RESIDENTIAL ENERGY STORAGE STUDY (RESS)

OPPORTUNITY

What are the capabilities of monitoring, automation, and control of four BTM residential Battery Energy Storage Systems (BESS)?



TECHNOLOGY

What is the technology?

- Lithium-ion battery pack
- Rooftop solar PV array
- Power Optimizers
- Inverters

- SolarEdge 5kW auto transformer
- Cloud-based Monitoring Program

SolarEdge was integrated with third-party software interfaces through a dedicated grid services API controller, which enabled automated control and data logging

APPROACH

What was the evaluation approach?

Energy Exported & Energy Produced

Energy Imported & Energy Consumed

FINDINGS

What were the major findings?



SOME KEY FINDINGS

 Autonomously responded to utility tariff pricing changes

 SCE's Time of Use (TOU) Prime tariff rate maximized cost savings

CONCLUSIONS

What were the major conclusions?

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Lessons learned from operationg equipment

BESS demonstrated its capabilities Economic improvements for future systems were identified

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Successful proof of concept for this emerging technology