Making Utility Data Accessible: Proactively Manage Energy

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- Company Overview
- Drivers for Energy Management
- Challenges
- Solutions
- Data Tells the Story
- Next Steps
- Lessons Learned
Company Overview

A Leading Value-Added Processor and Distributor of Metal

Our manufacturing divisions align value, service and experience

New Bar Sawing Capabilities

More Than Metal

A History of Quality
Indirect Purchasing - Samuel

- Energy: 9%
- MRO: 3%
- IT & Telecom: 11%
- Office Solutions: 77%
Energy Management Challenges

CCF vs. M3
## Energy Management Solutions

### Your electricity charges

Your service type is Sub-Transmission

**Electricity - kWh**
- Electricity you used in kilowatt-hours = 2,690,592 kWh
- Transformer loss adjustment of 1.0% = 26,906 kWh
- Adjusted usage in kilowatt-hours (2,717,498 x 1.034*) = 2,809,893 kWh

**Demand - kW**
- Demand used in kilowatts = 4,528 kW
- Transformer loss adjustment of 1.0% = 45 kW
- Total demand in kilowatts = 4,574 kW

**Demand - kVA**
- Demand used in kVA = 5,296 kVA
- 5,296 x 90% = 4,767 kVA
- Transformer loss adjustment of 1.0% = 48 kVA
- Total demand in kVA = 4,814 kVA

Your demand charges are based on 4,814 kVA this month as it is the higher of the two measures.

Your power factor is 4528 kW ÷ 5296 kVA, which equals 85%.

**Electricity:** 2,809,893 kWh @ 2.9745 c
- $83,581.20
- $5,242.58

**Global Adjustment:** 2,809,893 kWh @ 0.1866 c
- $29,007.42
- $15,735.65

**Delivery**
- Regulatory Charges
- Debt Retirement Charge
- HST (87086-5821-RT0001)

**Total of your electricity charges**
- $172,425.95

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**Note: Bill example is from Hydro One Franchise**
Data Tells the Story

3 Year electrical consumption history

Water Usage

3-Year Natural Gas Consumption History
Next Steps

Monthly Billing Report

Report Generated: 10/02/2015

Billing Calculation

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Billed kW Demand</td>
<td>649</td>
</tr>
<tr>
<td>Customer Charges</td>
<td>$89.54</td>
</tr>
<tr>
<td>Market Services</td>
<td>$1,491.47</td>
</tr>
<tr>
<td>Usage Factor</td>
<td>1.0256</td>
</tr>
<tr>
<td>Distribution Charges</td>
<td>$2,716.09</td>
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<tr>
<td>Debt Retirement Charge</td>
<td>$2,868.22</td>
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<tr>
<td>Total kWh</td>
<td>279,662</td>
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<tr>
<td>Transmission Charges</td>
<td>$1,697.68</td>
</tr>
<tr>
<td>Global Adjustment Charge</td>
<td>$23,720.16</td>
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<tr>
<td>Adjusted kWhr</td>
<td>286,822</td>
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<tr>
<td>Transformer Allowance</td>
<td>$0.00</td>
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<tr>
<td>Energy Contract Amount</td>
<td>$0.00</td>
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<tr>
<td>On Peak kWhr</td>
<td>193,283</td>
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<tr>
<td>Power Factor</td>
<td>76.53</td>
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<tr>
<td>Energy - HOEP</td>
<td>$9,223.83</td>
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<tr>
<td>Off Peak kWhr</td>
<td>86,379</td>
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<tr>
<td>Total Charges + HST</td>
<td>$47,219.30</td>
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</tbody>
</table>

ENERGY USE SUMMARY

- Total kWh: 279,662
- Usage Factor: 1.0256
- Adjusted kWh: 286,822

ENERGY MANAGEMENT INFORMATION

- Max Demand: 849 kW @ 9/2/15 09:45 AM
- Average kWh Daily: 9.561
- Average Cost/Day: $307.46
- Period's Load Factor: 60%
- Monthly Power Factor: 76.53%
LESSONS LEARNED

- Equipment Efficiency
- Business Integration
- Energy Use in Facilities
- Energy Supply Management
- Energy Data Management
THANK YOU