

## **Checklist to set up an EPC+ project**

The following checklist should support and guide SPINs during each phase of the implementation process of EPC+ services. It should give a short overview about the minimum requirements which should be considered.

How is an EPC+ project defined and what are SPINs?

Within the frame of an EPC+ project the cooperation of SMEs with the aim to offer joint EES to the market is described as **SPIN**. Such **SME Partnerships for Innovative Energy Services** are organized clusters of independent companies that jointly supply novel energy efficiency services to existing or new customers. The partnership sets commonly agreed objectives, valid for a structured and long-term cooperation.

The definition for an **EPC+ service** is the following:

1. An EPC + service is realised by as SPIN, (i.e a cluster composed of, at least, 3 or more SME's). However, fully-justified alternatives may also acceptable.
2. An EPC+ service is performance-based. Priority should be given to guaranteed savings contracts. However, fully-justified alternatives may also acceptable.
3. An EPC+ service should be innovative, by implementing either: (1) an existing service in a new sector, (e.g. in the sector of SME's or multifamily buildings), (2) an innovative service in a sector where performance based projects are already realized and (3) a combination of both.
4. An EPC+ service contains a demand-side energy efficiency measure: whose performance may be verified either quantitatively or qualitatively.

The following checklist is particularly based on the Targeted Tertiary Energy Performance Protocol of the Investor Confidence Project. This Protocol is designed for targeted tertiary projects that involve building retrofits with only one or a limited set of energy conservation measures, without major interaction between them. Further information can be found under

[europe.eepformance.org/uploads/8/6/5/0/8650231/3\\_targeted\\_tertiary\\_protocol\\_eu\\_v1\\_0\\_070416.pdf](http://europe.eepformance.org/uploads/8/6/5/0/8650231/3_targeted_tertiary_protocol_eu_v1_0_070416.pdf).

## **Periods during the implementation of an EPC+ project**

Four periods have been identified during an EPC+ project process:

1. Considerations before the initial contact,
2. Considerations between initial contact & signing the contract,
3. Considerations between signing the contract & initial startup and
4. Considerations between initial startup & first invoicing

Furthermore, each of these periods is divided in five sections which should be considered during the process:

1. Baseline core requirements/ required parameters / saving calculation
2. Design, construction & verification
3. Operation, maintenance & monitoring
4. Measurement and verification
5. Communication

### **1. Considerations before the initial contact**

The following points should be checked between the SPIN-members before the initial contact to the client takes place.

1. Baselining core requirements/ required parameters /saving calculation

(An energy usage baseline provides a critical starting point for accurate projection of potential energy savings as well as for measurement after retrofits and/or retro commissioning. The baseline must establish how much electricity a system or end use can be expected to use over a representative period, as well as any renewable energy that is generated and used on site. It should also factor in the impact of independent variables such as weather, occupancy, and operating hours on the baseline energy use, where these have an impact on the baseline energy consumption. The required parameters for each service can be identified within the different Toolboxes of WP 5. )

- The services, that should be provided, is / are known and the SPIN is ready to offer the service. A provider or alternatively the own production for the implementation is ensured.
- A potential market exists to acquire new clients.
- The calculation tool for measuring the baseline has been identified is transparent and provides rapid access to right data.
- Requirements have been identified, so that new service(s), its installation and future electricity costs decrease the average electricity costs of existing systems.

## 2. Design, construction & verification

- The SPIN partners can offer the service and no other new SPIN member is needed.
- The functionality of the service(s) and the consistent performance is/ are ensured.

## 3. Operation, maintenance & monitoring

- The service(s) is/ are available in sufficient quantity on stock or can be obtained in sufficient quantity.

## 4. Measurement and verification

- The correct measurement and verification procedure for the service has been identified. Each service follows a different measurement and verification procedure.  
(The necessary procedure(s) in order to verify the performance(s) are described within the different Toolboxes of WP 5.)

## 5. Communication

- Communication with the energy service provider (if necessary), if the service for the client is possible and when it can be arranged.
- Communication with the installer, if there is capacity for an installation and how long it would take (if a professional installation is necessary).

## Insights regarding this period

- Under which circumstances is an economic contracting model possible?
- How long would take the technical implementation of the new service(s) at the clients place.
- Minimum quantity that makes a contracting model economic. (see calculation tools of WP 5)
- Maximum quantity that can theoretically be delivered/ installed.

## **2. Considerations between initial contact & signing the contract**

### **1. Baseline core requirements/ required parameters /saving calculation**

- Current system of the client is outdated.
  - There is access to the facilities where the implementation of the new service(s) should take place.
  - The identified calculation tool (WP 5) of the required service(s) can be used in order to provide data about the current energy use (which parts of the system are used, how frequently and how intensive). If possible, further information about the current energy use over the last months is available (for the validity of the contract).
  - Agreement with the client about the regularity of the measurement, scale of reporting and protocolling of intermediate stages.
  - First calculation of profitability on the basis of measured data from the client or per calculation tool
- Determination of a financing model.
- Consideration of laws and guidelines.
- Consideration of weather data as well as economic, ecological and/ or technological relevant developments if they are related to the new service(s).

### **2. Design, construction & verification**

- Final selection of a suitable service for the client.
- Favored service can be technically implemented into the client's facility.
- Set up of the contract.

### **3. Operation, maintenance & monitoring**

- Final preparation of the service(s) for the client (e.g. pre-installation)

### **4. Measurement and verification**

- Implementation of occasional measurements at the client's facility.
- If possible, consumption measurement of the entire old system.

### **5. Communication**

- Discussions between the service providers (SPIN members) and the client about possible dangers and risks (if a professional installation is necessary).
- Instructions about specifics and details of the services(s) and its installation.
- Communication with the client to determine a timeframe for the installation of the new system.
- Consideration of specific technical details at the client's facilities.

### **Insights regarding this period**

- The client is willing to adopt the offer of the new service(s).
- A measurement for the baseline calculation at the client's facilities can take place
- The project is economically.
- A financing model has been chosen.
- The client has also been informed about possible risks.

### **3. Considerations between signing the contract & initial startup**

#### **1. Baselineing core requirements/ required parameters**

- The client grants access to the facilities.
- Consideration of potential complications and additional costs into the calculation of profitability

#### **2. Design, construction & verification**

- Implementation and installation of all new, contractually based services.
- Perhaps additional expenses due to necessary modifications during the installation.

#### **3. Operation, maintenance & monitoring**

- As far as possible: no interruptions/ restrictions of the client's business operation.
- Permanent comparison between the nominal and the actual values.

#### **4. Measurement and verification**

- If it did not happen already before, consumption measurement of the entire old system (including the measurement error).

#### **5. Communication**

- Communication with the energy provider and the service provider to achieve a fast installation of the new system
- Communication with the client and the service provider about possible problems/ dangers during the implementation process.
- If necessary, instruction to the client's employees.

#### **Insights regarding this period**

- Possible delays of the implementation of the installation.
- Insights about additional costs that result from the installation.

## **4. Considerations between initial startup & first invoicing**

### **1. Baselineing core requirements/ required parameters**

- The right conditions have been created in order to compare the old energy consumption with the consumption after the implementation of the service.
- Comparison of the current consumptions with the previous data before the implementation of the service.
- Generating a calculation of profitability with the newest data

### **2. Design, construction & verification**

- Necessary adjustments in the performance of the services and/ or the activation/ deactivation of single units.
- Consideration of additional energy-saving actions to achieve the objectives.

### **3. Operation, maintenance & monitoring**

- Monitoring of the consumptions and optional initiation of countermeasures where limit values are reached.

### **4. Measurement and verification**

- Determination of a tool in order to perform the new measurements (technical toolboxes of WP 5).
  - Measurement of the current energy consumptions of the service(s)
  - State the value of the measurement error.
  - Analysis if the measured values correlate with the expectations.
- The measurements verify the promised energy saving and the project was successful.

### **5. Communication**

- Presentation to the client about the results

### **Insights regarding this period**

- Information, if the implemented service is economically or not.
- Information, if the implemented action was successful.
- Achievement of experiences for similar projects in the future.