FINDINGS FEBRUARY 2022

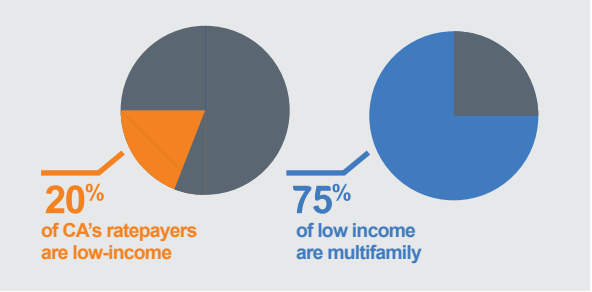
ENABLING CLEAN ENERGY IN DISADVANTAGED COMMUNITIES WITH INTEGRATED PV + STORAGE

OPPORTUNITY

Can an alternate business model manage grid users effectively and support overall grid health?

CAN THE DEVELOPED MODEL

1. Provide utility bill reduction
2. Reduce greenhouse gas emmissions
3. Support overall grid health



TECHNOLOGY

What is the technology?

- 2 60 kW EnergPort battery cells
- 2 60 kW bifacial solar PV arrays
- DC-coupled PV and storage system
- 3 port AC/DC Inverter
- Local controller coordinating PV, battery, and inverter
- Cloud-based multi-level controls integration
- Community sharing VNEM model
- Common area lighting and air conditioning DC loads, coupled with the battery system

APPROACH

What was the evaluation approach?

ANALYZED METRICS

- Battery and PV Functionality
- Time of Use Utility Rates
- PQ Implications
- Energy Utilization pre- vs post-treatment
- Load Shed DR Performance
- Multiple Battery Control Scenarios

EPRI collected data at 1-second, 1-minute, or 15-minute intervals.

FINDINGS

What were the major findings?

$253 MILLION IN BILL REDUCTION POTENTIAL
IF EXTENDED TO CALIFORNIA'S LOW-INCOME HOUSEHOLDS

THE ALTERNATE BUSINESS MODEL WORKS

- Lowered Costs
- Economic Development
- Greater Reliability
- Environmental Safety

CONCLUSIONS

What were the major conclusions from the study?

Lowered costs for the property residents + More load flexibility and benefits for the utility + Technology implementation pathways

The demonstration also offered lessons learns for more effective project, program, and policy targeting the low-income multifamily sector