CombinES
Combining energy services with subsidy schemes to finance energy efficiency in Central Europe

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Katowice, 15th April 2014

COMBINES PROJECT
CENTRAL EUROPE PROGRAMME/4CE499P3

WP5 National Report for Poland: Combining subsidy schemes with the EPC

This document has been conducted within the framework of the European Union project "CombinES" supported by the program Central Europe programme.

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DEFINITIONS AND GLOSSARY

Term	Definition
Energy Efficiency Directive (EED)	Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency
energy efficiency (EE)	means the ratio of output of performance, service, goods or energy, to input of energy (as defined by EED)
energy efficiency improvement	means increase in energy efficiency as a result of technological, behavioural and/or economic changes (as defined in EN 15900:2010)
energy savings	means an amount of saved energy determined by measuring and/or estimating consumption before and after implementation of an energy efficiency improvement measure, whilst ensuring normalisation for external conditions that affect energy consumption (as defined by EED)
energy performance contracting (EPC)	means a contractual arrangement between the beneficiary and the provider of an energy efficiency improvement measure, verified and monitored during the whole term of the contract, where investments (work, supply or service) in that measure are paid for in relation to a contractually agreed level of energy efficiency improvement or other agreed energy performance criterion, such as financial savings (as defined by EED)
EPC provider	means a natural or legal person who delivers energy services in the form of Energy Performance Contracting (EPC) in a final customer’s facility or premises
Comprehensive renovation	means co-ordinated implementation of both thermal envelope (including building envelope insulation and substitution of fixtures) and technology ones (including interventions on heating, cooling, domestic hot water (DHW) and ventilation systems The report is devoted to a “CombinES comprehensive renovation”, which is a special case of comprehensive renovation, where the thermal envelope part of the renovation is subsidized and the technology part of the renovation is implemented with the intervention of an energy service company (ESCO) trough the Energy Performance Contracting model (EPC).
CCR	is a special case of comprehensive renovation, where the

CombinES comprehensive renovation	thermal envelope part of the renovation is subsidized and the technology part of the renovation is implemented with the intervention of an energy service company (ESCO) trough the Energy Performance Contracting model (EPC)
energy service provider /energy service company (ESCO)	means a natural or legal person who delivers energy services or other energy efficiency improvement measures in a final customer's facility or premises (as defined by EED)
energy service (ES)	the physical benefit, utility or good derived from a combination of energy with energy-efficient technology or with action, which may include the operations, maintenance and control necessary to deliver the service, which is delivered on the basis of a contract and in normal circumstances has proven to result in verifiable and measurable or estimable energy efficiency improvement or primary energy savings (as defined by EED)
CFR: REGULATION 1303/2013 **Regarding ESI**	Regulation (EU) No 1303/2013 of the European Parliament and of the Council of 17 December 2013, laying down common provisions on the European Regional Development Fund, the European Social Fund, the Cohesion Fund, the European Agricultural Fund for Rural Development and the European Maritime and Fisheries Fund and laying down general provisions on the European Regional Development Fund, the European Social Fund, the Cohesion Fund and the European Maritime and Fisheries Fund and repealing Council Regulation (EC) No 1083/2006
PPP,	Public - Private Partnership
PPP Operation	Activities udertaken under PPP
NFOŚ	National Fund for Environmental Protection and Water Management
MF	Ministry of Finance
PA	Partnership Agreement (project)
ESI	European Structural and Investment Funds
TO4	Thematic objective 4"Supporting the shift towards a low-carbon *(low emission)* economy in all sectors
PPO	central Public Procurement Office (Authority)

1. SUMMARY

In this report, the term "**comprehensive renovation**" means **co-ordinated implementation of both thermal envelope (including building envelope insulation and substitution of fixtures) and technology ones (including interventions on heating, cooling, domestic hot water (DHW) and ventilation systems).** The main advantage of such approach is that it is possible to inter-optimize both types of measures within one renovation. This leads to **optimal result bringing maximum energy savings** under the given volume of investment costs. Such results are impossible to be reached neither by partial renovation, nor by implementing the two types of measures without co-ordination.

The report is devoted to a "**CombinES comprehensive renovation"**, which is a special case of comprehensive renovation, where the **thermal envelope part** of the renovation is subsidized and the **technology part** of the renovation is implemented with the intervention of an energy service company (ESCO) trough the Energy Performance Contracting model (EPC).

In order to allow for broader application of the CombinES comprehensive renovation, which combines the subsidies and EPC as two methods of financing, there exist a number of barriers that remain to be eliminated. The report therefore includes a proposal of amendments to the proposed common solution (Draft Proposal of amendments to allow for combining existing subsidy schemes with the EPC) prepared by SEVEn in October 2013.

The experience from the both already implemented and being implemented energy efficiency projects financed by EPC or in combination of subsidies and EPC, shows that combining them is a very promising way to realise the highest share of the existing energy efficiency potential from the limited public funds.

The optimal approach is to implement first the rule that the savings from ESM calculated and obtained should neither be automatically deducted from the energy related spending nor from the unit's "energy budget". They should be tracked, recorded and managed within the life cycle of ESM. The cost-effectiveness rules should be applied when decisions are made this would guarantee transparency, sustainability and potential future replication of undertaken actions.

One of the most important factors to create stable financing is to negotiate first the lowest possible prices of energy accepting the higher levels only then if additional services are supplied (access to meters' database, computer modeling, etc). The start from that point with the support of IPMVP rules helps to avoid unnecessary discussion on the projects' economic viability. (The lower avoided costs the lower IRR and the longer payback period).

The meetings and discussions while performing questionnaire actions have provided some more insights. Polish municipalities are not ready for outsourcing ideas. The long term relations with any private partners are perceived as potential source of risk for public administration. The lack of experience in negotiable procedures within the procurement process leads to the conclusion that although the main ideas of CombinES are welcomed, **the two procurements path shall be set as a target** in Poland because currently the path of one procurement under PPP operations is more viable and proven to be a success.

It is clear that the investment rhythm in Poland's public sector especially at the local self-governmental level is absolutely subordinated to two *election and subsidy* cycles. The office staff have announced to the public that one can observe a pre-election, election and »temporarily calm« seasons somewhere in between, but also a »donation« and »no-donation« seasons exist too. During the period of time when the subsidies are available, a kind of hunting for donations clearly prevails in order to release other finances aimed at strategic purposes. However the hunt-related activities are absorbing to the extent that makes the strategic activities almost forgotten.

The good news is that municipalities, who realized EPC projects as a PPP operation in competitive dialogue procedure, are eagerly repeating this procedure to streetligthing or sewage systems.

The Polish EPC market before it starts to run must at first to learn standing on its own feet or even to struggle to get on its feet after setback caused by unfavorable MF regulations regarding the public debt calculations and easy available subsidy funds.

In Poland first and the only one well described results in/of combining EPC with subsidy has materialized in Karczew. It is a good example that determination of the key decision makers in the municipality is a must and that an excessive intensity of support may become a threat or even a barrier to a stable EPC market development.

Nevertheless one of the key problem that remain is the lack of directives and definitions in Polish law system in the perspective of intensively supported EU programs in 2014-2020 period. This makes EPC providers worried about sustainability of this market.

It is spectacular that the terms "ESCO", ES, or EPC can not be found in the Operational Program of Infrastructure and Environment (adopted project) and just ESCO acronym can only be found once in the current version of the project of Partnership Agreement. Moreover no legislative document in directly refers to the definition of Energy Service.

The serious underdevelopment of the Polish "EPC market" is not only the result of the vague knowledge in the public sector regarding the EU directives related to energy efficiency but firstly by the habit of realizing public procurements *via* „open tendering only".

Therefore Poland needs more time to reach the ideals of the CCR Model. During the transition period public sector should be educated on benefits of EPC and trained on negotiable procedures in the public procurement. Both identified within the CombinES project EPC undertakings (Radzionków and Karczew) have been implemented as "PPP operations" under commercial dialogue formula.

2. CONCLUSIONS FROM THE SURVEY – TASK 5.2.2

2.1 Introduction to Polish procurement & EPC market

It is essential before studying the conclusions of the survey performed by FEWE to learn that not only the Polish EPC market especially regarding the public sector is in its infancy stage, but the whole public procurement market has been developing in a most unique way. The publicly available data of the PPO Polish central authority dealing with public procurement issues shows briefly the following development:

The share of negotiable procedures in Poland is extremely low, in comparison to average European levels. The need to enhance number of advance contract between the public & private sectors has reflected in creation of an utterly new Department in the Ministry of Regional Development (currently Ministry of Infrastructure and Development) which promotes and supports development of long term Public-Private Partnerships. One of few successes of the Polish negotiators has been the introduction to the EU **CFR** *Regulation No 1303/2013 of the European Parliament and of the Council of 17 December 2013* of the concept that the private partner of the PPP may be a beneficiary of the cohesion and structural funds (ESI)(Art.64).

According to the EC Report on the *Assessment of results and effectiveness of the EU regulations on public procurements*, as far as the EU market is concerned, the most popular procedure has been the open option procedure that comprised 73% of all announces for procurement. However, this amount reflects only 52% of the published total combined value of procurements. The second most often procedure was the limited option, that has referred to 9% of the respective announcements, however these procurements have been of much higher values, namely in total of 23% of the entire sum of submitted procurements. The negotiation procedure advanced by announcements has been used in 8% cases resulting in 14% of the total value. The option of competition dialogue has been in use in less than 1% cases with the total of 4% overall value and finally – procurements through negotiations without pre-announcement gave 7% of the number of procurements with 5% in value.

Polish public procurements, according to the information given in a Report issued by the PP Office for the year 2012 says that the most popular option in Poland was the open formula that covered more than 84% vs 73% of all procurement announcements. This responds to 67,6% vs 52% of the total combined procurements value. The »free-hand« procedure is the second popular option, covering 12% of announcements coming up to 9,6% in value. The limited procedure has only been the third ranked option in Poland with 2,3% of announcements (versus 9% in the EU) thus covering relatively much more, because as much as 7,34% (against European 23%)% in the total value. The pre-announced negotiation procedure was used in 0,07% (vs EU 8% in value) cases thus covering as much as 0.4% in value (versus 14% in the EU). The frequency of competition dialogue has not exceeded 0,05%(EU 1%) of procurements with their total values combining to only 0,12% (against 4%

in the EU) while the non-pre-announced negotiations have covered 0,15% (EU 7%) of cases with 2,34% in their total value (5% in the EU).

2.2 Conclusions from the questionnaire survey

Just in time, ten of eleven intended questionnaires were performed by FEWE employees in February, March and April of 2014. Half of them among ESCO – capable enterprises' representatives, and the other half among EPC – ready municipality representatives. Eight of them have already been involved in EPC-like contracts before, or have carried out one of negotiable procedures, two of them have no practical personal experience.

The findings of the questionnaires are summarized below:

1) How suitable do you think is the model of comprehensive renovation for implementation in your country in general?

		Very suitable	Suitable	Neutral	Unsuitable	impossible
I	Process for thermal envelope measures implementation	2+1	2+2	1+1	0+1	0+0
II	Financing of thermal envelope measures implementation - obtaining the subsidy	3+0	1+3	1+1	0+1	0+0
III	Process of technology measures implementation	3+3	1+1	1+0	0+1	0+0
IV	Financing of technology measures implementation thru EPC	2+3	3+1	0+0	0+1	0+0
V	Feasibility of combining both parts in the time schedule in the table	0+0	1+1	2+0	1+1	1+3

Table 1: Answers from ten EPC stakeholders to the CombinES questionnaires, 2014

The answers of municipalities precede the sign of +, the ESCO's answers follow this mark. It is worth to mention that the biggest enthusiasm to the two procurement concept by CombinES have been expressed by the market newcomers, the greatest pessimism has been found in more experienced ESCO's. As the table 1 shows, the members of the ESCO Association responsibility of the Facilitator do see the model of combined renovation generally as (very) suitable or neutral – but especially the financing issue was seen critical by the public authority.

The questionnaire action was preceded by brief comments on the objectives of this action and explanation of the questions. The questionnaire action was supported by an example time schedule of a project under the EPC formula including grant co-financing in the Polish conditions.

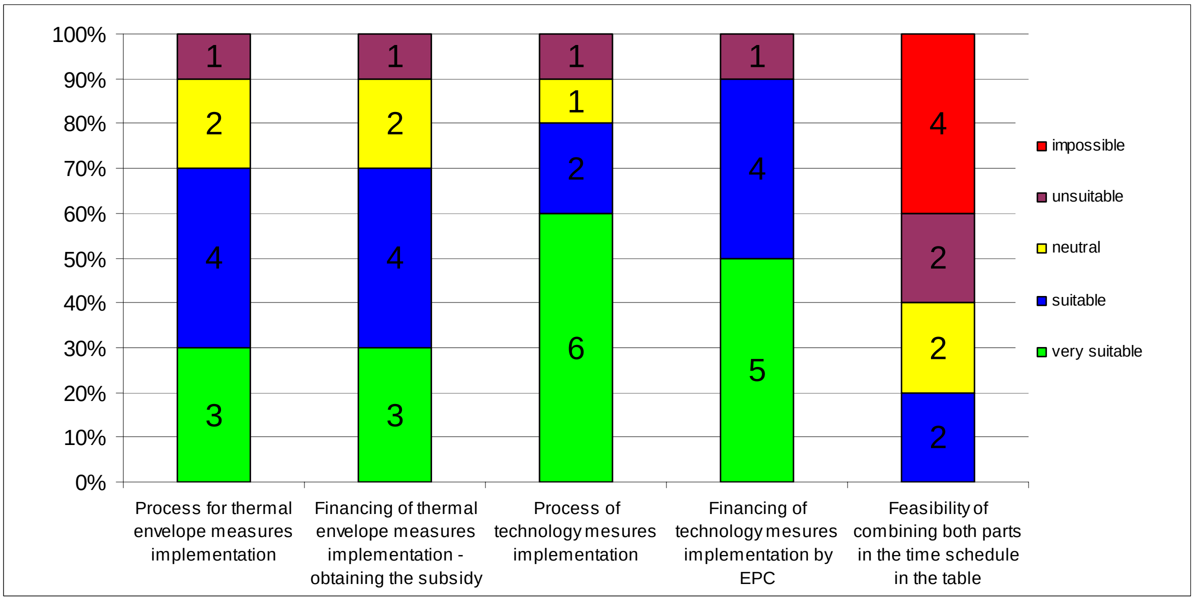


Figure 1 Consolidated opinions on implementing a CCR model.

In general, implementing of the **comprehensive renovation** model and fostering it with subsidy were considered suitable and very suitable by most of the participants (70%) , while some 20% of them considered it neutral. Only one inquired person has found this concept as an unsuitable solution. Positive impact was mostly explained by significant energy savings and operational costs mitigation expected to result from deep thermal retrofit. Disadvantage of this concept is high implementation costs therefore grants are needed.
Most of participants (60%) have found most suitable the process of implementation of technology measures within **comprehensive renovation.** Another 20% described it as suitable. The implementing technical measures because has been praised due to possible earlier closing the contracts . Large potential of technology related undertakings correlated with such activities as improvement of system efficiency or implementing system management is relatively cheap, profitable and cost-effective.
The idea that financing technology measures thru EPC has also been found very suitable by half of he respondents another 40% of them approved this idea as a suitable one. Financing of the implementation of the technology measures with EPC subsidies will allow to realize multiple projects, mainly for small/medium ESCO's. Formula EPC helps to maximize savings with low risk factor of failure. A significant risk of performance is shifted at the ESCOs side'.
Unfortunately more than half (60%)of participant finally pointed that introducing now CCR concept in two procurement is unsuitable. Moreover 60% of ESCO's didn't welcomed this solution called in impossible.
Only 20% of participants believe that it is suitable to implement the CCR in its optimal and most developed form of two procurement path. The most of the worries has been bound to the costs, risks and time of "winning" the grant part (complicated, long lasting procedures). Due to competence requirements and optional hiring a consulting firm it is very difficult to a profiled company to manage the process. Granting a subsidy is quite uncertain and will result in significant prolongation of the process of selecting partners. Also additional documentation would be required for the co-financing related documentation.

The variety of participants is shown in the following diagram.

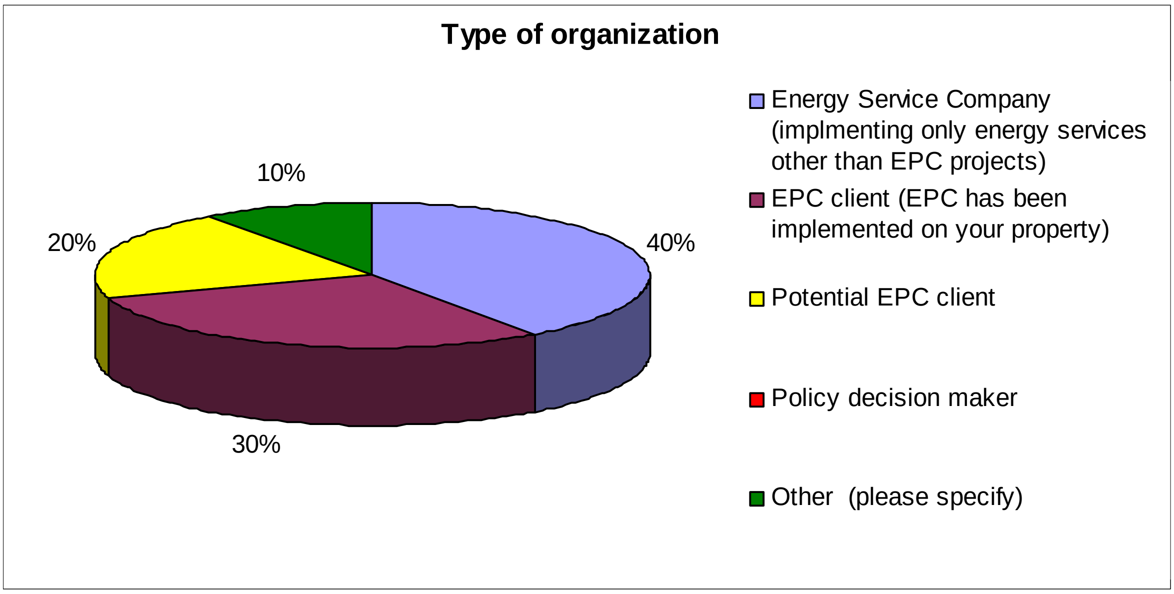


Figure 2 Type of organization.

2) While asked to justify / explain their earlier answers, both sectors - private (EPC-ready) and public (municipalities considering the EPC agreement) has been also asked to describe the basic barriers or advantages coming from the proposed model. They have shown and stressed the following issues:

i. Process for implementation of construction measures

Public- municipalities	ESCO's – private companies
Implementing of an investment makes it possible to maximize the achieved measurable savings and to introduce maintainance cost management	This process shall be performed in simple tender releasing ESCO from financing so that ESCO may focus on the core-business

ii. Financing of construction measures implementation - obtaining the subsidy

Public- municipalities	ESCO's – private companies
Involvement of subsidy deriving funds allows to less involve owns means. It also mitigates the financial costs in case of distributing repayments for the years to come	Normally EU Funds cannot be combined with inputs from private companies (ESCO) on energy procurement and this should be strived for.

iii. Process of technology measures implementation

Public- municipalities	ESCO's – private companies
Crucial importance lies with planning and implementing of general thermo-retrofit. Results may be achieved thru energy	Financing of EPC with subsidies will allow to realize multiple projects, mainly for

management system and modernization. Most reasonable results derive from a comprehensive solution.	small/medium ESCO's The EPC Formula maximizes savings. Risk factor comes from a wrong selection of an ESCO.

iv. Financing of technology measures implementation by EPC

Public- municipalities	ESCO's – private companies
In case of EE a public partner receives a guaranty of achieving savings. This is confirmed within the agreement and in case of failure the difference is reimbursed financially / agreement cost.	Low costs. Less risk of failure in effects. Higher risk at the ESCO side. Negative risk profile with shift of assets.

v. Feasibility of combining both parts in the time schedule in the presented diagram

Public- municipalities	ESCO's – private companies
Two procurements process is difficult and not reasonable. Public entities prefer to have single partner in procurement process, hence low costs, less risk of failure in achieving effects.	Not reasonable to divide - some modifications (of sources, enveloping, lighting, windows, etc.) and management may be considered.

2.3 Conclusions from the workshops

In the end of March a workshop within WP5 has been performed in Katowice. The basic principles of the project have been discussed with the representatives of municipalities.

The shallow impact of the ESCO's concept has been discussed regarding the building sector. The biggest tender of the last years has attracted just a few **EPC providers** despite the fact it has been announced in TED.

The participants have agreed that on the way to the optimal two procurement approach, due to lack of experience in the public sector and the preference of joint and full responsibility for the contract a one procurement approach shall be the starting point. Establishing new criterion where the volume of offered energy savings and the discounted cost play the key role should secure the distinct role of ESCO and guarantees during the procurement process. The additional stipulating and division of all **energy efficiency improvement** / EE measures in two groups regarding the prepared earlier energy audit simple PBP may also be helpful. The component of energy management shall also be awarded in procurement process. This shall enable the ESCO to play the leading role in the ad hoc –Consortium.

In the public sector there is a need for training on “negotiation procedures”, competitive dialogue.

The possibility of support of the introducing EPC - EE improvement via “PPP operations” according to the CFR Regulation (EU) No 1303/2013 has been welcomed.

According to above mentioned regulation- allow the ESCO to be the beneficiary of the operation or be the applicant,- initiator of the project (an receive technical support)

The repository of good practices and sharing of practical expertise on EPC/PPP may develop the market.

The biggest problem over the Polish market is lack of awareness and demand that turns into lack of openness from the public sector regarding any long-term contracts. It means that any contracts lasting longer than a single cadence –and even in fact exceeding a budget year time-span are generally perceived risky by the local authorities. The Polish entrepreneurs and companies have made a big progress and sustainable economic development owing to focusing on their core-business activities and outsourcing most of the indirect tasks. This has created a market for smaller businesses, while the public sector in Poland is still not ready to launch long-lasting cooperation with the private sector. Commonly available data regarding the practice in public procurement system show that <50% of the total number of bids are performed thru negotiation procedures, while open tendering covers more than 90% of cases [3]. The administrative officers prefer using of well-known procedures what is coupled with minimizing risk in terms of their work. The master criterion still remains the price itself rather than quality, durability or environmental context. The objectives of performed processes is to achieve a certain effect understood as a task to be solved (e.g. enveloping of a building) and not a long-lasting management process that would focus on the final quality of environment and conditions in the subject buildings. It is common that self-governments are able to report the range of energy consumptions in currency units rather in natural physical units and there are no reliable data regarding the comfort issues (temperature, humidity in rooms etc.).

Officers are interested in receiving grants / subsidies supportive to the maximum extent and they fear of not achieving pre-declared effects that may turn into necessity of paying-back the money hence they seek for programs with soft conditions which are easily accessible to avoid actions involving accurate measurement, typical for EPC.

3. INPUTS & COMMENTS TO COMMON SOLUTION

A "Proposal of amendments to allow for combining existing subsidy schemes with the EPC"[1] had been worked out by SEVEn and includes a proposal of amendments to the existing conditions of the subsidy programmes, the legislation and the EPC business model. The focus of this report is to add inputs and comments to the proposal from the Polish perspective and how it is functional for the Polish just emerging market. It is worth to mention that excess of subsidies in previous UE budget perspective has severely hampered the rising EPC / TPF market. Another blow has been delivered by Polish Ministry of Finance in December of 2010 which has introduced the new rule that face value of almost all TPF/EPC contract should be included in the public debt calculation. That, due to low level of remaining limits, has put the ESCO/EPC market to a standstill. The difference in attitude of MF to the PPP contracts has created the only opportunity to avoid the excessive debt barrier.

3.1 Main principles of comprehensive renovation

The main principles are well understood and supported by all municipalities – but the phrase »combined comprehensive renovation« should be shortened to CCR acronym and a separate definition allowing the one procurement approach combined that an obligatory energy management should be created. Referring to international standards like EVO'S IPMVP would be an asset. Some reasonable barriers protecting EPC contract from being crowded out by heavily supported grant projects should be set.

The good example of viable program is the NFOSiGW Green Investment Scheme program which basic rule has been maximum of 30% of grant and another 30% of preferably loan for each accepted project.

The flexible rules of that programme have made possible the realization in Karczew the first CCR- like project according to PPP formula. The key element of this projects are performance guarantees issued by the ESCO

Regarding Poland, the main comments to the proposed principles of comprehensive renovation are given below:

- Initial stage on ESCO market – technical support is essential and temporary adjustment of the proposed model (at least3-4 years transition period)
- Incentives comprising solution shall be introduced:
    - Implementing investment with EPC/ PPP shall be awarded with grants, higher guarantees or volume of EPC contract – higher intensity volume of the subsidy.
    - EPC – contract shall be accepted as a municipality own involvement (participation) in the financial montage during the application for the subsidy-grant support,

[1] WP5 Task 5.1.3, SEVEn, Prague, CZ, October 2013

- o Investments made without EPC/guaranteed part nor energy management may receive the support mainly via returnable, financial instruments
- o One procurement approach (with distinct role of ESCO and guarantees), but stipulating and division of all EE measures in two groups- CombinES shall be the start point.

- the rule of the grantor is paying for the result, the most "profitable" should be awarded (DGC method) shall be the rule.
- To start the projects the general rule of keep it simple use common sense is vital

3.2 Combines Comprehensive renovation – subsidies combined with EPC

Recommendation of amending the CPV (common procurement vocabulary), adopted by Regulation (EC) No. 213/2008 EU with item(s) related to EPC, EPC with guarantees shall be issued.

Elaborate further how the subsidy application works in the POLAND Republic: e.g.

- Recommend on the level of subsidies in percentages: e.g. 30% is more effective than 90% because clients might be more eager to reach energy savings.
- Set the rule the very is a must of the certain minimum participation of public beneficiary, eg 40% but and EPC or PPP contract may be accounted for it (reflects accrued future energy costs of the public entity- correlation with the energy savings).
- The unique solution of CFR regarding the PPP operation shall be described.
- Stress possible different applicants under PPP operations (EPC provider, Owner of Building, Construction Company may apply for subsidy scheme if well designed).

3.3 CombinES Comprehensive Renovation – two procurements

The recommendation to implement the comprehensive renovation within two separate procurement generally shall be a target/ idea and no comments are necessary here from the overall perspective. However, in the Polish conditions this method is impossible to be immediately and effectively introduced and one has to be realistic in that respect.

3.4 Barriers to implementation of Combines Comprehensive Renovation

The description of barriers are specific towards previous subsidy schemes. The key problem is what would be negotiated for new perspective and whether it would be possible do introduce the EPC company as a beneficiary or an applicant.

3.5 Proposal of amendments to current conditions

The key amendment is proposed according to the CFR 1303/2013 that the private partner in PPP should be eligible for support as a beneficiary . Pronounce an obligatory set of combination of CPV codes to be used in the announcement of public procurement in TED that would identify the EPC/CCR project. International competition may help to develop energy service market.

4. SPECIFIC MODIFICATIONS TO EACH COUNTRY - TASK 5.2.5

4.1 Proposed changes in subsidy programmes

There are currently neither EPC direct subsidy schemes for the building sector nor clear credible signals of change that could be *recognizable* in Poland. Perhaps to stimulate the debate again it would be good to promote the few best practices and to set clearly the rule that only financial instruments shall support the thermodernization. New possibilities creates the EU perspective 2014-2020 and the rules to be set and introduced.

The Partnership Agreement (project of Jan'2014) states the fundamental rules of spending the means from cohesion and structural funds (ESI) that shall be taken into consideration in all operational programs, both on regional and national levels. The Partnership Agreement is an only document coupled with new subsidy schemes 2014-2020 in which the acronym ESCO appears while in any other legislative document there are no references to the concept of "Energy Services" widely described in 2006 ESD and 2012 EED Directives. Below we quote an English version of the key provision deriving from a project of **the Polish Partnership Agreement (PA) send .**

"Prioritizing of intervention options regarding a support to energy efficiency undertakings using the EU funds has been done taking into consideration the following components:

- *Potential represented by the individual sectors and branches in terms of mitigation of energy consumption (e.g. a very significant potential has been identified in the construction and power transmission sectors),*
- *Basis for interventions with use of public financial means versus the aspect of counter-financing of the same projects by the private sector, optionally with a support from domestic funds; and, last but not least – achieving the same objectives through implementing legal regulations (e.g. to cancel the lack of access to other finances for energy retrofitting of public service buildings; sometimes an inconvenient payback of particular energy efficiency investments may purely justify **financing them by the private sector, including the ESCO formula)**,*
- *Range of interventions that are allowable for co-financing from the EU funds that derives from the EU regulations (first of all – exclusion of activities to mitigate emissions implemented within the ETS system).*

Definition of the optimal set of activities to improve energy efficiency in an enterprise or a building shall be done upon the basis of energy audit that is a key element of any TO4 supported project. In order to enhance the results of implemented projects it is possible to introduce intelligent energy management systems based upon the ICT technologies. "

The above regulation caused a lot of embrace among the facilitators and ESCOs since a certain number of stakeholders understand it as an informal prohibition against supporting EPC projects. On the other hand if each and every potential beneficiary of any energy efficiency funds would consider any investment as EPC then an enormous promotion of the ESCO – EPC would be achieved. Nevertheless a lot of confusion resulted from the fact of removing references to ESCO from the National Operational Program Infrastructure and Environment. The final provision regarding deep retrofit of public buildings is as follows:

"As well in case of public service buildings as the residential ones, it is not excluded to use ***any form of public-private partnership to implement such projects****, taking into consideration other available support schemes applied for this sector".*

The above comments refer to agreements under negotiations. Since the best practices in Poland regarding EPC have really been achieved within the PPP formula the best way to create sound fundaments of EPC market is to improve and develop similar projects.

This path creates unique opportunities which comes from special provisions that has been introduced with the CFR In the EU regulation of Dec17th, 2013. The following declarations, provisions and definitions should be highlighted:

(59) Public Private Partnerships ("PPPs") can be effective means of delivering operations which ensure the achievement of public policy objectives by bringing together different forms of public and private resources. In order to facilitate the use of ESI Funds to support operations structured as PPPs this Regulation should take account of certain characteristics specific to PPPs by adapting some of the common provisions on the ESI Funds.

Article 2 Definitions (24) ***'Public private partnerships' (PPPs) means forms of cooperation between public bodies and the private sector, which aim to improve the delivery of investments in infrastructure projects or other types of operations, delivering public services through risk sharing, pooling of private sector expertise or additional sources of capital; (25) 'PPP operation' means an operation which is implemented or intended to be implemented under a public-private- partnership structure;***

It is intended by FEWE /CombinES to recommend and support practical introduction in EFSI programs in Poland the rules set in the following provisions of CFR:

Article 62 PPPs ***The ESI Funds may be used to support PP****P operations. Such PPP operations shall comply with applicable law, in particular concerning State aid and public procurement.*

The next article open possibilities for ESCO's- EPC providers acting under PPP agreement to become a beneficiary of ESI Funds:

Article 63 Beneficiary under PPP operations 1. In relation to a PPP operation, and by way of derogation from point (10) of Article 2, a beneficiary may be either: (a) the public law body initiating the operation; or (b) a body governed by private law of a Member State (the "private partner") selected or to be selected for the implementation of the operation. 2. The public law body initiating the PPP operation may propose that the private partner, to be *selected after approval of the operation, be the beneficiary for the purposes of support from the ESI Funds. In that event, the approval decision shall be conditional on the managing authority satisfying itself that the selected private partner fulfils and assumes all the corresponding obligations of a beneficiary under this Regulation. […]*

> Only direct introduction in a straight way of these provisions into these Polish programs or specific rules related, will make it possible to take the advantage from practical using them in reality, upon decisions made the by the Polish offices. ESCOs would be mostly satisfied from the opportunity of being both the actual applicant and beneficiary of projects / programs that support energy efficiency at the Third Party entities..

In the understanding of Art. 2 item 10 of the relevant Decree, the "beneficiary" is a public or private entity or some pre-defined private persons (in case of EFRROW and EFMR – as for the Polish acronyms), who are responsible for initiating / developing operations within the context of State deriving support (financing). Another words, a "beneficiary" as understood in the Article 13 therein, is the entity who receives support (aid) in the form of financial instruments while in other provisions (Title IV) of the decree "beneficiary" means an entity who implements the financial instrument or who gains from the supporting schemes / funds in respectively pre-defined cases.

For the time being, the potential beneficiaries and target groups for subsidies within the investment priority comprise rather public authorities and units, including governmental administrative bodies and local councils and their representative entities and service providers, not being entrepreneurs, however. Nevertheless, the directory/list of beneficiaries at the State level is not closed while at the regional level it could be unclosed. Hence there is a good opportunity to introduce the PPP and ESCO ideas into the regional operational programs but the most promising in the POIiŚ – Operational Programme Infrastructure and Environment.

The recommended general rules of subsidy and the new specific subsidy scheme shall be similar to those included in NFOSiGW program marked as GISpart1

Two forms of co-financing could be delivered: 1) Subsidy; 2) An interest-bearing loan.

The maximum amount of support shall be following:
subsidy: amounting to 30% of eligible project with potential premium of 20% if EPC provider is involved or real energy management system is introduced
a loan: amounting to maximum 60% (40%) o of eligible costs (not expenditures) of the project.

The share (input) of public investor must cover a minimum of 30 % but it may be covered by end EPC agreement (value of future discounted costs of the building owner).

Additionally the following co-financing rules were set up :

1) Co-financing in form of investment loans without depreciation write-offs:

a) floating rate: WIBOR 3M + 50 base points (annually) if ESCO involved 0 base points.

b) period of financing: up to 15 years counting from the first projected disbursement of loan tranche.

c) grace period: grace period for the payment of principal instalments is calculated from the date of the disbursement of the last loan tranche, yet no longer than 18 months from the completion date of the project implementation.

2) Disbursement of funds will be available after the receipt by the donor of invoices not necessarily being paid or equivalent accounting documents that certify the implementation of particular project stages (referred to as "milestones") provided for in the implementation schedule.

The following costs shal be eligible for subsiding from funds provided:

1) the cost of purchase or production of new fixed assets, including: plant and machinery or tools, instruments and equipment as well as technical infrastructure related to the new investment, where construction of technical infrastructure is understood as interior installations of technological facilities, connections between technological facilities, roads, technological sites, etc.

2) cost of installing and activating the fixed assets,

3) cost of purchasing materials or construction works, provided that they are directly related to objectives of the supported project

4) cost of supervision

As far as loans provided by FI are concerned, the list includes additionally the preparation costs of necessary projects and documentation, provided that expenditure related to the preparation thereof will be indicated in the application for co-financing, and the purchase of intangible assets in the form of patents, licences, technical, technological, organizational or management-related knowledge not protected by means of patents.

Selection Process

The projects applying for funds in the particular call must meet formal and access (applicability) criteria. Applicants are selected according to a three-phase assessment:

- assessment of formal requirements (administrative compliance);
- assessment of project acceptability (acceptability criteria);
- ranking of the only project selection criteria (DGC).

The first stage verifies whether the project should effectively meet the formal criteria of assessment. Checks are made if applicant is included in the category "Beneficiaries" and if the project complies with the types of undertaking listed in the programme.

The second part answers the questions whether application is complete, and whether the Annexes necessary for technical, ecological and financial assessment are enclosed to the application. Other important factors are: usage of new EE devices, technical feasibility (including: correct selection of technology which guarantees material durability of the investment, realistic schedule of implementation), the quality of environmental effect (including: reliability of assumptions and data, achievable ecological effect that is also possible to be maintained for 5 years after the project completion). The detailed NFOS check list is presented in Annex 2.

The **only selection criteria** shall be DGC defined as follows:

DGC – Dynamic Generation Cost equals the price that allows for the achievement of discounted revenues equalling the discounted costs. In other words, the DGC indicator shows the technical cost of achieving the unit of environmental effect. The cost is expressed in the Polish Zloty (PLN) per environmental effect unit. The lower the indicator value, the more efficient the undertaking is.

The formula for the calculation of the DGC indicator

$$DGC = p_{EE} = \frac{\sum_{t=0}^{t=n} \frac{KI_t + KE_t}{(1+i)^t}}{\sum_{t=0}^{t=n} \frac{EE_t}{(1+i)^t}}$$

KI_t – – investment costs incurred in a given year – t;

KE_t – operational costs incurred in a given year – t;

i – discount rate (in the form of decimal fraction);

t – year; it assumes the value from 0 to n, where 0 is the year in which the first costs are incurred while n is the last year of operation of an installation.

EE – measurement of the environmental effect (in physical units) achieved in particular years. The environmental effect to which p_{EE} price for a physical unit is attributed (assuming that this price is constant in the entire analysed period);

p_{EE} – the cost per physical unit of environmental effect

4.2 Proposed changes in legislation

As identified in the overview of the existing subsidy schemes (CombinES Project: National Report for the Republic of Poland WP4) the application rules for programmes are not promoting EPC solutions: i.e. ESCOs are not allowed to perform the application, and programmes are not made for EPC especially. The lack of ES (Energy Service) concept in provision on the Polish local law makes it unable the direct support for facilitators and easy development of EPC projects. Therefore

1/ The Polish authorities should finally introduce into Polish legislation the basic concepts of the ESD and EED: like energy services, EPC or EPC provider. In not done locally helpful would be implementing it through the CPV common procurement vocabulary. The opportunity would be created thru necessity of using new CPV codes during public procurement process.

2/ The regulation CPV should be amended based on definitions set in EED in order to enhance the transparent flow of energy services among the Member States.

3/ As the Polish utilities, especially privatized ones, prefer to use the “buy out mechanism” instead of developing ESM, the possibility of considering the cost of certificates as the “justifiable” cost, transferred on the consumers in price should be minimized/closed. The cost of certificates should be paid from profits or should not be tax deductible. The fiscal investment incentives may be considered (thru intensified individual negotiable depreciation schemes).

4/ The self governmental unit should be enhanced / encouraged to develop in their bookkeeping system analytics accounts on chosen subject reflecting the actual usage of energy in billing units. (It is worth to mention that too many municipality treasurers do not support EESM just because due to the trade off between energy costs and energy services cost.

4/ It should be a legal obligation for the energy utilities companies to inform how long do they keep the billing related data and deliver it on any customer’s demand - in an usable format either to the customer itself or to an authorized unit – without fee (once on 3 years) or on the low flat rate basis.

4.3 Proposed changes in current EPC business models

In the period to come over 2014-2020 Poland is expected to become the biggest beneficiary for subsidies. This entails a fear that the public law bodies might not be able to generate relevant own input necessary to absorb these funds. This conclusion refers also to TO4.

This subject has revealed some unique Polish experience that may be helpful to resolve problems deriving from the following barriers: lack of knowledge, lack of own input, public debt.

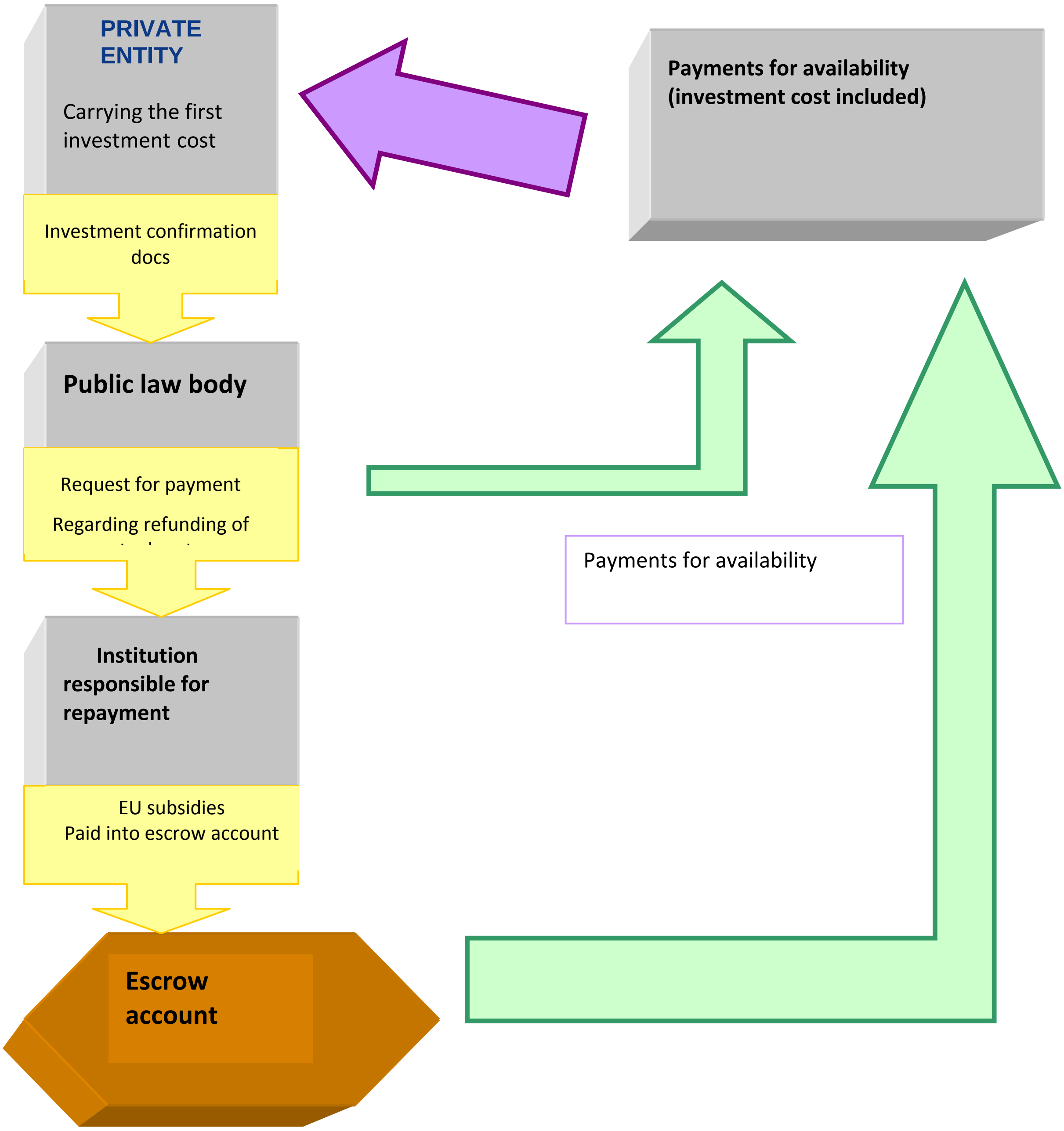
In Poland, after the regress in the public sector due to public debt issues, crowding out effect caused by accessible European funds and the lack of best practices there is no working business models for EPC providers. However based on scare experiences and new possibilities regarding CFR completely new business models should be considered.

CFR : Article 64
Support for PPP operations
1. In the case of a PPP operation where the beneficiary is a public law body, expenditure under a PPP operation which has been incurred and paid by the private partner may, by way of derogation from Article 65(2), be considered as incurred and paid by a beneficiary and included in a request for payment to the Commission provided that the following conditions are met:
(a) the beneficiary has entered into a PPP agreement with a private partner;
(b) the managing authority has verified that the expenditure declared by the beneficiary has been paid by the private partner and that the operation complies with applicable Union and national law, the programme and the conditions for support of the operation.

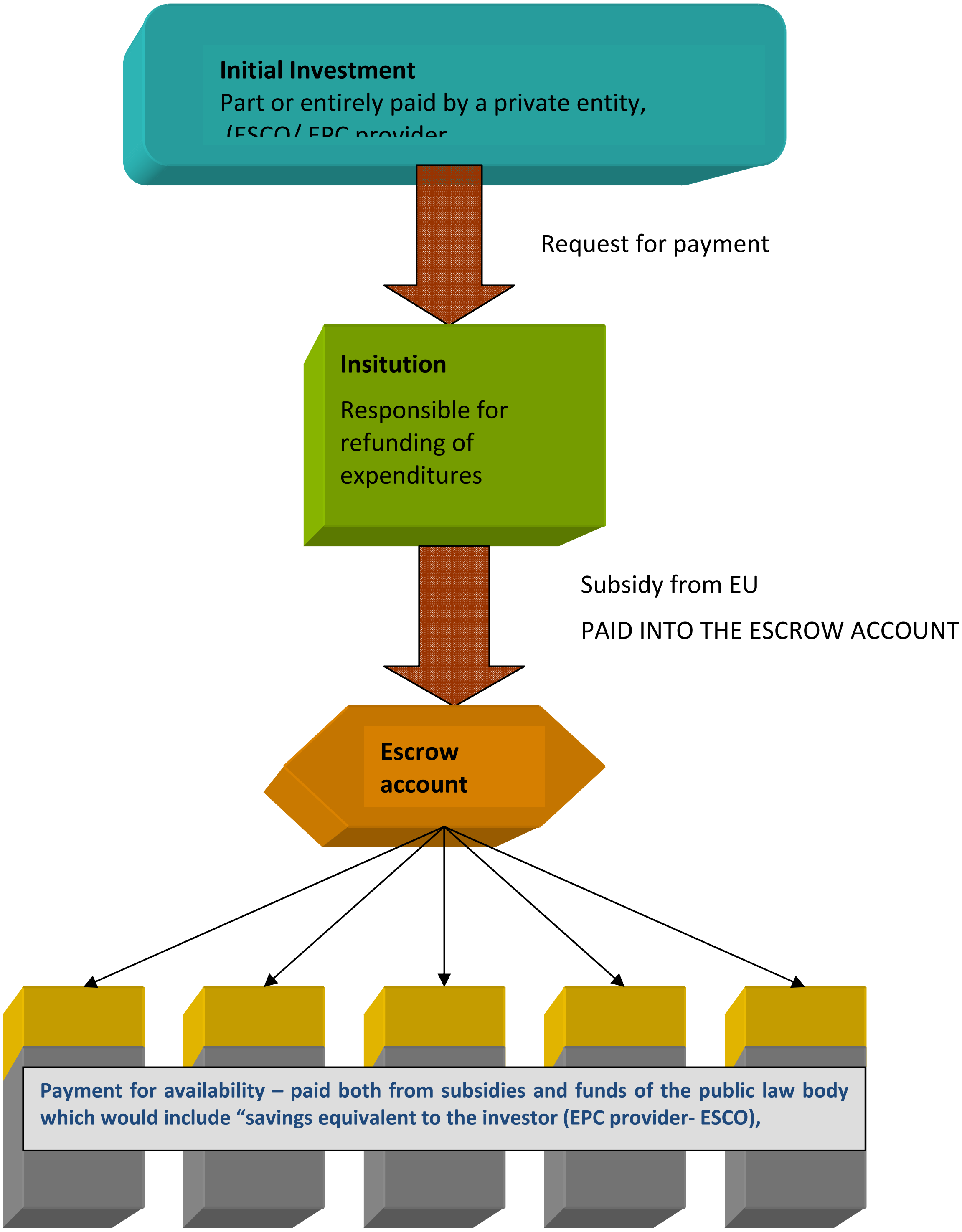
2. Payments to beneficiaries made in respect of expenditure included in a request for payment in accordance with paragraph 1 shall be paid into an escrow account set up for that purpose in the name of the beneficiary.
3. The funds paid into the escrow account referred to in paragraph 2 shall be used for payments in accordance with the PPP agreement, including any payments to be made in the event of termination of the PPP agreement.
4. The Commission shall be empowered to adopt delegated acts in accordance with Article 149 laying down the minimum requirements to be included in PPP agreements which are necessary for the application of the derogation laid down in paragraph 1 of this Article, including provisions related to termination of the PPP agreement and for the purpose of ensuring an adequate audit trail.

The CCR model adopted to Polish economy environment by definition shall create so called hybrid projects because it is combining resources of cohesion policy funds with the formula of public-private partnership. After several years of gathering practice, and establishing replicable contracts the vital change into the two procurement solution shall be introduced.

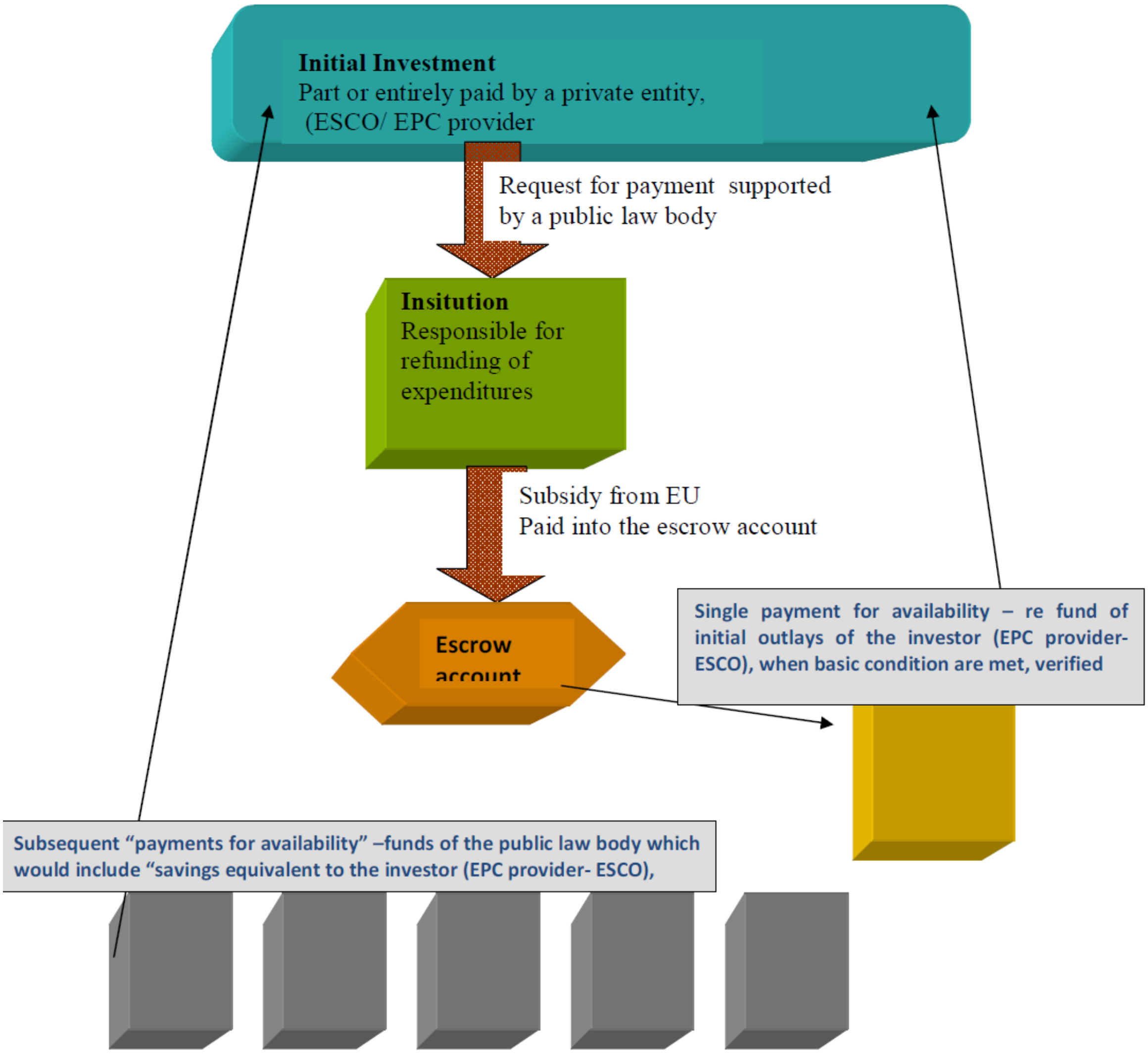
The creation of special ESCROW account managed by public partner or special institution, which performs the payments conditionally after meeting agreed conditions could solve the risk born by ESI of payment for not realized guaranteed effects. After transforming ESCO /EPC model into PPP agreement with an escrow account the basic structure will be as follow:



If subsidy will support the ideal, sustainable EPC/PPP project where EPC provider is considered as beneficiary a in regular intervals the ideal model would look like:


Initial Investment
Part or entirely paid by a private entity,
(ESCO/ EPC provider
Request for payment
Insitution
Responsible for refunding of expenditures
Subsidy from EU
PAID INTO THE ESCROW ACCOUNT
Escrow account
Payment for availability – paid both from subsidies and funds of the public law body which would include “savings equivalent to the investor (EPC provider- ESCO),

The possibility of distribution of payments from escrow account transfers more risk onto private partner (EPC –provider) and may be perceived as not attractive for an ESCO, or inducing additional financial costs , Nevertheless on the other hand if it enables transfer of debt out of the public partner's books and is just one of few possible options it will enable development of new "tailor made" solutions. These "tailor made solutions may be crucial in EPC market development in Poland if they realize expectation of the partners and the are at least neutral to the ESI.



The other solution (see previous Diagram 3) when the payment from an escrow account to the EPC provider is paid just once, as an refund of prior public beneficiary expenditure may create liquidity problems. These problems may be deepened by the rule, that additional expenditures may be required by programme as "own obligatory participation of the public partner", therefore the it is essential consider EPC /PPP contract as an equivalent of the "participation of the public partner". The direct transfer of subsidy to the private partner in the PPP/EPC contract will reduce possible delays caused by intermediaries and, if more similar projects are realized by an ESCO within the same program, enable reduction of cost due to lessons learned and practice.

These solution are not the only one, but fits best the current conditions in Poland and has been considered by decision makers, EPC providers and a municipalities as start point for vivid discussions. The consensus which is currently evolving can be concluded as follows,

Possibilities are interesting, but most welcomed would be creating a proven practice. The provision of article 64(4) staring with *The Commission shall be empowered to adopt delegated act* is seen as very promising but also making some uncertain issues.

One of the questions to be solved by practice is the responsibility of managing of the escrow account, who should be responsible for that.

5. CONCLUSIONS

The experience from the both already implemented and being implemented energy efficiency projects financed by EPC or in combination of subsidies and EPC, shows that combining them is a very promising way to realize the highest share of the existing energy efficiency potential from the limited public funds.

The optimal approach is to implement first the rule that the savings from ESM calculated and obtained should neither be automatically deducted from the energy related spending nor from the unit's "energy budget". They should be tracked, recorded and managed within the life cycle of ESM. The cost-effectiveness rules should be applied when the decisions are made this would guarantee transparency, sustainability and potential future replication of undertaken actions.

One of the most important factors is to negotiate first the lowest possible prices of energy accepting the higher levels only then if additional services are supplied (access to meters' database, computer modelling, etc). The start from that point with the support of IPMVP rules helps to avoid unnecessary discussion on the projects' economic viability. (The lower avoided costs the lower IRR the longer payback period).

The meetings and discussions while performing questionnaires have provided some more insights. Polish municipalities are not ready for outsourcing ideas. The long term relations with any private partners are perceived as potential source of risk for public administration. The lack of experience in negotiable procedures within the procurement process leads to the conclusion that although the main ideas of CombinES are welcomed, the two procurements path shall be set as a target in Poland as currently path of PPP operations is more viable.

It is obvious that the investment rhythm in Poland's public sector especially at the local self-governmental level is absolutely subordinated to two election and subsidy cycles. The office staff have announced to the public that one can observe a pre-election, election and »temporarily calm« seasons somewhere in between, but also a »donation« and »no-donation« seasons exist too. During the preriod of time when the subsidies are available, a kind of hunting for donations clearly prevails in order to release other finances aimed at strategic purposes. However the hunt-related activities are absorbing in a way that strategic activities become almost forgotten.

The Polish EPC market before start to walk and run must, after struggle to get on its feet after setback caused by easy available subsidy funds, first learn to stand on his own feet.

In Poland, after the regress in the public sector due changes in the rules of public debt calculations as well as the crowding out effect caused by accessible European funds and the lack of best practices there is no working business model. The good news is that municipalities, which realized EPC projects as a PPP operation in competitive dialogue procedure, are eagerly repeating this procedures to poprawic the streetligthing or the sewage systems.

Based on PA rules and new opportunities of CFR special provisions regarding PPP the cast of a new programme supporting EPC development is welcomed..

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