# Zero Emission Communities

# Designing of PPP Best Practice Survey

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**PPP (Public-Private Partnership)**

*"Contract or union contract, by which private entities named by private, are bound in the long term, before a public partner, to ensure the development of an activity aimed at satisfying a collective need, and where funding and responsibility for the investment and for the exploitation are delegated, in whole or in part, to the private partner."*

**EPC (Energy Performance Contract)**

*"Contract in which the executor is responsible for the project, its implementation, installation and maintenance, as well as for the obtaining of the necessary financing for an energy efficiency solution. The executor receives a percentage of capital gains generated from the receiving entity. The property of the project and the equipments are still held by the executor until the end of the contract, when it goes to the receiving entity."*

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# Public-Private Partnerships

## PPP Approach and Objectives

The Government in its mission to ensure public services, use, increasingly, procurement models that are essentially based on the collaboration between the public and private sectors, having in mind the idea of the provision of services in order to benefit the community, taking as a basic principle the risk sharing between partners.

This model, known as Public-Private Partnership (PPP) constitutes a privileged contractual form so that the public entities can ensure such services taking advantage from innovation, know-how and flexibility of the private sector funding, thus ensuring that the provision of services can be developed in a more profitable way in comparison to traditional models.

A PPP contract refers to a contract between private and public partners, in which the main responsibility for the creation, funding and operation of the infrastructure belongs, as a rule, to the private partner.

In this case, the public entities goes from a provider role to a regulatory one, being only responsible for the definition, characterization and quantification of essential public needs, thus hiring this provision in partnership with the private sector. This situation has the goal of maximizing the Value for Money (VfM) and minimizing the risk of involvement of the public partner.

PPP can be incorporated in transport, health, education, safety, waste management, water distribution or in the field of energy.

Main characteristics of PPP:

- The length of the relationship between partners.
- The method of funding the project.
- The role of partners in the definition, design, implementation, application and financing.
- The distribution of risks.

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## PPP Types

The Green Paper on Public-Private Partnerships and Community Law on Public Contracts and Concessions distinguishes two types of PPP:

- PPP purely contractual: based in solid contractual relations between the public and the private partner and include various configurations that assign one or more tasks to the private partner (design, financing, development, renovation or exploitation of a work or a service) and can integrate the scope of European Directives on public procurement;
- PPP institutionalized: they involve cooperation between public and private sectors in a separate entity, common to both sectors, whose main task is to ensure the delivery of a work or the provision of a service for public benefit.

## PPP Structure

PPPs are generally characterized by the following elements:

- The relatively extensive length of the relationship, which involves cooperation between the public and the private partners on different aspects of a planned project.
- The method of financing the project, assured in part by the private sector, sometimes through complex juridical and financial arrangements between the various players. To private financing may, however, be added public funding, sometimes in rather substantial amounts.
- The important role of the economic agent, who participates at different stages of the project (design, development, implementation, financing). The partner that belongs to the public sector focuses primarily on the definition of objectives to be achieved in terms of public interest, quality of services offered and pricing policy, thus ensuring the enforcement of these objectives.
- The distribution of risks between the public partner and private partner.The risks are generally transferred to the private partner.. However, PPP does not necessarily mean that the private partner assumes all the risks, or the most important part of the risks arising from the operation. The precise distribution of risks is made on a case by case, depending on the respective ability of the parties concerned to assess, control and manage.

## PPP Financing

Project Finance is a financing technique commonly associated with the type of financing of PPP.

It is particularly suitable for the implementation of infrastructure and it is mostly characterized by being a long-term financing, thus allowing the debt relief in the initial phase of the project.

It is also characterized by having a strong financial leverage, i.e. once the debts are smaller in the initial phase, this fact allows companies to keep a healthy level of debt, thereby enhancing the possibility that they may invest in other projects simultaneously. The debt to third parties and the shareholders' funds used as projects' guarantees are repaid only, or partially, by cash flow generated by the company in the operationalization of the project, instead of being paid by the property (own capital/resources) within the company. In a more comprehensive way, the business flows only with the resources of the business itself (self-funded business).

The funding model underlying a PPP involves, in what concerns the private partner, a major financial effort in the construction phase, which may appeal to bank financing and benefit, at this stage, from public funding throughout European funds or even public partner own resources.

The remuneration of the private partner can be made by the public partner and/or the consumers/final end-users of the service, having always as basis the payment criteria only after the start-up of the service and the services standards pre-agreed.

## PPP Risk Management

PPPs are a form of public procurement extremely complex, thus requiring a rigorous and balanced distribution of risks between each partner.

The optimal level of transfer is characterized by a situation of "win-win", where both the public and the private partner maximize/optimize their return relatively to the incurred costs.

However, in most cases, the risks associated with the project are allocated mainly to the private sector, but it should be remembered that the public sector shall also have a more or less significant responsibility by the provision of service and the satisfaction of the collective adjacent need.

## PPP Advantages

In a PPP, the cooperation with the private sector has the following main advantages:

- **Accelerating the provision of infrastructure** – PPP allows the public sector the implementation of the initial capital expenditure in a continuous stream of service payments over the contract, thus allowing that projects can move forward even when the availability of public capital is restricted (either through the annual public expenditure or budgeting cycles targets);

- **Faster execution** – the allocation of responsibility of design and construction for the private sector, combined with payments linked to the availability of a service, offer significant incentives for the private sector in order to deliver projects in the shortest construction time;

- **Reduction of cost in life cycle of the project** – in projects that require PPP service delivery of operations and maintenance, the private sectorstrong incentives to minimize costs throughout the life of a project, something that is intrinsically difficult to achieve within the limitations in the traditional model of public sector procurement;

- **Better risk allocation** – a core principle of any PPP is the allocation of the risk to the partner with better conditions to manage it, for the lowest cost, optimizing rather than maximizing, the risk of transfer, thus ensuring that best value is reached;

- **Better incentives to perform** – the assigning of the project risk should encourage the private sector contractor to improve its management and performance in a particular project, and the full payment for the private contractor should only occur if the required service standards are met in a continuous basis;

- **Improved quality of the service** – the quality of the services performed in the PPP scope is superior to the traditional model of public sector procurement, reflecting a better integration of the services with the support of assets, improved economies of scale, the introduction of innovation in the service delivery or performance incentives and penalties typically included within a PPP contract;

- **Additional revenue** – the private sector may be able to produce additional revenues from third parties, thus reducing the cost of any public entity, produced through the use of reserve capacity or the disposal of surplus assets;

- **Strengthening public administration** – by transferring the responsibility for providing services, the public sector is as regulator and will focus on planning and service performance, instead of monitoring the management of day-to-day to the delivery of service.

## Legal Issues

There is no specific legal framework for PPPs at European level.

Therefore, the Green Paper proposes the consult whether the Treaty that establishes the European Community (EC Treaty) and its secondary law are suitable and enough towards the special challenges posed by PPPs[1] (). This analysis refers to the selection of private partner and to the performance of the partnership.

Any act through which a public entity trusts the provision of an economic activity to a third party, should be studied according to the rules and principles of the EC Treaty. With regard to freedom of establishment and freedom to provide services (Articles 43º to 49º), these principles include, namely, the transparency, the equal treatment, the proportionality and the mutual recognition. Thus, the EC Treaty is applicable to PPP.

Some forms of PPP are subject to European legislation on the procedures for celebrating public contracts. Revised in 2004, this legislation introduces, namely, a new procedure for celebrating the competitive dialogue which provides a legal basis for some forms of PPP in the case of very complex projects for which a competent authority has a specific need and look at the traders for the best technical solution.

PPP may be subject to concessions for works and services. These are distinguished from public procurement, to the extent that the trader is paid at least in part, through the exploitation of the work or service. At European level, the awards are partial, or even in the case of service concessions, totally excluded from the scope of the European Directives on public procurement. The Commission's interpretative communication on concessions under Community law[2] clarifies the obligations of public authorities in the selection of candidates for the award.

Main issues on the development of PPPs in the context of effective competition and legal clarity:

- Guidelines on procedures for selecting the private partner.
- The creation of PPP from private initiative.
- The contractual framework and any changes in the course of PPP.
- Subcontracting.
- Challenge of effective competition in the case of private partnerships

[1] http://europa.eu/legislation_summaries/internal_market/businesses/public_procurement/l22012_en.htm

[2] Official Journal C 121, April 29th, 2000

# Energy Performance Contract

## EPC Approach and Objectives

The entry into force of the Directive of Energy Services since May 2006 (Directive 2006/32/EC), which repealed the Directive 93/76, provides an opportunity to strongly boost the energy efficiency activities.

The purpose of this directive is to promote energy efficiency in terms of final energy use in the Member States of European Union, through mandatory performance targets, and promotion of a sustainable market for energy efficiency and energy services.

To achieve the goal of promoting efficiency in energy end use and energy services, Chapter III of Directive 2006/32/EC defines that throughout the energy distributors, distribution system operators and retail energy suppliers (and direct and/or indirectly through other providers of energy services or measures for improving energy efficiency), Member States shall guarantee to consumers, among others:

- The provision and promotion of energy services at competitive prices;
- The promotion and availability of competitively priced energy audits and/or measures to improve energy efficiency;
- The contribution to the funds and funding mechanisms.

## EPC Structure

### Energy Services Companies

An Energy Service Company (ESCO) is a provider of energy services and/or energy efficiency using its own resources, or by other contractors, thereby sharing the financial risks and operating with the customer.

The remuneration for the services rendered is based, in whole or in part, in the achievement of economic goals of cost efficiency (namely energetic costs) or other agreed performance criteria.

In this scheme of financing, an ESCO company supplies the customer with the proper technical solutions and the needed financial resources in order to develop its energy efficiency project. The ESCO will determine the best technical option for the equipment to install, will fully or partially finance the various stages required to develop the project and will be responsible for the

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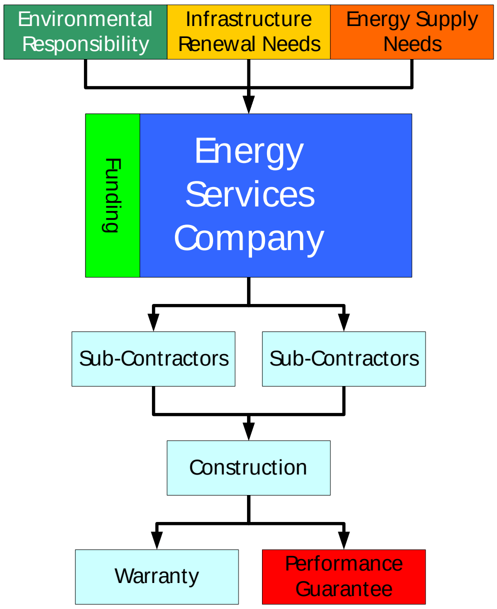
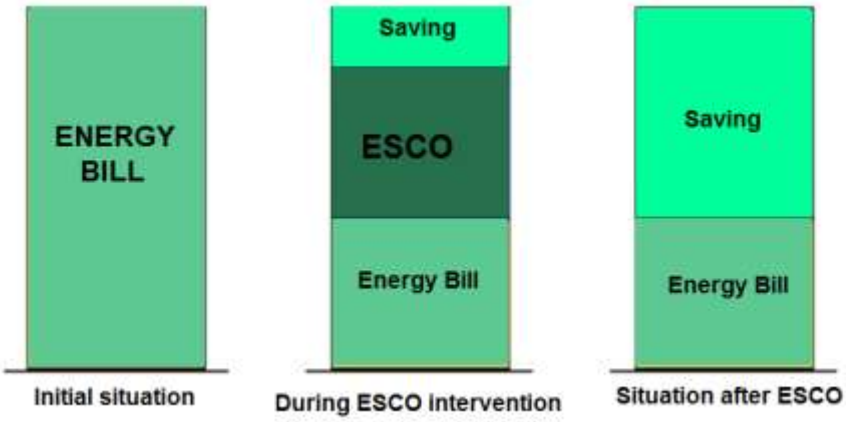
management and exploitation of the facility during the required period to the return of the investment (payback).

The ESCO assumes all risks related to the project, being the recovery of its investment based on the energy related costs avoided over a given period of time during which the ESCO will be the owner and the responsible for the exploitation of the project. After this period, the ownership of the property is transferred to the client (end-user) and the intervention of the finance company can be suspended or can extend through the conclusion of a new commercial relationship such as a contract of exploration and/or system maintenance.

The following figure illustrates a scheme of financing by adopting the model ESCO:



The following figure presents schematically the concept of ESCO, being perceptible that the existing energy bill is reduced through the implementation of measures of rationalization of the consumption and the adoption of more efficient equipment for energy conversion:




The performance of the ESCO shall be governed by the following criteria:

- Independence from suppliers of equipment and services, looking for each projects the best technical solutions and costs;
- Credibility about the terms of the relationship with the client, thus ensuring transparency and access to all financial transactions related to the project;
- Technical and financial capacity that allows the development of all the stages of the work program, thus demonstrating a sound financial structure capable of ensuring the investment plan for the project.

Contractual relations between the ESCO and the client are established by a Contract of Efficiency, which should include all aspects of the project, including:

- Period of stay ahead of the ESCO towards the exploitation of the facility;
- Means of payment in terms of energy costs avoided;
- Obligations and rights relating to the exploitation and maintenance of the system;
- Conditions of access and control of information relating to energy production, in order to check results;
- Take account of any changes in payment formulas.

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## EPC Advantages

- Guarantees of an effective reduction on customer's energy bill, since his earning depends on the return of investment;
- Guarantee of the best technical implementation of the project, as an ESCO has a qualified and experienced team in the implementation of projects in different energy areas;
- The costumer won't have any technical responsibility on the project and, in case of any technical problem and the non verification of the expected output, the ESCO will be responsible for what happened, and therefore the costumer will not have any financial disadvantage;
- Getting better technical and economic conditions in the purchase of equipment by an ESCO, as a result of their high volume of purchases, which means a project for less money;
- Diminishing in energy costs of the costumer and enrichment of its assets without any charge;
- The costumer maintains its financial resources, debt capacity and ability to invest intact;
- Immediate benefits in terms of reduction in energy bills;
- At the end of the transaction, the customer will own the equipment in good operating status, without having made any financial effort for this purpose.

# Case Studies

## Portugal

### PPP and EPC Approach in Portugal

In Portugal, the Resolution of the Council of Ministers nº 80/2008, 20th May, that approves the **PNAEE – National Action Plan for Energy Efficiency**, defines a set of programs and energy efficiency measures framed in three strategic areas, including the area of **Incentives and Financing.**

This includes, among others, the encouraging to the creation of ESCOs, addressed as follows: *"promotion of Energy Services Companies with the use of procurements and strong incentives to the creation of ESCOs, framed by Efficiency Contracts designed to give a legal framework to the relationship"*.

### Case Study 1

**Project identification.**

Energy Performance Guarantee Contract. Santa Maria da Feira Swimming Pool.

**Project appraisal.**

Budget of the project: 450.000 €.

**Design and agreement on PPP.**

Santa Maria da Feira Swimming Pool is a municipal swimming pool managed by a municipal public company called "Feira Viva – Cultura e Desporto E.E.M." and includes two areas: Swimming pool area and another inner area including fitness room and others services.

The project includes at the beginning the purpose of installation a fuel cell of 100 kW and solar panels to promote the introduction of energy efficiency and renewable technologies with the main aim of reducing energy costs.

The contract was signed in 2008 between "Feira Viva" and "Self Energy – Serviços de Energia", the first ESCO in Portugal. It is a mixed contract of supply and services. This kind of contract fits the project needs as it includes supply of energy equipments and conduction and maintenance of equipment with a performance guarantee to the public entity. According to this 10 years contract, SELF ENERGY will guarantee 10% reduction on energy costs in this swimming pool.

The provider of the fuell cells, an innovative technology using natural gas to produce hydrogen, was bankrupt last year. Because of that FEIRA VIVA and SELF ENERGY are actually analysing other options to achieve the aim of 10% reduction on energy costs. Possibly it will be installed a cogeneration system using motor technology. At the end of 2010 the partners have the purpose of choosing the new technological solution. Solar panels are already installed.

**Implementation of PPP.**

The services included were:

P1. Electrical energy and thermal energy supply, including the selling to the public grid of 50% of the electricity produced by the cogeneration system

P2. Conduction and maintenance

P3. Total guarantee (10% reduction on energy costs)

P4. Measurement & Verification (M&V) procedures to estimate the annual energy savings

P5. Investment on energy saving installations (optional during the 10 years contract)

A level of 10% reduction on energy costs was established. All the additional benefits in terms of reduction on energy costs belong to SELF ENERGY.

At the beginning of this contract SELF ENERGY analysed the consumption data in order to establish the baseline data.

All the investments included on this contract will be financed by the private party during the length of the project. Additional investments will be studied, proposed, executed and financed by the private party through the savings achieved or by selling the energy produced by RES systems.

## Case Study 2

**Project identification.**

Energy Performance Contract. Hotel units of Inatel Foundation.

**Project appraisal.**

Budget of the project: 90.000 €.

**Design and agreement on PPP.**

The Inatel Foundation, presently under the tutelage of the Ministry of Labour and Social Solidarity, affirms itself as a Foundation that offers social services, in the areas of social and senior tourism, and social and senior spas. INATEL Foundation is present all over Continental Portugal and its Autonomous Regions with a network of 22 agencies. INATEL Foundation have a network of social hotels with 16 hotel unities, 3 parks for Camping, 2 Houses for Rural Tourism and two spas – which represents a global offer of 4.200 beds – and a permanent structure of social and senior tourism and also an organization for the holidays of the beneficiaries and their families; a Theatre - Teatro da Trindade; two sport Stadiums – Estádio 1º de Maio, in Lisbon, and Parque de Ramalde, in Porto.

Inatel Foundation signed an ESCO contract with SELF ENERGY with the purpose of producing and selling electricity to the grid with solar photovoltaic panels.

The project includes the installation of photovoltaic microgeneration systems to produce at 5 hotels distributed through Continental Portugal (Covilhã, Guarda, Porto Santo, Manteigas, S. Pedro de Moel). The 3,68 kW photovoltaic systems sell electricity to the grid, with a fee-in-tariff that allows Inatel Foundation to have some revenues from those systems.

The contract was signed in 2000 between "Inatel Foundation" and "Self Energy – Serviços de Energia", the first ESCO in Portugal. It is a mixed contract of supply and services. This kind of contract fits the project needs as it includes supply of energy equipments and maintenance of equipment wit.

**Implementation of PPP.**

The services included were:

P1. Electrical production, including the selling to the public grid of 100% of the electricity produced by the photovoltaic systems

P2. Monitoring and Maintenance

According to this 8 years contract, SELF ENERGY will receive 75% of the revenues from the selling of electricity to the grid, and Inatel Foundation will receive the remaining 25% of the revenues.

75% of the investment included on this contract was financed by the private party (SELF ENERGY) and 25% of the investment was financed by the public party (Inatel Foundation).

During the period of the contract SELF ENERGY will monitor the electrical production and selling to the grid and all the maintenance procedures.

# Spain

## PPP and EPC Approach in Spain

PPPs are not explicitly disciplined by Spanish law, although all contracts whereby a public body awards a work involving an economic activity to a third party are subject to the general principles on the freedom of establishment and the freedom to supply services. As a consequence, PPP contracts have to comply with requirements of transparency, equal treatment, proportionality and mutual recognition.

In the Spanish public administration there are different approaches to the introduction of private financing into provision of utilities, according to the Spanish Law on Public Sector Contracts (LSCP) (Ley 30/2007, de 30 de octubre, de Contratos del Sector Público):

- **Concession (work concession):** it consists on using private capital to provide public facilities. It is based on a "user pays" model in which a private-sector party (the Concessionaire) is allowed to charge the general public service fees for using the facility (for example the payment of a toll for using a road). The role of the public sector in Concessions is to establish the framework under which the Concessionaire operates and to regulate the detailed requirements for the construction and operation of the facility, usually through a Concession Agreement signed between the Public Authority and the Concessionaire.

- **Franchises (service concession):** it is the right to exploit an already constructed facility (it is similar to a Concession but without the initial construction phase). The Franchisee may make a lump-sum payment to the Public Authority in return for his right. A Franchise is not considered to be PPP as previously defined because it doesn't involve the provision or upgrade of infrastructure, but only its operation. However the contractual and financial basis is similar in some aspects.

- **Contract of collaboration between public and private sector:** the Public Authority contracts a private organisation during a predetermined period of time, depending on depreciation rules, to carry on a global intervention that includes investment, construction and supplies for the global maintenance of complex installations.

With the latest concept, LSCP sets the basis for a legal framework for the development of PPP. In addition, the **Spanish Law of Sustainable Economy**, not still approved, as well as the **future Law of Energy Efficiency and RES** includes measures to enhance the Energy Services Companies market, promoting the requirement of these services and establishing a suitable legal framework for these companies to operate. This is a consequence of the need to adapt Spanish legislation to EU Directive 2006/32/CE on energy end-use efficiency and energy services. Also the **Spanish Royal Decree 6/2010, measures to improve the economy and the employment**, includes in the energy section measures to promote energy services companies (ESCOs). One of these measures is focused on the collaboration between ESCOs and Public Administration.

In fact, ESCOs are starting to operate in Spain. It consists on companies that offer energy services for their clients, which can be private companies as well as Public Administration. The profit they obtain is based on the energy savings achieved by the client. ESCOs are able to design, finance, develop and control a project assuming totally or partially the technical and economical risk.

One of the aims of the Spanish Ministry of Industry is to boost the energy services market through the ESCOs. This market is seen as a chance to reduce the energy consumption in Spain in order to achieve the reduction objectives established by the EC also in the public sector.

## Case Study 1

**Project identification:** Energy Management Contract. Santurtzi Municipal Sports Institute (Vizcaya).

**Project appraisal:** Budget of the project: 420.000 €.

**Design and agreement on PPP**

Santurtzi Municipal Sports Institute is a municipal sports centre that includes two areas:

- Inner area: it includes three conditioned swimming pools, playfields, squash room, fitness room, spinning room, dressing room, aerobic gym, etc.

- Outside area: athletics tracks, Olympic swimming pool, swimming pool for children, paddle courts, football field, etc.

The project includes global management of electricity, fuels, water, chemicals for the swimming pool water treatment and maintenance of the installations. Works in the boilers room are included in order to substitute oil by natural gas. 100 m2 of solar panels are installed. The water supply system and the lighting systems are upgraded. A centralized control system for the installation is installed. An UV system for the swimming pool water treatment is installed. The cooling system is also changed by a more efficient one.

The contract was signed in 2006. It is a mixed contract of supply and services. This kind of contract fits the project needs as it includes supply of energy resources and maintenance of equipment. According to the Spanish law, the length of this kind of contract can be agreed by the parties that sign it. The duration agreed was 10 years and the scheme followed is the P4 model. It was used the model of contract for energy services and maintenance elaborated by IDAE.

**Implementation of PPP**

The services included were:

P1. Electrical energy, thermal energy and water supply.

P2. Maintenance.

P3. Total guarantee.

P4. Works to upgrade and refurbish energy consuming installations.

P5. Investment in energy saving installations (optional).

A baseline price to be paid by the public administration to the private company was established in the tender. The tenderers could offer a lower price on their own risk.

Regarding P1, the first year of the project implementation, the successful tenderer (private party) must register the consumption data in order to establish the baseline data. If the consumption in the following years is increased, the public party will pay the difference. The price (€/m3, €/kWh, etc) is the one offered by the successful tenderer in the tender process. If the consumption decreases, the private party will pay the difference to the public party at the same price.

The works included in P4 must be financed by the private party during the length of the project, as well as the investments in P5. The installations included in P5 will be studied, proposed, executed and financed by the private party through the savings achieved or by selling the energy produced by RES systems.

## Case Study 2

**Project identification:** Public Hospital Area Juan Ramón Jiménez (Huelva)

**Project appraisal:** Budget of the project: 2,7 M€.

**Design and agreement on PPP**

The Hospital Area JRJ includes three buildings: JRJ Hospital, VR Hospital and Virgen de la Cinta Hospital.

The project was focused on energy saving and energy efficiency. It included the following measures:

- Upgrade of the climatization system of the JRJ Hospital.
- Installation of solar panels for producing warm water in JRJ and VR Hospitals.
- Increasing the capacity of the converter of the JRJ Hospital.
- Changing the climatization system in Virgen de la Cinta Hospital and increasing the capacity of the converter.

The formula used for the PPP was an Energy Performance Contract (EPC) considering a mixture of the share savings and guaranteed savings scheme.

**Implementation of PPP**

The ESCO guarantees the savings during the length of the contract (10 years). The financial risk is completely assumed by the ESCO. The ESCO receives a percentage of the annual savings as return of the project investment.

## Case Study 3

**Project identification:** Public lighting in Mombeltrán (Ávila)

**Project appraisal:** Budget of the project: 37.800 €

**Design and agreement on PPP**

The Town Council is responsible for the management of the construction and maintenance of the street lighting installation. In order to reduce the energy consumption of this installation the Town Council requires from the energy supplier (Iberdrola Generación, S.A.U.) the installation of voltage regulators in order to reduce the lighting intensity during the night and avoid over consumptions.

The PPP agreement adopts the scheme of the Energy Supply Contract (ESC).

**Implementation of PPP**

The main characteristics of the contract are:

- Iberdrola S.A. assumes completely the financial risk.
- Since the beginning of the project, the Town Council profits energy savings.
- Iberdrola S.A. charges monthly pre-established fees to the Town Council during the duration of the contract (3 years). The fee is lower than the savings achieved.
- The Town Council is the owner of the equipment since the beginning of the project, though Iberdrola S.A. keeps the control of the equipment till the global amount established in the contract is paid.

# Italy

## PPP and EPC Approach in Italy

**Legal framework**

The Italian legal framework for the realization of PPP operations' contracts is covered in most part by the Italian Legislative Decree no. 163/2006. Within it, in line with the directives of the EC 2004, the concessions of public works and service, including the sponsorship contract are defined and ruled. Also the approval of the Government Budget in 2007 made it possible the employment of property leasing contracts for the implementation of project.

In Italy at the moment there are 7 forms of PPPs:

1) **Contract of concession to build and management based on public initiative** (art.143 of "Code of public contracts for works, services and supplies", D.Lgs. n.163 of 2006). This is the traditional concession to build and operate in which the public administration, once the infrastructural needs have been individuated, elaborates a preliminary project and inserts this in the programming instruments already approved. On the basis of the preliminary project made by the public administration it starts the private tendering procedure to individuate a winner. The private income is received during the operation phase while there are also risks of financial and technical nature. The public contribution aims to grant to the private the obtainment of an economic and financial balance.

2) **Contract of concession to build and operate based on private initiative** (art. 153 and following of "Code of public contracts for works, services and supplies", D.Lgs. n.163 of 2006). This is a particular procedure in which the private sector is the promoter for the realization of a public facility or service and presents to the public administration a specific project that is linked with infrastructures already inserted in the programming instruments of the administration itself. The private income is received during the operation phase while there are also risks of financial and technical nature. The public contribution aims to grant to the private the obtainment of an economic and financial balance. The proposal, once declared of public interest by administration, is the basis of a public tender, aimed to the identification of the dealer, articulated in two moments.

3) **Other concessions of operation** - these are contracts between the public authority and a private subject for the supplying of a service. The private income is perceived during the operation of the service and can be linked to a price. This is balanced by the risks in operation the service. Compared to the previous two forms in this case the supplying of the service is not linked with the realization of a facility, and if a kind of facility is required, its value is not significative with respect to that generated by the supplying of the service.

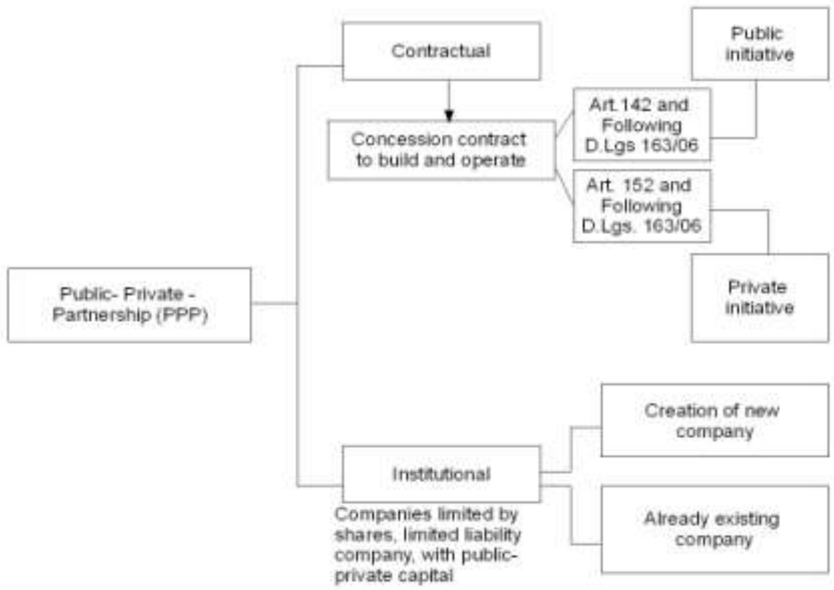
4) **Mixed public-private company** - the D.lgs n.267 of 2000 with art. 113 and following, identifies two typologies of public-private companies: stock companies with the purpose to realize with the contractual obligation of majority participation of public bodies, to which can

be assigned the only operation of services with or without economic significance; companies limited by shares realized without the contractual obligation of the majority participation of local bodies, for the operation of public services that have no economic significance and for the realization of the facilities necessary to the operation of services or for the realization of infrastructures and other works of public interest.

5) **Urban transformation company** - Urban transformation companies have been introduced with art. 120 of dl.lgs 267/2000. These represent a particular typology of mixed companies and are based on a specific social purpose, which is the design and realization of urban transformation works that will operate urban plans. Private income derives from the commercialization of the works realized on the upgraded area.

6) **Public sponsorship contract -** These are contracts subscribed between a public body, that assumes the qualify of sponsee, and a private operator, sponsor; the first will display the name and/or logo of the private sponsor that will pay for this.

7) **Immovable leasing** - These are contracts of lease of movable or immovable properties acquired or build by the lessor following indications of the leaseholder, who will assume all the risks, and who will have the possibility to become the proprietary of the leased properties at the end of the contract, by paying and established price. The law 27 December 2006, n. 296 (Finance Act 2007) art. 1, paragraphs 912-914 and 907.908 allows the use of the leasing contract for the construction, the acquisition and completion of public works or public utilities, by the commissioners required the application of the code of contracts public works, services and supplies.



## Economic benefit for PPP players

**1. Benefits for investors in PPP funds: investing** in stable cash-flow businesses, with a moderate risk

**2. Help sponsors:** PPP funds help sponsors to:

- Structure project financing (making them "bankables")
- Face equity needs (both through capital increase and mezzanine financing)
- Control costs during construction and operational period

**3. Benefits for public sector**

- PPP funds stress analysis on economic and financial feasibility of projects in the long term
- PPP funds are by nature long term investor; they are not interested in construction revenues

## The dimension and the structure of PPP market in Italy

PPPs in the last years have assumed a growing importance in Italy. Comparing the data related to the PPPs with those of conventional project financing the impact of PPPs in terms of economical value is raised in 3 years, from 2002 to 2005, form the 12,8% to the 44,2%.

If the PPPs are classified based on the value, it can be seen that the most of them are middle to low value operations (inferior to 5 million euro). In 2004, there were 481 PPPs of which 367, that is 76%, had a value inferior to 5 million euro. In 2005 the percentage raised to 82%. Regarding the sectors in which PPPs initiatives are mainly concentrated, these are medical facilities and utilities such as: water, methane, energy, telecommunications, and transports which, all together, represent the 80% of the market of 2005 with 9 billion euro of value. The chart listed below give a short overview for the investment strategy to adopt for Italian market.

*Table 1. Italy PPP Investment Strategy*

| | PUBLIC BUILDING | ENVIRONMENT | URBAN DEVELOPMENT | TRANSPORTS | PUBLIC UTILITIES |
|---|---|---|---|---|---|
| SIZE Of INVESTMENT | Medium-Low | Medium-High | Medium-Low | High | High |
| RISK | Low | Medium | Medium | Medium-High | Medium |
| YIELD | Medium | High | High | Medium-High | Medium |
| TENOR | Medium-High | Medium-High | Medium | High | Medium |
| INVESTMENT POLICY OF THE FUND | 50-60% | 10-20% | 15-20% | 5-10% | 20% |

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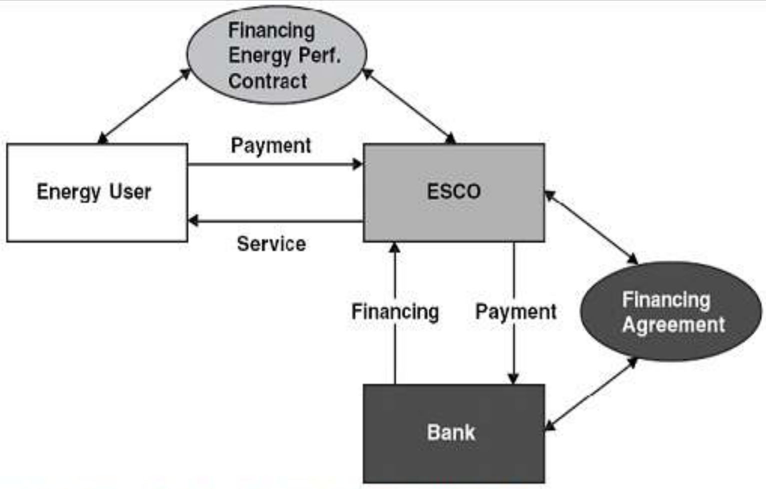
**EPC (Energy Performance Contract)**

Energy Performance Contracting (EPC) consists in procuring energy efficiency as a service. Through innovative contracts, Italian ESCOs (energy service companies) or other providers guarantee a specified energy performance and energy savings to the customer. In exchange they share the savings with the latter. If the project does not provide returns on the investment, the ESCO is often responsible to pay the difference. Policies and incentives can be introduced to kick-start and catalyze the ESCO industry. The examples of the Italian ESCO have shown that direct and indirect governmental support to EPC as well as the exemplary role of the public sector in initiating energy-efficiency change through ESCOs is crucial to kick-start a sustainable ESCO industry. EPC in the public sector is especially important as it does not only help reduce energy costs in this sector, but also triggers the development of the ESCO-market and demonstrates the advantages of EPC to the economy in general. In recent years on of the most outstanding feature of the Italian ESCO sector is the relevance that energy service companies or ESCOs have gained after the government introduced in 2005 the “White Certificate Scheme”, which obliges the national electricity and gas providers to either implement energy efficiency measures or buy the certificates, thus generating funds that can be used by the energy service companies to carry out their activities. The quantitative objectives pursued by the scheme for the improvement of energy efficiency are expressed in primary energy units (Mtoe) to be saved in comparison with the business as usual scenario for each year in the period 2002-20063. Italian ESCOs have developed from diverse origins, such as “ad hoc” independent companies, equipment suppliers, fuel and/or electricity suppliers, public energy agencies, PPP and joint ventures, and from ESCOs of French origin.

**Mode of operation of ESCOs**




Source: ECS Third party financing Achieving its Potential (2003)

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1. Preparatory documents for a call for competitive bids deliver by the municipality of Follonica. AzzeroCO2, May 2010.

2. *Relazione Attività svolte nel 2008*. UTFP Unit, Ministry of Economic Development. (May, 2009)

3. "Collection and analysis of existing PPP models and schemes in the participating countries and globally". RuralE.Evolution project, supported by the Intelligent Energy for Europe.

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## Case Study 1

**Project identification**

Solar Thermal Installation – Sports Centre Follonica, Grosseto

**Project appraisal**

Budget of the project: 300.681,38 €

**Design and agreement on PPP**

The PPP was created after the Italian Ministry of Environment has published a call for project named Solar Thermal Energy on Public Buildings. Following the call procedure, 65% of the total budget is cover by the Ministry and 35% by the company in charge to build and maintenance the installations. The public funding reach the 65% of the total budget if the Local Authorities in charge for a call for competitive bids receive and select a proposal that provide a TFP(Third Financing Party), Savings guarantee and the proponent is an ESCO. The 100% of the monitoring cost are cover by the Italian Ministry of Environment under the rules of the campaign "Solar Thermal Energy on Public Buildings".

**Implementation of PPP**

The first step was a call for competitive bids open by the municipalities of Follonica. After a comparative analysis of the 5 best options, the one selected is define following economic and long term-maintenance conditions. For the implementation an agreement call Third Financing Party was sign. This kind of contract foresees that the savings guarantee generated thanks to the Solar Thermal Plant are assigned to the ESCO in charge for the Solar Thermal Plant. This procedure is valid until the ESCO has covered its expensive for the project (35%). Afterwards the local authorities can up-take the complete property.

# Greece

## PPP and EPC Approach in Greece

In Greece, Law No. 3389/2005 issued at the 22nd of September 2005, introduces a new legal framework for the implementation of Public Private Partnerships in Greece. This legal framework aims at regulating the implementation of projects and the provision of services through PPP schemes. Specifically, the law defines the Public Entities that can implement partnership contracts with Private Entities, in areas falling within the scope of their competence.

Law 3398/2005 aims at providing incentives for both public and private entities, so as to engage themselves in PPPs for the construction of infrastructure or the delivery of services, when it can be demonstrated that this procurement method delivers value for money for the public sector. This Law defines the minimum content of a PPP contract, with a clear description of the rights and obligations of both parties, regulates specific issues, such as financing, participation of public entities in partnerships, the payment mechanism, the granting of permits, the protection of the environment, the treatment of archaeological findings, expropriations and cases of projects undertaken by Public Utility companies. Moreover, legal issues related to these partnerships, such as the transfer of claims, taxation and resolution of disputes (arbitration) are clearly defined.

The new legal framework provides that under a partnership contract, the Private Entities assume a substantial part of risks associated with the financing, construction, availability of or demand for the partnership object, against payment to be made as a lump sum or in instalments by the Public Entities or by final users of the works or services. As such, the financing, in whole or in part, for the construction of the works or the provision of services, is provided by resources and funds secured by the Private Entities that are paid back during the operational period of the projects.

Under Law 3389/2005, a Special Secretariat for Public-Private Partnerships (PPP Unit) has been established in the Greek Ministry of Economy and Finance, having the responsibility to identify projects that can be delivered via PPP schemes.

Regarding ESCOs, the Law No. 3855/2010 issued at the 23rd of June 2010, which is titled "Measures to improve energy efficiency in end-use, energy services and other provisions", sets the legal framework for the development and operation of energy services companies. This law is in compliance with the European Directive 2006/32 on energy end-use efficiency and energy services. One of the aims of the Law is the development of the ESCOs register which has not initiated yet.

Up to date, 34 PPP projects with a total budget of approximately 4 billion Euros have been approved, corresponding to 216 new infrastructure sites. However, only one project includes energy efficiency measures which has not been carried out yet. This PPP project was launched by the Hellenic Real Estate Corporation and involves the design, construction, financing and facility management of seven new buildings of the Hellenic Fire Service.

# Conclusions

A successful public private partnership should fulfill three conditions at a minimum:

a) Benefits for private sector: generate a profitable revenue stream or expand market access;
b) Benefits for the consumer: delivery of services that people want and would not have access to at the same price, in a business as usual situation, e.g. improvement of provided services;
c) Benefits for the government: fulfillment of a political need, social obligation, development imperative.

Based on the performed case studies (Greece, Italy, Portugal and Spain), we can conclude that the implementation of PPP is very similar, once that all countries are subjected to European Union legislation.

We can conclude as well that innovation capacity, dedication and cooperation among the parties are important success factors in the PPP, as well as a solid and simple legislative framework. For instance, in many countries, the PPP implementation is a long and bureaucratic process. Furthermore, it happens that partners have different expectations and understanding of their roles, so it is very important the consideration of experience and lessons learned abroad.

Summing up, a PPP can present a high number of advantages, but its designing, implementation and management is also a complex process.

When implementing a PPP, one must have the following aspects into consideration:

- Ensuring of an open market access and fair competition;
- Protecting the public interest and maximizing added value;
- Defining the optimal level of grant financing both to realize a viable and sustainable project but also to avoid any opportunity for windfall profits from grants;
- Assessing the most effective type of PPP for a given project;
- Make an extensive use of local resources, leading to price reduction of the offered public goods, improvement of living standards and sustainable development of the areas.

# Case Studies Template

## A. General Information

Case study title: ____________________________________________________________

Organization: ______________________________________________________________

Entities involved: __________________________________________________________

Date: ______________________________________________________________________

## B. Territory of PPP Implementation

**(Brief description)**

________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
__________________________________________________________________________

## C. PPP Characteristics

### Core Activity of PPP

**(Please describe the core activity that the PPP carries out in the field of energy)**

________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
__________________________________________________________________________

### Description of PPP

| **Duration of partnership (in years)** | |
|---|---|

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**Maturity level (mark the right answer)**

Completed ☐ Date of completion: ____________

Currently implemented ☐ Expected date of completion: _____________

**Fields of interest (please describe briefly)**

____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
______________________________________________________________________________

**Objectives to be achieved through the PPP (please describe briefly)**

____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
______________________________________________________________________________

**Service needs to be covered through the PPP (please describe briefly)**

____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
______________________________________________________________________________

**Management of the Project (mark the right answer)**

☐ **Private**

☐ **Public**

☐ **Joint**

☐ **Other:** __________________________________________________________________

**Ownership of the Project (mark the right answer)**

☐ **Private**

☐ **Public**

☐ **Joint**

☐ **Other:** ____________________________________________________________

**Risk management plan (mark the right answer)**

☐ **No**

☐ **Yes**

**Please explain:** ____________________________________________________________

______________________________________________________________________

**Additional information (please provide any additional information you think it is important to understand the standards and expectations of the PPP)**

______________________________________________________________________

______________________________________________________________________

______________________________________________________________________

______________________________________________________________________

______________________________________________________________________

## Initiative to adopt a PPP scheme for the specific service

**Reasons to adopt PPP (mark the right answer)**

☐ **Limitations in public funds to cover investment needs**

☐ **Efforts to increase quality and efficiency of public services**

☐ **Other:** ___ ____________________________________________________________

______________________________________________________________________

**Type of initiative**

☐ **Public initiative**

☐ **Private initiative**

**PPP type (mark the right answer)**

☐ **Concession**

☐ **Joint Venture**

☐ **Other:** ___ ______________________________________________________________

## Implementation Phase

**Selection procedure (please describe the procedure form proposal to approval)**

____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
______________________________________________________________________________

**Time required to formalize definitively the PPP (mark the right answer)**

☐ **< 1 year**

☐ **1-5 years**

☐ **>5 years**

☐ **Other:** _________________________________________________________________

**Construction period - if PPP has been completed (mark the right answer)**

☐ **0-2 years**

☐ **2-5 years**

☐ **>5 years**

☐ **Other: ___________________________________________________________________**

**Marketing Plan (mark the right answer)**

☐ **No**

☐ **Yes**

**Please explain: _________________________________________________________________**

_________________________________________________________________________________

| | |
|---|---|
| **Total costs with energy (initial plan)** | € |
| **Annual reduction of costs with energy** | € |

## Partnership Scheme

**Local Authorities (please name them):**

1. ___________________________________________________________________________
2. ___________________________________________________________________________
3. ___________________________________________________________________________
4. ___________________________________________________________________________
5. ___________________________________________________________________________

**Private Investors (please name them):**

1. ______________________________________________
2. ______________________________________________
3. ______________________________________________
4. ______________________________________________
5. ______________________________________________

**Role and Responsibilities of each body (justification of their involvement and description of the competence fields between public and private sector):**

1. ______________________________________________
2. ______________________________________________
3. ______________________________________________
4. ______________________________________________
5. ______________________________________________

**Duration of Partnership (mark the right answer)**

☐ **<5 years**

☐ **5-10 years**

☐ **15-20 years**

☐ **>20 years**

**Profit and cost sharing provisions (please describe briefly):**

______________________________________________

______________________________________________

______________________________________________

______________________________________________

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## Economic Framework of PPP

| | |
|---|---|
| **Estimated budget**<br>(in the initial plan) | € |
| **Real budget** | € |

**Investing Tools (please describe briefly)**

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

**Financial Contribution of Partners**
**(please give % of partners Financial Contribution)**

| Investor | % Contribution |
|---|---|
| | |
| | |
| | |
| | |
| | |

**Profit assurance for the private sector (please describe briefly)**

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

**Public guaranteed for loans (please describe briefly)**

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

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### Final Beneficiaries of the PPP (short and long term)

☐ **Local population**

☐ **SMEs**

☐ **Environment:**

**Other:** ____________________________________________________________

______________________________________________________________________

### Results

______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________

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