



# Site Power Systems

## A Technical and Financial Overview

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Let me know if I need to speak up



# There are a few AI-made images

Create an image that shows a guy using AI to make his class. The person should look like an egotistical social-media influencer / scammer.



Image: ChatGPT 4, 2024-05-20

I hope the humor works



# Giving attribution



Starry Night. An original painting by Mike Bishop

(I put sources down here.)

I need to go fast

Because it's hard for me to delete stuff.

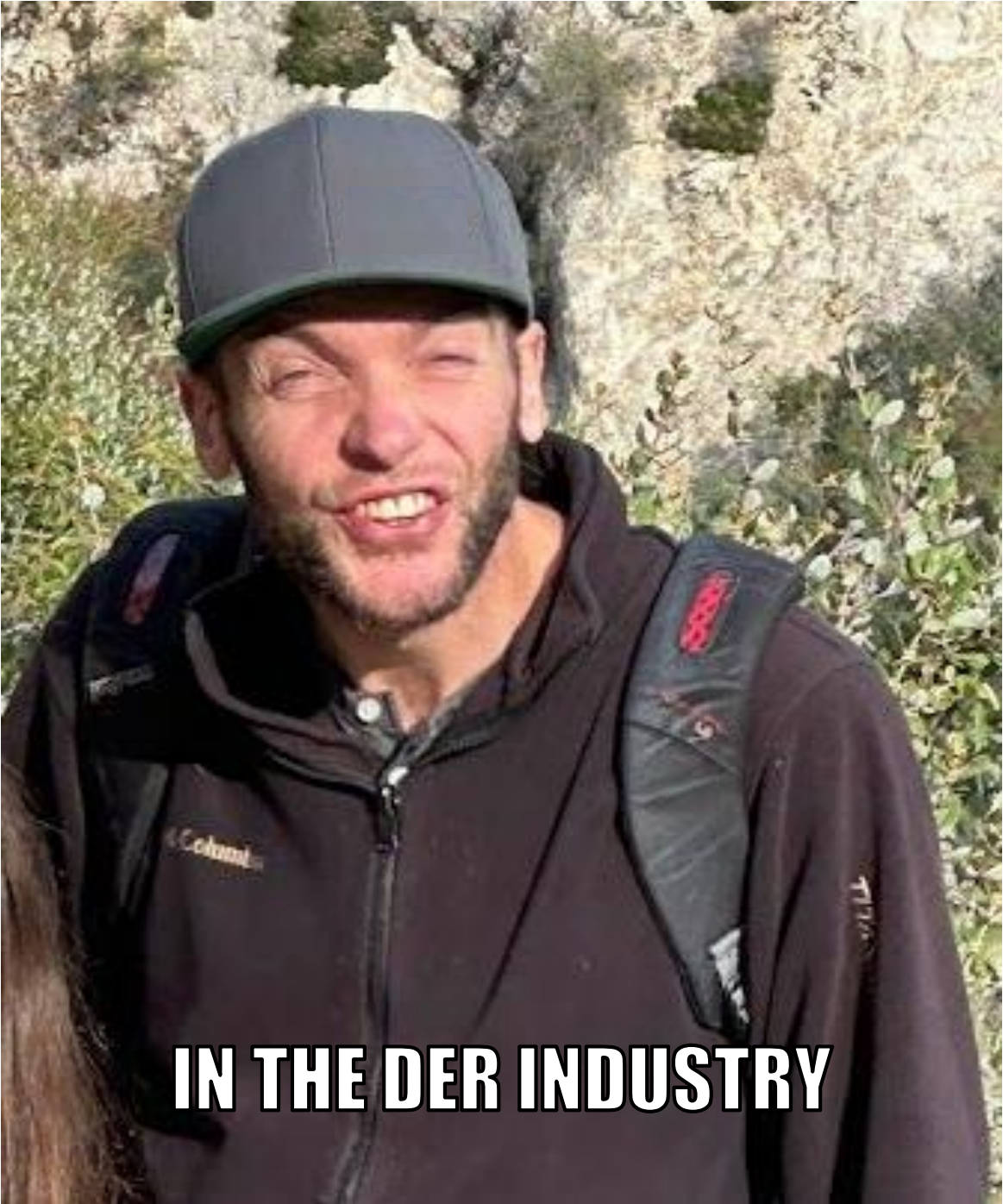


Thank you NABCEP

**THANK YOU**



Who is Mike?



**IN THE DER INDUSTRY**

# Who is Mike?

Mike managed PV modeling software for 10 years (OnGrid Tool, 2007-2016).

He's taught a long energy class 12 times before, at NABCEP CE and for PG&E.

In 2022, he got into electrical work.

- Has solo-installed 10 PV systems.

- Spent 3 months helping with a non-residential PV-system retrofit.

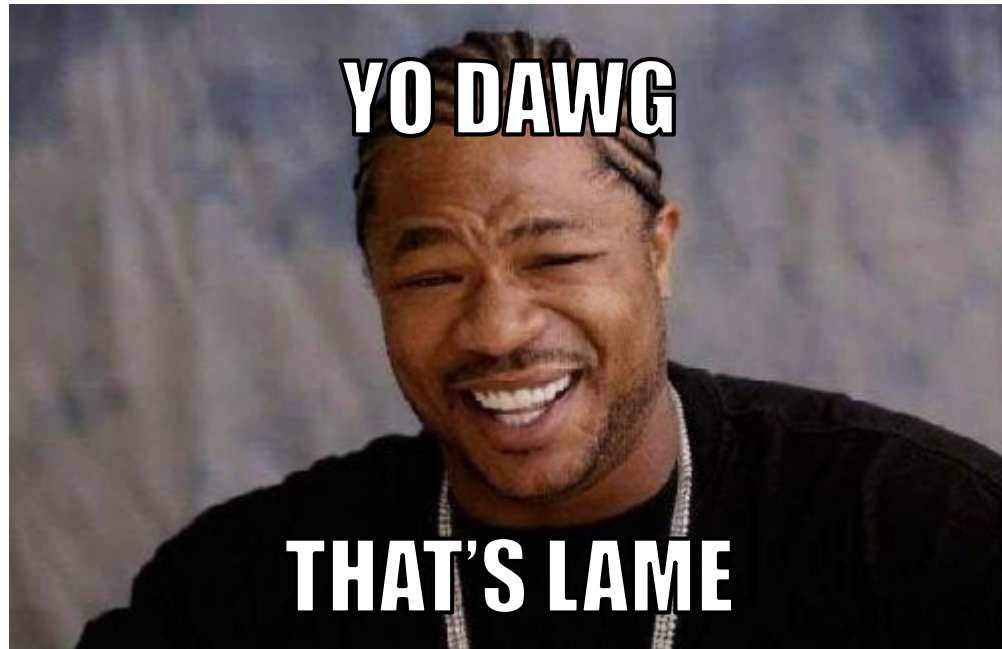
- Has also done some PV-system maintenance work.



# Mike's off-grid Victron install

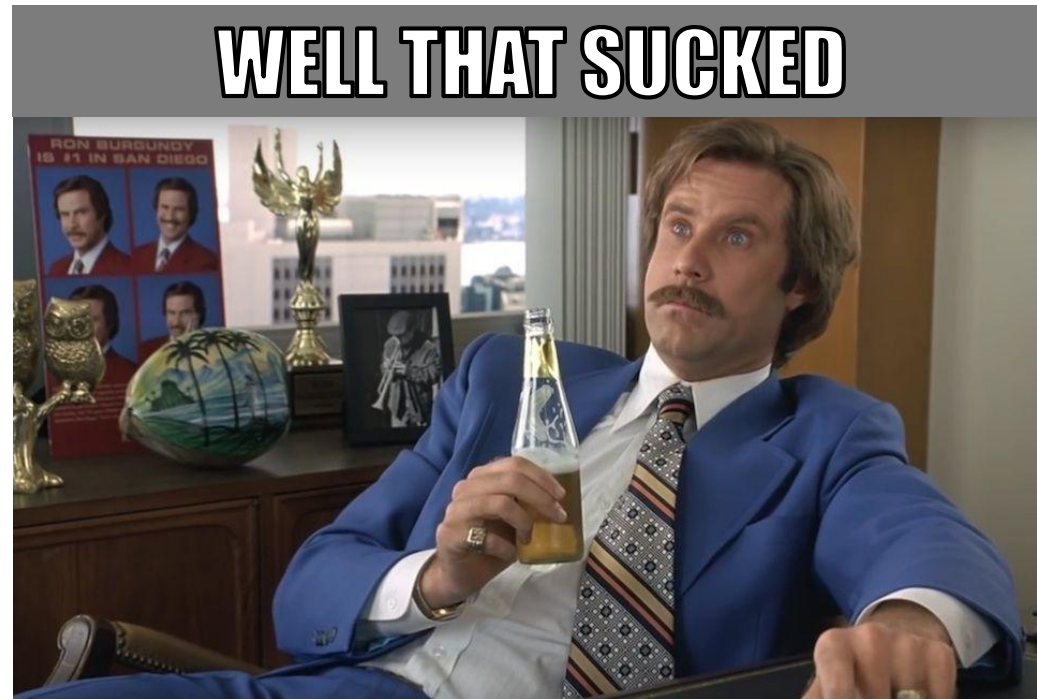


Mike isn't yet NABCEP certified



# Post-class survey

NABCEP and Mike want feedback.



# Class sections

Intro

Electricity

PV + battery technology

System pricing

The grid and electricity pricing

Utility data

Financial metrics

Other electrification tech

Power and energy shifting

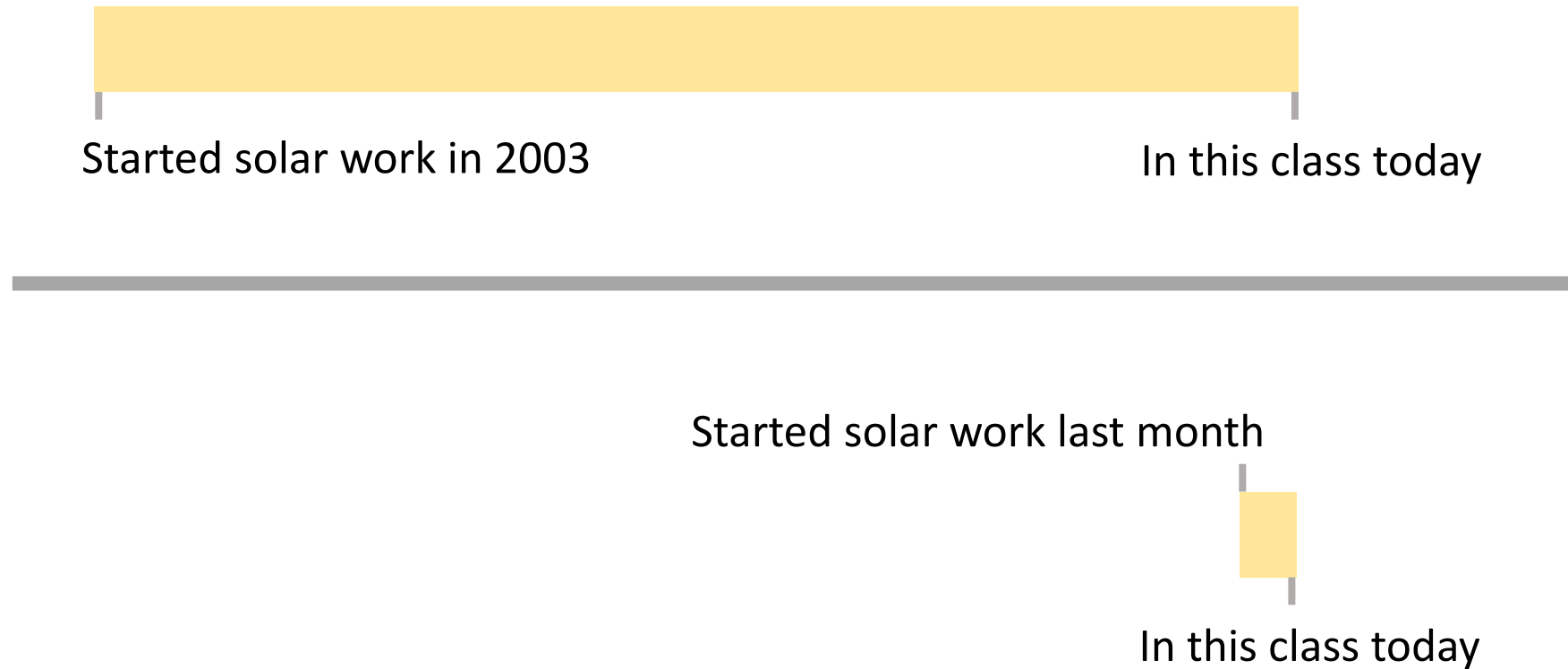
Electric bill crediting

Results over time

Tax credit + tax effects

Sales presentation

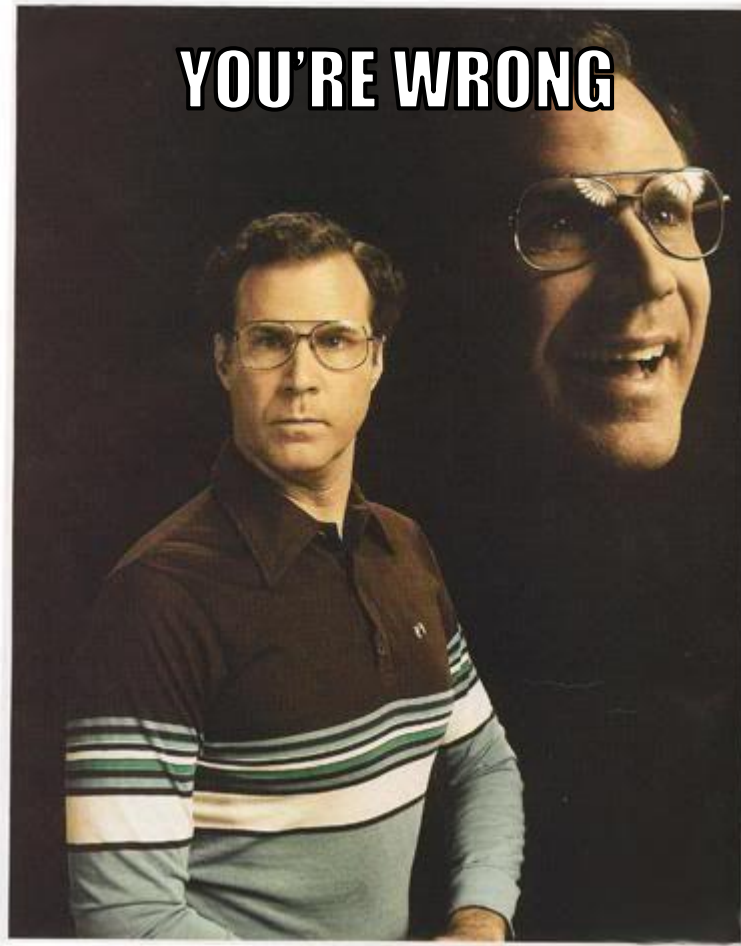
# Greenhorns and pros



Pros during the basic slides



My definitions are simple



# This class covers residential and non-residential

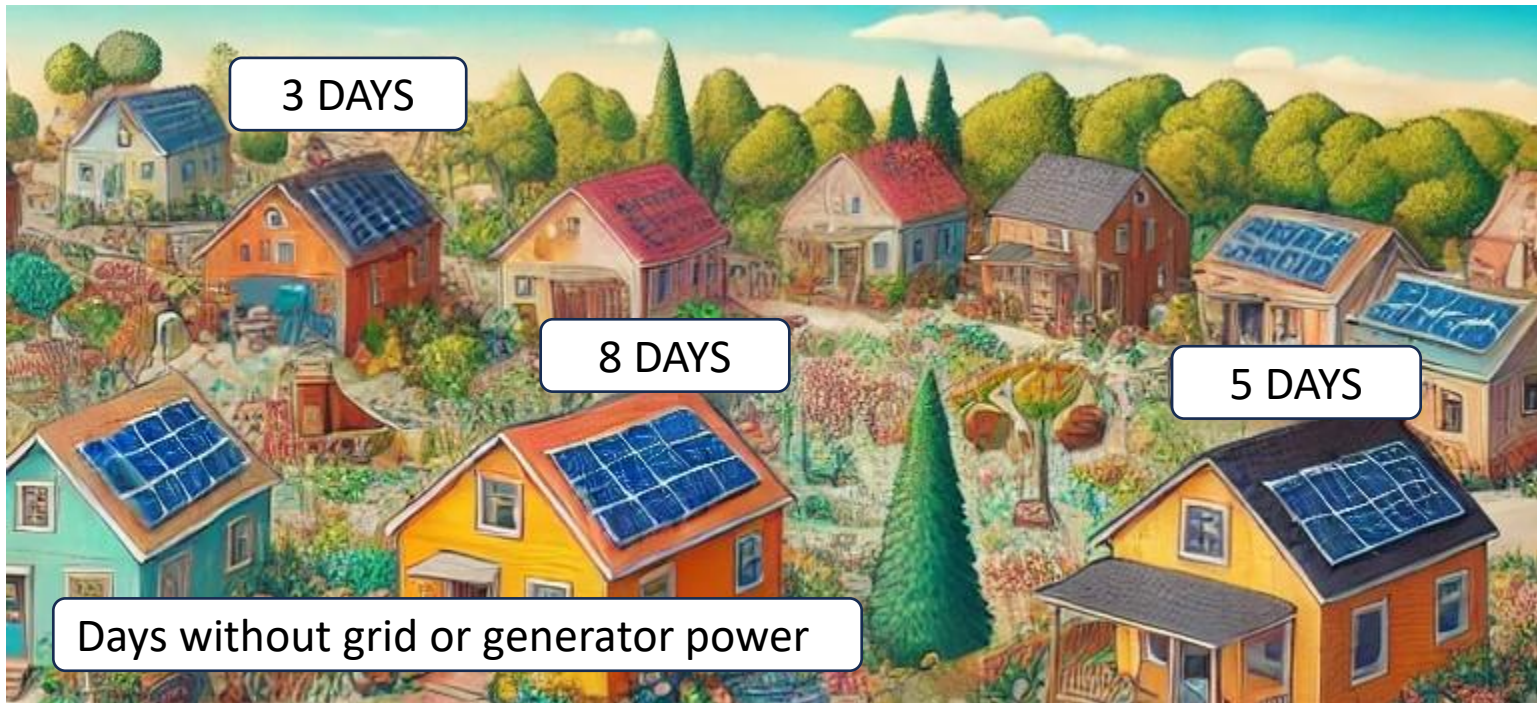


# A motivator for Mike

Don't hopelessly depend on the electric grid.



# Power control, the game



# Prospects can have it all

They can make a solid \$ investment.

...While also getting more independent.

# Ideally, we stay connected

The electric grid is a valuable resource.



Image: ChatGPT, 2025-03

# Software is everywhere



Software is eating the world.

— Marc Andreessen

A problem with software eating the world...

# A problem with software eating the world...

Software is often buggy and obnoxious.



# But good software:

Should make things cheaper.

Should make things easier.

Should give us more control.

“Technology is a great servant, but a terrible master.”

Some obvious premises

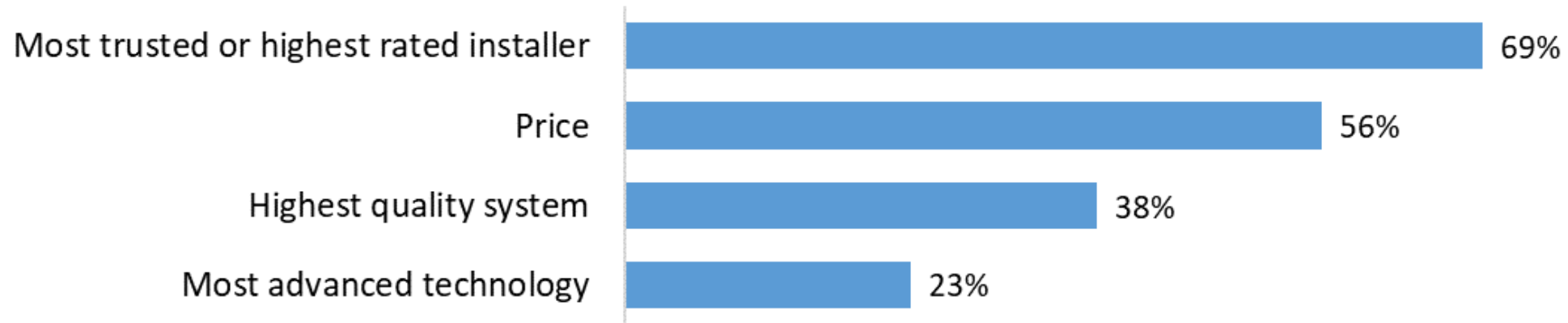
# Real investment

Site power systems are real financial investments.



# Trust is important

People are more likely to choose you if they trust you.



# Trust is important



Our job is not to make the sale. Our job is to see if the sale is appropriate.

— Ezra Auerbach

# Help them understand

People are more likely to say yes if they understand the opportunity.



Never invest in a business you can't understand.

— Warren Buffett

# Understand

People are more likely to understand if you understand.



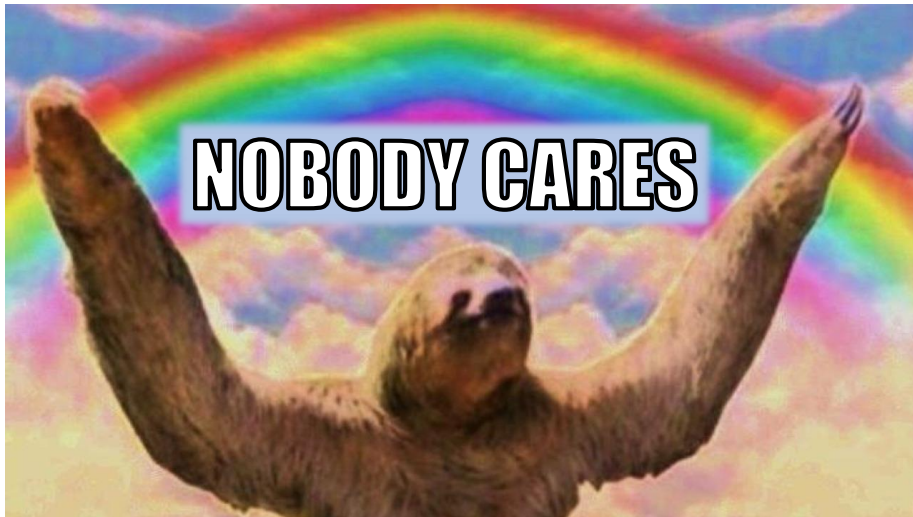
I suspect that whatever cannot be said clearly is probably not being thought clearly either.

— Peter Singer

Some big questions

# Due diligence

What level of financial due diligence will you provide?

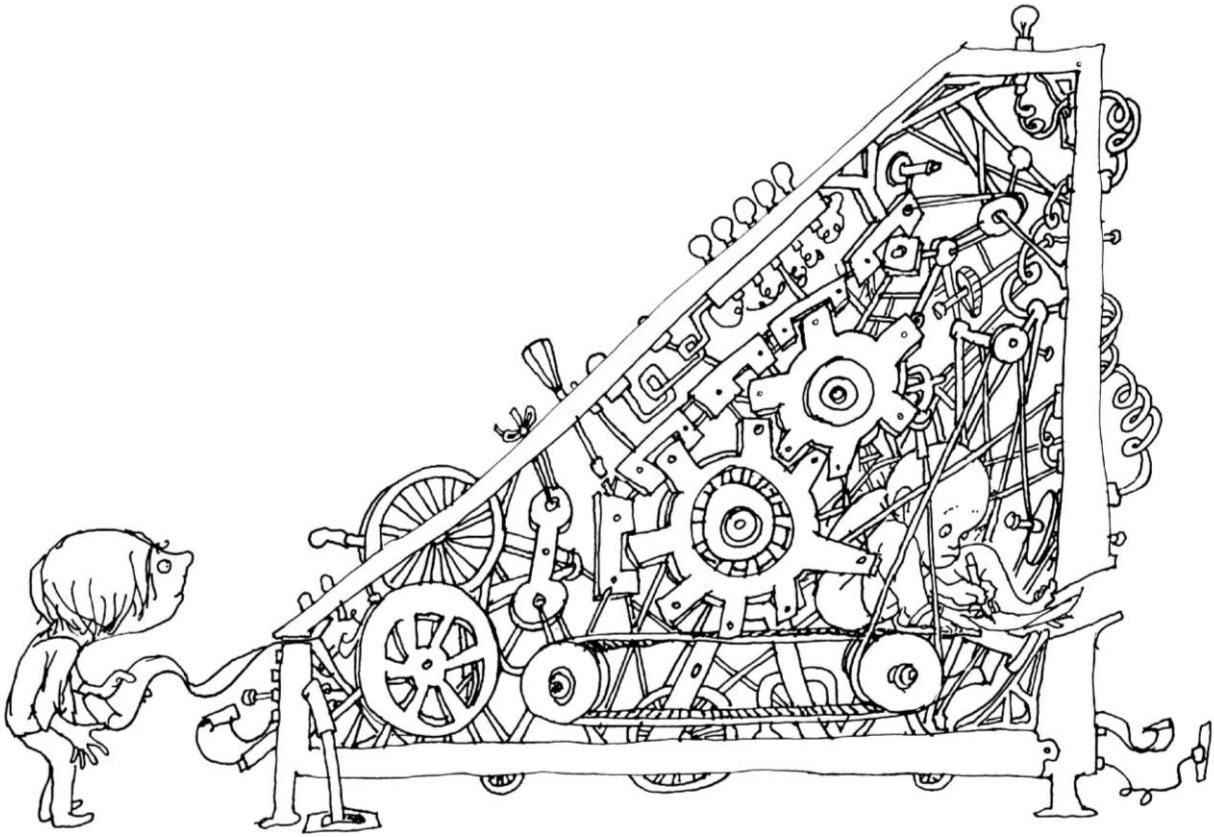


less diligence



more diligence

# Automate strong diligence



# Most PV customers are in the dark today

Customer concerns can be hand-waved away...



Your site's usage, the weather, and utility rates have changed since we prepared those projections. But everything looks good.

— busy sales rep

# Prediction

Savvier prospects will require real-world financial results.

# Get out in front

Provide real-world financial reporting.

Maybe with side-by-side comparisons to the original forecast.

...That reconcile usage, weather, shading, and utility rates.

And work through discrepancies between projected and actual.

# Optimism

How optimistic (aggressive) or conservative (safe) will your forecasts be?

close more deals now  
(short-term outlook)



have a satisfied customer base  
(long-term outlook)

# Risk disclosure

How much risk disclosure will you provide?



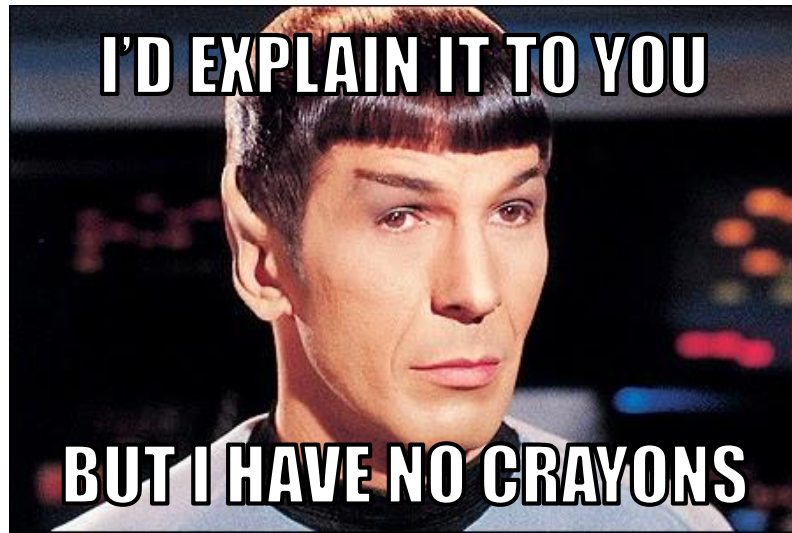
skeptical of low-risk claims



scared by risk warnings

# Level of detail

Overall, how much information will you provide?

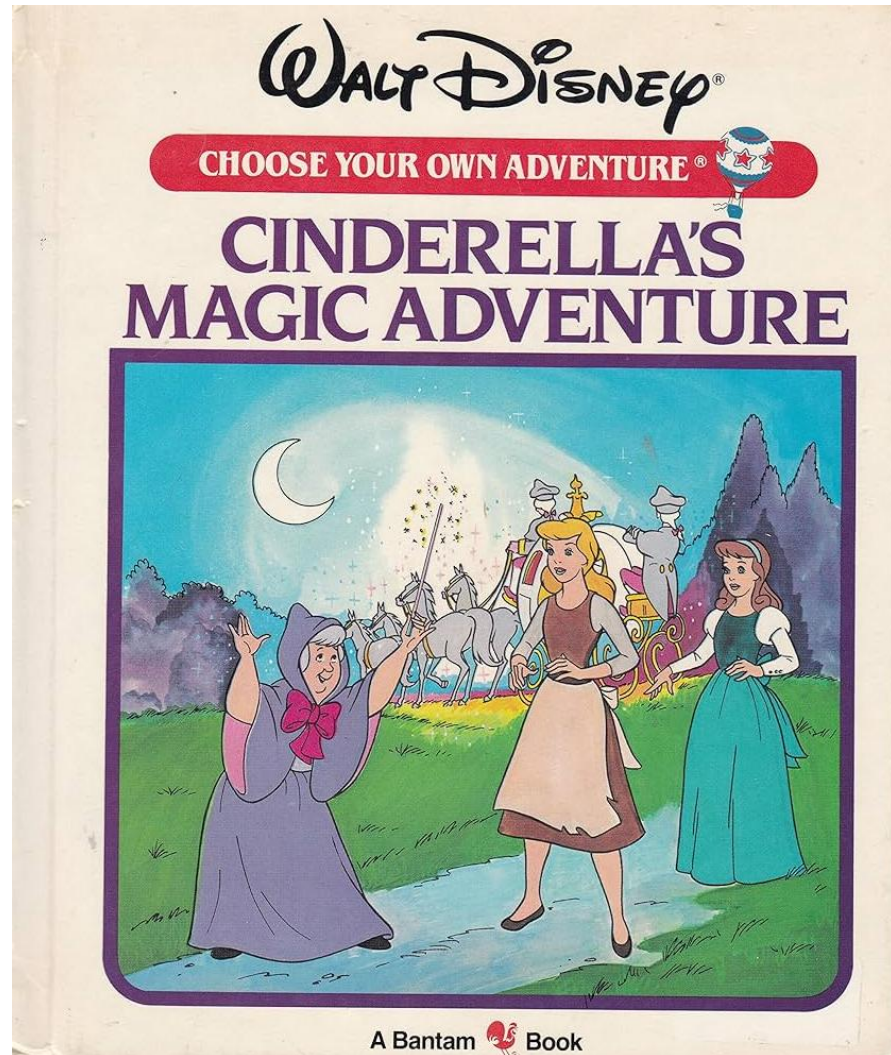


too basic



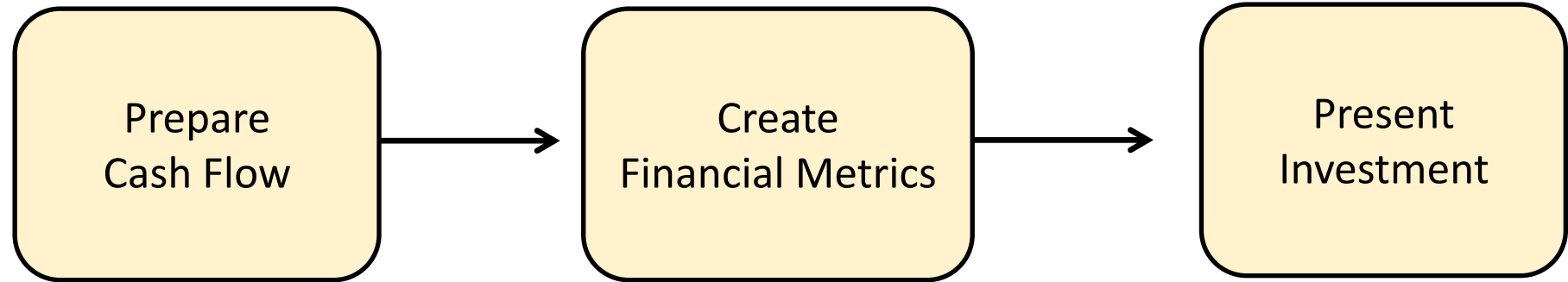
too detailed

Let them choose their own adventure



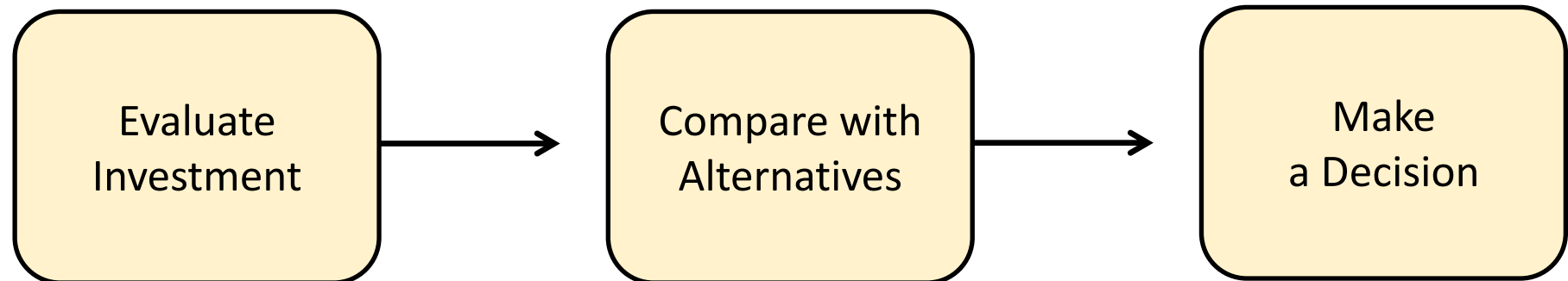
# Financially, it comes down to...

Rep:



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Prospect:



# Modeling options

1. Write your own model



2. Use third-party software



3. Skip the modeling



(I joke...  
Barack would provide legit projections.)

# Comfort is a given

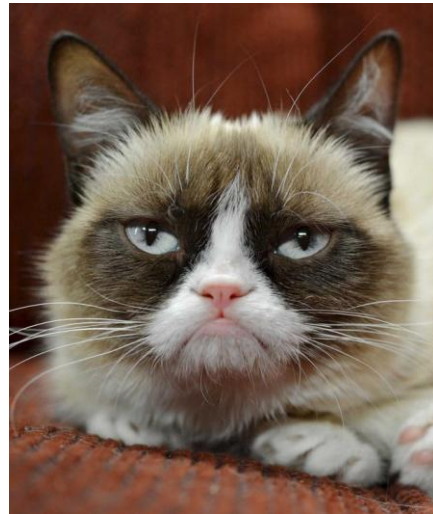
We won't ask anyone to sacrifice comfort or ease.

Let's help people *improve* their comfort and ease.



Put on a sweater.

— Jimmy Carter



GTFO.

— Grumpy Cat

INTRO

