrollment into a second treatment group for Rate B would not be met. The Project will proceed with all participants enrolled into the Rate A treatment group.

### ***Customer satisfaction***

**Status:** Yellow

**Expected Target by Phase 2 Midpoint:** Assess customer satisfaction with the program and technology.

**Actual by Phase 2 Midpoint:** Not started.

**Solutions/strategies in case of results below expectations:** Develop plan for ongoing messaging to enhance the customer experience.

### **Track 2 Planned Activities**

#### ***Bill impacts***

**Status:** Yellow

**Expected Target by Phase 2 Midpoint:** Calculate bill impacts from the first few months of the project and compare average annual customer bill to what it would have been on customers' previously selected rate.

**Actual by Phase 2 Midpoint:** Not started.

**Solutions/strategies in case of results below expectations:** Plan to adjust messaging to enhance participants' understanding of bill impacts, such as providing them with a mid-program assessment report.

### ***Technology installation***

**Status:** Yellow

**Expected Target by Phase 2 Start:** Complete technology installations at sufficient levels to meet enrollment targets.

**Actual by Phase 2 Start:** Not started. Phase 2 start and contracting has been delayed by the impacts of COVID-19.

**Solutions/strategies in case of results below expectations:** Adjust installation and customer support processes as required.

### ***Technology performance***

**Status:** Yellow

**Expected Target by Phase 2 Midpoint:** Monitor price communication and response capability of technology platforms.

**Actual by Phase 2 Midpoint:** Not started.

**Solutions/strategies in case of results below expectations:** Plan for continuous iteration and improvements to technology platforms in response to performance tracking.

### ***Recruiting and enrollment***

**Status:** Yellow

**Expected Target by Phase 2 Start:** Obtain enrollment levels sufficient to answer key research questions.

**Actual by Phase 2 Start:** Not started. Phase 2 start and contracting has been delayed by the impacts of COVID-19.

**Solutions/strategies in case of results below expectations:** Adjust recruitment approaches and onboarding support as necessary, and track improvements from new approaches.

***Customer satisfaction***

**Status:** Yellow

**Expected Target by Phase 2 Midpoint:** Assess customer satisfaction with the program and technology.

**Actual by Phase 2 Midpoint:** Not started.

**Solutions/strategies in case of results below expectations:** Develop plan for ongoing messaging to enhance the customer experience.

## **Appendix C: Procedures and Policies**

### **CYBERSECURITY AND PERSONALLY-IDENTIFIABLE INFORMATION PROTECTION**

Consistent with Commission policy related to cybersecurity and the protection of personally-identifiable information (“PII”), each partner agreement executed for the implementation of the Project includes specific protections related to cybersecurity and PII. This protection is critical in encouraging customers to sign up with new and innovative services offered by utilities.

### **ACCOUNTING PROCEDURE ESTABLISHED**

On February 16, 2016, in Case 15-E-0229, Con Edison filed an accounting procedure for the accounting and recovery of all REV demonstration project costs.<sup>6</sup> O&R filed an accounting procedure on September 1, 2016. Each accounting procedure establishes a standardized framework that will govern how the Companies categorize and allocate the costs of the REV demonstration projects, and will facilitate analyzing each project to determine the overall financial benefits of the program to customers.

### **COSTS, BENEFITS, AND OPERATIONAL SAVINGS**

Budget information for all of Con Edison and O&R’s REV demonstration projects is being filed confidentially with the Commission, concurrently with the filing of this document. All costs filed are incremental costs needed to implement the projects. To date, no tax credits or grants have been available to reduce the net costs of the projects, but the Companies will take advantage of such offsetting benefits when they are available. Due to the early stage of implementation for the Project, there are no operational savings to report at this time.

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<sup>6</sup> Case 15-E-0299, *Petition of Consolidated Edison Company of New York, Inc. for Implementation of Projects and Programs that Support Reforming the Energy Vision*, General Accounting Procedure.