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# Project Title:

# New Buildings Energy Renovation Business Models incorporating dual energy services

# **NOVICE**

**Grant Agreement No: 745594** 

# **Collaborative Project**

Title

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Author(s)	Mircea Bucur						
Description of the related task and the deliverable in the DoA	The purpose of this task is to establish a working arrangement between ESCOs and Aggregators through a memorandum of understanding. The MoU will be concise and well-structured and will aim to describe the bilateral agreement of these two parties, stipulating their common line of action, their roles and responsibilities implementing energy management and DR programs, adopt clean EE technologies and achieve continual EE improvements. This is a direct move towards increasing the efficiency in the process and overcoming the barriers for financing and bankability. The Aggregator's role has to pave the way to extract the maximum value to EPC contracts. Comfort of building occupants, DSM or even the prosumer role of the Clients are aspects and values to be promoted within this scheme. The ESCO seeks to minimise the energy consumption of buildings, while the Aggregator will act as an intermediary between the ESCO and the TSO/DSO and will design efficient DR mechanisms to entail significant challenges. The MoU will be built considering all the steps and processes of the EPC. Taking into account the current legislations (T.3.1) and the market analysis (T3.2) the MoU will address different scenarios (market schemes) to capture the diverse objectives of the involved entities and guarantee significant benefits for both parties.						
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# 2 ABBREVIATIONS

BOOT Build-Own-Operate-Transfer IEC Integrated energy contract

EE Energy Efficiency

EPC Energy Performance Contract

ESC Energy supply contract ESCO Energy Service Company

FM Facility Manager
DR Demand Response

DSO Distribution System Operator DSR Demand Side Response

MoU Memorandum of Understanding

PO Programme Operator

TSO Transmission System Operators

# **3** EXECUTIVE SUMMARY

The purpose of this document is to introduce a process for setting up a basic Memorandum of Understanding (MoU) between Aggregators and ESCOs to enable them to benefit from the synergies introduced by the combined business model. The document sets up the market context by identifying the key actors either directly involved or creating dependencies for the agreement so that these roles can be followed throughout different sections of the MoU. Next, the current and the proposed new market interactions between the market participants are described so that the benefits and necessity of the MoU are highlighted. Based on the visual description of the proposed market interactions, key elements of the activities and exchanges between parties are documented in a proposed MoU. Key aspects of the relationship between the parties are then addressed - prospective client identification, format of the DSR programme or EPC contract, client acquisition and relationship, implementation, payments, operations and rationale is provided for structuring articles in their current format. In the end, a full model of the Memorandum of Understanding is proposed as a framework agreement that can be further customised by parties to reflect their own objectives. Interested parties such as ESCOs and Aggregators are encouraged to use this format as a starting point in discussing partnership and to add their own specific requirements to fully reflect the desired interactions and outcomes between the parties.

# 4 MARKET CONTEXT

While this document will focus mainly on the contractual framework agreement between ESCOs and Aggregators, it is important to understand and define the roles of other stakeholders that are relevant for the revenue generation process or for the execution of any EPC or DSR actions. In this context, the Memorandum of Understanding (MoU) mainly outlines the relationship between the ESCO and Aggregator as the main contracting parties, but the roles of other relevant third parties may need to be considered. Third parties considered here include:

- Clients (Building owners)
- Transmission System Operator
- Distribution System Operator
- Facilities Management Companies

#### 4.1 ESCO

ESCOs provide energy services to customers. This can include the installation of new energy efficient equipment; maintaining and efficiently operating existing equipment to provide outputs such as heat and light to the client; installation and operation of renewable energy technologies; or assistance in the purchase of energy, including most commonly electricity or gas. From the point of view of the client, one of the incentives to work with an ESCO is that projects are often offered on a turnkey basis which removes much of the complexity and technical hurdles to implementing several energy efficiency projects in parallel.

According to the definition of an ESCO given by the Joint Research Centre of the European Commission (http://iet.jrc.ec.europa.eu/energyefficiency/esco), the three main characteristics of an ESCO are:

- ESCOs guarantee energy savings and/or provision of the same level of energy service at lower
  cost. A performance guarantee can take several forms. It can revolve around the actual flow
  of energy savings from a project, can stipulate that the energy savings will be sufficient to
  repay monthly debt service costs, or that the same level of energy service is provided for less
  money.
- The remuneration of ESCOs is directly tied to the energy savings achieved by the project.
- ESCOs can finance, or assist in arranging finance for the installation and operation of an energy system by providing a savings guarantee.

This means that ESCOs accept some degree of risk, due to the fact that their incomes depends on the effective implementation of the project and achievement of the predicted energy efficiency savings that were guaranteed to the client as part of the contract.

#### 4.2 AGGREGATOR

Demand Side Response Aggregator (DSR Aggregator) is a third party company specializing in electricity demand side participation. In practice, DSR Aggregator contracts with the individual demand sites (industrial, commercial or residential consumers) and aggregate them together to operate as a single DSR provider to:

- Transmission System Operator (TSO)
- Balance Responsible Party (BRP)
- Distribution System Operator (DSO)

The individual demand sites can use a combination of increasing on-site generation and/or process shutdown or reduction to deliver the active power demand reduction service. The DSR Aggregator receives a percentage of the value created by the avoided consumption to reduce peak demands, balance intermittent generation, provide a balancing service or increase security of supply.

The DSR Aggregators will typically use specific methods to engage with Clients and assess suitability of sites and assets for participation into DSR programmes. Through the use of historical and live data acquisition from candidate sites, the DSR Aggregator is able to model the load behaviour under different grid scenarios and forecast potential revenues taking into account specific market conditions as well as hard constraints under business as usual scenarios on the client side. Moreover, the Aggregator will manage multiple portfolio of aggregated assets towards the market, will bid into different programmes and will manage automatic dispatching of portfolios based on the signals from the programme operators. These are all highly specialised activities, usually supported by dedicated hardware deployment on Client side and by the use of a complex distributed energy resource management platform operated by the DSR Aggregator.

# 4.3 CLIENTS

Clients (building owners) are private or public individuals or entities in possession of the title deeds of the building. They are responsible for paying any taxes related to the property and operating and maintaining the building. In the context of the MoU, clients are the assets owners and main recipients of any Demand Response revenues generated using their assets after Aggregators and ESCOs costs have been deducted. They provide ESCOs and Aggregators with Business as Usual scenarios that set the boundaries of how specific assets can be used for Demand Response programmes or how specific Energy Performance Contracts or Energy Efficiency actions can be deployed without impacting on the building occupants and their normal activities. Typically, client organisations are assisted by Facility Management companies who will provide the technical expertise in setting data and control interfaces with various assets or building management systems and will assist in the deployment of EPCs or DSR programmes.

# 4.4 Transmission System Operators (TSOs)

The Transmission System Operator (TSO) is responsible for transporting electrical power on a national or regional level, from the point of generation to the local DSO in each area, using fixed infrastructure like high voltage power lines and substations. As TSOs are of critical importance to the national distribution and delivery of energy and due to the high costs involved in managing the transmission infrastructure, the TSO is usually a monopoly and is often totally or partially owned by state or national government. TSOs are not involved in upstream generation of power or downstream distribution of power and are financed by charging a fee in proportion to the amount energy they transport. In most European countries, the TSO is the main Programme Operator (PO) for flexibility services, meaning they are the ones structuring commercial programmes, specifying requirements for each type of service (such as minimum capacity to enter the market, system response time, response minimum and maximum duration) as well as establishing the pricing mechanism for each type of service. It is this very specialised approach for tendering flexibility services that encouraged the business model of Aggregators to develop, as Clients lack technical expertise and capacity to build up portfolios and bid into the markets to secure contracts.

# 4.5 DISTRIBUTION SYSTEM OPERATORS (DSOs)

The Distribution System Operator (DSO) has the responsibility of building and maintaining connections and substations for end users (buildings) and manages the power transmission (at voltage levels of 150 kV or less). The DSO also installs, preserves and manages the transmission and distribution grids to ensure that energy suppliers can always deliver the energy demanded by customers at any given moment. DSOs are impartial, so they can guarantee non-discriminatory access to third parties. In the recent years, the roles of the DSOs across Europe is evolving, with some countries like UK allowing DSOs (DNOs in UK) to run their own flexibility programmes for network constraint management, while in some other counties DSR services need to be pre-approved by the DSO so ensure there is no negative impact on the local grid.

#### 4.6 FACILITIES MANAGEMENT COMPANY

Facilities Management (FM) companies integrate the principles of the administrative, management, architectural, engineering and human science factors around building administration. Their functions include: planning and steering the overall activities related to the correct and efficient global building management; leading the effective integration of corporate strategies for building resources (e.g. implementing a space optimization policy); coordinating building and retrofit projects; contracting all the services, utilities and products related to smooth operation of the building (e.g. energy, water, security, asset management etc); and maintenance and conservation of equipment. It should be noted that FM companies don't necessarily have a focus on energy efficiency – unless that is driven by the client – and typically lack the financing capacity to support such actions. The main responsibilities of the FM company will be around maintaining the smooth operation of their clients' facilities taking into account business as usual requirements from the client, and are often accompanied by stringent a Service Level Agreement (SLA). While they provide technical support for both ESCOs and Aggregators in the deployment of energy efficiency and demand reductions strategies, it is often the case that restrictions of the SLA cause their objectives to diverge from those of ESCOs and Aggregators.

# 5 Types of interactions between ESCOs and Aggregators

#### 5.1 CURRENT INTERACTIONS

In an ever-changing market place where the business models and roles of market players are constantly changing, it is important to understand the dynamics between existing players in the market today and the likely future dynamics as the combined business model emerges as a suitable option.

In the traditional market model, both ESCOs and aggregators operate independently from each other, with the only link between them being the client. While this model may also have a few different structures depending on who is assisting the client in their relationship with both ESCO and aggregator (e.g. external energy consultants, EPC facilitator, FM company, or a combination of other organisations), the typical interaction in the market place is described in Figure 1 below.

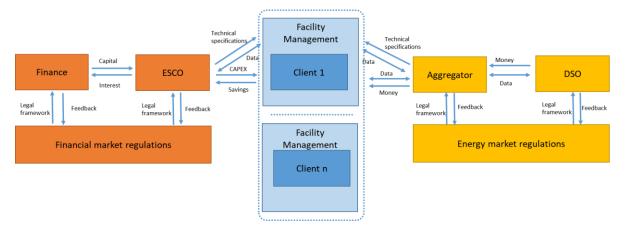


Figure 1: Interaction between exisitng market players

In this standard model, both ESCOs and aggregators interact independently with the client. Based on their specific business model, aggregators may or may not charge the client for the initial investment to enable the delivery of DSR services. The aggregator manages the flexibility towards the DSR markets, aggregates that into portfolios and contracts which are assigned to various market programmes, and gets paid by the network operator. Typically aggregators retain a percentage of the payments from the DSO (after fully recovering the equipment cost, if not supported directly by the client) as a management fee, covering the cost of the platform and portfolio management. The regulatory bodies will have an impact on the TSO/DSO activity and will shape the type and number of commercial products in the market place.

The ESCO will secure finance from their investors to deploy energy saving actions on the client side. This model will support a number of variants, but typically ESCOs will recover their initial investment over a number of years from the savings they generate for their client.

#### 5.2 Proposed interactions under ESCO/Aggregator MOU

The new combined model will provide some new dynamics between market players. At this moment it is envisaged that the standard model will move most of the client interaction to the ESCO side of the business, with the aggregator featuring as a partner or subcontractor to ESCO. Due to the complexities and legal requirements, the interaction with the TSO / DSO as well as payments for DSR services must be through the aggregator. Current market entry conditions and specific technical

requirements from the TSO / DSO for their commercial programmes require a specific skillset that Aggregators have built as part of their core business. Accessing multiple revenue streams with DSR services is also a complex activity that Aggregators have specialised in, which requires detailed knowledge about the bidding process and accurate price and load forecasting tools that are part of the Aggregator platforms. However, on the client side, the specifications, equipment and works for enabling DSR will be incorporated into the wider energy efficiency actions and will be financed by the ESCO. With a longer business history and an activity focused on close engagement with the clients, ESCO are better positioned to conduct all the customer facing activities. The DSR payment to the client will also be processed through the ESCO, who will recover their capital costs and will also retain a management fee. The diagram below describes the interactions between the market players in the proposed new model.

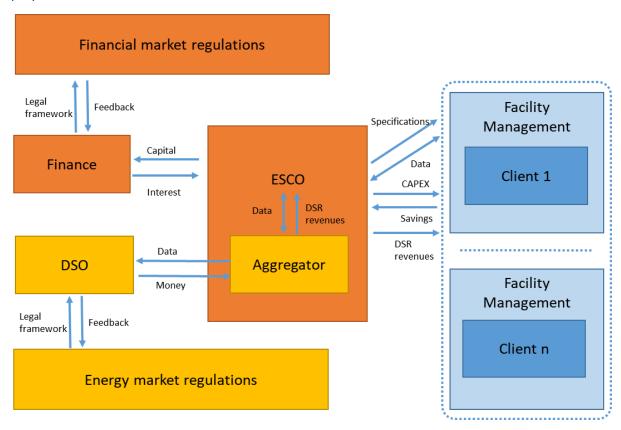


Figure 2: Interactions between market players in the new business model

There are a few other variants of this model that partners may be willing to explore. While the MoU we propose in this document is based on this particular model, it also offers enough flexibility to partners to change some if the elements and create variant models derived from this one.

# 6 Memorandum of understanding structure and key points

In this report we aim to identify a core set of elements that would need to be addressed in a generic MoU between an ESCO and an Aggregator, regardless of the particularities of the collaboration. This will set the basis of the commercial collaboration between parties and can be enhanced by specific agreements for specific clients / industries as partners gain experience and confidence in delivering services together. The overarching idea is to provide clients with a single point of contact via the ESCO for both EPC and DSR services. As such, we believe any MoU should address the following elements which are discussed in detail in the rest of this chapter:

- Prospective client identification
- Format of DSR programme or EPC contract
- Client acquisition and relationship
- Implementation
- Programme management (operations)
- Payments
- Business as usual
- Exclusivity & non complete clauses.

#### 6.1 Prospective Client Identification

This will set the generic terms of how the ESCO and Aggregator parties will identify prospective clients for the joint services model, either from their list of existing clients or through attracting completely new customers. This will ensure a consistent approach regardless of the industry vertical or type of client targeted and will also be reflected in the revenue scheme depending on which party made the introduction or referral. The example MoU in Annex 1 is based on the assumption that more referrals will be made from the ESCO side since in most countries the ESCO market is larger, well recognised and more mature compared to the DSR market in which aggregators operate. However, referrals could come from either party and the MoU can be modified accordingly to accommodate referrals from either party.

Once a prospective client is identified, both parties will work together on a joint pursuit plan in order to either add one of the missing services to the portfolio (either DSR or EPC contracts in the case of existing customers) or to sign a contract for joint services.

## 6.2 FORMAT OF DSR PROGRAMME OR EPC CONTRACT

To preserve a coherent approach to prospective clients from both ESCO and Aggregators, this section will define some generic terms for the DSR programmes and EPC contracts. In the model described by the MoU presented in Annex 1, it is stipulated that the demand management enabling technologies will be implemented at no obligation, no liability, and no upfront cost to the end-client, however this will not include any upgrade costs for existing infrastructure such as grid connection upgrades, metering and control infrastructure (other than Aggregator's own equipment). This is very reassuring for prospective clients as it shows that the Aggregator party is confident it can deliver value to the client. However this model may not be widely supported by Aggregators, many of which may choose to charge the upfront cost of DSR equipment to the client. This is also acceptable and can be specified in this section of the MoU as long there is some indication of the level of investment required to enable DSR services and expected payback time that can be presented to the client to document their decision.

#### 6.3 CLIENT ACQUISITION AND RELATIONSHIP

It is important to define how the interaction with prospective clients will take place and who 'owns' the client relationship in order to present the client with a seamlessly integrated service offering. In this respect, the ESCO and Aggregator will identify Prospective Clients both from within their existing client base and from outside of it, who can benefit from participation in DSR programmes or implementation of EPC contracts.

To be consistent with the single point of contact approach described earlier, the recommended format is that only the ESCO should interface directly with the prospective clients for dual services contracts. In specific circumstances, the ESCO may require assistance from the Aggregators in relation to specific client qualification activities such as historical data modelling, site surveys, asset suitability analysis, and client meetings etc. The parties can agree and stipulate in this clause of the MoU whether the Aggregator would offer a white label service in this instance or be introduced to the client as a trusted partner of the ESCO.

Once a contract is signed for a dual services EPC, the ESCO will provide the Aggregator with all the necessary information and client sign-offs required for them to be able to offer the client's flexibility to the network operator, implement specific DSR programmes and handle payments for grid services provided.

# 6.4 IMPLEMENTATION

This is a critical aspect in the collaboration between ESCO and Aggregator as the technical solutions used by the partners may have divergent objectives. A typical EPC will look at improving energy efficiency across the board for the entire infrastructure of the prospective client. This in turn may impact on the amount of flexibility that the prospective client has available to offer to DSR programmes. However, when working together from design phase through to implementation phase, Aggregators and ESCOs can identify the best technologies that can offer both energy efficiency as well as flexibility around loads to enable clients to gain additional revenues from DSR programmes. For example, this could include upgrades to BMS and HVAC control systems, replacing generators with CHP, or installing renewables with battery storage.

The ESCO is responsible for conducting an investment grade energy efficiency audit to identify the scope of energy reduction opportunities. The ESCO takes on the role of project manager to implement all upgrade opportunities and is the single point of contact with clients. The benefits are measured and verified, to demonstrate to the client that targeted savings have been achieved. The ESCO continues to act as project manager over the course of the contract, which typically lasts 5-8 years.

In practical terms, the Aggregator will be responsible for end-client evaluation and acceptance, site audits, installation of all metering equipment, writing the scope of works for the building management systems software required, and all contractual obligations required by the TSO, Distribution Network Operator, supplier or other entity that operates a Demand Response (DR) programme ("Programme Operator"). This can be done in tandem with the energy efficiency audit carried out by the ESCO to minimise disruption to the client.

In the example MoU in Annex 1, the upfront costs for metering, controls and communications hardware and software required to implement the DR solution can either be borne by Aggregator, deducted from first year revenues or paid in advance by the client via the ESCO. The costs associated with any equipment upgrades required on the client side to facilitate participation in DR programmes will be paid for by the client.

There is also an option for the ESCO to perform equipment installation and site surveys based on training received from the Aggregator. This also aims at creating synergies and reducing deployment costs for both ESCO and Aggregator.

#### 6.5 Programme Management - Operations

It is important to clearly separate and define the responsibilities for the operation and management of DSR programmes as per the requirements of the Programme Operator (PO). In this respect, the Aggregator will be responsible for providing a turn-key service allowing the client to participate in DSR programmes. This includes the operation and management of DSR programme participation and covers all responsibilities relating to: maintaining market expertise; market representation and advocacy; absorbing financial risk of participation on DSR programmes; billing and revenue collection from the PO; long-term tendering and pricing with PO; providing the client with event/test notifications; metering maintenance; client reporting; and providing engineering input for clients as necessary.

However, to maintain consistency with the single point of contact approach, all client communication with regards to the operation and management of DSR programmes will be facilitated by the ESCO. In order to fulfil the specific requirement from the PO for each individual site participating in a DSR programme to be signed off by the owners, an Addendum to the MoU, (which will include the Annex 8 required by the PO), will be added for every client and every site covered by the agreement. This can either be countersigned by the site owner or, if the ESCO secured a power of attorney letter to act on behalf of the site owner, it can be signed off by the ESCO.

DSR strategies for each type of programme will be shared in advance between the ESCO and the Aggregator so that the ESCO can assess the potential impact on building energy efficiency and highlight any necessary KPIs that might be impacted during the times that the DSR programmes are being dispatched. This will allow the ESCO to correctly reflect the impact of DSR programmes on their respective KPIs in any EPC or Service Level Agreement (SLA) contract with the client.

### 6.6 PAYMENTS

This clause will structure a basic reward system to exemplify how specific financial agreements between ESCO and Aggregator can be implemented. This can vary based on the specific model implemented between ESCO and Aggregator, types of DSR programmes available in the national market, types of assets used for DSR services, and the reconciliation system in place between Aggregator and PO. The suggested structure can serve as a starting point for further negotiations between parties.

Each prospective client will receive a written proposal from the ESCO based on the Aggregator's desktop analysis of the data provided by the client and/or the site surveys, which outlines the achievable revenues from participating in DSR programmes. The client's earnings are based on the available controlled load at the site, and the level of participation in appropriate DR programmes. The client's earnings, and therefore the ESCO's fees, will be paid via self-billing in four equal quarterly instalments from the end of the first quarter in which the client is declared operational, and will continue until the end date of the agreement between Aggregator and the ESCO.

Depending on the DR capacity declared as operational in each of the respective DSR programmes, the ESCO will be entitled to a percentage margin of the gross revenues earned from participating in those programmes as detailed in Table 6-1. This payment will be based on a blended rate so that the ESCO

will be paid the respective margins for the capacity in each respective threshold. The above rates are based on allocating a percentage of the DSR revenue to the client with the remainder being shared between Aggregator and the ESCO in agreed proportions.

Table 6-1: Payments to ESCO as a reseller; per MW of declared capa
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Declared Capacity	DSR Programme						
Deciared Capacity	STOR	CM-TA	FFR/FCDM	TRIAD Savings	TRIAD Export		
first 10MWs	x%	x%	x%	x%	x%		
10 - 20MWs	x%	x%	x%	x%	x%		
>20MW	x%	x%	x%	x%	x%		

The most important aspect of this clause is that the three-way shared revenue model between the client, ESCO and Aggregator will be discussed on a case by case basis, reflecting the level of involvement and effort from all parties in offering and deploying a contract. The specific percentages to be retained by each party will be detailed in an Addendum signed for each new site that is assigned to a programme, together with the Annex 8 document required by the System Operator.

#### 6.7 Business as Usual

It is anticipated that any DR actions implemented by the Aggregator on client side will comply with the client's 'Business as Usual' scenarios. This includes maintaining the comfort level of building users in commercial and residential buildings, and ensuring no performance degradation on industrial processes or any other type of restrictive covenants highlighted by the client. Where the ESCO is bound to the client by an SLA or performance guarantee, impact assessments will be run (DSR trials) to understand which parameters may be affected by DSR actions and will require client sign off before enrolling into specific DSR schemes. This could include for example acceptance by the client of a wider range of acceptable building temperatures during a demand response event and return to normal operating conditions within a certain amount of time of the conclusion of the event. To ensure the predicted impact of DR events is realistic, the 'Business as Usual' scenarios that Aggregator needs to take into account when assessing DSR potential is the normal functioning scenario after the implementation of energy efficiency measures.

#### 6.8 EXCLUSIVITY & NON-COMPETE

In the example MoU in Annex 1 we consider a scenario where partners will seek exclusivity with each other in this type of client engagement. As such, the ESCO will provide DR services for its end-clients exclusively with the Aggregator for the duration of this agreement. The ESCO will not offer any of the DR programmes to its clients directly without the Aggregator for a period of 6 months following termination of the contract. Similarly the Aggregator will only offer EPC services to its clients through the ESCO, and the Aggregator will not directly offer EPC services to its clients for a period of 6 months following the termination of the contract.

Other models can be considered where the ESCO can work with multiple Aggregators and vice versa particularly where the parties operate in different geographical regions.

#### 6.9 OTHER CLAUSES

The generic MoU attached in Annex 1 also includes some standard terms around confidentiality and marketing, non-circumvent clause, duration, and good faith – those aspects common to generic MoUs – and will be subject to direct negotiations between the parties.

# 7 Conclusions

In this document we analysed the requirements for a Memorandum of Understanding between an ESCO and an Aggregator with a view that such document will help parties to better understand how mutual benefits can be achieved from a combined business model. The MoU is a flexible framework to allow parties to establish the principles around how to approach new and existing customers for a combined offering, while maintaining a simple and consistent approach. We mapped the main stakeholders typically involved in the process of procuring EPC or DR services and detailed one of the potential models for the interactions between the main stakeholders. Based on this, the current example of a Memorandum of Understanding between ESCO and Aggregator was created as detailed in Annex1, with the following main characteristics:

- Simple structure: Any good framework agreement should be simple enough for the parties to review and implement in relatively short period of time
- Flexible: While roles are clearly defined, there is enough flexibility to allow different levels of
  involvement from both ESCO and Aggregator at various stages, from approaching prospective
  clients to offering, contracting and delivering the services. This flexibility is also mirrored in
  the shared revenue model.
- Clear definition of roles: Mainly based on a 'single point of contact' philosophy to foster trust and consistency in the relationship with the client.

# 8 ANNEX 1

Annex 1 – Model example of Memorandum of Understanding between ESCO and Aggregator

#### **Model of Memorandum of Understanding**

This Agreement ("the Agreement") is entered into on	between	, a
[nationality] company with registered XXXXXX ("Aggregator") and $$ , [na	tionality] company	with
registered number ("ESCO"),		

#### **INTRODUCTION**

Aggregator and ESCO (together the "Parties" and each a "Party") intend to form a mutually beneficial relationship in which the Parties will work together to market and sell Demand Response ("Demand Response"), Energy Efficiency Services such as Energy Performance Contracting (EPC) and/or other energy asset management programmes, including, but not limited to: Capacity Market services, Firm Frequency Response (FFR), Short Term Operating Reserve (STOR), Triad management, DNO-led Demand Response programmes, Frequency Controlled by Demand Management (FCDM) (collectively "Programmes"), to electricity end-user customers within the UK. Aggregator is a leading provider of demand response services, and ESCO is an energy service company.

#### TERMS

- Prospective Client Identification. ESCO and Aggregator will work to identify existing and
  prospective electricity end-user clients and sites that can benefit from participation in
  Programmes of from the deployment of energy efficiency services ("Prospective Clients").
  Following identification of Prospective Clients ESCO and Aggregator will determine joint pursuit
  plans in respect of each such Prospective Client in order to sign a contract with that party.
- 2. Format of Programme. The Programmes will be implemented at no obligation, no liability, no upfront cost to the end-client for the demand management enabling technology. However this will not include any upgrade costs for existing infrastructure such as, but not limited to, grid connection upgrades, metering and control infrastructure (other than Aggregator's own equipment). For Energy Efficiency actions, ESCO will provide a financing plan for the CAPEX involved in the deployment of the Energy Efficiency actions.
- 3. Training. Collateral. Aggregator will provide ESCO staff with the necessary training and education regarding the Programmes to be delivered by Aggregator. Such training will begin at the earliest mutually acceptable date and will include access to all Aggregator marketing materials necessary to give effect to the terms of this Agreement. Aggregator shall be the authorized representative in all Programmes with respect to any Prospective Client.
- 4. Client Acquisition and Relationship. ESCO and Aggregator shall identify Prospective Clients from within and outside of their existing client base who can benefit from participation in the Programmes or implementation of EPC contracts.

4.1. ESCO shall interface with the Prospective Client directly with regard to all aspects of their participation in the Demand Response Programmes, which may be with or without involvement of the Aggregator.

- 4.2. Should ESCO require Aggregator's involvement this may, at no cost to ESCO unless expressly agreed otherwise in writing, include (but not be limited to) assessment of the suitability of the Prospective Client to receive the Services, site audits and/or initial discussions with the Prospective Clients ('Site Assessments')
- 4.3. ESCO shall contract with the Prospective Client for EPC and Demand Response services, and once contracted (the "Client"), ESCO shall provide Aggregator with the relevant details in order that Aggregator may deliver the relevant Programme(s) to the Client(s) on behalf of ESCO.

#### 5. Implementation.

- 5.1. Aggregator will be responsible for procuring that at all times during the life of this Agreement that it has a contract in place with the System Operator or Distribution Network Operators for the ability to tender for, and to provide, the relevant Demand Response Programmes.
- 5.2. Following receipt of a written instruction from ESCO, Aggregator will further be responsible for:
  - (a) Prospective Client evaluation and acceptance;
  - (b) Installation of the necessary Demand Response enabling technology, i.e. metering and control equipment, communication gateways, interfaces with existing metering and control systems; and
  - (c) All contractual obligations required by the System Operator, Distribution Network Operator, Supplier or other entity that operates a Demand Management Programme ("Programme Operator").
- 5.3. ESCO will use reasonable endeavours to provide Aggregator with such information and data from the Client or Prospective Client as Aggregator reasonably requires to enable Aggregator to perform its obligations under the Agreement, including for the avoidance of doubt, pre- qualification information for any Demand Response Programmes.
- 5.4. Aggregator will bear the cost of supplying and maintaining all required hardware and software, including any enabling software (including client web portal access.
- 5.5. At ESCO's option, and following training by Aggregator, ESCO may undertake the installation, conduct technical surveys, complete Site Assessments and inform Aggregator of anticipated Client go-live dates of the Programmes.
- 5.6. The costs of commissioning and testing of metering equipment and software shall be borne by Aggregator.
- 5.7. At ESCO's option, upfront costs for the purchase, commissioning, testing and installation of metering, controls and communications hardware and software required to implement the Demand Response solution will be borne by Aggregator or paid in advance by the Prospective Client to ESCO, who will then reimburse Aggregator in accordance with the provisions of clause 7 below

# 6. Programme Management & Operations

- 6.1. In respect of each Client that contracts with ESCO for the receipt of the Services, Aggregator will provide ESCO with all reasonable assistance to enable ESCO to provide:
  - 6.1.1 turn-key services and management of Programme participation as it pertains to maintaining market/Programme expertise;

- 6.1.2 market representation and advocacy;
- 6.1.3 billing and revenue collection from Programme Operator;
- 6.1.4 long-term tendering and pricing with Programme Operator;
- 6.1.5 providing Client event/test notifications;
- 6.1.6 metering maintenance;
- 6.1.7 client reporting; and
- 6.1.8 providing engineering input for Clients as necessary.
- 6.2. ESCO will communicate directly with the Client with respect to Programme management. Aggregator will only communicate directly with the Client with ESCO's prior written consent.
- 6.3. Aggregator will provide commercial support to ESCO on marketing proposition and shared marketing collateral content, particularly on any new balancing service brought out by the TSO / DSO provided that neither Party shall utilise the other Party's marketing collateral or materials without the consent of the other Party.

#### 7. Fees and Payment

- 7.1. Aggregator will provide to ESCO a proposal outlining achievable revenues for each site based on the Site Assessments together with information provided by ESCO and/or the Client or Prospective Client.
- 7.2. The potential earnings of the Client will be based on the available controlled load data provided by the Client to ESCO in respect of the relevant Programme(s).
- 7.3. In consideration of the implementation and provision of the Services, the parties may receive:
  - 7.3.1 A share of DSR Payment Revenue as set out in clause 7.4 below;
  - 7.3.2 A share of DSR Cost Savings Revenue as set out in clause 7.5 below; and
  - 7.3.3 Installation Fees in accordance with the provisions set out in clause 7.6 below.
- 7.4. Aggregator shall be permitted to retain a proportion of any DSR Payment Revenue received by Aggregator in an amount to be confirmed by ESCO in writing in respect of each Client, with the full balance (without any further set-off or deduction other than the agreed retention amount) to be paid to ESCO by Aggregator by B.A.C.S transfer or such other equivalent instantaneous transfer of funds to such bank as ESCO may from time to time direct or as ESCO may otherwise from time to time agree, but in all circumstances to be received by ESCO as cleared funds within [5 days] of any DSR Payment Revenue received by Aggregator.
- 7.5. ESCO shall be permitted to retain a proportion of any DSR Cost Savings Revenue received by ESCO in an amount to be confirmed by ESCO in writing in respect of each Client, with the full balance (without any further set-off or deduction other than the agreed retention amount) to be paid to Aggregator by ESCO by B.A.C.S transfer or such other equivalent instantaneous transfer of funds to such bank as ESCO may from time to time direct or as ESCO may otherwise from time to time agree, but in all circumstances to be received by Aggregator as cleared funds within [5 days] of any DSR Cost Savings Revenue received by ESCO.
- 7.6. ESCO shall pay to Aggregator any installation fees in an amount to be confirmed by ESCO in writing in respect of each Client. For the avoidance of doubt ESCO shall not be obliged to pay Aggregator any installation fees unless ESCO has received an equivalent amount from a

Client that has been designated by both the Client and ESCO as an installation fee payable to Aggregator.

- 7.7. The invoice shall comply with ESCO's Invoice Instructions notified to Aggregator from time to time, including without limitation stating clearly that it is an invoice and include the contract reference number, the full name of the ESCO contracting legal entity, the period to which the Price relates, the date, the contact name at ESCO, a description of the Services to which the invoice relates, a valid ESCO purchase order number, Aggregator's full name and registered company VAT number and such other information as ESCO may reasonably require.
- 7.8. Any incomplete invoice will be invalid. For the avoidance of doubt, ESCO shall not be bound by a purchase order for a price other than as set out, described and/or calculated in or pursuant to this Agreement.
- 7.9. If ESCO has pre-authorised Aggregator to incur any expenses in the performance of the Services and ESCO has also agreed in writing to reimburse the same, then Aggregator shall provide receipts or such other evidence as ESCO may require to support any claim for such expenses.
- 7.10. Without prejudice to any other right or remedy ESCO may have, ESCO reserves the right to set off any liability of ESCO and/or any Affiliate of ESCO to Aggregator, whether either liability is present or future, liquidated or unliquidated arising under this Agreement or any other agreement which may exist from time to time between them, against any liability of Aggregator to ESCO under this Agreement.
- 7.11. All amounts due under this Agreement or against ESCO under any other agreement shall be paid by Aggregator to ESCO in full without any set-off, counterclaim, deduction or withholding (other than any deduction or withholding of tax as required by law).

#### 8. Business as Usual.

Any Demand Response actions implemented by the Aggregator on Client side will comply with the Client Business as Usual Scenarios. This includes comfort levels throughout commercial and residential buildings, no performance degradation on industrial processes or any other type of restrictive covenants highlighted by the Client. Where the ESCO is bound by SLA to the Client with relations to parameters that might be affected by DSR actions, impact assessments will be run (DSR trials) to understand which parameters may be affected and will require Client sign off before enrolling into specific DSR schemes.

#### 9. Exclusivity. Non-Compete.

ESCO will provide Demand Response services for its end-clients exclusively with Aggregator for the duration of this agreement. The ESCO will not offer any of the Programmes to its Clients directly without Aggregator within a period of 6 months following termination of this contract.

#### 10. Confidentiality and Marketing.

Aggregator and ESCO agree not to disclose this Agreement or any information relating to it to any third party without the consent of the other but Aggregator and ESCO may disclose such information

if required to do so by law or a relevant regulatory body or if the information has come into the public domain without breach of this paragraph.

Aggregator may like to use ESCO's logo for marketing and PR or create a case study. Aggregator will make ESCO aware of any marketing actions or use the ESCO's logo, brand or the ESCO's name prior to using these. If ESCO requires additional written consent from their Company's Media and Communication team, this can be organised separately.

#### 11. Non-circumvent.

Aggregator shall not enter into any Demand Response contract with any end-client introduced under this agreement outside of the terms of this agreement for the duration of this agreement. If the referral or lead does not result in a signed contract within a 6 month period following the introduction, Aggregator shall have the ability to approach the prospective customer directly in order to pursue a contract.

#### 12. Period.

This Agreement will remain in force for 24 months after execution.

#### 13. Good Faith.

Each Party shall at all times act in good faith towards the other and shall use all reasonable endeavours to ensure the observance of the terms of this Agreement. Each Party shall do all things necessary and desirable to give effect to the spirit and intention of this Agreement.

Authorised Signatory	Authorised Signatory
Signed:	Signed:
[Name] For and on behalf of [ESCO]	Name For and on behalf of Aggregator
Title:	Title:
Date: / / 2018	Date: / 2018