
Energy Efficiency Program Proposal

ThermWise[®] Energy Comparison Report

Program Description

ThermWise Energy Comparison Report Background

The ThermWise Energy Comparison Report (ECR) is a customized report that includes a series of four graphical illustrations that show how a customer's usage compares (confidentially) to customers with similar housing and other characteristics. The goals of the ECR are to help influence customers' behavior, lifestyle, appliance purchases, shell measures, and to encourage customers to be more energy efficient, while boosting participation in other rebate programs including the ThermWise Home Energy Plan.

The ECR is available to customers via opt-in and opt-out programs. Customers participate in these programs by visiting the Company's website, DominionEnergy.com or by being selected to receive the ECR at regular intervals throughout the year. The program's cost effectiveness is measured based on an analysis of savings achieved for the program.

ThermWise Energy Comparison Report History

In 2010, Dominion Energy began researching utility behavioral-driven programs operating throughout the United States and reporting usage-analysis to residential customers. In 2011, the Company launched the first ECR. Since development, the ECR has been an integrated component of the Market Transformation Budget. In Dominion Energy's 2015 Budget Filing the Company launched the ECR as a stand-alone program and claim natural gas savings as part of the program. In 2019 the Company intends to maintain this program as a stand-alone program.

The following table describes the current and historical distribution of the ECR. The column labeled "Control" are those customers who have not received the ECR in order to compare statistically against the recipients for the purpose of evaluating the program's effectiveness.

ThermWise Energy Comparison Report Distribution

Description	Recipients	Control	Planned Group Discontinuance
Group A (Initial Pilot – Nov 2011 Launch)	8,000		December 2015
Group B (High Usage – December 2012)	25,000	25,000	December 2016
Group B (High Usage – December 2012)	25,000	25,000	Group Relaunch December 2017 to December 2018
Monthly Opt-In (Opt-In as of September 2018)	4,421		Ongoing
Group C (Roll – Out – September 2013)	100,000	10,000	December 2017 Group Relaunch 2018
Group D (Roll – Out – November 2014)	100,000	10,000	December 2018
Group E (Roll – Out – October 2016)	55,000	10,000	October 2020
Group F (Roll – Out – (2017)	50,000	5,000	October 2021
Group G (Roll – Out – 2018)	50,000	25,000	October 2022

Group H (Roll – Out 2019)	25,000	10,000	October 2023
Group I (Roll – Out 2020)	25,000	10,000	October 2024
Group J (Roll – Out 2021)	25,000	10,000	October 2025

Elements of Comparison

Customers are compared to one-hundred premises that share the same dwelling type, are located in the same weather zone, have similar square footage, and built within the same time period. Additionally, the Company employs a comparison of homes based on a “similarity index” based off of the 10,000 closest homes within a weather zone of base load, peak to base usage, and weather sensitivity. This similarity index is designed to account indirectly for things such as the efficiency of gas equipment, number of appliances, customer’s behaviors, and a home’s occupancy without actually having that specific information. When combined with dwelling type, weather zone, square footage, and year built, comparison groups are formed to create a benchmark by which a customer may understand how their natural gas usage ranks relative to other similarly categorized customers.

ThermWise Energy Comparison Report Savings

At the end of a full year’s distribution of the report and for each reporting group, the Company performs studies to verify the Energy Comparison Report’s effectiveness. To date, the Company has found that reports distributed by postal mail are the most effective at saving energy. Actual annual average savings are updated yearly using savings from each eligible group to determine a weighted actual Savings. The Company computes a weighted annual realized savings of 0.99 decatherms for all program recipients. The following table illustrates the weighted savings calculation across all programs.

Description	Recipients	Annual Savings
Group B (High Usage – December 2012)	12,823*	0.5714
Group C (Roll – Out – September 2013)	66,710*	2.1693
Group D (Roll – Out September 2014)	73,063*	0.3754
Group E (Roll – Out November 2016)	49,667*	0.40382
Monthly (Varies)	4,421*	0.99
Actual Weighted Savings		0.99

*recipients are based on the most recent size of the group. This is lower than the original group due to customer attrition and program opt out.

The Company also discounts participant attrition with the savings. In addition to the weighted actual savings, the Company calculates a level of persistence savings beyond one year. The savings are calculated using third party persistence savings analysis. The Company calculates persistence savings to be 0.63 decatherms for a total savings of 1.62 for all program participants.

Consistent with standard testing procedures, the Company will run an annual savings tests using known and measurable statistical techniques following the yearly completion of each of the distribution pilots. Customers that view the report online or alternatively opt-in to receive the report do not undergo statistical savings testing. However, those who have opted in are assumed to save in proportion to those in the push groups.

ThermWise Energy Comparison Report Future

The Company plans to expand the report’s reach to at least an additional 75,000 customers over the next three years beginning in October 2019 while managing existing participant groups. This growth is scheduled at 25,000 in 2019, 25,000 in 2020, and 25,000 in 2021. The Company will continue to monitor program efficacy

and program duration. For the report push strategy, the Company intends to maintain the frequency of five times per year. The Company will continue to monitor additional opportunities to extend the program's reach.

As the Company encourages more energy savings through better appliance and shell measures in homes and businesses, Dominion Energy believes that behavioral energy savings will become even more important in reducing natural gas energy consumption. The ECR stands ready to aid in this transition. Dominion Energy looks forward to continue to reach more customers in this program, and examine additional ways to engage customers and achieve behavioral savings.

The Company will continue to review the ECR process to examine ways to increase customer participation and improve the customer's energy efficiency. Any changes would not alter the general framework of the program as outlined above but merely expand on and enhance the elements already in place.

ThermWise Energy Challenge Pledge Pilot Program

According to the 2018 Annual ThermWise Telephone Survey performed by Lighthouse, a combined 29% of customers indicated that they participated in the ThermWise Rebate Program either to "save money" or "to protect the environment." Research further indicates that individuals that make a commitment to changing their behavior are more likely to follow through and do so.¹

In 2019, the Company proposes to create a pilot program to capture interested general service residential customers the opportunity to make a commitment to saving energy. Contingent upon the Commission's approval, the Company will commence development. Subsequently, the Company will have a sign up period to allow customers to voluntarily sign up for the challenge. In Fall 2019 the Company will launch the ThermWise Energy Challenge to enrolled customers. During the campaign, customers will receive at least monthly regular emails or text messages from Dominion Energy. By creating a program that allows customers to pledge their commitment towards energy conservation, the Company will provide opportunities for customers to exercise their interest through a formalized Dominion Energy program.

The Company plans to operate this pilot program for at least two years starting in the Fall 2019. The Company will monitor program efforts and evaluate savings for enrolled customers. Based on performance, the Company may at a later date choose to expand this pilot program to additional program eligible customers.

¹ Pallak, MS, Cook, DA, Sullivan, JJ (1980). "Commitment and energy conservation." In L. Bickman (Ed.), Applied Social Psychology Annual (pp 235 – 253). Beverly Hills