



REV Demonstration Project:
Smart Home Rate

2019 4Q Quarterly Progress Report

Dated: January 31, 2020

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1.0 EXECUTIVE SUMMARY

Consolidated Edison Company of New York, Inc. (“Con Edison”) and Orange and Rockland Utilities, Inc. (“O&R”), (together the “Companies”), submit this 4th quarterly report for 2019 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, 2015.¹

1.1 PROGRAM ACHIEVEMENTS

On February 1, 2017, the Companies submitted the Project for approval by Department of Public Service Staff (“DPS Staff”). On June 6, 2017, DPS Staff approved the Project. Thereafter, 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, 2018.² On February 7, 2019, the Commission issued an Order Approving Tariff Amendments with Modifications.³

1.2 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.

1.3 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.⁴ 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

¹ 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).

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

³ 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).

⁴ 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.

facilitate analyzing each project to determine the overall financial benefits of the program to customers.

1.4 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.

1.5 SMART HOME RATE

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.

2.0 SMART HOME RATE – QUARTERLY PROGRESS

2.1 DEMONSTRATION HIGHLIGHTS

2.1.1 Q4 2019 Report - Major Task Completion

- Launched Track 1 recruitment campaign.

2.1.2 Activities Overview

Phase 0, Demonstration Planning: The Project team made progress on transaction agreements for Track 2 and began revising Project plans to reflect a delayed start and accommodate an expanded installation timeline.

Phase 1, Demonstration Project Development and Testing: This phase has been completed for Track 1 and has not yet started for Track 2.

Phase 2, Market Launch: The Project team launched the Track 1 recruitment campaign, including an informational webpage and direct mail and/or email outreach to approximately 75,000 customers. The Project team delayed thermostat installations and subsequent recruitment touchpoints to complete environmental, health, and safety plans needed to proceed with fieldwork. The delay increased the risk of missing recruitment targets, and, as a result, the Project team made plans to implement modifications to the recruitment and enrollment approaches.

Phase 3, Demonstration Project Evaluation: This phase has not yet started.

2.1.3 Key Metrics

Track 1 enrollments: 287 customers enrolled in the program; 205 Con Edison customers and 82 O&R customers.
















Track 1 thermostats installed: 0.

2.1.4 Next Quarter Forecast

In Q1 2020, the Project team will continue to work on finalizing Track 2 transaction agreements and finalize revisions to the Project plan. The Project team plans to begin thermostat installations and resume recruiting and enrolling customers in Track 1.
















2.1.5 Checkpoints/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	  




*Details on the phases can be found in section 2.3.1.

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	  

* Details on the phases can be found in section 2.3.1.

Legend

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

2.1.6.1 Bill impacts

Status: Green

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.

2.1.6.2 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: Thermostat installation has not started pending completion of associated environmental, health, and safety plans.

Solutions/strategies in case of results below expectations: Expand installation and recruitment timeline by delaying rate activation date.

2.1.6.3 Technology performance

Status: Green

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.

2.1.6.4 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: Recruitment campaign was launched but is now on hold until the Project team is able to proceed with thermostat installations as described in item, 2.1.6.2 above. Execution of strategy below needed to mitigate increased risk of missing enrollment targets.

Solutions/strategies in case of results below expectations: Adjust Project design to use a matched control group, increase recruitment population, and extend the installation and recruitment timeline.

2.1.6.5 Customer satisfaction

Status: Green

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.

2.1.7 Track 2 Planned Activities

2.1.7.1 Bill impacts

Status: Green

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.

2.1.7.2 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 is delayed as transaction agreements have not been finalized.

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

2.1.7.3 Technology performance

Status: Green

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.

2.1.7.4 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 is delayed as transaction agreements have not been finalized.

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

2.1.7.5 Customer satisfaction

Status: Green

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.

2.2 CHANGES TO THE PROJECT DESIGN

In Track 1, the delayed start to thermostat installations increased the risk of missing recruitment targets for each rate treatment group. As a result, the Project design will be adjusted to:

- Use a matched control group to funnel more recruited customers into the rate groups;

- Increase recruitment population; and
- Extend the recruitment timeline.

The start of Track 2 will be delayed to accommodate an expanded installation timeline that provides contingency for potential residential storage permitting delays.

2.3 WORK PLAN & BUDGET REVIEW

2.3.1 Phase Review

2.3.1.1 Phase Progress

The Project team moved into Phase 2 (Market Activities) in Track 1.

Phase 0 (Demonstration Planning) will continue in Q1 2020 for Track 2. The Track 2 timeline will be revised to reflect a delayed Project start and expanded installation timeline. Revised timelines and budgets will be finalized in Q1 2020.

2.3.2 Work Plan

Track 1

Act no	Activity Description	Lead	2018				2019				2020				2021				2022			
			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/ Tendril																				
3.1	Software	Tendril																				
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 (Revisions in progress)

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/ 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																								

2.3.3 Updated Budget

Budget information is being filed confidentially with the Commission.

2.4 CONCLUSION

2.4.1 Lessons Learned

- 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.

2.4.2 Recommendations

The Project team recommends modifying processes to incorporate environmental, health, and safety considerations early in the procurement cycle.

The Project team recommends finalizing revised Project timelines for Track 2 in Q1 2020.

3.0 APPENDIX

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Smart Home Rate REV Demo Project – Q4 2019

The Smart Home Rate Demo Project (“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 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 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.

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]
Q4 2019 Spend: *Filed Confidentially*
Cumulative Spend: *Filed confidentially*

Phase 0: Demonstration Planning
In progress (T2)

Phase 1: Demonstration Project Development & Testing
In progress

Phase 2: Market Launch
In progress (T1)

Phase 3: Evaluation
Not yet started

Lessons Learned:

- *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 Lessons Learned:

- *Modify processes to incorporate environmental, health, and safety considerations early in Project procurement cycle.*

Issues Identified:

- *T1: Delays increased risk of missing recruitment target for each rate treatment group.*

Solutions Identified:

- *T1: Move to matched control design approach and increase recruitment population to funnel more recruited customers into rate groups, and extend recruitment timeline.*

Recent Milestones:

- *T1: Launched recruitment campaign to 75,000 customers, including direct mail, email outreach and informational webpage.*

Upcoming Milestones:

- *T1: Proceed with thermostat installations and resume recruitment campaign.*
- *T2: Execute vendor contracts and finalize revised Project timeline.*