Traditional Energy Efficiency Projects and Energy Performance Contracts: A Comparative Analysis

Geneviève Gauthier, National Director
Community Energy Planning: Getting to Implementation in Saskatchewan
Saskatoon, June 26, 2015.
ECONOLER

› Is a Canadian consulting firm specialized in the design, evaluation and financing of energy efficiency projects and programs.
› Has completed over 3,000 mandates over 30 years.
› Has a team made up of 60 experts, including engineers, economists as well as financial and marketing specialists.
OUR EXPERTISE AND CLIENTS

› Energy Efficiency and Energy Management
› Facilitators for Energy Performance Contracting (EPC)
› Measurement and Verification (M&V, EM&V, M&T)
› Economic Analysis Services
› Program Evaluation and Design
› Energy Efficiency Financing (EPC, PACE, On-bill financing)
TODAY’S CHALLENGE

In only 15 minutes*:

› Demystify Energy Performance Contracting (EPC)

› Point out its features and characteristics

* To do so, a few shortcuts will be used, but I will be glad to answer to any specific questions afterwards
## Project Mode at a Glance

### Traditional
- End user acts as the project manager
- End user takes all technical and financial risks
- End user is responsible for financing
- No performance appraisal (erosion of savings)

### EPC Shared-Savings
- Third party acts as the project manager, and assumes most technical and financial risks
- Third party is responsible for financing
- Third party gets paid as a share of the savings

### EPC Guaranteed Savings
- ESCO acts as the project manager, and assumes most technical and financial risks
- End user is responsible for financing
- ESCO guarantees the performance
### KEY PLAYERS IN EE PROJECTS

| Traditional                  | › Engineering firms  
|                             | › Mechanical and electrical contractors  
|                             | › BAS providers |

| EPC Shared-Savings          | › Energy Services Companies (ESCO)  
|                             | › Funding body specialized in EE* that will work with ESCOs or players of the traditional market |

| EPC Guaranteed Savings     | › Energy Services Companies (ESCO) |
## PROJECT COST AND PAYMENT

<table>
<thead>
<tr>
<th>Method</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Traditional</strong></td>
<td>‣ Total cost is unknown until all contractors are selected, and <strong>is not guaranteed</strong>&lt;br&gt;‰ Payment in accordance with the progress of the project</td>
</tr>
<tr>
<td><strong>EPC Shared-Savings</strong></td>
<td>‣ Total cost is unknown until all contractors are selected, but <strong>is guaranteed</strong>&lt;br&gt;‰ Payment is a share of the measured and verified annual energy savings</td>
</tr>
<tr>
<td><strong>EPC Guaranteed Savings</strong></td>
<td>‣ The total cost is known and <strong>guaranteed</strong> as soon as the ESCO is selected&lt;br&gt;‰ Payment in accordance with the progress of the project</td>
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</tbody>
</table>
## PROJECT DURATION

<table>
<thead>
<tr>
<th>Type</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional</td>
<td>Projects usually stop when all ECMs have been commissioned</td>
</tr>
<tr>
<td>EPC Shared-Savings</td>
<td>Project usually stops from 1 to 10 years after all ECMs have been commissioned</td>
</tr>
<tr>
<td>EPC Guaranteed Savings</td>
<td>Typically, the project stops after the payback period</td>
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# MAIN ADVANTAGES

## Traditional
- Simple approach
- Adequacy with standard construction projects
- Lots of providers in the market
- Relatively fast to implement

## EPC
### Shared-Savings
- Turn-key projects
- No performance: no payment
- Could be off-balance sheet
- Collateral services: training, awareness, etc.

## EPC
### Guaranteed Savings
- Payback is guaranteed
- Total project cost is known from the beginning
- Persistence of the energy savings
- Collateral services: training, awareness, etc.
# MAIN DISADVANTAGES

<table>
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<th>Traditional</th>
<th>EPC Guaranteed Savings</th>
<th>EPC Shared-Savings</th>
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<tbody>
<tr>
<td>› Not performance oriented</td>
<td>› Takes longer to implement the project</td>
<td></td>
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<tr>
<td>› No services (training, awareness, optimization)</td>
<td>› End user has less to say on the ECM</td>
<td></td>
</tr>
<tr>
<td>› Final implementation cost is unknown until the contractors are selected</td>
<td>› Needs assistance to facilitate procurement, implementation, negotiation, and M&amp;V</td>
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</tr>
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TESTIMONY

“Having Econoler as a facilitator with this level of expertise has been invaluable to our team as the measures were analysed for technical capacity as well as suitability to the RCMPs long term needs.

Their awareness of the contracting rules and ability to spot the potential risks will ensure that our partnership with the ESCO remains in good standing as this long term partnership moves forward.”

Karen Dupuis, Corporate Management & Controllership Branch, RCMP
A good facilitator is one that has been involved in dozens of different projects, with a strong knowledge of EPC and M&V.

Facilitators can assist with:

- Project planning
- Procurement process
- Contractual negotiations
- Feasibility study and planning stage
- Measurement and verification (M&V)

For usually less than 1 to 5% of the total project cost, you can be assisted by a facilitator for the duration of the project (typically 12 years).

That cost could be integrated into the EPC.
THANK YOU
CONTACT ME IF YOU HAVE ANY QUESTION

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PROJECT PROCESS

Traditional
- Select Engineering Firm
- Select Project
- Select Contractors
- Implement
- (Usually) No Perform. Appraisal

EPC Shared-Savings
- Select ESCO
- Select Project
- Select Contractors
- Implement
- Monitor Performance

EPC Guaranteed Savings
- Select ESCO and project (2-step approach)
- Detailed Feasibility Study
- Implement
- Monitor Performance