REDUCING ENERGY COSTS AT CAPAY CANYON RANCH

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Client

CAPAY CANYON RANCH

Goals

Identify cost-saving strategies and empower the Capay Canyon team to make informed energy decisions

Objectives

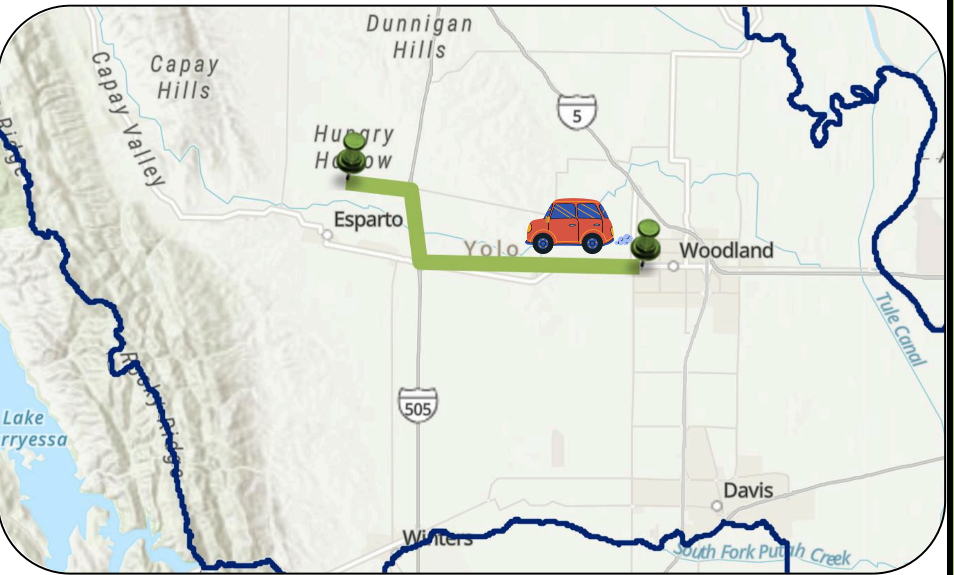
1. Analyzing historical PG&E bills
2. Evaluating alternative rate plans
3. Understanding how the solar system interacts with the billing setup

Teams We've Talked With

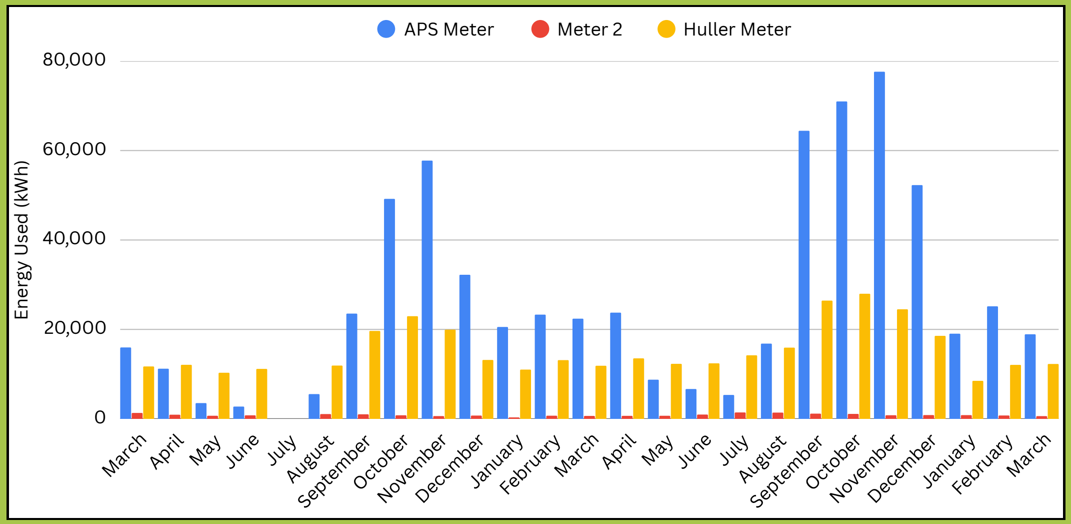
UC DAVIS | FACILITIES

VALLEY CLEAN ENERGY

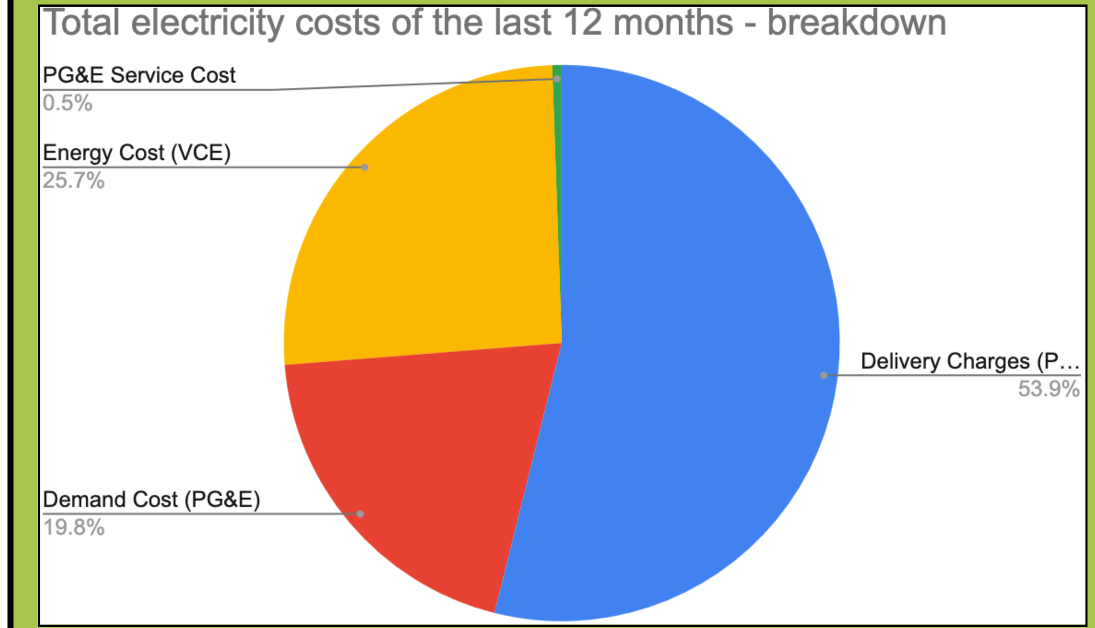
PG&E



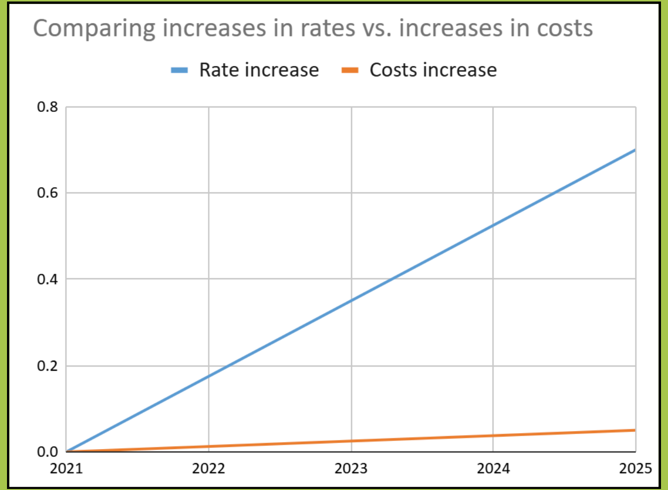
2023-2025 Bill Analysis



Three meters **each on different rates**. Fall peak almond processing during which system runs **around the clock**

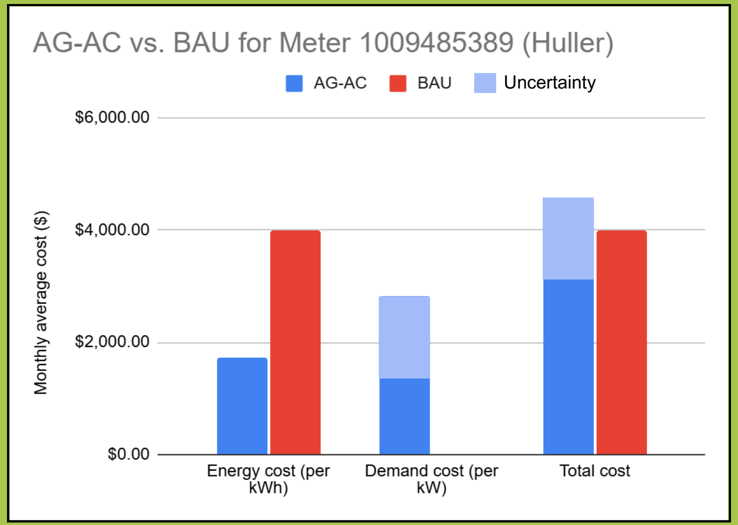


- Delivery Charges: cost per kWh of using PG&E's lines to deliver electricity.
- Demand Cost: based off of the max. kW load in a month.
- Energy costs: cost per kWh for VCE's electricity generation.



Rates increased 70% between 2021 and 2025, but **costs only increased 4%**

Is switching from B6 to AG-C worth it?



Almond Processing and Sorting (APS) meter:

- Agricultural high load (>35 kW): AG-B or AG-C

Meter 2:

- Agricultural low load (<35 kW): AG-A1 or AG-A2

Huller meter:

- Business/Commercial: B6 TOU

Key findings:

- PG&E rep is key for ensuring PG&E properly analyze the best possible scenario.
- The amount of the Demand Cost will determine if it is beneficial.

Is Solar Saving Money?

Current Costs	Estimated cost without solar	Estimated 2021 costs
$196,880.98	$307,117.20	$188,175.35

- Estimated annual savings: **$110,236** *Yes!*
- Estimated Pay-back: 3-7 years

Optimizing Solar for Costs

	Adding 40kW	Adding 60kW	Adding bateries
Pay-Back (years)	3.20	3.40	44.00

Insights

1. Savings from solar (36%) aren't enough to completely offset rate increases (38%).
2. No losses from **cap on** month-to-month NEM rollover allowing for solar expansion
3. Solar **IS** saving money for the farm
4. Most consumption is during off-peak hours

Rate	2021	Current	% Increase
Average	$0.30	$0.51	68.00%

Recommendations

- Avoid consumption during peak hours.
  - Agricultural peak: 5-8 pm
  - Commercial peak: 4-9 pm
- Get rate analysis from PG&E to confirm if changing from B6 to AG-B/AG-C would be advantageous.
- Finish the process to get a PG&E rep.
- Consider solar expansion.
- Ensure unnecessary loads are OFF while machinery is running.
- General energy efficiency recommendations

AESAP AGRICULTURE ENERGY SAVINGS ACTION PLAN

- Monitor solar production to help detect failures and maximize production.