U.S. Energy Service Company (ESCO) Industry: Recent Market Trends

Elizabeth Stuart, Peter H. Larsen, Juan Pablo Carvallo, Charles A. Goldman and Donald Gilligan

Electricity Markets and Policy Group
2015 ESCO Market Survey

• Identifying ESCOs:
  • NAESCO membership list
  • DOE and states’ qualified ESCO lists; Energy Services Coalition
  • ESCOs that requested training or accounts on eProject Builder
  • Research other companies that might engage in ESPC

• 2015 Response rate: 91% (43 of 47)

• Survey questions included:
  • 2014 revenues by market segment, contract type, region (new)
  • Expected revenue growth in next 3 years
  • New customers, use of tax incentives, financing approaches
  • Incorporation of non-energy benefits in performance-based projects
Current and Projected Revenues

Gross revenue (billion$, nominal)

- Reported revenues
- ESCO Projected revenues

Year
- n=47
- Goldman et al. (2002) (n=63)
- Satchwell et al. (2010) (n=44)
- Stuart et al. (2016) (n=47)
- Hopper et al. (2007) (n=46)
- Stuart et al. (2013) (n=45)
Revenues by Market Segment

<table>
<thead>
<tr>
<th>Year</th>
<th>Market Segment</th>
<th>Commercial/Industrial</th>
<th>Federal Govt.</th>
<th>Healthcare</th>
<th>Housing/Other</th>
<th>K-12 Schools</th>
<th>State/Local Govt.</th>
<th>Univ./Colleges</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td></td>
<td>15%</td>
<td>23%</td>
<td>22%</td>
<td>16%</td>
<td>6%</td>
<td>9%</td>
<td>7%</td>
</tr>
<tr>
<td>2011</td>
<td></td>
<td>19%</td>
<td>24%</td>
<td>19%</td>
<td>14%</td>
<td>6%</td>
<td>7%</td>
<td>8%</td>
</tr>
<tr>
<td>2014</td>
<td></td>
<td>21%</td>
<td>21%</td>
<td>24%</td>
<td>24%</td>
<td>10%</td>
<td>7%</td>
<td>8%</td>
</tr>
</tbody>
</table>

n=29
n=35
n=43
Revenue Share by ESCO Size

- **n=38**
- **n=45**
- **n=47**

**Gross revenue (billion$, nominal)**

- **2008**
  - Large (> $300M): 52%
  - Medium ($100M-$300M): 34%
  - Small ($0-$99M): 14%

- **2011**
  - Large (> $300M): 56%
  - Medium ($100M-$300M): 29%
  - Small ($0-$99M): 15%

- **2014**
  - Large (> $300M): 51%
  - Medium ($100M-$300M): 33%
  - Small ($0-$99M): 16%
Revenues by Contract Type

2008
- Performance-based: $0.9B (22%)
- Design-build: $2.7B (69%)
- Consulting: $0.7B (15%)
- Utility programs implementation: $0.1B
- Other: $0.1B

n=29

2011
- Performance-based: $0.7B (15%)
- Design-build: $3.1B (69%)
- Consulting: $0.9B (15%)
- Utility programs implementation: $0.1B
- Other: $0.1B

n=34

2014
- Performance-based: $0.8B (16%)
- Design-build: $3.7B (74%)
- Consulting: $0.2B (15%)
- Utility programs implementation: $0.1B
- Other: $0.1B

n=43
2014 Revenues by U.S. Census Region by ESCO Size

- **New England**
- **Middle Atlantic**
- **South Atlantic**
- **West South Central**
- **East South Central**
- **West North Central**
- **East North Central**
- **Mountain**
- **Pacific**

**ESCO Size**
- Large (>$300M)
- Medium ($100M-$300M)
- Small ($0-$99M)

*n=43*
Revenues from New Customers by Market Segment (2012-2014)

Gross revenue from performance contracting projects (billions, nominal)

Customer
- New
- Old

Market segment
- Federal Govt.
- State Local Govt.
- K-12 Schools
- Univ. Colleges
- Healthcare
- Housing Other
- Commercial Industrial

n=40
Non-energy Benefits in ESPC (2012-2014)

Use NEB?  No  Yes

Federal Govt.  N=17
State Local Govt.  N=31
K-12 Schools  N=29
Univ. Colleges  N=21
Healthcare   N=18
Commercial Industrial  N=12

Avoided Capital Costs
Avoided O&M
Demand Response
Increased Revenues
Tradeable Emission Credits
Water

Non-energy benefit (NEB)
ESPC for Facility Improvement (2012-2014)

Number of ESCOs

Market segment

Level of use of ESPC for facility improvements purposes

- Zero (0%)
- Low (1% to 33%)
- Medium (33% to 66%)
- High (above 66%)

n=28
Use of Tax Benefits (2012-2014)

Tax benefits usage level:
- High (above 66% of projects)
- Medium (33% to 66% of projects)
- Low (1 to 33% of projects)
- Zero (0% of projects)

Number of ESCOs using tax benefits:

- Commercial Industrial
- Federal Govt.
- Healthcare
- Housing Other
- K-12 Schools
- State Local Govt.
- Univ. Colleges

n=30
Potential Factors Influencing Revenue Trend

- **Increased competition** from companies not meeting LBNL historic definition of ESCO (e.g., mechanical contractors)
- ESCOs may have achieved significant [market saturation](#) in some market segments; remaining market may present higher barriers
- **Budget uncertainties** in state/local/educational markets exacerbate barriers to the long-term commitment of ESPCs
- Post-ARRA [reduction in state energy office staff](#) and consultants
Contacts/Acknowledgements

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