



CEP Case Study - Food Processing Plant

Case Specifics

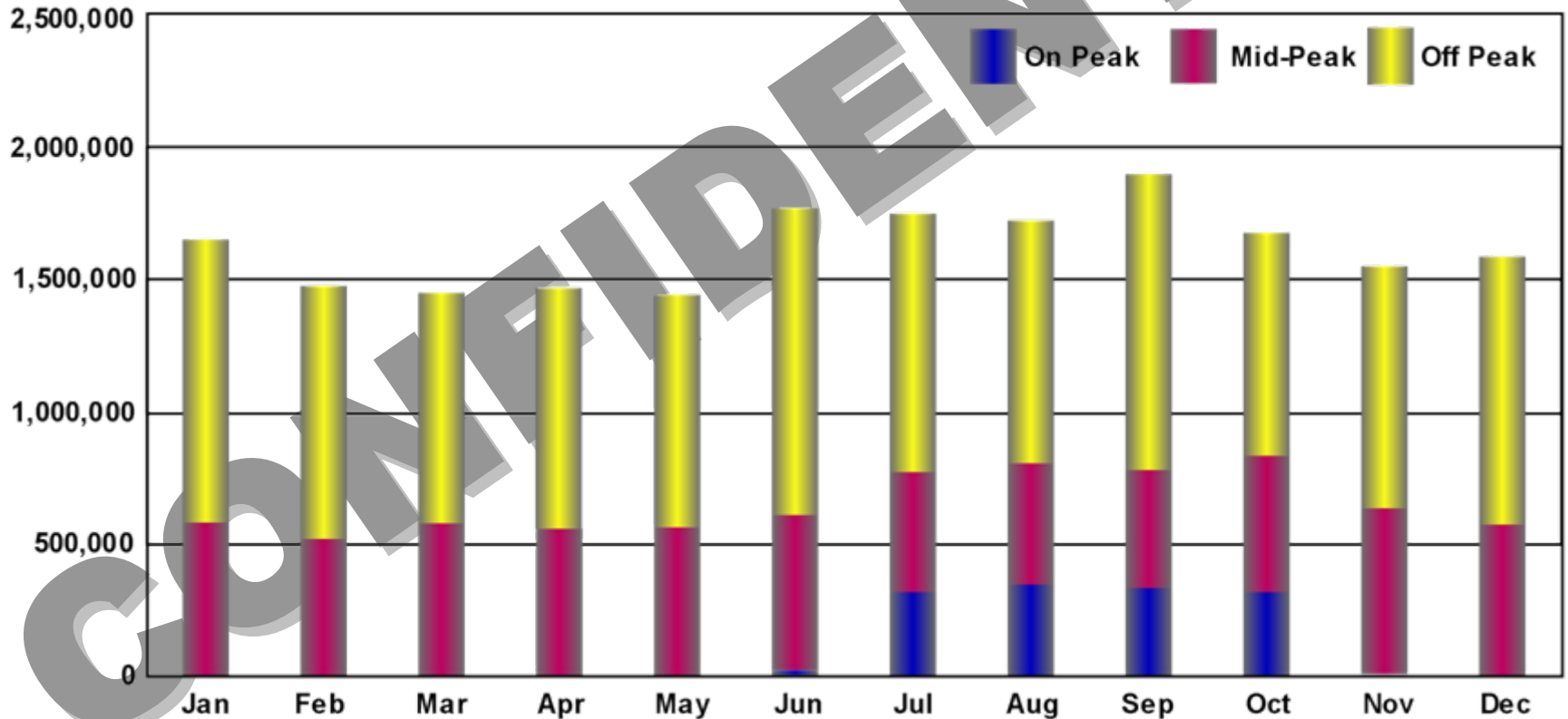
- ☀ Electric Peak Demand: 3 MW
- ☀ Utility: SCE
- ☀ Load Factor: 90%
- ☀ Thermal Application: *Refrigeration Sub-cooling*
- ☀ Expected kWh Offset: *2.5 million*
- ☀ Expected kWh Sold: *17 million*
- ☀ Minimum Take Structured: 90%
- ☀ Fixed Price Duration: 5 years
- ☀ Contract Maturity: 7 or 10 years
- ☀ System Configuration: *2x 1350 kW w/ 300 Ton Absorption Chiller*
- ☀ Projected Economics:
 - ~ *PV > \$1.3 Million over 7 years*
 - ~ *Reduction in spend: 17%*



Food Processing Plant Case Study

kWh Usage

Food Processing Plant kWh Monthly Usage

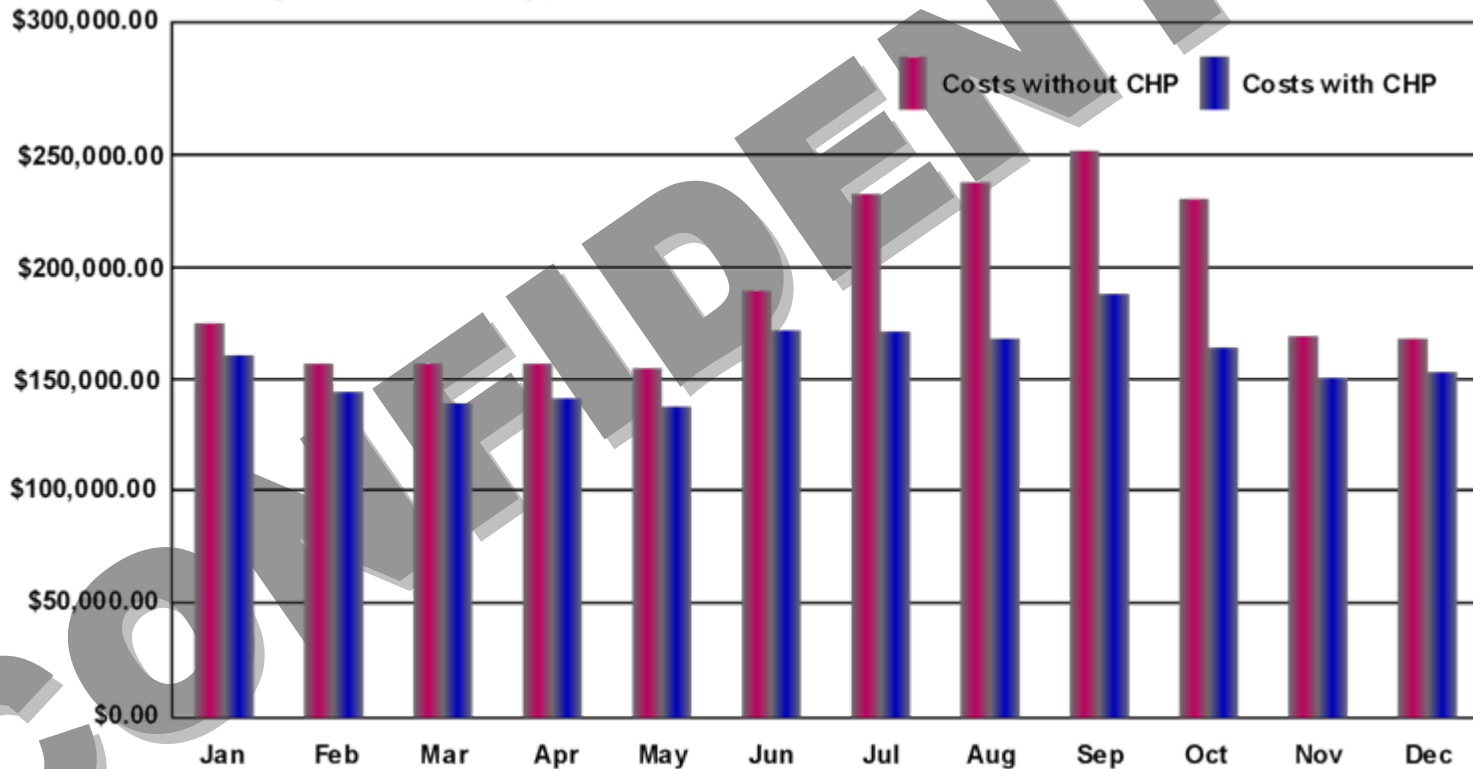




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Energy Costs

Food Processing Plant Energy Costs vs. Estimated Costs with CHP Solution



Note: Based on Utility data from 2001-2002.



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Understanding Pricing & Economics

Fixer Electric Price with Chiller Offset

| | |
|--|---------------|
| CEP Contract Rate for Electricity @..... | \$0.1050 /kWh |
| CEP Effective Rate..... | \$0.0914 /kWh |

| | | |
|-------------------------------------|------------|-------------------|
| Utility Spend Now..... | | \$2,274,369 |
| kWh Purchased from Utility..... | 19,569,612 | |
| Expected kWh Purchased CEP(1)..... | 17,022,393 | |
| Cost..... | | 1,787,351 |
| Residual kWh Purchased Utility..... | 36,754 | |
| Cost..... | | 111,721 |
| Electric Savings..... | | \$ 375,297 |

| | | |
|---|--|-------------------|
| Total Annual Savings..... | | \$ 375,297 |
| | | 16.50% |
| Percentage of Electric Load Satisfied @ Min. Take..... | | 91.11% |



Food Processing Plant Case Study

Understanding Pricing & Economics

Electric Usage Summary

| | Edison | CEP |
|--|---------------------|---------------------|
| kWh Purchased..... | \$19,569,612..... | \$17,022,393 |
| Residual kWh Purchased from Utility..... | N/A..... | \$.....36,754 |
| | <u>\$19,569,612</u> | <u>\$17,059,147</u> |
| Chiller Offset kWh | | \$ 2,510,465 |
| Value Chiller Offset | | \$ 291,716 |

Notes:

1. Minimum take set at 90% of CEP expected annual kWh sales.
2. Typical contract is 7-years.
3. Price or minimum take can be reduced for a longer contract.
4. Max chiller output sub-coding kWh 3,112,500.



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Understanding Residual Utility Costs

Usage Based on Last 12-Months of Energy Consumption Data

| Category | kW | Rate | Cost |
|--------------------------------|------------|-----------|----------|
| Demand Charges (kW) | | | |
| Max. Facilities Related Demand | 350 | \$ 6.60 | \$60,390 |
| Max. Annual On Peak Demand | 305 | \$ 17.95 | \$ 90 |
| Max. Annual Mid Peak Demand | 350 | \$ 2.70 | \$ 108 |
| Max. Annual Off-Peak Demand | 340 | \$0.00000 | \$ 0 |
| Energy Charges (kWh) | | | |
| On Peak | 0 | \$ 0.1974 | \$ 0 |
| Mid Peak 10,928 | \$0.1093 | \$ 1,303 | |
| Off Peak 25,826 | \$0.0846 | \$ 2,168 | |
| Stand-by Charges (kW) | 0 | \$ 2.55 | \$ 0 |
| E-Depart (kWh) | 17,022,393 | \$ 0.0028 | \$47,663 |
| CTC Charges | 0 | \$ 0.00 | \$ 0 |

Total Expected SCE Residual Spend

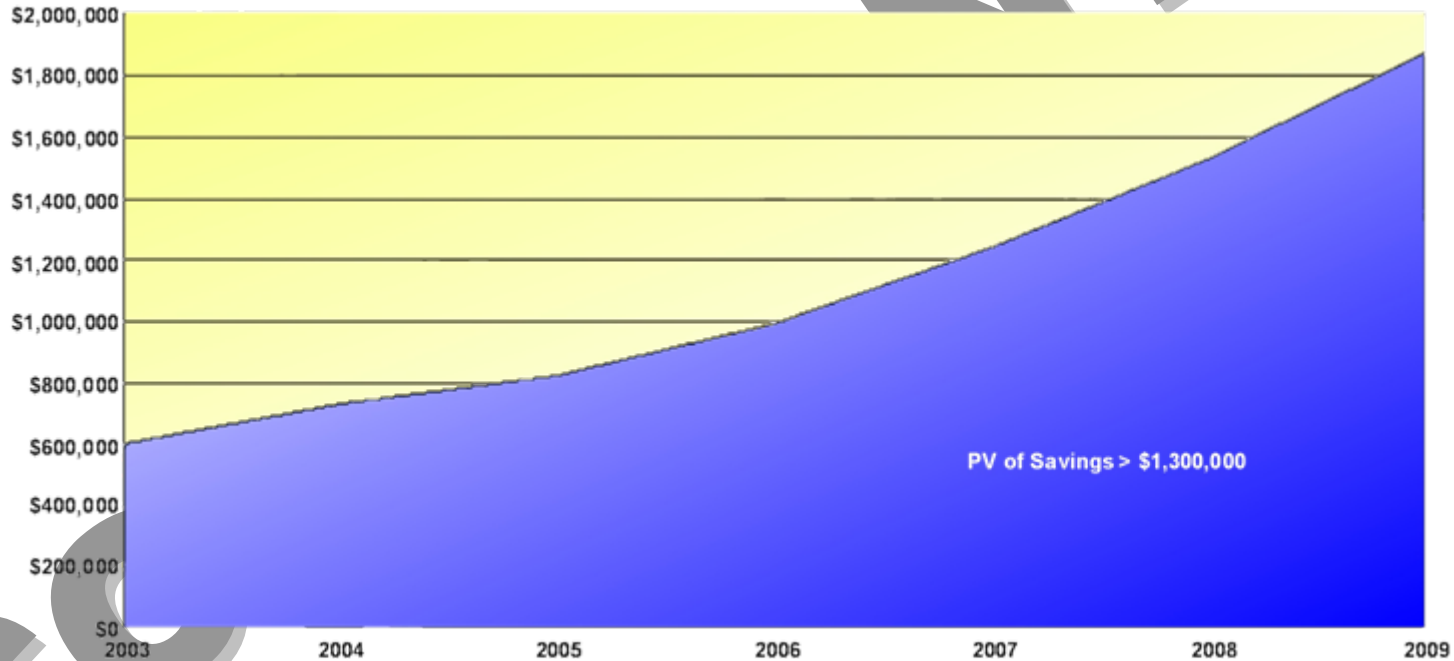
\$111,722



Food Processing Plant Case Study

Economics

Accumulative Energy Savings
Based Upon CEC Forecast *Updated—February, 2003*



Notes:

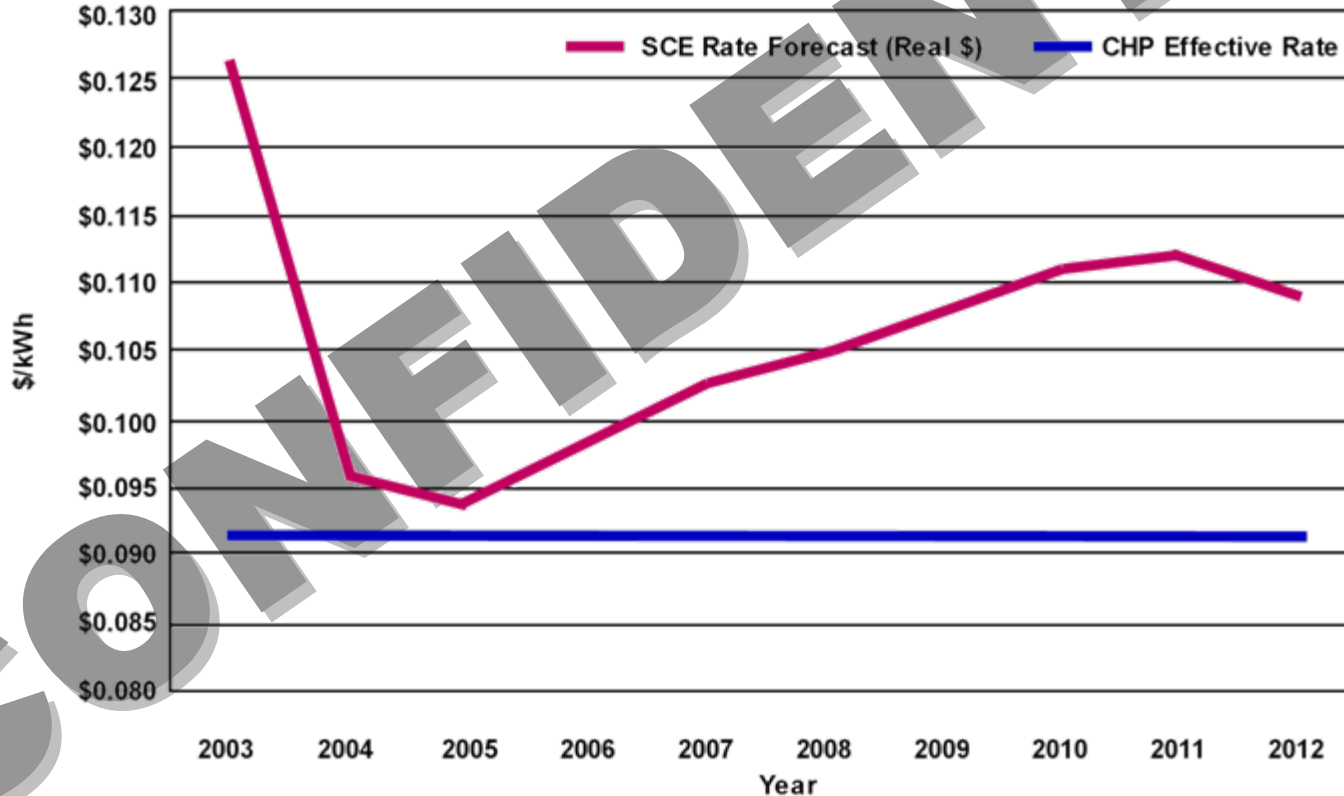
1. Savings calculated based on price estimated CEP cost vs. Utility cost under CEC rate projection.
2. Clarus price is based on 7-year contract with 5-year fixed energy price. Assumes gas price stability at the end of year 5.
3. Utility rate source: 2003-2013 Electricity Price Outlook—California Energy Commission—February, 2003.
4. PV calculated @ 10%.



Food Processing Plant Case Study

CEC Rate Forecast

Projected Electric Rates – SCE
Based on CEC Forecast - Updated February 2003





Food Processing Plant Case Study

CEP Process

