NAVIGANT

ComEd
Bidgely Pilot Evaluation Report

Energy Efficiency / Demand Response Plan:
Plan Year 9 (PY9)

Presented to
Commonwealth Edison Company

FINAL

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Prepared by:

Will Sierzchula
Navigant

Na Yu
Navigant

www.navigant.com

ComEd Bidgely Pilot Evaluation Report

Submitted to:

ComEd
Three Lincoln Centre
Oakbrook Terrace, IL 60181

Submitted by:

Navigant Consulting, Inc.
150 N. Riverside, Suite 2100
Chicago, IL 60606

Contact:

Randy Gunn, Managing Director	Jeff Erickson, Director	Carly Olig, Managing Consultant
312.583.5714	608.497.2322	608.445.9900
Randy.Gunn@Navigant.com	Jeff.Erickson@Navigant.com	Carly.Olig@Navigant.com

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1. INTRODUCTION

This report presents the results of the impact evaluation of ComEd's PY9 Bidgely Pilot. It provides a summary of the energy and demand impacts for the program in total and broken out by level of engagement. Appendix 1 presents the impact analysis methodology and Appendix 2 shows detailed results. PY9 covers June 1, 2016 through December 31, 2017.

2. PROGRAM DESCRIPTION

The Bidgely pilot combines energy usage information and digital messages to help customers save energy. The pilot included 1,218 residential participants who chose to opt-in.[1] All of them received energy usage information in hourly, daily, and monthly increments; disaggregation of usage into heating load, cooling load, pool pump load (if applicable), and always on load[2,3]; tips and recommendations to reduce consumption; and the ability to see actual and projected spend for the current billing cycle. Thirty-six of the pilot participants also received a HomeBeat Home Area Network (HAN) device that allowed them to see their usage in real-time.[4] Bidgely participants had relatively low average daily use (17 kWh) compared to other similar ComEd EE programs. For comparison, participant average daily usage in PY9 in Home Energy Report program waves ranged from 18 to 57 kWh.[5]

3. PROGRAM SAVINGS

Table 3-1 summarizes the incremental energy savings the Bidgely pilot achieved in PY9. This program specifically focused on energy savings, and demand savings were not estimated by either the program or the evaluation. In addition, the type of analysis the evaluation used estimates net savings and no further net-to-gross (NTG) adjustment is necessary. Because of this, there is neither an ex ante estimate of gross savings nor a gross realization rate.

Table 3-1. PY9 Total Annual Incremental Savings

Savings Category	Energy Savings (kWh)	Demand Savings (kW)	Peak Demand Savings (kW)
Ex Ante Gross Savings	NA	NA	NA
Program Gross Realization Rate	NA	NA	NA
Verified Gross Savings	NA	NA	NA
Program Net-to-Gross Ratio (NTGR)*	NA	NA	NA
Verified Net Savings†	99,586	NA	NA

Source: ComEd data, Bidgely Data, and Navigant team analysis.
* This type of analysis estimates net savings, no further NTG adjustment is necessary.
† This value is after the uplift adjustment.

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[1] The pilot was specifically targeted to avoid overlap with participants in ComEd's Home Energy Report program.
[2] Bidgely described "Always On" as the base load in a participant's home, made up of appliances and consumer devices that are either always plugged in or are used very intermittently such as TV, cable box, phone chargers, PCs, gaming consoles, etc.
[3] One-hundred percent itemization, which disaggregated 100% of usage, was launched on July 17, 2017 and applied only to participants without the HAN device. Some disaggregation was available before this date but this is when 100% of usage became disaggregated.
[4] The HomeBeat devices were installed between February and September of 2017.
[5] Navigant, 2018, *ComEd Home Energy Report Program Evaluation Report Plan Year 9*.

Navigant conducted an uplift analysis[6] but did not find evidence that the Bidgely pilot increased participation in other programs. Therefore, the uplift adjustment was zero kWh. The details of the uplift analysis are shown in Section 6.4.

Navigant did not receive an ex ante savings estimate and as such was unable to calculate a program realization rate.

4. PROGRAM SAVINGS BY MEASURE

The Bidgely pilot only has a single measure, behavioral savings from the web and app. In PY9, the measure life for the pilot was one year. Detailed savings broken down by engagement are presented in Section 6.

5. IMPACT ANALYSIS FINDINGS AND RECOMMENDATIONS

Navigant estimated savings for 1,218 participants. Total PY9 verified savings were 99,586 kWh.

Finding 1. The Bidgely pilot saved an average of 1.1% of participant energy use. Participants in the pilot averaged 17 kWh of daily use in PY9. The savings are similar, in percentage terms, to the savings achieved by waves in the Home Energy Report program with similar usage.[7]

Finding 2. Both individual instances and discrete months of participants logging into the Bidgely app are associated with increased energy savings. Of the two criteria, logging into the app in a new month is associated with almost 10 times more savings than one additional log in. Additional analysis shows that customers who logged in at least twice saved an average of 1.84% while customers who logged in at least five times saved an average of 2.83% and customers who logged in at least 20 times saved an average of 5.72%.

Recommendation 1. Bidgely should encourage participants to access the app in multiple months through time to drive the highest savings.

Finding 3. Participants tend to access the Bidgely solution via the website more than through the mobile app. The savings estimates suggest that visiting via the web may have generated higher savings than mobile; however, the difference between the two estimates was not statistically significant.

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[6] Only uplift in PY9 was analyzed; as the program started in PY9 a legacy uplift calculation was not applicable.
[7] Navigant. 2018. C*omEd Home Energy Report Program Evaluation Report.* Presented to Commonwealth Edison Company.
http://ilsagfiles.org/SAG_files/Evaluation_Documents/ComEd/ComEd_EPY9_Evaluation_Reports_Final/ComEd_PY9_HER_Report_2018-04-10.pdf

6. Appendix 1. Impact Analysis Methodology

6.1 Detailed Data Cleaning

In preparation for impact analysis, Navigant combined and cleaned data provided by ComEd and Bidgely. The pre-cleaned and pre-matched dataset included 1,218 participants and 296,776 controls.[8] Navigant removed customers and data points from the analysis in the steps identified in Table 6-1. After cleaning and matching, the dataset comprised 1,194 participants and 1,099 controls.

Table 6-1. Site and Observation Attrition Due to Data Cleaning

Data Cleaning Step	Customers		Observations		Customer % Change		Observation % Change	
	Treatment	Control	Treatment	Control	Treatment	Control	Treatment	Control
Original Raw Data	1,218	296,776	42,045	19,224,507	NA	NA	NA	NA
Subset to bills ending before 12/31/2017	1,218	251,201	41,020	8,232,390	0.0%	-15.4%	-2.4%	-57.2%
Remove duplicate bills	1,218	251,201	41,020	7,984,505	0.0%	0.0%	0.0%	-3.0%
Remove observations with negative usage	1,218	251,167	41,020	7,972,325	0.0%	0.0%	0.0%	-0.2%
Flatten bills*	1,218	251,167	40,013	7,747,547	0.0%	0.0%	-2.5%	-2.8%
Exclude outliers†	1,218	251,144	40,013	7,743,478	0.0%	0.0%	0.0%	-0.1%
Remove accounts missing more than 4 records in the pre-period	1,213	1,117	39,924	42,609	-0.4%	-99.6%	-0.2%	-99.4%
Subset to a 12-month pre-period for each customer	1,213	1,117	30,933	31,210	0.0%	0.0%	-22.5%	-26.8%
Remove participants who logged in before the start of PY9	1,194	1,099	30,314	30,578	-1.6%	-1.6%	-2.0%	-2.0%

Source: ComEd data, Bidgely Data, and Navigant team analysis.
* This involves combining bills that end in the same month to create a dataset suitable for analysis.
† Outliers are defined as observations with average daily usage more than one order of magnitude from the median usage.

6.2 Matching Approach

Navigant selected matches based on participant and potential control energy usage during the 12-month period before program enrollment. For purposes of matching, enrollment occurred when a participant first logged into the Bidgely solution. Matching periods varied as participants had different enrollment dates.

Match quality is denoted by the Euclidean distance between a participant and potential controls over the matching period through the sum of squared differences. The non-participant with the shortest Euclidean distance relative to the participant's usage across the 12 months prior to enrollment was chosen as the matched control; matching was done with replacement. Figure 6-1 provides visual verification that participants and controls had similar average usage during the matching period.

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[8] Controls were taken from the control customers in the Home Energy Report program.

Figure 6-1. Pre-Period Participant and Control Usage Comparison
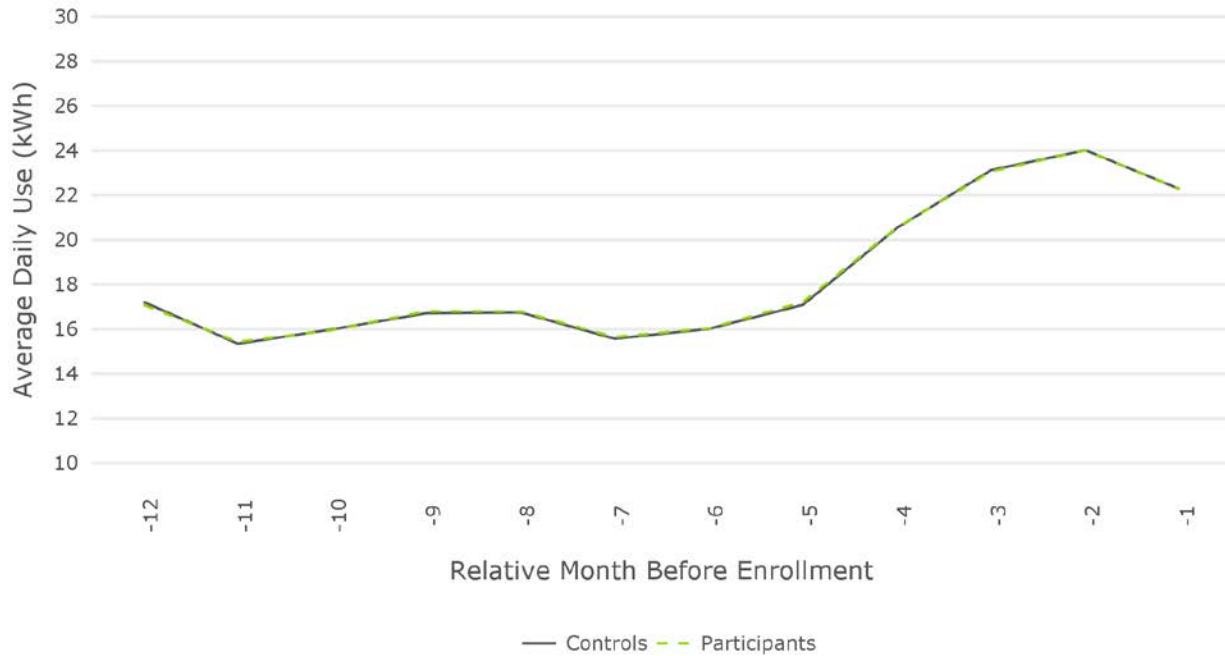
Source: ComEd data, Bidgely Data, and Navigant team analysis.

6.3 Regression Methodology

The Lagged Dependable Variable (LDV) model controls for non-treatment differences in energy use between participants and controls via a lagged energy explanatory variable. This model frames energy use in calendar month *t* of the post-program period as a function of both the treatment variable and energy use in the same calendar month of the pre-program period. The underlying logic is that systematic differences between participants and controls will be reflected in differences in their past energy use, which is highly correlated with their current energy use. Each of the regression models Navigant estimated in PY9 used this LDV model.

Equation 6-1 provides the specification used to estimate overall annual program savings where the coefficient β_1 identifies average daily kWh savings.

Equation 6-1. LDV Annual Program Savings Model

$$ADU_{kt} = \beta_1 Treatment_k + \sum_J \beta_{2j} Month_{jt} + \sum_J \beta_{3j} Month_{jt} \cdot ADUlag_{kt} + \varepsilon_{kt}$$

Where:

ADU_{kt}	is average daily usage in kWh by household *k* in bill period *t*
$Month_{jt}$	is a binary variable taking a value of 1 when j = t and 0 otherwise[9]
$Treatment_k$	is a binary variable taking a value of 0 if household *k* is assigned to the control group, and 1 if assigned to the treatment group
$ADUlag_{kt}$	is household *k*'s energy use in the same calendar month of the pre-program year as the calendar month of month *t*

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[9] In other words, if there are *T* post-program months, there are *T* monthly dummy variables in the model, with the dummy variable $Month_{tt}$ the only one to take a value of 1 at time t. These are, in other words, monthly fixed effects.

ε_{kt} is the cluster-robust error term for household *k* during billing cycle *t;* cluster-robust errors account for heteroskedasticity and autocorrelation at the household level[10]

To further explore savings, Navigant also estimated several variants on Equation 6-1. The variants estimated savings by month of the program and by level of engagement with the Bidgely solution.

Equation 6-2 provides the specification to estimate monthly program savings where all variables are as defined in Equation 6-1. The set of coefficients β_{1j} is the estimate of the program's average daily kWh savings by month.

Equation 6-2. LDV Monthly Program Savings Model

$$ADU_{kt} = \sum_J \beta_{1j} Month_{jt} \cdot Treatment_{kt} + \sum_J \beta_{2j} Month_{jt} + \sum_J \beta_{3j} Month_{jt} \cdot ADUlag_{kt} + \varepsilon_{kt}$$

In addition to program savings, Navigant also estimated energy savings according to whether participants accessed the solution via the website or mobile app. Equation 6-3, shows the specification for this model. The coefficients β_3 and β_4 estimate average daily kWh savings associated with accessing the pilot via the Bidgely website or mobile app, respectively.

Equation 6-3. LDV Savings by Device Model

$$ADU_{kt} = \sum_J \beta_{1j} Month_{jt} + \sum_J \beta_{2j} Month_{jt} \cdot ADUlag_{kt} + \beta_3 Web\_Usage_k + \beta_4 Mobile\_Usage_k + \varepsilon_{kt}$$

Where:

Web_usage_k is a binary variable taking a value of 1 when household *k* accessed the app via the website

$Mobile\_usage_k$ is a binary variable taking a value of 1 when household *k* accessed the app via a mobile device[11]

and all other variables are as defined in Equation 6-1.

Navigant ran a fourth model to estimate savings according to the total number of times a participant logged into the Bidgely solution. Equation 6-4 shows the specification for that model; the coefficient β_3 is the estimate of average daily kWh savings related to each individual login.[12]

Equation 6-4. LDV Savings by Logins Model

$$ADU_{kt} = \sum_J \beta_{1j} Month_{jt} + \sum_J \beta_{2j} Month_{jt} \cdot ADUlag_{kt} + \beta_3 Acct\_Logins_k + \varepsilon_{kt}$$

Where:

$Acct\_Logins_k$ is the number of times household *k* logged into the Bidgely solution in PY9

and all other variables are as defined in Equation 6-1.

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[10] Ordinary Least Squares (OLS) regression models assume that the data are homoskedastic and not autocorrelated. If either of these assumptions is violated, the resulting standard errors of the parameter estimates are incorrect (usually underestimated). A random variable is heteroskedastic when the variance is not constant. A random variable is autocorrelated when the error term in one period is correlated with the error terms in at least some of the previous periods.

[11] It is possible for both Web_usage_k and $Mobile\_usage_k$ to be one for customers who accessed the pilot through both platforms.

[12] Multiplying this coefficient by the number of logins for a given participant gives that participant's estimated savings.

Finally, Navigant ran a fifth model to estimate savings according to the number of unique months a participant logged into the Bidgely solution.[13] Equation 6-5 shows the specification for that model, where coefficient β_4 is the estimate of average daily kWh savings related to the number of months an individual logged into the solution (after controlling for the total number of logins which is captured in β_3).[14]

Equation 6-5. LDV Savings by Monthly Logins Model

$$ADU_{kt} = \sum_J \beta_{1j} Month_{jt} + \sum_J \beta_{2j} Month_{jt} \cdot ADUlag_{kt} + \beta_{3k} Acct\_Logins_k + \beta_4 Acct\_Mo\_Logs_k + \varepsilon_{kt}$$

Where:

$Acct\_Mo\_Logs_k$ is the number of distinct months household *k* logged into the Bidgely solution in PY9

All other variables are as defined in Equation 6-1 and Equation 6-4.

6.4 Accounting for Uplift in Other Energy Efficiency Programs

If participation rates in other EE programs are the same for Bidgely treatment and control groups, the savings estimates from the regression analyses are already "net" of savings from other programs as this indicates the Bidgely program does not increase or decrease participation in other EE programs. However, if the Bidgely program affects participation rates in other EE programs, then savings across all programs are lower than indicated by the simple summation of savings in the Bidgely and EE programs. For instance, if the Bidgely program increases participation in other EE programs, the increase in savings may be allocated to either the Bidgely program or the EE program, but cannot be allocated to both programs simultaneously.[15] Note that when the Bidgely program decreases participation in other programs there is no issue of double-counting and thus no adjustment to the savings total is made.

Data permitting, Navigant uses a difference-in-difference (DID) statistic to estimate uplift in other EE programs. To calculate the DID statistic, the change in the participation rate in another EE program between PY9 and the pre-program year for the control group is subtracted from the same change for the treatment group. For instance, if the rate of participation in an EE program during PY9 is five percent for the treatment group and three percent for the control group, and the rate of participation during the pre-period is two percent for the treatment group and one percent for the control group, then the rate of uplift due to the Bidgely program is one percent, as reflected in Equation 6-6.

Equation 6-6. DID Statistic Calculation

$$(PY8\ treatment\ group\ participation - prePY\ treatment\ group\ participation)$$
$$- (PY8\ control\ group\ participation - prePY\ control\ group\ participation)$$
$$= DID\ statistic$$
$$(5\% - 2\%) - (3\% - 1\%) = 1\%$$

The DID statistic generates an unbiased estimate of uplift when the baseline average rate of participation is the same for the treatment and control groups, or when they are different due only to differences

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[13] This refers to logins that occurred in distinct months. For example, logging into the app on July 1st and July 31st would only constitute logging in in one month, but logging in on July 31st and August 1st would constitute logging in in two unique months. This variable is meant to capture repeated usage of the app through time as opposed to just total number of logins. It is possible that logging into the app 12 times in one month is very different, in terms of savings, than logging in to the app once per month in 12 distinct months.

[14] Multiplying this coefficient by the number of distinct month logins for a given participant gives that participant's estimated savings.

[15] It is not possible to avoid double counting of savings generated by programs for which tracking data are not available, such as upstream lighting programs.

between the two groups in time-invariant factors, such as the residence's square footage. For PY9 the DID statistic was adjusted to account for the differing lengths of the pre and post periods since PY9 was 19 months.

Note that no adjustments were made for negative uplift (i.e. cases where the Bidgely pilot decreased participation in other programs). Additionally, Navigant only considered uplift in PY9 as there was no legacy uplift because PY9 was the pilot's first year.

Navigant examined the uplift associated with four EE programs: the Fridge and Freezer Recycling (FFR) program, the Home Energy Assessment (HEA) program, and the Home Energy Rebates (Rebate) program.[16] The FFR program achieves energy savings through retirement and recycling of older, inefficient refrigerators, freezers, and room air conditioners. The HEA program is offered jointly with the local gas utilities and achieves savings by providing direct installation of low-cost efficiency measures for single family homes, such as CFLs and low-flow showerheads. The Rebate program offers weatherization and incentives to residential customers to encourage customer purchases of higher efficiency heating, ventilating, and air-conditioning (HVAC) equipment. Table 6-2 shows estimates for PY9 uplift.

Table 6-2. Estimates of PY9 Uplift for Bidgely Program

	FFR	HEA	Rebate
Median program savings (annual kWh per participant)	902	549	201
Number of treatment customers	1,194	1,194	1,194
Treatment rate of participation, PY9	3%	1%	1%
Change in rate of treatment participation from pre-program year	-1%	-2%	-6%
Number of control customers	1,194	1,194	1,194
Control rate of participation, PY9	1%	1%	0%
Change in rate of control participation from pre-program year	-1%	0%	-2%
DID or POD statistic	0%	-2%	-4%
Participant uplift	-2	-22	-53
Statistically significant at the 90% confidence level?	No	Yes	Yes
Savings attributable to other programs (kWh)	-1,805	-12,114	-10,720
Percentage change in EE program participation rate for participants	-6%	-61%	-80%

Source: ComEd data, Bidgely Data, and Navigant team analysis.

7. APPENDIX 2: IMPACT ANALYSIS DETAIL

Navigant evaluated Bidgely pilot energy savings from several perspectives including overall, by month, by access type, and by how frequently and when a participant logged into the solution. This section of the report provides those savings results along with several plots to help visualize the impacts.

7.1 Regression Outputs

Table 7-1 shows the regression output for the Bidgely pilot annual savings model (see Equation 6-1). Full regression output for the other models are available upon request.

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[16] Note that by design there was no overlap between the Bidgely program and the Home Energy Report program. There was also no overlap with the Multi-Family Energy Savings Program as Bidgely was only offered to single-family homes.

Table 7-1. Overall Savings Regression Output

Variable	Coefficient	Standard Error	T-Statistic	P-Value
treatment	-0.19	0.11	-1.74	0.08
yrmo201608	-1.38	3.25	-0.43	0.67
yrmo201609	3.17	0.72	4.43	0.00
yrmo201610	1.64	0.29	5.64	0.00
yrmo201611	1.52	0.28	5.39	0.00
yrmo201612	1.02	0.45	2.28	0.02
yrmo201701	1.45	0.51	2.86	0.00
yrmo201702	1.75	0.29	6.07	0.00
yrmo201703	1.87	0.32	5.90	0.00
yrmo201704	1.00	0.30	3.36	0.00
yrmo201705	1.45	0.21	6.80	0.00
yrmo201706	1.96	0.23	8.41	0.00
yrmo201707	1.74	0.30	5.82	0.00
yrmo201708	0.60	0.36	1.69	0.09
yrmo201709	1.17	0.30	3.85	0.00
yrmo201710	3.42	0.29	11.61	0.00
yrmo201711	1.69	0.30	5.67	0.00
yrmo201712	2.10	0.34	6.24	0.00
yrmo201608:avgdailykwh_pre	1.16	0.12	9.55	0.00
yrmo201609:avgdailykwh_pre	0.99	0.04	27.97	0.00
yrmo201610:avgdailykwh_pre	0.97	0.02	43.40	0.00
yrmo201611:avgdailykwh_pre	0.89	0.02	40.54	0.00
yrmo201612:avgdailykwh_pre	0.99	0.03	30.70	0.00
yrmo201701:avgdailykwh_pre	0.96	0.03	30.48	0.00
yrmo201702:avgdailykwh_pre	0.85	0.02	42.92	0.00
yrmo201703:avgdailykwh_pre	0.87	0.02	35.92	0.00
yrmo201704:avgdailykwh_pre	0.93	0.02	38.95	0.00
yrmo201705:avgdailykwh_pre	0.90	0.02	48.71	0.00
yrmo201706:avgdailykwh_pre	0.82	0.01	56.37	0.00
yrmo201707:avgdailykwh_pre	0.84	0.01	61.63	0.00
yrmo201708:avgdailykwh_pre	0.75	0.01	52.53	0.00
yrmo201709:avgdailykwh_pre	0.72	0.01	48.98	0.00
yrmo201710:avgdailykwh_pre	0.99	0.02	44.53	0.00
yrmo201711:avgdailykwh_pre	0.95	0.02	39.15	0.00
yrmo201712:avgdailykwh_pre	0.89	0.02	37.90	0.00

Source: ComEd data, Bidgely Data, and Navigant team analysis.

7.2 Monthly Energy Savings

Figure 7-1 shows monthly savings along with 90% confidence bounds. Most of the monthly savings values were not statistically significant from zero (indicated by the confidence bound crossing zero), likely because of the small sample size. The monthly savings do not show strong trends although there is some evidence that savings were higher in July and August 2017, just after the launch of 100% itemization in the disaggregation.

Figure 7-1. Monthly Program Savings

Source: ComEd data, Bidgely Data, and Navigant team analysis.

7.3 Energy Savings by Access Type

Bidgely participants could access the solution via the website or a mobile device. Participants could access the pilot through either a web portal or a mobile app. Figure 7-2 shows the breakdown of how many participants utilized each access type. On average, participants visited the app or web fourteen times; however, the distribution was heavily right-skewed with a median of only three visits per participant. Approximately one-third of participants only visited the app or web one time.

Figure 7-2. Number of Participants by Login Method
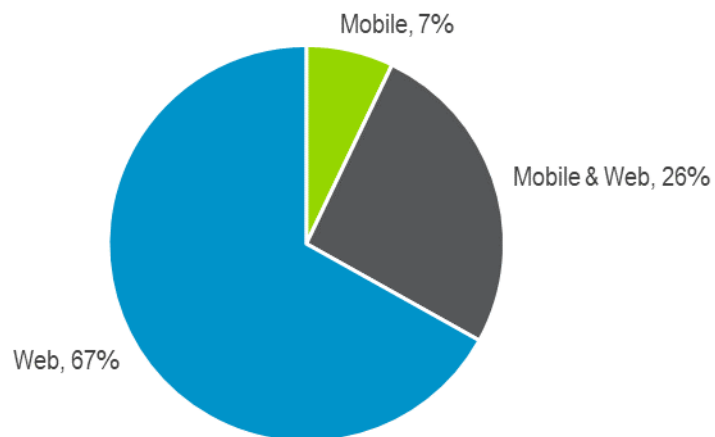
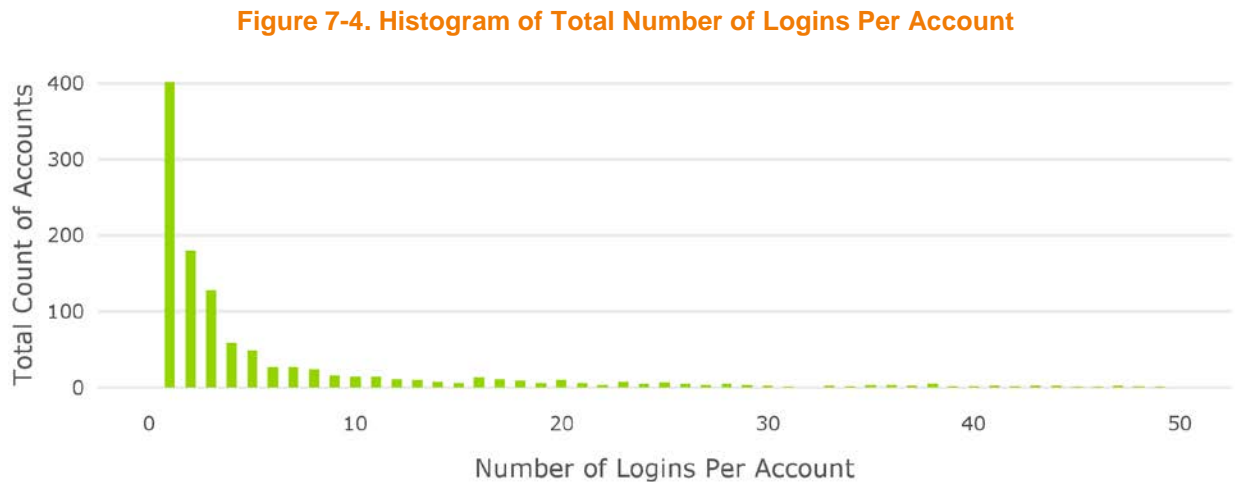*Source: ComEd data, Bidgely Data, and Navigant team analysis.*

Each time a participant logged into the solution, Bidgely tracked whether the visit was by web or mobile,[17] which allowed Navigant to estimate the relationship between energy savings and access type. Figure 7-3 shows savings associated with web and mobile usage along with 90 percent confidence intervals. This figure shows that the point estimate of savings from web access was higher than mobile, however the two estimates are not statistically different at the 90% confidence level.

Figure 7-3. Program Savings by Access Type
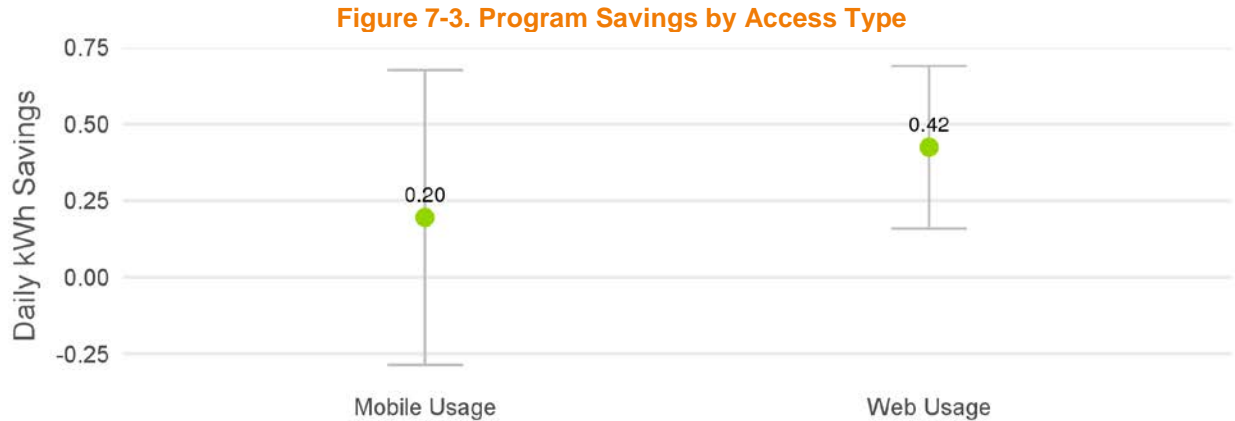
Source: ComEd data, Bidgely Data, and Navigant team analysis.

7.4 Energy Savings by Frequency of Logins

Navigant estimated Bidgely program savings according to the number of individual instances and the number of discrete months participants logged into the solution. Figure 7-4 shows a histogram of the total number of logins per account; most users logged in between one and five times. Figure 7-5 shows a histogram of number of unique months the user accessed their account; most users logged in in between one and five distinct months.

Figure 7-4. Histogram of Total Number of Logins Per Account

Source: ComEd data, Bidgely Data, and Navigant team analysis.
Note: The x-axis was truncated at 50 logins, without truncation the histogram goes to approximately 1000 logins.

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[17] Participants could access the Bidgely solution via both the web and mobile devices.

Figure 7-5. Histogram of Number of Distinct Month Logins Per Account

Source: ComEd data, Bidgely Data, and Navigant team analysis.

Table 7-2 shows the savings associated with one additional login (at any time) and Table 7-3 shows the savings associated with logging in in one additional distinct month (after accounting for the total number of logins). The savings associated with logging in in one additional unique month are considerably higher than those associated with just one additional login. These results suggest that keeping customers engaged through time is more important than getting them to engage a lot in a short period of time (for example, right after they enroll).

Table 7-2. Savings by Total Number of Logins

Savings Type	Daily Energy Savings Per Account Per Login (kWh)	Annualized Energy Savings Per Account Per Login (kWh)
One Additional Login	0.005	1.8

Source: ComEd data, Bidgely Data, and Navigant team analysis.
Note: These savings come from the model shown in Equation 6-4.

**Table 7-3. Savings by Number of Distinct Month Logins**

Savings Type	Daily Energy Savings Per Account Per Login (kWh)	Annualized Energy Savings Per Account Per Login (kWh)
One Additional Unique Month	0.044	16.06
One Additional Login	0.003	1.10

Source: ComEd data, Bidgely Data, and Navigant team analysis.
Note: These savings come from the model shown in Equation 6-5.

Navigant ran models on subsets of customers with at least two logins up to at least 20 logins. The savings for each subgroup are shown in Figure 7-6. This figure clearly shows that savings increase as customers have more logins. However, this is not a causal analysis; it could be that the customers who remain engaged and continue to log in to the platform would save more even if they had logged in less.

Figure 7-6. Savings for Customers with at least X Logins
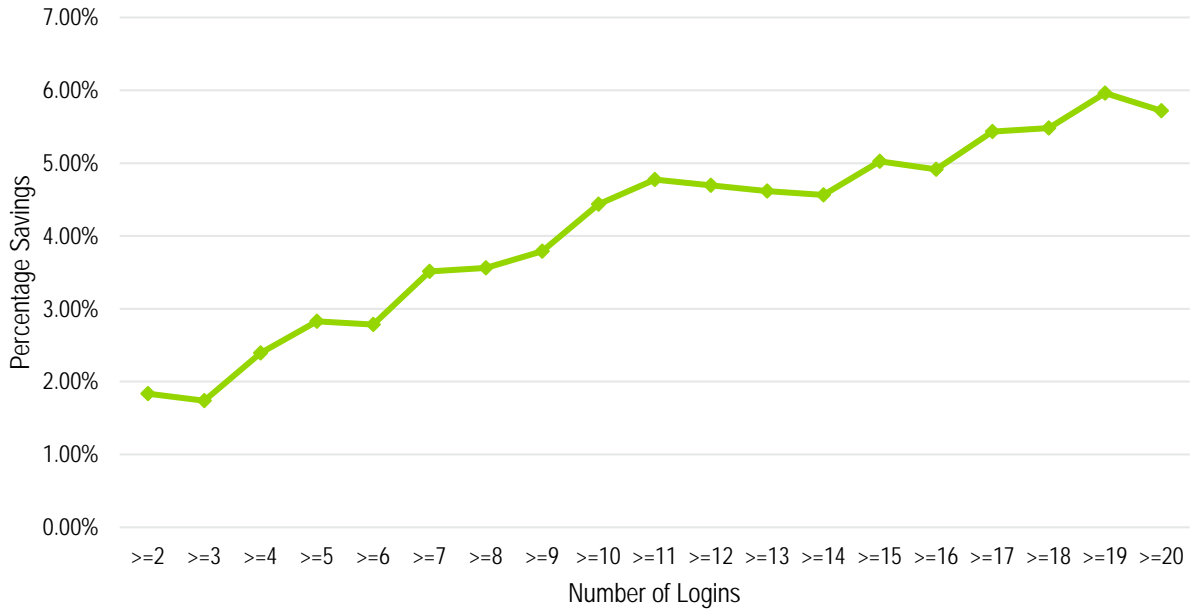
Source: ComEd data, Bidgely Data, and Navigant team analysis.

Navigant calculated the program retention rate in each month after the initial login by calculating how many customers visited the platform each month after their initial login. The retention rates over the entirety of the program (17 months) are shown in Figure 7-7.

Figure 7-7. Retention Rate
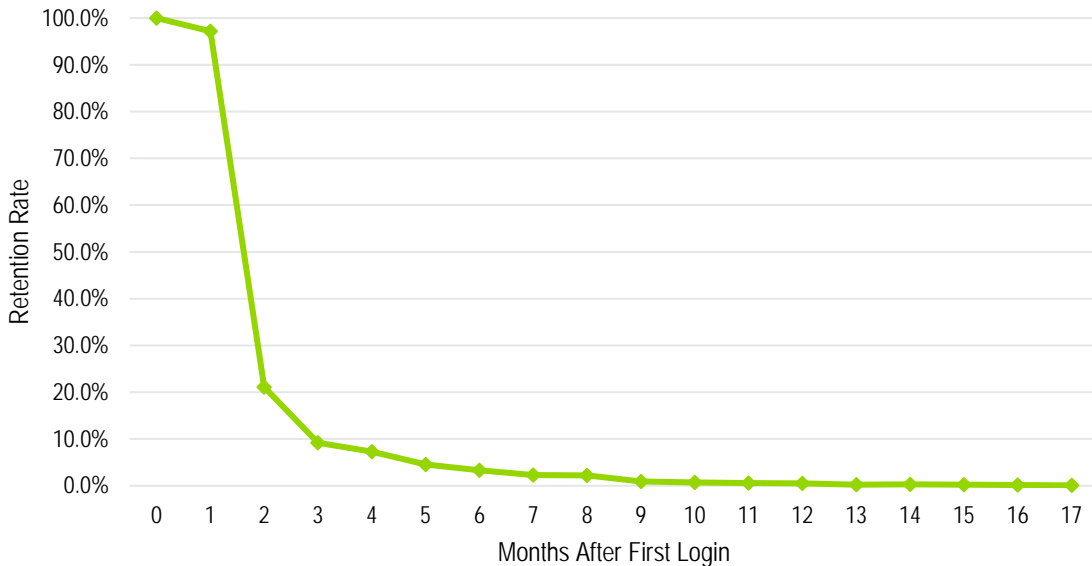
Source: ComEd data, Bidgely Data, and Navigant team analysis.

8. APPENDIX 3. TRC DETAIL

Table 8-1 shows the savings detail for the Total Resource Cost (TRC) cost-effectiveness analysis. This TRC variable table only includes cost-effectiveness analysis inputs available at the time of finalizing this PY9 impact report. Additional required cost data (e.g., measure costs, program level incentive and non-incentive costs) are not included in this table and will be provided to evaluation at a later date. Further, detail in this table (e.g., EULs) other than final PY9 savings and program data are subject to change and are not final.

Table 8-1. TRC Detail

End Use Type	Research Category	Units	Quantity	Effective Useful Life	Ex Ante Gross Savings (kWh)	Ex Ante Gross Peak Demand Reduction (kW)	Verified Net Savings (kWh)	Verified Gross Peak Demand Reduction (kW)
Behavioral	NA	Household	1,218	1	NA	NA	99,586	NA

Source: ComEd data, Bidgely Data, and Navigant team analysis.