



Duquesne Light Company EV TOU Pilot Program Overview

February 2023



EV Time-of-Use (TOU) Pilot Program Overview



For Electric Vehicle Drivers & Charging Hosts

- Only residential customers that drive electric and small & medium commercial customers (<200 kW monthly metered demand – the cap for hourly priced service) with an EV or EV charging qualify, including those with net metering.
- CAP, Budget Billing, and Virtual Meter Aggregation customers are not eligible.



Time Based Supply Rate

- Electricity supply rate changes throughout the day, and is lowest during off-peak times, such as overnight.
- The rate schedule does not change for weekends, holidays, or seasonally.



Applies to the Whole Premise

- By default, the rate applies to the entire premise, unless the EV charging is separately metered.

EV Time-of-Use (TOU) Pilot Program Background

- EV TOU customers are supplied through the same Fixed Price, Full Requirements (FPFR) products as other Default Service Plan (DSP) customers in that customer class.
- Rate Structure:
 - The EV-TOU rate applies to the entire premise load.
 - Applies 7 days-a-week, year-round.
 - Three time periods:

Period	Time	Example Rate Factor
Peak	1 – 9 pm	1.43
Off-Peak	6am – 1pm; 9 – 11 pm	0.81
Super Off-Peak	11pm – 6 am	0.59

- Over or under collection from EV TOU rates and costs paid to FPFR product suppliers is recovered through the respective Rider 8 reconciliation mechanism (from default service customers in the respective customer class).

EV Time-of-Use (TOU) Pilot Program Rate Factors

- Rate Factors are calculated by:
 - Calculating the hourly-load average real-time LMP for each EV TOU time period.
 - Calculating the overall capacity cost and capacity obligation.
 - Adding the capacity prices and LMPs per MWh for each given time period and expressing these values relative to the load-weighted average sum of capacity prices and LMPs per MWh across all hours.

Residential Electric Vehicle Time of Use Rate Factors

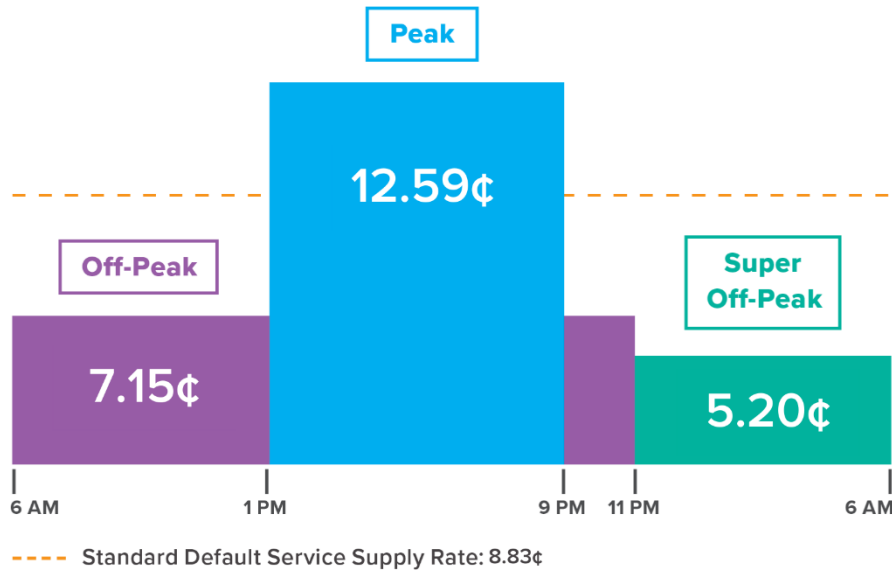
Capacity		Peak	Off Peak	Super Off Peak	Total
2022/2023 Capacity Price (\$/MWH)					
	2017	\$14.70	\$0.00	\$0.00	\$5.78
	2018	\$14.06	\$0.00	\$0.00	\$5.55
	2019	\$15.23	\$0.00	\$0.00	\$6.01
	2020	\$14.52	\$0.00	\$0.00	\$5.82

Energy		Peak	Off Peak	Super Off Peak	Total
Load-Weighted LMP (\$/MWH)					
	2017	\$37.62	\$30.29	\$22.83	\$31.37
	2018	\$50.62	\$40.27	\$27.53	\$41.24
	2019	\$33.94	\$27.38	\$20.73	\$28.36
	2020	\$29.21	\$22.63	\$16.18	\$23.73

Capacity + Energy		Peak	Off Peak	Super Off Peak	Total
\$/MWH					
	2017	\$52.32	\$30.29	\$22.83	\$37.15
	2018	\$64.68	\$40.27	\$27.53	\$46.79
	2019	\$49.18	\$27.38	\$20.73	\$34.36
	2020	\$43.74	\$22.63	\$16.18	\$29.56

Rate Factor		Peak	Off Peak	Super Off Peak
2022/2023 Rate Factor				
	2017	1.41	0.82	0.61
	2018	1.38	0.86	0.59
	2019	1.43	0.80	0.60
	2020	1.48	0.77	0.55
	Average	1.43	0.81	0.59

Why EV Time-of-Use?



“Accordingly, we urge all parties participating in the upcoming DSP proceedings to consider how EV specific TOU rate offerings could be made available to consumers.”

PA PUC Secretarial Letter¹
January 2020

- Offers EV drivers an opportunity for supply savings
- Decreases proportion of higher-priced on-peak energy needed to serve DSP customers

Customer Value



- Encourages EV adoption
- Encourages greater use of existing grid assets during off-peak periods for generation and transmission.

Company Value



¹ M-2019-3007101 – Investigation into D.S. and PJM Interconnection, LLC. Settlement Reforms.

Customer Education – Before Enrolling

Website

WHOLEHOME EV RATE
Home > Energy & Money Savings > Electric Vehicles > WholeHome EV Rate

**ELECTRIFY YOUR RIDE
THAT'S THE CHARGE**



AN ELECTRICITY SUPPLY RATE FOR EV DRIVERS

EXPLORE THE WHOLEHOME EV RATE
The WholeHome EV Rate is an electricity supply rate offered by DLC through its default service plan for residential customers that own or lease an electric vehicle (EV). By enrolling in the rate and shifting your electricity consumption to off-peak times, such as overnight, you may be able to save.

HOW IT WORKS:

- TIME-BASED RATE**
Your electricity supply rate will change throughout the day and will be lowest during off-peak times, such as overnight.
- APPLIES TO THE WHOLE HOME**
By default, this electricity supply rate applies to your entire home, not only to your EV charging.
- OPPORTUNITY TO SAVE**
If you can charge your EV and shift use of your major electric appliances to off-peak times, such as overnight, you'll have the greatest potential to save.

[DuquesneLight.com/EV](https://duquesnelight.com/EV)

Online Rate Advisor

You can save **~\$1,406** per year by switching to WholeHome EV Rate with a 2022 Nissan LEAF

Monthly Rate Comparison Home Electric Vehicle Gasoline

Compare Lowest Rate Only



Service	Home	Electric Vehicle	Gasoline	Total
Current Standard Residential Service	\$200	\$0	\$166	\$366/mo
WholeHome EV Rate	\$200	\$55	\$0	\$255/mo

Estimated average cost per month

Current Standard Residential Service: \$366/mo

WholeHome EV Rate: Save \$117/mo

Legend: Home (Teal), Electric Vehicle (Orange), Gasoline (Black)

Show Rate Details

Basic Filters

CURRENT RATE: Standard Residential S

ELECTRIC VEHICLE: 2022 Nissan LEAF

I ALREADY OWN THIS EV

MILES DRIVEN PER YEAR: 12,000 miles

CHARGING PATTERN: Overnight (11 p.m. - 6 a.)

Advanced Home

HOME MONTHLY ELECTRIC BILL: \$210 / month

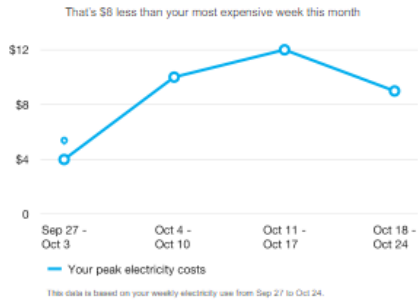
I HAVE EGS SUPPLY? ?

EV.DuquesneLight.com/Rates

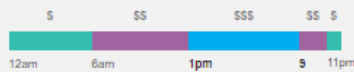
Customer Education – After Enrolling

Rate Coach Emails

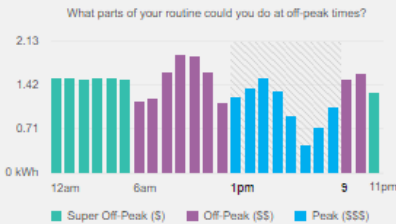
During peak hours this month, you spent the least the week of Sep 27 - Oct 3



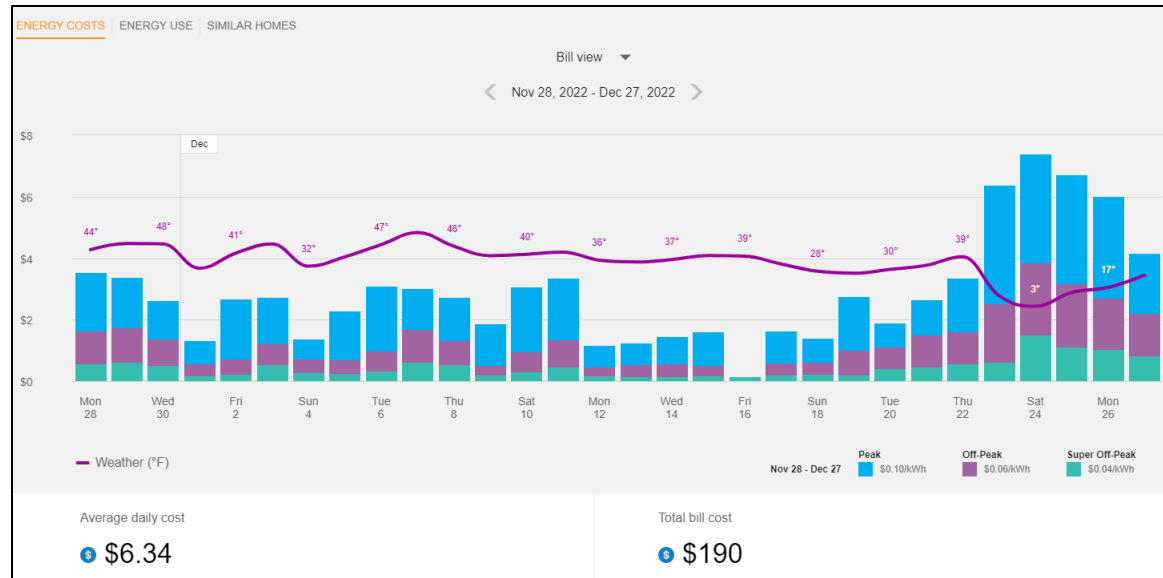
Electricity is 3.5x more expensive from 1pm to 9pm



Here's how you used electricity during the weekdays



Unique Databrowser Experience

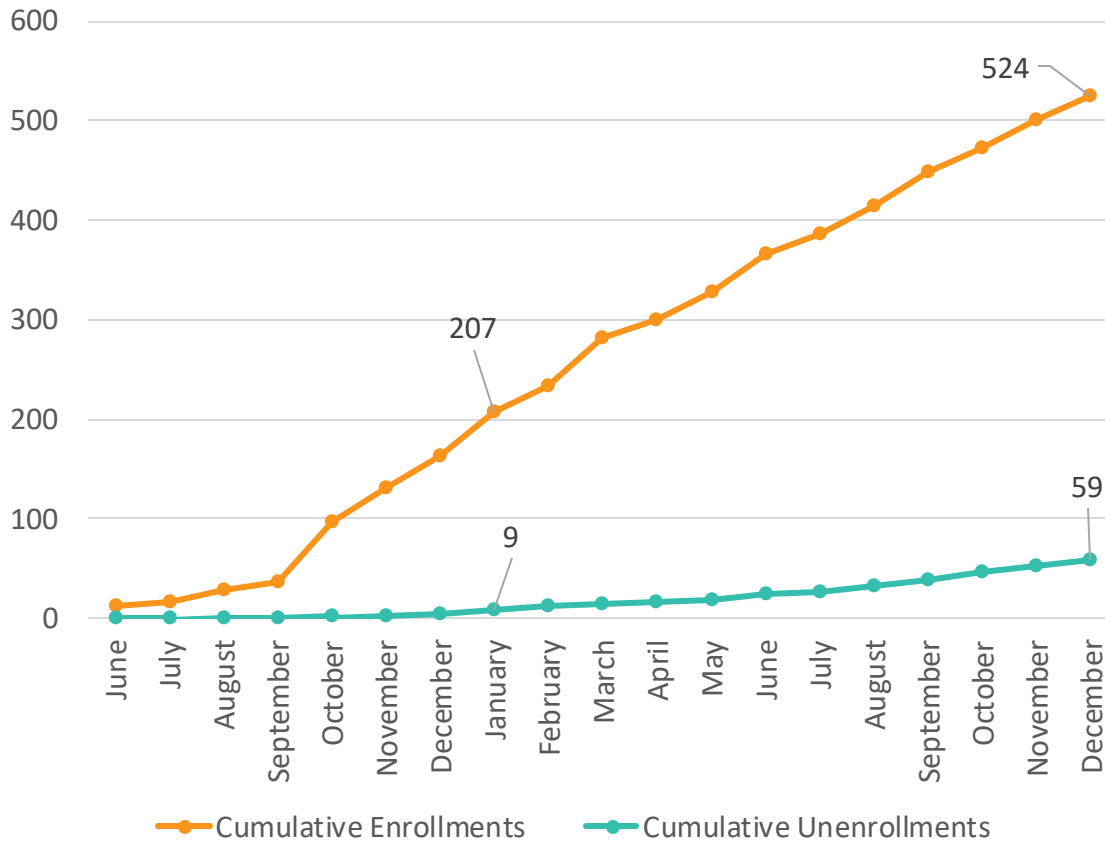




Enrollment and Rate Effectiveness

EV TOU Enrollment Recap

465 Customers Actively Enrolled
as of December 31, 2022



Quick Facts

Retention Rate	89%
Cumulative Residential Customers	519
Cumulative Commercial Customers	5
Net Metering Customers	88

Average TOU Customer is Saving Money

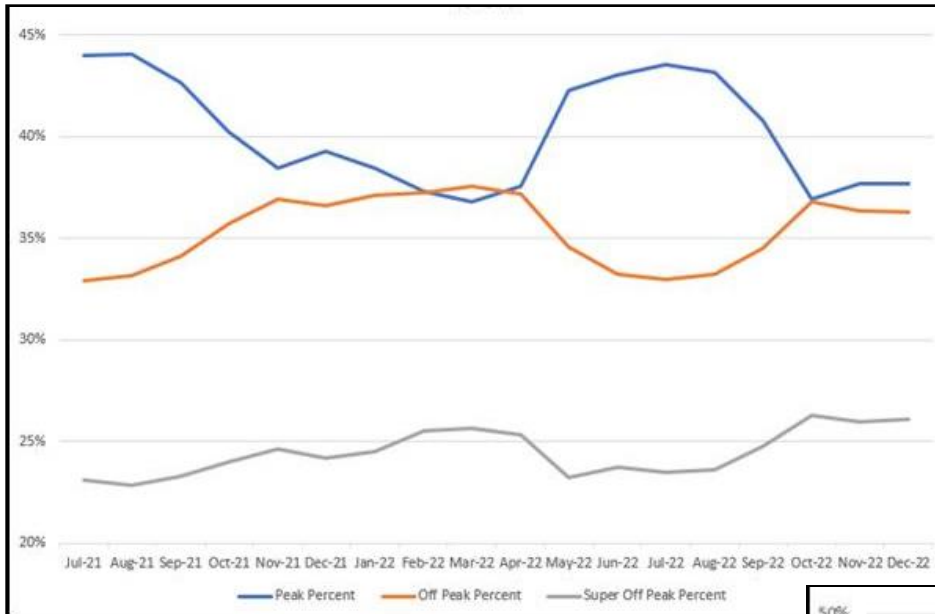
Over the life of the program, the average TOU customer has seen a reduction in their monthly bill.

Total TOU Program Savings	\$22,104.02*
TOU Savings per Bill	\$6.58*
TOU Bill Percent Reduction	10.3%*

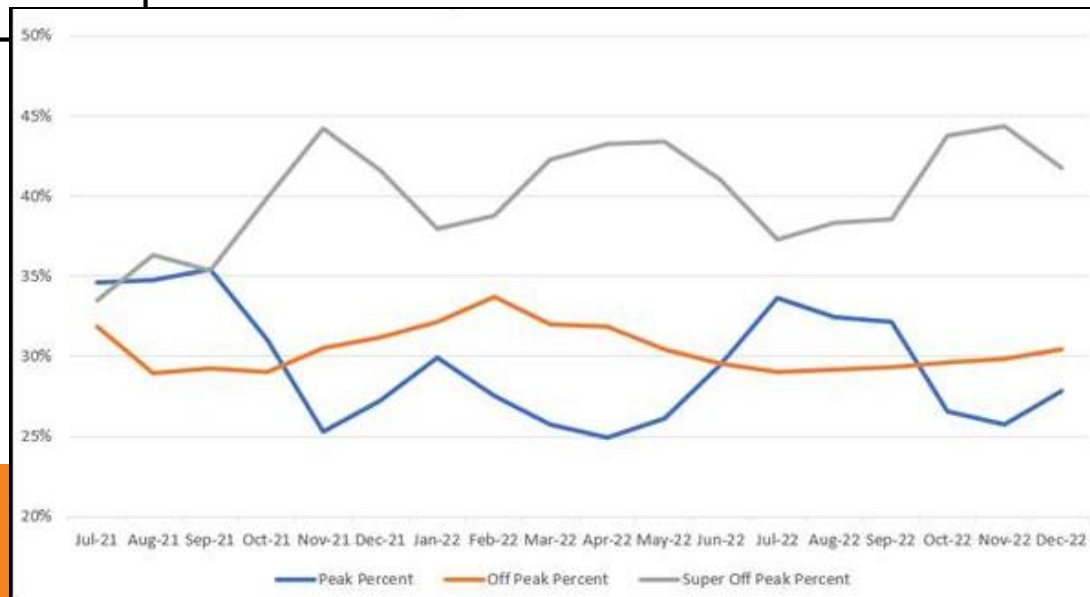
*Data from June 2021 through November 2022. Billing data from December 2021 and July 2022 are excluded from the analysis because of data issues due to a rate change implemented at that time.

Enrolled Customers Use a Greater Share of Electricity during Off-Peak Times

EV Driving Non-TOU Customers

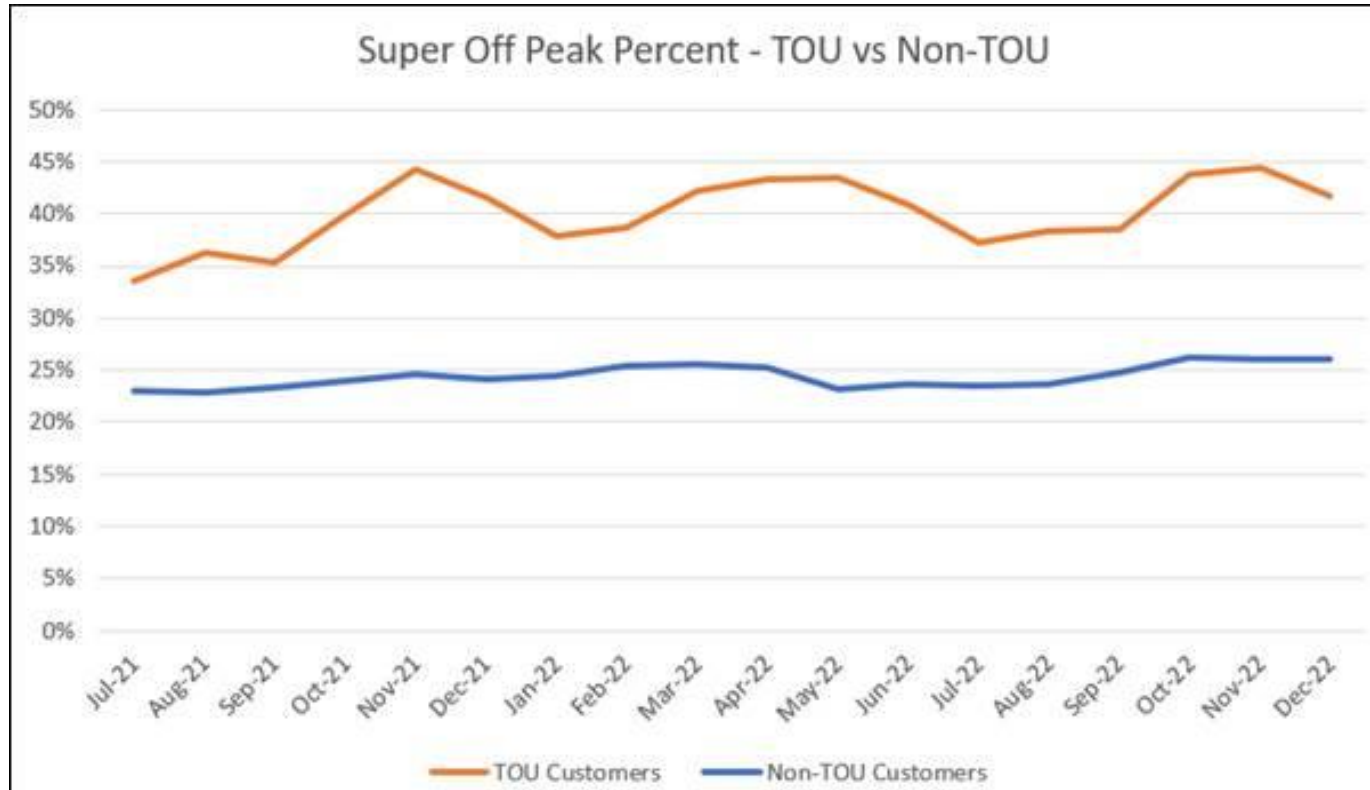


EV TOU Customers



Enrolled Customers Use More Electricity during Off-Peak Times

TOU customers consistently use electricity during super off-peak hours at a higher rate than non-TOU customers.



Customer Survey Overview

Survey Methodology

- Online survey of known EV drivers
- 189 customers completed the survey of the 1,397 invited
- Survey fielded late September to early October 2022

Key Findings

For those aware of the rate, **33% have used the Rate Advisor Tool**, and **90% found it at least somewhat helpful**.

Top enrollment barriers: perceived **lack of savings**, uncertainty surrounding **impact on bill**, and difficulty with **switching usage to off-peak times**.

64% would be **more interested in an EV TOU rate that only applied to EV charging**, as opposed to a rate that applied to their entire home.

Questions?

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