

# Power Factor Correction: A Case Study



## SMC Corporation of America

10100 SMC Boulevard • Noblesville, Indiana 46060

### The Facility

- High-Tech Manufacturing
- Fortune 1000 Company
- Highly-Skilled Electricians on Staff

### Service

- Power Factor Correction

### Results

- Project Cost: \$10,500
- Cost Savings  
Annually: \$16,000  
Monthly: 23%
- Payback Period: 8 Months
- Monthly Demand Reduction:  
7,973 kWh

*Not Magic.  
It's Power Factor Correction.*

### Power Factor Correction

SMC Corporation worked with IPA Energy Group in the fall of 2018 to perform a comprehensive power factor assessment. It was recommended that SMC implement power factor correction on their large 100-ton air conditioner units due to the savings projections. This implementation included a Fluke data logger on one of the units prior to and after correcting the power factor in order to see the actual results.

This joint effort revealed significant savings on the monitored air conditioner unit. The data logger results showed an advanced savings of \$400 per month on the single unit; IPA had calculated \$219 per month. In partnership with IPA Energy Group, SMC is planning to perform power factor correction on the remaining 128 air conditioner units in 2020 with an annual savings of \$144,000.

### Benefits

The immediate benefit to SMC is a cost savings of \$16,000 annually on the (4) 100-ton air conditioner units. With a verified solution to roll out in 2020, substantial decrease in electrical demand costs are anticipated. An additional benefit is a proven solution to add high electrical efficiency to SMC's new corporate headquarters building in 2020.

### Long-Term Savings

SMC also has an improved level of efficiency which will reduce the heat and stress of existing electrical equipment. This will extend usable life and reduce replacement and maintenance costs.

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