STEPPING

Supporting The EPC Public Procurement IN Going-beyond

Module 5 – Detailed analysis phase

Feasibility studies

The feasibility study verifies the site information provided by the energy audit and confirms the viability of the energy efficiency improvements outlined in the energy service company's proposal.

At a minimum, the feasibility study includes the following activities:

- physical inspection of the design and condition of all energy systems
- measurement of airflow rates, combustion efficiency and other variables
- review of standards of service and comfort, e.g. temperature and air quality required by building occupants, and a comparison of existing conditions with these standards
- analysis of energy-use patterns
- use of computerized simulation models.

Legal framework at national level, typologies of EPC contracts: contracting models applied

Italy

The EU Energy Efficiency Directive is being transposed in Italy through Legislative Decree 102/14, which provides some important innovations and obligations about energy efficiency. In particular, the role of ESCO is promoted, as well as the use of Energy Performance Contracts (EPC) and Third-Party Financing (TPF). This decree also transposes the energy audit obligation and highlights the role of white certificates (energy saving obligation), already in place in Italy since 2004.

The Legislative Decree 115/2008, transposition of 2006/32/EC directive on energy services, is still a relevant legislation for ESCOs, defined as service companies that offers contracts, guarantees energy savings and participates in the financial risk of operations. The Decree defines also the requirements that an "energy service contract" and "energy service contract plus" (which corresponds, within certain limits, to the EPC model) must meet. The energy service contract, a contract for the supply of heating, efficient management, maintenance and eventually upgrading of the heating systems, was originally introduced by a Presidential Decree 412 in 1993.

Legal framework at national level, typologies of EPC contracts: contracting models applied

Italy

Energy service contracts were historically focused on good management, maintenance and eventually upgrade of thermal plants. Energy service plus contracts focus on both building and plants, also if, due to short pay-back times required and the habit to the previous approach, measures on plants are more diffused. It is also worth to mention that a model contract and contract guidelines for EPC in public sector aren't available yet in Italy.

The national technical standard for ESCOs, the UNI CEI 11352, was introduced in 2010. A second, more certification oriented edition was published in 2014. The Standard refers to the European standard EN 15900 on energy efficiency services. Among the other requirements (technical, financial, managerial), to be certified an ESCO must demonstrate to have signed at least one energy performance contract.

Regarding energy performance contracts, Legislative Decree 102/14 established that ENEA (National Agency for Environment and Energy) should draw up a model contract for the improvement and spread out in Italy of energy performance contracts, similar to the European Energy performance contracting EPC.

Typologies of EPC contracts

Actually, there is not just one kind of EPC because it does not exist a standard; there are many archetype contracts (*guarantee savings, shared savings, chauffage*) and each one has different advantages and weaknesses: often, indeed, an EPC offered by an ESCO has different features deriving from a combination of them: the two most used contract types are **guaranteed savings** and **shared savings**. In the first type the performance is related to level of energy saved, which is guaranteed to meet debt service obligations down to a floor price, while in shared savings the performance is related to cost of energy saved and the ESCO bills upon actual results. A guaranteed saving approach is being done especially in situations in which the client is interested in including deep renovation measures in an EPC project. As the payback period of deep renovation measures is usually higher than the duration of an EPC project, a participation of the client in the construction costs or a public subsidy is usually the only way to achieve this goal (this approach is sometimes referred as “EPC+”).

Technical choices

Technical and definitive choices can be made by the ESCo itself within the bid or by the concerned Public Authority imposing a sort of definitive project to be just implemented by the ESCO.

- According to AESS approach and experience, leaving to the ESCo the final technical proposal (in Italy we call it "implementation/executive project") has to be preferred. This for 2 main reasons:
- the awarded ESCo has normally internal skills likely providing a range of technical/innovative solutions - in order to reach the set objective of energy saving - the Public Body is on average not provided with. For sure the Public Body can negotiate measures deemed as prior but often – at least in the Italian context – the ESCo can provide more and more effective technical solutions than the Public Body alone.
- The ESCO is responsible for the achievement of the energy saving goal set in the Call and has to run the risk of the design of technical solutions the ESCO itself is going to implement and manage for a number of years and. Therefore the ESCO itself must be responsible for the possible failure to achieve savings (imposing to the ESCO a project of technical choices selected by the Public Body could let the ESCO to feel free about the implementation risk and could limit technical, innovative and quantitative improvements further proposed in the offers, thus concretely reducing the chance for a likely higher energy saving result).
- AESS experience shows as – if a good but still "light" project is included in the Call for tenders – the market normally "replies" offering on average an energy saving doubled than the one initially foreseen.
- Not including the implementation on very final technical choices in the Call, does not imply further costs to the Public Body as they will – if needed – covered by the ESCO (at least for the same, often for a higher energy saving target set in the Call).
- Finally, also a recent Italian survey among Public Bodies carried out by the National Network of Local Energy Agencies, confirms the great trouble from Public Bodies to invest their own resources on elaboration of the implementation/executive projects compared to lighter but still binding projects to ESCOs (the energy audit carried out in line with the EU standard already provides all the needed parameters for building up a good - and manageable for coming years - EPC contract).

Debt capacity from interested Public Authorities

- The possibility for Public Authorities to externalize the debt related to energy retrofitting through EPC, and thus maintain their capacity to invest in other public issues, is essential in the interest of the public sector towards such scheme. A clarification by national and/or EU authorities on the way to consider EPC liabilities in public accounts would be however crucial. Also this important element contributes to define the share of investments the Public Body is potentially able to cover.
- EPCs indeed quantify and guarantee long-term energy savings. EPCs can serve as a basis for a business model where intangible energy savings are transposed into a secured cash-flow (guaranteed energy performance), so that they can be presented as counterpart to investment in energy performance and secure debt repayment.
- Involving third parties (of different size and statute) in financing energy efficiency-EPCs open thus the way for private capitals to be invested in energy savings, providing an alternative to the insufficiency of available public funds.
- Public Bodies can thus allocate their equity and debt capacity to other investments but also other energy efficiency investments that would not be made through EPCs. Indeed, *it cannot be expected that all investments would be realized through EPCs*, especially in case of deep retrofit measures with long pay-back time where a participation of the Public Body to the overall investment is normally expected.

Debt capacity from interested Public Authorities

- In Italy, a major bottleneck for EPC on the regulatory level is the very restrictive approval practice of EPC in local authorities by the supervisory authorities, which control public debt levels. Especially for indebted communities, for which EPC could be explicitly interesting, the approval for EPC projects is very hard to obtain in several Regions. On this issue, however, on last 19 September 2017 an Eurostat note has been pusblished (http://europa.eu/rapid/press-release_IP-17-3268_en.ht). It basically declares EPC to be considered off-balance for PAs.
- In Italy, due the so called Stability Covenant (Patto di Stabilità), municipalities are not allowed to allocate equity amounts in order to co-finance long payback period interventions, typical of energy efficiency projects in the building sector. The on-going work on EPC's guidelines/model contract at national level is also addressing this issue.

End of Module 5