Glossary

1. Model definitions

Program Authority	The program authority is the public entity or organization that is in charge of the program or that controls the program delivery unit. This is typically a national or regional government, a provincial or local authority or council or a city or municipal council.
Program Delivery Unit	The Program Delivery Unit (PDU) is the organization that is specifically set-up to execute or facilitate the program or project. It is often a separate legal entity, but can also be a department or project team within an existing organization.
Implementation Model	The implementation model is the method by which the projects are technically and operationally implemented in the field, most often by using contractors or subcontractors. Typical implementation models are **Energy Performance Contracting**, **Energy Supply Contractin**g and **Separate Contractor Based.**
Energy Performance Contracting	Energy Performance Contracting (EPC) is a method to implement energy efficiency projects, by which an ESCO (Energy Services Company) acts as a unique contractor and assures all of the steps of a project, from audit through installation up to operations and maintenance. The ESCO delivers a performance guarantee on the energy savings and takes responsibility for the end result. The EPC contract is the contractual agreement by which the output-drive results are agreed upon. Other aspects like maintenance can also be integrated and potentially be performance based. Performance guarantees are associated with a bonus and penalty scheme. Measurement and verification and Monitoring are key features of successful EPC contracts. EPC contracts can include financing schemes in which the ESCO acts as third party investor, but EPC contracts can also be financed by the building owner with own funds or through a bank loan.
Energy Supply Contracting	Energy Supply Contracting is method to implement local energy production projects, by which an ESCO (Energy Services Company) acts as unique contractor and by which « useful » energy (e.g. heat, cold, steam, electricity) is delivered to the customer at a contractually agreed price per kWh. The ESCO is

	in charge of dimensioning, engineering, installing and maintaining the local production installation (e.g. boiler, combined heat & power, photovoltaic solar panels) for the duration of the contract. He typically manages the production efficiency of the installation to optimize the cost of transformation of the fuel into useful energy. The price for the useful energy delivered typically includes a fixed component to cover for the investment of the installation and a variable component to cover for the fuel usage.
Separate Contractor Based	This is a method to implement multi-technique energy efficiency projects, by which each step of the process is dealt with by a separate party (energy auditor, engineering company, installer or contractor, maintenance company) and by which individual projects (e.g. boiler replacement, relighting, isolation, etc.) are executed by separate contractors for each technique. This method is typically time consuming and requires a project coordinator to manage the process of getting all of the individual projects executed in a timely manner. For a public authority to use this method requires separate public tenders for each individual projects. The method is therefore relatively resource intensive. It can be useful to have a Program Delivery Unit or other organization to act as an "integrator" of this method to ensure an end-to-end delivery of the energy efficiency program and provide a consistent level of service from the different contractors.
Operating Services	The Operating Services are the kind of services that are delivered by the Program Delivery Unit. They can be **Marketing, Aggregation, Integration, Facilitation, Financial Advisory, Financing and Assessment.**
Marketing	Marketing covers the commercialization of the services of energy efficiency to the beneficiaries. This covers the whole range of communication and commercial development services that are necessary to inform the beneficiaries of the types of offerings that are available to them. It also covers the pricing policy and product/services development.
Aggregation	Aggregation means that the Program Delivery Unit (PDU) bundles the projects of multiple "internal" customers by acting on behalf of them and by making them available to the market. A more advanced form of aggregation includes the bundling or pooling of buildings of various internal customers into one single project to increase the size of the project. Aggregation is done to create economies of scale both operationally and financially.
Integration	Integration means that the Program Delivery Unit (PDU) acts as an intermediary between the beneficiary on one hand and the contractors or subcontractors on the other hand. This means that the contract for the delivery of the energy efficiency is signed between the integrator and the beneficiary and that the integrator signs contracts with the (sub)contractors. This role is often associated with the Separate Contractor Based implementation model, although it can also be applied to EPC or ESC. In the latter case, the integrator has back-to-back agreements with the beneficiary on one hand and the ESCO on the other hand.

Facilitation	Facilitation means that the Program Delivery Unit (PDU) does not sign the contract with the beneficiary, but coordinates or "facilitates" the whole process of project delivery on behalf of the beneficiary. The contracts are signed directly between the beneficiary and the contractors. This role is often played by the PDU in case of EPC or ESC implementation models, where the contract is signed directly between the beneficiary and the ESCO. Managing the tendering process is typically part of facilitation services offered in case of EPC or ESC projects.
Financial Advice	Financial Advice means that the PDU provides guidance and consultancy to the beneficiary on available funding for his project. This may include financial engineering and assistance in the negotiation of the best available financing or even arrange for the financing to be put in place. This can also include help in obtaining grants or technical assistance subsidies.
Financing	Financing means that the PDU will itself provide financing, either through an own fund or by packaging external financing solutions into an integrated financing service. In this case the PDU takes on the financial risk of the project. This option is typically used where a dedicated fund is created as part of the energy efficiency program.
Assessment	Assessment is the role by which the PDU evaluates the technical and financial viability of an energy efficiency project and decides whether or not the project gets implemented and/or financed. The PDU will typically use a number of criteria to judge whether the project is acceptable or not.
Funding Vehicle	The Funding Vehicle is the entity that is used to finance the projects. It can be a fund (investment fund, utility fund, risk guarantee fund), a financial institution (bank), an ESCO or the property owner himself (public or private) and/or citizen (cooperation).
Financial Instrument	The Financial Instrument is the financing technique that is being used to fund the projects. It can be equity, loans, grants, bonds (public or private), operational leasing, utility incentives (green or white certificates), on bill or on tax financing, EPC or ESC financing, MESA financing and/or a risk sharing facility.
Repayment model	Refers to the sources that the borrower is going to use in order to reimburse or repay the debt. Repayment can come from the guaranteed savings obtained from the ESCO, from shared savings agreed with the ESCO, from savings obtained through a Power Purchase Agreement or from reductions in Service charges.
Performance risk	The Performance risk defines which party covers the technical risk of the non-performance or under-performance in terms of energy efficiency goals or guarantees or financial guarantees. This risk can be covered by an ESCO, by the program owner, by the property or building owner, by the contractor and/or by an insurance provider.
Recourse	A legal agreement by which the lender has the rights to pledged collateral (property or other assets that a borrower offers a lender to secure a loan) in the event that the borrower is unable to satisfy debt obligation. Recourse refers to the legal right to collect. The finance institution may either assume the rights to the energy savings (receivables), may take a security interest in

	the project equipment (assets installed) or on the property of the borrower.
Financial risk	The Financial risk defines which party covers the financial risk of not living up to the obligations of reimbursing the financing (loan or other), default of payment and/or bankruptcy of the holder of the financial obligation.
Size of project (or project portfolio)	This is the estimated or average size of one individual project in the program. This is be the budget for the energetic renovation of one building or (in the case of EPC) of a pool of buildings. It can also be the size of one single energy efficiency measure in case of separate contractor based models.
Development/implementation stage	The Development/implementation stage defines whether the model is in its start-up phase (typically less than 2 years in service, with no or few projects executed), is in its growth phase (with a number of successful projects executed and growing more or less rapidly) or has reached a mature stage (with a lot of successful projects implemented and a steady growth).
Operational development maturity	The Operational development maturity defines the level of maturity of the model specifically in terms of being able to execute technically the projects and assuring their operations throughout the lifetime of the projects. It is also a measure of the operational capacity of the Program Delivery Unit.
Financial development maturity	The Financial development maturity defines the level of maturity of the model specifically in terms of being able to provide adequate financing to the projects, with more or less barriers to growing the amount of investments in relation to the global financial objectives. It is also a measure of the financial capacity of the PDU to engineer or provide financing.
Level of establishment	The Level of establishment is a qualitative measure for whether the model "in general" (and thus other identical or comparable models) is more or less well established throughout Europe. It can be a new model, one with a few examples or a well-established model with many examples.
Growth potential	The Growth potential is a qualitative measure for whether the model (and other identical or comparable) models has the ability to grow more or less rapidly and thus allow the increase of the number of projects under that model. Growth potential can be large or limited.
Scalability of the model	The Scalability of the model is a qualitative measure for whether the model can be more or less scaled-up, with or without having to increase accordingly the amount of financial or human resources. It can be low, moderate or high.
Replicability of the model	The Replicability of the model is a measure for whether the model (and other identical or comparable) models has a large potential for being duplicated in other regions or countries. It can be low, moderate or high.
Impact on public balance sheet	The impact on public sheet is a measure for whether the financing solutions that are implemented in the model generate more or less increase in public debt and allow or not public debt deconsolidation. This refers to ESA (European System of National and Regional Accounts) neutrality. It can be low, moderate or high.

2. Other definitions

Annual Percentage Rate (APR)	The annual rate (rather than just a monthly rate or fee) that is charged for borrowing (or made by investing), expressed as a single percentage number that represents the actual yearly cost of funds over the term of a loan. This includes any fees or additional costs associated with the transaction. It is thus a finance charge expressed as an annual rate.
Baseline	The baseline for energy consumption refers to the information collected by measuring a building's energy performance for a minimum of 12 months (36 months preferred). This baseline can serve as a starting point for setting energy efficiency improvement goals as well as a comparison point for evaluating future efforts and trending overall performance. It's actually the energy consumption that would have occurred during a defined period had the efficiency measures not been installed or the energy efficiency programme not been implemented.
Bonds	A bond is a debt investment in which an investor loans money to an entity (typically corporate or governmental) which borrows the funds for a defined period of time at a variable or fixed interest rate. Bonds are issued by companies, municipalities, states and sovereign governments to raise money and finance their projects and activities.
Cogeneration	Cogeneration through combined heat and power (CHP) relates to the use of a heat engine or power station to generate electricity and useful heat at the same time.
Concession of services-type of tender	Is a contract of the same type as a public service contract except for the fact that the consideration for the provision of services consists either solely in the right to exploit the service or in this right together with payment.
Covenant of Mayors	Is the mainstream European movement involving local and regional authorities in the fight against climate change. It is based on a voluntary commitment by signatories to meet and exceed the EU 20% CO2 reduction objective through increased energy efficiency and development of renewable energy sources.
Demand side	Relates to end-use customers of energy. This is the opposite of supply-side which refers to the energy production side (e.g. utility companies).
Emphyteutic Lease	In an emphyteutic lease, the owner leases land or property to the lessee for a period of up to 99 years. But unlike a conventional lease, the lessee agrees, over the period of the lease, to add construction or improvements to the property so as to increase the value at the end of the lease period. At the end of the emphyteutic lease period is the property and all of its improvements revert to the lessor.
Energy conservation measure (ECM)	Is any type of project conducted, or technology implemented, to reduce the consumption of energy in a building. The types of projects implemented can be in a variety of forms but usually are designed to reduce utility costs: water, electricity and gas.
Energy Services Company (ESCO)	Is a business providing a broad range of energy solutions including designs and implementation of energy savings projects, retrofitting, energy conservation, energy infrastructure outsourcing, power generation and energy supply, and risk

	management.
EPC Financing	EPC financing is a financial instrument in which an ESCO finances an energy efficiency project through an Energy Performance Contracting (EPC) model and by which the initial investment is partially or totally reimbursed from the guaranteed energy savings.
Equity	Is mostly used when referring to an ownership interest in a business, especially when considered as the right to share in future profits or in appreciation in value of the business. Is also used to indicate funds contributed by the owners or stockholders of a business compared to funds borrowed from third parties (e.g. banks, investment funds…).
ESC Financing	ESC financing is a financial instrument in which an ESCO finances a local energy production project through an Energy Supply Contracting (ESC) model and by which the price of the delivered useful energy is composed of 2 components: a fixed fee that corresponds to the reimbursement of the initial hard ware investment by the ESCO and a variable fee that depends on the price of the fuel that is being used and delivered by the ESCO.
European Local Energy Assistance (ELENA)	Is part of the European Investment Bank's broader effort to support the EU's climate and energy policy objectives. This joint EIB-European Commission initiative helps local and regional authorities to prepare energy efficiency or renewable energy projects
European System of National and Regional Accounts (ESA)	Refers to the internationally compatible EU accounting framework for a systematic and detailed description of an economy.
Feed-in tariff scheme	Is a policy mechanism designed to accelerate investment in renewable energy technologies. It achieves this by offering long-term contracts to renewable energy producers, typically based on the cost of generation of each technology. Rather than pay an equal amount for energy, however generated, technologies such as wind power, for instance, are awarded a lower per-kWh price, while technologies such as solar photovoltaic are offered a higher price, reflecting costs that are higher at the moment
Local energy initiative (LEI)	Are projects initiated and managed by actors from civil society, that aim to educate or facilitate people on energy use and efficiency, to enable the collective procurement of renewable energy or technologies, to provide, generate, treat or distribute renewable energy derived from various renewable resources for consumption by inhabitants, participants or members who live in the vicinity of the renewable resource or where the renewable energy is generated.
Mobilising Local Energy Investments – Project Development Assistance (MLEI-PDA)	Funded under the Intelligent Energy Europe II programme. Addresses local and regional authorities or their groupings to develop projects or packages of sustainable energy projects which are of relevance for the local/regional territorial development and considered to be of 'bankable' scale by financing institutions and/or suitable for grant funding by EU financing schemes such as the cohesion or structural funds. Funds activities necessary to prepare, and mobilise finance for public

	investment programmes, such as feasibility studies, stakeholder and community mobilisation, financial engineering, business plans, preparation for tendering procedures
Net Present Value (NPV)	Is the difference between the present value (value of an expected future cash flow determined as of the date of today or the date of valuation) of cash inflows and the present value of cash outflows. NPV is used to analyze the profitability of a projected investment or project. A positive NPV indicates that the projected earnings generated by a project or investment (in present value) exceeds the anticipated costs (also in present value). In general, a positive NPV indicates that the investment is profitable, and a negative one indicates that the investment is generating losses.
Off-grid	Refers to not being connected to a grid, mainly used in terms of not being connected to the main or national electrical grid. It can refer to stand-alone power systems or mini-grids typically to provide a smaller community, home or building with energy.
Official Journal of the European Union (OJEU)	This is the publication in which all tenders from the public sector which are valued above a certain financial threshold according to EU legislation, must be published. The legislation covers organisations and projects that receive public money. The Publications Office of the European Union (L'Office des publications de l'Union européenne, or OPOCE) is responsible for the production of the OJEU. OPOCE is based in Luxembourg.
Pari passu	Gives equal repayment rights to all investors involved in a project in case of default.
Power Purchase Agreement	A Power Purchase Agreement (PPA) is a contract between two parties, one which generates electricity (the seller) and one which is looking to purchase electricity (the buyer). It defines all of the commercial terms for the sale of electricity between the two parties, including when the project will begin commercial operation, schedule for delivery of electricity, penalties for under delivery, payment terms, and termination.
Preferential loans	Government sponsored initiative to stimulate capital investment, especially in less-developed or high unemployment areas, by advancing loans at below market interest rates.
Relighting	Relighting is a renovation process in which current lamps and, if necessary, also fixtures, are replaced by LED lights or another alternative. Relighting can allow for a decrease of 50% to 80% in electricity consumption. Modern LED lighting provides a better quality of light and results in lower electricity costs.
Retrofitting	For buildings, this means making changes to the systems inside the building or even the structure (the envelope) itself at some point after its initial construction and occupation.
Revolving fund	A Fund established to finance a continuing cycle of investments through initial amounts received from its shareholders, creditors or donors and later on through amounts received from reimbursements of provided funding or loans to projects. These recovered funds become available for further reinvestment in other projects.
Risk sharing facility	Is an agreement between guarantors and lending institutions designed to share with the lending institutions some of the risk of loss associated with the lending institutions' extension of

	credit to borrowers. A Risk sharing facility typically reimburses a lending institution for a fixed percentage of incurred losses that exceed a predefined threshold (also called a first loss). Risk sharing facilities are often offered to lending institutions requiring credit risk protection but not funding.
Sustainable Energy Action Plan (SEAP)	Is the key document in which the Covenant of Mayors signatory outlines how it intends to reach its CO2 reduction target by 2020. It defines the activities and measures set up to achieve the targets, together with time frames and assigned responsibilities. Signatories represent cities, with different size from small villages to major metropolitan areas that have signed the Covenant of Mayors on a voluntary manner.
Third Party Financing	Refers solely to debt financing. The project financing comes from a third party, usually a financial institution or other investor, or the ESCO, which is not the user or customer.
Utility Fund	A utility fund invest primarily in the securities (equity, bonds,…) of gas, water and electric companies (utility companies) that supply water and power to cities and municipalities. They may also invest in firms that supply equipment or services for utility companies.
Utility incentives	Are federal, state, and local subsidies, which have been allocated to specific energy conservation programs (efforts directed toward electrical, water, and gas efficiency). White certificates are a typical example of a utility incentive.
White certificates	In environmental policy, white certificates are documents certifying that a certain reduction of energy consumption has been attained. In most applications, the white certificates are tradable and combined with an obligation to achieve a certain target of energy savings. Under such a system, producers, suppliers or distributors of electricity, gas and oil are required to undertake energy efficiency measures for the final user that are consistent with a pre-defined percentage of their annual energy deliverance. If energy producers do not meet the mandated target for energy consumption they are required to pay a penalty. The white certificates are given to the producers whenever an amount of energy is saved whereupon the producer can use the certificate for their own target compliance or can be sold to (other) parties who cannot meet their targets. Quite analogous to the closely related concept of emissions trading, the tradability in theory guarantees that the overall energy saving is achieved at least cost, while the certificates guarantee that the overall energy saving target is achieved. A white certificate, also referred to as an Energy Savings Certificate (ESC), Energy Efficiency Credit (EEC), or white tag, is an instrument issued by an authorized body guaranteeing that a specified amount of energy savings has been achieved. Each certificate is a unique and traceable commodity carrying a property right over a certain amount of additional energy savings and guaranteeing that the benefit of these savings has not been accounted for elsewhere. In Europe several countries have implemented a white certificate scheme or are seriously considering doing so. Italy started a

	scheme in January 2005; France and Denmark a year later. Great Britain has combined its obligation system for energy savings with the possibility to trade obligations and savings. The Netherlands and Poland are seriously considering the introduction of a white certificate scheme in the near future.

3. Figure 1 colour codes

	Program Authority/Shareholders
	Program Delivery Unit
	Beneficiaries/End customers/Projects
	Contractors/ESCOs
	Financiers/Financial institutions/Investment funds
	Technical & operational relationships/Technical contracts/EPC contractual relations
	Financial flows/Financial agreements/Investments/Funding
	Ownership relations/shareholder relations