

CLEAResult<sup>®</sup>

# AEEA Virtual Summit

*Energy Management Programming – A Catalyst for Economic Growth*

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# Introductions

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**Michael Deane**

Senior SEM Program Manager  
- Canada



**Bill Gowdy**

Environment & Public Affairs Manager  
- Northern Alberta

# Energy Management Program Comparison

## ENERGY MANAGERS

## STRATEGIC ENERGY MANAGEMENT

Enroll independently



Cohort approach with up to 12 participants

Dedicated energy manager



Entire energy team

Usually covers multiple sites



Focuses on a single site

Capital projects



Low/no-cost measures

On a per-project basis







On the whole site level

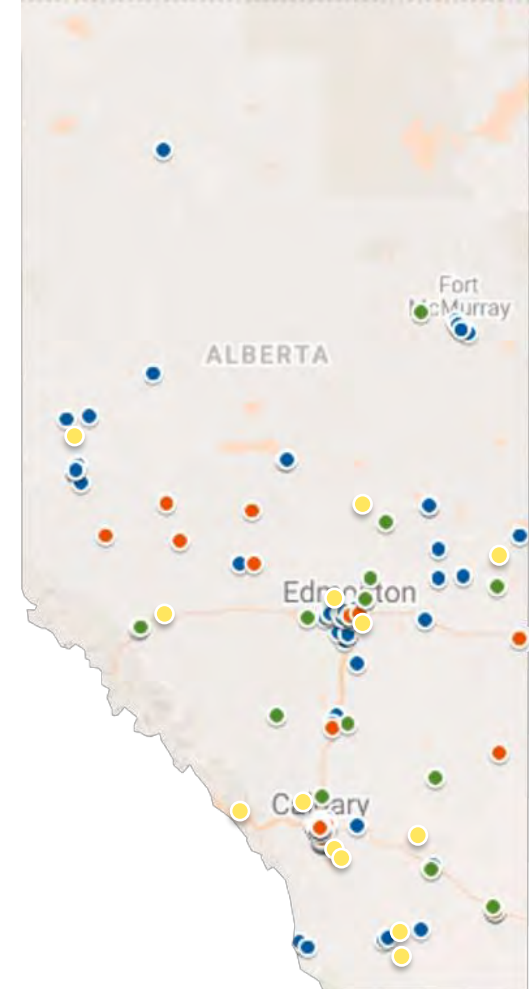
Large variance



4.9% kWh  
6.7% Natural Gas

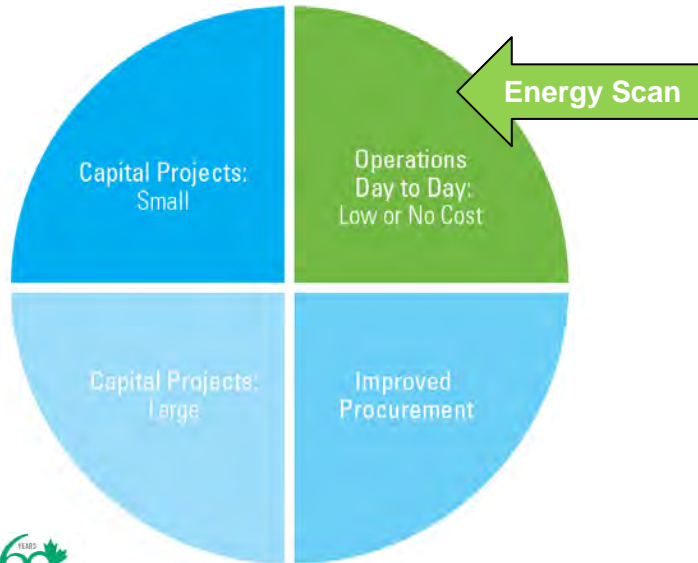
# Alberta Participant Coverage

Program Sponsor/ Program Name	Participant Criteria	Facility Type	# of Participants	# of Sites
 <b>MCCAC</b> – Municipal Energy Manager Program	Population: <b>&lt;150,000</b>	Municipalities	20	351
 <b>GOA</b> – Onsite Energy Manager Program	Annual consumption: <b>&gt;25,000 tCO<sub>2</sub>e</b>	Non-LFE Industrial, Institutional, Commercial	24	64
 <b>GOA</b> – SEM 6 Cohorts Program	Annual consumption: <b>&gt;5,000 tCO<sub>2</sub>e</b>	Non-LFE Industrial, Institutional, Commercial	60	190
 <b>GOA/ NRCan</b> – SEM for LFE Program	Annual consumption: <b>&gt;100,000tCO<sub>2</sub>e</b>	Industrial LFE sites	12	12
<b>Total:</b>			<b>116</b>	<b>617</b>

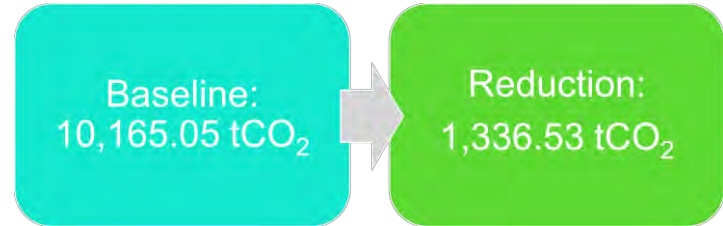


# Lafarge Participation - SEM

- Completed Facility Tours (Operations Staff)
- Established Opportunity Register of Goals



- 5 facilities achieved **13.2%** of total reduction in GHG portfolio, from electricity and natural gas over 1 year (change of habits only)



Electricity Savings: **901,614 kWh**  
Natural Gas Savings: **14,841 GJ**



**409** Cars Removed

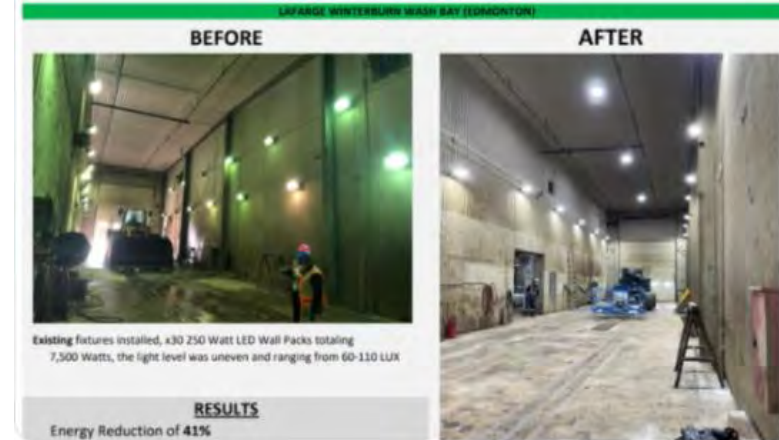


**893** Homes E-powered for 1 year

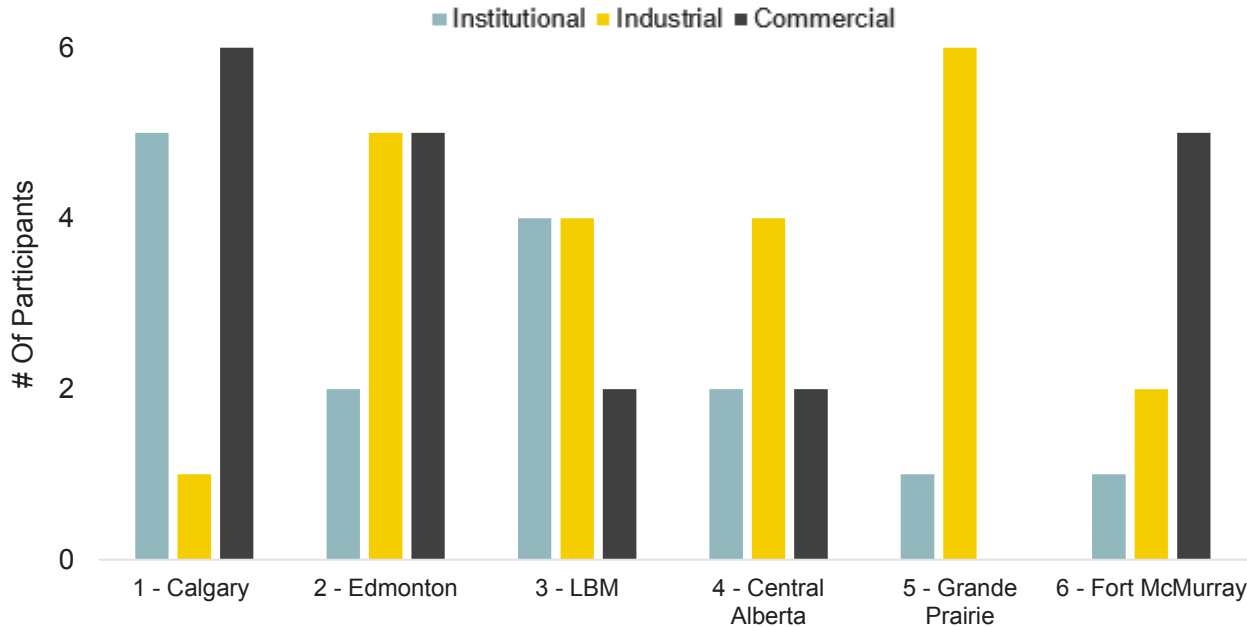


# Ongoing Impacts of SEM

- SEM was the catalyst in 2019 for continuing energy reduction initiatives
- Captured attention and imagination of company / employees
- Internal sustainability training provided to ALL Lafarge staff
- Program has precipitated numerous capital projects and energy assessments
  - Numerous lighting retrofit projects
  - Installation VFDs
  - Compressor retrofits



# SEM for 6 Cohorts Performance



**480,762**

SEM Lifetime  
tCO2e Savings\*

**55**

Group  
Workshops

**420+**

One on One  
Coaching Sessions

**1,205**

Measures  
Implemented

\* Projected savings based on actual  
year 1 and year 2 performance



# SEM for 6 Cohorts Impact



# of cars taken off the road:  
**104,000+**



Cost of SEM savings:  
**\$10/ tCO<sub>2</sub>e**



Participant savings:  
**\$126 Million**

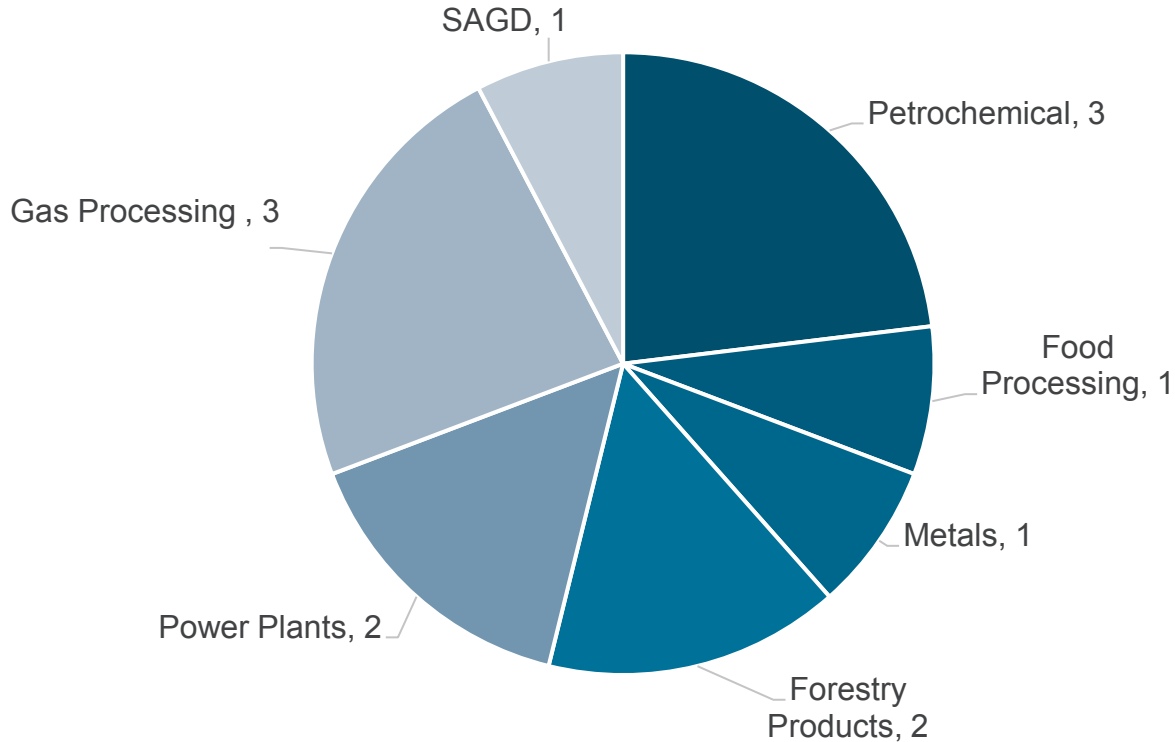


Jobs created for \$1 Million  
investment in SEM: **104**



Ratio of investment in versus  
resultant revenue generated:  
**\$1 to \$25**

# SEM for LFE Performance



## 3.18 Million

SEM Lifetime  
tCO2e Savings\*

### 10+

Group  
Workshops

### 80+

Individual Sessions

### 95+

Measures  
Implemented

\* Projected savings based on actual  
year 1 performance

# SEM for LFE Impact



# of cars taken off the road:  
**690,000+**



Cost of SEM savings:  
**\$0.46/ tCO<sub>2</sub>e**



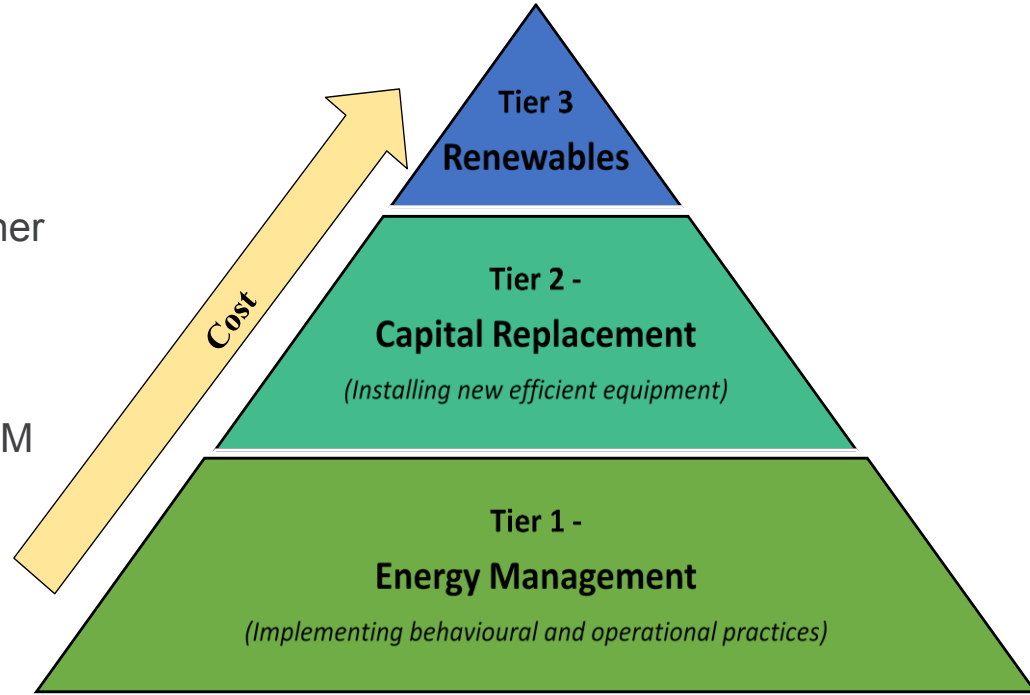
Participant savings:  
**\$330 Million**



Ratio of investment in versus  
resultant revenue generated:  
**\$1 to \$223**

# The Economics of Energy Management Programing

- SEM is over **3x more cost efficient** than capital replacement programs
- Energy Management activities **set the foundation** for organizations to have a higher impact as they move through the different Tiers of Energy Efficiency.
- SEM participants complete **50% more incentivized capital projects** than non-SEM participants\*
- Energy management programing helps **drive economic growth, upskill** organizations, and **increase market competitiveness.**



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Thank you

Michael Deane ([michael.deane@clearesult.com](mailto:michael.deane@clearesult.com))