

# Making Utility Data Accessible: Proactively Manage Energy

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# Samuel, Son & Co., Limited

- 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



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Our manufacturing divisions align value, service and experience

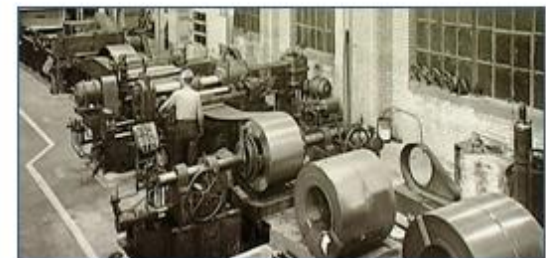
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New Bar Sawing Capabilities

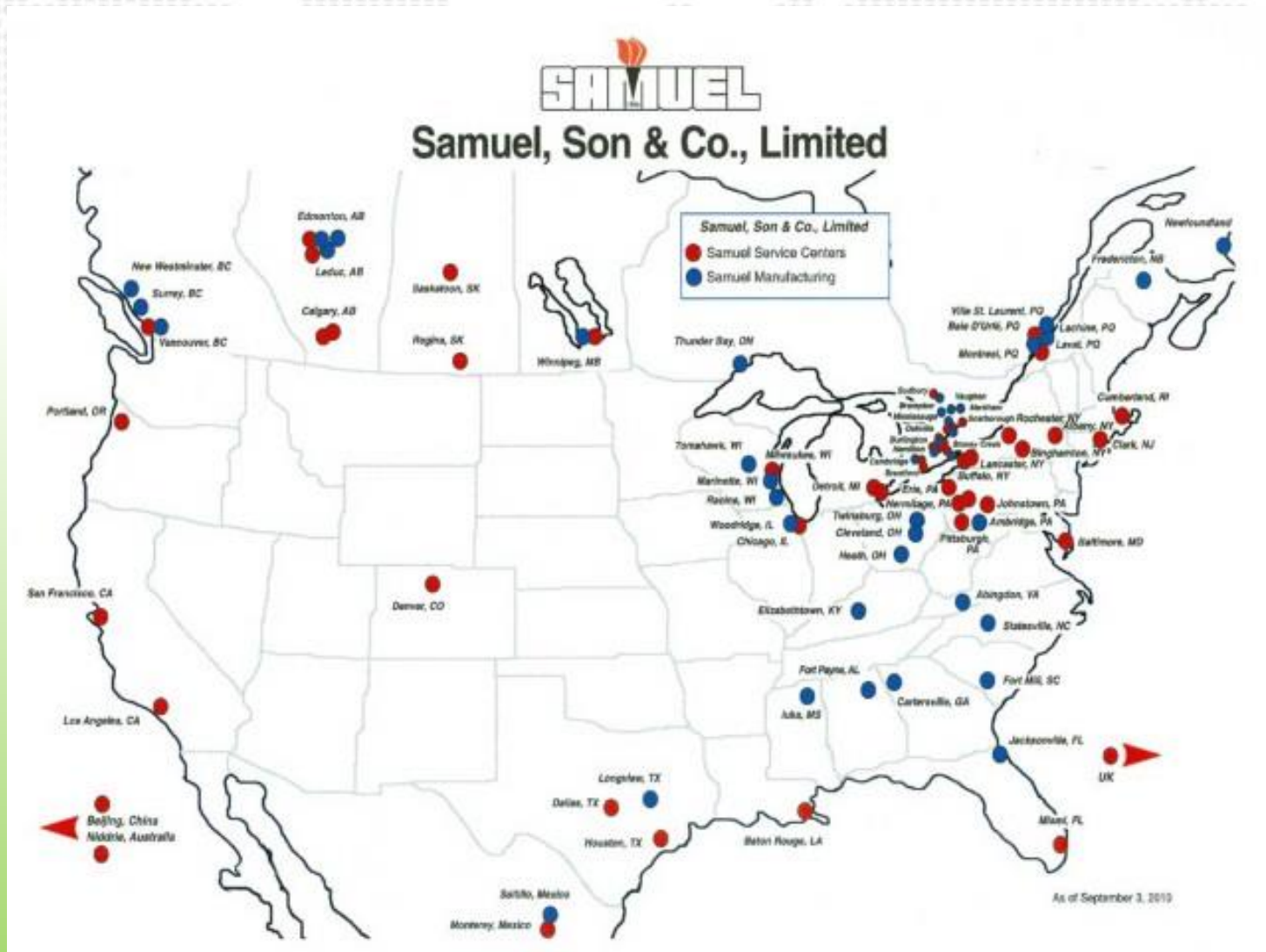


More Than Metal



A History of Quality

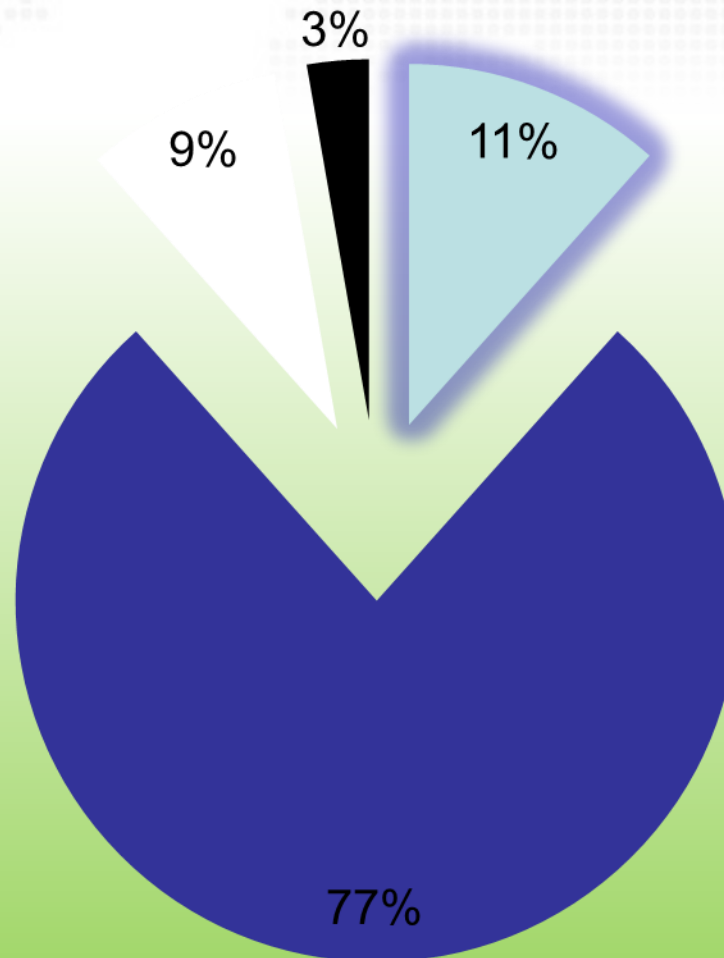
# Company Overview



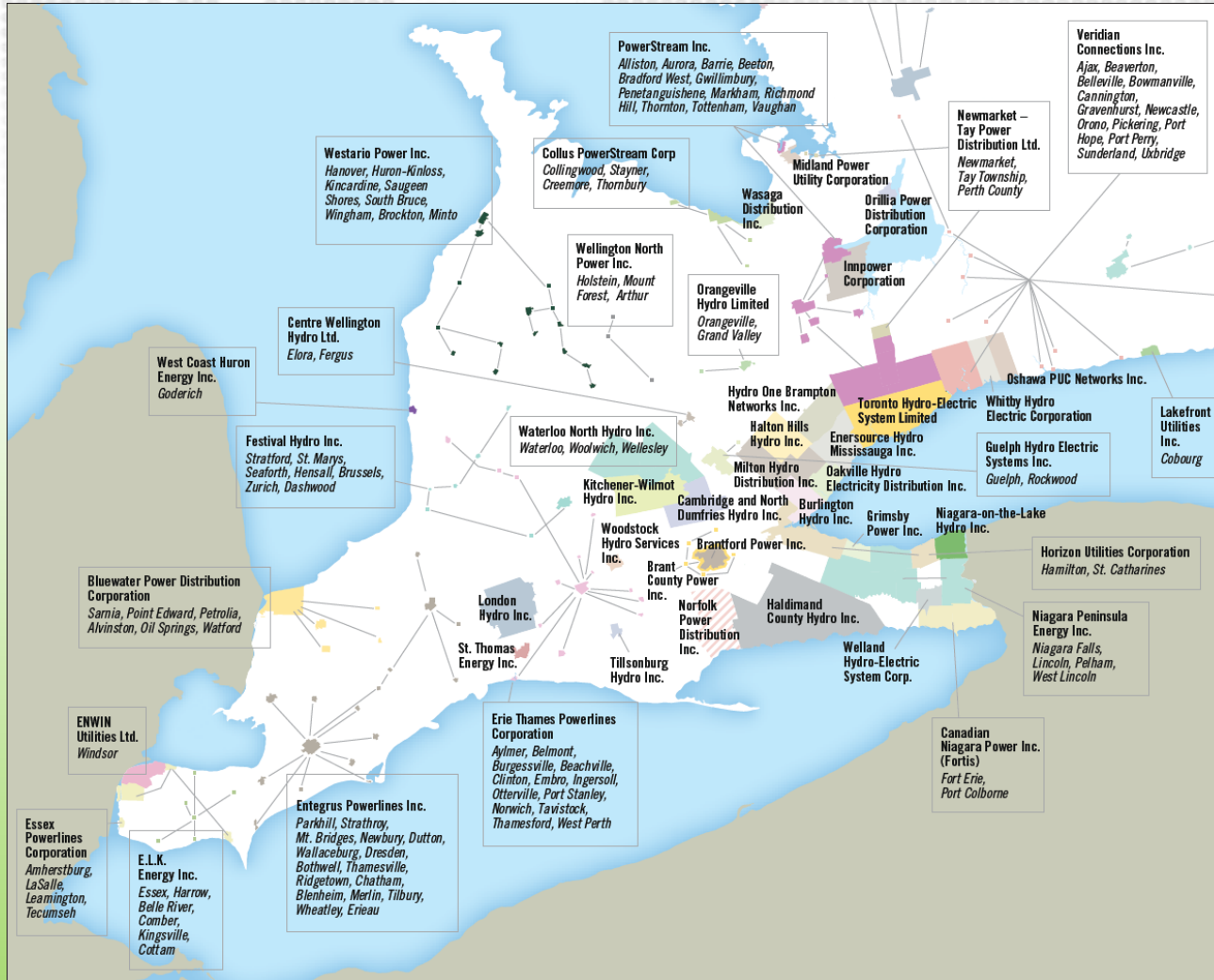
# Indirect Purchasing - Samuel



■ Energy ■ MRO ■ IT & Telecom ■ Office Solutions




# Energy Management Challenges



# Energy Management Challenges





**Nova Scotia Power Inc.**  
PO Box 848, Halifax Nova Scotia B3J 2V7  
Any questions? Please call us at 902-428-6230  
Weekdays 8am-8pm  
www.nspower.ca

1  
Web Access #  
0472581-8

10644

Create your MyAccount profile at [www.nspower.ca/MyAccount](http://www.nspower.ca/MyAccount)

Account Number      Amount due by Sep 14      \$986.24

**SAMUEL SON AND CO LTD**      Commercial      Service from Jul 22 to Aug 21, 2015

Meter number	Rate code	No. of days	New meter reading	Last meter reading	Multiplier	kWh used	Current demand
1201725	11M	30	959.00	918.00	120	4920	26.2

**Your meter was read on Aug 21, 2015**  
Billing date Aug 25    Includes payments received by Aug 25

Amount owing from last bill	993.49
Payment received Aug 14 - Thank you	-993.49
<b>Balance owing after last payment</b>	<b>\$ .00</b>

**Energy charges:**

Demand 26.2 kVA x \$10.49700	275.02
Energy 4920 kWh x \$0.11841	582.58
<b>Total energy charges</b>	<b>857.60</b>

**Other charges**

Tax: HST (11931 4938 RT)	128.64
<b>Total other charges</b>	<b>128.64</b>

<b>Total amount due</b>	<b>\$986.24</b>
<b>Amount due by Sep 14, 2015</b>	<b>\$986.24</b>

Interest on overdue amounts is calculated at 1.5 % per month or part thereof (19.56% per annum).

**Past electric use:**

Bill date	Days	Daily avg	Dmd	Load Ftr
-----				
<b>Current period</b>				
Aug 15	30	164	26.2	26.1
-----				
<b>Same period one year ago</b>				
Aug 14	30	140	25.1	23.2

43412

**Heritage Gas**  
PARK PLACE 1  
200-238 BROWNLOW AVENUE  
DARTMOUTH, NS B3B 1Y2  
(902) 466-2003

Please... detach this portion of the bill and return it with your payment. Make cheques payable to *Heritage Gas Limited*.  
(See reverse side of bill for other payment options.)

Area/Cycle    2000/14      Account No.      Amount Now Due      **\$26.13**

Statement Date    Aug. 25, 2015    2 8 AOUT 2015      Amount Paid

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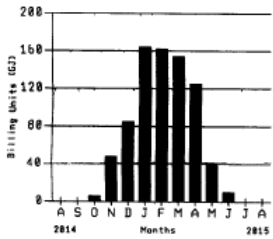
Account No.      Amount Now Due      **\$26.13**  
Premise No.      Amount Paid  
Customer Name      Service Address

Statement Date    Aug. 25, 2015

**Heritage Gas**  
PARK PLACE 1  
200-238 BROWNLOW AVENUE  
DARTMOUTH, NS B3B 1Y2  
(902) 466-2003

Meter No.	Usage		Days	Meter Reading			Volume (m3) x	Conversion Factors		Billing Units (GJ)
	From	To		From	To	Type		Pressure	Energy =	
10000740	Jul. 21, 2015	Aug. 19, 2015	29	89819	89819	Actual	0	1.3316	.03989	.00

**Your Consumption History**



**Your Account Information**  
Type: XSGS Small General Service

PREVIOUS AMOUNT DUE	\$16.13
Payment - Thank You	Aug. 12, 2015    16.13CR
<b>BALANCE FORWARD</b>	<b>.00</b>
<b>CURRENT CHARGES - from Jul. 21, 2015 to Aug. 19, 2015</b>	
Fixed Monthly Customer Charge	21.87
Base Energy Charge	.98
Municipal Payments	.98
Sub-Total	22.85
Harmonized Sales Tax @ 15%	3.28
<b>TOTAL CURRENT CHARGES</b>	<b>26.13</b>
<b>AMOUNT NOW DUE</b>	<b>26.13</b>

Effective August 1, 2015, the Gas Cost Recovery Rate will be maintained at \$7.50 per gigajoule (GJ).

Current Charges are due by Sep. 15, 2015. Any unpaid Balance Forward is past due and should be paid immediately. Thank you.

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 ¢

Global Adjustment: 2,809,893 kWh @ 0.1866 ¢

\$83,581.20

\$5,242.58

Delivery

Regulatory Charges

\$29,007.42

\$15,735.65

Debt Retirement Charge

HST (87086-5821-RT0001)

\$19,022.49

\$19,836.61

**Total of your electricity charges**

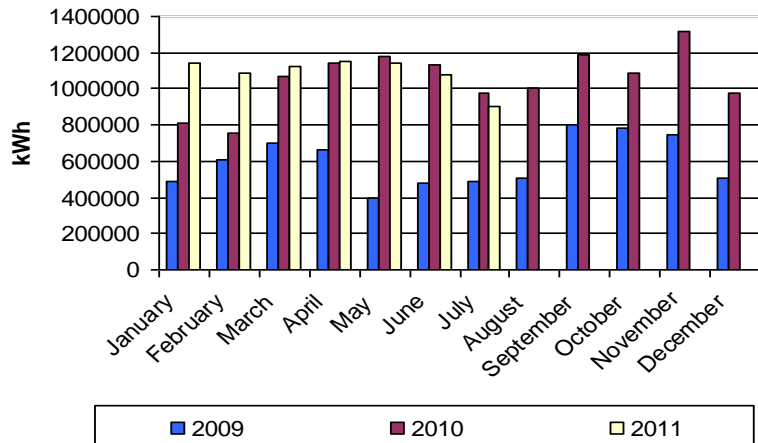
**\$172,425.95**

\*\*Note: Bill example is from Hydro One Franchise

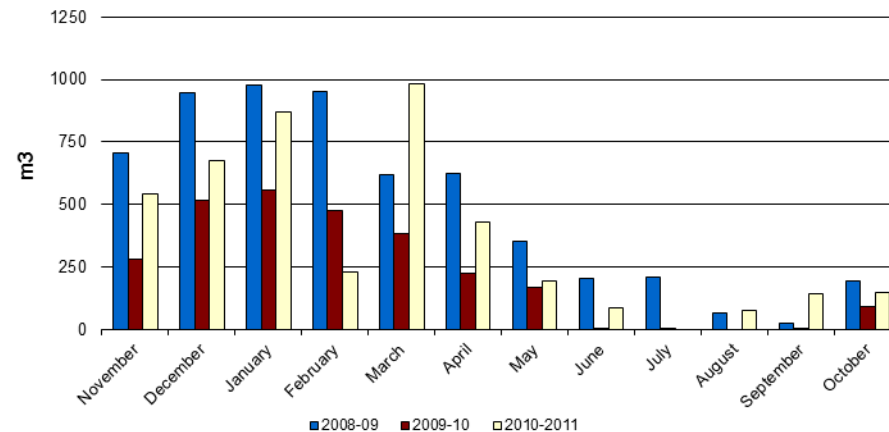


# Data Tells the Story

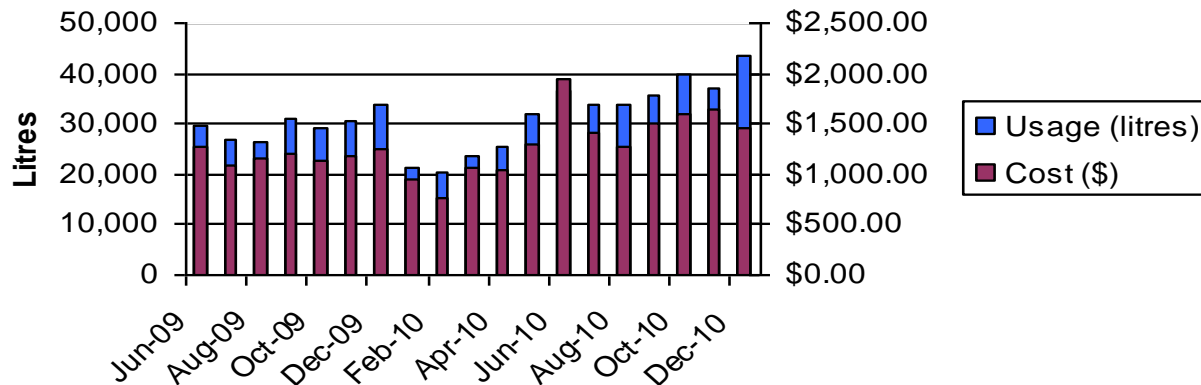
### 3 Year electrical consumption history



### 3-Year Natural Gas Consumption History



### Water Usage



# Next Steps



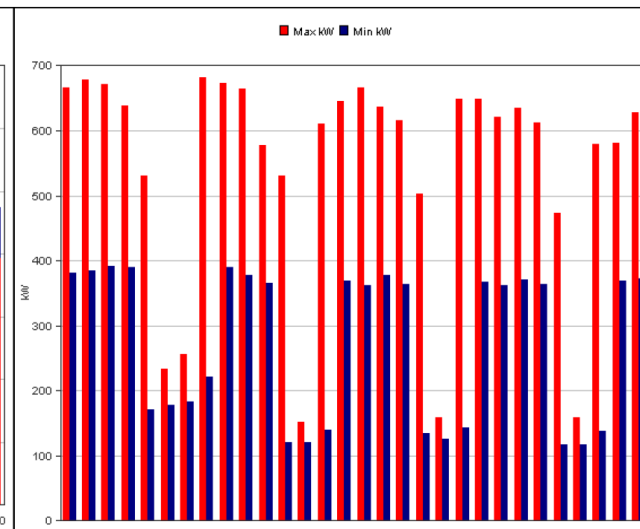
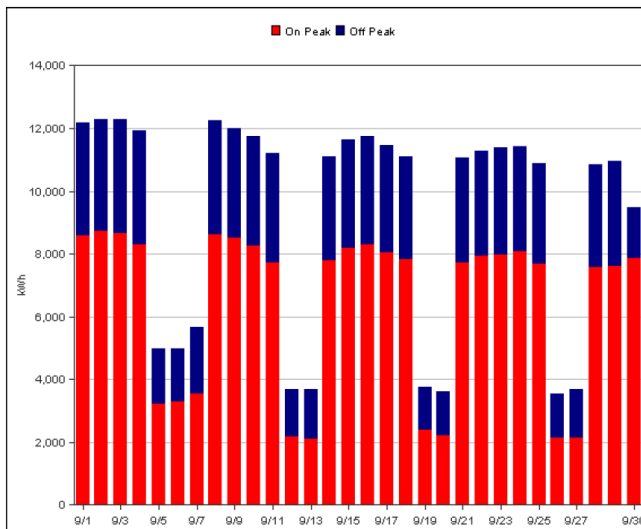
## Monthly Billing Report

Report Generated: 10/02/2015

Reporting Period: September, 2015

### Billing Calculation

Billed kW Demand	649	Customer Charges	\$69.54	Market Services	\$1,491.47
Usage Factor	1.0256	Distribution Charges	\$2,716.09	Debt Retirement Charge	\$2,868.22
Total kWh	279,662	Transmission Charges	\$1,697.68	Global Adjustment Charge	\$23,720.16
Adjusted kWh	286,822	Transformer Allowance	\$0.00	Energy Contract Amount	\$0.00
On Peak kWh	193,283	Power Factor	76.53	Energy - HOEP	\$9,223.83
Off Peak kWh	86,379			<b>Total Charges + HST</b>	<b>\$47,219.30</b>



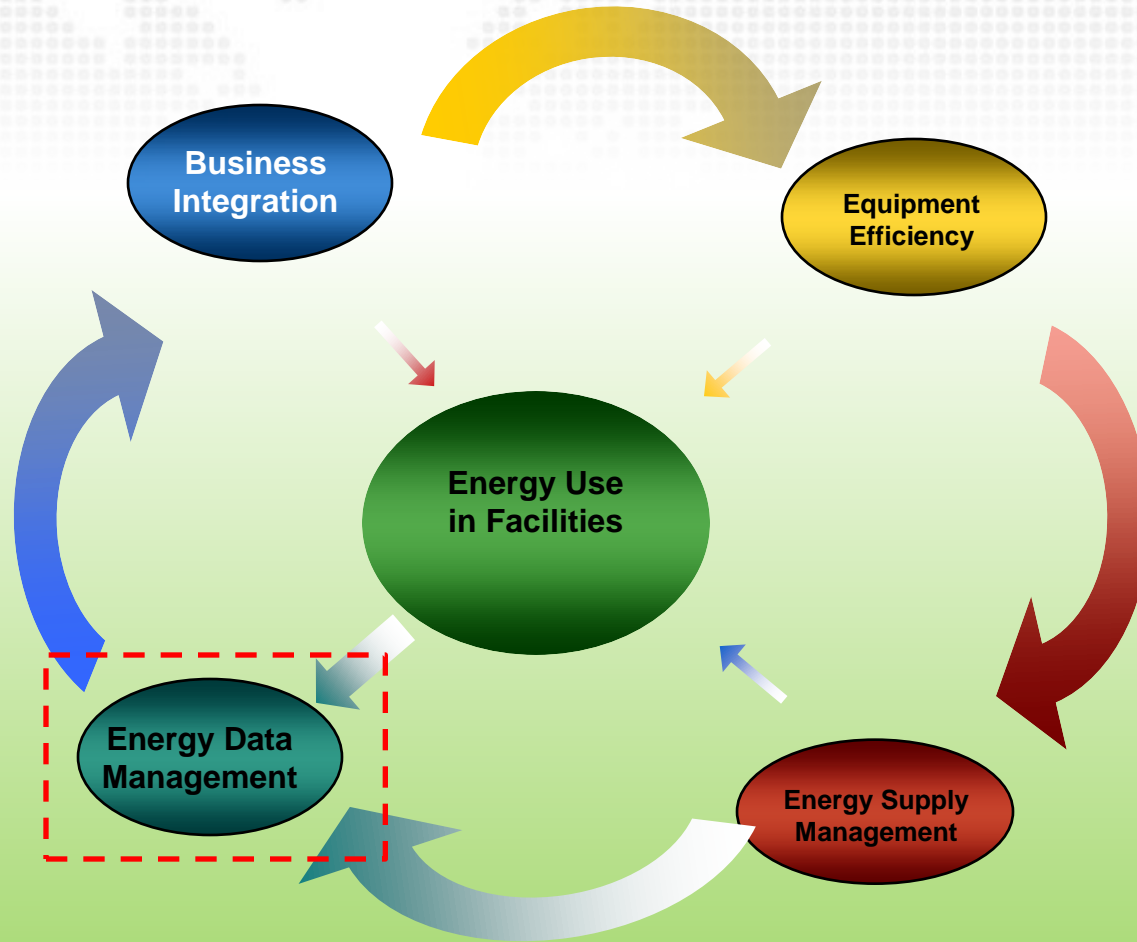
### ENERGY USE SUMMARY

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

### ENERGY MANAGEMENT INFORMATION

Max Demand	649 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



**THANK YOU**