

ESCOs Around the World

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ABSTRACT

Imagine an industry where 25-50% return on investment is common...an industry that can cost-effectively reduce pollution and bring us closer to our sustainability goals...an industry where customers are offered reduced operating costs and new equipment without front-end capital expenses...an industry where the project costs are paid for out of avoided utility costs—guaranteed...an industry where targeted projects can reduce carbon emissions, thus avoiding important impacts on climate change. The appeal is enormous, so it is not surprising that the energy performance contracting industry and the energy service companies (ESCOs), which offer all this, have been growing rapidly.

In fact, the appeal is so great that one wonders why there is not a crush of new firms striving to be ESCOs on every street corner in the world and anywhere potential beneficiaries are lining up to find such providers. Unfortunately, there are serious barriers and difficulties that work against such an industry.

Given this background, it seems inevitable that questions regarding the status of the industry are frequently asked. In an attempt to respond to these questions, experts around the world were asked to report on the status of the ESCO industry in their respective countries. These reports were compiled in a book, *ESCOs Around the World: Lessons Learned in 49 countries* [1]; some of the major findings are summarized in this article.

WHAT WE CAN LEARN

Unique? Of course we are. Our firms, our organizations, the way we do business—all are unique. Give the folks in Texas a case study from the northeast, and they'll say, "But this is not New Jersey!"

In Japan, the comment is, "But this is not America!" In Italy, they stress they are not Germany. Spain is not France, and Madrid is not Valencia.

Among all our unique qualities, however, runs a surprising amount of commonality. Working on *ESCOs Around the World*, an incredible wealth of good information from people in the ESCO business was compiled. While situations were, and are, unique, there is much in common than can benefit us all. Pierre Langlois (who made significant contributions to the book) and I are deeply indebted to each of the contributing authors for taking time from their busy schedules to tell us the status of the ESCO industry in their country, and for sharing the obstacles they have encountered, some solutions they have tried, and the opportunities before them.

THE GLOBAL MARKETPLACE

For those of you looking for overseas opportunities, our colleagues offer some exciting choices. If you are wondering if these opportunities are for you, consider a comment once made by Don Smith, a pioneer in US performance contracting. When Don was asked why he was looking at foreign markets for energy masters, he replied rather bluntly, "Because that's where the market is, stupid!" A word of caution, however. There is not sufficient information in the country reports to take you beyond US shores. An incredible amount of additional homework is needed. As Jim Hansen stated in *Performance Contracting: Expanding Horizons*, "An in-depth investigation of selected countries with limited risks can allow an ESCO to bring together the ingredients that can lead to success. An ESCO that does not have the internal resources to make a careful business evaluation in a selected country should secure outside consultation or stay home." [2]

Intriguing information can come from most unusual sources. For those of us with roots in industrialized countries, we often see ourselves "helping" developing countries. We can. We do. But they have much to teach us. From reading all the information from the contributing authors, we find that what happens there can help us work more effectively in areas closer to home, where traditional business strategies don't always work.

LESSONS FROM DEVELOPING COUNTRIES

Some of the biggest problems ESCOs have in serving their clients are vandalism and theft. The energy manager at the Mumbai airport was convinced that performance contracting would work there. He had, however, one serious problem—about 100,000 people lived in the space near the runways. They routinely took the lights at the end of the runway, and they connected to the wires strung there to drain unknown amounts of power from the airport. He declared that he could stop them but that he would be dead the next day. In this type of environment, ESCO opportunities are limited. Lesson learned: Know the culture and know the limits of what might work.

Another prevailing problem is the need for a functioning legal system. Contracts are rarely enforceable in developing countries. Work typically proceeds with the close relationship of the parties and a handshake. This is not as foreign as it seems. Currently, performance contracting has been brought to a standstill in one state in America, as a client apparently feels no compunction to comply with the contract terms to which it originally agreed, and the courts may okay a unilateral change in contract language. A handshake would probably have been more binding.

In China the greatest concern that is closely related to contract enforcement is collecting payments from customers. In Shandong Province, the ESCO there cleverly hired individuals who were close to a specific customer to collect those payments. That person's only job is collecting the payment on a regular basis, and his pay is based on making that collection. It works.

A strong component that all of these situations have in common is: Know the local situation. This is equally true in developed countries. Many societies are a patchwork of religious, linguistic, and cultural diversity. A critical component in sustaining your business is becoming informed regarding local conditions and becoming part of the local scene. Lessons from developing countries include: Work with people who already effectively doing business in that market, become partners with those who know the local dynamics, and make it worthwhile for them to do business with you. It often pays to demonstrate your value to them through employee training and broader community involvement. Key ingredients are recognition and respect for what they offer.

Whatever country you are working in and whatever your busi-

ness model may be, the common message throughout the developing world is that a business can be successful if it is a win-win for the company and the local people. This means you must be at the forefront of helping kids and expanding the economy. Success is possible, but results are apt to be short-term. ESCOs can't afford short-term. Direct purchase or very short payback measures can help you establish a presence until "long-term" is within reach.

The old line about global markets and local solutions is true. Local input in developing strategies unique to each market is critical.

MAJOR LESSONS FROM AROUND THE WORLD

Overwhelmingly, our colleagues, when reporting on ESCO development in their respective countries, cited the importance of *government leadership*. In particular, they frequently cited a lack of definition of what an ESCO is and does. Most of the book's contributing authors indicated that they are expecting the government to provide the definition and describe the parameters of operation. Our colleagues repeatedly made it clear that the absence of government action, or the wrong action, can create huge obstacles.

Closely related to the reliance on government leadership for industry growth is the expressed need for *accreditation and certification*. In Austria, the government has developed the "thermoprofit" quality labeling procedure. South Africa is currently acting on a broad mandate to "accredit" ESCOs. Turkey has a new law which requires that the qualities of an ESCO be defined. In the US, some ESCO accreditation has been done by the National Association of Energy Service Companies or its members, and the US government periodically prequalifies ESCOs as eligible to perform work in federal agency buildings under an abbreviated selection process.

Since an ESCO is often viewed as being only as good as its last project (which throws certification into question), there is a growing trend to certify the expertise of specific ESCO personnel. The certification programs offered by the Association of Energy Engineers are filling a great need in this regard. In particular, the Certified Energy Managers program and work to certify measurement and verification professionals are gaining traction around the world.

Most countries are calling for some specific help in *measurement*

and verification. Tunisia has noted the need to assess EE investments, and Malasia stresses the need for M&V to “document” and sell success. Work by the US Department of Energy leading to the International Performance Measurement Verification Protocol (IPMVP) has become the basis for internationally accepted M&V protocol [3]. When the US government cut the funding for the IPMVP, Hansen Associates was very proud that it took the lead in creating a non-profit organization that kept the process operational. In a few countries, the IPMVP has been modified. In Egypt, the UNDP, as part of its involvement in an EE project, produced a simplified version of the IPMVP. As yet, no records are available as to how well the simplified version is fulfilling the requisite M&V needs.

Financing is a perennial problem. Several countries cite the lack of interest by commercial banks. While multi-lateral banks such as the World Bank and the European Bank of Reconstruction and Development have supported energy efficiency and ESCO work, little has been done to help commercial banks see the need and the most effective procedures for loaning money to ESCOs. The International Energy Efficiency Financing Protocol (IEEFP) has taken some initial steps in this regard; one contributing author, Monica Perez, describes in her report some early steps by IEEFP in Mexico.

Our colleagues revealed a growing use of *guaranteed savings* as a financial model. Outside of North America, however, *shared savings* is still the most frequently used financial model. The popularity of shared savings is based on its clear advantage when introducing a new concept to an area without asking the customers to incur any debt obligations. In addition, there is appeal for customers who are having difficulty establishing creditworthiness in a transitional economy. Finally, some large companies, with their greater resources, have a market advantage over small ESCOs that cannot establish a significant market presence without becoming too highly leveraged.

A prevailing problem, which is apparent in US markets as well, is the *lack of customer awareness* of the opportunities ESCOs offer. Some of the contributing authors lament the fact that, even after more than two decades, the potential client base does not really understand the process. Among the prevalence of ignorance is a growing range of problems such as excessive claims of success, tariff correction “rip-offs,” inadequate audits, weak M&V, and project failures. In such instances, bad news travels fast and problems are readily believed.

One activity by ESCOs around the world that is conspicuously absent in the reports is the inclusion of renewables in their projects. Activities by ESCOs to promote **renewables** appears to have been limited by such factors as:

- 1) Renewables can often be expensive.
- 2) Advocates of renewables tend to place such advocacy in competition with EE.
- 3) Renewables often require massive efforts, such as wind farms, that are not customer specific and therefore don't fit the ESCO model.
- 4) ESCOs often do not have the in-house expertise to recognize the opportunity and/or implement the concept.

In the US report, *ESCOs Around the World*, there is the statement, "EE Pays for Green." This offers the best reason that ESCOs in all corners of the globe should become more involved in the effort to help customers move toward sustainability.

CONCLUSION

ESCOs Around the World is a compilation of reports by dedicated professionals with invaluable insights. It is rich in information that the ESCO industry can use in any country. As advocates for performance contracting, we have found the gathering of this information to be very gratifying. There is certainly a ways to go, but the maturity of this relatively young industry is a joy to behold. From Washington, DC to Bangkok, I have variously been labeled the mother, grandmother, and godmother of performance contracting. I gladly accept all three titles, for ESCOs are alive and well, and they are doing a great job of helping the economy and preserving our natural resources and our environment.

References

1. Hansen, Shirley J. with Pierre Langlois and Paolo Bertoldi. *ESCOs Around the World: Lessons Learned in 49 Countries*. Published by The Fairmont Press, Lilburn, Georgia. 2009.
2. Hansen, Jim. "Assessing International Opportunities," Chapter 17, p. 29. *Performance Contracting: Expanding Horizons, 2nd Edition* by Shirley J. Hansen. Published by The Fairmont Press, Lilburn, Georgia. 2006.
3. For further information on IPMVP, see the organization's website, evo-world.org

ABOUT THE AUTHOR

Shirley received her Ph.D. from Michigan State University. Among many recognitions, she is most proud of her distinguished alumnae award from the university and her induction into the Association of Energy Engineers Hall of Fame. For many years, Shirley has been recognized around the world as a leading authority in the field of energy management, policy, and financing, with particular expertise in performance contracting. Her expertise is backed by more than thirty years as an experienced administrator, educator, author, and lecturer; currently she is Chairman & Chief Executive Officer of Hansen Associates, an energy conservation and management firm. Prior to founding Hansen Associates in 1980, Shirley served as the Director of the Schools and Hospitals Conservation Division of the U.S. Department of Energy (DOE).