PG&E ADR Incentive Program Case Studies 2015



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Commercial Offices

PROJECT SUMMARY

1,055 kW total load shed potential approved \$369,250 incentives

Peak Day Pricing, Aggregator Managed Portfolio Installation in progress

DR Measure: Energy management system upgrade

PROJECT DISTINCTIONS

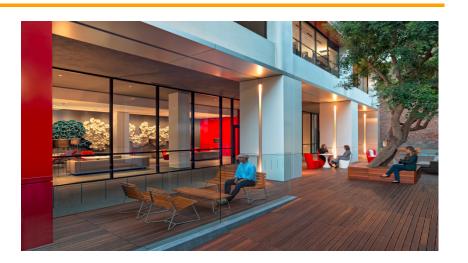
Advanced HVAC technology 27% reduction of facility load enabled Continuous trade ally relationship (Enerliance) Streamlining of review process over time Increase approved kW from initial proposal

KEY CHALLENGES

Significant 24/7 demand (baseload) > 50% deducted from available baseline

More complex commissioning and testing of the advanced and sophisticated controls





FACILITY PROFILE

| Building ¹ | Sq Ft | Incentive ² | Load Shed ³ |
|-----------------------|-----------|------------------------|------------------------|
| 1 | 446,000 | 31% | 27% |
| 2 | 775,000 | 27% | 27% |
| 3 | 332,093 | 34% | 27% |
| 4 | 430,000 | 18% | 27% |
| 5 | 90,348 | 36% | 30% |
| 6 | 70,090 | 26% | 27% |
| Totals | 2,144,021 | 27% | 27% |

¹San Francisco, CA

²Incentive as a percent of total project cost

³Load shed as a percent of total facility demand (non-baseload)



PROJECT SUMMARY

210 kW total load shed potential approved \$25,647 incentives

Peak Day Pricing, Capacity Bidding Program
Project complete

DR measure: shutoff glycol refrigeration loop

PROJECT DISTINCTIONS

Project Costs 100% Covered by ADR Incentives

Motivated customer

Experience participating in DR manually

Worked directly with device manufacturer (Gridlink)

ADR Team provided technical guidance

KEY CHALLENGES

In-house staff installing ADR controls for first time

Installation schedule extended



FACILITY PROFILE

| | Building Description ¹ | Sq Ft | Incentive ² | Load Shed ³ |
|---|-----------------------------------|---------|------------------------|------------------------|
| 1 | Main Showroom | 39,200 | 100% | 58% |
| 2 | Warehouse 1 | 173,214 | 100% | 83% |
| 3 | Warehouse 2 | 104,481 | 100% | 84% |
| 4 | Warehouse 3 | 62,089 | 100% | 60% |

¹San Jose, CA



²Incentive as a percent of total project cost

³Load shed as a percent of total facility demand



PROJECT SUMMARY

4,287 kW total load shed potential approved Capacity Bidding Program
Project complete

DR measure: energy management system upgrade

PROJECT DISTINCTIONS

Lighting is large portion of load shed strategy
Developed with PG&E account representative
Project Costs 100% Covered by ADR Incentives
Direct access customer
Self aggregated architecture

KEY CHALLENGES

Many sites – 71 similar but unique Site conditions varied from audit



FACILITY PROFILE

71 locations throughout PG&E territory 3,814 kW Lighting load shed approved 473 kW HVAC load shed approved EMS programming completed by Novar





Large Office

PROJECT SUMMARY

221 kW total load shed potential approved \$77,350 incentives

Peak Day Pricing

Project Complete

DR measure: wireless pnuematic thermostats

PROJECT DISTINCTIONS

ADR incentives reduced automation upgrade cost Advanced HVAC technology (Cypress) DR performance 120% of approved kW in 2014

KEY CHALLENGES

Coordinate between thermostat and EMS vendor, customer management team

Efficient facility reduced DR potential and ADR incentives to support upgrade project





FACILITY PROFILE

Office tower in San Francisco financial district 570,900 square feet new wireless thermostats installed on 17 floors Incentives represent 22% of project costs Load shed represents 14% of baseline demand

Getting Started

Total funding available: \$4,667,105

- Building size and location
- Load Shed Strategy
- Data Authorization Form (provided by Energy Solutions)
- Enrollment form (provided by Energy Solutions)

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