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

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Definition of U.S. ESCO

- Project developer in business of improving *end-use energy efficiency*:
  - Combine engineering expertise with financial services to extract untapped potential for energy efficiency
  - Integrates broad range of services: project identification, engineering & design, financing, construction, M&V of savings, maintenance, and billing

- Performance contracting: ESCO's compensation is tied to project's performance

- Product and Service Strategies
  - full range of energy efficiency services
  - energy and facility management services
  - build/own/operate major energy facilities (cogeneration, onsite renewables)
Estimated Size of U.S. ESCO Industry

NOTE: ~25% Annual Growth Projected by Industry for 2009-2011
Municipal/state govt, K-12 schools, university/colleges and hospitals (MUSH) account for 69% of ESCO industry activity in 2008 (~$2.8 billion)
Energy efficiency projects account for $3B and onsite generation & renewables account for 20% (~$800 million) of ESCO industry revenues.
Project Objectives
- Track ESCO industry performance and evolution over time
- Examine trends in savings, investment levels, market penetration of EE technologies, and customer preferences

Approach
- NAESCO/LBNL partnership with voluntary participation from industry and government agencies
- Project data primarily from NAESCO accreditation process
- Information verified through peer review and reference checks
- ~3,300 ESCO projects in 49 states representing over $8B in total investment (or about 20% of the total ESCO industry activity)
ESCO project investments tend to be concentrated in heavily populated states that have supportive enabling policies…
Measures Installed in ESCO Projects

- Lighting and HVAC controls are the most commonly installed measures.
- Growing importance of onsite generation and renewables—but starting from a small base.
We classify each project by defining their primary retrofit strategy (e.g., lighting-only, major HVAC, minor HVAC, distributed generation).

Share of lighting-only projects is declining over time (25 to 3%); share of onsite, distributed generation projects is increasing over time.
Typical ESCO project costs $2.2M in federal government and university/college facilities; ~$1.5M in K-12 schools and local govt. buildings. Investment levels are much lower in private sector buildings ($500,000).

FG = Federal govt.
GO = State/local govt.
UC = Universities/colleges
SC = K-12 schools
HH = Healthcare
PH = Public housing
- Major HVAC Projects typically save ~25% of baseline energy usage
- Lighting-only retrofits typically save ~30-40% of lighting energy usage
Payback times are typically 7-9 years in public sector projects; 4 years in private sector projects; and 2-3 years for lighting only projects.
The ESCO industry continues to grow despite a general downturn in the broader economy.

ESCOs are installing a more comprehensive mix of technologies at project sites.

The public/institutional market sector continues to be the dominant market for U.S. ESCOs.

The investment level of ESCO projects continues to increase primarily because of customer demand for a more comprehensive mix of capital-intensive technologies.

Despite installation cost increases, ESCOs are still able to generate net economic benefits for their customers.
For More Information...

- Download reports here: http://eetd.lbl.gov/ea/emp/ee-pubs.html

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- Project investment levels (i.e., per-contract installation costs) are increasing over time, even after accounting for effects of inflation;
- Reasons: More comprehensive projects, including on-site generation and non-energy installations; labor and material cost inputs may also be increasing faster than inflation rate.
Increasing installation costs over time are influencing payback time trends.