

Residential Solar Energy: The Time is NOW

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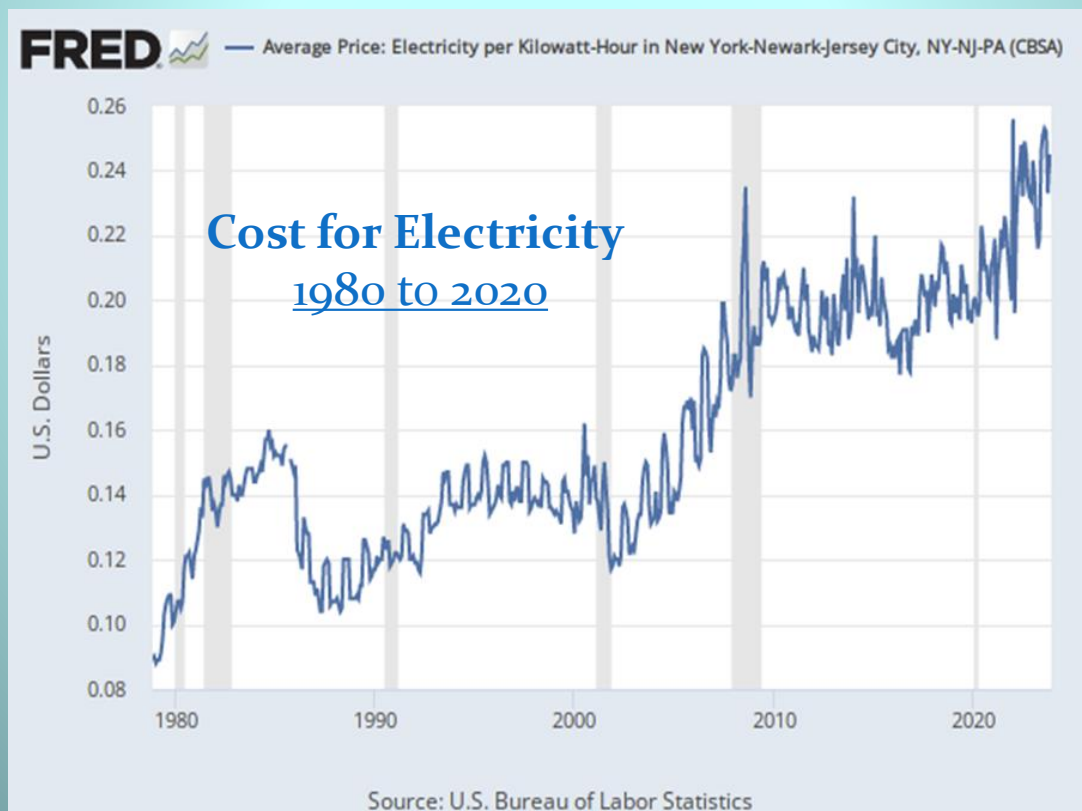
516-523-6994

Walter Mugdan

Udalls Cove Preservation Committee

The Problem

- Electricity costs keep rising. Costs have increased an average of about 4% per year over the last 30 years and are expected to continue to rise in the future.



The Problem

- Most of the electricity you can buy from the grid is generated by burning fossil fuels (coal, oil and gas), creating air pollution, including greenhouse gas emissions that drive global climate change.
 - Major weather disasters are linked to climate change: heat waves, droughts, wildfires, intense hurricanes and tornados, even intense cold spells and blizzards.



The Solutions



Mayor's Office of Climate &
Environmental Justice

➤ Switch to LEDs

LED bulbs use 75% less energy than incandescent bulbs and can greatly reduce your energy bills, ease our power grid, and reduce emissions from fossil-fuel power plants. LEDs also last 25% longer.

➤ Electrify Stoves, Dryers, and Boilers

Through the Inflation Reduction Act (IRA), you can get tax rebates for appliances that reduce utility bills and slash emissions. If you're a renter, try an electric hotplate or induction stovetop. Or buy stuff with the Energy Star seal. And see if your income lets you save without spending!

➤ Get a Heat Pump

They're the warmer, cooler, easier way to heat and cool your home, and they don't burn fossil fuels like oil, propane, or natural gas.

➤ Go Solar!

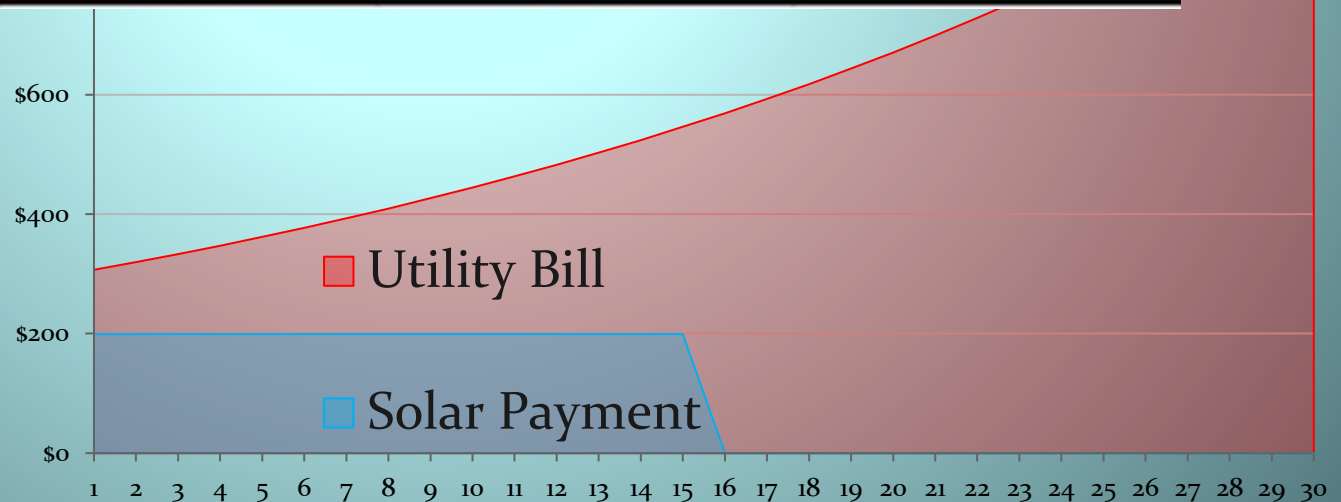
Solar panels harness energy from the sun. In NYC, the utility company is required to compensate you for the solar energy you generate, which reduces your electricity bill and increases the value of your property. Solar energy is clean, requires no fuel and very little maintenance, and can be installed within a few days.

Solar will save you money . . .

. . . here's a typical example:

	Utility Bill	Solar Payment
Monthly Cost Today	\$307	\$199
Escalation Rate	4.2%	0.0%

30 Year Cost	Utility Bill	Solar	Savings
Total of Payments	\$213,657.02	\$35,820	\$177,837
Monthly Average	\$593	\$100	\$494



Now Is The Time For Solar...

\$\$ INCENTIVES \$\$ - At a High Point Now, but not for long....

Federal, state and city financial incentives are available to support your investments in a healthy relationship with solar.

consult your tax professional to determine your eligibility for tax benefits, and whether any incentives you receive are considered taxable income.

➤ Federal (30% of the total system cost)

- **Federal Tax Credit:** Residential building owners are eligible to receive a federal tax credit (not a deduction) that can reduce the amount of federal income tax they owe or increase their tax refund. The credit is based on 30% of the total system cost (less any NY-Sun rebates) for residential systems placed in service between December 31, 2021, and January 1, 2033.

➤ New York State

➤ **NY-Sun Incentive: (NYC = \$.20/Watt)**

The NY-Sun Initiative provides incentives for installing solar electric systems throughout the state. Incentives are distributed through three regions: Con Edison, PSEG Long Island, and Upstate The NY-Sun incentive is funded by the System Benefits Charge (SBC) that appears on your utility bill and is paid directly to the installing contractor.

- **New York State Tax Credit: (\$5,000 Tax Credit)** Residential building owners who install solar may be eligible for a tax credit for the lesser of 25% of the installed cost of the solar energy system (up to 25 kW on net-metered systems) after the NYSERDA incentive, or \$5,000.

Now Is The Time For Solar...

- **New York City (30% of Total System Cost - over 4 Years)**
 - **New York City Property Tax Abatement (PTA):** Building owners who place a grid-connected solar energy system into service after **January 1, 2024** are eligible for a four-year Tax Abatement of 7.5% per year of the installed cost of the system, for a total of 30%. Abatements are applied after the NY-Sun Incentive. This tax abatement is spread equally over four years and may not exceed your property tax liability for any given year.
 - **Sales Tax Exemption:** New York exempts the sale and installation of residential solar-energy systems from the state's sales and compensating use taxes.
 - **NYS Historic Homeownership Rehabilitation Tax Credit:** This credit can reduce the cost of solar projects by **20% for homeowners in eligible districts**. Covers 20% (up to a \$50,000 in credits) of the cost of improvements – including solar installations – that are completed on owner-occupied homes located within:
 1. historic districts listed on the **National Register of Historic Places** AND
 2. **income-qualified census tracts**.

What it will look like . . .



Solar Accounting



- Total Upfront Cost of going Solar = **\$0**
- Typical 1st Year Savings for a one family home (including Tax Abatements) = **\$3,255**
- Saving tens of thousands of \$\$\$ for decades to come while providing a brighter and more sustainable future for your family and community:

Priceless.



Get Your Solar Numbers!

1. Take a picture of your ConEd Bill
2. Text it to:

(516) 523-6994

I will do the rest.

Thank you!



**Rosario Romano | NEW YORK
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dba NGS SOLAR**

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A Real Life Example:

The Mugdan Residence in Little Neck, NY

Purchase Details*:

Investment Details

Financing Term	25 years*
APR*	1.99%
Monthly Payment*	\$109

System Price	\$35,039
State & Local Incentives ^{4, e}	\$713

Net Contract Price	\$34,325
Co-Payment	\$0

Financing Amount	\$34,325
26.0% Federal Tax Credit ^{5, e}	\$9,110

State Tax Credit ^{4, e}	\$5,000
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Yr. 1 property tax abatement ^e	\$1,716
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Yr. 2-4 property tax abatement ^e	\$5,148
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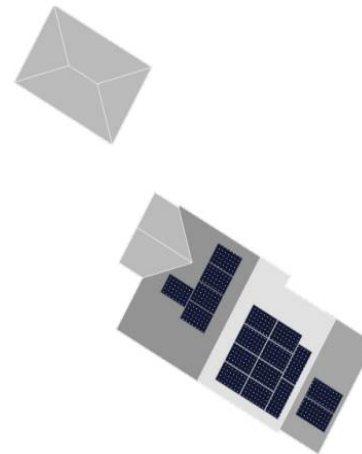
Net Investment	\$13,350
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*Federal and City tax credits were *less* in 2021 when this solar project was started. At the time, the federal credit was 26% and the City credit was 20%; ***both are now at 30%***.

System Details

SunPower Equinox[®] System for the MUGDAN Residence

The only all-in-one, complete home solar system. From solar cell to software, the SunPower Equinox[®] system generates more power, is more reliable, and looks better than conventional home solar power systems.



SYSTEM SIZE



7.14 kWp (DC)
17 Panels

COMPONENTS



SOLAR PANELS
M Series420 Series
Watts



MOUNTING SYSTEM
InvisiMount[®]



MONITORING SYSTEM
mySunPower[™]

ELECTRICITY

USAGE (EST.)
5,570 kWh/year



YEAR 1 PRODUCTION (EST.)
5,343 kWh

Signature _____ Date _____

I approve this solar power design and hardware. I understand panel placement may vary based on electrical and structural design factors.

Pre-Construction Estimated System Production

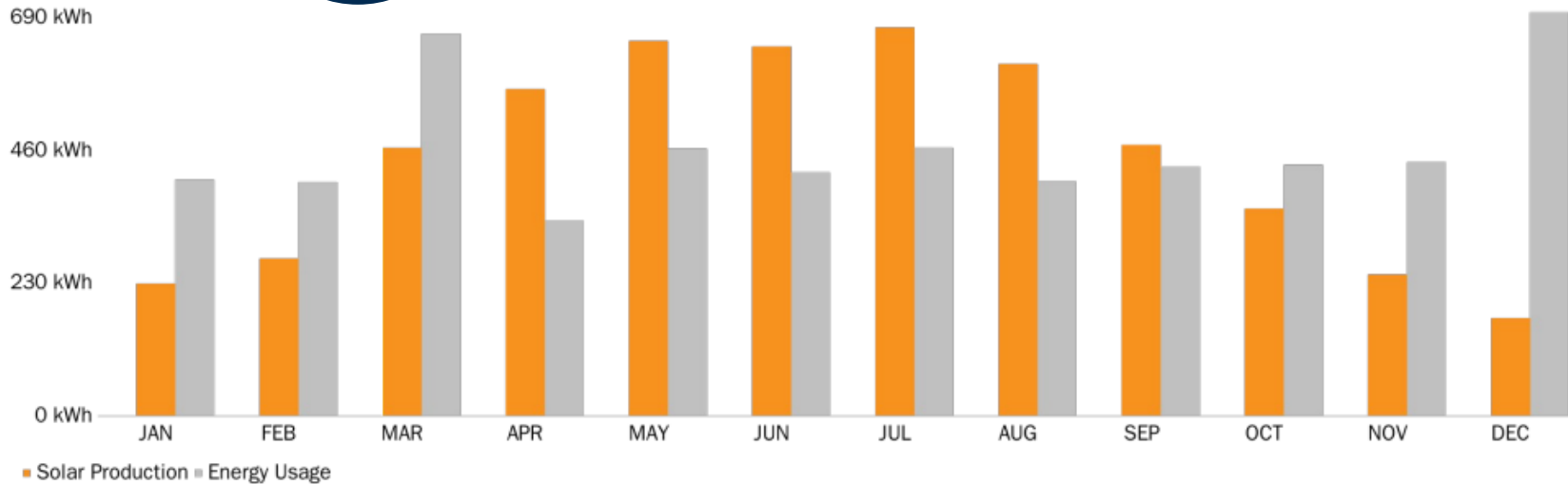
CURRENT ELECTRIC CONSUMPTION VS. ESTIMATED SOLAR ELECTRICITY PRODUCTION

PEAK AC OUTPUT: 3.73 kWp

Total Est. Energy Consumption^o: 5,570 kWh

Est. Usage from Solar: 5,343 kWh

Est. Usage from the Grid: 227 kWh



See Important Information on page 7.

Pre-construction estimate of annual production: 5,343 kWh
Actual 1st year annual production (3/10/2022 – 3/9/2023): 5,802 kWh

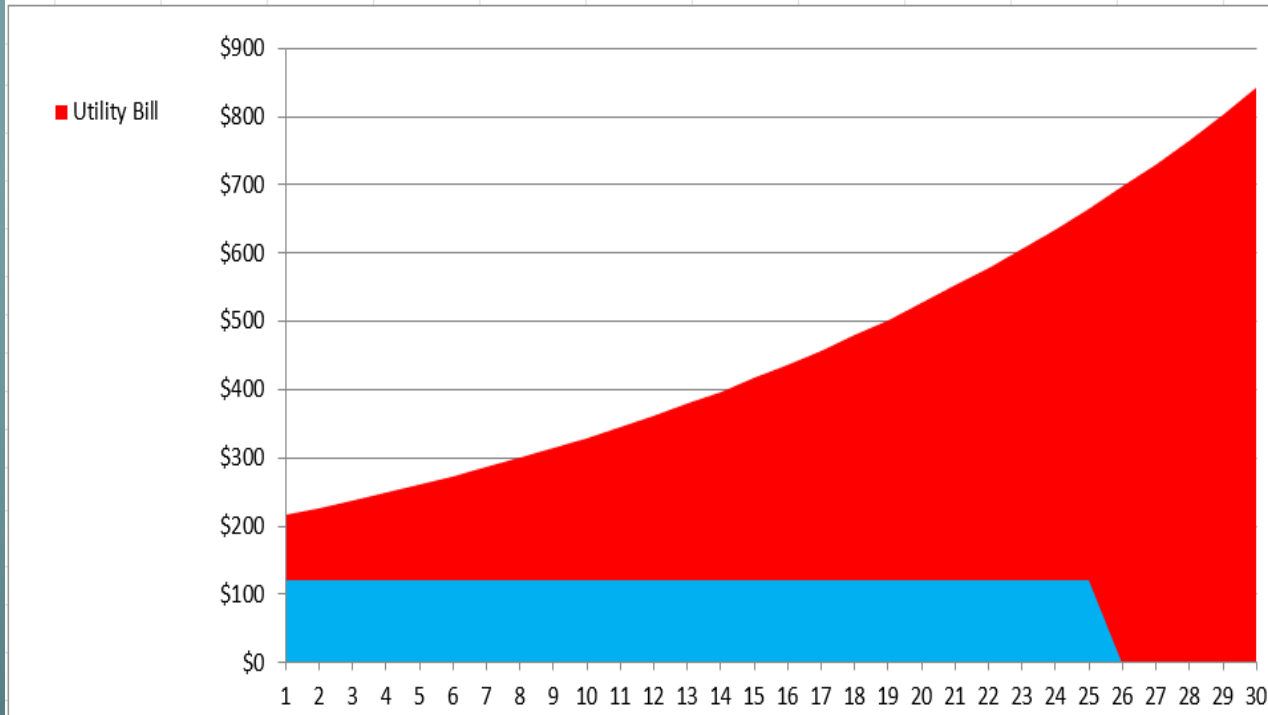
Pre-Construction

Projected 30-year Cost Comparison:

	Utility Bill	Solar Pymt
Monthly Cost	\$131	\$109
Escalation Rate	4.8%	0.0%

Total of Pymnts	\$83,975.66	\$32,700
Monthly Average	\$233	\$91

ConEd vs. Solar 30 Year Projections



30 Year Total Savings

\$63,283.46

****Average Yearly Savings****

\$1,709.19



Installation Day
Feb. 14, 2022





EXTERIOR



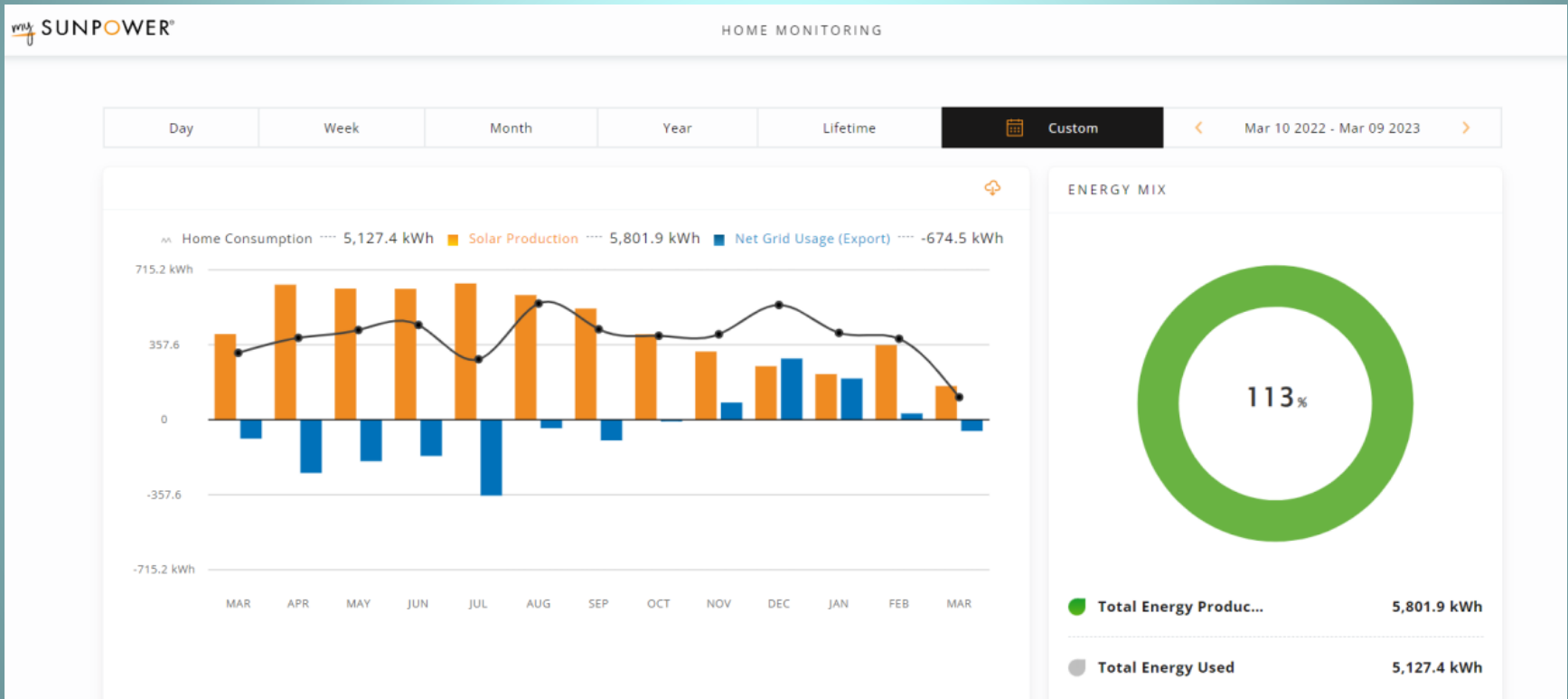
INTERIOR





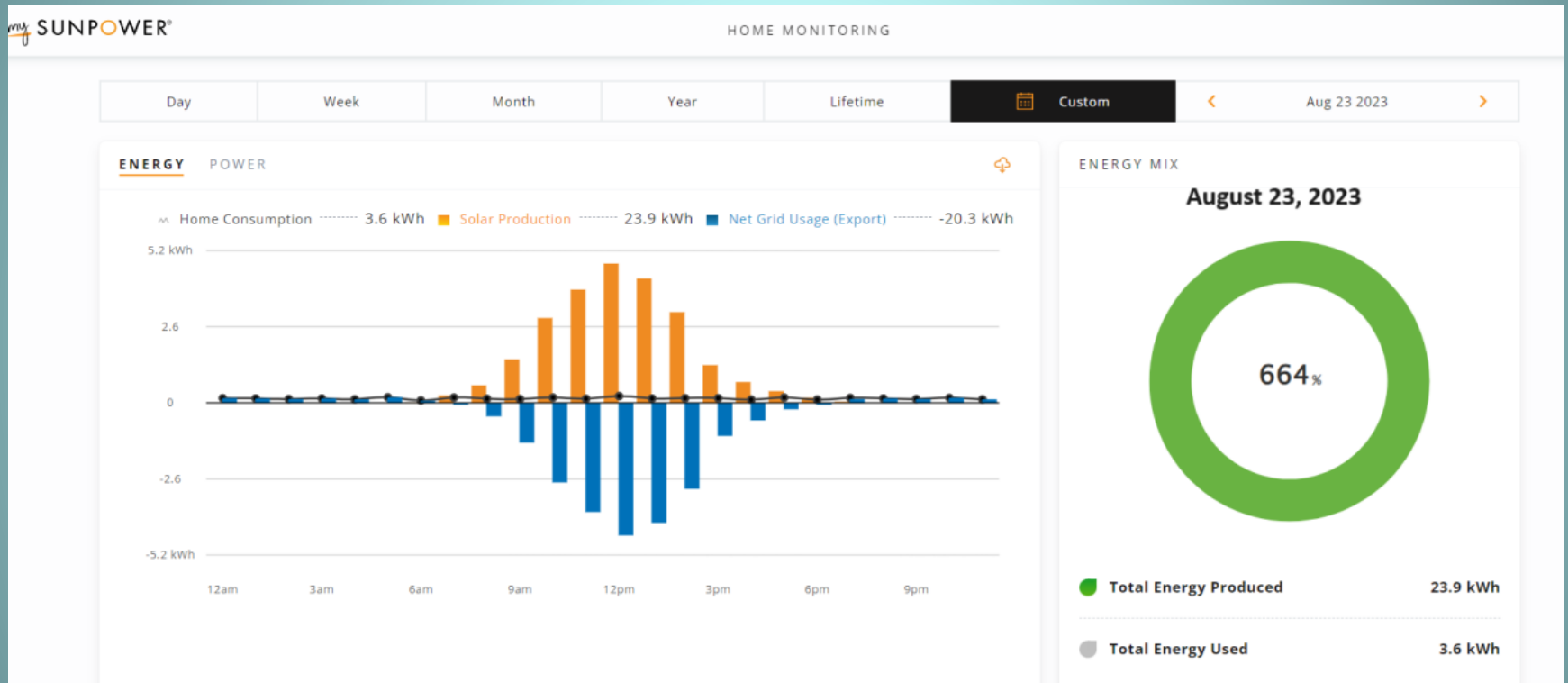
Activation Day:
March 10, 2022

FIRST YEAR (3/10/22 – 3/9/23) From the Monitoring App:



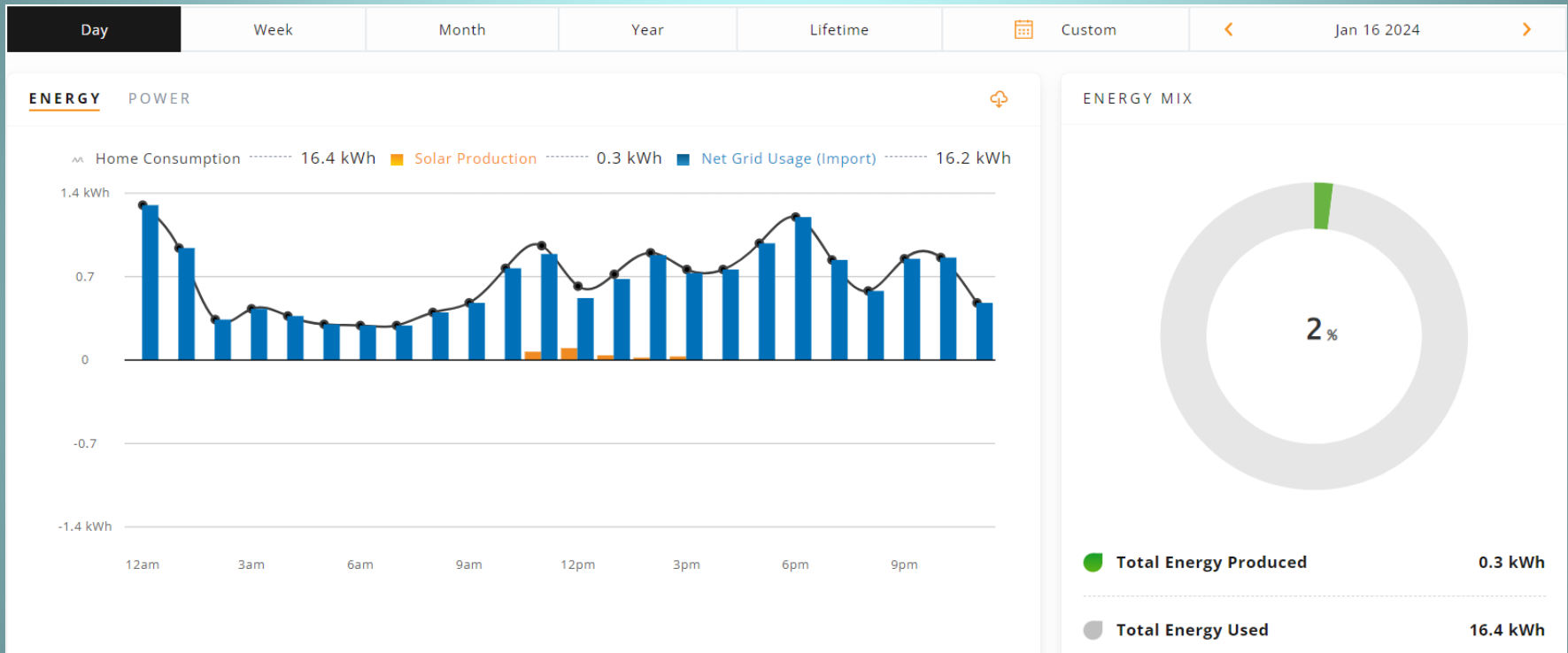
The system generated 113% of the electricity consumed in the house during the year, out-performing the 96% pre-construction estimate.
This created “credits” – see below.

OUR BEST DAY SO FAR – 8/23/2023 *



***House was empty – everyone was away on vacation;
full sun all day.**

OUR WORST DAY SO FAR – 1/16/2024 *



* Short day -- less than one month after the winter solstice; and first snow in NYC in 701 days covered the panels.

CON ED BILL FOR DEC. 7, 2023 – JAN. 5, 2024:

Name: WALTER MUGDAN

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Your electricity breakdown *Rate: E1 Residential or Religious - Net Metering*



Electric Meter Detail - billing period from December 6, 2023 to January 5, 2024 (30 days)

Type	On peak energy
Low Tension	0 kWh

Meter #	New Read	Read Type	Date	Prior Read	Read Type	Date	Read Diff	Total Usage kWh
013091218	3351	Actual	Jan 05	3102	Actual	Dec 06	249	249

Your Supply Charges

Customer charge	\$0.00
Supply 0 kWh @0.1499¢ per kWh	\$0.00
Sales tax @ 4.5%	\$0.00
Total electricity supply charges	\$0.00

Your electricity supplier: VERDE ENERGY

Supplier account number: 004637946

Address: 101 Merritt 7 Corporate Park 3rd Flr
Norwalk CT 06851

Phone: (800) 388-3862

Messages from your electricity supplier:

NEW! Login to My Account at coned.com for a new ESCO bill comparison tool!

Your Delivery Charges

Basic service charge	\$18.17
Delivery 0 kWh @0.000¢/kWh	\$0.00
System Benefit Charge @0.000¢/kWh	\$0.00
Customer Benefit Contribution 7.00kW @ 1.143/kW	\$8.00
GRT & other tax surcharges	\$1.28
Sales tax @4.5%	\$1.24
Total electricity delivery charges	\$28.69

Your electricity total

\$28.69

No charge for electric **Supply** or **Delivery**, thanks to the solar credits we have accrued. Modest **Basic Service** charge because we remain hooked up to the grid and receive electricity as needed (night, cloudy days, etc.).

CON ED BILL FOR DEC. 7, 2023 – JAN. 5, 2024:

Your Net Meter Summary (cont'd)

Billing period	Your electricity use	Cumulative net meter energy credit	kWh billed
Mar 10, 2022 - Apr 08, 2022	-94	-94	0
Apr 08, 2022 - May 09, 2022	-250	-344	0
May 09, 2022 - Jun 08, 2022	-249	-593	0
Jun 08, 2022 - Jul 08, 2022	-164	-757	0
Jul 08, 2022 - Aug 08, 2022	-268	-1025	0
Aug 08, 2022 - Sep 07, 2022	-72	-1097	0
Sep 07, 2022 - Oct 06, 2022	-52	-1149	0
Oct 06, 2022 - Nov 04, 2022	-37	-1186	0
Nov 04, 2022 - Dec 08, 2022	142	-1044	0
Dec 08, 2022 - Jan 09, 2023	309	-735	0
Jan 09, 2023 - Feb 08, 2023	125	-610	0
Feb 08, 2023 - Mar 10, 2023	-7	-617	0
Mar 10, 2023 - Apr 10, 2023	-209	-826	0
Apr 10, 2023 - May 03, 2023	-156	-982	0
May 03, 2023 - Jun 07, 2023	-339	-1321	0
Jun 07, 2023 - Jul 07, 2023	-167	-1488	0
Jul 07, 2023 - Aug 07, 2023	-245	-1733	0
Aug 07, 2023 - Sep 06, 2023	-261	-1994	0
Sep 06, 2023 - Oct 05, 2023	-17	-2011	0
Oct 05, 2023 - Nov 02, 2023	25	-1986	0
Nov 02, 2023 - Dec 06, 2023	115	-1871	0
Dec 06, 2023 - Jan 05, 2024	249	-1622	0
Credit Carried Forward to Next Period			-1622 kWh

Negative numbers = Credits; I'm making more kWh than I am using

Positive numbers mean I'm using more kWh than I am making

Running total of Credits (Increases March through October; decreases November through February)

Your electricity use
The electricity supplied to you by your Utility or the electricity you generated back into the grid during this period. A negative number indicates a net meter energy credit for the period.

After 22 months of solar production, we have a “credit” of 1,622 kWh. This credit doesn't hurt us, but it doesn't help us. However, if we further reduce our carbon footprint by using electricity to make hot water, or to charge a plug-in hybrid or a fully electric car, we can take advantage of the credit.

COST COMPARISON FOR OUR FIRST 12 MONTHS OF SOLAR PRODUCTION (3/10/2022 – 3/9/2023)

	Kwh Used	kWh Generated	kWh Difference	Electric Supply Cost	Electric Delivery Cost	Payment to Solar Company	Total	Savings
Without Solar	5,127	0	5127	\$769	\$1,123	\$0	\$1,892	\$0
With Solar	5,127	5,802	(675)	\$0	\$324	\$1,308	\$1,632	\$260 *

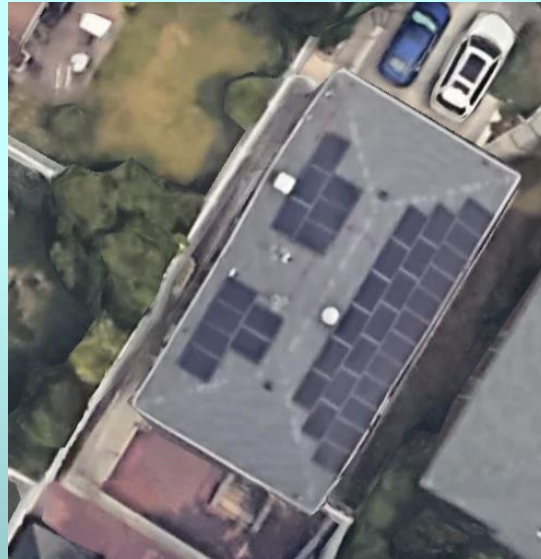
ADDITIONAL SAVINGS: \$5,000 – One- time NY State Tax Credit
\$5,148 - 4 Year NYC Property Tax Credit (\$1,716/year)
Total: \$10,148 - Or \$405/year if spread over 25 years

*Annual savings will increase as cost of electricity from the grid increases, while payments to solar company remain steady.



OUR NEIGHBORS ARE GOING SOLAR





**All within
two blocks
of our
house!**

QUESTIONS?

For more information or a free consultation contact:

ROSARIO ROMANO

NGS SOLAR

rosario@ngssolar.com

516-523-6994