

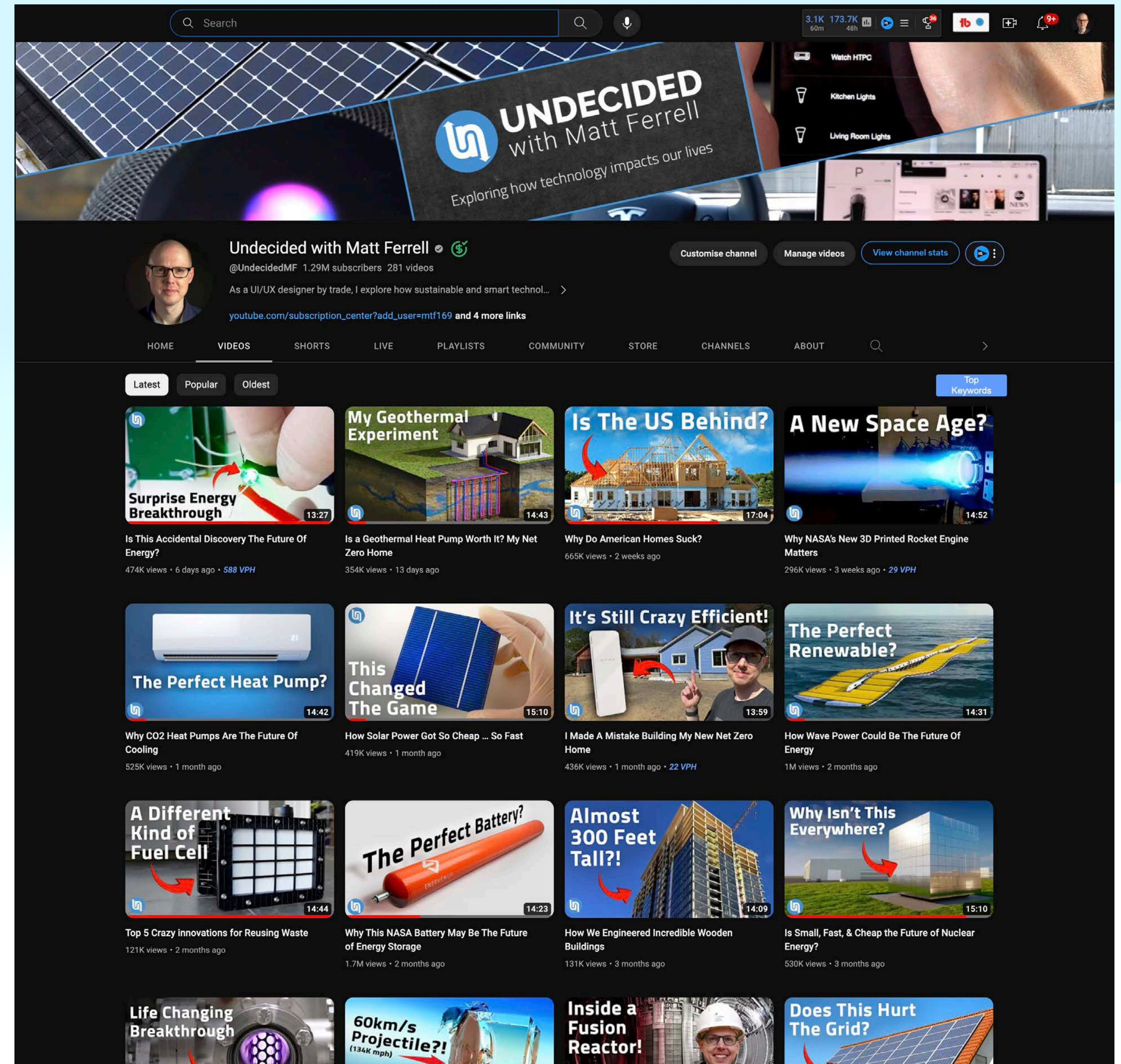
# **A Consumer's Perspective on Going Solar/Net Zero**

**Matt Ferrell - October 2023**



# Who Am I?

- Former UI/UX designer
- Background in communications and information design
- Tech enthusiast and early adopter
- Full time YouTube creator talking about sustainable and renewable technologies





# What have I done?

Built a net zero home



Hopefully

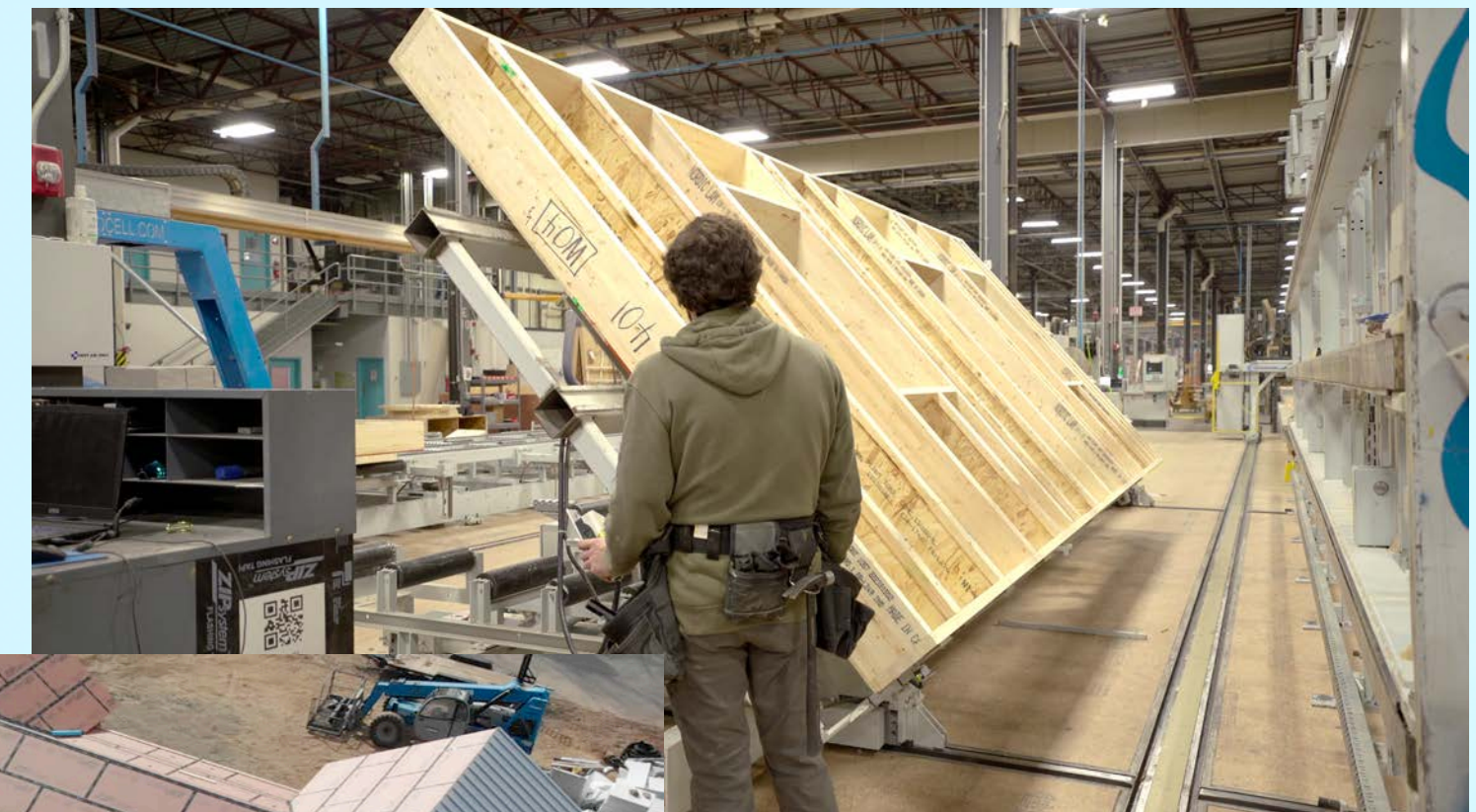


# The details

## We went a little nuts

- Factory built home (near Passive House level efficiency)
- Geothermal heating and cooling with desuperheater for hot water
- Heat pump water heater
- Energy Recovery Ventilator (ERV)
- Heat pump dryer, induction range, etc.
- Smart home features (automatic shades, etc.)
- Solar panels and home battery (NET ZERO!)

...hopefully





# Why do this?

**It's nuanced**

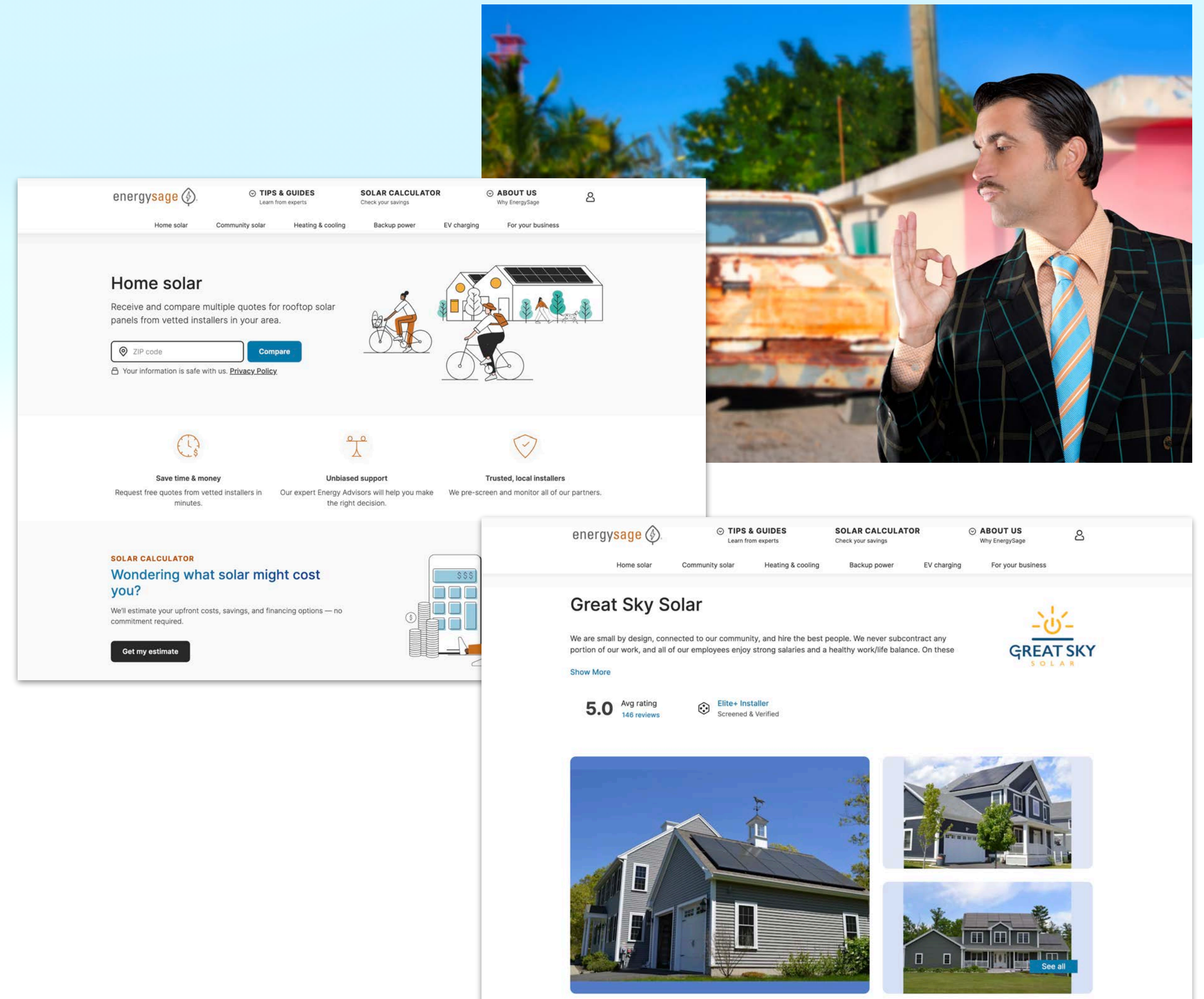
- Environmental
- Security
- Financial



# Finding a Solar Installer

## AKA - The Wild West

- Used car salesmen-like practices
- EnergySage
- Great Sky Solar repeat customer

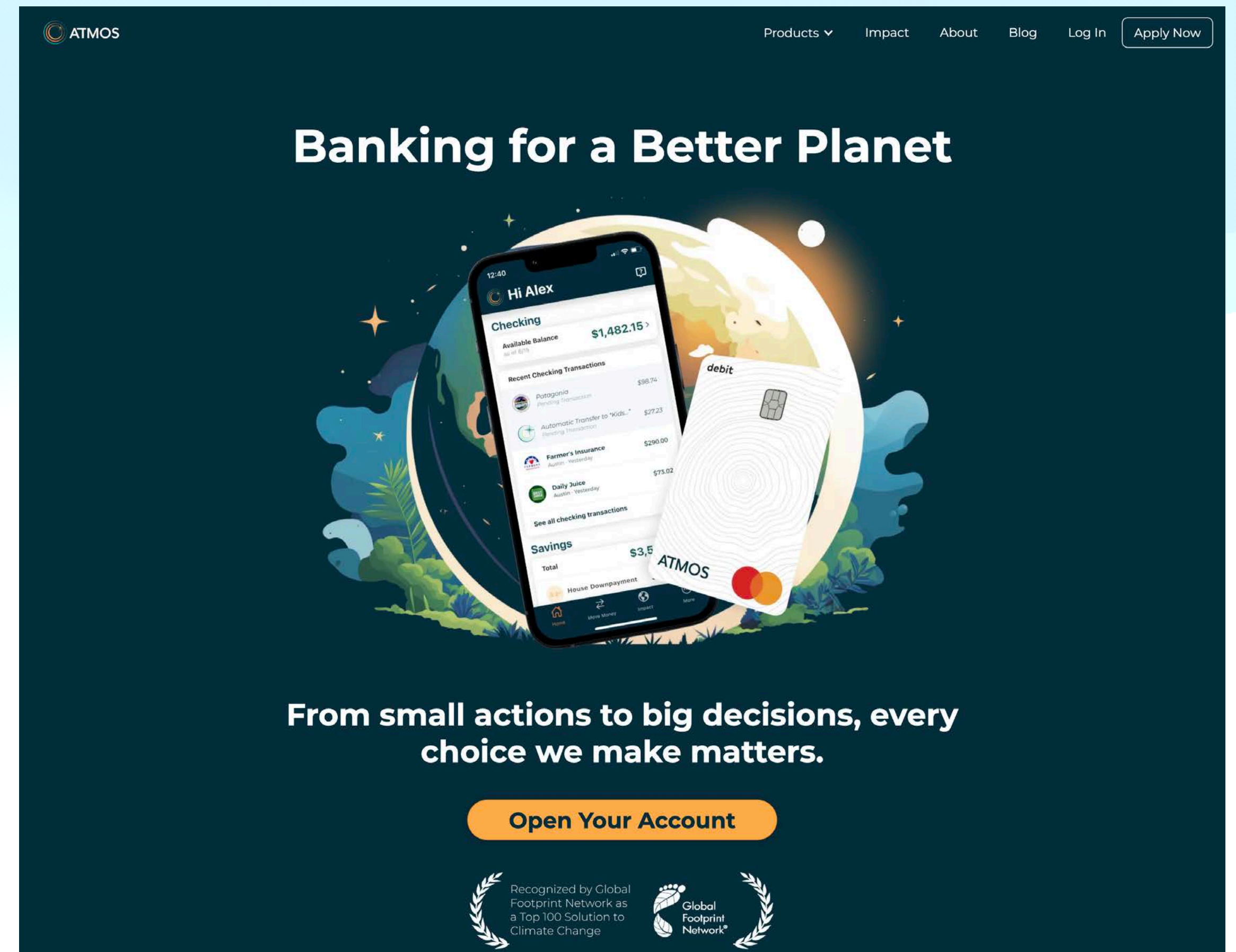




# Financing

## The “not bad” side of this

- Pretty good options through credit unions and local banks
- Seamless experience with installer
- Online options like Atmos Financial



The banner features a dark teal background with a central illustration of a smartphone and a debit card. The smartphone screen displays a banking app interface for 'Hi Alex' with a checking balance of \$1,482.15 and a list of recent transactions including Potogonia, Automatic Transfer to 'Kids', Farmer's Insurance, and Daily Juice. The debit card is white with a fingerprint sensor and the ATMOS logo. The background of the illustration shows a stylized Earth with green landmasses and blue oceans, surrounded by stars.

ATMOS

Products ▾ Impact About Blog Log In [Apply Now](#)

## Banking for a Better Planet

From small actions to big decisions, every choice we make matters.

[Open Your Account](#)

Recognized by Global Footprint Network as a Top 100 Solution to Climate Change

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# PV System and Installation

It can be overwhelming

- Trusting your installer's recommendations
- Doing your own due diligence
- Understanding your goals and needs

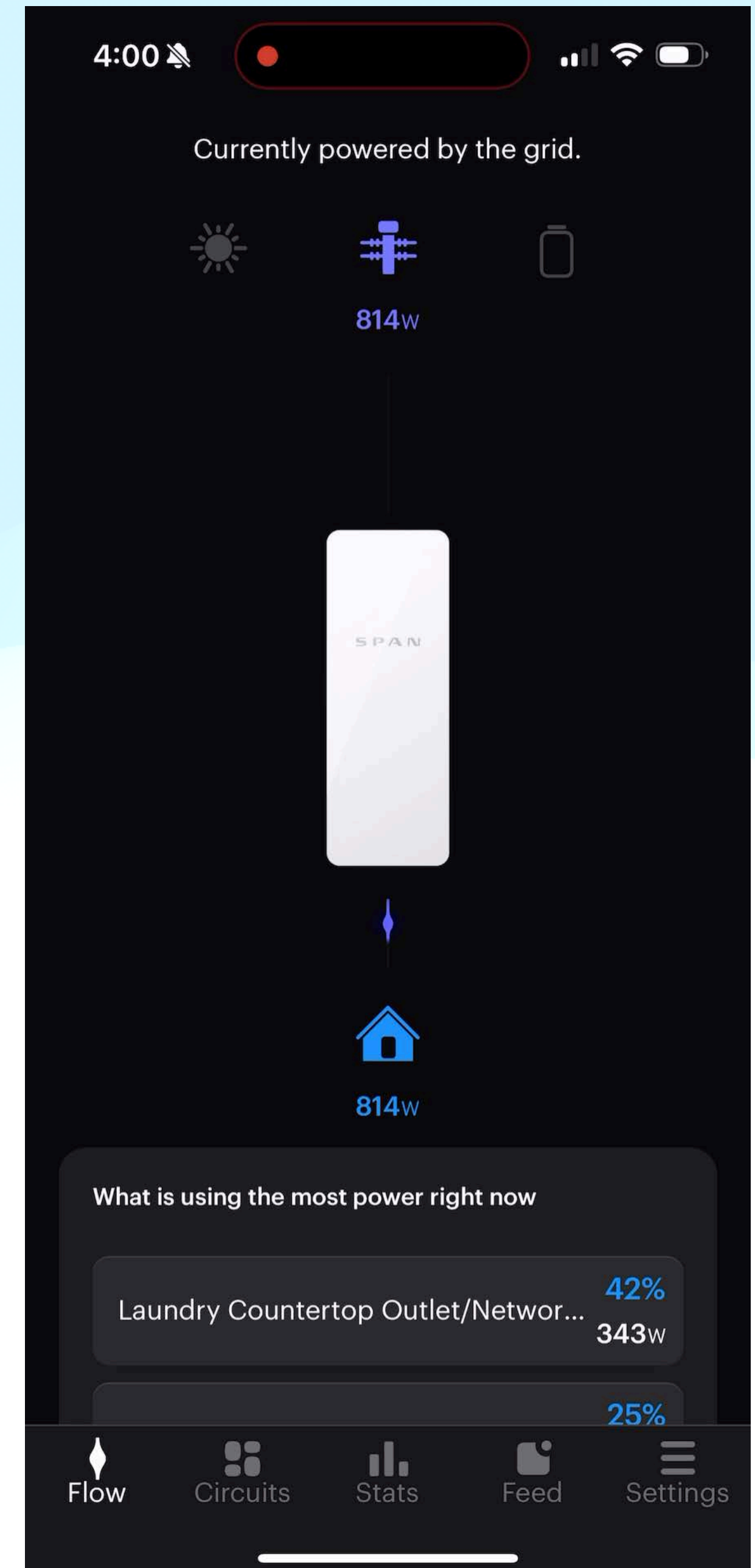




# Predicting Energy Use

## Smart Home To The Rescue

- Using data from my Span to narrow in on what was going to transition with us
- Reading a lot of appliance spec sheets
- Spreadsheet madness

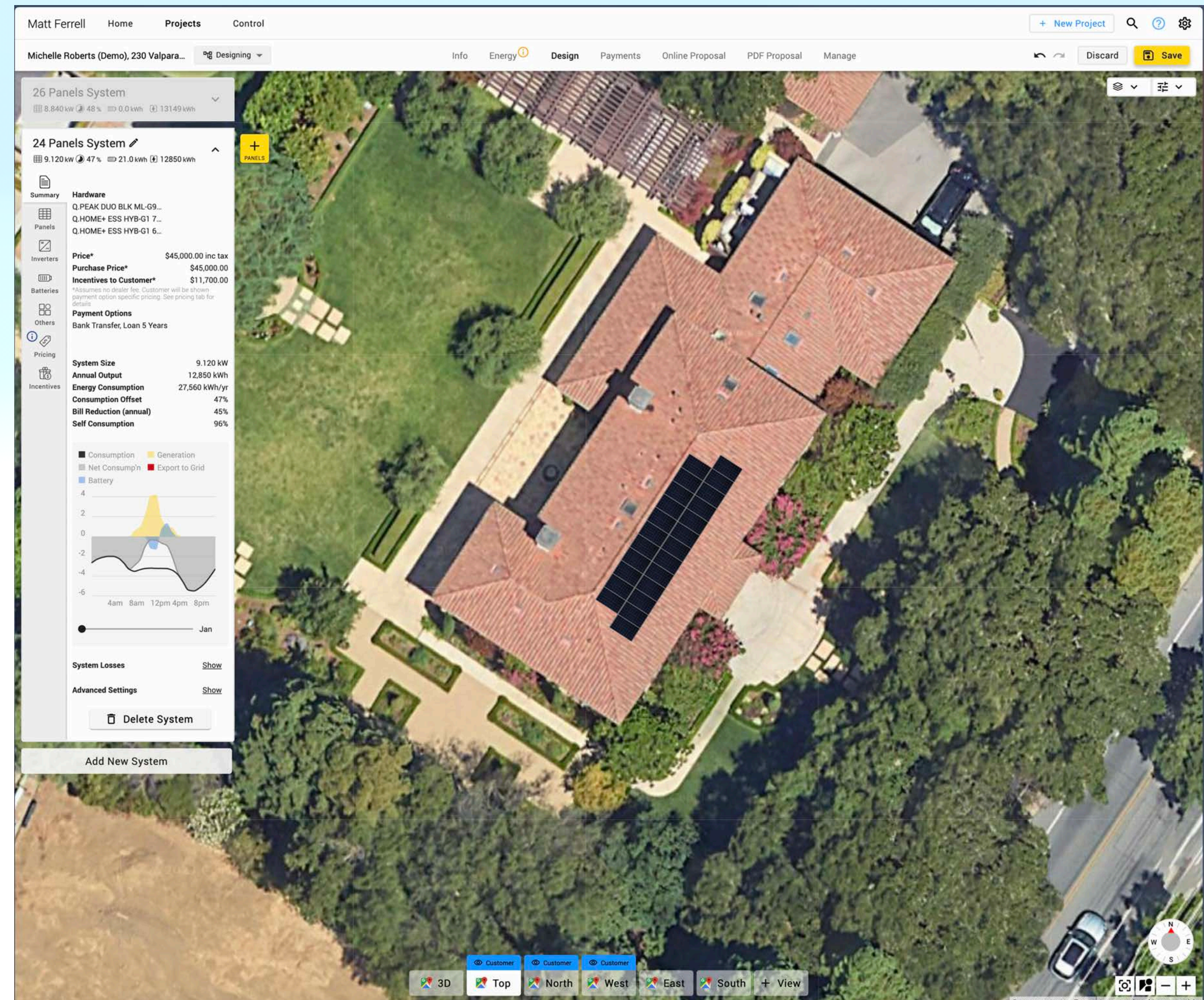




# PV System and Installation

It can be overwhelming

- Free online tools that help
- [opensolar.com](https://opensolar.com)





# It's done ... almost

## This has to get better





# Navigating the Incentives

## The DOER Maze

- A lot falls on the shoulders of your installer
  - Hopefully you chose a good/trustworthy installer
- Random accounts, forms, and authorizations





# RECs

## SRECs, RECs, SMART, oh my

- SMART is no longer worth it
- REC market will be better financially
  - Average: 3.5 cents per kWh generated
  - Expected: ~\$600/year

The screenshot shows the Mass.gov website with the following elements:

- Header:** Mass.gov logo and a search bar with the text "Search Mass.gov" and a magnifying glass icon.
- Breadcrumbs:** Home > Energy > Renewable Energy > Renewable Energy Portfolio Standard
- Offered By:** Massachusetts Department of Energy Resources | Renewable and Alternative Energy Division
- Main Title:** Solar Massachusetts Renewable Target (SMART)
- Description:** A long-term, sustainable solar incentive program to promote cost-effective solar development in the Commonwealth
- Text:** DOER created the Solar Massachusetts Renewable Target (SMART) Program to create a long-term sustainable solar incentive program that promotes cost-effective solar development in the Commonwealth. This webpage provides an overview of past and planned public meetings, relevant documents, presentations, and reports related to the new program.
- Social:** A section with a horizontal line above the text "Social".
- Social Links:** Two links: "MassDOER Twitter" with a Twitter icon and "MassDOER YouTube" with a YouTube icon.
- Footer:** A dark blue banner with the text "What would you like to do?" in white.



# Home Batteries

AKA “It’s not worth it”

- Common refrain I kept hearing from random trades, “Batteries aren’t going to be worth it.”
- Regulations limiting the size
- Heat Loan madness





# Connected Solutions

## The secret weapon for batteries in MA

- No time of use rates
- Peak shaving benefits
- Previous benefits with 1 Tesla Powerwall: \$700-\$800/year

EVERSOURCE

Search

Help

Sign In / Sign Up

Account & Billing

Outages & Storms

Services

Save Money & Energy

Safety

About

Residential / ... / Demand Response / Battery Storage Demand Response

Information on this page is for customers in Amherst, MA

Not your town? Change location

Demand Response for Home Battery Storage

Earn rewards and lower carbon emissions by enrolling your home battery storage system in Eversource's ConnectedSolutions.

Home batteries can help you store clean energy generated by a home solar system, or simply provide backup energy in case you need it.

By enrolling in the ConnectedSolutions Demand Response program, you will be rewarded for allowing Eversource to use the energy stored in your battery at times of high demand.

Incentives for home batteries are based on the average kilowatt (kW) used per event, averaged over the season. All events will occur between 3 and 8 p.m. If there is an extreme weather event in the forecast, we will not draw energy from your battery.

Incentive per average kW used	\$275
Season Dates	June 1- September 30
Number of Events	30-60



# Final Verdict

It has to be better than this

- DOER red tape
- Bad communication and instructions
- Leap of faith feeling





# Net zero?



Hopefully