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## VCE Community Advisory Committee Meeting – January 26, 2023 via video/teleconference

### Item 10 – Legislative Summary & Update



# Public Comments

To Provide Public Comment on any agenda item please:

- E-mail 300 words or less to: [meetings@valleycleanenergy.org](mailto:meetings@valleycleanenergy.org)

**OR**

Join the Public Comment Queue by

- “Raising Hand” on Zoom Meeting

**OR**

- Press \*9 if joining by phone

Emailed comments received **before** the item has concluded will be read into the record.

Emailed comments received **after** the item has concluded but before the end of the meeting will not be read but will be included in the meeting record.

# Item 10 – Legislative Summary & Update

## Dates & Deadlines

- December 5, 2022 – Legislature Convenes 2023-24 Session
- January 4 – 2023 Legislative Session Reconvenes
- January 10 – Governor Releases Proposed 2023-24 Budget
- February 17 – Last day to introduce bills
- April 28 – Last day for policy committees to hear fiscal bills (1st House)
- June 2 – Last day for bills to pass house of origin
- June 15 – Last day for the Legislature to pass Budget Bill
- July 14 – Last day for policy committees to hear fiscal bills (2nd House)
- July 14 – August 14 – Summer Recess
- September 14 – Last day of 2023 Legislative Session
- October 14 – Last day for Gov. Newsom to sign or veto bills
- January 3, 2024 – Legislature reconvenes for 2024 Legislative Session

# Item 10 – Legislative Summary & Update

## Change is in the Air

- Assembly: 24 new members (30% turnover)
- Senate: 10 new members (25% turnover)
- Committee Changes
  - Senate Energy, Utilities & Communications Committee
    - Committee grew from 14 to 18 members
    - New Chair: Senator Bradford
    - New Members:
      - Ashby (D – Sacramento) (New Senator)
      - Caballero (D – Merced)
      - Durazo (D – LA)
      - Newman (D – Fullerton)
      - Seyarto (R – Murrieta) (New Senator)
      - Skinner (D – Berkeley)
      - Wilk (R – Santa Clarita)

# Item 10 – Legislative Summary & Update

## Change is in the Air

- Committee Changes
  - Assembly Utilities & Energy Committee
    - New Members:
      - Chen (R – Yorba Linda)
      - Connolly (D – Marin)
      - Mathis (R – Porterville)
      - Schiavo (D – San Fernando Valley)
      - Wallis (R – Palm Springs)
- Legislative Leadership
  - Assembly has voted for Assemblymember R. Rivas (Hollister) to replace Speaker Rendon on July 1
  - Senator Atkins (San Diego) remains Senate Pro Tem, terms out in 2024

# Item 10 – Legislative Summary & Update

## Budget Woes

- State is facing a projected \$22.5 billion deficit
- Proposed cuts to allocations for energy programs
  - Reduces by \$1.1 billion the investments in Zero-Emission Vehicles from \$10 billion to \$8.9 billion.
  - Appropriates \$100 million to the Clean Energy Reliability Investment Plan funds for reliability and enabling investments that will accelerate the clean energy transition, which was part of SB 846 (Dodd) to extend Diablo Canyon.
  - Reverts \$400 million from the California Arrearage Payment Program
  - Delays \$370 million of funds and reduces \$87 million of future funds for the Equitable Building Decarbonization Program at the CEC and. Maintains approximately \$835 million (91 percent).
  - Reduction of \$25 million in 2023-24 from the Transmission Financing Program at the California Infrastructure Bank. This maintains approximately \$225 million (90 percent).
  - Reduction of \$270 million in 2023-24 from the Residential Solar and Storage program at the PUC. Maintains approximately \$630 million (70 percent) for incentives for low-income utility customers.

# Item 10 – Legislative Summary & Update

## Budget Optimism

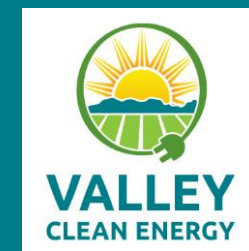
- Despite the deficit and multitude of proposed cuts, the budget maintains \$100 million to the Clean Energy Reliability Investment Plan funds for reliability and enabling investments that will accelerate the clean energy transition, which was part of SB 846 (Dodd) to extend Diablo Canyon.
- The Administration's proposal for this funding includes the following reference:
  - ❖ Strategic investments in the agricultural and water sectors that reduce both peak electricity consumption and water use.



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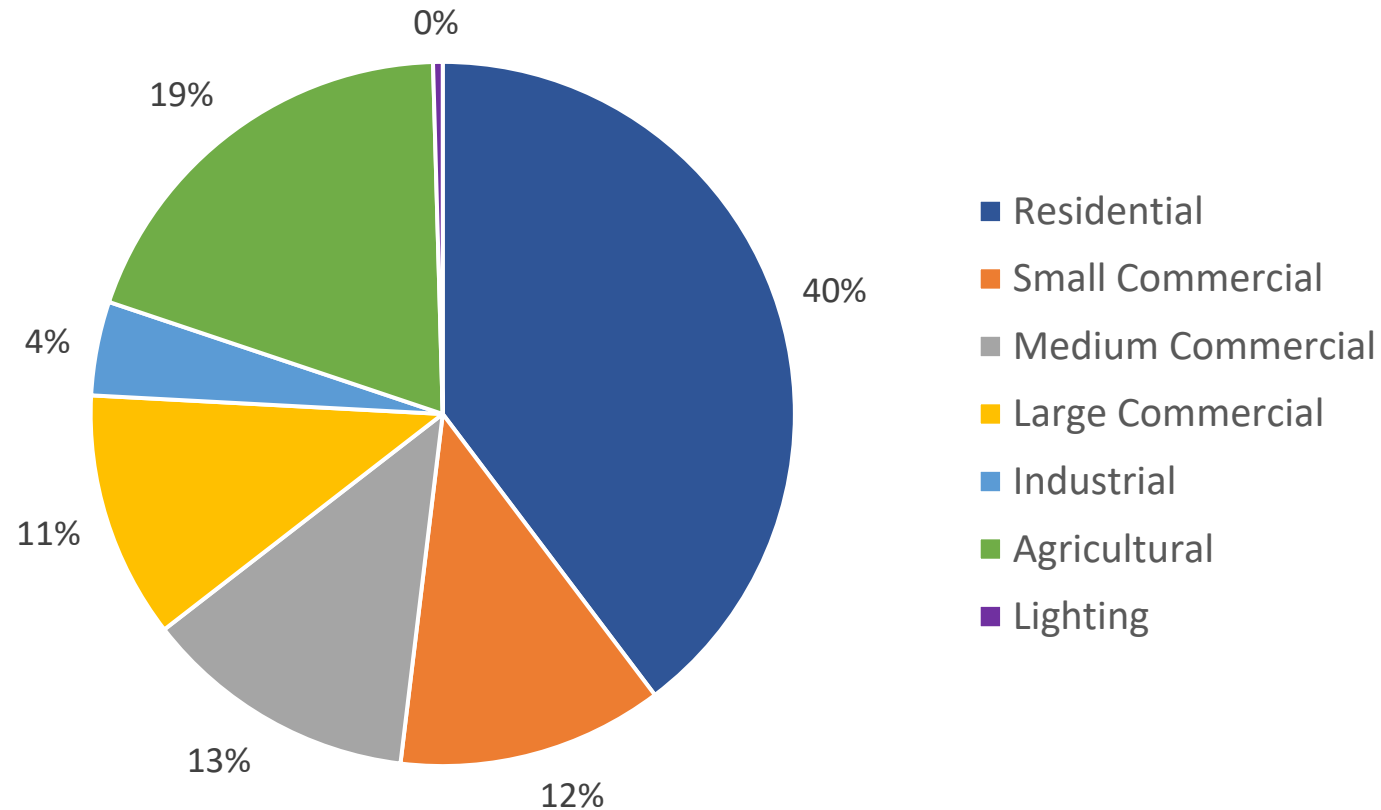
**VCE Community Advisory Committee Meeting – January 26, 2023  
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**Item 11 – Understanding VCE’s Ag Load & Forecasting Potential**





# Item 11 – Understanding VCE’s Ag Load & Forecasting Potential: Retail Load by Customer Class



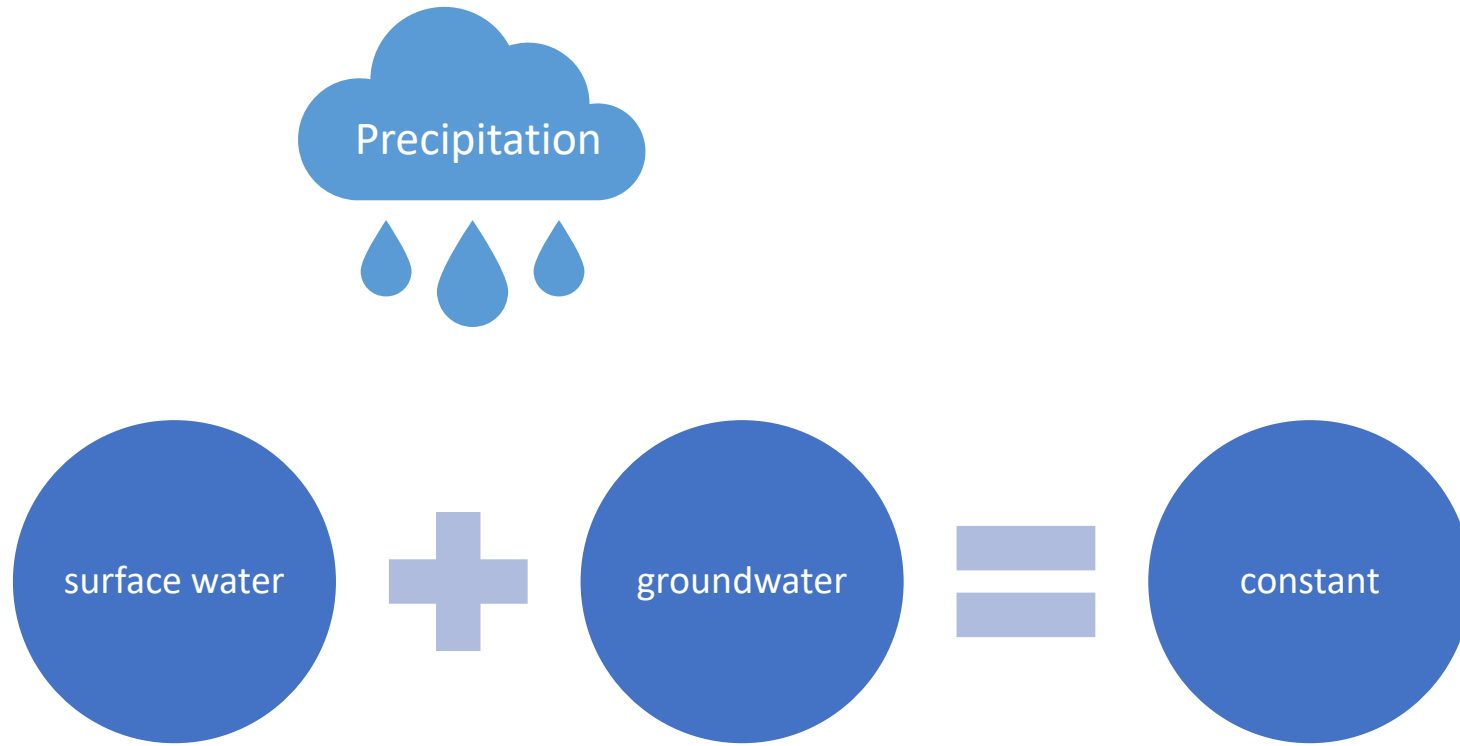
Wholesale load = retail load + 6% distribution losses

# Item 11 – Understanding VCE’s Ag Load & Forecasting Potential: Background

- VCE’s Ag customers use electricity to pump groundwater for irrigating crops
- Most crops require watering throughout the summer



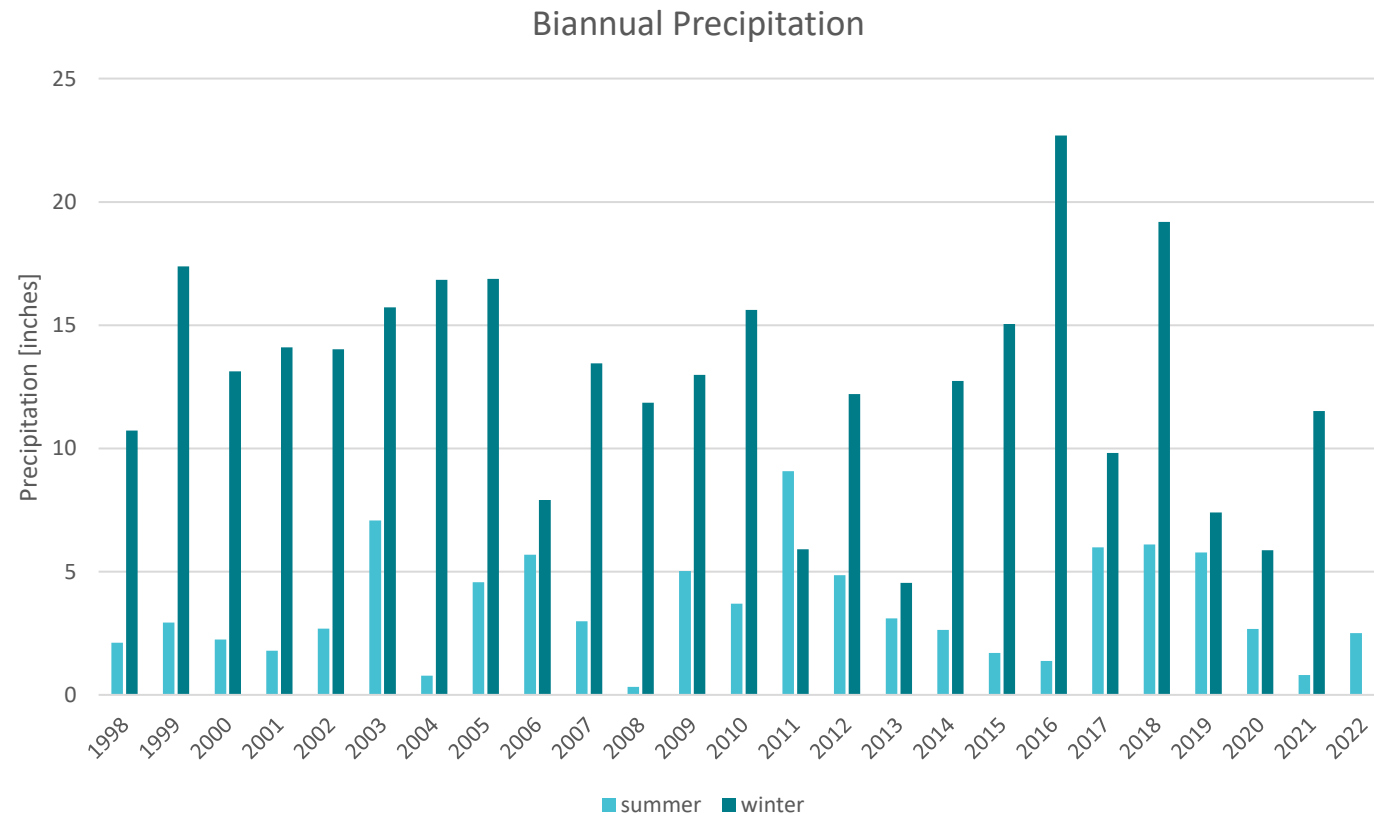
# Item 11 – Understanding VCE’s Ag Load & Forecasting Potential: Water Sources



The image shows the cover of the Yolo Subbasin Groundwater Agency Annual Report for the years 2019, 2020, and 2021. The cover features a teal background with a white border. On the left side, there is a logo for YSGA (Yolo Subbasin Groundwater Agency) with the website address YOLOGROUNDWATER.ORG. On the right side, the text reads "Yolo Subbasin Groundwater Agency Annual Report - WY 2019, 2020, 2021 Yolo County, CA". Below the text, there are three small images: a field of tall grasses, an aerial view of a water treatment facility with large circular tanks, and a view of a water treatment plant building. At the bottom of the cover, there is a large photograph of a river flowing through a valley with hills in the background. At the bottom right corner of the cover, the address "Yolo Subbasin Groundwater Agency 34274 State Highway 16, Woodland CA 95695" is listed.

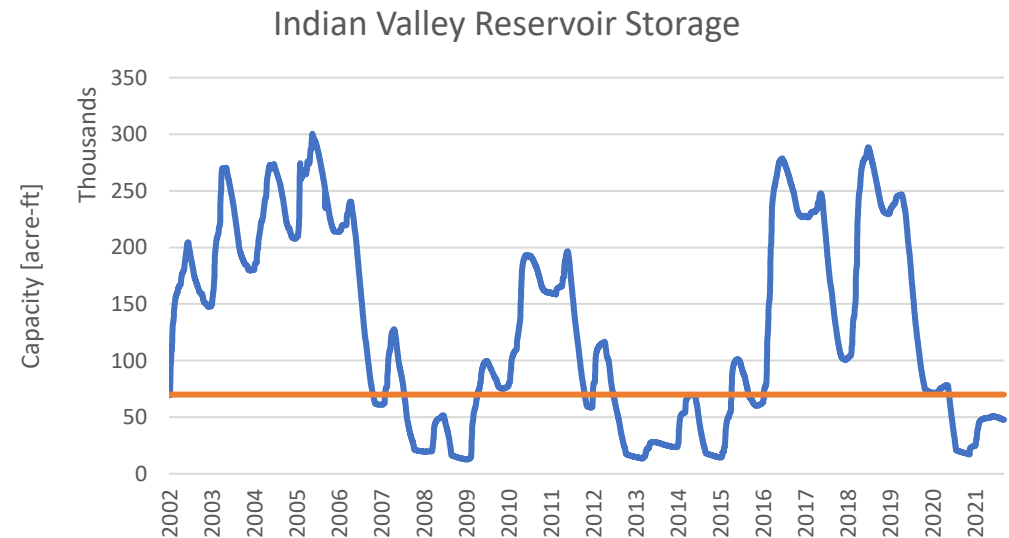
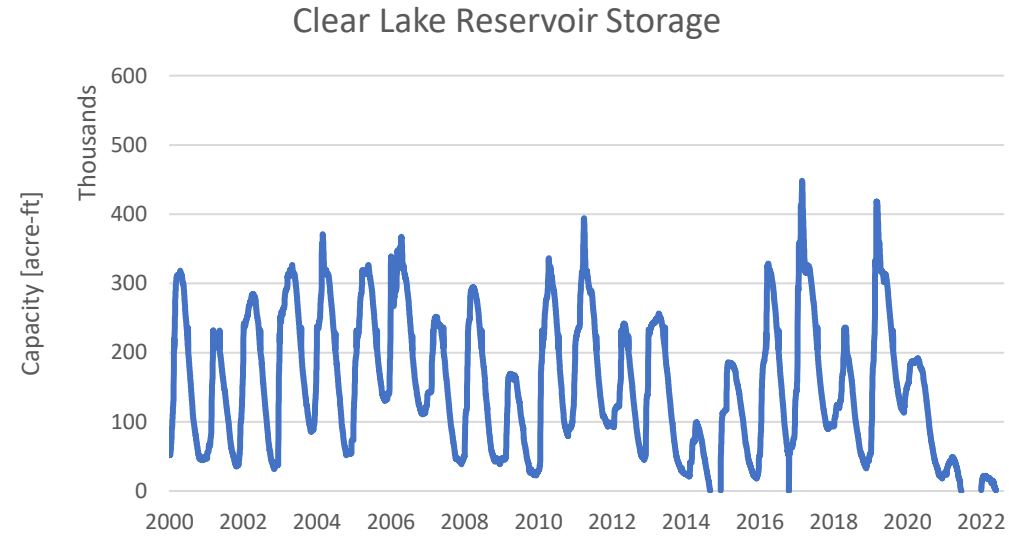
# Item 11 – Understanding VCE’s Ag Load & Forecasting Potential: Precipitation

- Yolo County annual average rainfall: 19 inches
- Rain season – winter



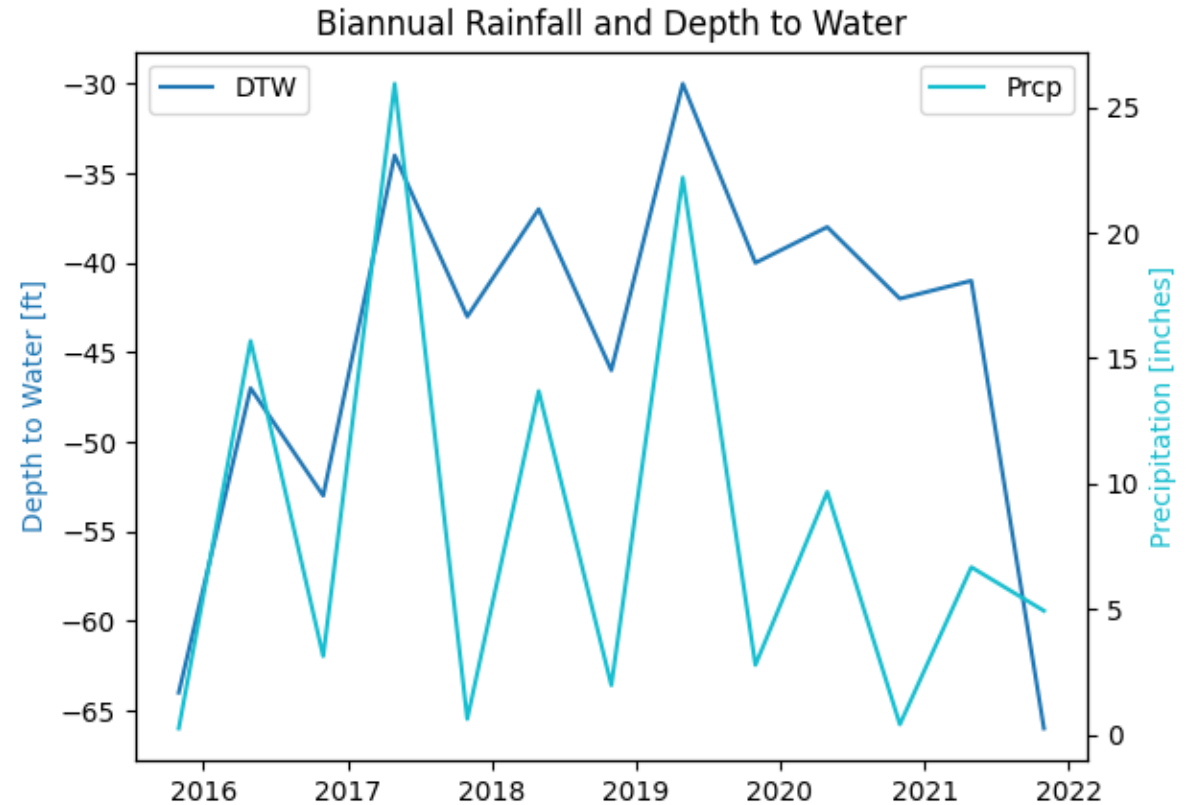
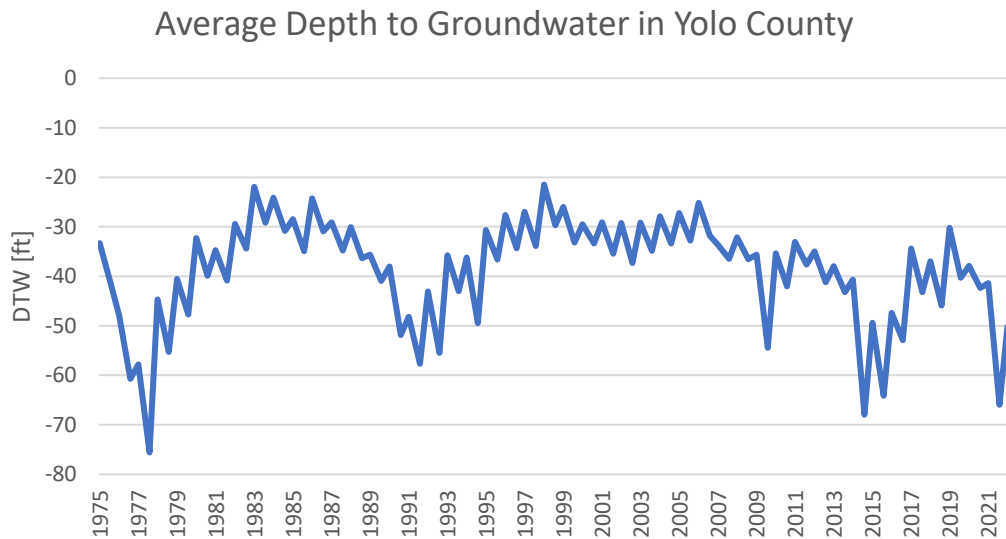
# Item 11 – Understanding VCE’s Ag Load & Forecasting Potential: Surface Water

- Yolo County Flood Control releases water from Clear Lake & Indian Valley as surface water to farmers
- VCE has a PPA with Indian Valley Reservoir, which generates electricity when storage > 70,000 acre-ft



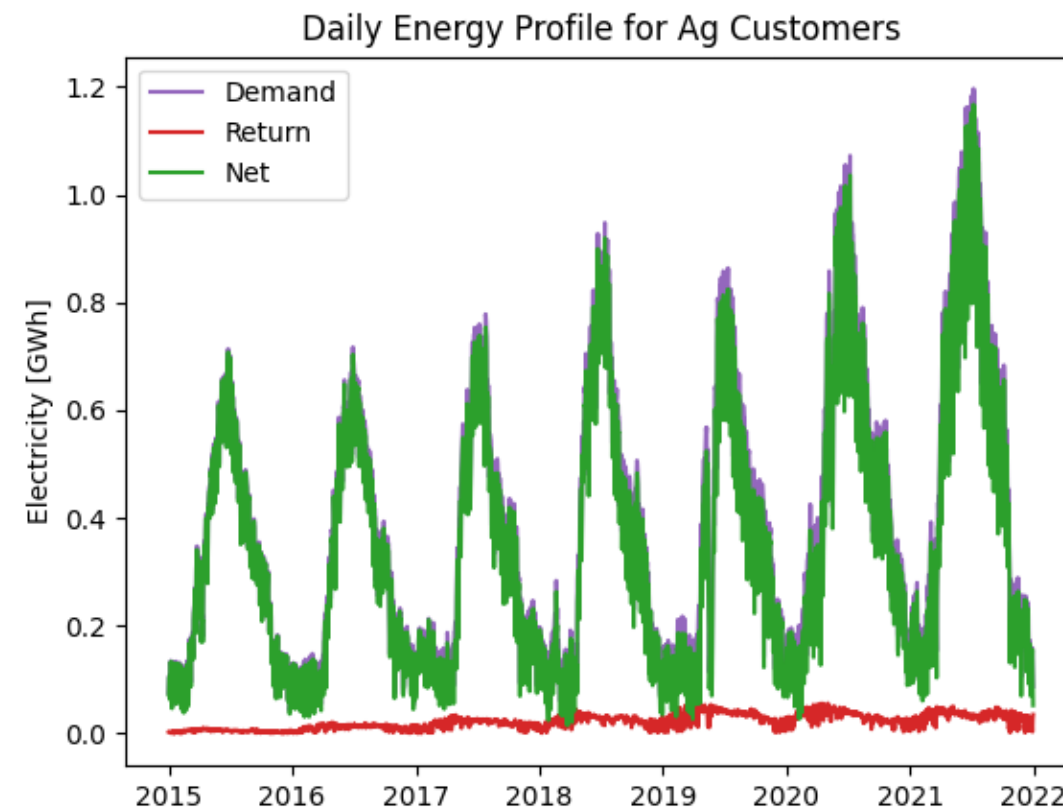
# Item 11 – Understanding VCE’s Ag Load & Forecasting Potential: Groundwater

- The Yolo groundwater supply is resilient to droughts and replenishes fast!
- Although droughts can cause groundwater levels to drop, rainy years always restore groundwater levels

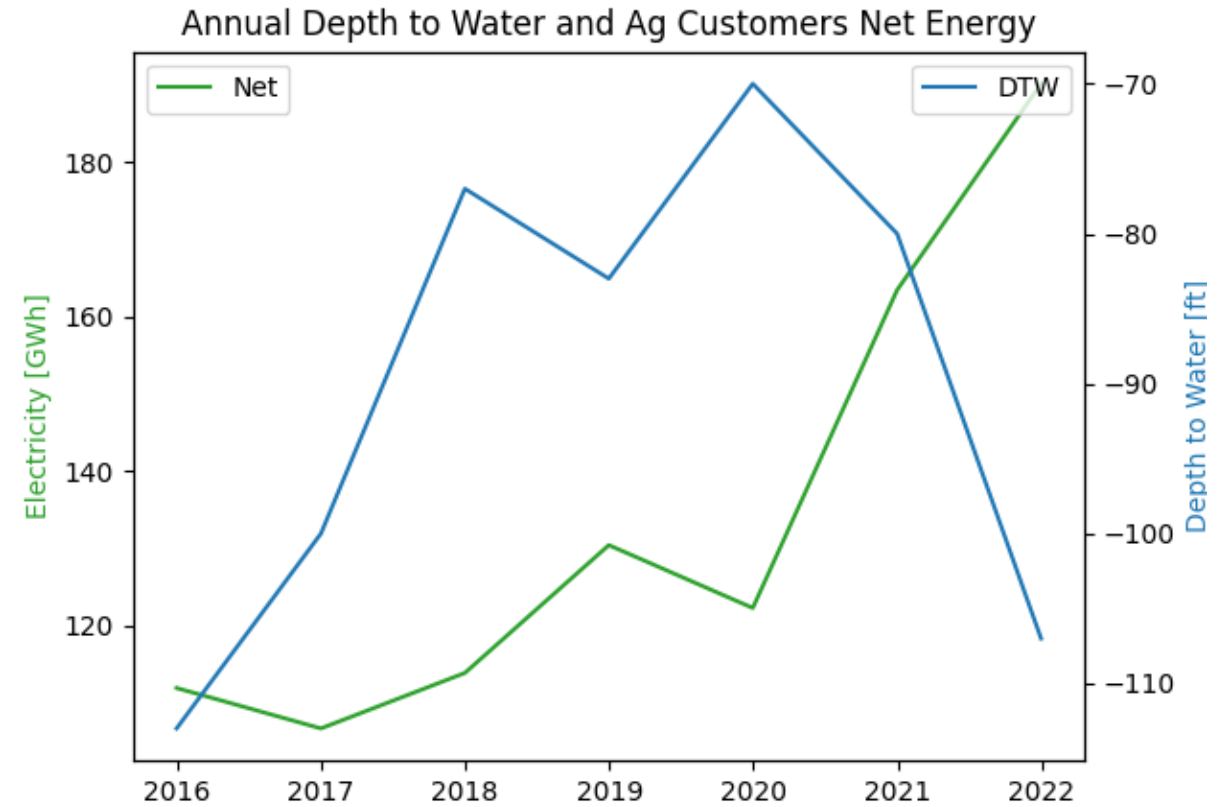
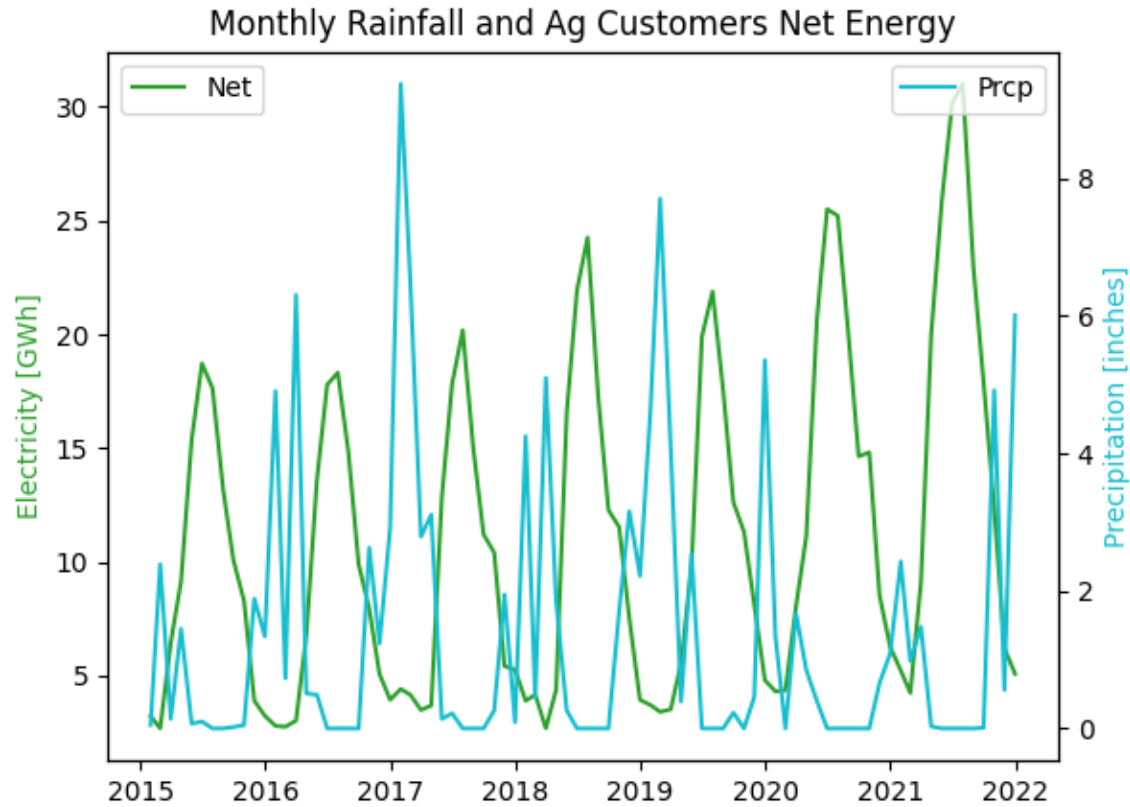


# Item 11 – Understanding VCE’s Ag Load & Forecasting Potential: Energy Forecasting

- VCE’s current forecasting methodology primarily uses historical trends and temperature data to forecast load
- This approach works for residential, commercial, and industrial customers but is more challenging with Ag customers, whose electricity consumption varies based on water demand, which is influenced by the (growing) season and drought conditions



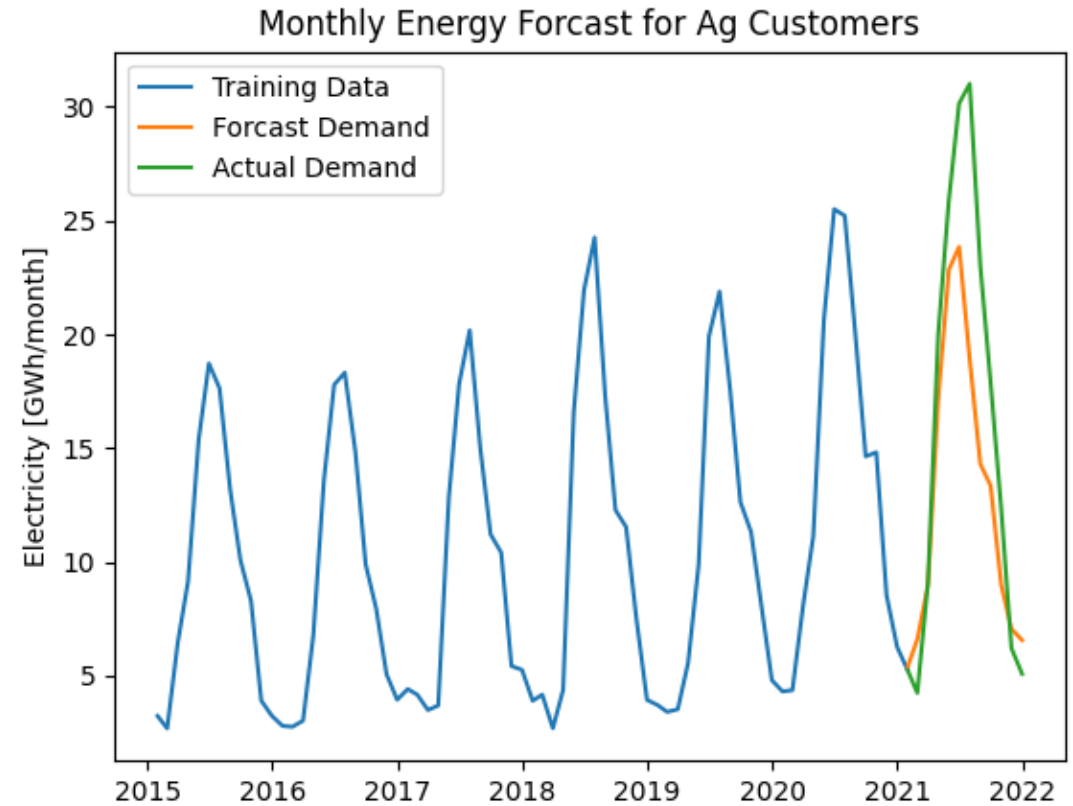
# Item 11 – Understanding VCE’s Ag Load & Forecasting Potential: Energy Forecasting





# Item 11 – Understanding VCE’s Ag Load & Forecasting Potential: Machine Learning

- Seasonal Autoregressive Integrated Moving Average (SARIMA) – widely used to forecast data with a seasonal component
- Used 6 years of “training” energy data (2015-2021) to forecast demand for 2022
- While the model captured the seasonal nature of the data and the apparent long-term increasing trend, it failed to capture the “actual” summer peak



# Item 11 – Understanding VCE’s Ag Load & Forecasting Potential: Future Work

## Takeaways:

- Reservoir & groundwater data is insufficient to forecast year-ahead Ag water/energy demands because precipitation is so variable and influential
- Climate models forecast year-ahead precipitation data, which can be downscaled to regions to predict rainfall. However, this is expensive with uncertain accuracy
- Forecasting rainfall in agricultural regions is not only important from an energy procurement perspective, but also for farmers to effectively plan and manage their crops
- Issue is greater than Yolo County or the Central Valley, and affects any region where groundwater is required to meet water demands