

RECIPRO

- Developed by Thermoflow, Inc.
- Primary use: Screening of small commercial/industrial cogeneration applications
- Add-in module to Excel 2000 spreadsheet software
- Provides baseline comparison (grid electricity and separate boiler)
- Equipment data library: Reciprocating engine gen sets
- CHP applications: Hot water, chilled water
- Analysis duration/time step: unlimited; monthly (with single daily load curve per month)
- Economic analyses: cash flow, NPV
- Cost: \$1,500. (<http://www.thermoflow.com/>)

RECIPRO Input/Output Is On Excel Spreadsheet

Microsoft Excel - TFRECIPRO1

File Edit View Insert Format Tools Data Window Help Thermoflow-PD Thermoflow-RECIPRO Thermoflow-ELINK

BB = 275000

RECIPRO
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The Monthly Electricity Table

| Month | On Peak KWH | Off Peak KWH | On Peak USD/KWH | Off Peak USD/KWH | Demand KVA | Demand Cost USD | Total Cost USD |
|-------|----------------|-----------------|--------------------|---------------------|---------------|--------------------|-------------------|
| Jan | 275000 | 484000 | 0.0699 | 0.0699 | 1350 | 10000 | 63044 |
| Feb | 340320 | 560000 | 0.0683 | 0.0683 | 1400 | 10000 | 71492 |
| Mar | 323210 | 528000 | 0.0676 | 0.0676 | 1400 | 10000 | 67542 |
| Apr | 352356 | 606000 | 0.0687 | 0.0687 | 1400 | 10000 | 75839 |
| May | 371000 | 720000 | 0.0739 | 0.0739 | 1450 | 10000 | 90625 |
| Jun | 452000 | 779519 | 0.0761 | 0.0761 | 1800 | 10000 | 103719 |
| Jul | 452100 | 810000 | 0.0783 | 0.0783 | 1850 | 10000 | 108822 |
| Aug | 450000 | 850000 | 0.0787 | 0.0787 | 1840 | 10000 | 112310 |
| Sep | 450000 | 823500 | 0.0722 | 0.0722 | 1822 | 10000 | 101947 |
| Oct | 440000 | 710000 | 0.0638 | 0.0638 | 1502 | 10000 | 83370 |
| Nov | 332111 | 596000 | 0.0634 | 0.0634 | 1499 | 10000 | 68842 |
| Dec | 312110 | 550000 | 0.0651 | 0.0651 | 1399 | 10000 | 66123 |

RECIPRO 2.0

- Electricity Table
- Heat Table
- Summer Months
- A/C Peak Hours
- General Table
- Financial Table
- Load Model Option
- Compute
- Output Options
- Engine Database
- Units Conversion

RECIPRO's Navigator Bar

RECIPRO Input Data Sheet3

Ready NUM

RECIPRO Output

- Fuel flows
- Electricity production/consumption
- Heat production/consumption
- Monthly operating, capital, and tax-related cash flows for reference year