



## Press Information 2015

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### **European Cooperation regarding energy-performance contracting**

#### **EU-Project “EnPC-INTRANS” - Job creation with energy performance contracting**

Since 2009, most economies of developed nations around the globe have struggled to generate and sustain job growth. Despite the tightening of the labor market in recent years trailing the slow but stable economic recovery, unemployment remains at high levels, particularly among highly educated and young job seekers. Facing the growing tensions between generations and classes, fueled by an unprecedented rise in income inequality, policymakers covet sustainable solutions to mitigate brain drain, impoverishment, and social exclusion by creating permanent employment opportunities. Energy efficiency investments are able to stimulate a net increase in employment in two major ways and as such, can greatly contribute to comprehensively addressing various aspects of sustainable development, emphasizing the importance of social cohesion in our culture.

Primarily the implementation of energy efficiency projects, either through upgrades in technical equipment, refurbishment of buildings thermal envelopes, awareness raising/promotional/skill development or any type of comparable measures, foster the direct creation of jobs as the projects are carried out and secondly, the saved costs on energy are eligible to be retained and reinvested in the advancement of the same project or in the broader economy. Additionally, a pervasive implementation of energy efficiency projects further encourages and strengthens a wider variety of products and services (for e.g. energy management services, energy auditing, information and communication technology for personal energy accounting, energy saving appliances and lighting systems, etc.), supplied by enterprises present in the region, nation or anywhere in the EU.

Albeit investment in energy efficiency is often shrugged off as not offering an attractive investment value in terms of risk to reward quota, numerous real-life studies have refuted these false notions. Such was the case of the study carried out by the Jülich Research Centre for the German KfW Development Bank, which showed that employing people on building refurbishment could result in immediate benefits for the greater economy. The study concluded that every Euro invested in building refurbishment programs returned a four to five-fold capital return in terms of life-cycle impact, bringing in a total of 340.000 newly created local jobs. According to another study “Renovation Tracks for Europe up to 2050: Building renovation in

Europe – what are the choices?”, published by Ecofys in June 2012, building stock renovation is the most cost-effective way to reduce greenhouse-gas emissions, reduce energy dependency and revitalize the European economies at the same time. Specifically three potential scenarios of future renovations were examined, developed on the Ecofys Built Environment Analysis Model (BEAM), indicative of the renovation speed, the quantity of energy efficiency improvement and use of renewable energy. It was concluded that the implementation of the “deep renovation” scenario (moderate yearly retrofit rate of 2.3% with high energy efficiency ambition), would foster the largest energy consumption reduction, GHG savings and economic output (compared to shallow renovation with low and high use of renewable energy sources). While the cost for implementing all three scenarios were estimated to be roughly equal (from 8.2 to 8.8 trillion €), deep renovation was identified as offering the most promising outcome. It was concluded



that adopting this model could bring about a 80 % reduction of energy required for space heating and hot water preparation, meet the CO<sub>2</sub> emission target (a 93% reduction) and perhaps even more importantly, create jobs for highly educated and skilled workers in the tune of 1.4 million additional jobs till 2050 (almost twice as much compared to shallow renovation), building on the assumption that each million € of investments creates 1 year of full employment for 17 workers.

On another note, according to the EU's energy efficiency review, meeting a 40 % energy efficiency target in 2030 would stimulate annual economic growth of 4 %, provide roughly a 3.15% increase of jobs and reduce fossil fuel imports up to 505 billion € every year.

Based on these numbers, it comes as no surprise that perhaps the biggest obstacle, preventing the widespread uptake of energy efficiency investments amongst private investors, public authorities as well as ordinary citizens are “high” start-up costs, relatively long payback periods of such investments and the un-willingness of creditors to support such activities. Additional factors that hamper these types of investments are the lack of awareness amongst key players and general public, measures focused on the supply side, difficulties associated with procurement procedures (maximum energy savings vs. minimum up-front cost), selective financing and lack of policy incentives, non-binding targets, discouraging investment taxation as well as stiff accounting and budgetary rules.

While the policy development is focused on the European and national levels, the actual realization of the majority of energy efficiency and renewable energy projects are carried out on the local/regional level. In the wake of the seventh year of the global financial crisis, public budgets of local authorities are stretched, largely relying on annual deficits to finance contemporary liabilities. It is therefore necessary to target the local/regional implementation of renovation strategies, focusing in particular on the capacity and know-how of public local authorities to implement innovative funding models for such projects, relying on Energy Performance Contracting to secure start-up capital and mitigate associated risks.

Granted these issues are not trivial, but can be successfully mitigated by applying alternative and innovative financing mechanisms, that are able to minimize or reduce altogether the risks and uncertainties associated with each investment. The introduction of innovative Energy Performance Contracting financing models addresses many issues outlined above, making them an essential mechanism to realize as much of the projected energy saving goals as possible.

The preliminary analysis carried out in all 9 countries involved in EnPC-INTRANS showed a particular favorability for 3 distinct types of EPC business models that proved to be successful in different socio-economic environments, facilitating energy efficiency investment from basic to intensive renovation initiatives.

The 3 identified models in question are basically a variation of the standard EPC model, which is also one of the models represented in this group.

The first model that was recognized as effective was the EPC light business model, which is characterized with low volume of investment and focuses on achieving energy savings exclusively through organizational measures, avoiding intensive capital requirement in technical equipment and labor. The involved ESCO can guarantee the savings in energy and thus maintenance costs in a similar fashion as in the EPC standard model, but with significant less risk and capital requirement, making it a viable solution to underdeveloped markets in general, as well as SMEs that are interested in participating in the ESCO market, but lack the startup capital, technical know-how and experience in the market.

The second one, as stated above, is the EPC basic/standard model that is also most commonly defined as a guaranteed savings contract between the ESCO and the client outlining different scenarios in terms of obligations, responsibilities as well as division of profits in the case of outperformance. The majority of

risks are therefore taken over by the ESCO, nevertheless the client can be severely exposed in the case of ESCO bankruptcy.

Finally, the conducted research of implemented ESCO project also favored the EPC Plus business model that is represented by the application of comprehensive refurbishment measures, including adaptation measures, which generally lower the effective ROI and lengthen the effective payback period of the investment as a whole. This is in general characteristic of deep renovation, for which it's not unusual for the payback period to exceed 20-25 years or even longer. Considering the deviations of energy price projections and the present volatility in the energy markets, it's unreasonable for investors to consider the outstanding risks associated with such a prolonged time period in correlation with relatively small upside/reward potential. Therefore, the implementation of such business models is dependent on co-financing, either by building owners, public funds or less likely, private actors, which effectively channels risk and reduces the payback period, making it a viable opportunity when structured appropriately. These three business models offer a transition from basic/shallow renovation attempts to widespread deep renovation initiatives, which we have learned, offer the best value in terms of created jobs, reduced emissions and exalted living standard of the general populous, should therefore represent the final goal of the international movements towards sustainable development.

EnPC-INTRANS will attempt to secure the described benefits by fostering the involvement of the private sector in energy efficiency investments within the publicly owned building stock. This will be achieved by implementing large-scale capacity building for local public authorities and private companies (particularly small and medium sized enterprises or SMEs), building upon successful business models utilized in divergent cultural and socio-economic environments across the partner countries.

Primarily, EnPC-INTRANS will strive to foster job growth by preparing the ground for investment, through the means of:

- stakeholder consultations (organization and conduction of consultations including at least 250 relevant stakeholders and experts from the public sector, ESCOs and other private companies, most importantly SMEs, acquiring their feedback on policy, administrative and other related issues, also including the training needs assessment)
- raising awareness, know-how and providing skill sets for the implementation, dissemination, replication of capacity building and qualifying measures to at least 50 trainers across the partner countries
- Acquiring participation of at least 1000 local stakeholders, key actors and community representatives in the "Road show" events
- Training at least 2000 experts and local decision makers on technical, legal and financial issues associated with EPC implementation, derived from best practice examples of business models proven as most effective.

The combined efforts of EnPC-INTRANS will attract a cumulative 60 million € in sustainable energy investments, triggering from 60 to 90 GWh of primary energy savings each year. The fostered investment could provide a significant amount of green jobs (according to the reviewed studies) while simultaneously strengthening social cohesion, mitigating climate change and facilitating a more secure and independent energy supply for the EU.

*"What we need to do is really improve energy efficiency standards, develop in full scale renewable and alternative energy and use the one resource we have in abundance, our creativity."* - [Lois Capps](#)

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