



2011-2014 Industrial Program Review

Industrial Accelerator and saveONenergy PROCESS AND SYSTEMS

June 23rd, 2011

Welcome

Presenter:



Evelyn Lundhild

Manager Industrial

2011-2014 Industrial Program Review

Industrial Accelerator and
saveONenergy **PROCESS AND SYSTEMS**

Objective for this session

- Provide Engineering Consultants and Equipment Vendors sufficient background information so that they can guide their industrial customers to take advantage of these new incentive programs to implement capital projects
- Focus will be on Industrial Accelerator and SaveONEnergy Process and Systems Incentives

Agenda

1. Introduction to OPA Industrial Programs
2. Overview of Industrial Programs
3. Eligibility – Participants and Projects
4. Program Incentives
5. Participant Requirements
6. Your Role - Bringing Value to Your Customers
7. Managing Timeline Expectations
8. Tips to Assist Participants



OPA Program Overview

Province-wide Conservation Programs

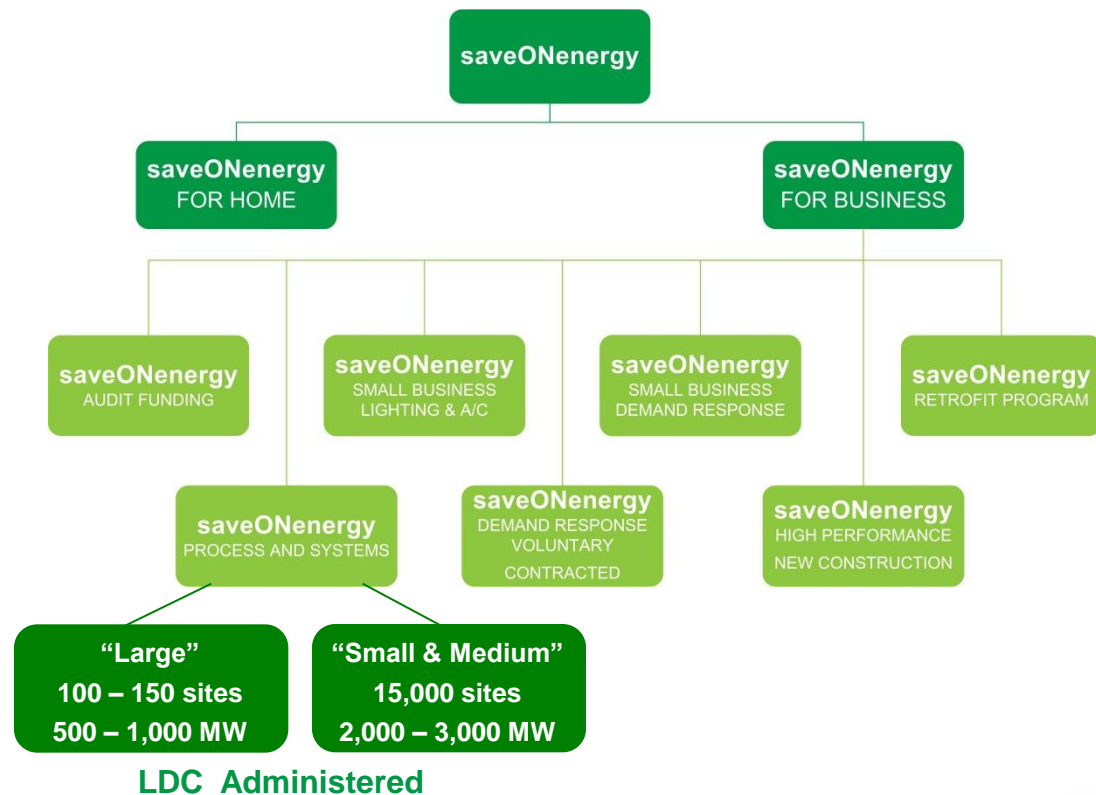
Transmission Connected

industrial accelerator™

Transmission Connected “Large”
50 – 80 sites
2,000 MW

OPA Administered

Distribution Connected





Industrial Programs Overview

Initiative Goals

- Primary objective is to help industrial customers to make significant capital investments in upgrading their plants and equipment in order to deliver electricity savings.
 - ❖ Fast track capital investment in major energy-efficiency projects
 - ❖ Attractive financial incentives to encourage investment in innovative process changes and equipment retrofits
 - ❖ Participants will contractually commit to delivering savings over the expected life of the project.



Industrial Program Concepts

- Industrial Accelerator and Process and Systems

- ❖ Engineering Studies
- ❖ Capital Incentives



- PROCESS AND SYSTEMS Only - Enabling initiatives

- ❖ Embedded Energy Managers
- ❖ Monitoring and Targeting
- ❖ Meter Lending Library



Project Types and Requirements

Project Type	Annualized Electricity Savings	Project Incentive Agreement Term	Detailed Engineering Study Requirement	Security Requirement
Project	> 350 MWh	10 years	Yes	Yes
Micro Project	Between 100 and 700 MWh	5 years	No	No
Portfolio	Two or more Projects (no micro-projects)	10 years	Yes	Yes
Self-Generation	< 20 MW nameplate capacity	10 years	Yes	Yes

Benefits to Participants

- Reduce electricity consumption and costs
 - ❖ Increase energy productivity
 - ❖ Reduces risks associated with fluctuating energy costs
- Accelerates return on energy efficiency projects
- Advances commitment to sustainability
 - ❖ Builds an energy-efficiency culture within the organization
 - ❖ Assists in achieving compliance with environmental or efficiency policies
- Improves product quality and process reliability
- Helps improve competitiveness of site

Studies

Preliminary Study

Evaluate the scope of an opportunity

- Estimate Energy Savings ($\pm 30\%$)
- Estimate Project Costs ($\pm 50\%$)
- Funded up to \$10,000

Detailed Study

Develop the business case for internal approval

- Estimate Energy Savings ($\pm 10\%$)
- Estimate Project Costs ($\pm 25\%$)
- Process and System: Funded up to \$50,000
- **IAP: Fully funded for first year of program**

Please note, the net cost of the studies is deducted from the final project incentive.

PROCESS AND SYSTEMS Only

Monitoring and Targeting Systems

- Funding available to cover 80% of cost of installing a Monitoring and Targeting System up to \$75,000
- Participant will deliver savings of 200 kW within 2 years of installation
- Annual reporting for 5 years



PROCESS AND SYSTEMS Only Embedded Energy Managers

- Funding for up to 80% of annual salary of an energy manager at a large customer site
- A successful Energy Manager will:
 - ❖ Be an employee of the customer
 - ❖ Deliver an annual target of 300 kW of peak demand reduction and $(0.3 * \text{FLF} * 8760)$ MWh of energy savings
 - ❖ Deliver 30% of savings target from non-incented projects
 - ❖ Prepare an Energy Management Plan within first 6 months





Eligibility – Participants and Projects

Eligibility

- Participant
 - ❖ Not insolvent
 - ❖ Industrial
- Project
 - ❖ Project must have >10 year life
 - ❖ Must involve installation of a measure
 - ❖ Project must deliver minimum 350 MWh of annualized electricity savings
- Micro Project
 - ❖ Must deliver between 100 and 700 MWh of savings per year averaged over 5 year project life

IAP Eligible Participants

- AbitibiBowater
- Ainsworth Engineered
- ArcelorMittal Dofasco
- Atlantic Packaging Products
- Barrick Gold
- Carmeuse Lime
- Casco
- Cytec Canada
- De Beers Canada
- Domtar Pulp and Paper
- Dyno Nobel Nitrogen
- Essar Steel
- First Nickel
- Flakeboard Company
- Ford Motor Company
- General Motors of Canada
- Georgia-Pacific Canada
- Gerdau Ameristeel
- Goldcorp Canada
- Haley Industries
- Hamilton Specialty Bar
- Imperial Oil Limited
- Ivaco Rolling Mills
- Kirkland Lake Gold
- Lafarge Canada
- Lake Shore Gold Corp.
- Lanxess
- North American Palladium
- Nova Chemicals
- Novelis
- Oxy Vinyls Canada Co.
- Panabrasive
- Shell Canada Products
- St. Andrew Goldfields
- St Marys Cement
- St. Mary's Paper
- Suncor Energy Products
- Tembec Enterprises
- Terrace Bay Pulp
- Toyota Motors Canada
- U.S. Steel Canada
- Vale
- Wesdome Gold Mine
- Weyerhaeuser Company
- Xstrata Canada Corp.

Ineligible Projects

1. A project that the LDC or OPA determines is more appropriately funded by another program
2. Lighting
3. Demand Response
4. A Project designed to reduce voltage or improve Power Factor or Power Quality, other than as an ancillary benefit to obtaining Electricity Savings;
5. A Project that involves installation of any equipment or system that does not comply with all applicable laws, regulations and standards;
6. A Project for which another financial incentive is being received by the Participant from the LDC, the OPA, the provincial crown or an agency thereof.
7. Prior to submitting a Preliminary Engineering Incentive Application, a Detailed Engineering Incentive Application or a Project Incentive Application, the Participant has entered into an agreement with a contractor or consultant, or ordered or purchased any equipment for use in relation to this Project without the prior written consent of the LDC/OPA.

Typical Projects

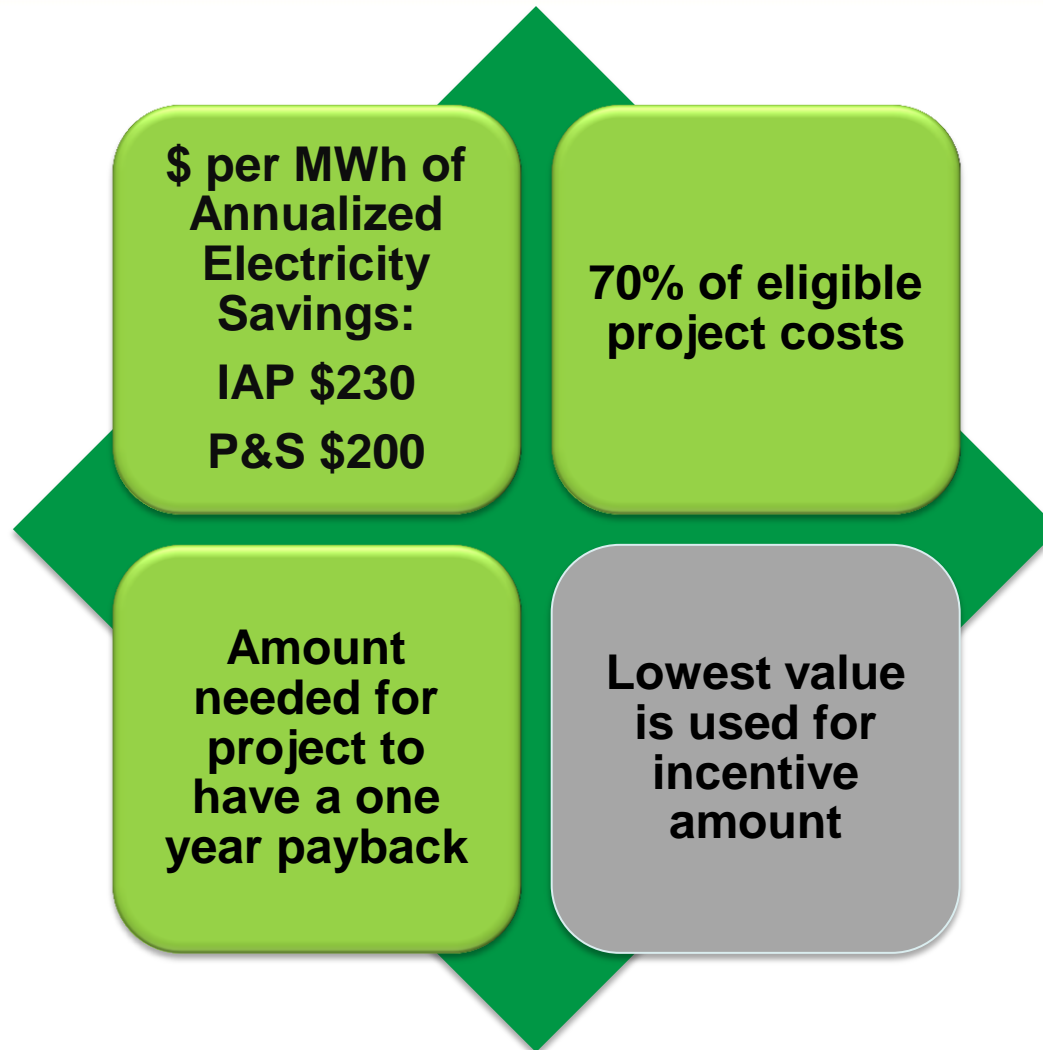
- VFDs on Pumps and Fans
- Compressed Air system upgrades
- Ventilation Systems
- Large process improvement projects





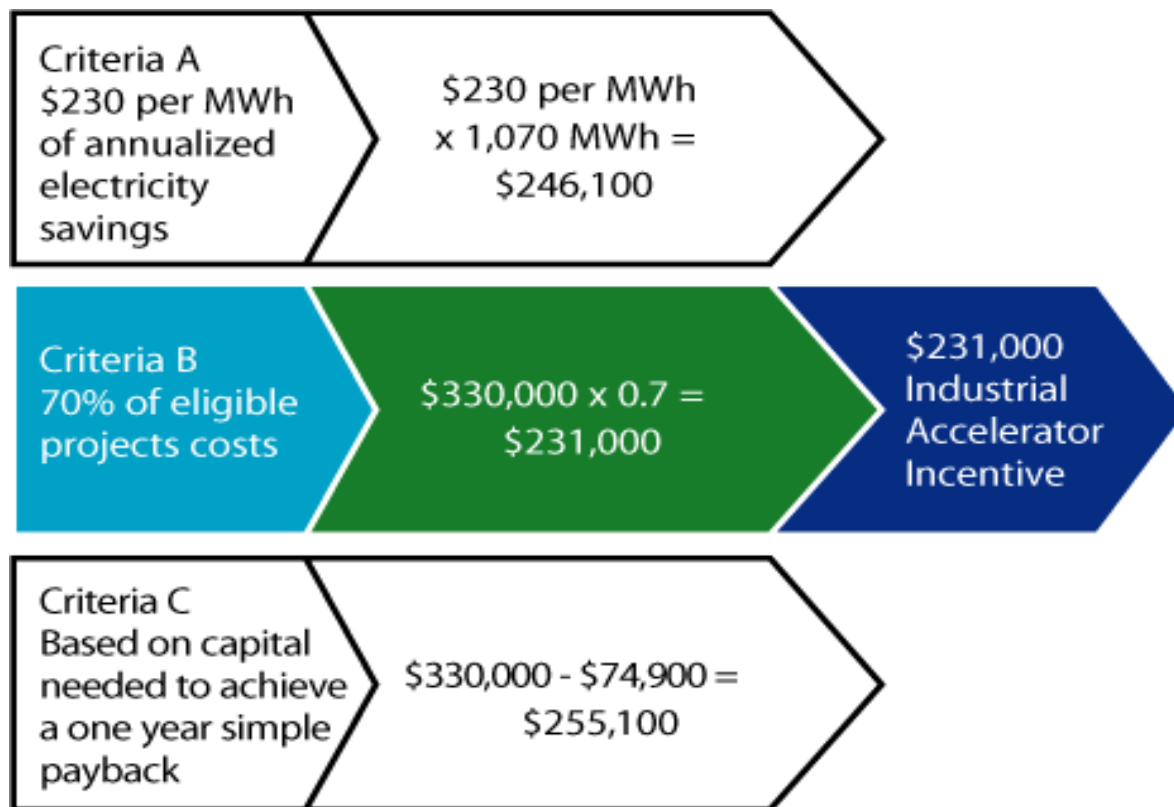
Industrial Program Incentives

Program Incentives



IAP Simple Financial Incentives Calculation

A pump system retrofit is estimated to produce 1.07 GWh of electricity savings annually. Eligible project costs are \$330,000 and energy cost is \$70/MWh, so the cost savings are estimated to be \$74,900/year



Eligible Project Costs

Studies

Preliminary engineering studies
(up to \$10,000)

Detailed engineering studies
IAP – Fully Funded
S&P - up to \$50,000

Equipment

Capital costs for equipment

Meters, sensors, controls, etc.

Materials

Resources

Internal staff working on project

Engineering firms

Other professional services

Other

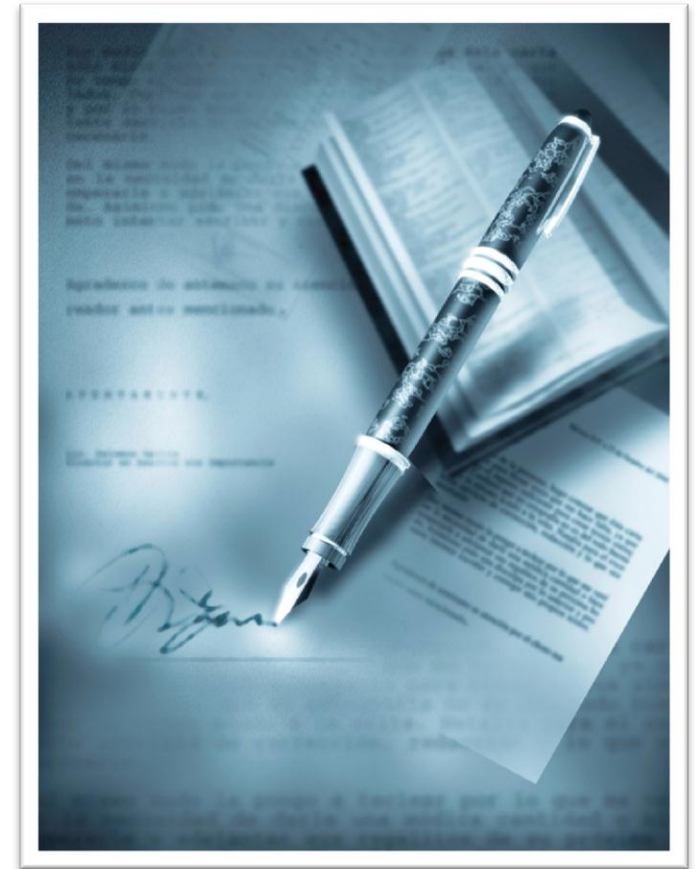
Permits and License Fees

Environmental assessments

Data collection services

Incentive Contract

- Two Payment Options
 - ❖ Advanced Incentive
 - ❖ Deferred Incentive
- 10 year commitment to deliver savings
 - ❖ M&V Reporting required
- Need to achieve >80% of predicted savings (PSU) or >90% (IA)
- Includes preparation of an Energy Management plan
 - ❖ Submit to the OPA or LDC within one year of the in-service date





Participant Requirements

Measurement and Verification

- High degree of rigour is needed to verify project savings
 - ❖ A well formed M&V plan protects the ratepayers investment
 - ❖ Provides 3rd party verification of actual savings
 - ❖ Follows established international protocols (IPMVP)



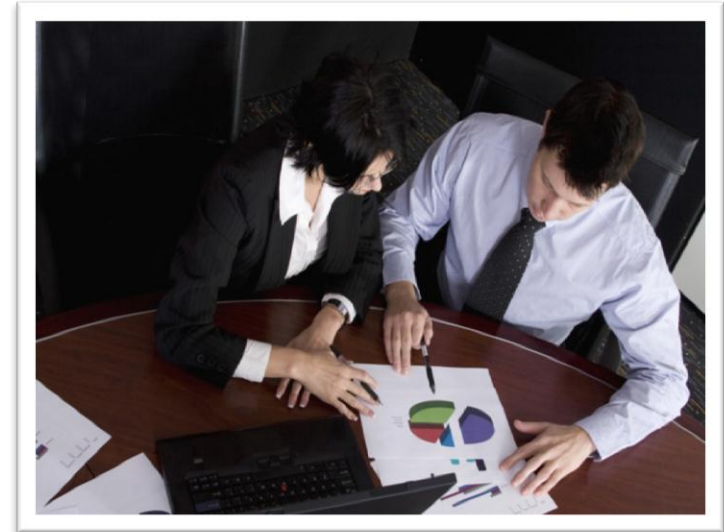
Measurement and Verification

- M&V Plan for the project will be developed by the Technical Reviewer
 - ❖ Agreed to and implemented by the participant
 - ❖ Baseline developed by Detailed Study
- Data reported to the LDC/OPA annually
- Participant to deliver >80% of predicted savings (PSU) or >90% (IA)



Energy Management Plans

- Responsibility of each participant
- Must be filed within one year of first incentive application
 - ❖ If not filed LDC/OPA may withhold up to 25% of the incentive





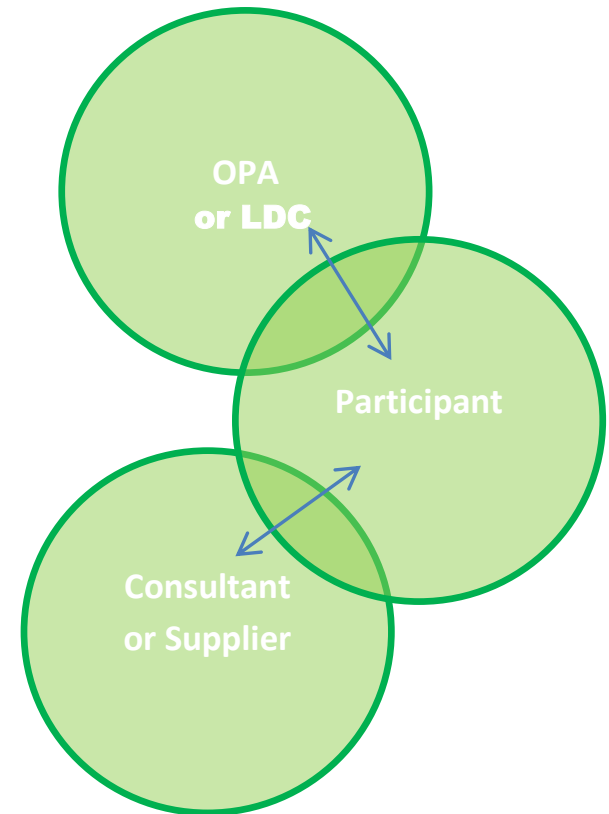
Your Role - Bringing Value to Your Customers

Supporting IAP

The OPA needs your support and collaboration as a critical link in the process to promote and encourage participation

Please note:

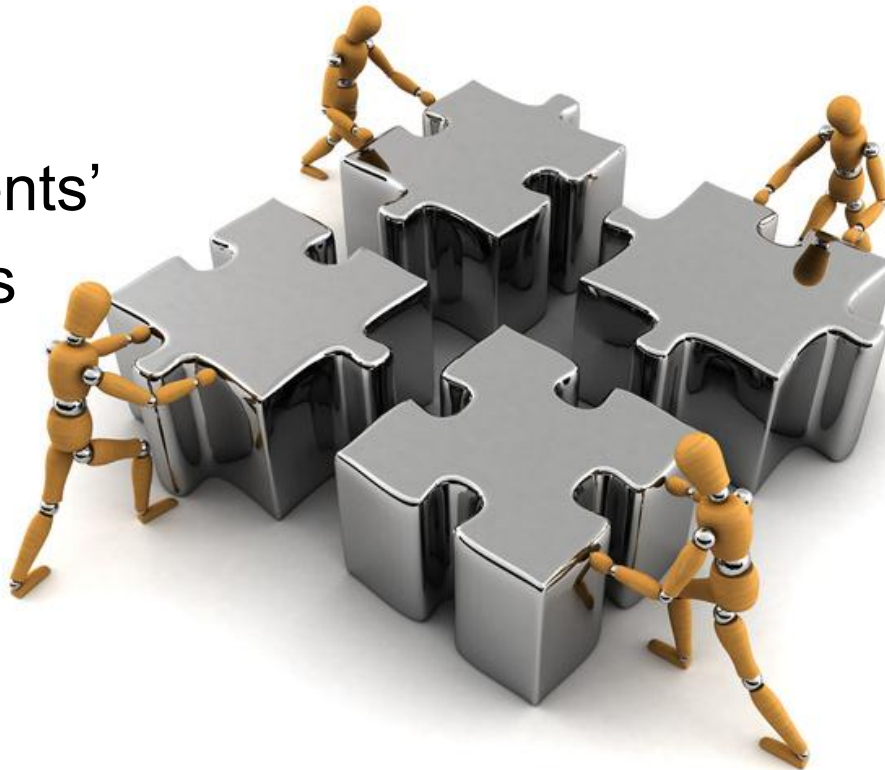
- ❖ There are no contractual agreements between suppliers, consultants and the LDC/OPA.
- ❖ Incentive Payments are made directly to the participant



Working together we can

Address challenges faced by client firms

Manage clients' expectations



Reduce approval time for proposal

Avoid rejection of proposals

Your Supporting Role

- Project identification and proposal development
- Study execution
- Project qualification/feasibility assessments
- Manage the process to ensure smooth delivery of requirements
- Leveraging your experience to bring forward projects that may be on the shelf



Bringing Value to Your Business

- The Program provides funding, which will be used to procure your services and products
- May create opportunities to revitalize relationships with current clients or prospects
- Helps encourage the development of a culture of conservation and ongoing investment in energy related projects

Challenges Faced by Participants

Challenges

- ❖ Access to capital, protecting cash flow
- ❖ Increased competition, emergence of new competitors
- ❖ Access to resources and manpower

How Industrial Accelerator helps:

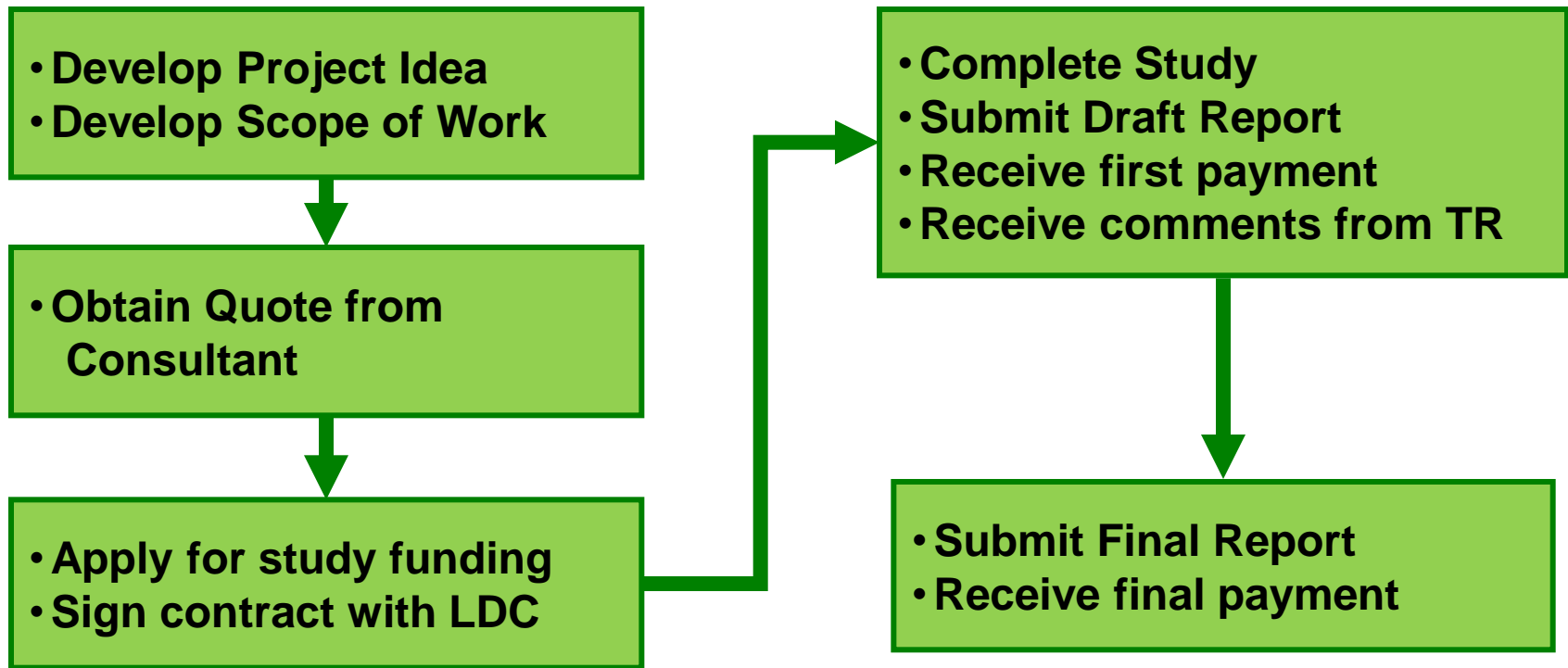
- ❖ Financial support through incentives
- ❖ Manage operating costs and energy cost uncertainty
- ❖ Improve cash flow
- ❖ Improve product cost structure and competitive position
- ❖ Leverage staff through use of consulting services



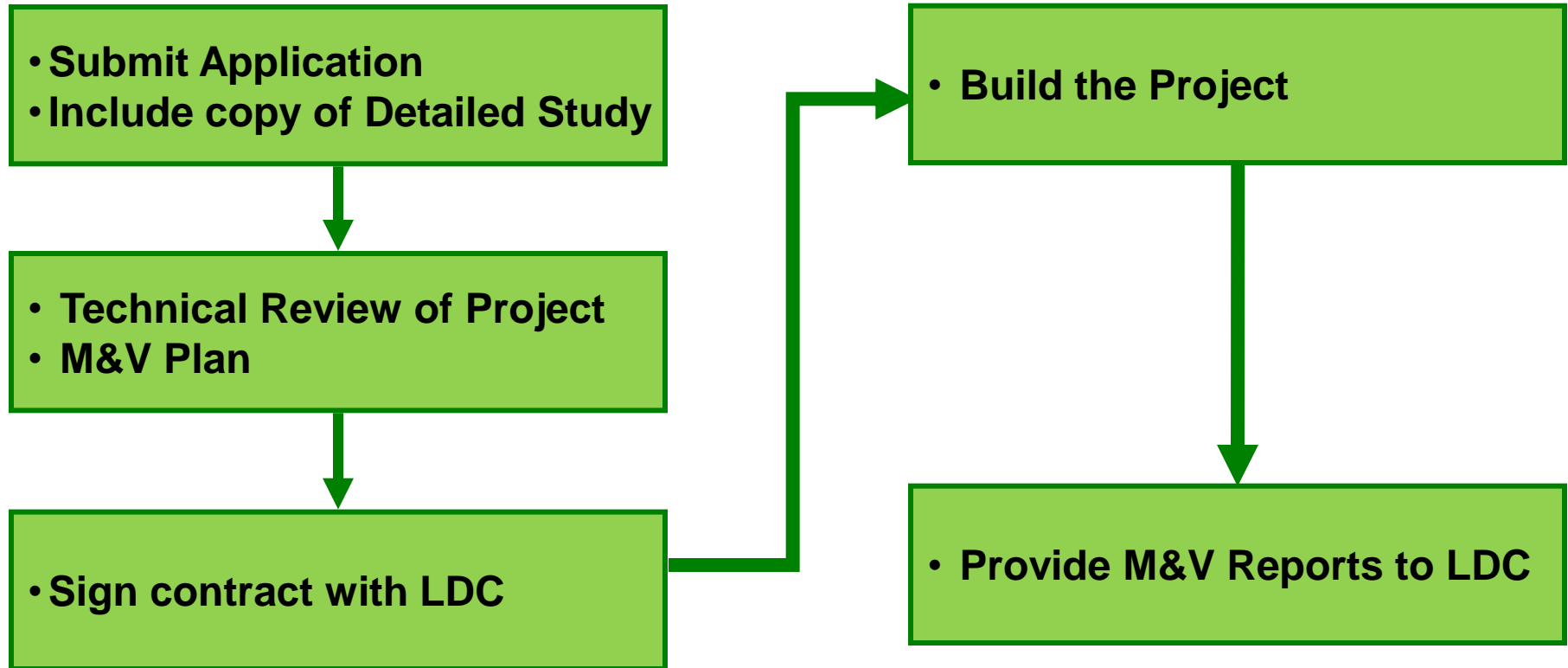


Managing Timeline Expectations

Process Flow for Studies (Participant Perspective)



Process Flow for Incentive (Participant Perspective)



Managing Timeline Expectations

Engineering Studies - Preliminary and Detailed

Step 1

- Funding Application
 - Summary: Approximately 30-40 Calendar days

Step 2

- Baseline Methodology
 - Summary: Approximately 8-12 Calendar days

Step 3

- Study Draft Report - Acceptance, Payment, and Approval
 - Summary: Approximately 35 Calendar days

Step 4

- Study Final Report - Must be received within 60 days of the Approval of Study Draft
 - Summary: Approximately 60-70 Calendar days

Managing Timeline Expectations

Incentive Agreement





Tips to Assist Participants

Tips – From our experience

- Go after “good” projects
 - Clear boundaries
 - Bigger projects
 - Data readily available
 - Top energy consuming areas
- Get the right people in the room
 - Operations, engineering, finance
- Be aware of customer capital investment cycles



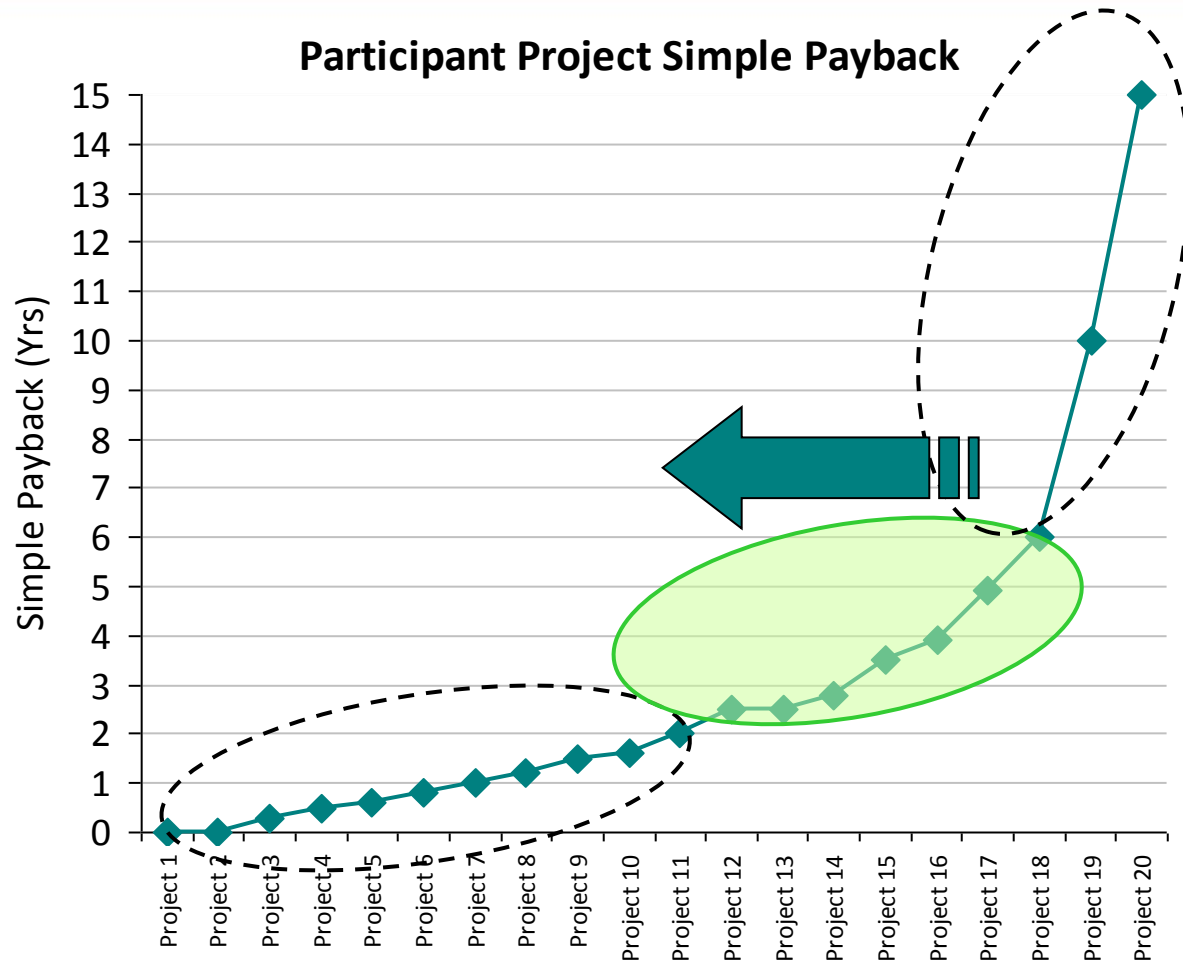
Attractive Project Characteristics

Project characteristics	Benefit
<ul style="list-style-type: none"> • Proven Technology • Projects supported with robust and comparable historical data and baselines 	<ul style="list-style-type: none"> • High confidence in the delivery of the savings
<ul style="list-style-type: none"> • Projects with a clear mechanism to energy savings • Projects where the mechanism for saving can't be manually overridden • Projects that are or will be supported with measurement, monitoring and control capabilities 	<ul style="list-style-type: none"> • Savings persistence
<ul style="list-style-type: none"> • Projects that utilize waste energy streams (Flared gas) 	<ul style="list-style-type: none"> • Environmental benefits
<ul style="list-style-type: none"> • Projects that yield long terms results 	<ul style="list-style-type: none"> • Low acquisition cost
<ul style="list-style-type: none"> • Projects with 3-5 years simple back 	<ul style="list-style-type: none"> • Cost effective project

Project Attractiveness

Finding a balance between:

- ❖ Cost effectiveness of a project
- ❖ Influence of the incentive on a project



Contact Us for Assistance

www.saveONenergy.ca

click on “For Business”

www.Industrialaccelerator.ca

Contact your Local Electricity Distribution Company

ANY QUESTIONS?





Appendix

Industrial Electricity Use By Sector

Industrial Ontario Electricity Use

