Why Hungary?
Lessons Learned from the Success of the Hungarian ESCO Industry

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ABSTRACT

Hungary has been celebrated as one of the most successful cradles of the ESCO industry in Europe. Utilities have also championed performance-contracting type services in Hungary. Furthermore, most key electric suppliers claim that energy efficiency services will play a more significant role in their product offerings, post-liberalization, than they do in their portfolios in Western Europe.

Why Hungary? Why have ESCOs flourished in Hungary, while they are facing stronger battles to get off the ground in several other European countries? Why are energy efficiency services projected to play a more significant role in the liberalized Hungarian electricity market than in many other European countries? What can the world learn from this case? – Which are the success factors that are transferable?

The paper provides an analysis of these questions. The results of the paper are based on the insight and experiences of an international group in the ESCO business, as well as interviews conducted with most of the key participants in the Hungarian ESCO industry and representatives of electricity suppliers. The paper discusses the factors determining the success or failure of ESCO industries in a general context, this context being the Hungarian electricity market, the liberalization process, the development of the banking sector and the financial environment, government policies, and international aid programs, all of which have influenced the present landscape of the performance-contracting industry. The paper concludes by identifying internationally transferable success components.

Introduction

The business-based provision of energy efficiency services, or energy performance contracting, has been celebrated as a key instrument to deliver demand-side energy efficiency in liberalized markets around the world (see e.g. Bertoldi et al. 2003 and ECS 2003 for Europe; Vine 2003 for an international survey; O'Drian et al. 2000 and Vine, Nakagami & Murakoshi 1999 for the USA; Murakoshi & Nakagami 2003 for Japan). Market players, who are best positioned to deliver such services to consumers, are energy service companies (ESCOs) and energy suppliers. Since ESCOs can capture cost-effective energy-efficiency potentials without significant market intervention or institutional budgetary spending, they have come into the limelight of the energy-efficiency community. While many studies estimate that the size of cost-effective energy-efficiency investments is considerable around the globe – just the European potential market has been estimated to be 5-10 billion Euros per annum (Bertoldi et al. 2003) – and thus should represent attractive business opportunities in many countries, the ESCO industry is getting off the ground with variable success around the world. Large differences can be found even within the European Union (EU). For instance, in 2002, there were about four hundred and

eighty ESCOs in Germany with a total annual turn-over of about 3 billion Euros, whereas Bertoldi et al. identified only three active ESCOs in Finland with a total turnover of 4-5 million Euros in the same year, with another three recently started (Bertoldi et al. 2003).

In recent years, Hungary has been reported as one of the most successful cases for the ESCO business in Europe. For instance, the International Energy Agency considers Hungary to be "one of the leading countries to develop the scope of ESCOs in the 90s [...]" (IEA 2003b, 46). In addition to ESCOs, utilities have also championed offering performance-contracting type services in Hungary. Furthermore, many key electric suppliers claim that energy efficiency services will play a more significant role in their product offerings, post- liberalization, than they do in their portfolios in Western Europe (Bakacs pers. comm.; Boross pers. comm.).

Why Hungary? Why have ESCOs and performance contracting been flourishing in Hungary, while they are facing stronger battles to get off ground in, for instance, several other Central and East European (CEE) countries? Why are energy efficiency services projected to play a more significant role on the liberalized Hungarian electricity market than in many other European countries? The paper seeks to provide answers to these questions, and investigates if any of the factors contributing to this success are transferable.

Background

Hungary shed communist rule in 1989. Since this date, the economy has been successfully transformed from a centrally planned system to a market economy. Hungary joined the EU in May 2004. However, despite the respectable economic milestones achieved through the reforms during this period, the legacy of the socialist regime still lingers in several ways. Hungary and other CEE countries are still catching up with the West in the environment and energy fields. In particular, Hungary has completed all steps of the energy market reforms required by the European Union's *Acquis Communautaire* (Ürge-Vorsatz et al. 2003). Today, over half of the electricity market consumers are free to select their supplier.

Perhaps the most important legacy of the socialist regime in the energy field has been high-energy intensities. The economies of CEE countries are still less energy-efficient than those of the EU-15, though this gap is gradually closing for some CEE countries due to fuel switching, efficiency gains and replacement of capital stock (for more details see Ürge-Vorsatz et al. 2003). For instance, in 2001, primary energy intensity, expressed in purchasing power parities (PPP), was almost 80% for the Slovakia, more than 60% for the Czech Republic, more than 40% for Poland, and approximately 20% higher than the EU-15 average for Hungary. Therefore, the economies of CEE countries are still more wasteful than those of EU-15.

In the past, low and subsidized energy prices and the lack of incentives for efficiency have created obsolete, polluting and highly inefficient electricity industries. Centralized energy systems, large power plants, very long transmission lines, and old technology resulted in sizable production, and transmission and distribution losses. On the demand-side, inefficiency was caused by unrealistic prices (thus no incentive to save), inefficient equipment, lack of awareness, and wasteful consumer behaviour and management practices. Some of these problems still exist. Hence, large opportunities for improved efficiency are still waiting to be tapped. This socialist heritage after the political changes, combined with rising energy prices and increasing consumption, made CEE countries realize that there was a great need for energy savings. Since the collapse of the old system, much effort has been invested in changing the legislation,

regulation and policy, but still not enough to create a sufficiently favourable atmosphere for energy efficiency.

Description of the Hungarian ESCO Market

In the past decade Hungary has seen a significant growth in its energy efficiency business, ESCO activity, and market acceptance. From 1996 to 2000 alone, the number of ESCOs active on the market increased at least fourfold (CJ Aron Associates 2000). [1] Analysts of the international energy community have observed that the Hungarian energy efficiency industry is better established (in terms of longevity) and, at the same time, more solidly based (in terms of competition and maturity of the market) than in most other transition economies (EGI 2002; ESC 2003); and Hungary is one of the leading countries to develop the scope of ESCOs (IEA 2003b). For instance, Ligot (2001) ranked Hungary as the most "ESCO friendly" country among the CEE countries in 2001. While there has been no official overall survey of Hungarian market potential, Wright (1999) observed that "Western companies sense a potential USD 2 billion market in Hungary".

The Hungarian ESCO market was born right after the political changes, at the outset with the trade of energy efficiency equipment, followed by the emergence of installation companies and private energy auditing capacities, constituting largely of consultants and engineers (EGI 2002). Today, there are about ten to twenty key players on the Hungarian ESCO market whose primary business is performance contracting. In addition, there are about two hundred other market players, who include the delivery of energy efficiency services or investments among their portfolio. Utilities also play an increasing role in providing performance contracting and ESCO type services, as will be described below. EGI (2002) distinguishes between the following categories of ESCOs in Hungary: 1) ESCOs not included in the money flow (50-100 with a market value of USD 4-8 million); 2) ESCOs working according to the concept "ESCO as the borrower" (ten-twenty with a market value of USD 12-20 million); 3) and ESCOs that undertake operation (less than ten, whose overall market value changes year by year but can be estimated to HUF[2] 5-7 billion annually – i.e., USD 20–28 million).

The market is currently focused on public sector institutions (municipalities, schools, hospitals, etc.): *the majority* of energy efficiency investments in the municipal sector are made by private entrepreneurs (EGI 2002). In his international survey of ESCOs, Vine estimates that 80% of the ESCO activity in Hungary is targeted at the municipal sector; the remaining 20% are shared between the industrial and residential sectors (Vine 2003). Typical ESCO projects include public lighting, district heating and combined heat and power (CHP) investments. There have been various trends dictated by the actual legislative and financial background. Earlier public lighting projects were typical, but today, CHP (typically the gas engine based CHP) is in the spotlight. There have also been some fuel conversion projects, and boiler house reconstructions (Kovacsics pers. comm.). The industrial sector, in particular, has been getting more attention recently.

[1] Clearly the number of ESCOs in the country is only one factor that influences the level of investment. In general exact numbers showing the annual turnover of ESCOs are hard to obtain. See next paragraph for estimations of the market value of ESCOs active in Hungary.

[2] Hungarian Forint

Reasons for the Success of the Hungarian ESCO Industry

Experts in the ESCO industry have observed that the Hungarian ESCO market is well developed in comparison to the ESCO markets in other European countries (CJ Aron Associates 2000; ECS 2003; EGI 2002; IEA 2003b). So why has the ESCO business flourished in Hungary rather than in other CEE countries with similar initial conditions, such as Poland or the Czech Republic? The reasons are complex, and several of them are country specific. We divide the factors contributing to the success to those arising from: 1) the general context, 2) the financial sector, 3) the energy sector, and 4) international aid programs.

Success Factors: General Context

To start with, as mentioned above, energy intensities in former communist countries ranked among the highest in the world after the collapse of the socialist era, leaving substantial opportunities for improvement in energy efficiency. Due to the neglect of energy management and good maintenance, large potentials have existed at cost-effective levels: e.g., in Poland, Slovakia and the Czech Republic the economic potential[3] of total energy efficiency has been reported to be in the range of 18-22% (Ürge-Vorsatz et al. 2003 and references herein). SEVEn, cited in Evans (2000), estimates that the ESCO market potential in the Czech Republic is about USD 10 million per year. Low payback periods, such as three to five years for net investment/saving ratios, are not uncommon in the CEE region. However, the fact that Hungary has the lowest energy intensity among the so-called Visegrád Four countries (Hungary, Poland, the Czech and Slovak republics) shows that large energy efficiency potentials alone are not sufficient to create a sustainable ESCO market (see IEA 2003a).

Hungary led the way with the market-oriented restructuring of its economy, starting in the 1980s. Within the economic reforms, it has been a leader in electricity restructuring in the region by completing a large share of unbundling, price liberalization, privatization, lifting of most subsidies, and discontinuing cross-subsidies by the late 1990s. By 2004, all non-residential electricity consumers were eligible to choose their supplier; and the gas market has been opened as well. The ownership of the district heating systems was transferred to the local governments, heating stations were privatized, direct subsidies were stopped and state owned flats were also privatized. Considerable amendments have been made in the legislature as well. Devolving statutory powers to local authorities, fiscal decentralization and rules of public budgeting related to energy savings have also greatly contributed to the development of ESCO projects in the municipal sector[4] (Rezessy et al. 2004). Last, but not least, payment arrears and commercial losses are much less of a problem in Hungary than in the rest of the region.

Mainly as a consequence of radical economic reforms, enterprises came under pressure to reduce costs, and often started to outsource energy efficiency upgrades. This is because industry in this region typically has limited access to capital, and when capital is available, it is directed to low-payback investments, such as marketing and development.

[3] At a discount rate of 5 %.

[4] Hungarian municipal institutions can keep their energy costs constant if they have signed a contract with an ESCO and if the ESCO retains ownership over the equipment until the end of the contract. In this case, during the contract duration the municipality is paying the same energy costs as it formerly paid, but in the form of a service fee to the ESCO. This service fee includes the previously paid energy costs plus the equipment fee (Rezessy et al. 2004).

Success Factors: Financial Sector

Along with early general economic reforms, Hungary has also embarked on a dynamic schedule to privatize its banking sector. Many banks were acquired by or merged with foreign banks in the mid 90s. By the late 90s, the banks in Hungary typically had high liquidity and often provided long-term financing. In addition, loans were available in local currency (Hungarian Forints), eliminating perceived local currency risks. This optimal banking background was set in a favourable economic environment. Interest rates have come down substantially from 20 – 24% in 1990 to 8 – 10% in 2003[5]. Inflation has been controlled, and has been reduced from as high as 25% in 1995 to less than 5% in 2003. This significant improvement in the Hungarian capital market conditions has motivated financial institutions to become more aggressive in seeking new markets for lending (CJ Aron Associates 2000).

Beyond the good initial financial sector, banks gained early experience with energy efficiency projects through international projects (these will be detailed further below). Several subsidized loan schemes have been available for energy efficiency through state and multilateral programs, often administered by financial institutions and commercial banks. Following the footsteps of multilateral efforts, the Hungarian state has also directed various funds and subsidies towards energy efficiency projects. While the total amount of these funds was not sufficient to transform the ESCO market alone or to have a large impact, their importance lays, among others, in the fact that the market and financial sector has acquired further experience in performance contracting (PC) and third party financing (TPF), practices have evolved, and new companies have been established or old firms added PC to their business portfolios.

Leasing has also been permitted and encouraged early in Hungary through institutional reforms, enabling this concept to be used for many types of projects, including energy efficiency projects. The lessons learnt from the leasing experience proved to be very important in the development of ESCO-type off-balance-sheet financing for energy efficiency projects, as both rely on the same concept.

Today[6], the financial settings for TPF PC projects are very positive in Hungary. Banks are more in favour of energy efficiency projects now than previously, because of the mature ESCO industry and secure profitable projects. For instance, in 2003, OTP Bank, the largest Hungarian bank in terms of equity and assets, had 20 million Euros worth of lending through ESCOs. The bank is also among the co-founders of some ESCOs through equity investments (Weöres 2003). Advantageous loan schemes with 9.5% interest rates, compared to 33% at the initial phase, are commonly available.

Success Factors: Energy Sector

One of the, if not *the*, most important conditions for a successful PC industry is the pricing of energy. Within the economic framework of the socialist economy with nominal residential tariffs, flat rates, high general energy sector subsidies and heavy cross-subsidies, a profit-oriented energy efficiency industry has little potential for development. Therefore reforms in energy pricing are an important precondition for ESCOs in CEE.

[5] At the end of 2003 Hungarian central bank has raised the bank base rate to 12.5%. The expectations by the business sector are that this is a temporary measure.
[6] Early 2004

As discussed above, Hungary has also been a pioneer in the CEE region in energy sector reforms. However, pricing reforms were sluggish until the mid-1990s. Then, the majority of energy enterprises were privatized, primarily by foreign investors (such as RWE, EDF, Ruhrgas). The foreign owners of energy businesses, looking for reasonable profits, placed tremendous pressure on the Hungarian government to complete pricing reforms. As a result, electricity prices have been claimed to reflect direct costs and allow for an 8% profit margin for utilities since the late 90s, and most subsidies and cross-subsidies have been eliminated. However, in 2000, Hungary had one of the lowest residential electricity prices among countries in CEE and the Baltic states. One area where prices are still well below world market prices and where cross-subsidies still prevail is residential natural gas (NG). Since the majority of residential heating is provided by this fuel (either directly or via district heat fired by NG). Therefore, NG bills constitute a large share of household expenditures, making natural gas prices an extremely politicized issue. Today residential NG prices are still "subsidized" through the privilege to use national, and therefore much cheaper, NG production. Furthermore, there still appears to be cross-subsidies between products sold by the oil and gas company MOL (IEA 2003b).

Since the opening of the electricity and natural gas markets, energy tariffs have also been liberalized for eligible consumers, but are still regulated for the captive market. District heat prices have become the jurisdiction of municipalities, and have been largely liberated[7].

In summary, it can be asserted that the early start of the price reforms in Hungary made it possible for the PC industry to take root in the early 90s, and flourish in the energy-efficiency business in the late 90s.

Contrary to many Western experiences, market opening has not, and is not expected to, bring down energy tariffs to a significant extent; therefore, should not provide a counterincentive for energy efficiency projects. Energy sector restructuring has produced another incentive for the energy efficiency market, which is rather country-specific. Hungary, unlike the majority of CEE and many West European countries, does not suffer from the problem of generation overcapacity. This, together with existing long-term power purchase agreements (PPAs), leaves little free capacity on the market to enter into competition on a liberalized market. Electricity suppliers, consequently, expect a larger role for value-added services in their product offerings than in their Western markets[8], since price differences may not become such a major factor in retaining old and attracting new consumers. Thus, several utilities expect greater emphasis on energy efficiency services in Hungary than in other European power markets, as a result of liberalization (Bakacs pers. comm., Boross pers. comm.).

For a few years already, utilities have been active in entering energy service agreements and performance contracts to capture/retain customers in anticipation of the market opening. Such medium and long-term arrangements, for instance a street lighting system upgrade financed by financial savings realized through an energy efficiency project, lock the consumer to the supplier for years after liberalization. This was done by many utilities using the inclusion of long-term energy supply as a contract condition in exchange for the implementation of an EPC related to energy cost reduction. However, liberalization may add a new risk element in project economics: namely that price depends on more factors than previously and hence will probably be more volatile (ECS 2001a).

[7] The Minister of Economy and Transport sets the official price of steam and hot water generated in public power plants and sold to DH companies. Municipalities set the official DH prices for residential and other consumers.
[8] Most Hungarian suppliers are owned by the large European electricity market players, such as E-On, EDF, RWE.

Finally, energy sector reforms included a few incentives for ESCOs and PC introduced by the government to improve the environmental performance and sustainability of the Hungarian energy industry. Following the fall of communism, Hungary, like other CEE countries, has come under increasing pressure from international groups and EU accession to improve the sustainability of its energy sector, i.e., raise energy efficiency, reduce emissions, and increase the share of renewables and other more environmentally friendly ways of energy production, such as CHP, district heat and natural gas. As a result, the Hungarian government has introduced certain measures and legal provisions in these directions. A few of these have provided an incentive for the ESCO industry, such as legal, though indicative, conservation targets, the feed-in obligation and price premium and support schemes for energy-efficiency, renewable investments, and fuel switching. A few of these are detailed below.

The decree of the Ministry of Economic Affairs (Decree 56/2002 GKM) on mandatory purchase of co-generated electricity from power stations and co-generation units under 20MW provided an important momentum to the TPF market in district heating and CHP. The decree sets purchasing obligations and price premiums (feed-in tariffs); this allows modernization of natural gas fired plants with gas engine units (ECS 2001b). The mechanism has been extremely favourable for the establishment of CHP units and there have been worries of misusage. The decree was revised at the end of 2003.

The Hungarian government has been placing an emphasis on energy efficiency by legal conservation targets and certain financial support mechanisms, which is unique in the region (although still not ambitious enough). In 1999, the Hungarian government accepted the resolution on the strategy of energy saving and energy efficiency increase until 2010. The program supports the energy and cost savings in households and municipalities, and envisages modernization of the obsolete, inefficient district heating and street lighting systems. The program aims at raising awareness of energy conservation, aid for energy audits at municipalities, industry and Research and Development activities of the small and medium size enterprises (SMEs) suffering from the lack of funds. Although the amount available for these purposes has been fluctuating, a number of successful projects have been completed, many of which happened in a PC framework or through the facilitation of ESCOs. These have all added to a favourable environment for the birth and operation of ESCOs in Hungary.

Success Factors: International Aid Programs

After the change in regime, Hungary has been a primary target for various international donor and aid programs targeting energy efficiency. Many international groups, including the European Bank for Reconstruction and Development (EBRD), the Global Environment Facility (GEF) through the International Finance Corporation (IFC), Phare program of the European Commission, and the United State Agency for International Development (USAID), have been supportive in the promotion of ESCO industry in particular through different approaches and programs.

A leading example in this area is the innovative partial guarantee support program to assist the financing of energy efficiency projects developed by the IFC with the support of GEF funding. The pilot phase of this program, called Hungarian Energy Efficiency co-Financing Program (HEECP), operated from 1997 to 2001 with funding totalling USD 5 million from the GEF. It made the financing of energy efficiency projects possible in Hungary, where the local financial institutions had not otherwise been willing to finance, due to barriers such as lack of

experience with such projects and the ensuing perception of high credit risk among financing institutions (FIs), the existing weak client/project credit profile, the high project preparation costs, and weak preparation capacities by sponsors and ESCOs. Risk management tools (partial guarantees for loans from domestic FIs, such as leasing companies and banks) and capacity building tools (technical assistance to FIs, ESCOs, SMEs) have been provided within the framework of HEECP (Rozsa 2003). Its successor – HEECP-2 – is an expanded program funded by the IFC, GEF and bilaterals for the period 2001 to 2005. Among the indicators of the success of HEECP are the take-off of projects that were very close to being competitive, but would not have got financing otherwise (thirty projects got started), and the building of a competitive lending market for commercial finance for energy efficiency projects in Hungary by introducing energy efficiency as a new potential market (participating FIs represent over 90% of the bank sector) (Rozsa 2003). By now the above-mentioned types of projects are financed without the IFC guarantee. The banks are hunting for energy efficiency projects, requiring lower levels of collateral and down payment and finance projects based on cash flow (Rozsa 2002, 2003). Thus, the guarantee mechanism is proving successful and should be considered for application in other countries where capital and EE market conditions are suitable, is the conclusion of the mid-term evaluation of HEECP (CJ Aron Associates 2000).

Evaluation of International Aid Programs

Hungary has not been the only country attracting more international support for energy efficiency and its ESCO industry. However, aid programs have not always had the major market transformation effect that has been experienced in Hungary. Why?

One of the main reasons that international aid programs have had such a positive impact in Hungary, compared to other countries where similar programs have been implemented, is the fact that these programs have come in the best adapted sequence possible. Hungary can be considered fortunate in this context since it cannot be claimed that this was done deliberately by the different donors. Indeed, the initial programs that were implemented were grant programs to help build capacity and increase awareness in the energy efficiency sector within the country through mainly demonstration projects. The second step saw the arrival of programs providing loans at subsidized interest rates, which encouraged further project development given this access to initial financing for projects. The next phase provided technical assistance to help develop and structure financially viable projects, thus developing a pipeline of interesting bankable projects. At the end of this process, the IFC/GEF program introduced in-country support for accessing financing for the projects. In such a logical sequence, even though it has not been planned with purpose by the different donors, the aid programs created a momentum that built up awareness and capacity among the different stakeholders in the energy efficiency sector. Because there was no direct competition among the programs, each one built on the strength of the previous one, and came in a timeframe that enabled the previous program to achieve its goals. While competition is generally considered to be beneficial, this particular situation made it possible to avoid confusion in the market. If too many similar incentives are given, confusion can arise when none is comprehensive enough to address all the barriers related to project implementation, such a situation can leave the market with small numbers of real realizations. As a consequence of this specific context, Hungary has demonstrated that structured aid programs can achieve impressive results.

The other aspect of the success of aid programs in Hungary stems from the fact that these multilateral funds fell on an already fertile ground with many of the reforms advanced (see above). Since many of the economic and energy sector barriers were removed and a favourable environment created, the experiences provided by these programs successfully established patterns and practices, demonstrating that the concept of PC and TPF could work successfully in Hungary, and brought the scheme to the forefront of the financial and energy efficiency communities. The experience provided by these projects has been successfully transferred, and the financial institutions and other intermediaries have learned how the mechanism works.

Success Factors: Additional Reasons

Some other factors contributed to the Hungarian success in the development of a strong energy efficiency and ESCO market. The requirements for EU accession provided strong motivation to liberalize the energy sectors and ensure that energy prices reflect true economic costs[9]. In particular, the requirement for lower energy intensity also exerted some pressure to trigger institutional changes in relation to the improvement of energy efficiency in the country.

More recently, the ratification of the Kyoto Protocol by the EU and the accession countries (including Hungary), forced governments to introduce policies and measures to promote reductions in greenhouse gas (GHG) emissions, which generally implies the conservation of energy, since energy consumption is by far the biggest contributor to GHG emissions and improving energy efficiency is among the most cost-efficient options for GHG reduction. These measures contributed as well to the development of stronger incentives to develop the energy efficiency sector. Even though Hungary introduced many of its changes before the accession to EU or the ratification of the Kyoto protocol, these two elements further supported the actions of Hungary and increased the probable sustainability of these measures.

In addition to the relatively long history of ESCO activities in Hungary, the current construction boom triggered by the strengthening economy and the introduction of subsidized and unsubsidized mortgage schemes should provide many new opportunities for ESCOs specializing in whole-building integrated energy solutions. The CHP industry is also booming, due to the fact that distribution companies are obliged to pay for the electricity from cogeneration units at a very favourable rate, as discussed above, providing opportunities for ESCOs specialising in CHP.

Although the overall environment for ESCOs in Hungary is very favourable, the situation is not ideal, with a number of negative features and barriers. These include VAT tax regime[10], and public tendering procedures that disregard the specifics of ESCO services. However, due to length limitations, these barriers cannot be detailed. While the scope of this paper was to concentrate on the ingredients of success, which can potentially be transferred internationally, it is also important to analyse the remaining impediments in a future paper.

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[9] The ten countries which acceded to the European Union in May 2004 had to transpose the legal framework of the EU, referred to as the *Acquis Communitaure*. Within the *Acquis* the EU legislates a certain market opening schedule in the electricity and gas markets of the member states. By 2007, all European power and gas consumers will be eligible to choose their suppliers, and by the date of accession at least one-third of the electricity market had to be open for choice. For more information on membership criteria and the evaluation of progress made by the accession countries see http://europa.eu.int/comm/enlargement/intro/criteria.htm.

[10] When ESCO services are categorized as development services, the 25 % VAT applies; when the ESCO operates the modernized energy equipment, the whole intervention may be considered an energy service and enjoy reduced VAT rate (EGI 2002).

Conclusion: What Can the World Learn from the Hungarian Case?

The case of Hungary demonstrates that early energy sector restructuring, good institutional and banking sector reforms, and structured aid programs can lead to important positive results in countries in transition in the energy performance contracting business. It also allows us to conclude that ESCOs and third party financing can play an important role in achieving energy efficiency goals if a nurturing business environment is provided.

As the world looks for solutions to increasing energy needs and the environmental impact of energy consumption, the Hungarian case represents an interesting example of how to support the introduction of sustainable solutions that bring positive financial and economic impacts for the national economy.

Various reforms, governmental plans and programs, international help and local support made it possible for energy services to work successfully in Hungary. More concretely, the factors that influenced ESCOs in Hungary, or elsewhere, include the economy, the price of energy, the banking sector, the financial situation of potential clients, the legislative basis, the business experience of ESCO staff, and access to information about the ESCO concept. Availability of financial resources and economic stability proved to be critical aspects in developing ESCOs.

In spite of all the existing barriers there are further opportunities to develop energy efficiency services, as there is an untapped potential for energy efficiency in Hungary and, thus, an important market waiting. Moreover, the process of electricity sector liberalization holds its own fruits. Need for economic efficiency, the limits to growth in the energy supply industry, and environmental commitments (reduction of CO_2 emissions and other environmental degradations contributed by energy) will strengthen the efforts to conserve rather than consume energy.

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