

### **Paper # 3**

#### **ESCO Models in India**

You may have heard there is or will be a new neighbor around the corner: Energy Services Companies (ESCOs).

Forget about all the permutations, mutations, clones and other not helpful explanations and life forms of what an ESCO is supposed to be. In my opinion an ESCO is simply a firm that convinces a client from industry or commerce to let the ESCO (i) conduct an energy audit, (ii) prepare an investment grade paper and strategy on how to reduce energy cost in a firm, and (iii) invest in the firm to implement the recommendations, and (iv) prove the energy cost reduction to get paid.

Another approach which comes closer to the definition of an Energy Service Provider (ESCO) is the following concept common in Europe: An ESCO signs a contract with a client in need of electricity and process heat and simply sells these two forms of energy at a cheaper rate to the firm. In other words the ESCO generates and sells energy in terms of kWh or tons of steam on the premises of the client. All investments, operational costs and maintenance are with the ESCO. The client only buys electricity and steam.

Based on either definition there is no ESCO operating in India so far. It is also highly doubtful that an ESCO may be a successful business model for industrial clients in the future.

The following paradox has so far prevented ESCOs from providing services in India although they have tried:

Large and professionally managed energy intensive industries are not interested in hiring an ESCO to reduce energy costs because they have the equity, the know how and engineering divisions to implement recommendations on their own. All that they need are "Ideas" provided by a fixed fee based energy audit. These firms are well aware that an ESCO approach is the most expensive way to reduce energy costs since an ESCO shares in verified savings and provides financing at usually higher costs.

In other words ESCOs and well managed large Indian firms do not match.

Smaller firms, with little know how, no access to financing and no capability to implement recommendations to reduce energy cost would greatly benefit from an ESCO, even at higher costs.

However under an ESCO service model the ESCO carries 100% of the risks, including: the risk of technical miss judgment, the financial risk, the risk of noncompliance of the firm with her obligations under an ESCO contract and the risk of the firm going out of business before the project cycle is complete, and last but no least the risk of proving to the firm actual energy savings in a challenging environment of statistical noise in data collection and analysis.

Consequently the most desirable clients are not interested in the ESCO and those firms who may sign with an ESCO will not find an ESCO willing to take the risks.

All hope is not lost. BEE is experimenting with government and other public buildings where an ESCO and client may be a better match. Furthermore the ESCO model has some merit in the biggest problem bothering the power sector in India. More than 30% of all public power is consumed in rural areas by the agricultural sector, at about 9% cost recovery. In a scenario where the "last miles" count with respect to reduction of technical and commercial losses, an ESCO model may still be a risky but nevertheless practical solution. As it stands, every kWh supplied to farmers at costs of Rs. 3-5 realizes only.

Consequently every kWh saved due to higher efficiency of transmission and enduse of electricity in rural areas, avoids cost of Rs. 2-4 for those who supply power to the substations.

From this point of view energy savings in rural areas should be the most profitable thing for suppliers to start with.

The trouble with this approach is the hard realities that SEB's are not really responsible for financial losses of power supply to rural areas.

Stay tuned for more news!

Yours

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