



MY ELECTRIFICATION JOURNEY

SUE DORWARD

CARBON MANAGER LLC, BRIDGEWATER

MARCH 20, 2025

BACKGROUND

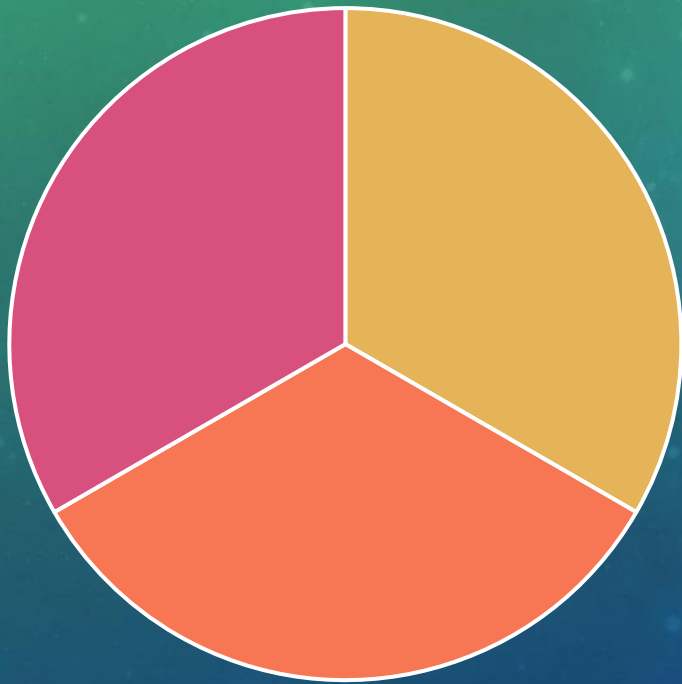


RAMPING UP



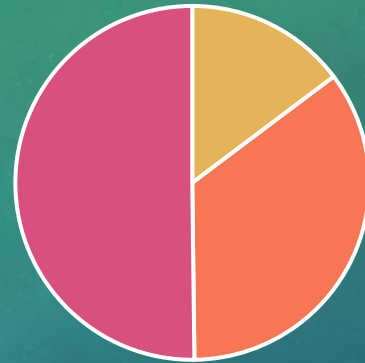
FIRST STEPS

2007 emissions – 35 tons



home cars flights

2024 emissions – 17 tons



home cars flights



Your carbon footprint is the equivalent of planting 400 urban trees.

VEHICLE	➤	12,056 lbs CO ₂ e
PUBLIC TRANSIT	➤	0 lbs CO ₂ e
TRAVEL	➤	17,259 lbs CO ₂ e
HOME ENERGY	➤	5,071 lbs CO ₂ e

Your total carbon footprint 34,386 lbs CO₂e

CAR – 2012 TESLA MODEL S

Free Tesla charging for life

85 kWh

RWD, single motor

255 mi range new

230 mi range now

134,000 miles

replaced motor

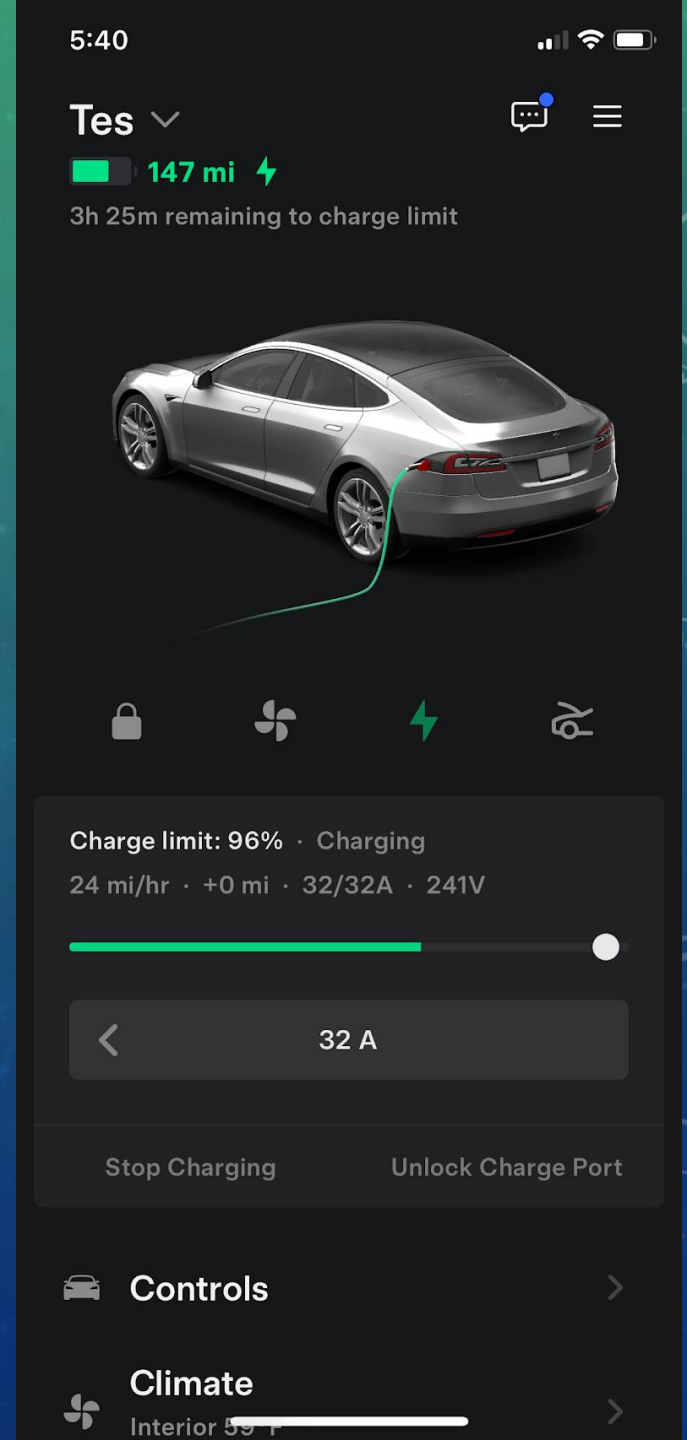
replaced door handles

fixed suspension



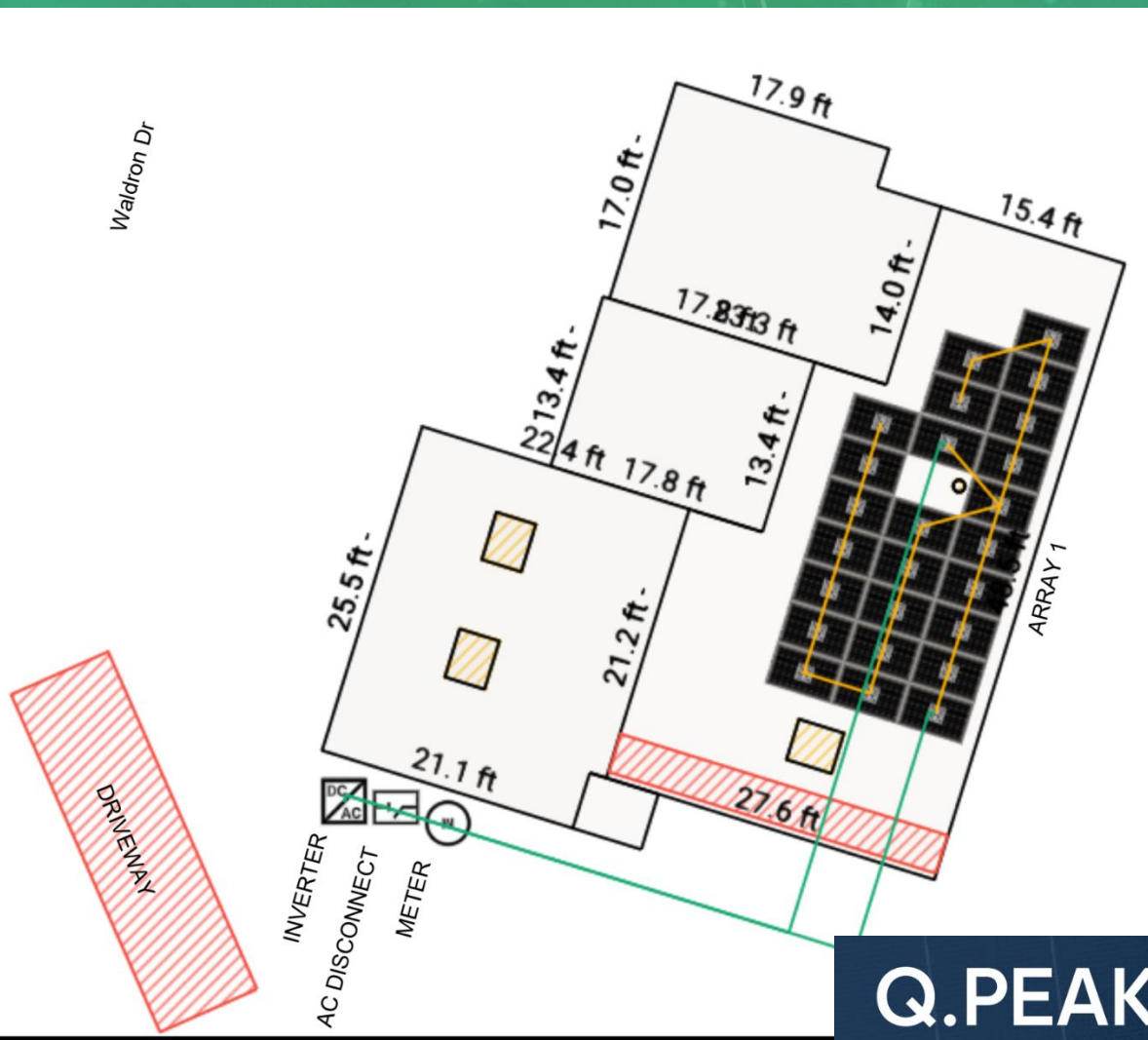
HOME CAR CHARGING

NEMA 14-50 plug



HOME – OWN 8 KW SOLAR ARRAY





8.00 kW DC PV SYSTEM
Opp ID #114517
 3 Waldron Dr
 Martinsville, NJ 08836

Manufacturer	Model	Quantity
Hanwha Q-cells	Q.PEAK DUO-G5 320	25
SolarEdge Technologies Inc.	P320	25
SolarEdge Technologies Inc.	SE7600H-US	1

Array Information

Array	Modules	Tilt	Azimuth
1	25	20	107

System Specifications
 320W Modules
 14' Rails
 Attachments
 Splices

ESE ORIENTATION
 \$ FOR EFFICIENCY
 MADE IN US/KOREA

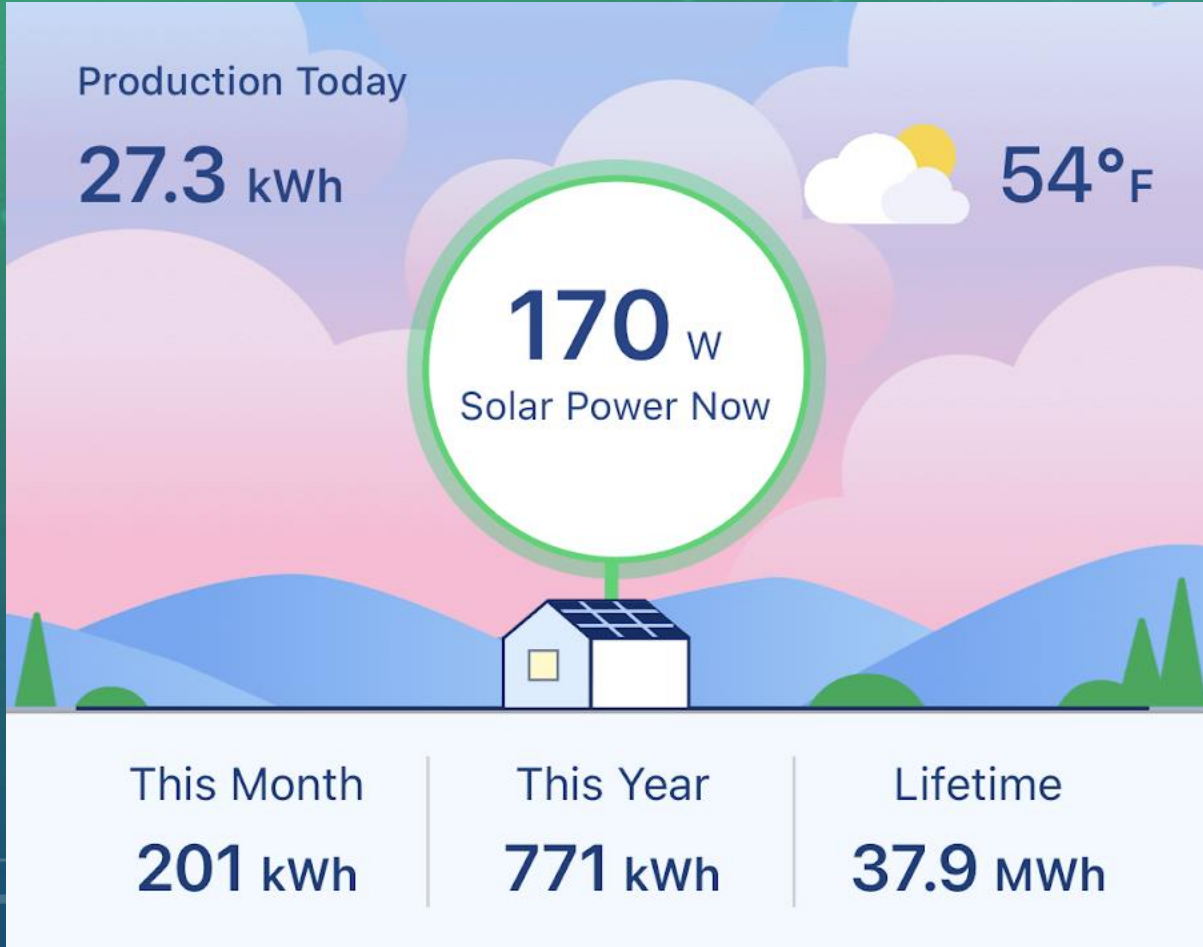
Q.PEAK DUO BLK-G5
300-320
 ENDURING HIGH PERFORMANCE



Phone: 1-866-767-4436 | Fax: 504-275-1209
 Web: www.posigen.com
 819 Central Ave, Suite 210, Jefferson, LA 70121



SOLAR PERFORMANCE (APP)

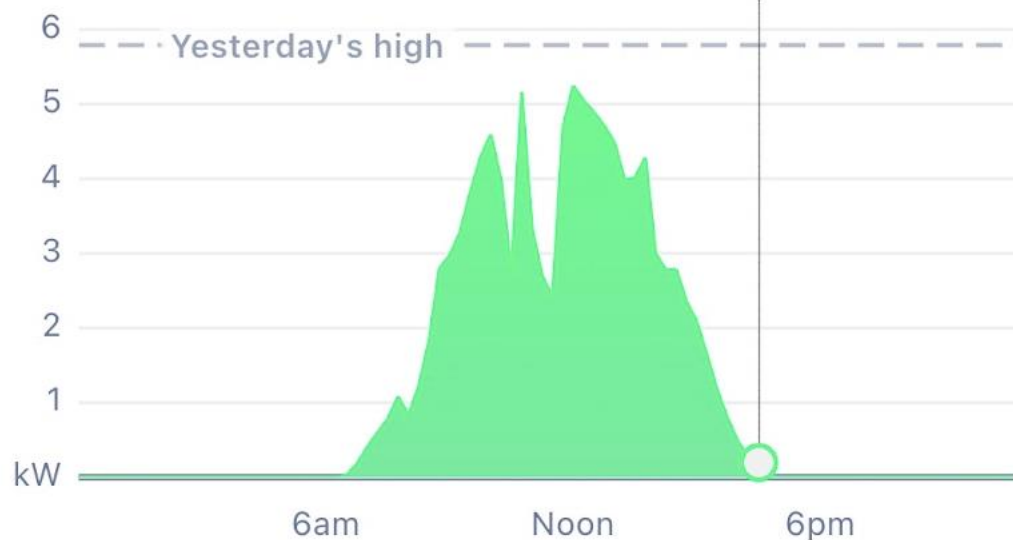


MARCH 9

Production

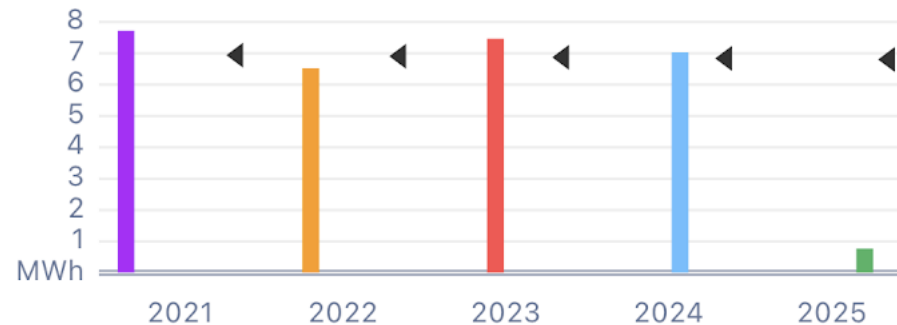
27.3 kWh

05:30 PM 197 W



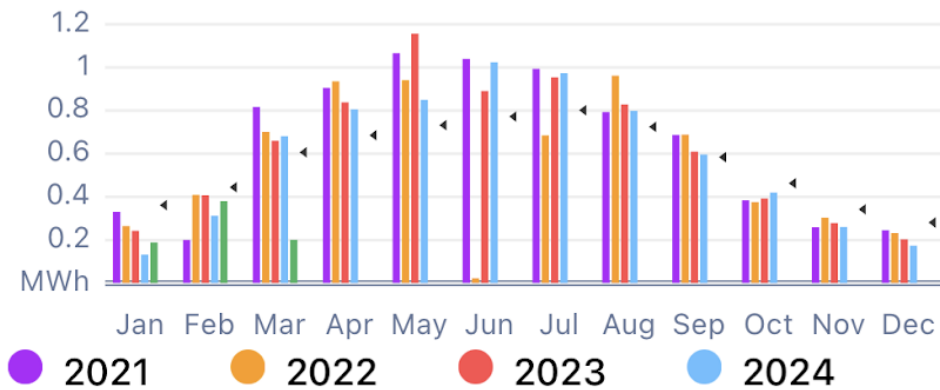
Comparative Production

Month Quarter **Year**



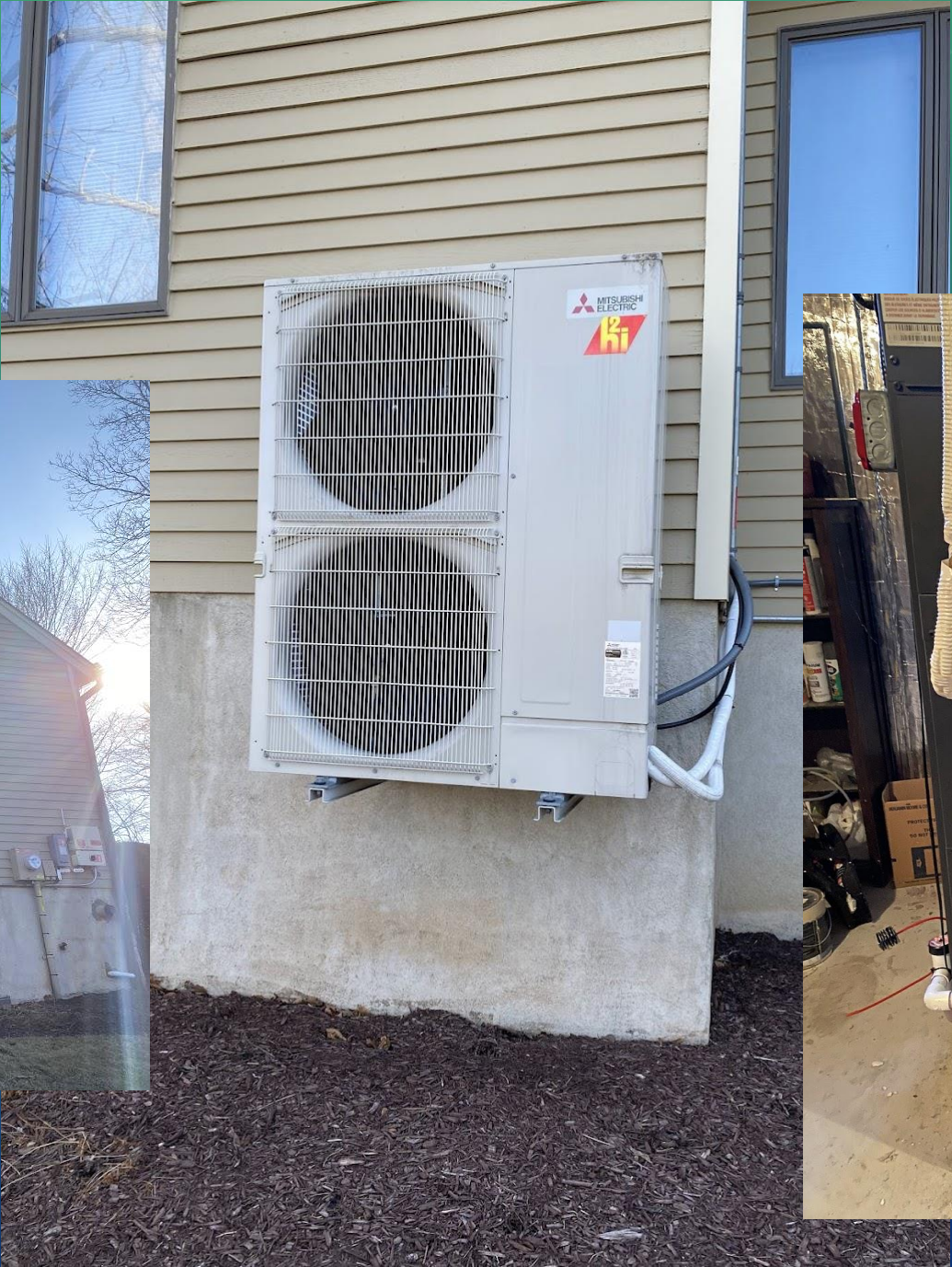
Comparative Production

Month Quarter Year



● 2025 ● Estimated

HEAT PUMP





100% heating performance down to 5° F with guaranteed heating down to -13° F.

Mitsubishi Hyper-Heat H2i cold climate

4 ton (undersized)
ducted
electric resistance backup
69°F

PERFORMANCE

Cooling Capacity up to 42,000 BTU
Heating Capacity up to 54,000 BTU
SEER 15-20 (depends on the indoor unit)
EER: 10.3-13 (depends on the indoor unit)
HSPF: 9.8-11.6 (depends on the indoor unit)
Heating Minimum Temp: -13 F
Cooling Minimum Temp 0 F (with wind baffle)
Room Cooling/Heating Capacity up to 2,000 sq ft

PERFORMANCE

Cooling Capacity 42,000 BTU
Heating Capacity up to 48,000 BTU
Airflow Rate, CFM 1040-1262-1485
Room Cooling/Heating Capacity up to 2000 sq ft



Details of your gas charges

Your rate: Residential Service Gas-Heating - RSG (HTG)

Meter # 4257102

Usage

Actual reading Feb 21, 2025	3681
<i>Less</i> Actual reading Jan 23, 2025	3671
Difference	10
Converted to CCF x 1.012	10.120
Converted to therms x 1.034	10.464
Total gas you used in 29 days	10.464 therms

Delivery charges

Monthly service charge		\$10.00
Charges for delivering gas to you:		
For the First	7.325 therms x \$0.622526	\$4.56
For the Next	3.139 therms x \$0.624403	\$1.96
Balancing Charge	10.237 therms x \$0.100615	\$1.03

Total gas delivery charges \$17.55

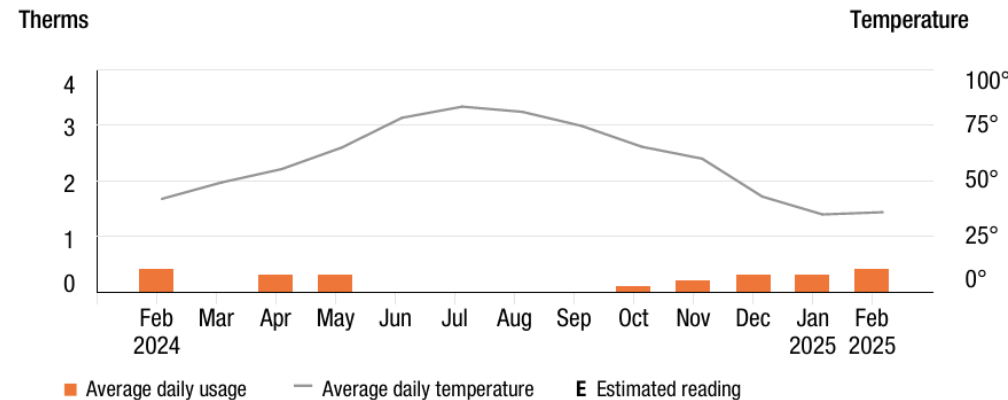
Supply charges

Cost of gas supplied by PSE&G:	10.464 therms x \$0.325879	\$3.41
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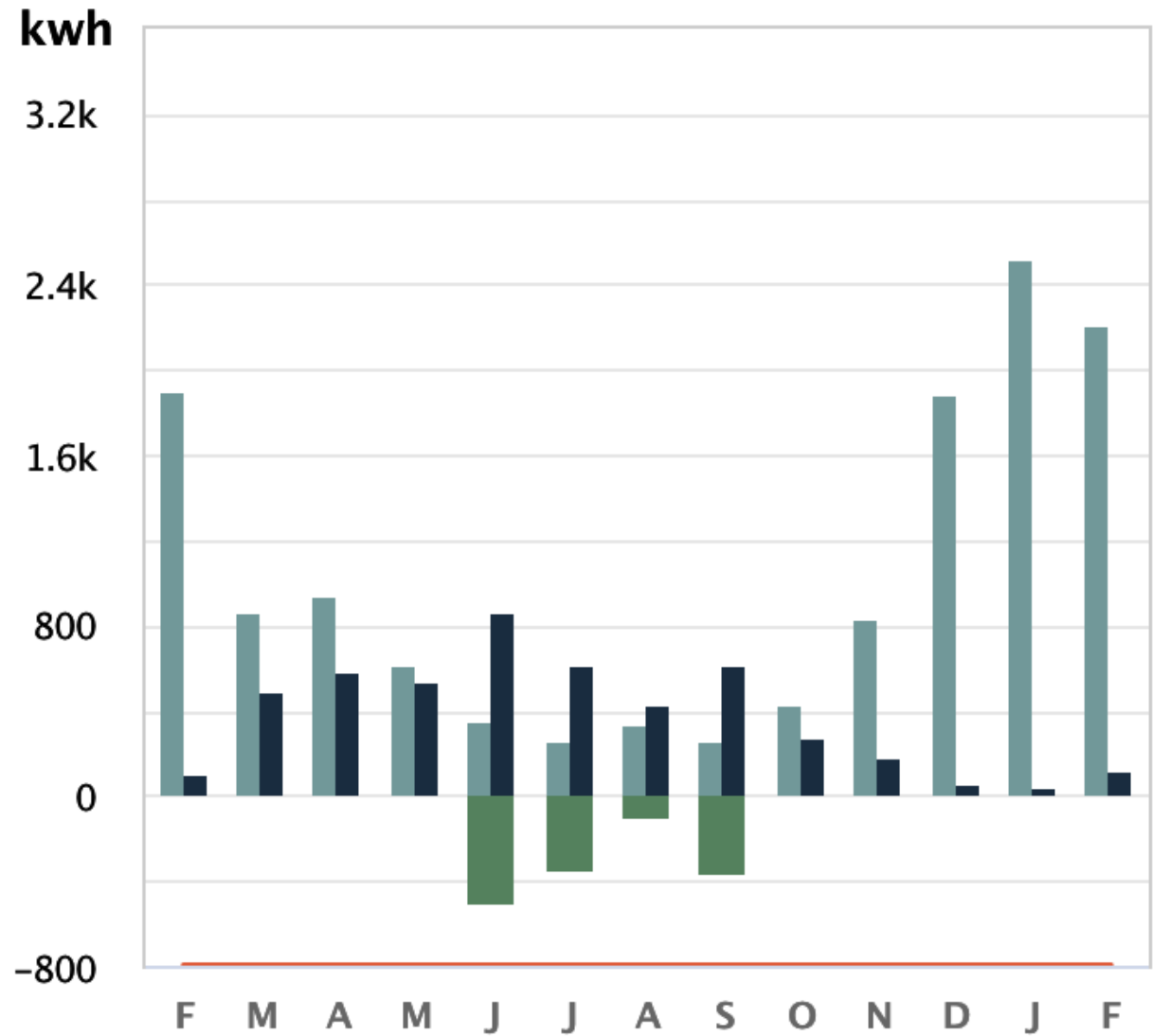
Total gas supply charges \$3.41

Total gas charges \$20.96

How much gas are you using?



Monthly Usage - Meter #302904777



— Demand
 ■ Usage In
 ■ Usage Out
 ■ Net Usage

Net Metering Program

Date	kWh delivered to you (IN)	kWh delivered to PSE&G (OUT)	Difference (NET)	kWh billed to you	Cumulative kWh
Apr 24	930	578	352	352	0
May 24	608	538	70	70	0
Jun 24	348	860	-512	0	-512
Jul 24	247	603	-356	0	-868
Aug 24	327	431	-104	0	-972
Sep 24	250	615	-365	0	-1,337
Oct 24	0	0	0	0	0
Oct 24	427	274	153	0	-1,184
Nov 24	824	179	645	0	-539
Dec 24	1,881	53	1,828	1,289	0
Jan 25	2,521	34	2,487	2,487	0
Feb 25	2,199	112	2,087	2,087	0

75°F?

69°F

<= smart meter installed

FEBRUARY ELECTRIC BILL

Delivery charges

Monthly service charge		\$6.00
Charges for delivering electric to you:		
kWh charges		
For the first	406 kWh x \$0.062414	\$25.34
For the next	1,008 kWh x \$0.062421	\$62.92
For the next	194 kWh x \$0.062320	\$12.09
For the next	479 kWh x \$0.062338	\$29.86
Total electric delivery charges		\$136.21

Supply charges

Cost of electric supplied by PSE&G:

Charges		
For the first	600 kWh x \$0.149067	\$89.44
For the next	1,487 kWh x \$0.149065	\$221.66
Total electric supply charges		\$311.10



Total electric charges

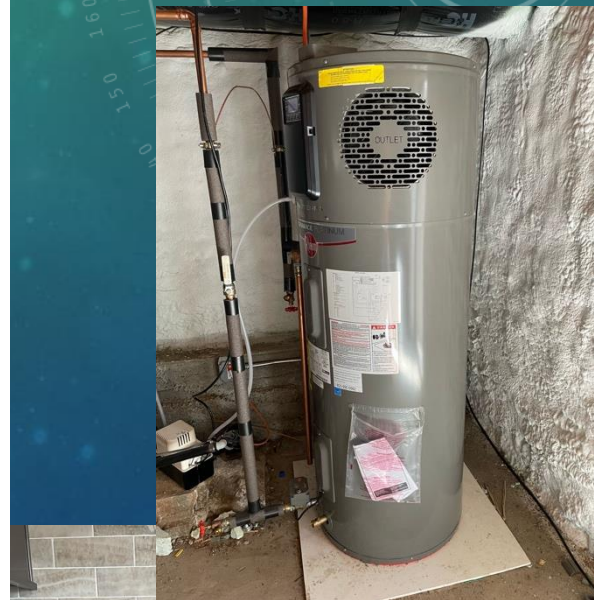
\$447.31

LAKE HOUSE

all electric!
same heat pump
55°F
2000 sq ft
better insulated
(not undersized)



Total owed by Feb 28, 2025		\$261.05
As a Checkless customer - Total charges of \$261.05 will be deducted from your account on Feb 28, 2025		
Usage Information for Meter Number 5003091293		
Feb 06, 2025 KWH Reading (Actual)		14,377
Jan 09, 2025 KWH Reading (Actual)		13,256
KWH used		1,121
Charges From JCP&L		
When contacting an Electric Generation Supplier, please provide the following. Customer Number: 0804360501 0007660318 Rate: Residential Service JC_RS__01D		
Customer Charge		4.27
Delivery Service Charges	1,121 KWH x 0.049518	55.51
JCP&L LRAM Charge	1,121 KWH x 0.000546	0.61
Current Consumption Bill Charges		60.39
Billing Information for Ambit Energy		
Po Box 864589, Plano, TX 75086 Customer Service: 1-877-282-6248 Account Number: A7128495 Rate: BILL_READY		
Billing Period: Jan 09, 2025 to Feb 06, 2025		
Actual Usage 1,121.00kwh @ 0.1790		200.66
Total Ambit Energy Current Charges		200.66
Current Period Adjustments Include Pjm Lrc, As Defined In Your Disclosure Stmt.		



LAKE HOUSE

GARAGE

Date	Billing period	Bill amount
03/14/2025	02/07/2025 - 03/09/2025	\$238.83
02/13/2025	01/09/2025 - 02/06/2025	\$261.05
01/14/2025	12/09/2024 - 01/08/2025	\$219.89
12/13/2024	11/07/2024 - 12/08/2024	\$91.27
11/13/2024	10/08/2024 - 11/06/2024	\$137.16
10/11/2024	09/09/2024 - 10/07/2024	\$154.89
09/13/2024	08/07/2024 - 09/08/2024	\$169.97
08/12/2024	07/09/2024 - 08/06/2024	\$233.56
07/12/2024	06/07/2024 - 07/08/2024	\$214.65
06/12/2024	05/08/2024 - 06/06/2024	\$143.30
05/13/2024	04/10/2024 - 05/07/2024	\$57.89
04/12/2024	03/12/2024 - 04/09/2024	\$126.33

Date	Billing period	Bill amount
03/14/2025	02/07/2025 - 03/09/2025	\$5.44
02/13/2025	01/09/2025 - 02/06/2025	\$5.19
01/14/2025	12/09/2024 - 01/08/2025	\$5.44
12/13/2024	11/07/2024 - 12/08/2024	\$5.19
11/13/2024	10/08/2024 - 11/06/2024	\$50.28
10/11/2024	09/11/2024 - 10/07/2024	\$90.86
09/13/2024	08/09/2024 - 09/10/2024	\$203.60
08/13/2024	07/10/2024 - 08/08/2024	\$24.79
07/12/2024	06/08/2024 - 07/09/2024	\$108.79
06/12/2024	05/10/2024 - 06/07/2024	\$36.12
05/14/2024	04/10/2024 - 05/09/2024	-\$0.01
04/12/2024	03/12/2024 - 04/09/2024	-\$9.95

BUYING CARBON REMOVALS – 15 AND 17 TONS



Carboneers India Biochar

Providing local farmers with the technology and training to create carbon-sink biochar



O P E N A I R



**THE
NAKIVALE
BIOCHAR
PROJECT**



RVCC REMOVALS - 21 TONS (1%) AND 43 TONS (2%)



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53 Teams
6 Continents
20 Countries
162 Students
51 Universities

Including: Stanford & Purdue (US), Imperial College (UK), EPFL (Switzerland), Indian Institute of Technology (India), UNSW (Australia), Atilim (Turkey), UofC (Canada), Democritus (Greece), UCAB (Venezuela), Copenhagen (Denmark), Thammasat (Thailand), UDS (Ghana), CUP (China), BHOS (Azerbaijan), Rabina Simkhada (Nepal), Suez (Egypt), NAU (Mexico)... to name just a few!

@Carbon Unbound
New York, NY.



The OpenAir Carbon Removal Challenge is a worldwide challenge for students to create new processes, approaches and prototypes to remove carbon from the land, waters, or air. Student teams will design and build creative solutions to the carbon pollution problem. The very best approaches will be selected as finalists for an in-person showcase at the Carbon Unbound conference in New York City, in May 2025.

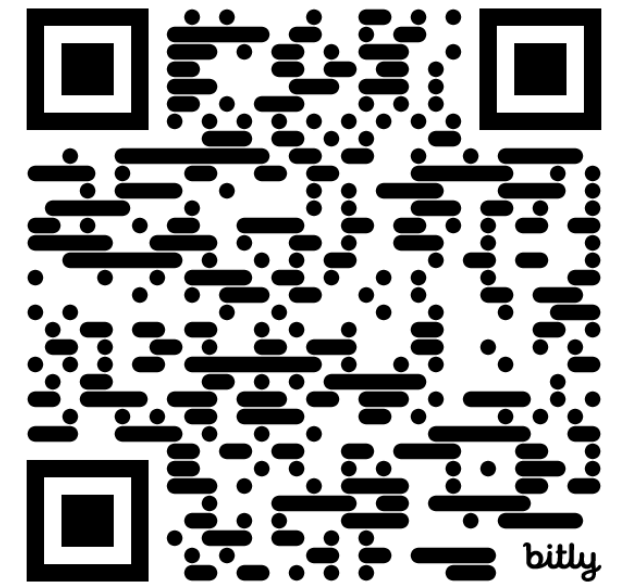
CONTACT carbonremovalchallenge@openaircollective.cc to partner or sponsor.

because even a
small donation
gets us closer to
a possible solution



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THANK YOU!

sue@carbonmanager.cc

Let's connect on LinkedIn!