

## Integrating Batteries Clean Water Utilities



**CLEAN WATER SoCAL**  
CREATING SUSTAINABLE SOLUTIONS

# TerraVerde ENERGY

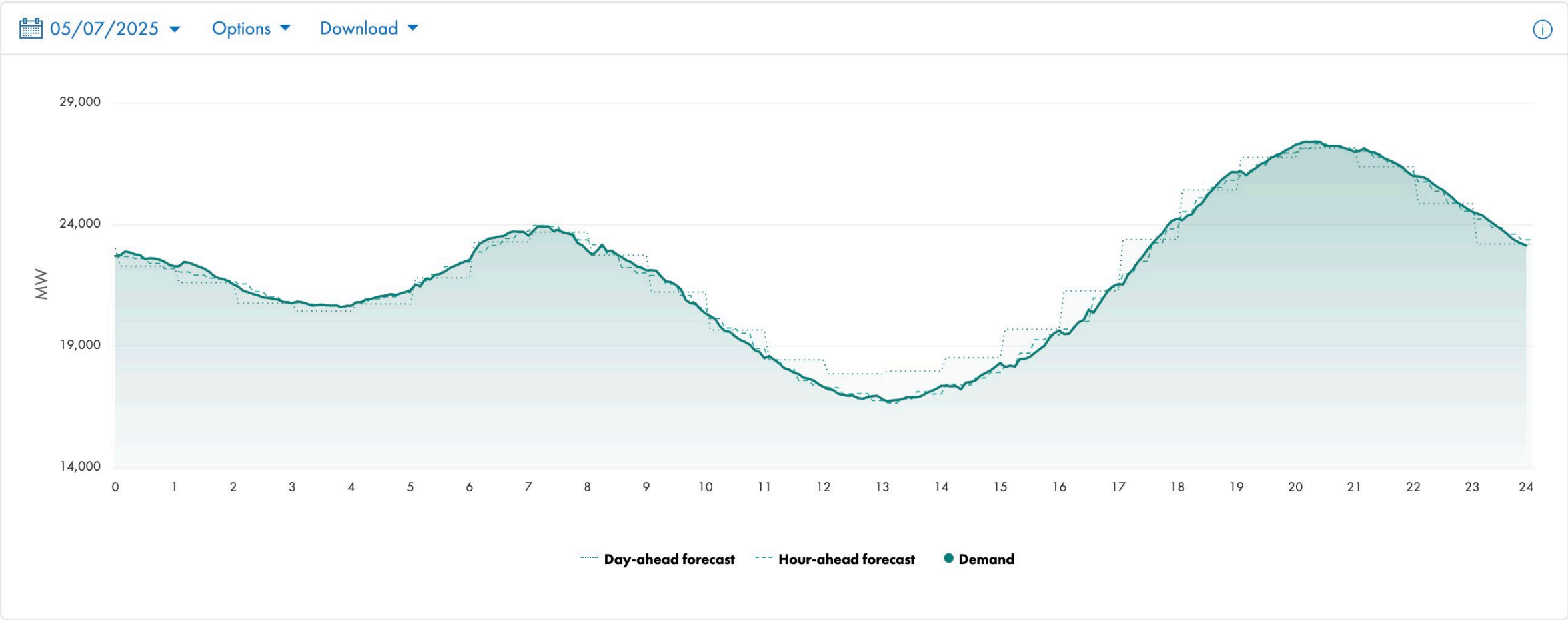
# California Electricity Rate Escalation in 2025

Jan 2013 - Jan 2025 | Combined Commercial & Residential



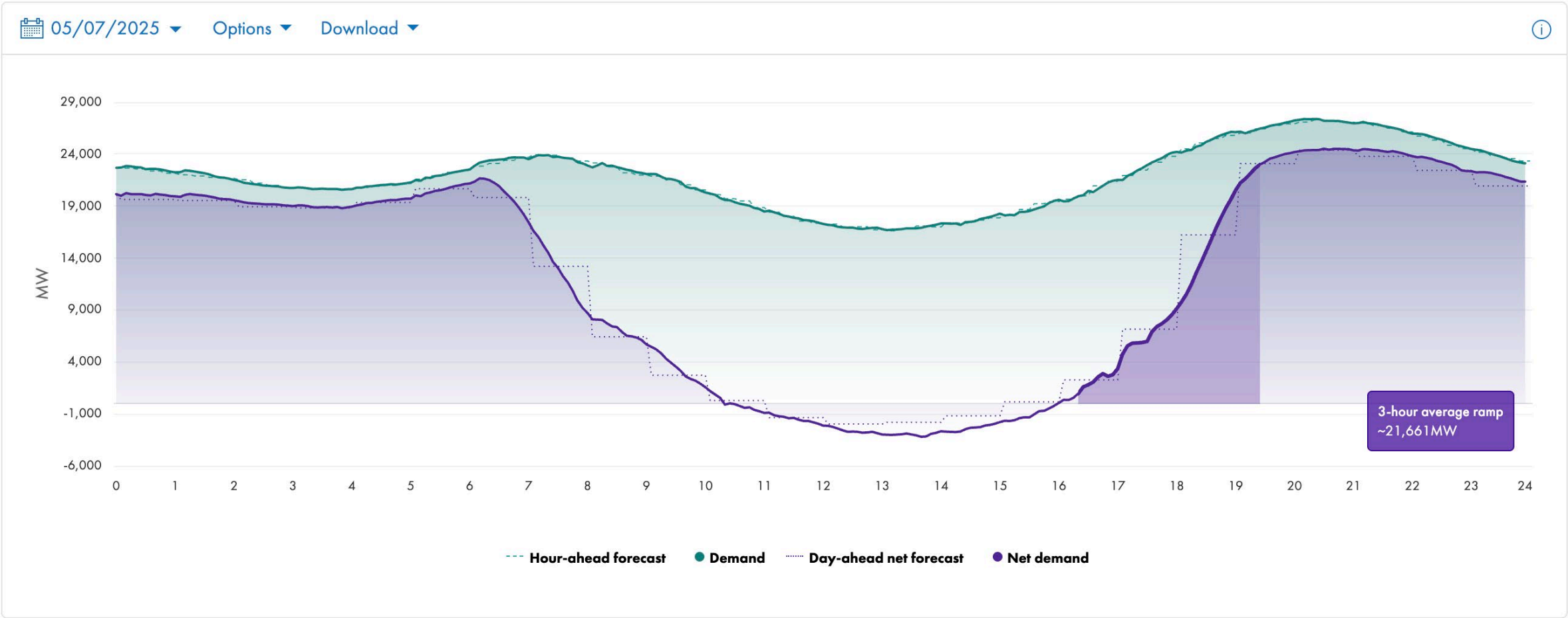
# Demand trend

System demand, in megawatts, compared to the forecasted demand in 5-minute increments.



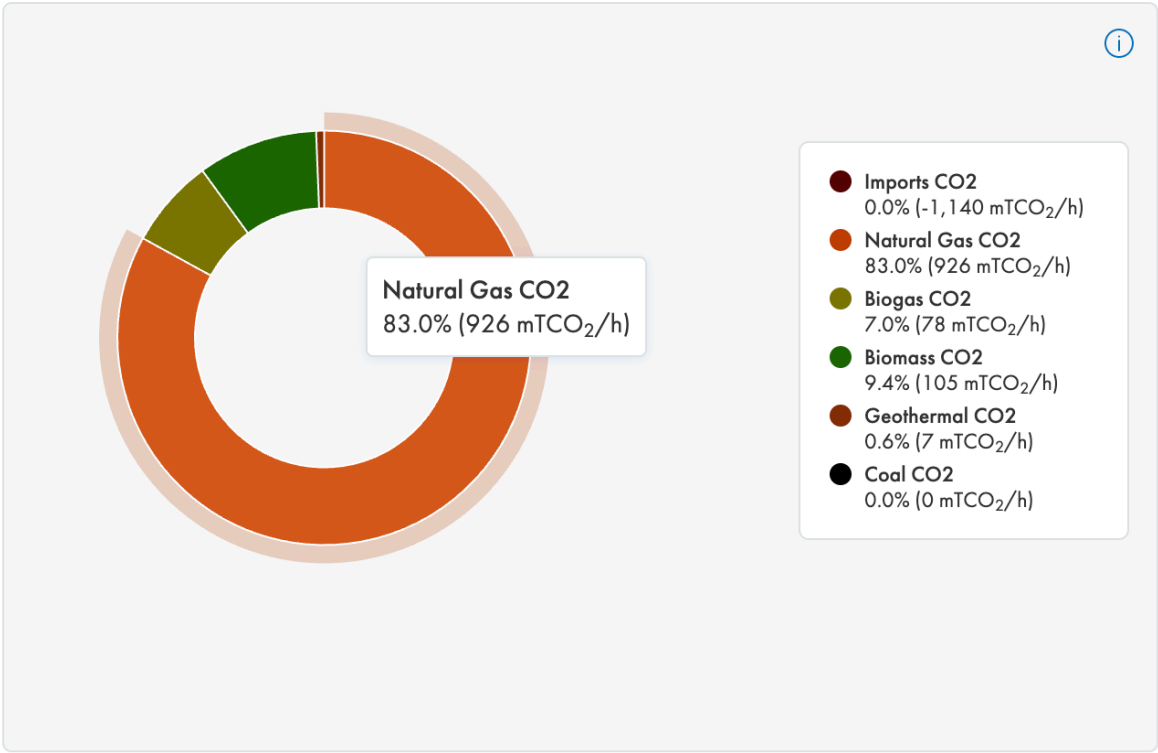
# Net demand trend

System demand minus wind and solar, in 5-minute increments, compared to total system and forecasted demand.



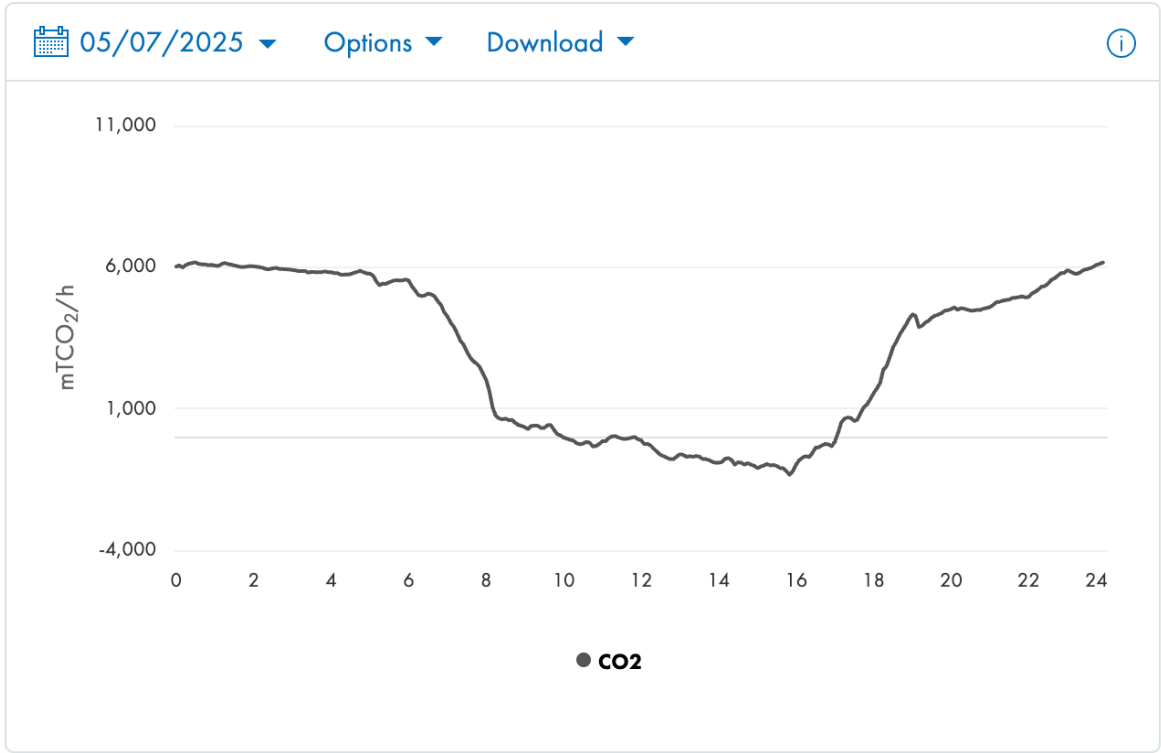
# Current CO<sub>2</sub> per resource

Current percentage of CO<sub>2</sub> broken down by resource.



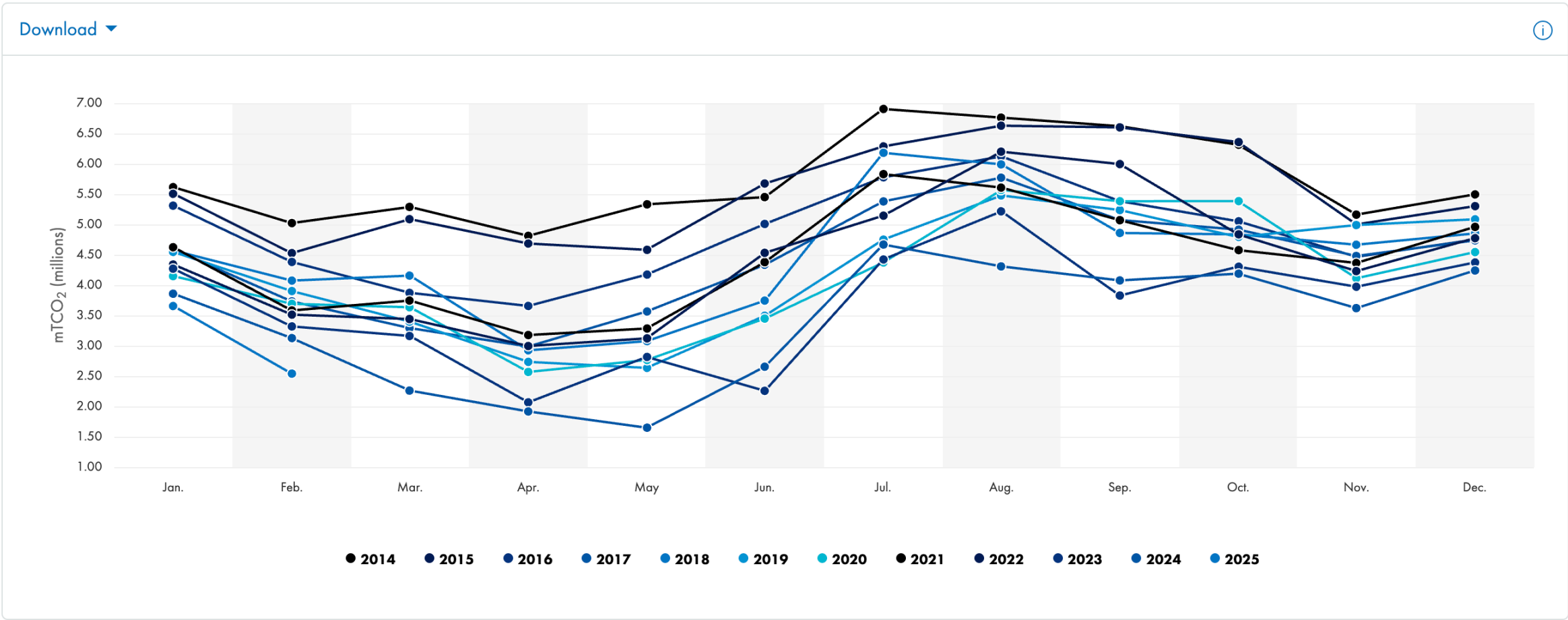
# Total CO<sub>2</sub> trend

Total CO<sub>2</sub> produced in five-minute increments.



# Historical CO<sub>2</sub> trend

Yearly snapshot of CO<sub>2</sub> emissions by month.



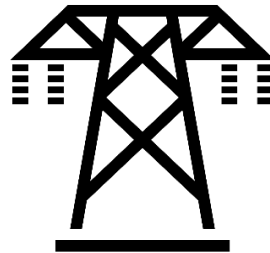
# Why Batteries for Water Infrastructure?

To future-proof against \_\_\_\_\_

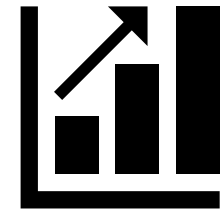
**Cost Inflation**

2x

**Grid Outages**



**Load Growth**





## 3 Battery Project Configurations

**1**

**Back-up Power  
Augmentation**

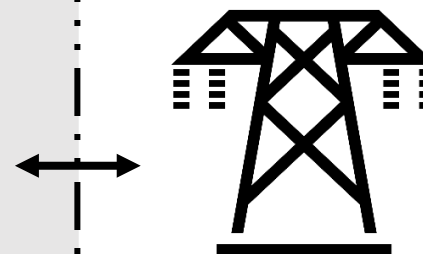
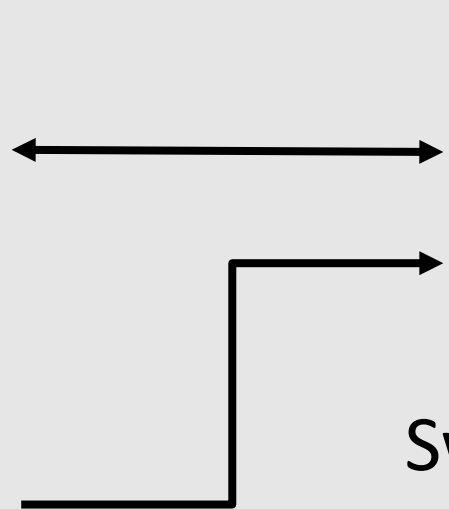
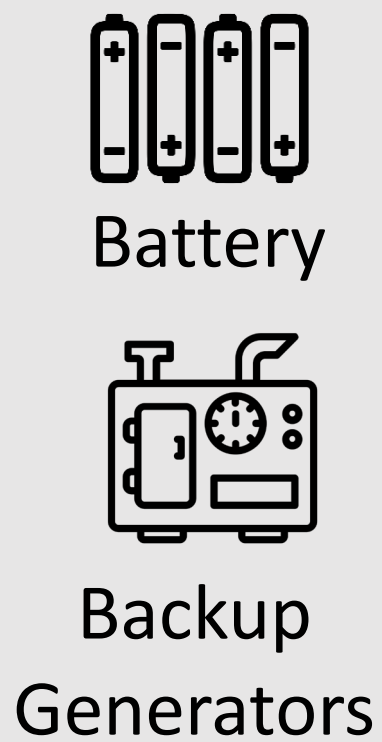
**2**

**Battery Boosted  
Electric Vehicle  
Charging**

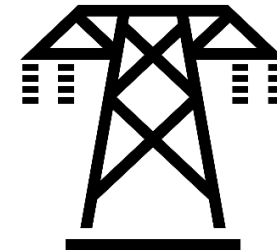
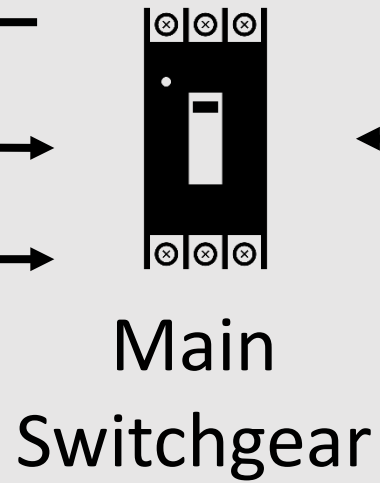
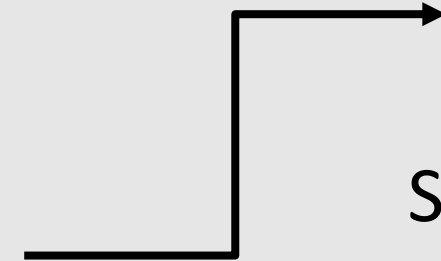
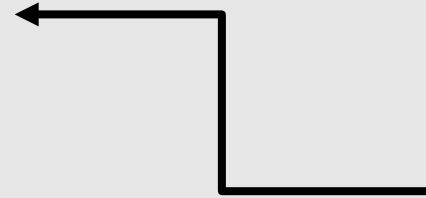
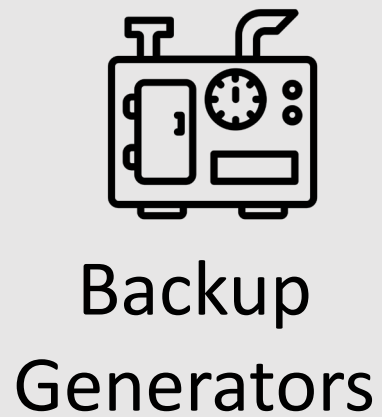
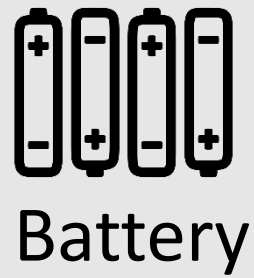
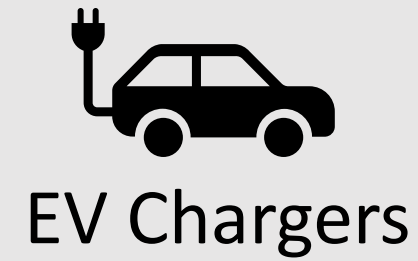
**3**

**Self Generation for  
Self Consumption**



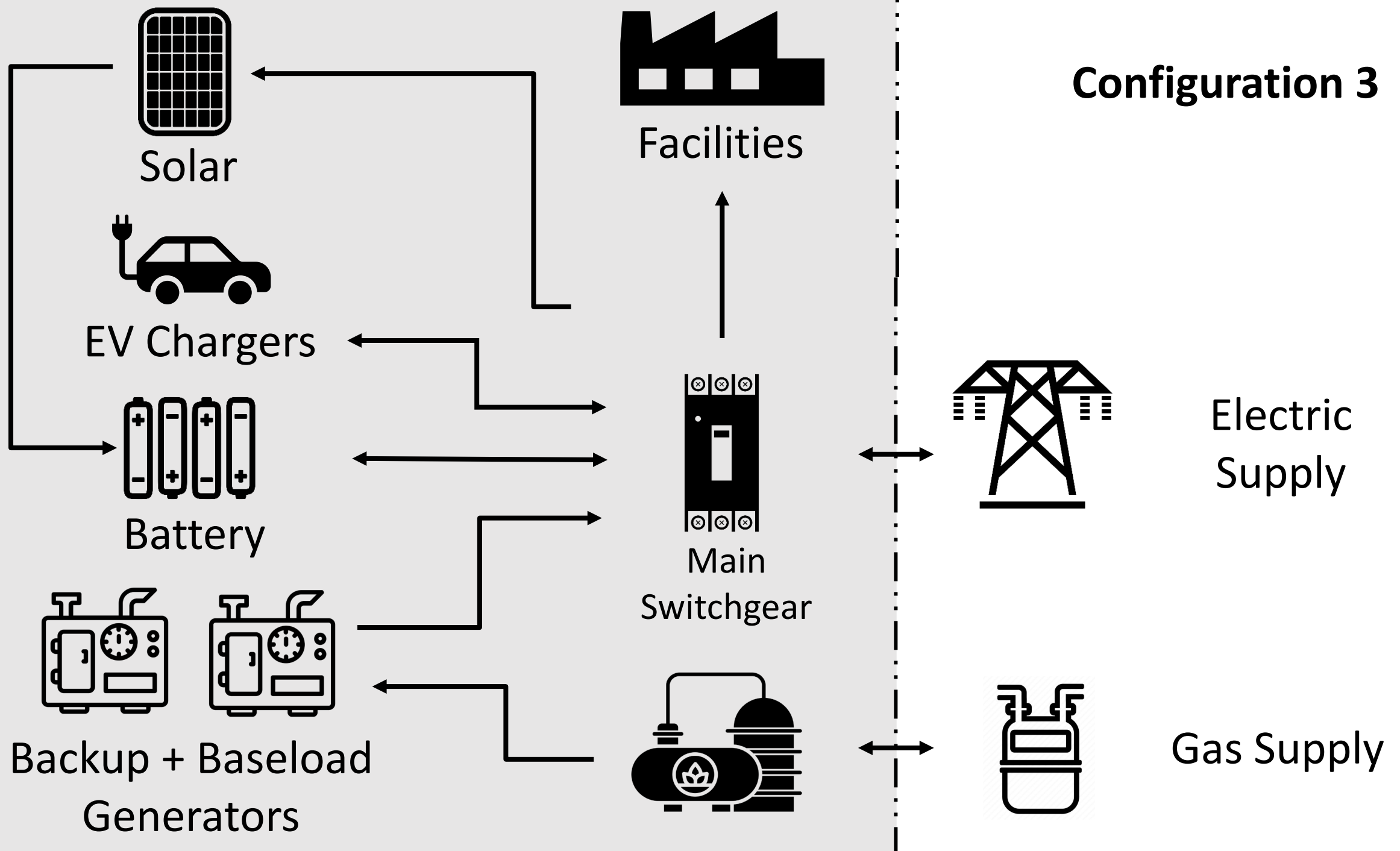


**Configuration 1**

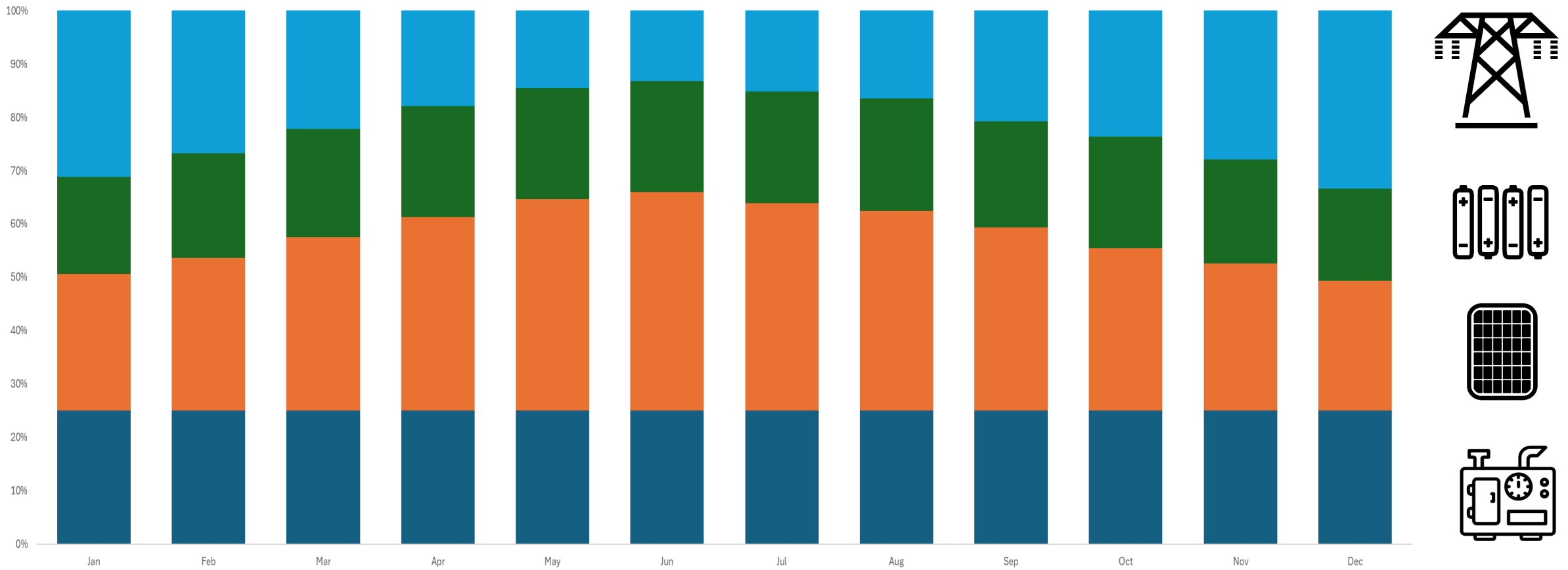


**Configuration 2**

Electric  
Supply



# Self Generation > Utility Supply



### 3 Takeaways for Batteries as Resources

1. **Location matters** – operating plant vs. emergency pump
2. **Operational augmentation** – think redundancy > replacement
3. **Revenue creating** – financial incentives on both sides of the meter

## 2 MWh Battery Revenue & Funding Sources

1

**Rate Optimization**  
\$0.15/kWh

**\$87k/year**

2

**DSGS**  
May - Oct

**\$80k/year**

3

**SGIP**  
Up to 50% of cost

**Up to \$1.4m**

# About TerraVerde Energy

TerraVerde is an owner's representative energy consulting since 2009

We work for public agencies in California

We assess, procure, and operate energy infrastructure projects

**132 Municipalities**

have worked with us

**467 Systems**

we operate

**>\$1 Billion**

in CIP deployed

**TerraVerde**  
ENERGY



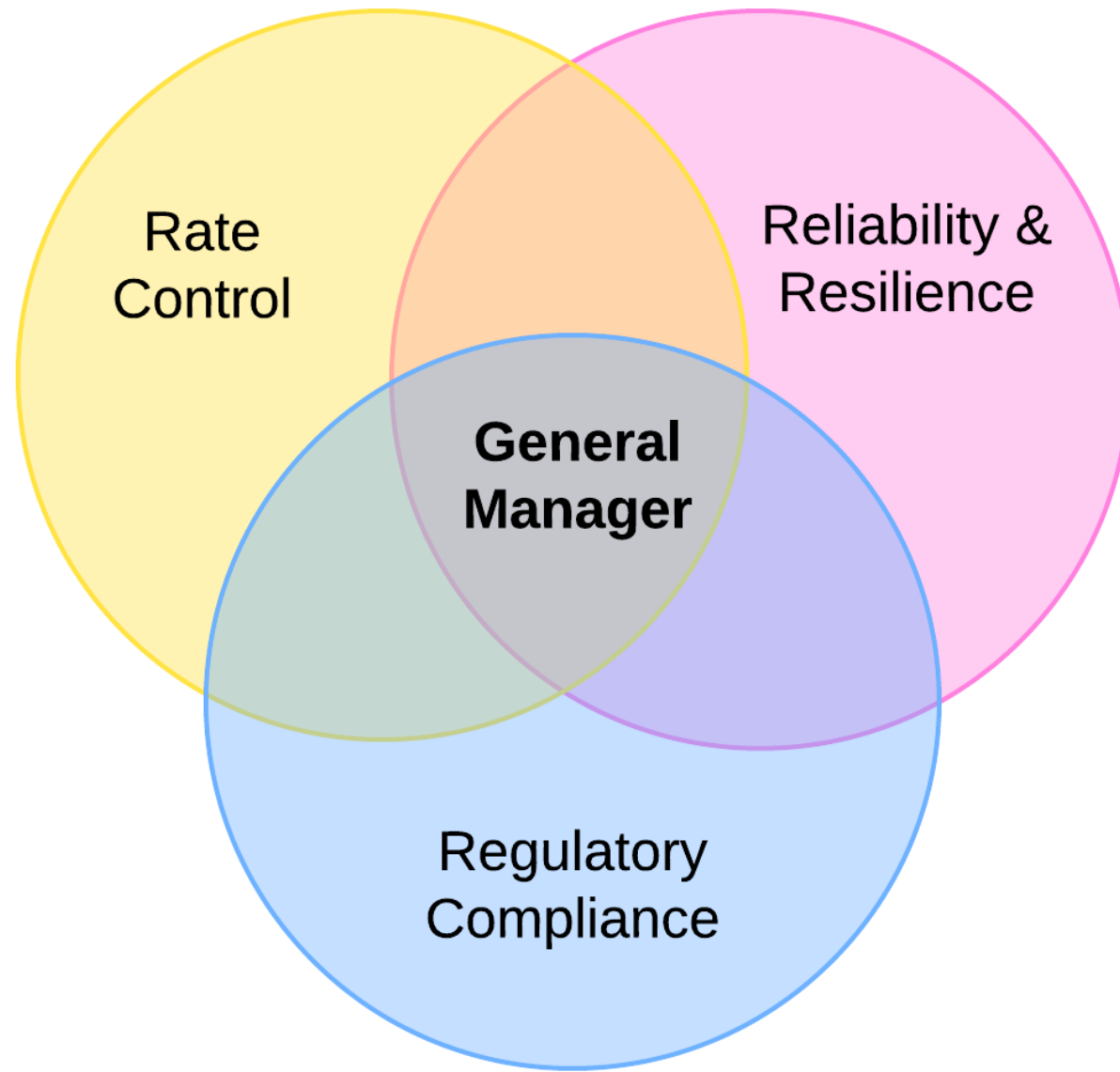
# Who We Help

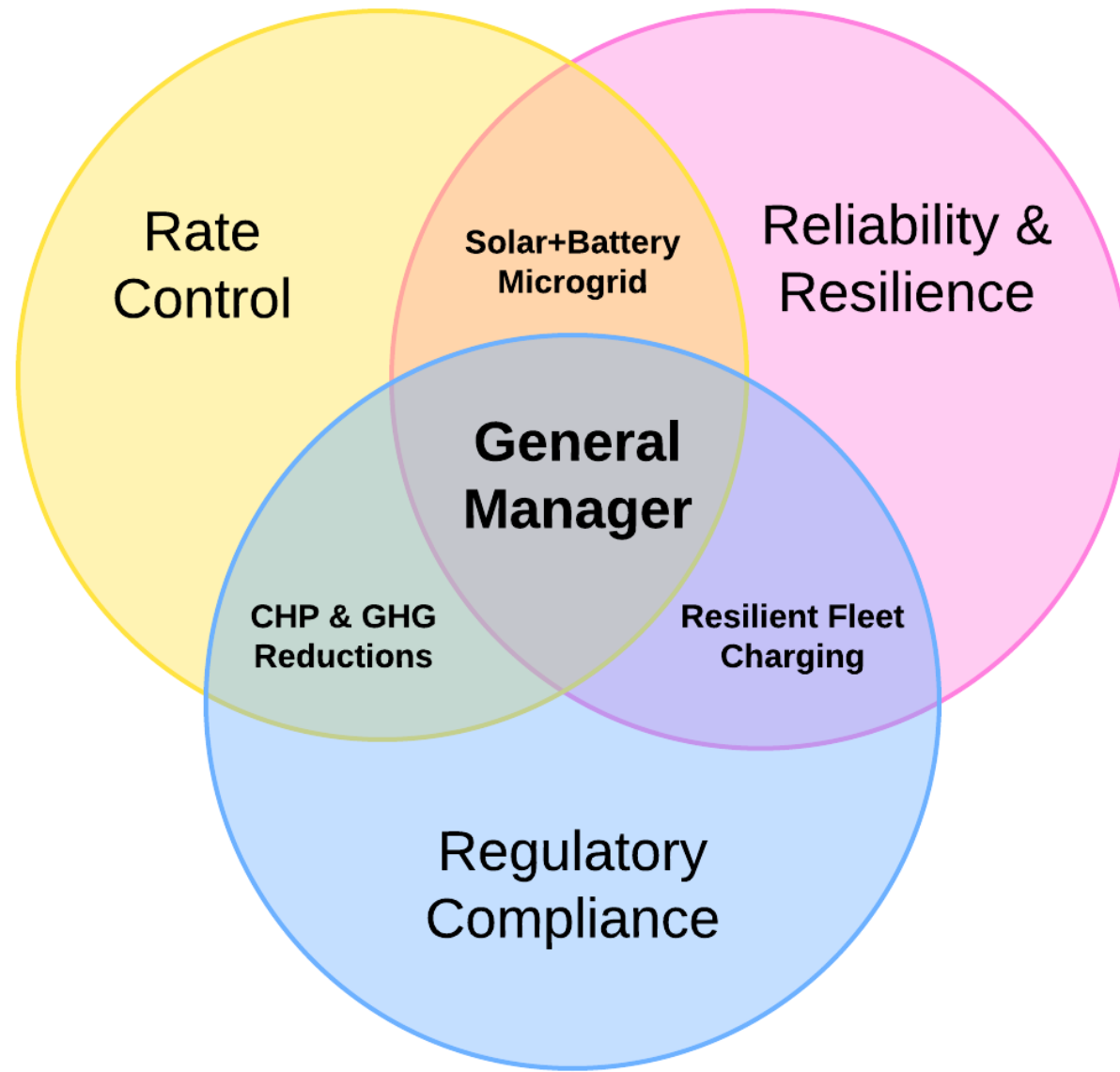
We work with staff members at public agencies

Seeking to reduce costs, increase reliability, and meet regulatory compliance

With a desire to understand the financial & technical impact of energy to their operation











# TerraVerde

ENERGY

We solve energy infrastructure puzzles.

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