

Arctic Fox Energy Tracking

Energy Tracking in Alberta

Obtaining & Using Your Data

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Why track energy?

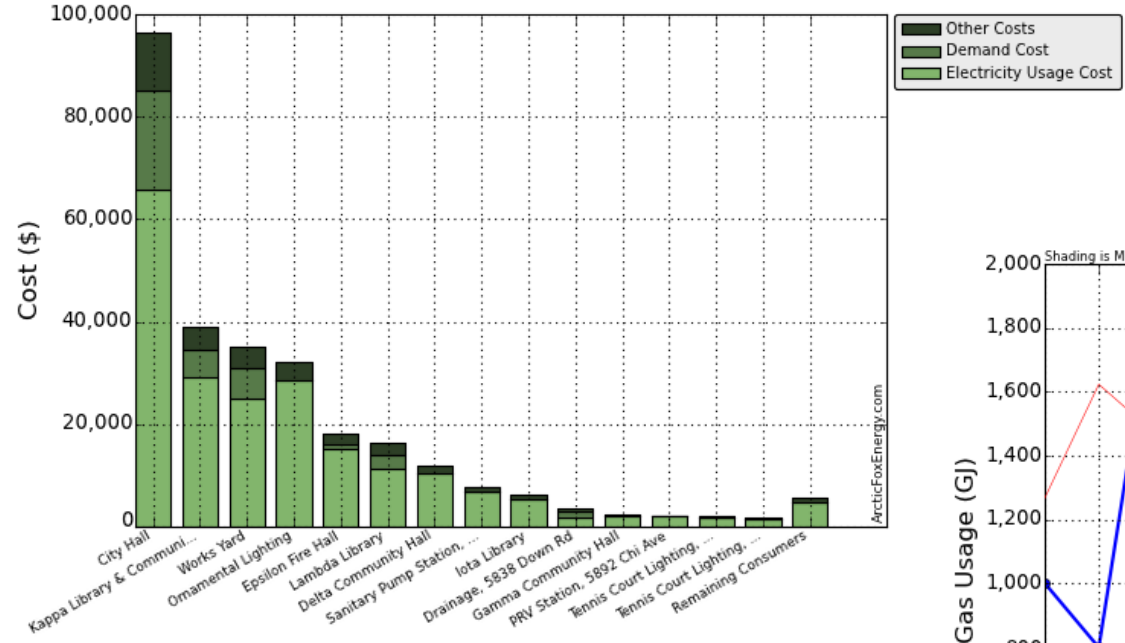
- To know energy use & cost breakdown of every facility
- To catch costly equipment malfunctions early
- To easily report usage, cost, and emissions

Giving Data Meaning

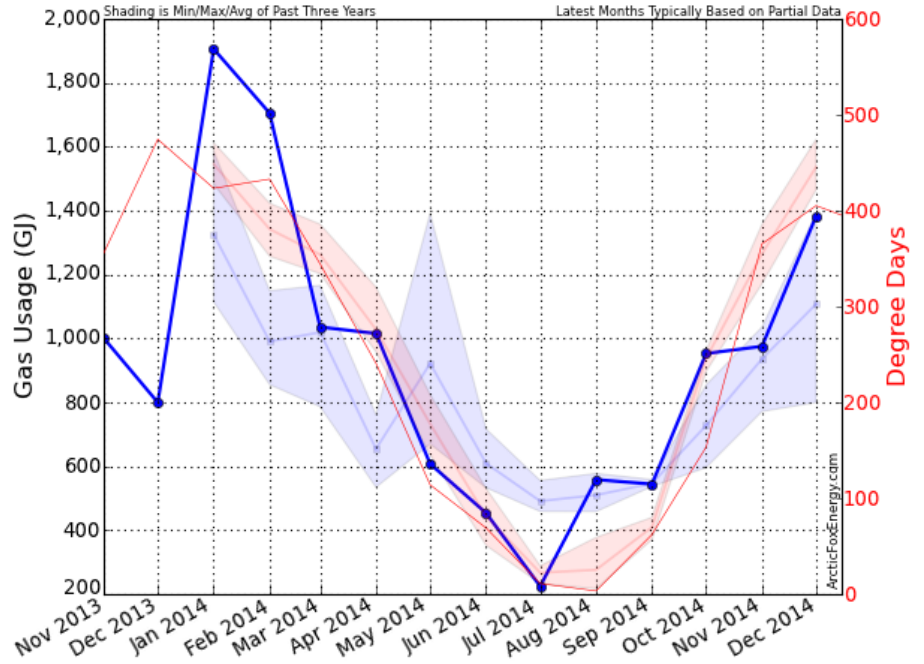
Arctic Fox Energy Tracking



Sample Report
2013 Top Electricity Consumers Cost (\$)



Sample Report
Grand Total Gas Usage (Gj)




Background

Arctic Fox Energy Tracking



- Working with BC cities since 2008
- Recently setup the Town of Valleyview
 - Obtained historical data 2004 to present
 - AMSC
 - TransAlta
 - Local Gas Utility
- Determined best way to obtain & update data
- Extract meaning from the data



Arctic Fox Energy Tracking

Step 1: Obtain raw utility data



Reports

Report Purpose: Cumulative Metered (DCM) Power

Contract and Accounts Management

Meter Reads

Cumulative Metered (DCM) Power

Cumulative Metered (DCM) Gas

Interval Metered (DIM) Reads Gas

Interval Metered (DIM) Reads Power

Settlement

Daily Usage Strip Information Gas

Delivery Charge Gas

Delivery Charges - Power

Energy Charges and Consumption Gas

Energy Charges and Consumption Power

Energy Settlement Consumption Gas

Energy Settlement Consumption Power

Hourly Usage Strip Information Power

Load Factor

Power Factor

For sites with basic cumulative consumption meters, the metering data record may be viewed to observe current and previous r

Customer

Billing Account

Site [Search by Site](#)

Date From To

Include Cancel/Rebills

[Show/Hide Filters](#)

[Continue](#)



AMSC

Reports < Report Purpose: Cumulative Metered (DCM) Power ^

For sites with basic cumulative consumption meters, the metering data record may be viewed to observe current and previous r

Customer:

Billing Account:

Site: Search by Site

Date From: To:

Include Cancel/Rebills

[Continue](#)

[Show/Hide Filters](#)

Cumulative Metered (DCM) Power - Excl Cancels

- Select Columns
- Filter
- Rows Per Page >
- Format >
- Flashback
- Save Report
- Reset
- Help
- Download CSV**
- Download XLS

The screenshot displays the MSC Energy Tracking software interface. At the top left is the MSC logo. A navigation menu on the left includes 'Reports', 'Contract and Accounts Management', and 'Meter Reads'. Under 'Meter Reads', several options are listed, including 'Cumulative Metered (DCM) Power'. The main content area shows report details for 'Customer Town of Valleyview' and 'Billing Account Town of Valleyview Site'. It specifies a 'Date From 10-Nov-2015 To 10-Nov-2015', 'Include Cancel/Rebills No', and a 'Report Run Date 10-NOV-2015'. A search bar and 'Go' button are present. Below this, a section titled 'Cumulative Metered (DCM) Power - Excl Cancels' contains a search input and 'Go' and 'Actions' buttons. A 'Choose report download format:' section offers three options: CSV (with a green checkmark and a red arrow pointing to it), HTML, and Email. A large red arrow points to the CSV option. At the bottom, a 'Back' button is visible.

The screenshot displays the MSC Energy Tracking web application interface. The top left features the MSC logo. The main navigation bar shows 'Reports' and 'Report Purpose: Interval Metered (DIM) Reads Power'. A left-hand sidebar lists various report categories: Contract and Accounts, Management, Meter Reads, and Settlement. The 'Meter Reads' section is expanded, and 'Interval Metered (DIM) Reads Power' is highlighted with a red box. A red arrow points from this menu item to the 'Show/Hide Filters' text on the main content area. The main content area contains a form for configuring the report, including fields for Customer (Town of Valleyview), Billing Account (Town of Valleyview), Site, Date From (01-Jan-2015), and Date To. The Interval is set to Daily. A 'Continue' button is visible at the bottom right of the form area.

MSC

Reports < **Report Purpose: Interval Metered (DIM) Reads Power** ^

For sites with interval meters, raw metering data may be viewed for any significant period down to the base 15 minutes

Customer Town of Valleyview

Billing Account Town of Valleyview

Site Search by Site

Date From 01-Jan-2015 **To**

Interval 15 min Hourly Daily

Show/Hide Filters

Continue

- Contract and Accounts
- Management
- Meter Reads
 - Cumulative Metered (DCM) Power
 - Cumulative Metered (DCM) Gas
 - Interval Metered (DIM) Reads Gas
 - Interval Metered (DIM) Reads Power**
- Settlement
 - Daily Usage Strip Information Gas
 - Delivery Charge Gas
 - Delivery Charges - Power
 - Energy Charges and Consumption Gas
 - Energy Charges and Consumption Power
 - Energy Settlement Consumption Gas
 - Energy Settlement Consumption Power
 - Hourly Usage Strip Information Power
 - Load Factor
 - Power Factor



Delivery Cost

MSC

Reports < **Report Purpose: Delivery Charges - Power** ^

This report provides a summary of delivery charges by their invoicing Delivery (Transmission and Distribution), Local entered, regardless of usage period, or by Charge Date, reporting charges with usage periods within the From-To date.

Customer Town of Valleyview

Billing Account Town of Valleyview

Site Search by Site

Date From 01-Jan-2015 **To**

Report By Bill Date Charge Date

Totals Show Hide

Show/Hide Filters Continue

- Contract and Accounts
- Management
- Meter Reads
 - Cumulative Metered (DCM) Power
 - Cumulative Metered (DCM) Gas
 - Interval Metered (DIM) Reads Gas
 - Interval Metered (DIM) Reads Power
- Settlement
 - Daily Usage Strip Information Gas
 - Delivery Charge Gas
 - Delivery Charges - Power**
 - Energy Charges and Consumption Gas
 - Energy Charges and Consumption Power
 - Energy Settlement Consumption Gas
 - Energy Settlement Consumption Power
 - Hourly Usage Strip Information Power
 - Load Factor
 - Power Factor



Energy Cost

MSC

Reports < **Report Purpose: Energy Charges and Consumption Power** >

Provides a summary of energy charges and their associated consumption amounts categorized by charge type, or a the From-To date range entered, regardless of usage period, or by Charge Date, reporting charges with usage period

Customer Town of Valleyview

Billing Account Town of Valleyview

Site Search by Site

Date From 01-Jan-2015 **To**

Report By Bill Date Charge date

Totals Show Hide

Show/Hide Filters

Continue

- Contract and Accounts
- Management
- Meter Reads
 - Cumulative Metered (DCM) Power
 - Cumulative Metered (DCM) Gas
 - Interval Metered (DIM) Reads Gas
 - Interval Metered (DIM) Reads Power
- Settlement
 - Daily Usage Strip Information Gas
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 - Energy Charges and Consumption Gas
 - Energy Charges and Consumption Power**
 - Energy Settlement Consumption Gas
 - Energy Settlement Consumption Power
 - Hourly Usage Strip Information Power
 - Load Factor
 - Power Factor



Demand

The screenshot displays the AMSC Energy Tracking software interface. On the left is a navigation menu with categories: Contract and Accounts, Management, Meter Reads, and Settlement. Under 'Meter Reads', 'Load Factor' is highlighted with a red box. The main panel is titled 'Report Purpose: Load Factor' and contains a description: 'The Load Factor report lists sites with poor load factors. Si'. Below this are two dropdown menus: 'Customer' set to 'Town of Valleyview' and 'Month/Year' set to 'NOVEMBER 2015'. A blue 'Continue' button is positioned to the right of the 'Month/Year' dropdown. Below the dropdowns is a red 'Show/Hide Filters' link. Two red arrows point upwards from the bottom of the page towards the 'Continue' button and the 'Show/Hide Filters' link.



Demand

AMSC

Reports < **Report Purpose: Load Factor** ^

The Load Factor report lists sites with poor load factors. Sites with poor load factors may be targeted

Customer Town of Valleyview
Month/Year NOVEMBER 2015
Report Run Date 10-NOV-2015 Continue

Show/Hide Filters

Search: [] Go Actions

Site ID	Site Description	Site Address
0010452957015	RIVER INTAKE	12 70 22 W5 SE LEGAL PL , V

1 - 1 of 1

- Select Columns
- Filter
- Rows Per Page >
- Format >
- Save Report
- Reset
- Help
- Download CSV
- Download XLS

AMSC

Reports < Report Purpose: Load Factor ^

The Load Factor report lists sites with poor load factors. Sites with poor load factors may be target

Customer: Town of Valleyview

Month/Year: NOVEMBER 2015

Report Run Date: 10-NOV-2015

Continue

Show/Hide Filters

Go Actions

Do Not Display

From date

To date

Display in Report

Site ID

Site Description

Site Address

Metered Usage(kWh)

Metered Demand (kW)


Hours

Load Factor

Move All

Information Power	
Load Factor	

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Reports < Report Purpose: Power Factor ^

The Power Factor report lists sites that have been invoiced by a WSP for deficient power factor (currently Atco is the only charge for deficient power factor, which may be applied to the difference between the highest metered kVA and 111% of

Customer

Billing Account







Site [Search by Site](#)

Charge Date From **To**


[Continue](#)

[Show/Hide Filters](#)

- Contract and Accounts
- Management
- Meter Reads
 - Cumulative Metered (DCM) Power
 - Cumulative Metered (DCM) Gas
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 - Energy Charges and Consumption Power
 - Energy Settlement Consumption Gas
 - Energy Settlement Consumption Power
 - Hourly Usage Strip Information Power
 - Load Factor
 - Power Factor**

Name	Date modified	Type	Size
 cumulative_metered_(dcm)__power_-_excl_cancels, 2015-10.csv	11/5/2015 5:45 PM	Microsoft Excel C...	805 KB
 delivery_charges_-_power_by_bill_date, 2015-10.csv	11/5/2015 5:52 PM	Microsoft Excel C...	327 KB
 energy_charges_and_consumption_power_by_bill_date, 2015-10.csv	11/5/2015 5:51 PM	Microsoft Excel C...	566 KB
 interval_metered_(dim)_reads_power_-_daily_detail, 2015-10.csv	11/5/2015 5:47 PM	Microsoft Excel C...	1,264 KB
 load_factor, 2015-10.csv	11/5/2015 5:48 PM	Microsoft Excel C...	98 KB
 power_factor, 2015-10.csv	11/5/2015 5:49 PM	Microsoft Excel C...	8 KB

6 files in this example

A banner image featuring a white Arctic fox standing on a snow-covered mountain peak under a blue sky with light clouds. The text 'Arctic Fox Energy Tracking' is overlaid on the bottom left of the image.

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Step 2: Prepare data files

DCM

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U			
1	Customer	Site ID	Site Descr	Site Addr	Trans Date	Ca	Socket ID	Meter	From Read	To Read	kW	V	kVA	From	To	Di	Mete	Usage (kW	Pres	\ Pres	\ kWh	kW	V	kVA
2	Town of V	10001126125	Lot 1 Blk 1	Lot 1 Blk 1	3-Nov-15	-	50112591	-	30-Sep-15	30-Oct-15	8.28	0	0	0	0	0	0	98.77	0	0.0	0	0	0	
3	Town of V	10001660272	Streetligh	5110HW L	3-Nov-15	-	40166011	-	30-Sep-15	30-Oct-15	0.1	0	0	0	0	0	0	98.27	0	0.0	0	0	0	
4	Town of V	10001883638	100W HPS	4805 16 ST	3-Nov-15	-	5188361	-	30-Sep-15	30-Oct-15	0.1	0	0	0	0	0	0	98.27	0	0.0	0	0	0	
5	Town of V	10003829024	Light # 1,	42 St Valle	3-Nov-15	-	75382871	-	30-Sep-15	30-Oct-15	0.1	0	0	0	0	0	0	98.27	0	0.0	0	0	0	
6	Town of V	10006369023	150W Stre	204 Mead	3-Nov-15	-	60636876	-	30-Sep-15	30-Oct-15	8.28	0	0	0	0	0	0	98.77	0	0.0	0	0	0	
7	Town of V	10010090026	Streetligh	Light, 490	3-Nov-15	-	1009001	-	30-Sep-15	30-Oct-15	0.1	0	0	0	0	0	0	98.27	0	0.0	0	0	0	



- Sort by Trans Date
- Keep all rows from last update
- Key column: “Usage (kWh)”

DIM

Arctic Fox Energy Tracking



	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Site ID	Site Descr	Site Address	Time	kW	kWh	kVA	kVAh	kVAr	kVArh	PF (kW/kVA)	Read Type	Pool Price	Date
2	10452957015	RIVER INT.	12 70 22 W -		1.000	0.000	1.000	1.000	1.000	1.000	1.000	A	10.00	31-Oct-15
3	10452957015	RIVER INT.	12 70 22 W -		1.000	0.000	1.000	1.000	1.000	1.000	1.000	A	10.00	31-Oct-15
4	10452957015	RIVER INT.	12 70 22 W -		1.000	0.000	1.000	1.000	1.000	1.000	1.000	A	10.00	31-Oct-15
5	10452957015	RIVER INT.	12 70 22 W -		1.000	0.000	1.000	1.000	1.000	1.000	1.000	A	10.00	31-Oct-15
6	10452957015	RIVER INT.	12 70 22 W -		1.000	0.000	1.000	1.000	1.000	1.000	1.000	A	10.00	31-Oct-15
7	10452957015	RIVER INT.	12 70 22 W -		1.000	0.000	1.000	1.000	1.000	1.000	1.000	A	10.00	31-Oct-15
8	10452957015	RIVER INT.	12 70 22 W -		1.000	0.000	1.000	1.000	1.000	1.000	1.000	A	10.00	31-Oct-15



- Sort by Date
- Keep all rows from last update
- Key column: “kWh”
- Be aware: hourly data, not daily data



Arctic Fox Energy Tracking

Delivery Cost

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Site ID	Site Descr	Site Address	WSP	Meter Type	Customer	Customer	Billing Acc	From Date	To Date	Invoice Date	Transmiss	Local Acce	Subtotal	GST	Total
2	10001599761	Suite D, 50	5001 51 A	ATCO Elec	DCM	Town of V	353719	C353719-0	1-Jun-15	30-Jun-15	8-Oct-15	0.00	0	0.00	0.00%	0.00
3	10001599761	Suite D, 50	5001 51 A	ATCO Elec	DCM	Town of V	353719	C353719-0	1-Aug-15	31-Aug-15	8-Oct-15	0.00	0	0.00	0.00%	0.00
4	10001599761	Suite D, 50	5001 51 A	ATCO Elec	DCM	Town of V	353719	C353719-0	10-Aug-15	31-Aug-15	8-Oct-15	49.29	0.00	52.3	2.61%	54.91
5	10001599761	Suite D, 50	5001 51 A	ATCO Elec	DCM	Town of V	353719	C353719-0	1-Sep-15	7-Sep-15	8-Oct-15	24.76	0.00	25.47	0.78%	26.25
6	10003133823	4 Plex 500	5002 52 A	ATCO Elec	DCM	Town of V	353719	C353719-0	1-Jun-15	30-Jun-15	8-Oct-15	0	0	0	0	0
7	10003133823	4 Plex 500	5002 52 A	ATCO Elec	DCM	Town of V	353719	C353719-0	1-Aug-15	31-Aug-15	8-Oct-15	0.00	0	0.00	0.00%	0.00
8	10003133823	4 Plex 500	5002 52 A	ATCO Elec	DCM	Town of V	353719	C353719-0	10-Aug-15	31-Aug-15	8-Oct-15	76.88	4.75	78.27	2.99%	81.26

- Sort by Invoice Date
- Keep all rows from last update



Arctic Fox Energy Tracking

Energy Cost

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	
1	Site ID	Site Descr	Site Address	Meter	Custom	Customer	Billing Acc	From Date	To Date	Invoice Date	Hedge	Market	Line	Loc	Unacc	Trading	Other	Subtotal	GST	Total	Consumption	Details
2	10001599761	Suite D, 5001	51 Avenue	DCM	353719	Town	C353719-0	1-Apr-15	30-Apr-15	8-Oct-15	0	0	0	0	0	0	0	0.00	0.00	0.00	0	Details
3	10001599761	Suite D, 5001	51 Avenue	DCM	353719	Town	C353719-0	1-Jun-15	30-Jun-15	8-Oct-15	0.00	-0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	Details
4	10001599761	Suite D, 5001	51 Avenue	DCM	353719	Town	C353719-0	1-Aug-15	31-Aug-15	8-Oct-15	0.00	0.00	0.00	-0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	Details
5	10001599761	Suite D, 5001	51 Avenue	DCM	353719	Town	C353719-0	10-Aug-15	31-Aug-15	8-Oct-15	0	0	0	0	0	-0.00	0	-0.00	0.00	-0.00	0	Details
6	10001599761	Suite D, 5001	51 Avenue	DCM	353719	Town	C353719-0	1-Sep-15	30-Sep-15	8-Oct-15	0.00	-0.00	0.00	-0.00	0.00	0	0	0.00	0.00	0.00	0.00	Details
7	10001599761	Suite D, 5001	51 Avenue	DCM	353719	Town	C353719-0	1-Sep-15	7-Sep-15	8-Oct-15	0	0	0	0	0	-0.00	0	-0.00	0.00	-0.00	0	Details
8	10003133823	4 Plex 500	5002 52 Avenue	DCM	353719	Town	C353719-0	1-Apr-15	30-Apr-15	8-Oct-15	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	Details

- Sort by Invoice Date
- Keep all rows from last update
- *Ignore Consumption*

Load

Arctic Fox Energy Tracking



	A	B	C	D	E	F	G	H	I
1	Site ID	Site Descr	Site Addr	Metered	Metered	Period Ho	Load Fact	From date	To date
2	10001126125	Lot 1 Blk 1	Lot 1 Blk 1	99	8.00	700	0.100	30-Sep-15	30-Oct-15
3	10001660272	Streetligh	5110HW L	99	8.0	700	0.100	30-Sep-15	30-Oct-15
4	10001883638	100W HPS	4805 16 ST	99	8.0	700	0.100	30-Sep-15	30-Oct-15
5	10003829024	Light # 1,	542 St Valle	99	8.0	700	0.100	30-Sep-15	30-Oct-15
6	10006369023	150W Stre	204 Mead	99	8.00	700	0.100	30-Sep-15	30-Oct-15
7	10010090026	Streetligh	Light, 490:	99	8.0	700	0.100	30-Sep-15	30-Oct-15
8	10011334938	TOWN SIG	3 70 22 W5	99	8.00	700	0.100	30-Sep-15	30-Oct-15



- Sort by To Date
- Keep all rows from last update
- Key column: “Metered Demand (kW)”

Arctic Fox Energy Tracking

	A	B	C	D	E	F	G	H
1	Site ID	Site Descr	Site Addre	From Date	To Date	Deficient	Metered I	Charge (\$)
2	10458801313	NEW WAT	15 70 22 W	1-Oct-15	8-Oct-15	10.70	0.7967	21.76
3	10961336416	SEWER LA	LSD SE 21-	1-Oct-15	6-Oct-15	2.28	0.8770	3.4
4	10795043110	ICE PLANT	4429 52 A\	1-Oct-15	6-Oct-15	10.88	0.7902	20.86
5	10458801313	NEW WAT	15 70 22 W	10-Sep-15	30-Sep-15	10.70	0.7967	21.27
6	10961336416	SEWER LA	LSD SE 21-	8-Sep-15	30-Sep-15	2.28	0.8770	3.48
7	10795043110	ICE PLANT	4429 52 A\	8-Sep-15	30-Sep-15	10.88	0.7902	22.07
8	10452957015	RIVER INT.	12 70 22 W	1-Sep-15	30-Sep-15	12.70	0.8881	21.28



- Sort by To Date
- Keep all rows from last update
- Key column: “Metered Power Factor”

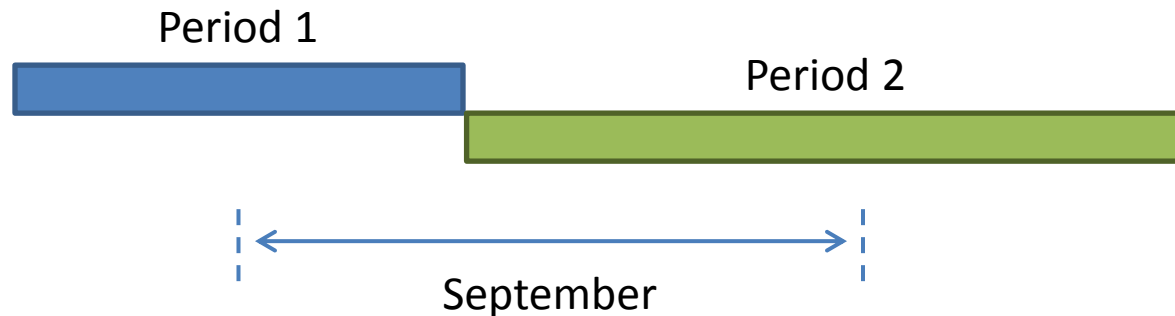


****Month Normalization****

- Raw utility data is organized by **READ DATE**
- Meters are read sporadically throughout the year
- Usage and cost data is for reading period
(ex: September 11 - October 15)
- Need usage **PER MONTH** for meaningful tracking

Month Normalization

- Example:
 - 60 GJ from August 20th to September 10th
 - 80 GJ from September 11th to October 15th
 - Therefore usage in September:
 $60 \text{ GJ} * (10 \text{ days} / 22 \text{ days}) +$
 $80 \text{ GJ} * (20 \text{ days} / 35 \text{ days}) = 73 \text{ GJ}$



Step 3:

Extract meaning from data

3 main options:

1. Manipulate with Excel, or
2. Import into self-managed software, or
3. Work with an energy tracking and data visualization consultant

- Compare between facilities
 - Identify energy reduction candidates
- Compare to history
 - Catch spikes in usage for investigation
(equipment malfunctions can cost \$\$,\$\$\$.\$\$)
- Factor in climate
- Have facility/meter cost & usage at fingertips
- Have municipality cost & usage at fingertips

Example Result

Arctic Fox Energy Tracking

Navigation Links: [Town of Valleyview Energy Report »](#)



Town of Valleyview Energy Report

Report Homepage Section Contents

- Town of Valleyview Energy Report
 - Timeframe
 - Report
 - Alerts
 - Summaries
 - Notes

Next

[Town of Valleyview Grand Total](#)

Timeframe

This Monthly Report covers through

September, 2015

based on statements provided up to and including

October, 2015

Report

Town of Valleyview Grand Total

- **Buildings Class**
 - Buildings Class Total
 - **Community Hall Subclass**
 - Community Hall Subclass Total
 - Memorial Hall
 - **Housing Subclass**
 - Housing Subclass Total
 - 4 Plex
 - **Ice Arenas Subclass**
 - Ice Arenas Subclass Total
 - Arena
 - **Library Subclass**
 - Library Subclass Total
 - Library
 - **Office Subclass**
 - Office Subclass Total
 - Town Office
 - **Outdoor Pools Subclass**
 - Outdoor Pools Subclass Total
 - Pool
 - **Public Works Buildings & Yards Subclass**
 - Public Works Buildings & Yards Subclass Total
 - Public Works Shop
 - Recycling Center
- + **Lighting Class**

Alerts & Summaries

- **Office Subclass**
 - Office Subclass Total
 - Town Office
- **Outdoor Pools Subclass**
 - Outdoor Pools Subclass Total
 - Pool
- **Public Works Buildings & Yards Subclass**
 - Public Works Buildings & Yards Subclass Total
 - Public Works Shop
 - Recycling Center

.....
+ **Lighting Class**
.....

+ **Water & Wastewater Class**
.....

+ **Miscellaneous Class**
.....

Alerts

[Alert Page - Current Month](#)

[Alert Page - Previous Month](#)
.....

Summaries

[Summaries](#)
.....

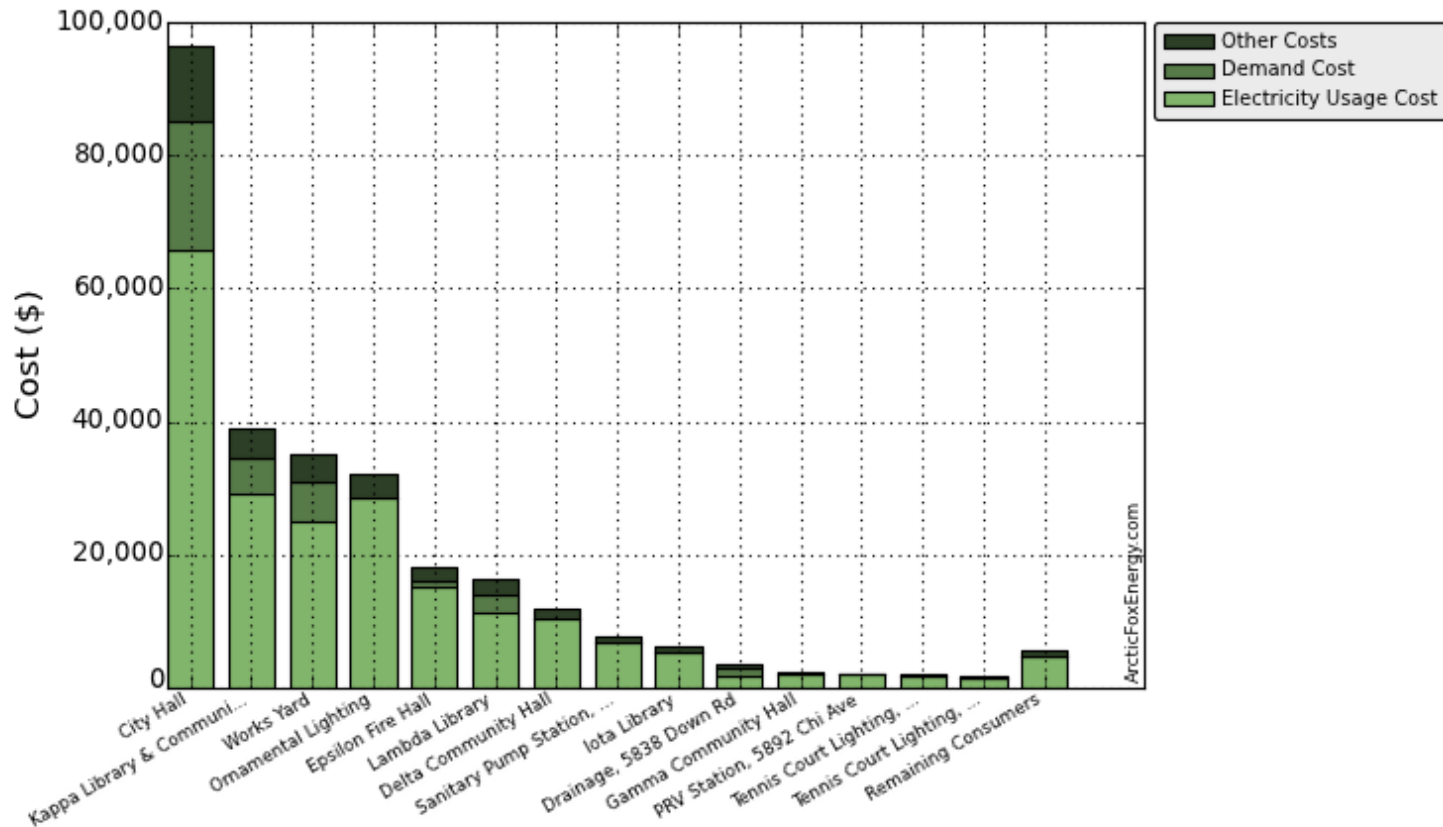
Notes

Please view the Report Notes page for important details about this report.



Facility Comparison

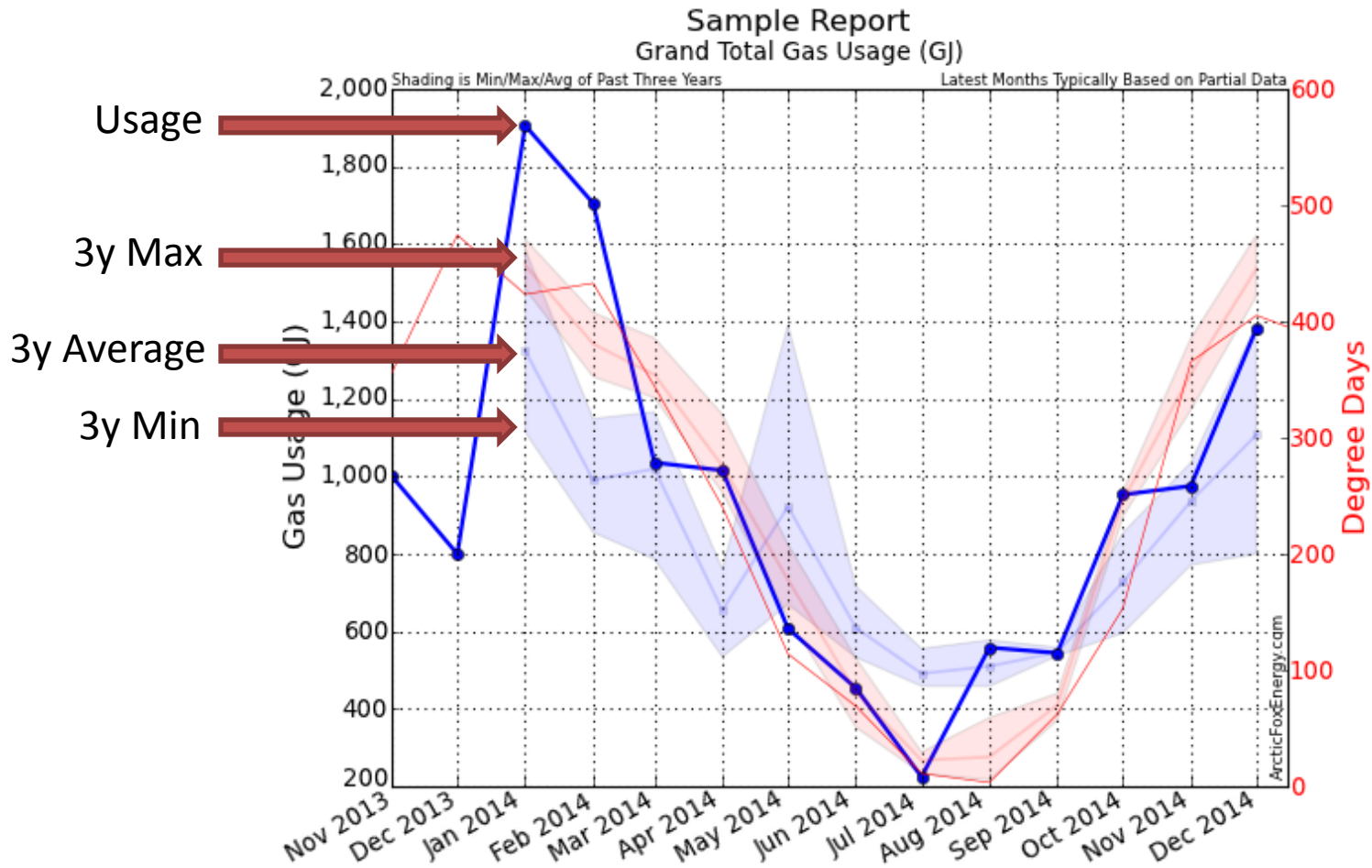
Sample Report
2013 Top Electricity Consumers Cost (\$)



ArcticFoxEnergy.com

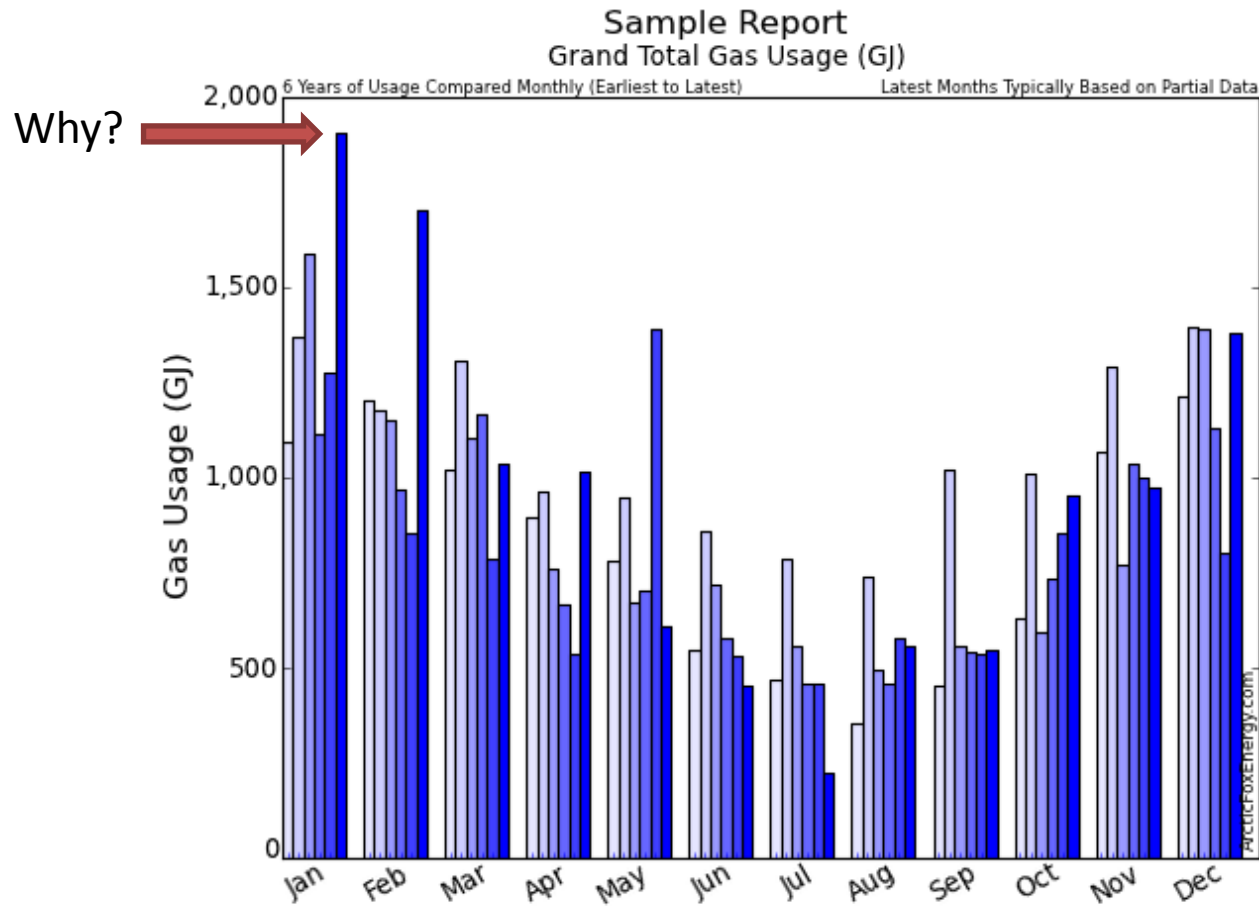


Historical Comparisons





Historical Comparisons



Summaries

Arctic Fox Energy Tracking



Monthly Total Data


Date	Adj Gas Usage (GJ)	Total Gas Cost (\$)	Adj Elec Usage (kWh)	Total Elec Cost (\$)	Total Usage (ekWh)	Total Cost (\$)	GHG (tCO2e)
Jan 2013	1,274.06	13,221.77	409,205.53	30,860.75	763,111.50	44,082.52	69.11
Feb 2013	855.56	10,202.15	372,079.05	18,954.29	609,734.86	29,156.44	47.77
Mar 2013	786.41	9,176.74	394,332.59	23,668.50	612,780.05	32,845.24	44.64
Apr 2013	534.39	5,600.22	360,199.10	21,377.23	508,641.80	26,977.46	31.63
May 2013	1,391.45	14,569.69	368,360.73	23,391.34	754,875.70	37,961.03	74.38
Jun 2013	532.98	6,070.62	358,962.47	23,258.51	507,011.68	29,329.13	31.54
Jul 2013	458.60	5,466.95	388,893.67	23,434.06	516,281.81	28,901.00	28.26
Aug 2013	577.68	5,798.11	394,762.30	26,296.08	555,227.68	32,094.19	34.27
Sep 2013	536.73	5,085.35	351,057.69	19,805.20	500,148.22	24,890.55	31.62
Oct 2013	854.56	9,758.74	352,782.24	23,384.02	590,159.92	33,142.76	47.45
Nov 2013	1,001.11	10,970.16	380,317.18	24,799.50	658,404.30	35,769.65	55.13
Dec 2013	799.64	8,344.61	412,004.41	21,158.33	634,127.92	29,502.94	45.55
Jan 2014	1,905.67	20,297.44	430,204.26	26,595.65	959,557.60	46,893.10	99.11
Feb 2014	1,705.19	20,296.41	393,895.15	23,634.23	867,560.39	43,930.64	88.77
Mar 2014	1,035.78	10,848.90	373,539.12	26,778.21	661,256.29	37,627.12	55.27
Apr 2014	1,015.56	12,097.85	344,165.00	19,366.62	626,264.26	31,464.47	53.97
May 2014	607.42	6,246.48	348,728.84	24,068.10	517,455.77	30,314.58	33.71
Jun 2014	453.78	5,206.89	343,210.13	23,048.93	469,261.09	28,255.82	26.01
Jul 2014	224.43	2,099.23	356,503.44	24,149.83	418,844.12	26,249.06	14.73
Aug 2014	558.18	6,712.92	365,384.52	24,157.02	520,434.15	30,869.94	31.42
Sep 2014	544.29	5,782.54	337,472.99	25,790.20	488,664.95	31,572.73	30.45
Oct 2014	952.79	8,175.57	362,532.14	25,309.91	627,195.20	33,485.48	51.03
Nov 2014	975.36	9,483.80	366,406.78	20,920.96	637,340.80	30,404.75	52.19
Dec 2014	1,382.75	21,932.78	370,669.68	28,090.58	754,766.16	50,023.36	72.50

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Yearly Data

Date	Gas Usage (GJ)	Total Gas Cost (\$)	Elec Usage (kWh)	Total Elec Cost (\$)	Total Usage (ekWh)	Total Cost (\$)	GHG (tCO2e)
2009	9,727.57	95,498.46	4,463,737.23	265,376.19	7,165,840.16	360,874.65	600.00
2010	12,869.10	126,700.11	4,452,513.86	276,246.38	8,027,264.24	402,946.49	756.00
2011	10,354.88	115,500.50	4,442,212.75	273,642.42	7,318,568.63	389,142.93	626.21
2012	9,558.78	107,171.64	4,498,850.07	283,219.61	7,154,065.43	390,391.24	588.02
2013	9,603.17	104,265.12	4,542,956.96	280,387.80	7,210,505.43	384,652.92	541.36
2014	11,361.20	129,180.82	4,392,712.06	291,910.24	7,548,600.77	421,091.06	609.15

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Arctic Fox Energy Tracking

Thank you!

Questions?

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Sample Report: www.arcticfoxenergy.com/report