

September 24, 2025



Enova

WEBINAR

with special guest

Festival Hydro INC.

Unlock Incentives for your Customers

AGENDA

10:00 – Welcome & Introductions

10:10 – Overview of Save on Energy

10:20 – Retrofit Program Examples

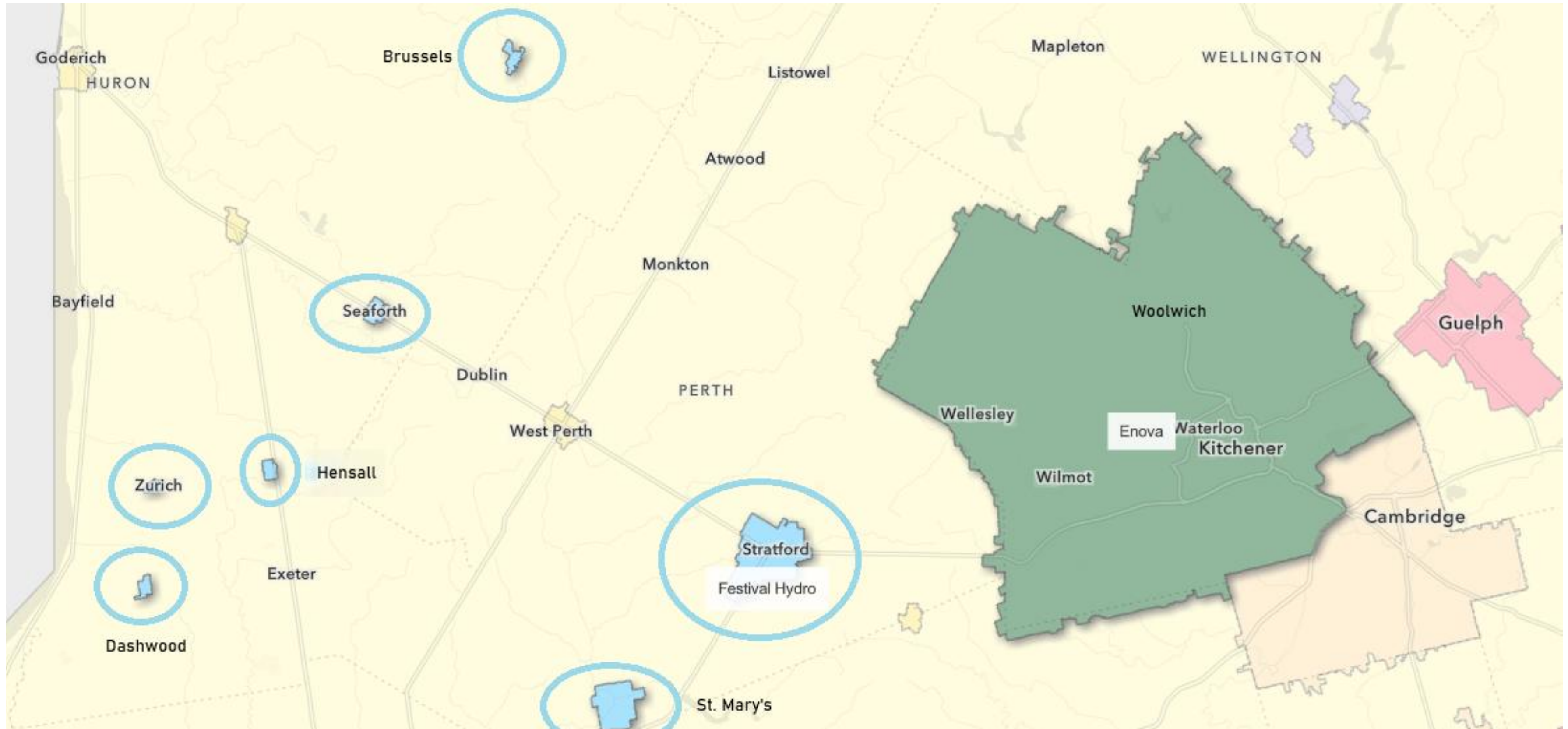
10:30 – Support from Enova and Festival Hydro

10:45 – Wrap-up Q&A

**Feel free to ask questions at
any point during the webinar!**



Service Territories – Festival Hydro and Enova



Overview of Save on Energy Programs



Energy Efficiency Program Evolution



SAVE ON ENERGY



- ☐ **Launched in 2011, continued today**
 - *12-year funding agreement, 2025 – 2037*

- ☐ **Most cost-effective solution for building grid capacity**
 - *less than 3 ¢/kWh compared to 8 - 24 ¢/kWh*

- ☐ **For residential, small business, MUSH, C&I, first nations**
 - *must be connected to the IESO-controlled grid or LDC*

- ☐ **Incentives not rebates**
 - *apply before you buy new equipment*

SAVE ON ENERGY PROGRAMS

□ *For Business (non-residential)*

- *Expanded Energy Manager (EEM) Program*
- *Strategic Energy Management (SEM) Program*
- *Energy Performance Program (EPP)*
- *Existing Building Commissioning (EBCx) Program*
- *Instant Discounts Program (for Lighting, Point of Sale)*
- *Retrofit Program – **FOCUS OF TODAY***



RETROFIT PROGRAM – THE WORK HORSE

❑ Two Stage Application Process

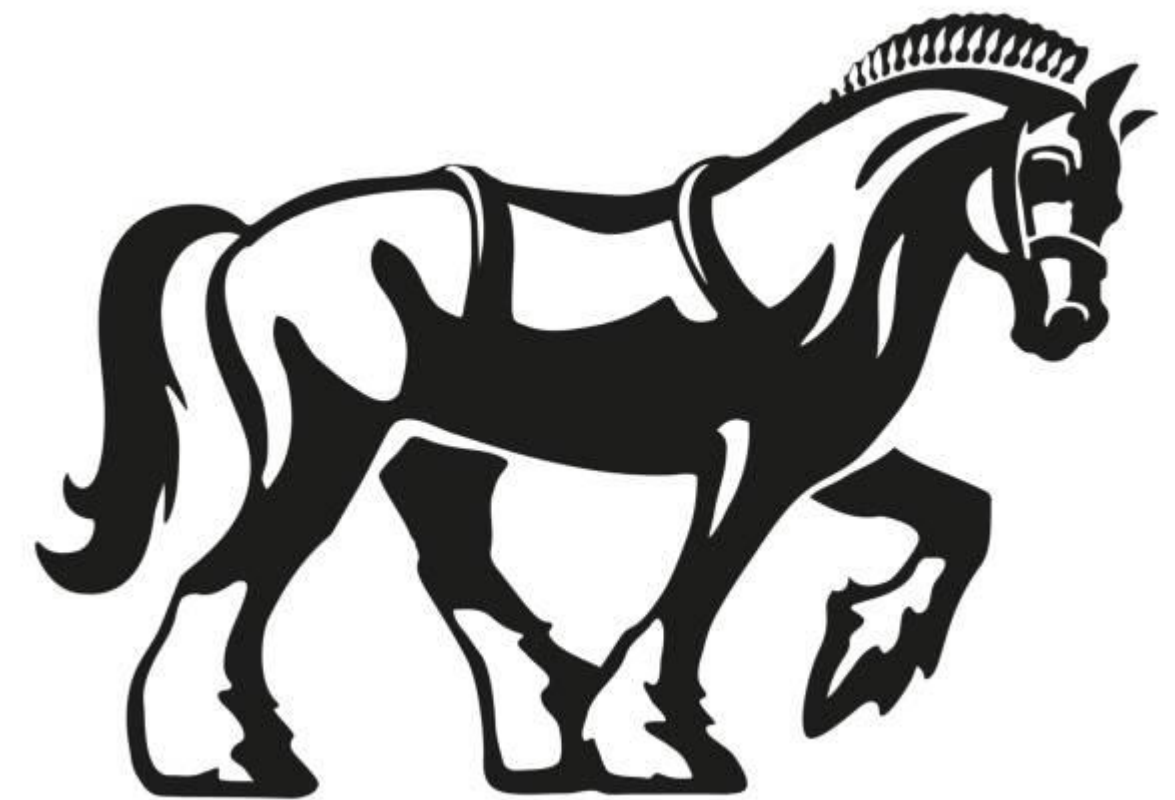
- *pre-project and post-project, all through online portal*
- *prescriptive and/or custom, whichever is better*

❑ Incentives

- *up to 50% of eligible project costs*
- *social housing and regional adders*
- *paid once project is complete*

❑ Participant Eligibility

- *non-residential or farm operation*



RETROFIT PROGRAM REQUIREMENTS

□ Proof of Project Costs

- *quote and invoice must have eligible costs itemized*
- *costs can be rolled up into one amount per category*

Eligible Cost	Prescriptive	Custom
new equipment / materials	Y	Y
third party labour to install the new equipment	Y	Y
disposal / decommissioning of replaced equipment	Y	Y
energy audits not funded by the IESO		Y
design, engineering and/or architecture		Y
third party project management		Y
equipment delivery and duties		Y
inspections (eg. ESA, TSSA)		Y
prepare and implement the Project M&V Plan		Y

□ Equipment Specsheets

- *make/model must match what's listed on quote and invoice*

RETROFIT PROGRAM REQUIREMENTS

❑ Supporting Calculations for Custom Stream Applications

- *IESO Engineered Worksheets*

❑ Resources

- [Top tips for a smooth application \(pdf\)](#)
- [QA/QC guidelines \(pdf\)](#)
- [Best practices for photo requirements \(pdf\)](#)
- [Pre-project application checklist \(pdf\)](#)
- [Post-project submission checklist \(pdf\)](#)
- [Sufficient vs. insufficient project quotes \(pdf\)](#)
- [Sufficient project invoice example \(pdf\)](#)
- [Understanding the Retrofit process infographic \(pdf\)](#)

RETROFIT PROGRAM REQUIREMENTS

❑ Minimum Incentive Thresholds

- *Prescriptive = \$500 (less than \$10,000 for unplanned)*
- *Custom = \$1,500 (minimum 1 kW and/or 2,000 kWh)*

❑ Timelines

- *submit application prior to purchase order*
- *incentive paid within 2 years of application pre-approval*

❑ Not Eligible Measures

- *pilot or demonstration projects, unproven technology*
- *fuel switching (eg. gas furnace RTU to heat pump)*

RETROFIT PROGRAM – PRESCRIPTIVE STREAM

□ Think “Coupon”

- *prescribed list of measures with specific requirements*
- *does not have to replace any previously existing equipment*

□ Incentives

- *per unit, varies depending on measure*
- *unplanned replacements of recently failed AC or VSD air compressor, non speed-modulating VFDs*

□ Eligibility

- *minimum efficiency requirements per measure*
- *listed in worksheets available online*



RETROFIT PROGRAM – PRESCRIPTIVE STREAM

□ Examples of Eligible Projects

- *industrial energy management information system (**NEW**)*
- *computer room air conditioners (**NEW**)*
- *solar photovoltaic systems (**NEW**)*
- *fans, pumps, motors, variable speed drives*
- ****heat pumps***, chillers, HVAC, controls*
- *demand control ventilation*
- *injection moulding machines*
- *compressed air, refrigeration*
- *agribusiness*



RETROFIT PROGRAM – CUSTOM STREAM

❑ Think “Calculated”

- *efficiency case versus base case*
- *does not have to replace any previously existing equipment*

❑ Incentives

- *\$1,800 per peak kW saved or \$0.20 per kWh saved*
- *for almost any equipment consuming electricity*

❑ Eligibility

- *be projected to deliver savings for a minimum of 48 months from the project completion date*

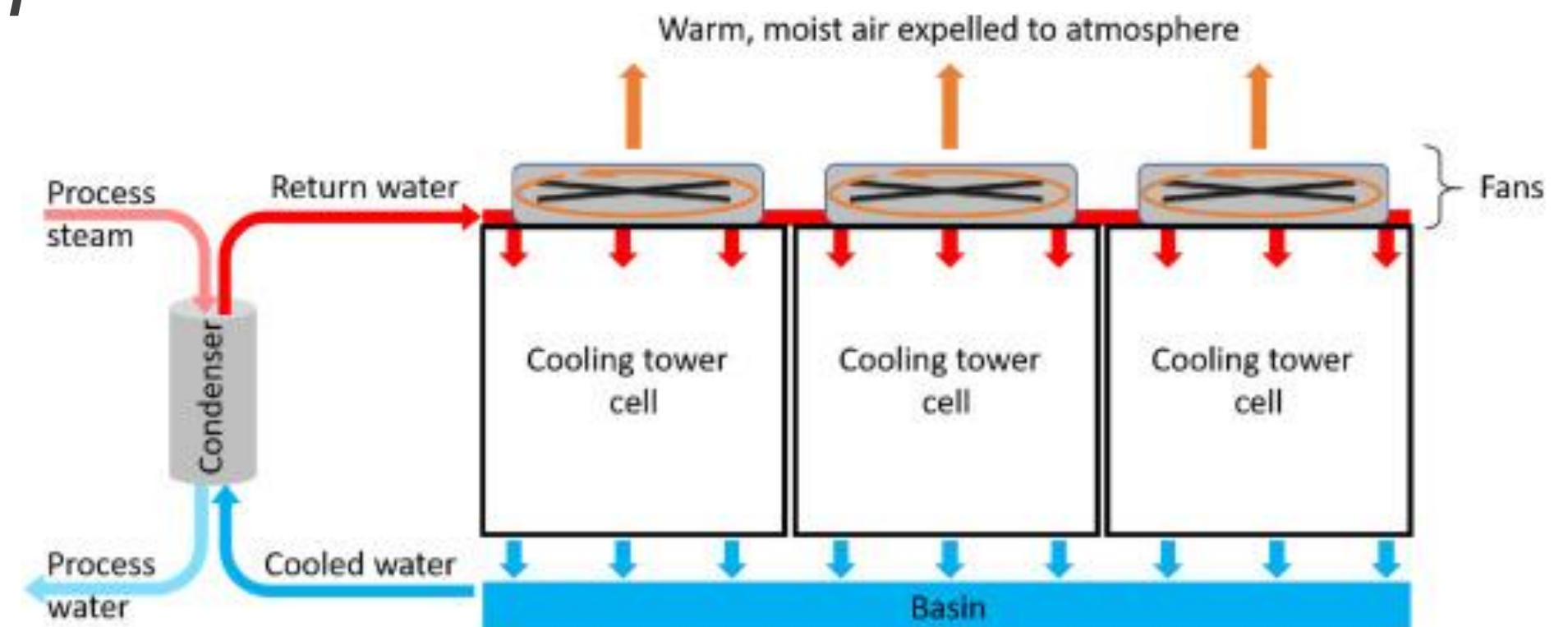
Retrofit Project Examples



RETROFIT PROGRAM – EXAMPLE #1

□ Cooling Tower Fans – Project Details

- 1 cooling tower with 3 x 50HP fans, 1 with VFD
- 1 cooling tower with 2 x 50HP fans, 1 with VFD
- added new VFDs to remaining 3 fans
- both cooling towers serve 1 condensed water system
- BAS sequences fans and match heat load
- weather dependant 24/7 operation



RETROFIT PROGRAM – EXAMPLE #1

❑ Cooling Tower Fans – Prescriptive Stream

- $3 \text{ VFDs} \times \$9,900 = \$29,700 \text{ incentive}$
- *assumes operating 4,000 hours per year, 15.2 kW demand savings and 136,695 kWh energy savings*

Variable Frequency Drive (VFD) Incentives

Motor Size on which VFD is installed (HP)	1	1.5	2	3	5	7.5	10	15	20	25	30	40	50	60	75	100
Participant Incentive (\$/VFD)	\$210	\$300	\$420	\$600	\$1,050	\$1,500	\$2,040	\$3,000	\$3,900	\$5,100	\$6,000	\$7,800	\$9,900	\$11,700	\$14,700	\$19,500
Motor Size on which VFD is installed (HP)	125	150	200	250	300											
Participant Incentive (\$/VFD)	\$24,300	\$29,400	\$39,000	\$48,600	\$58,500											

RETROFIT PROGRAM – EXAMPLE #1

❑ Cooling Tower Fans – Custom Stream

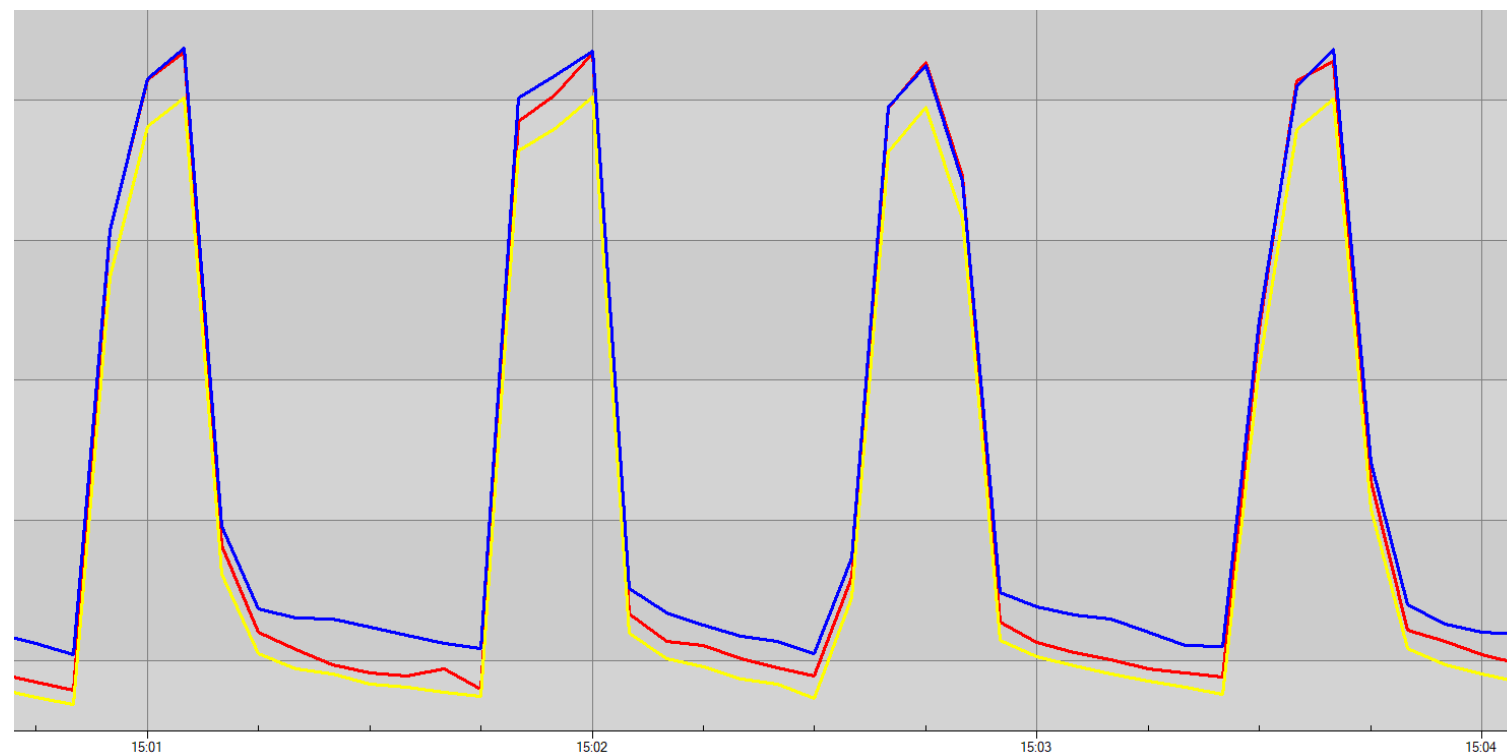
- *develop an annual hourly energy model based on BAS reports, weather and fan curves to estimate real energy usage*
- *42.8 kW demand savings and 89,649 kWh energy savings
= \$1,800 x 42.8 kW = \$77,040 incentive*

Temp (°C)	Rel Hum (%)	WetBulb Tw (C)	WetBulb Tw (F)	SS Motor Output (BHP)	VFD Motor Output (BHP)	Tower 1 Cell 1 (VFD%)	Tower 1 Cell 1 BC BHP	Tower 1 Cell 1 EC BHP	Tower 1 Cell 2 Status	Tower 1 Cell 2 BC BHP	Tower 1 Cell 2 EC BHP	Tower 1 Cell 3 Status	Tower 1 Cell 3 BC BHP	Tower 1 Cell 3 EC BHP	Tower 2 Cell 4 Status	Tower 2 Cell 4 BC BHP	Tower 2 Cell 4 EC BHP	Tower 2 Cell 5 (VFD%)	Tower 2 Cell 5 BC BHP	Tower 2 Cell 5 EC BHP	Base Case Power (BHP)	Base Case Power (kW)	Efficient Case Power (BHP)	Efficient Case Power (kW)
28.1	53	21.2	70.1	46.6	15.0	100.0%	50.0	22.5	0	0.0	0.0	1	46.6	22.5	1	46.6	15.0	57.0%	28.5	15.0	171.6	135.5	75.1	59.2
24.1	73	20.5	68.9	46.3	13.2	100.0%	50.0	19.8	0	0.0	0.0	1	46.3	19.8	1	46.3	13.2	68.9%	34.5	13.2	177.2	139.9	66.1	52.2
22.9	74	19.5	67.1	46.0	11.2	100.0%	50.0	16.9	0	0.0	0.0	1	46.0	16.9	1	46.0	11.2	51.8%	25.9	11.2	167.9	132.5	56.2	44.4
21.5	84	19.5	67.1	46.0	11.2	100.0%	50.0	50.0	0	0.0	0.0	0	0.0	0.0	1	46.0	11.2	39.4%	19.7	11.2	115.7	91.3	72.4	57.1
20.9	82	18.6	65.6	45.7	10.0	100.0%	50.0	50.0	0	0.0	0.0	0	0.0	0.0	1	45.7	10.0	42.1%	21.1	10.0	116.8	92.2	70.1	55.3
19.9	87	18.3	64.9	45.6	9.7	100.0%	50.0	50.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	33.4%	16.7	16.7	66.7	52.7	66.7	52.7
20	86	18.3	64.9	45.6	9.6	100.0%	50.0	50.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	60.9%	30.5	30.5	80.5	63.5	80.5	63.5
19.7	85	17.9	64.1	45.4	9.2	100.0%	50.0	50.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	50.4%	25.2	25.2	75.2	59.4	75.2	59.4

RETROFIT PROGRAM – EXAMPLE #2

□ Air Compressor – Project Details

- *125HP fixed speed air compressor with integrated dryer*
- *air-cooled, oil injected, load/unload control*
- *20 years old and in disrepair (leaking oil, air, etc)*
- *oversized and short cycling*
- *replace with variable speed option*



RETROFIT PROGRAM – EXAMPLE #2

□ Air Compressor – Prescriptive Stream

- *assumes operating 5,702 hours per year*
- *26.1 kW demand savings and 148,822 kWh energy savings*
= \$24,480 incentive

Air Compressor Capacity (HP)	Incentive Rate per New VFD Air Compressor
≥10	\$ 1,560.00
≥15	\$ 2,340.00
≥20	\$ 3,120.00
≥25	\$ 3,900.00
≥30	\$ 4,680.00
≥40	\$ 6,240.00
≥50	\$ 9,780.00
≥60	\$ 11,740.00
≥75	\$ 14,680.00
≥100	\$ 19,580.00
≥125	\$ 24,480.00
≥150	\$ 29,360.00
≥200	\$ 34,280.00

RETROFIT PROGRAM – EXAMPLE #2

□ Air Compressor – Custom Stream

- *use engineered worksheet for VSD compressed air*
- *13.6 kW demand savings and 136,539 kWh energy savings*
 $= \$1,800 \times 13.6 \text{ kW} = \$27,308$

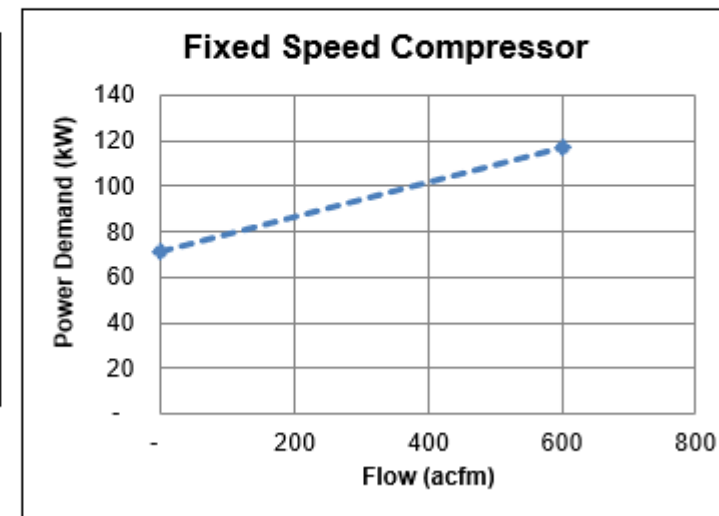
TYPICAL OPERATING PRESSURE					
100	Intended Compressor Operating Discharge Pressure (psig)				
FIXED SPEED COMPRESSOR (CAGI DATA SHEET INPUTS)					
CAGI Data Sheet Field #	Description	Value	Units		
1	Manufacturer	600	acfm		
2	Model				
3	Rated Capacity at Full Load Operating Pressure:				
4	Full Load Operating Pressure			103	psig
10	Total Package Input Power at Zero Flow			71.0	kW
11	Total Package Input Power at Rated Capacity and Full Load Operating Pressure	117.0	kW		

5.1 Full Load Flow:Power ratio seems OK (4-6 acfm/kW)

Rated Pressure of Fixed Speed Compressor seems OK for Operating Pressure Requirements.

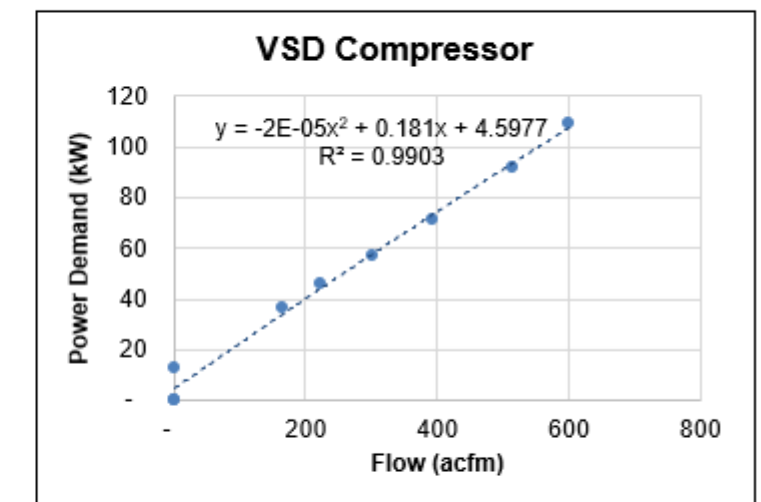
Fixed Speed Compressor

Flow (acfm)	Power Demand (kW)
0	71.0
600	117.0



VSD COMPRESSOR (CAGI DATA SHEET INPUTS)			
CAGI Data Sheet Field #	Description	Data Input	
1	Manufacturer		
2	Model Number		
3	Rated Operating Pressure (psig)	175	
8	Input Power and Capacity	Input Power (kW)	Capacity (acfm)
	Point 1 (Max)	109.5	601.0
	Point 2	92.2	514.0
	Point 3	71.4	392.0
	Point 4	57.0	303.0
	Point 5	45.6	223.0
	Point 6	36.4	164.0
	Point 7		
	Point 8		
9	Total Package Input Power at Zero Flow	12.4	

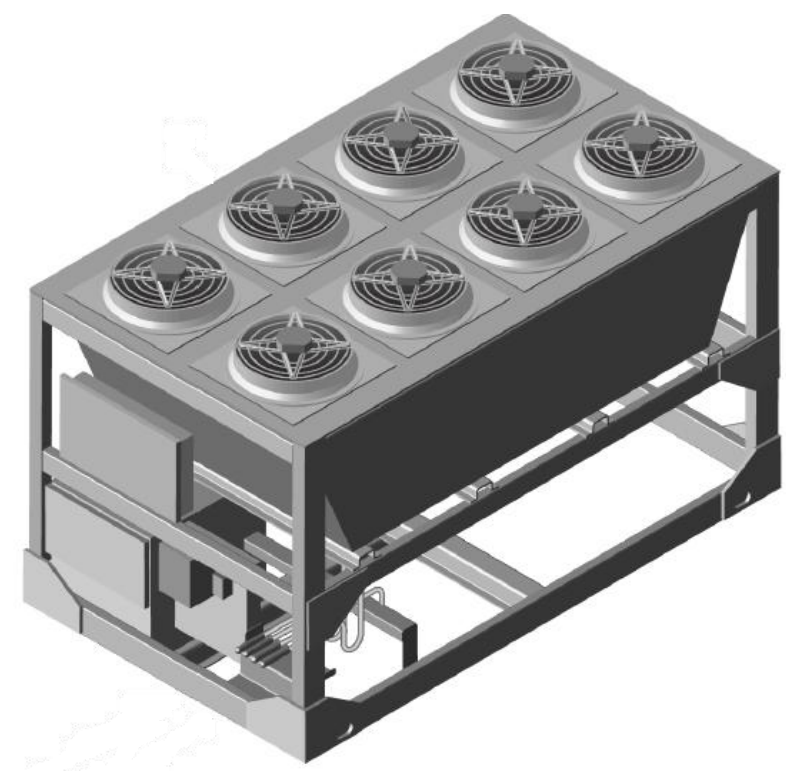
Rated Pressure of VSD Compressor seems OK for Operating Pressure Requirements.



RETROFIT PROGRAM – EXAMPLE #3

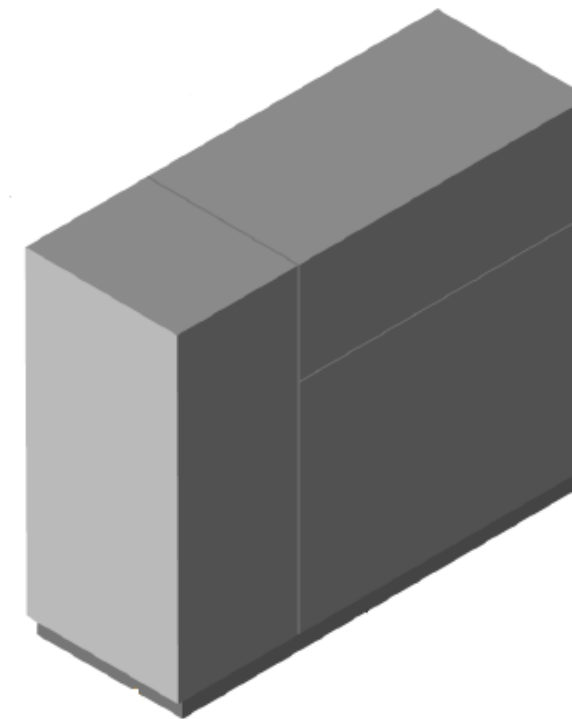
❑ Computer Room Air Conditioning – Project Details

- *data centre adding 70kW of load*
- *existing cooling system not adequate*
- *new air-cooled refrigeration unit and premium condenser with free cooling economizer (pumped refrigerant system)*



outside

inside



RETROFIT PROGRAM – EXAMPLE #3

❑ Computer Room Air Conditioning – Prescriptive Stream

= \$10,000 incentive

- assumes operating 8,760 hours per year
- 4.17 kW demand savings and 36,526 kWh energy savings

Computer Room Air Conditioners (CRAC)							
Computer Room Air Conditioners (CRAC)	Net sensible Cooling Capacity	Configuration	Minimum SCOP Efficiency	Manufacturer Name/Model #	Quantity	Unit Participant Incentive	Total Participant Incentive
New installation or replacement of existing equipment with new high efficiency air-cooled CRACs exceeding the minimum efficiency levels	<65,000 Btu/h	Downflow / Upflow	2.47			\$1,300	\$0
	≥65,000 Btu/h and <240,000 Btu/h	Downflow / Upflow	2.35			\$4,500	\$0
	≥240,000 Btu/h and <760,000 Btu/h	Downflow / Upflow	2.12		1	\$10,000	\$10,000

RETROFIT PROGRAM – EXAMPLE #3

❑ Computer Room Air Conditioning – Custom Stream

- *use manufacturer's simulation software to determine energy usage of standard unit versus free cooling unit*
- *1 kW demand savings and 49,077 kWh energy savings
= \$0.20 x 49,077 = \$9,815 incentive*

Canada - TORONTO																				
Dry Bulb Bin Data																				
Temperature Bins Deg F	below 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85-89	90-94	above 95
Temperature Bins Deg C	below -15.0	-15.0 to -12.8	-12.2 to -10.0	-9.4 to -7.2	-6.7 to -4.4	-3.9 to -1.7	-1.1 to 1.1	1.7 to 3.9	4.4 ot 6.7	7.2 to 9.4	10.0 to 12.2	12.8 to 15.0	15.6 to 17.8	18.3 to 20.6	21.1 to 23.3	23.9 to 26.1	26.7 to 28.9	29.4 to 31.7	32.2 to 34.4	above 35
Dry bulb hrs	148	167	263	368	337	592	890	859	519	684	697	754	761	516	601	363	178	44	17	2
WB @ DB bin		6	11	16	20	25	30	35	39	43	48	53	57	61	64	66	69	71	74	
Ave Dew point	2	2	7	12	17	22	27	32	29	34	39	44	49	54	50	55	60	57	54	61

1 DS105AU		Air Cooled unit 4 Step				MCL110E8													Total		
System kW load																				MW-Hr	
Compressor kW	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.7	13.4	14.2	15.1	15.9	16.8	16.4	107.8
Evap Fan kW	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	17.2
Condenser kW	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.8	1.8	1.8	1.8	2.7	2.7	2.7	3.5	3.5	3.5	12.4
Humidifier kW	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.5
Free cooling pump kW	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0
UPS & Distribution	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total power consumed kW	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.4	16.3	15.7	15.7	16.4	18.1	18.9	19.7	21.4	22.3	21.9	146.8

SUPPORT FROM ENOVA AND FESTIVAL HYDRO



SUPPORT FROM ENOVA AND FESTIVAL HYDRO

☐ Energy Assessment & Project Development

- *your co-pilot*

☐ Incentive Application Support

- *leverage our extensive experience*

☐ Customer Reassurance

- *more than just moral support*

☐ Connections to Other Funding

- *Enbridge, NRCan, water conservation authorities*

