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Eurostat Guidance Note

THE IMPACT OF ENERGY PERFORMANCE CONTRACTS ON GOVERNMENT ACCOUNTS

Executive Summary

Energy Performance Contracts (EPCs) are part of the energy transition promoted by the EU Commission with a view to achieve better efficiency in energy use, resulting in possible substantial energy savings in a context of global external dependence of the EU for its energy supply. Government units, as owners of public buildings and constructions used in the context of different of functions, may be involved in energy performance contracts and contribute to energy savings.

This note provides guidance on how to record the impact of EPCs on government accounts. The main issue to be determined is the allocation of the capital expenditure (gross fixed capital formation in national accounts), related to some specific asset(s), which may take place in the first phase of the contract, to the appropriate institutional sector.

Although such contracts show specific features and may cover in practice various arrangements, some analogies could be found with Public-Private-Partnerships (PPPs). The accounting rules developed for PPPs by Eurostat¹ should be applied whenever an EPC could be assimilated to a PPP contract. It is to be underlined that, in order to be considered as a PPP, the capital expenditure should be at least 50% of the value of the assets, a percentage which might be difficult to reach in case of EPC contracts. Additionally, another condition for being considered a PPP is that the performance of the partner must be precisely measured.

In case the capital expenditure (gross fixed capital formation) undertaken by a specialised unit (the Energy Service Company - ESCO) would be allocated to the government unit owning the assets, the assets shall be recorded on government balance sheet. This would have an impact on government surplus/deficit (net lending/borrowing (B.9)) at the time when the capital expenditure is undertaken, while the financing of this expenditure will be included in government debt. The contract would be split between a capital procurement contract and a service contract.

However, under some very specific conditions, an EPC could potentially be assimilated to an operating lease and show therefore a different impact on government accounts.

¹ See Manual on Government Deficit and Debt (MGDD), chapter VI.4. The latest MGDD edition is available at: <http://ec.europa.eu/eurostat/web/government-finance-statistics/methodology/manuals>.

1. Introduction

The problem of energy efficiency

In recent years, there have been several initiatives at the EU level, concerning energy savings in the context of mitigating climate change and reducing the EU dependence on external sources of energy.²

In this context, the EU Commission elaborated an “[Energy Efficiency Directive](#)”, which entered into force on 4 December 2012. Most of its provisions were to be adopted by the Member States by 5 June 2014, in order to improve the efficiency of the consumption of energy resources.

In this respect, new types of contracts have been devised in which one party, which would be a specialised entity, referred to as “Energy Service Company” (ESCO), would provide, through different means, a reduction in the consumption of energy. An ESCO would then be remunerated according to the performance achieved as regards the energy savings it would achieve, as measured by a set of indicators.

These ESCO entities are expected to be specialised in delivering energy saving services. They may be independent or affiliates of firms involved in the construction (notably in the case of major international corporations) or in the energy equipment sector. A consortium grouping entities from different fields could also be set up, whereas project companies or Special Purpose Entities may be also created for specific operations. ESCOs would normally be considered as market producers in national accounts.

Government is concerned with the establishment of energy performance contracts, as is the owner of numerous buildings used for various public activities (health, education, administration, security, etc.). It is often the case that such buildings show frequently a low energy efficiency pattern. Government buildings may be old and built on the basis of old outdated norms or obsolete techniques, notably at time when energy was particularly cheap. Their maintenance may have been neglected and the behaviour of occupants/users may lead to waste in energy.

Due to the possible high amount of renovation expenditure involved and in a context of budgetary constraints in many EU Member States, government units may enter in various kinds of contracts with specialised units, frequently observed since a long time in other areas such as transport infrastructures, for energy efficiency purposes. For instance, some arrangements such as “Design Finance”, “Design Build Maintain”, “Design Build Finance”, “Design Build Finance Operate”, “Design Build Finance Operate Maintain” are or could be potentially envisaged, although they are generally designed for new assets and not for renovation works on existing buildings for energy efficiency purpose.

In practice, there is a large variety of contracts which might be covered by this energy saving initiative.

The statistical guidance developed below is applicable to EPCs as regards the identification of the risks under the responsibility of the ESCO (also called partner in this note).

² For instance, the “3 x 20%” initiative for 2020, the “Factor 4” for 2050, the “Energy efficiency plan” in 2011, new norms for buildings and construction (“High Energy Quality”), etc.

From a national accounts point of view, the main issue refers to the allocation of gross fixed capital formation. In this context, it needs to be decided whether to record it in the accounts of the contracting government unit (S.13) or of the partner (the ESCO).

Service contracts

An EPC may cover different tasks such as providing a diagnostics, measuring the causes of excessive energy consumption (losses in network, bad use of existing equipment, etc.) and/or proposing changes in some equipment or other works.

Some contracts can also involve the provision of monitoring services over a period of time, taking the responsibility of the management of the equipment owned (and paid) by the government units. Normally, these contracts do not imply an initial capital expenditure³, as the ESCO will use its own measurement/control instruments.

All these types of service contracts must be considered as contracts exclusively for service procurement, recorded as government intermediate consumption at the time the service is performed, independently of any payment arrangement⁴.

Contracts with an initial capital expenditure

In the context of energy savings, in most cases, there is a need for a substantial replacement of the energy equipment, which is often referred to as the “Heating, Ventilation and Air Conditioning” system (HVAC). More precisely, this energy system is composed of boilers, chillers, gensets and electronic control equipment⁵ which have the particularity to be easy (re)movable and replaceable. Such equipment may be purchased directly by government, separately or as a whole, or provided in the context of more global contracts.

Its installation would imply some works on the structure in which they are to be introduced and its lifetime would be by nature lower than the one of the building in which they are installed. The lifetime of an asset may be in fact an important factor to consider as far as the treatment in national accounts is concerned (see below).

However, for government buildings, in some cases, changing the energy system may not be sufficient to incur significant savings in energy and to considerably increase efficiency. It might be necessary to carry out some works, generally substantial, on the structure of a building. Examples may be non-removable assets such as modern windows with double or triple glazing, renovating the roof, adding a “skin” to the walls, reducing the “thermal bridges”, etc. In these cases, the role of the ESCO would go beyond the simple provider of energy equipment.

These activities may be independent from the energy system itself, as described above. However the innovation of EPCs constitutes a global approach in terms of objectives to be reached, by combining the construction/renovation phase with the maintenance phase. In this sense, there are some analogies with the Public-Private-Partnerships, where it is deemed that a

³ "Capital expenditure" and "gross fixed capital formation" are used in this note as synonyms.

⁴ If government would pay a rather significant lump sum at inception, in the context of a long term contract, the lump sum should be recorded in government accounts as a financial advance (payable) to be progressively reduced by the effective provisions of the related services.

⁵ Radiators may also be part of this system where it would be simple and not costly to settle/replace them.

unit responsible for both the construction/renovation and the maintenance of infrastructure would be induced to improve the quality of the construction and/or to perform a better selection of the appropriate equipment.

In this case, whatever the size of the expenditure to be incurred, the improvements to the buildings must be definitely embodied into them. Nothing can be removed at the end of the construction phase.

Contracts on several buildings

There may be EPCs (involving construction/renovation and the maintenance phase) which are not designed to improve energy efficiency exclusively in one single building but at the same time in several, if not all, buildings of a specific category owned by a government unit (or even jointly by several government units) on a specific area under the responsibility of the government unit(s). For instance, this could be the case of all schools or all administrative buildings in one town.

The amount of works on each individual building may be variable, limited in some cases only to the energy system and in other cases involving the structure of the building itself. This contract involving several buildings at the same time should still be assessed according to PPPs (if possible) analytical rules at the level of the global contract and not at the level of individual buildings. This would also be applicable for the total amount of the capital expenditure (see below) incurred.

Finally, it may happen that the arrangement would foresee a “master contract” (or framework contract) which would then be followed by a series of individual contracts dedicated to specific buildings. It must be checked, in this case, whether the contracts established at individual level would reflect the basic provisions of the master contract.

Moreover, some EPCs can cover the construction of a new asset, such as a hot water/steam central boiler and a network linking different government buildings on a given area.

2. Recording EPCs as Public Private Partnerships

Recording public-private partnerships in national accounts

Under the national accounts methodology, in PPPs government enters into a contract to buy services from a non-government unit over a long period of time, resulting from the use of specific “dedicated assets”, built or significantly improved by the non-government unit. The main source of the revenue of the partner under this contract comes from government⁶.

⁶PPP's do not cover concession contracts where final users will pay directly (for instance by tolls) for the use of some assets.

Since 2004 Eurostat, in cooperation with the EU Member States, has elaborated rules regarding the statistical impact of PPPs on government accounts. These rules have been often amended to take into account market innovations and are mainly based on the national accounts risk and rewards approach, through the analysis of different contractual clauses.

Accounting rules for PPPs are developed in a dedicated chapter (VI.4) in the Manual on Government Deficit and Debt (MGDD). Some general rules on PPPs are also included in the European system of accounts (ESA 2010), in chapter 20 on Government accounts.

These rules apply only to long term contracts, i.e. contracts with duration of at least 5 years, where there is an initial capital expenditure related to some government assets, either new or existing. Once more, it is to be recalled that a single contract must necessarily contain two distinct phases for being a PPP: construction (during which the capital expenditure is undertaken) and operation/exploitation, with a partner being responsible for both.

In this context, another important issue is that in order to be recognised (or assimilated to) as a PPP for government accounting purposes, the EPC has to cover a capital expenditure in the already existing assets owned by government (major renovation of the structure, significant refurbishment, modernisation or upgrading, changing major equipment needed for the functioning of the building) equal at least to 50% of the value of the asset.

Finally, in order for the dedicated assets to be classified off-government balance sheet, a majority of the risks⁷ and rewards (amongst other) must be transferred to the partner. Otherwise, the gross fixed capital formation will be allocated to government, with an impact on the government surplus/deficit (net lending/borrowing (B.9)), with the assets being considered (from an economic ownership perspective in national accounts) as assets of the government, and an imputed loan equal to the value of the assets treated as part of government debt.

Common features of EPCs with the Eurostat definition of PPPs

Energy Performance Contracts have frequently a duration of at least 10 years (notably when related only to part of the energy system equipment for which the anticipated lifetime is close to this maturity) but they also may run up to 20 years and more, notably when there is a need for significant works on the building structure itself. The ESCO unit will have taken some commitments (here to achieve a lower energy consumption) during the whole lifetime of the contract, which includes a relatively long exploitation/maintenance phase.

Thus EPCs, notably because of the requirement to achieve significant improvement in energy efficiency, frequently imply an initial capital expenditure. This would be however not, as such, sufficient in order to qualify such contracts as PPPs, in the national accounts sense.

Finally, the ESCO may be seen as bearing some risks when its remuneration will depend effectively on some performance indicators agreed in advance. For instance, if the choice of the components of the renovation/equipment expenditure is not adequate, the unit will not comply with its energy savings objectives and will not obtain the expected profit.

EPCs and the national accounts provisions

⁷ In a nutshell, only the risks resulting from some government decisions impacting directly the conditions of implementing the contract and some risks falling under “force majeure” should not be taken over by the partner. As a consequence, this majority must be understood as a very preponderant part of all related risks.

First of all, the nature of the gross fixed capital formation must be examined. If an EPC would cover exclusively the energy system equipment, the analysis of the contract would not be based on the PPPs rules as this equipment could not be considered as “intrinsically attached” to the building, even if, as mentioned above, one could expect that the length of the contract would generally cover the lifetime of this energy system. In addition, frequently, interventions concern the replacement of parts of the equipment by newer and more modern ones, which normally do not require large installation costs and significant transformation in the building itself.

Under some strict conditions, described in section 3 of this note, the EPC could be treated as an operating lease.

On the contrary, if the initial capital expenditure would cover a significant amount of works on the structure of the building itself, the EPCs could be analysed according to the existing methodological national accounts rules on PPPs. In this context, the contract should also satisfy a set of conditions, described below.

Importance of the initial capital expenditure

An important rule deals with the significance of the renovation/isolation works compared to the value of the building (after the works). The MGDD establishes a “50% rule”⁸ which should also be applied in the case of EPCs. Thus, the total value of capital expenditure for improving energy efficiency should reach at least 50% of the value of the building after the renovation⁹.

If this condition is not met, the contract cannot fall under the rules of a PPP and the new gross fixed capital formation has to be considered in any case as government expenditure (impacting net lending/borrowing (B.9) progressively as the capital expenditure is incurred) whereas the assets (together with the corresponding debt) will be included in the government balance sheet under the existing national accounts framework.

In practice, the original contract would be, from a national accounts point of view, split between a normal procurement contract for acquisition of assets and a contract for service purchase. However, there will also be a need to reallocate to government, for national accounts purposes, some flows and assets/liabilities which appear in the accounts of the ESCO but must be allocated to government.

Government financing of the capital expenditure

A second series of conditions refers to specific provisions covering the financing by government under various forms, such as investment grants, direct loans and equity in

⁸ MGDD VI.4.16 states that: “*If the contract is for renovation, etc., this work must represent a majority part of the value of the asset after completion. If it does not, (less than 50%), the contract is not viewed as a PPP, as defined in this chapter, and, instead, is split into an asset procurement contract and a services contract, the asset remaining recorded on the balance sheet of the government unit.*”

⁹ When the capital expenditure includes works on the core of the assets, it is assessed globally and not separately by identifiable parts of the assets.

a project company or SPE¹⁰ (EU grants to the partner not being considered as government resources¹¹), as well as government guarantees.¹²

According to the methodological rules on PPP in MGDD VI.4, if government, under any of the forms mentioned above, provides more than 50% of the total financing needed by the ESCO, the gross fixed capital formation will be allocated in its totality to government, with an initial impact on government surplus/deficit and debt according to the time of expenditure. The debt incurred by the ESCO will be “rerouted”, i.e. a loan will be imputed in government accounts. Thus, regular payments by the government contracting unit would be for a part treated as redemption of this loan (a financial transaction), and for another part as intermediate consumption and imputed interest (a non-financial transaction). In national accounts terms, the arrangement should be considered as similar to a financial lease, of which the statistical treatment is described in ESA 2010 (See 3.129, 3.134, 4.48, 5.134, 5.135, 15.04, and 15.13-15.22).

Unitary payments by government to the ESCO

Finally, there is a third condition which is linked to the nature of the payments to the ESCO by the contracting government unit. In spite of some specificity – the existing link to some energy savings – the payment mechanism to the ESCO should fall under the “availability risk” analysis, which is developed in MGDD VI.5.

Effectively, the risk would not concern the demand for energy (the bill remaining at the charge of the government unit) but the capacity of the equipment and the way it is managed, in order to save energy and achieve higher efficiency.

Under the MGDD, this necessarily implies a penalty mechanism in order to provide an incentive to the partner’s performance.¹³ This should be clearly stated in the contract, otherwise the partner could not be considered as taking the availability risk.

As a result, the revenue (and thus the profit) of the ESCO would depend first and foremost on the quality of the choices initially made as regards the improvement to be introduced in the energy system and in the building itself in order to reduce the energy consumption, and, secondly, on the management performance during the second step of the contract.

In this regard, it is imperative to be in a position to clearly identify the exact responsibility of the partner with respect to the resulting efficiency gains, i.e. to distinguish what is unquestionably attributable to the new equipment, its maintenance and the energy monitoring under its responsibility, from the influence of other factors (such as climate conditions, change in use of the building, behaviour of occupants, etc.).

¹⁰ This is to be assessed at the level of the whole government sector. In other words, the financing may be provided by another government unit(s) than the government contracting one. This may include investment grants provided by another government than the unit signing the EPC.

¹¹ This is also the case for financial instruments, as defined in Regulation 1303/2013, which are directly or indirectly financed by European Structural and Investment (ESI) Funds.

¹² Any loan, even from international institution such as the EIB, benefiting from a government guarantee, is to be considered as government financing, consistently with the PPPs chapter of the MGDD.

¹³ Such penalties must, first, have a significant effect and not only a cosmetic one, and, second, increase with the “volume” of defaulting performance. No energy savings should mean that no payment be made to the ESCO.

In practice, in many cases, such precise identification would likely be complex and rather difficult. This is why, in some cases, only one part of the payment will be linked to the performance.

As a result, if the contractual clauses of an EPC will not include a reliable measurement system, allowing a precise way to identify the exact performance of the ESCO (and, thus, meet this fundamental penalty requirement), or if payments by the government unit will not mostly depend on performance indicators, the analysis of risk sharing would be blurred and, notwithstanding the above rules to be complied with, the gross fixed capital formation should be considered as government expenditure and the related (new) assets should then be considered as government assets, for the value foreseen in the contract.¹⁴

3. The specific case of the operating lease

Some arrangements that could be assimilated to an operating lease (see ESA 2010 chapter 15 for more details on the treatment in national accounts) might also exist. They should cover exclusively items which are part of the energy system, as defined above.

In this case, for national accounts analysis, the ESCO should be firmly committed to replace, at any time during the lifetime of the contract, the defaulting or obsolete parts of equipment, at its own initiative or at the request of the government unit.

This also means that there should be neither a commitment from government to own the equipment at the end of the contract, nor an option to acquire it at its residual value at the end of the contract.

It is, in addition, important that the EPC would not cover the total expected life-time of the energy equipment.

If all these conditions were observed in the EPC, the corresponding capital expenditure would not be considered as government expenditure in national accounts (GFCF), but considered as carried out by the ESCO itself, except if the financing conditions mentioned above under section 2 were not met.

As a consequence, only rental payments by government (classified as intermediate consumption – purchase of services) would be recorded over the lifetime of the contract, i.e. the treatment would follow the rules for operating lease in national accounts.

On the contrary, if these conditions were not met, the EPC would be considered as involving two different contracts, one for the purchase of energy equipment and one for its maintenance/monitoring, even if the contractual partner would be the same. In national accounts, one contract would have to relate to government gross fixed capital formation (as improvements to existing assets beyond ordinary maintenance and repairs) and a second contract would have to relate to maintenance services (recorded as intermediate consumption in national accounts).

¹⁴ There is also, in Eurostat methodology, guidance concerning contractual clauses related to early termination of a PPP contract. In a nutshell, when the termination results from a defaulting performance of the partner, the latter must not receive from government a compensation which would not include a significant penalty element. Generally, the bad performance comes from bad quality of the assets, including improvement works, and/or insufficient maintenance. When the termination clauses would imply that government would take over the assets, these must enter in the government balance sheet at a “fair” economic value, taking into account their exact condition. The assessment of an independent body is required in this respect.

4. Conclusions

It might be difficult for national accounts compilers to undertake a case-by-case analysis of all individual contracts which, in addition, may involve rather small amounts.

Therefore, as a practical rule, given the high likelihood that capital expenditure incurred in the context of EPCs would have to be recorded in government accounts anyway, Eurostat considers that all capital expenditure within EPCs should be treated, by default, as government expenditure through gross fixed capital information (or as intermediate consumption in the case of simple service procurement, as described above). The impact on the debt will also follow the above mentioned treatment.

However, whenever for some individual sizeable contract there would be a presumption that it could satisfy all conditions for being a PPP and at the same time be recorded off-government balance sheet, an analysis might be conducted by the National Statistical Institute of the country involved, in co-operation with Eurostat.

This guidance note is applicable for contracts signed from 2015 onwards.