



Daniel J. Arcangeli

January 28, 2020

Honorable Michelle Phillips
Secretary
New York State Public Service Commission
Three Empire State Plaza
Albany, New York 12223

RE: 15-E-0283 – Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of New York State Electric & Gas Corporation for Electric Service

Dear Secretary Phillips:

In accordance with Appendix BB of the Order Establishing Rate Plan, issued and effective June 15, 2016 in Cases 15-E-0283, 15-G-0284, 15-E-0285, 15-G-0286, New York State Electric & Gas Corporation (“NYSEG”) hereby submit the attached quarterly Energy Smart Community Report.

NYSEG welcomes feedback from customers, third parties, the Commission, Staff and other stakeholders.

Respectfully submitted,

A handwritten signature in black ink that reads "Daniel J. Arcangeli".

Daniel J. Arcangeli



4th Quarter 2019 Report

Energy Smart Community

January 31, 2020

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Executive Summary

This 4th Quarter 2019 Energy Smart Community (ESC) report will highlight key achievements which have contributed towards successful program implementation. In addition to the Executive Summary, the report has seven sections. Sections 1, 2, and 3 are dedicated to Grid Automation, Integrated System Planning (ISP), and Customer and Market Enablement, which are the three core functions of the DSPP. Section 4 is dedicated to Customer Platforms, Communications and Stakeholder Engagement, and section 5 is for Emerging Projects. Each section displays the major milestones which have been achieved during the 4th quarter of 2019 and presents upcoming milestones for the 1st quarter of 2020. Sections 6 and 7 document the revised schedule deviations, and revised costs.

In the 4th quarter, OptimizEV, which will incentivize residential EV charging load shifting for AMI customers, has met its 35 participant enrollment target. All 35 installations have been completed. The baseline data collection phase began on November 1, 2019 after 17 chargers were successfully installed and connected to the network. The load shifting optimization portion of OptimizEV will begin on March 1, 2020 and continue for one year.

The customer user interface (UI) that will allow customers to tell NYSEG by when they would like their car charged and their energy requirement is in its final stages of development. The project team has gathered participant input to support the UI development through conversations, learnings from the existing UI as well as a well-attended participant webinar demonstrating the new UI that took place on November 7th. The discount formula has been developed and is being programmed into the control software by vendor Kitu Systems. A survey was conducted in collaboration with Cornell University that to help inform the UI, set parameters of the scheduling algorithm, as well as support future EV program development across NYS. A total of 462 responses were collected in September-October 2019. Key findings included:

- Display the discount as a percentage: valuation of percent savings are greater than those of actual dollars
- Inform about environmental benefits: EV owners/lessees are environmentally aware and desire to know emissions being saved in pounds of greenhouse gases
- Allowing the utility to delay charging is negatively perceived, but the negative effect can be offset by the benefits (discount and environmental impact)

The Behind the Meter Battery project made progress in Q4, with the completion of two of the remaining four battery sites. One of the remaining sites is still under construction and plans to be complete in Q1 2020. Tesla has completed engineering and permitting on the final site and is awaiting interconnection approval to begin construction on the project. NYSEG also continued to operate the two initial sites that were installed in December 2018. These customers saw another strong quarter of savings of \$0.83/kWh/month/customer before adjustments or subscription fees were applied in Q4 2019. At the end of 2019, the first year of BTM battery operation, the two operating customers received an average of \$0.76/kWh/month/customer after adjustments and subscriptions fees are applied. As the additional sites are completed, the

customer savings they produce will provide additional detail of the viability of BTM battery storage to different Commercial and Industrial businesses. Additionally, NYSEG is working with Tesla to aggregate and bid these BTM resources into the NYISO Wholesale DR market to leverage additional value streams. The registration of these assets has been delayed while Tesla develops the systems and processes to bid these resources into the NYISO Wholesale market.

1 Grid Automation

1.1 Advanced Metering Infrastructure (AMI)

Q4 Status	
<ul style="list-style-type: none"> 13,210 electric AMI meters installed 7,596 gas AMI meters installed Odd form meter deployment continues (78 remaining) 	
<ul style="list-style-type: none"> 99.60% AMI electric meter daily read rate 96.11% AMI gas meter daily read rate 	
<ul style="list-style-type: none"> Opt-out rate (no fee) = 1.3% 	
<ul style="list-style-type: none"> AMI fully deployed and integrated, the system is operating with high reliability. 	
Timeframe	Future Activities
Q1	<ul style="list-style-type: none"> Odd-form meter deployment continues (78 remaining). Meter Firmware upgrades to add efficiencies and functionality. Revert FW testing and begin deployment. Waiting on activation issue resolution. Gas Network troubleshooting and tuning for remaining meters not reporting.

1.2 Distribution Automation

Q4 Status	
<ul style="list-style-type: none"> All capacitor banks are installed, but there is one that isn't working and needs to be taken off the pole so a diagnosis can be made. 	
Timeframe	Future Activities
Q1	<ul style="list-style-type: none"> Complete SCADA testing.

1.3 Advanced Distribution Management System (ADMS)

Q4 Status	
<ul style="list-style-type: none"> Siemens has completed SAT testing. 	
Timeframe	Future Activities
Q1	<ul style="list-style-type: none"> Train Operator(s) to monitor ADMS in parallel to production.

2 Integrated System Planning

2.1 DER and Load Forecasting

DER and Load Forecasting scope is complete for the Energy Smart Community. Any additional scope will be documented through AVANGRID's Change Management Process per the Implementation Plan filed in January 2017.

2.2 DER Hosting Capacity

DER Hosting Capacity scope is complete for the Energy Smart Community. Any additional scope will be documented through AVANGRID's Change Management Process per the Implementation Plan filed in January 2017.

2.3 DER Developer Portal

DER Developer Portal scope is complete for the Energy Smart Community. Any additional scope will be documented through AVANGRID's Change Management Process per the Implementation Plan filed in January 2017.

3 Customer and Market Enablement

3.1 Customer Segmentation and Analytics

Q4 Status	
<ul style="list-style-type: none">The ESC Residential Customer Survey (3rd administration) was completed and the data sent to Tom Barks, Andrew Leja and Ricardo Daziano. Completed, usable surveys inside Tompkins County w/AMI = 668, w/in Tompkins County w/out AMI = 2,949, outside Tompkins County = 535 for a total of 4,152 completed, usable surveys).	
Timeframe	Future Activities
Q1	<ul style="list-style-type: none">Further evaluate results from 3rd ESC Residential Customer Survey administration.

3.2 Smart Usage Plan (TOU)

Q4 Status	
<ul style="list-style-type: none">The Regulatory Report was submitted on August 30, 2019302 customers enrolled in the rate	
Timeframe	Future Activities
Q1	<ul style="list-style-type: none">Evaluate Smart Usage Plan pilot for potential closure in 2020.

3.3 Energy Marketplace (NYSEG Smart Solutions)

Q4 Status	
<ul style="list-style-type: none"> Statistics from Tompkins County compiled since site launch in October 2017 (ESC Footprint) <ul style="list-style-type: none"> 1,354 Transactions 2,586 Products sold 189 Demand Response Enrollees OptimizEV Product page and enrollment page went live 	
Timeframe	Future Activities
Q1	<ul style="list-style-type: none"> Development of a heat pump marketing campaign Uplight SOW review

3.4 Energy Manager and Innovative Usage Report

Q4 Status	
<ul style="list-style-type: none"> Added educational content on the Smart Usage Plan, specifically the supply and demand complexity. Automated rates and working with a few issue corrected by Franklin Statistics: <ul style="list-style-type: none"> 2.95% of customers using Energy Manager 6.76% active site users 5% alerts sign up 	
Timeframe	Future Activities
Q1	<ul style="list-style-type: none"> Continue evaluation of portal performance and Smart Usage Plan automated billing implementation.

3.5 Energy Profiler Online (EPOs)

Q4 Status	
<ul style="list-style-type: none"> EPO is live for non-residential customers not on mandatory hourly pricing 	
Timeframe	Future Activities
Q1	<ul style="list-style-type: none"> Evaluate another mailing to increase enrollment and usage

4 Customer Platforms, Communications and Stakeholder Engagement

4.1 Customer Communications and Stakeholder Engagement

Q4 Status	
<ul style="list-style-type: none"> The third administration of the ESC Residential Customer Survey was launched in early November and kept in the field until the end of November. 	
<ul style="list-style-type: none"> The events season wrapped up in mid-December and culminated with a total of over 2500 meaningful conversations within Tompkins County. 	
<ul style="list-style-type: none"> EnergyTrack Report tentative schedule for 2020 received - March, June, Sept and Dec OptimizEV input on user experience, portal, marketing materials phase 1 and 2. Smart Partner mailing sent in December 2019. 	
Timeframe	Future Activities
Q1	<ul style="list-style-type: none"> OptimizEV web page built and launched and bus ads finalized. Funds, communication needs for Smart Partner/Energy Navigator 2020. Transition plans for Smart Usage Plan - timing, evaluation and comm needs.

4.2 Smart Partner Program

Q4 Status	
<ul style="list-style-type: none"> Reviewed a proposal for NYSEG Smart Partner Program in 2020 and make recommendations Finished the busy events season in mid-December. 	
Timeframe	Future Activities
Q1	<ul style="list-style-type: none"> Program likely not continued in 2020

5 Emerging Projects

5.1 DC Fast Charging

Q4 Status	
<ul style="list-style-type: none">Working with an EVSC supply company to obtain load profiles for residential charging in order to identify customers within the ESC who have electric vehicles and pull a month of interval data for them.Project planning and schedule revision at NYPA offices.	
Timeframe	Future Activities
Q1	<ul style="list-style-type: none">Delayed site construction to start in March 2020.Develop a revised installation schedule with NYPA and work through a plan to engage with site hosts.

5.2 OptimizEV

Q4 Status	
<ul style="list-style-type: none">The goal of 35 participants was met.All 35 installations have been completed and the baseline data collection phase began on November 1, 2019 after 17 chargers were successfully installed and connected to the network.A successful participant webinar demonstrating the new UI took place in November.	
Timeframe	Future Activities
Q1	<ul style="list-style-type: none">Begin discount algorithm testing.Plan for baseline data presentation January – February 2020.Plan for updated targets (associated with implementation plan metrics) relative to baseline data.

5.3 DER Adoption Forecasting

Q4 Status	
<ul style="list-style-type: none">CleanPower Research completed technical potential mapping of rooftops in ESC (via LiDAR data)All available billing and load data for ESC transferred to CleanPower Research	
Timeframe	Future Activities

Q4 Status

Q1

- CleanPower Research compiling and analyzing all data for planned January 2020 delivery of results

6 Deviations from Established Project Plan

1. EV Fast Charging – Site Host Recruitment	
Deviation	Construction delays have caused the overall program schedule to slip.
Action	Site construction will start in March 2020 and be completed by May or June.

7 Revised Cost Baseline

Actual Cost to Date	2016 - 2018		2019		2020		Total		Grand Total
	CapEx	Opex	CapEx	Opex	CapEx	Opex	CapEx	Opex	
AMI	\$8,397,258		\$1,509,900				\$9,907,158		\$9,907,158
ADMS	\$4,285,620	\$2,331	\$638,874				\$4,924,494	\$2,331	\$4,926,825
DER Load Forecasting	\$89,335		\$2,896	\$162,000			\$92,231	\$162,000	\$254,231
DER Hosting Capacity									
DER Portal		\$2,380						\$2,380	\$2,380
Customer Segmentation & Analytics		\$225,570		\$32,273				\$257,843	\$257,843
Innovative Rate Design		\$42,637		\$101,360				\$143,997	\$143,997
Energy Manager & Innovative Usage	\$1,505,738	\$101,793	\$534,246	\$293,228			\$2,039,985	\$395,021	\$2,435,006
Energy Marketplace		\$381,593						\$381,593	\$381,593
Stakeholder Engagement		\$833,790	\$3,593	\$463,165			\$3,593	\$1,296,956	\$1,300,549
PMO		\$1,032,030		\$81,895				\$1,113,924	\$1,113,924
ESC Communications									
DCFC			\$66,038				\$66,038		\$66,038
DER Adoption Forecasting									
Smart Home Rate			\$1,089,739	\$13,398			\$1,089,739	\$13,398	\$1,103,137
Grand Total	\$14,320,151	\$2,741,309	\$3,845,265	\$1,019,601			\$18,165,416	\$3,760,910	\$21,926,325

Current Forecast	2016 - 2018		2019		2020		Totals		Grand Total
	CapEx	Opex	CapEx	Opex	CapEx	Opex	CapEx	Opex	
AMI	\$8,349,829		\$944,384		\$654,908	286,555	\$9,949,121	286,555	\$10,235,676
ADMS	\$4,461,326	\$95,151	\$379,520				\$4,840,846	\$95,151	\$4,935,997
DER Load Forecasting	\$88,934			\$135,000			\$88,934	\$135,000	\$223,934
DER Hosting Capacity									
DER Portal	\$11,974						\$11,974		\$11,974
Customer Segmentation & Analytics		\$225,570		\$64,000		\$26,550		\$316,120	\$316,120
Innovative Rate Design		\$65,362		\$140,000		\$92,000		\$297,362	\$297,362
Energy Manager & Innovative Usage	\$1,735,869	\$172,734	\$520,190	\$151,750		318,963	\$2,256,059	\$643,447	\$2,899,506
Energy Marketplace		\$240,899		\$304,196		\$55,332		\$600,427	\$600,427
Stakeholder Engagement		\$833,790		\$381,000				\$1,214,790	\$1,214,790
PMO		\$1,388,695		\$184,934		\$160,000		\$1,733,629	\$1,733,629
ESC Communications				\$152,150				\$152,150	\$152,150
DCFC			170,000	\$40,000			\$170,000	\$40,000	\$210,000
DER Adoption Forecasting									
Smart Home Rate			\$1,039,570	\$27,000	\$187,884	\$24,000	\$1,227,454	\$51,000	\$1,278,454
Grand Total	\$14,650,522	\$3,248,708	\$3,053,664	\$1,580,030	\$842,792	\$963,400	\$18,544,387	\$5,565,631	\$24,110,019