



REPORT

on status quo of EPC markets in the city of Prague

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Conditions of EPC implementation

Potential of EPC implementation in respective city/region

The EPC method has been known in the Czech Republic since 1992 and implemented from 1993, when the first two projects were prepared in hospitals (one was in Prague, specifically the Faculty Hospital Na Bulovce). Since then several projects have been implemented in Prague, the largest of which was the project at the Faculty Hospital Motol (implemented in 2004), the best known project being in the National Theatre (implemented in several stages from 2007 to 2009) and the greatest number of school buildings being in the Prague 13 district (31 schools in all).

Existing Energy Efficiency Documents for the city/region

An important general document, which should support the development of the EPC method throughout the republic, was the Government Resolution from 19 October 2011, which requires its use in state administration buildings. In response to this resolution, in 2012 the Ministry of Industry and Trade ensured the processing of new text to the standard contract for the provision of energy services with a guaranteed result, including a description of the content of the annexes that the contract usually contains.

For the given locality a specific document is valid in the form of a regional energy concept for Prague, which is to be amended in the foreseeable future. The concept, however, is only a general note as regards using EPC methods.

Potential target groups and buildings for EPC implementation

Public sector

The public sector of the area concerned has all the prerequisites for using the EPC method. Its environment is relatively stable and the buildings offer relatively large potential savings. At the same time, it faces a lack of financial resources and qualified personnel.

Among the suitable sectors for applying EPC methods are educational buildings (universities, secondary schools, but also primary and nursery schools), hospitals and other health care facilities, buildings for culture and sport, social buildings and administrative buildings.

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Potential suitable customers are:

- The City of Prague (secondary schools, social buildings and administrative buildings),
- Individual city districts (primary and nursery schools, administrative buildings, etc.)
- Ministerial buildings and other government organisations such as faculty hospitals, theatres and other cultural facilities and administrative buildings, etc.

Private sector

In the private sector the EPC method is used to a lesser extent. The reason for this is usually the greater risk during financing and the more stringent rules regarding the specification of the requirements when selecting the ESCO. Despite this, it is possible to use EPC, for example in the area of production, in administrative buildings, hotel industry, etc.

It is not suitable to use the EPC method in the area of housing due to legal and ownership relations.

Attitude of the local/regional authorities to EPC

Generally energy efficiency and in particular the implementation of EPC projects is supported in the territory of Prague. Success in preparing specific projects, however, depends primarily on the awareness and the will of the individual bodies (city council, councils), whether they are willing to promote the EPC method. This is further influenced by the political situation at the time, which, unfortunately, is not always stable. Generally, however, the endeavours to use the EPC method are growing, as is evident from the annually increasing energy efficiency projects resolved using the EPC method.

Various EPC seminars are organised in the territory of Prague to raise awareness. Recent ones that could be mentioned are the two-day workshop Outlook for EPC Methods in the Czech Republic held in the framework of the European Union ManagEnergy campaign and intended for both cities, municipalities and county councils, as well as for ministries, state administration and organisations administering state owned buildings.

Barriers in EPC implementation

The most frequent barriers to the further development of using the EPC method is primarily distrust or ignorance on the part of customers. Furthermore, in the public sector there is also the barrier of the strenuousness of relatively complicated preparations for the public procurement process that the projects require. The main initiator of developing the market for energy services with a guarantee thus remains ESCO and firms supporting and organising selection procedures for public contracts.

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In the framework of the government sector EPC projects can be implemented in contributory organisations. For the time being the EPC method cannot be used in the organisational structures of the state (formerly budgetary organisations) because the exemption from the law (Act No. 218/2000 Coll.) does not apply to these organisations.

Position of the EPC implementation

Existence of basic instruments for EPC

In the Czech Republic there are several basic documents which are freely available to those interested in the EPC. This concerns the following:

- The standard contract for the provision of energy services by EPC including a description of the annexes' content for concluding contractual relationships with providers of energy services with a guarantee.
- The process of preparing a selection process for public procurement of EPC (a description of the selection process).
- A methodology for preparing and implementing of energy efficiency projects on EPC (this year the original methodology will be amended).
- A code of conduct on EPC (a description of standard behaviour by the ESCOs and also by the customers).

Existence of EPC (Energy Services Companies)

Survey of existing ESCOs

Currently the Czech market for EPC services has approximately 10 ESCOs, 5 of which are located directly in Prague (ENESA, AB Facility, Siemens, MVV Energie CZ, Dalkia Czech Republic).

The provision of EPC services, however, is not limited to the company's place of business and ESCOs are able to carry out energy-saving projects throughout the Czech Republic.

Scope of ESCO experiences

Virtually all of the ESCOs operating on the Czech market have a long-term focus on the business of providing energy services via the EPC method, they have experience from a number successful projects and regularly enter into other EPC projects.

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The most experienced representatives from the ESCOs have been dealing with EPC projects for twenty years. Among the companies with the most projects implemented, and thus with the most experience, are ENESA, Siemens, MVV Energie CZ, AB Facility (all from Prague) and the Středisko pro úspory energie (Centre for Energy Savings) from Most.

Ability to compete

The Act on Public Procurement has been in force since 1995, pursuant to this it is essential to enter projects solved by the EPC method in the public sector. Since roughly 2005 the notification used for public procurement for EPC projects is the form of negotiated procedure of the EPC with publication, which, as has been confirmed in many selection procedures, is most appropriate for the projects concerned.

Depending on the process of selection procedures, competitiveness is achieved in the entire Czech market and this is true even in Prague.

ESCO associations or other institutions

In 2010 the Asociace poskytovatelů energetických služeb (APES, i.e. Association of Providers of Energy Services), was set up in the Czech Republic, which seeks to promote the development of energy services in Czech conditions. Among its main priorities are the following:

- to represent and defend the legitimate interests of energy service providers in the Czech market as well as in other, in particular, European countries,
- to contribute actively to the long-term development of energy services in the Czech Republic,
- to determine and harmonise standards in energy services in the Czech Republic,
- to promote energy services in the public and private sector.

Currently APES has 15 members including both providers and facilitators of energy services from consultancy and legal companies.

Financing and banking sector in relation to EPC projects

As a general rule, financing of the project is provided by the ESCO, rather than the contracting entity, and by obtaining investment funds through a bank loan, which is paid back from the savings achieved.

The parameters of the loan provided to the ESCO by the bank (financial costs) are directly reflected in the contract on the provision of energy services with a guarantee.

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It is not imperative to use a bank loan, but the ESCO is usually only able to finance very small-scale projects from the funds available.

In the last few years ESCOs have resolved financing EPC projects in the form of purchasing the receivables for the contracting authority with regards to the bank, i.e. factoring. Thus the contracting authority pays the loan “directly” to the bank (of course without the need to conclude a credit agreement) and the ESCO guarantees achieving the agreed-upon amount of energy savings and reduction in operating costs. Factoring is now the most frequent manner of financing these projects.

Existence of programs for support of EPC

It is generally true that projects resolved by the EPC method don’t need subsidies, but they do need support in terms of information support and support in the form of examples from the state.

Thus it can be stated that there is limited support for implementing EPC projects from state resources. A direct subsidy is provided only for the preparatory stage of projects resolved by the EPC method, specifically for processing the preliminary analysis as to whether the buildings selected are suitable for the EPC method. It concerns finance provided from the EFEKT program, which is promoted by the Ministry of Industry and Trade.

Currently, SEVEn is intensively engaged with the options for supporting the implementation of comprehensively resolved energy efficiency projects in buildings in the government sector. The aim is to connect the application of EPC methods with the installation of building insulation during one period of time and coordinating them both so as to achieve maximum energy savings.

Depending on these two supports an increase in projects resolved by the EPC method can be expected.

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EPC projects

Realized projects

So far approximately 200 EPC projects have been implemented in the CR with investment funds exceeding CZK 3 billion, while it can be estimated that Prague accounted for about a third of the projects.

The largest number of energy-saving projects in the form of EPC was implemented in the public sector, in particular in primary and secondary school buildings. Another frequent area is health care followed by the area of culture. In the private sector, projects were principally carried out in the area of industry.

The savings achieved were guaranteed for thermal energy, electricity and water and, implicitly, also included the savings on operating costs and the related reduction in resources for maintenance, operation, etc.

Sources of financing for the projects were approximately 80 % from bank loans and 20 % from the ESCO's resources.

Selected examples of the projects implemented in Prague illustrate projects from the most common areas:

State Opera in Prague

Object:	historical building from 1888
Investor:	State Opera Prague (Ministry of Culture)
Measures realised:	installation of new cooling units, installation of new condensing boilers and replacement of circulator pumps, heat recuperation from air conditioning output, installation of frequency control fans and pumps, use of energy saving lights and drinking water saving devices
Baseline:	CZK 12.9 million
Contractual relationship:	10 years
Installation period:	2010
Amount invested:	CZK 33 million
Savings (%):	35 %
Savings (CZK):	5.2 million CZK/year

Of the other Ministry of Culture buildings, measures were also implemented via the EPC method in the historical buildings of the Estates Theatre and the National Theatre.

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Schools in Prague 13

Object:	31 primary and nursery school buildings
Investor:	Prague 13 District
Specifications:	Parallel EPC project with a project for insulating the buildings funded with the support of a subsidy for 15 buildings
Measures realised:	disconnecting the heating and hot water heating systems from the district heating network, installing highly efficient condensing gas local sources, mounting thermostatic valves, fitting computer controlled systems for individual temperature regulations in the rooms (IRC), connecting the regulation systems to a central control room, water and electricity saving measures
Baseline:	CZK 36 million
Contractual relationship:	10 years
Installation period:	2010 - 2011
Amount invested:	CZK 105 million
Savings (%):	56 %
Savings (CZK):	21 million CZK/year

Of the other schools where measures have recently been implemented via the EPC measures the following examples can be given: Novovysočanská Secondary Training College (2009) or Gočár Secondary Technical College (2010), in which a combination of EPC was also used in parallel with reconstructing the building's shell.

The Institute for the Care of Mother and Child in Podoli, Prague

Object:	Grounds of health facility buildings built in 1914 located in the Vyšehrad protected heritage area.
Investor:	The Institute for the Care of Mother and Child (contributory organisation of the Ministry of Health of the CR)
Measures realised:	rebuilding steam boilers for hot water, building local pressure-independent transfer stations with hot water heating in the building's four pavilions, complete reconstruction of the heating system, installation of a new measurement and regulation system with a central control room, energy management and service for the measurement and regulation system (M&R) for the entire repayment period
Baseline:	CZK 6.3 million
Contractual relationship:	7.5 years
Installation period:	2004
Amount invested:	CZK 17.1 million
Savings (%):	42 %
Savings (CZK):	2.6 million CZK/year

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Of the other Prague medical facilities the following examples can be given: The Faculty Hospital Motol and the Faculty Hospital na Bulovce (1994).

Prospective projects

This year several projects are being prepared in Prague in the public sector with an approximate value of CZK 120 million. It primarily concerns buildings in the sectors of education, health care and culture.

For example an EPC for the Czech Technical University in Prague is in the preparatory phase and verification of the suitability of applying the EPC method for renovating the technological equipment in the framework of energy management has been carried out. Specifically this concerns thirteen sites with 37 buildings in all.

Another project that has been prepared is the EPC applied for by the Czech Philharmonic for the multifunctional cultural building Rudolfinum.

It is assumed that the projects will be guaranteed for the contracting entities by the ESCO that is selected, including financing, while the basic condition will be achieving the contractually agreed-upon energy savings.

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