



JDS Uniphase Santa Rosa Campus

Santa Rosa, CA



Building Information

- Floor area: 347,626 ft²
- Function: lab, office space and clean room

System Information

- 120 DX units
- 230 FPHs, 51 RAHMs & 20 EXFs
- 13 cooling tower fans, 9 tower pumps & 9 loop pumps
- 1-638 MBH boiler with 2 circulation pumps

Project Date

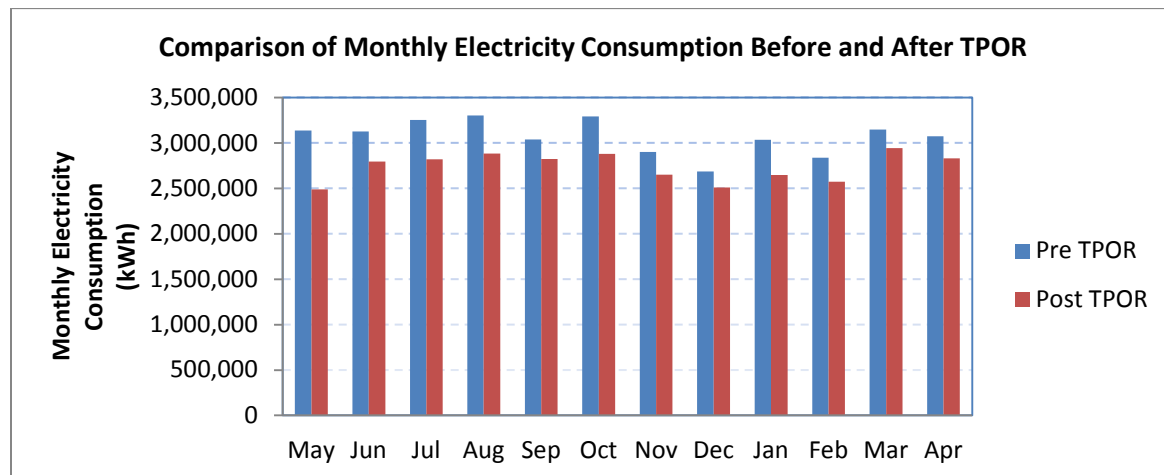
- Project Completed: May 2010

Total Performance Oriented Retrofits (TPOR)

- Installed VFDs for RTU supply fans, process cooling water pumps and RAHM fans
- Installed temperature sensor and pressure differential transmitter for process cooling units
- Installed temperature sensors for single duct DX units
- Upgraded the control system for cooling tower from local control to BAS control
- Implemented Bes-Tech complete system oriented SZ DX unit technology for RTUs
- Implemented Bes-Tech complete system oriented VAV algorithms for Single Duct DX units
- Implemented optimal fan speed control for RAHMs/FPHs to maintain required particle count and space pressure control
- Implemented optimal speed control for process cooling water pumps/tower pumps/fans

Benefits

- Reduced comfort complaints
- Improved system reliability
- Energy savings:
 - Electricity: 3,500,000 kWh/year
 - Heating: 2,118 MMBtu/year
- Cost savings: \$293,273/year
- PG&E incentive : \$ 348,896
- Simple payback: 1.95 years





JDS Uniphase Building 80

San Jose, CA



Building Information

- Floor area: 44,200 ft²
- Function: office building and clean room production area

System Information

- 1 single duct VAV AHU
- 3 make up air units
- 5 Recirculation AHUs
- 1 DX unit
- 15 VAV boxes
- 4 - 174 ton air-cooled chillers
- 4 - 2.04 MMBH gas boilers

Project Date

- Project Completed: April 2011

Total Performance Oriented Retrofits (TPOR)

- Implemented Bes-Tech dynamic minimum airflow reset technology
- Implemented Bes-Tech complete system oriented SDVAV technology
- Implemented optimal fan speed control on the clean room AHUs
- Optimized supply air temperature and supply air dew point temperature for MAUs
- Optimized chilled water supply temperature reset
- Implemented optimal stage control and hot water temperature reset for boilers

Benefits

- Reduced comfort complaints
- Improved system reliability
- Energy savings:
 - Electricity: 1,146,300 kWh/year
 - Heating: 2,761 MMBtu/year
- Cost savings: \$162,351/year
- PG&E incentive : \$129,930
- Simple payback: 1.8 years