



## Short analysis report, survey and regional network Region Carlow/Kilkenny

The Carlow Kilkenny Energy Agency as regional partner for the Streetlight EPC project held a regional stakeholder meeting in Hotel Kilkenny on the 15<sup>th</sup> of August 2014. The meeting was attended by local authorities, potential ESCO's, lighting consultants, energy experts and local authority procurement officers.

A meet and greet was arranged from 8:30 to 9:15 with tea/coffee and registration on arrival. Each stakeholder was given an information booklet on the project. The stakeholder meeting commenced with two presentations, an introduction by Paddy Phelan to the Carlow Kilkenny Energy Agency and the Streetlight EPC project and a presentation on behalf of Kilkenny County Council by Declan Keogh.

Following the presentations each stakeholder introduced themselves and their interest in EPC/ESCO/Street Lighting in term of the Streetlight EPC project. From this we identified the broad spectrum of people in attendance.

Once the presentations and introductions were completed the stakeholders moved into an adjacent room where the roundtable discussion took place. The group was split into 3 tables at random selection. Each table was given three questions to discuss; 10 minutes were given to each topic. After the coffee break the stakeholders discussed the 3 topics in detail in an open form.

The three topics discussed were:

- What are the main challenges for developing streetlight EPC markets in Ireland?
- What are the main positive factors that could help develop streetlight EPC in Ireland?
- How can streetlight EPC be developed further in Ireland?
- Any other issues discussed by the group during the breakout sessions.

### Summary

- Main challenges for developing streetlight-EPC markets in your region

The main challenges for developing EPC in Ireland were discussed at length at the meeting. The key points from each groups' findings were posted up on the flip charts. These key points were split into 4 sections; *Administration, Technical, Procurement & Finance*. Each table discussed the questions in detail, wrote their key points onto a sticky note and stuck it in the relevant section. The following are the challenges and topics that

arose during the stakeholder meeting;

**Administration:**

In Ireland there is very little education or knowledge in the area of ESCO and EPC. Workshops should be held in order to educate the industry in terms of both LED street lighting, ESCO and EPC. The education should also centre on the technology and Smart Central Management Systems available, the control measures that need to be incorporated into any EPC contract would need to be clear from the offset.

The issue surrounding the exact project scope was raised by each group, what is the best way to separate the different types of infrastructure into different lots, for example heritage lighting or decorative lighting.

The Unmetered Register (UMR) is a section of ESB Network that administers the unmetered public lighting in Ireland. The UMR holds the asset register of the country's entire unmetered electricity supply. The UMR needs resources in order to update their systems of work to account for the changes made to their work systems in terms of large scale changes. The asset management of the public lighting database for each local authority needs to be done in compliance with the needs of updating the UMR database. The ESCO/EPC contractor needs to be made fully aware of the requirements needed to update the UMR database and also the councils own inventory.

**Procurement:**

Both the Private Finance Initiative (PFI) and Public Private Partnership (PPP) models have been used as a funding mechanism in the UK and Ireland. The PFI model is used extensively in the UK however it has been controversial at times. In Ireland the finance model most commonly used for motorway building has been the PPP model. Both of these funding mechanisms need to be compared against the proposed EPC model contract.

The Sustainable Energy Authority of Ireland (SEAI) was established in 2002 as Ireland's national energy authority. The SEAI administer grant aid, they also oversee the energy reporting of the public sector in Ireland. SEAI have an energy product database called the Triple E Product Register, the Public Sector use this register to procure energy efficient products. The triple E register is seen as a barrier by manufacturers of LED technology as the process is too slow and cumbersome. The situation in other countries needs to be compared with Ireland. The UK model could act as a direct comparison for this purpose.

The procurement of EPC/ESCO type of contracts needs to be clear and concise. If the project scope is not clearly defined it may lead to difficulties in how the project is to be realised. The project scope is important and it must clearly define what is included in the EPC/ESCO contract. The project scope needs to specify design, cabling, new poles, changes in pole location; meter boxes upgrades etc. if applicable to the particular project.

The SEAI are currently working on a suitable EPC Contract specifically for Streetlight EPC, these contracts would need to be tailored to suit the specific application of each EPC model. With the use of EPC or ESCO contracts there is an inherent risk on the part of the

contractor. If an energy performance contract is going to be specified for a 10 or 15 year period a good relationship needs to be in place between the ESCO and the lamp manufacturer or supplier. Evidence of this should be in place at the time of tendering.

### **Finance**

The SEAI Triple E Product Register can also cause a problem in terms of financing of projects as the scope of choosing LED technology can be limited based on the availability of LED lighting on the product register.

As discussed previously when estimating the financial cost of the project, the project scope needs to be clearly defined. The exact extent of what is included for example Infrastructure, poles, cables and lighting needs to be included from the start of the project. The Financial / Funding Mechanisms that have been used historically in both the UK and Ireland need to be investigated and compared to the current European models of ESCO/EPC.

In Ireland there is very little knowledge of EPC. Therefore there is no confidence in EPC as a financial model. With the Governments targets for energy reduction in the Public Sector the EPC model needs to be tried and tested In Ireland to improve the confidence in it as a financial model for energy savings. SEAI are currently working on EPC contracts and are looking for opportunities in the area of Energy Performance Contracting.

### **Technical**

The cost base and energy charging of the new lighting project needs to be agreed at the start of the project. It is likely that the company carrying out the EPC/ESCO contract will not be same as the utility provider. Therefore any energy savings accrued during the lifetime of the project needs to be set out at contract stage.

The baseline Unmetered Inventory of the Local Authority and the UMR need to be synchronised and updated. A specific section of the contract should set out the requirements needed to update both inventories otherwise the savings made will not be realised by the local authority.

The existing standard for public lighting in Ireland needs to be investigated and how a retrofit street lighting project will change the current standards that exist in Ireland.

The current state of the infrastructure of the public lighting in Ireland may affect the feasibility of incorporating an ESCO/EPC contracts. The use of electricity network poles, redesign of current street lighting schemes and the retrofit of mini pillars needs to be addressed.

### **Other comments discussed by the group**

How can infrastructure upgrades be incorporated into Energy Performance Contracts, what are we asking the savings to pay for? Does the contract include for replacement of poles, cable etc.

How will EU Procurement Procedures affect the contract and how can these procedures be addressed at an early stage.

The baseline data is very important, the client needs to know what they are expected to tender? The baseline inventory needs to include adequate detail and an up to date asset register.

The Small and Medium Enterprises will not engage in this process if the risk is too high for them. The cost will increase as the Contractors are bidding on risk element of the project.

In Austria, they included waste collection and street washing to help fund the projects by mixing and matching various elements of works. The model approach needed to be taken for this project is knowledge transfer of the ongoing issues and how we overcome these blocking issues.

The SEAI have a published a draft document on Energy Performance Related Payments so far there has not been good response, due to lack of knowledge and understanding of the risks involved. In Street lighting the UMR acceptance of LED/ New Technologies would need to be addressed to move forward with this type of model.

The Impacts on financial budgets of public bodies would also need to be taken into account and how these contracts are reported in the yearly budget.

The third party asset element of any contract would need to agree from the outset. There may be an element owned by ESB Networks for example the network pole or there may be other issues in terms of the contract for maintenance contractors etc.

The UMR/CER and ESB Networks need to be in agreement on the requirement to permit trials with virtual metering management systems and sending back energy data that is on an unmetered supply. Also the historical issue of energy charging (dusk to dawn/dusk to midnight) for unmetered public lighting needs to be changed to facilitate EPC in terms of trimming and dimming.

Are the finance companies going to accept the invoicing system? The solution is virtual metering but the technology needed to allow metering to 3rd Party. In the UK it is not metered and the Central Management System is not widespread. For example a 150W SON will be billed at 120W. The database needs to be robust and accepted.

One of the simplest options is to issue the UMR with the equivalent wattage, however there is a risk to UMR that the wattage be altered at a later date. Offaly/Laois Local Authorities are currently using the equivalent wattage in terms of LED technology retrofits. The following question was asked at the stakeholder meeting, **Why can't we just meter?**

- Capital investment
- Half of lighting assets are on ESB Network poles

Measurement & Verification Protocols need be adhered to, in order to verify energy savings. The preparatory work is key; load profiles of each lamp needs to be established. There should be an accepted margin of error with all parties (ESB Network/UMR/Local Authority/NRA). A consensus was agreed that the lighting consumption in Ireland is straight forward and shouldn't be an issue.

Exercise and Cost Benefit Analysis for the project of metering the unmetered supply; the ESB Networks company will switch a supply from unmetered to metered at a cost. It should be possible to integrate a CMS system but will it be acceptable.

The switching of control gear to electronic control gear also needs to be incorporated into the cost of any retrofit and any new types of photocell or smart systems. The upgrade of public lighting system are more likely going to go with an intelligent LED driver and most new luminaires will have that technology incorporated into the luminaire.

Is there an EPC market in the UK?

National Car parks public lighting Energy Performance Contract.

Student Accommodation

They are currently not dimming and trimming

- *Main positive factors in your region which could be helpful in developing streetlight-EPC markets*

The positive factors discussed were:

### **Administration:**

It will lead to a reduction of the carbon footprint of the local authority. The current driver for energy reduction is the public sector energy saving target of at least a 33% reduction in energy by 2020. This is contained in the National Energy Efficiency Action Plan 2009 – 2020 published by the Irish Government in 2009. It will lead to the creation of employment and job creation in terms of lighting retrofits, administration, design and installation. It will also establish a baseline protocol and a billing protocol for public lighting.

### **Technical**

It will lead to an asset renewal of a current aging public lighting asset. It will lead to a reduced carbon footprint for the public body. It will drive innovative solutions for energy efficient public lighting and also for the research in new public lighting control systems.

The technology has improved safety features and also is recognised by law enforcement as better lighting source for security for streets compared to SOX or SON lighting. There is also a reduction in environmental lighting pollution compared to SOX or SON lighting. There is also the advantage of introducing new technologies to the Irish Market, the public sector in Ireland is supposed to set an example to others in terms of trailing new technologies and innovations.

## **Finance**

It will lead to a reduction of the carbon footprint of the local authority or other lighting authority. There is a financial incentive in terms of the cost saving benefit of introducing new public lighting schemes. The design cost refund could work as a solution, to the barrier of integrating the cost of design into the project. The design cost would be refunded to the unsuccessful bidders if a framework was followed – only 3 tenderers would pre-qualify to tender for the project. Ireland would act as a good test bed as Ireland has a small public lighting infrastructure. There is currently an Energy Efficiency Fund of €70m available to finance EPC/ESCO schemes in Ireland.

## **Procurement**

Reduction in carbon footprint as discussed previously. The design cost refund would have to be incorporated into any procurement documents. The design parameters and specifications would need to be set out at procurement stage. The refund process would also have to be made clear to the intending contractors.

- *How can EPC be developed further in Ireland?*

## **Administration**

We need to simplify the understanding of EPC Procedures with training and education required on Public Lighting and EPC. A case study/evidence sharing of projects and feedback from projects underway in Ireland and across Europe needs to be made available in a public forum.

## **Technical**

Through procurement procedures a panel of contractors needs to be created. This will allow the contracting authority to pre-qualify contractors onto a panel for further EPC/ESCO projects.

The dimmable profiles, central management systems and metering protocols need to be agreed. The work on the baseline needs to be carryout now. A proper baseline needs to be set for the public lighting Infrastructure in Ireland. This will allow for a smoother transition to equivalent metering for public lighting I Ireland.

There is a need to establish and implement demonstration project €1m and above.

As discussed previously the SEAI Triple E is seen as a barrier to manufacturers, the independent verification which is not accepted and the certification process is too onerous. The timeframe during the year there are a certain amount of opportunities to update the Triple E schedule. The UK Criteria may be a good framework to investigate for Ireland.

## **Procurement**

The current procurement procedures can be seen as cumbersome. Therefore a simplified procurement approaches to market for EPC/ESCO should be made available.

SEAI are currently working on a standard contract for Public Lighting Energy Performance Contracts.

## **Financial**

The current billing and tariffs systems have not been updated in recent years therefore the current billing and tariff systems need to be updated to reflect the new technologies available.

## **Other issues discussed by the group**

Baseline: Scottish Futures Trust has a toolkit for public lighting maintenance.

Monitoring & Verification needs to understand the elements to address with EPC

IMPVP Protocol - International Protocol – no national protocol

Can use on EPRP – Adapt M&V to Irish Context & Projects

Certified Measurement and Verification training scheme for M&V

Pierre Langoit - practical EPC experience from Canada

EPC which incorporated Monitoring & Verification

Constantly changing technologies – Value Engineering Clauses in contract

Recap on Workshop A – The key Issues discussed were:

ESB Un-Metered Register (UMR)

ESB Networks

County & City Managers Association (Local Authority Representatives)

Commission for Energy Regulation (CER)

Definition of roles of all involved

Inventory of the Public Lighting Infrastructure (Lighting, poles, cables etc)

Set out protocols for Monitoring & Verification and Payment Mechanisms.

- Main conclusions for the development and activities of the EPC facilitation service and the implementation of EPC projects in your region (try to define some priorities based on your findings for the market development activities in the following WPs).

Engage with the Commission for Energy Regulation in Ireland as they have responsibility for tariff changes and the adoption of equivalent metering.

Engage with ESB Networks in terms of metering, ownership of network poles, specifications etc.

Engage with the UMR – Unmetered Register – Section of the ESB responsible for management and updating of the public lighting inventory for the public lighting stock of the country.

## Knowledge about and trust in EPC

- Have any EPC projects been implemented in your region/country?

During the stakeholder meeting the topic of EPC in Ireland was discussed. Hugh Cummins representing Philip Lee Solicitors told the delegation that there is currently an EPC project underway in Ireland but could not release further details on it at that stage.

SEAI have given three examples of EPC's in Ireland that are currently ongoing:

*Royal Victoria Eye & Ear Hospital Dublin;*

**Measures:** Insulation, building heating and ventilation controls, lighting, remote energy monitoring and Combined Heat and Power.

**Awareness:** Staff Awareness, ongoing energy management & maintenance management.

**Investment:** €300,000 shared by host and ESCO (Aramark)

**Annual Savings:** Circa €60,000 shared over 10 years.

Other examples of EPC;

*Liffey Meats* – Upgrading of processing and services at three facilities to include heat recovery, pipe and equipment insulation, new steam generation plant, low energy effluent treatment plant and lighting. This is to be delivered using an EPC.

*Tesco* – They are investing in low energy technologies in their stores and continue to use innovative financing models such as energy performance contracting to retrofit these technologies across the estate. Internal Lighting Energy Service (Using Fund)

*Four Seasons Hotel Dublin* – This project involves a comprehensive retrofit of lighting, heating, controls and ventilation systems; whilst also retrofitting the building fabric. It will be delivered through an EPC model.

- If yes, how many and which kind of projects were these? Did they include street lighting projects? What was the experience with these projects (positive/negative)?

The current EPC project discussed at the stakeholder meeting is just underway; it is a hotel and leisure centre upgrade and does not include Public Lighting. In Ireland there are no EPC projects underway for Public Lighting

- Have there been any activities to develop EPC projects/markets and if yes, by whom (e.g. an association, an individual ESCO, a public programme, an EU project)? Which target groups were they addressing? What were the main experiences in this process?

The Sustainable Energy Authority of Ireland are committed to implement EPC projects in Ireland they have made funding available to help finance the EPC model. Financial support is available for the implementation of EPC projects in Ireland. The SEAI are offering 50% supports; €7,000 if energy bill is <€1m and €15,000 if energy bill is > €1m.

CODEMA – City of Dublin Energy Agency are currently working on a European Project in relation to EPC. The European Energy Service Initiative aims to facilitate the development of long-lasting EPC implementation schemes in 9 European major cities and regions. The

project will also introduce the use of EPC as a practical tool to implement long-term energy efficiency.

- Is there any material on EPC available in your country (check also [http://ec.europa.eu/energy/intelligent/in-action/energy-performance-contracting/european-union\\_en.htm](http://ec.europa.eu/energy/intelligent/in-action/energy-performance-contracting/european-union_en.htm))?

The Sustainable Energy Authority of Ireland has made material available for the implementation of EPC projects in Ireland:

- A Guide to Energy Performance Contracts and Guarantees
- Sample EPC Contract
- EPC Workbooks – Stages 1 – 5
  - Stage 1: Get Organised
  - Stage 2: Initial Appraisal (Select Contract Route)
  - Stage 3: Detailed Appraisal (Plan & Prepare)
  - Stage 4: Procurement
  - Stage 5: Contract Implementation
- What are the knowledge levels on EPC, what are the main perceptions/ideas/misunderstandings about EPC?

In Ireland there is a lack of understanding of the EPC model, it has been successful in other countries but has failed to gain substantial growth here in Ireland. The SEAI and Government are keen to implement the EPC model in Ireland. From the stakeholder meeting it is clear to see that there is a market in Ireland for both EPC and ESCO financing. The SEAI are currently supporting an EPC/ESCO model for public lighting in Mayo County Council, Kerry County Council and Fingal County Council. Before the stakeholder discussion CKEA spoke to Eamonn Scanlon from Kerry County Council and discussed the issues relating to EPC in Public Lighting. Eamonn was unable to attend the stakeholder meeting in Kilkenny therefore CKEA is going to hold a separate meeting with Eamonn to discuss the issues relating to EPC and ESCO for public lighting.

## **The availability of ESCOs**

- Are there any ESCOs active in your region/country?

In Ireland there are a small number of companies involved in ESCO's, the companies involved in ESCO the majority of the projects thus far are on a small scale. The ESCO project currently underway are based on building fabric upgrades, internal lighting, upgrades of motors/pumps.

The stakeholder meeting identified a potential for ESCO's in Ireland for public lighting.

- If yes, what is their main field of activity and what kind of companies are they (also list them)?

Currently the main area of EPC/ESCO in Ireland is building fabric upgrades, biomass boilers, internal lighting, upgrading of motors & pumps etc.

- Which other companies in your region/country could potentially become ESCOs (especially for street lighting)?
  - Philips
  - Airtricity Utility Solutions
  - Lagan Group
  - Bilfinger Dublin
  - NuLumen Tek
  - Energy Automation Systems Ireland
- How could the financing of the ESCOs be supported in your region?

The stakeholder meeting identified certain barriers that need to be overcome in terms of EPC/ESCO in Ireland. CKEA are currently working on the issues raised in this meeting.

## Legal/procurement issues

- What are the main issues that need to be addressed in your region in relation to procurement issues?

Design Cost Refund: If the lighting design for the project is incorporated into the tender, a mechanism for the unsuccessful contractor to receive a refund on the design element of the project should be incorporated into the procurement procedure.

PFI/PPP Model: Analyse previous mechanisms used in Ireland such as PFI (Planned Finance Incentive) and PPP (Public Private Partnerships) and investigate what worked and what didn't.

Sustainable Energy Authority of Ireland Triple E Product Register: The Triple E register is an energy efficiency product database operated and maintained by SEAI. In order to comply with Green Public Procurement public bodies should purchase equipment from the Triple E database. From the stakeholder meeting it was obvious that this is seen as a barrier to companies in terms of the ability to input product data onto the triple E register on a regular basis. It also needs to take account for the constantly changing street lighting product line.

Project Scope: The scope of the project needs to be clearly defined at the procurement stage. What is included? (Pole, cable, infrastructure etc.)

EPC Knowledge in Ireland: Lack of knowledge in terms of EPC and ESCO's

Suitable EPC Contract for Streetlight EPC: SEAI are working on a specific contract for Streetlight EPC.

Risk ESCO versus Lamp Supplier

- Are municipalities aware of the phasing out process? If yes, do they have strategies/ideas how to deal with it?

The phasing out process for certain public lighting products was discussed at the stakeholder meeting. Most people were aware of the process but there was no clear strategy or ideas were put forward by the Local Authorities or NRA on how to deal with this issue.

- Are there any other legal aspects that have an impact on street lighting EPC market development (e.g. implementation of other EU directives, regulations concerning light pollution, liability issues for the street lighting operators)?

Not currently.

## **Street lighting & LEDs**

- What is the typical ownership structure of the street lighting in the region? Who pays what? Who is typically in charge of maintenance and who does it in practice?

The street lighting in Ireland was previously maintained by the Electricity Supply Board (ESB) the operation and maintenance of this has since been transferred to the local authorities. In 2009 the ESB sold their contracting business to Scottish and Southern Energy plc. In Ireland the majority of unmetered public lighting is both owned and operated by the Local Authority or the National Roads Authority.

In 2012 Kilkenny County Council entered into a regional maintenance contract for the maintenance of their public lighting. The South East Region consisted of Waterford, Wexford, Carlow, South Tipperary and Kilkenny County Council this regional maintenance contract was one of the first in Ireland and covered the maintenance of approximately 47,000 public lights in the South East.

The local authorities pay for the operation, maintenance and energy of the public lighting in their area. The National Roads Authority pays for the operation, maintenance and energy of the public lighting on the National and Motorway Road Network in Ireland.

- What are typical sizes of street lighting?

The size of public lighting stock in Ireland varies depending on the county. In Ireland there are approximately 450,000 unmetered public lighting units. There are 47,000+ public lights in the counties that form the South East Regional tender.

- Which municipalities could be pioneer municipalities in your region?

In Ireland there are 3 counties that are currently working on EPC framework for public lighting. This is being led by Eamonn Scanlon from Kerry County Council with the support of SEAI, Mayo County Council and Fingal County Council.

- Are there any other significant operators of street lighting (than municipalities) in your region?

The most significant operator of public lighting in the region apart from the municipalities is the National Roads Authority. In Ireland the National Roads Authority (NRA) operates and maintains the national road network and the motorway road network in Ireland. This would include the public lighting on these routes.

- What are the perceptions about LED street lighting?

There is a mixed reaction to the installation of LED lighting in Ireland. The installation of LED street lighting has been welcomed by the local police as it makes identifying people and cars makes/colour a lot easier. In other areas such as residential it has received negative perceptions as people that normally had light on their house to get the key in the door are left in darkness. One of the areas identified by the stakeholder meeting is local engagement in LED public lighting (local representatives, housing association, police etc)

- What are typical costs for electricity for municipalities in your region? What are typical operating hours? What is a typical age for street lighting installations?

The typical cost for street lighting in Ireland varies depending on the type of lighting fitting used, power factor of the lighting. The cost per kWh for street lighting varies from 0.13161c/kWh → 0.16334c/kWh

Currently in Kilkenny there are 3 main types of operating hours:

Dusk till Dawn: 4150 hours per year (Majority of installations)

Dusk till Midnight: 12XX hours per year (Parks etc that are closed to the public at night)

24 hour: CCTV, Traffic Sign

The age of lighting stock in Ireland varies from new to 20 years old. The main lighting stock in Kilkenny would be 15 years old +

- Are there any street lighting projects using LED already implemented in the region, if yes, which projects are these (name of municipality, size, costs, etc.)?

Laois County Council

Longford County Council

Carlow County Council

Mayo County Council

## **Other issues with an impact on streetlight-EPC market development**

- Are there any funding programmes for streetlight projects (EU, national, regional)? If yes, how do they work?

In 2013, the Irish Government set up the National Energy Efficiency Fund with €35 million of seed capital for investment in energy efficiency projects. This seed capital was further matched by another €35 million by private investors. In March 2014, Sustainable Development Capital LLP (SDCL) was appointed by the Department of Communications Energy and Natural Resources to act as the Investment Advisor to the National Efficiency Fund. SDCL will provide a source of finance to public and private sector client organisations undertaking energy efficiency projects throughout Ireland.

- Are there any issues which could have a positive or negative impact on the streetlight-EPC market development? How could you make best possible use of the positive factors? How could you address the negative factors?

### **Positive Factors:**

#### **Administration**

Reduce Carbon Footprint  
Driver -Council Energy Saving Target – 33% by 2020  
Creates Employment / Job creation  
Establishing Baseline protocol  
Billing Protocol

#### **Technical**

Renew Asset  
Reduce Carbon Footprint  
Drives innovative solutions  
Technology safety and security improved  
Environment Lighting pollution reduced  
Technology

#### **Finance**

Reduce Carbon Footprint  
Cost Saving  
Design Cost Refund – Solution to barrier – cost of design would be refunded to unsuccessful bidders if framework was followed – only 3 tenderers would pre-qualify  
Good Test Bed – Ireland Small Public Lighting Infrastructure  
Energy Efficiency Fund €70m

#### **Procurement**

Reduce Carbon Footprint  
Design Cost Refund

**Negative Factors:****Administration:**

Education in the area of ESCO and EPC  
Technology and Smart CMS (Control Measures)  
Project Scope – Different type of infrastructure into different lots.  
Unmetered Register  
Energy Company Involvement  
Asset Management  
EPC Knowledge

**Procurement:**

PFI/PPP Model  
Sustainable Energy Authority of Ireland Triple E Product Register  
Project Scope  
EPC Knowledge  
Suitable EPC Contract for Streetlight EPC  
Risk ESCO versus Lamp Supplier

**Finance**

Sustainable Energy Authority of Ireland Triple E Product Register  
Project Scope of Works  
Financial / Funding Mechanisms  
Confidence in the EPC model  
EPC Knowledge in Ireland

**Technical**

Energy Charging  
Baseline Inventory  
Existing Standards  
Baseline Unmetered Supply  
Age of current Infrastructure  
Unmetered Register (UMR)  
Risk for ESCO versus supplier

CKEA will continue to work with all stakeholders in order to find a solution to the barriers identified in the stakeholder meeting.

- Any other issue that you would like to mention?

Other issues identified by Eamonn Scanlon, Kerry County Council:

Need to get agreement on Equivalent Metering protocol from the CER and MRSO.  
Specification of Equivalent Metering – International Standards or Codes of Practice and metrology issues – accuracy of Equivalent Metering certification and ongoing validation.  
Transfer of data to the UMR, and migration from UMR to equivalent metering how will this be achieved? Are the resources available in the UMR.  
Need to finalise protocols with ESB Networks and also need to get local ESB Networks people on board.

## **Annex 1 Description of event held as part of the survey**

### **EVENT DESCRIPTION**

#### **Project Partner: Carlow Kilkenny Energy Agency**

**Title of the event: Streetlight EPC Roundtable**

**Date & location:** 15<sup>th</sup> August 2014, Hotel Kilkenny

**Organiser(s):** Carlow Kilkenny Energy Agency

**Number of Participants:** 27

#### **Summary**

A stakeholder meeting was held in Kilkenny to discuss a number of topics in relation to streetlight EPC in Ireland. The stakeholder meeting was disseminated to all sectors involved in public lighting in Ireland. At the event there were local authority representatives both technical and financial, street lighting designers and consultants, advisors in EPC, energy agency representatives, lighting suppliers and potential ESCO's. After the introduction there were two presentations: one on the Streetlight EPC project presented by CKEA and a second on Streetlight in Kilkenny by Kilkenny County Council.

The second stage of the meeting was a roundtable discussion where the group was split into 3 tables at random selection. Each table was given three questions to discuss; 10 minutes were given to each topic. After the coffee break the stakeholders discussed the 3 topics in detail in an open form.

#### **Objectives & main programme points**

The objective of the stakeholder meeting was to disseminate the Streetlight EPC project but to also allow the stakeholders to voice their opinions on the barriers involved with implementing streetlight EPC in Ireland. The three topics discussed were:

- What are the main challenges for developing streetlight EPC markets in Ireland?
- What are the main positive factors that could help develop streetlight EPC in Ireland?
- How can streetlight EPC be developed further in Ireland?
- Any other issues discussed by the group during the breakout sessions.

The breakout session involved a lot of good debate around the area of EPC and ESCO's for the Irish market.

## **Conclusions & lessons learnt (based on stakeholder input)**

The roundtable discussions allowed each table to debate the three topics outlined above amongst their own group, these topics were discussed and debated by each table the inputs were then labelled and stuck to a flip chart one per table. The facilitators then went through each topic and they were then discussed and debated amongst the entire group. The main conclusions gained from these debates was that the representatives from CKEA and Kilkenny County Council need to engage with key public bodies that have influence over the street lighting sector in Ireland in order to influence and change policy decisions.

CKEA need to engage with the Commission for Energy Regulation in Ireland as they have responsibility for tariff changes and the adoption of equivalent metering. Once progress is made in this area it will allow the implementation of streetlight EPC projects in Ireland more realistic. They also need to engage with ESB Networks in terms of metering, ownership of network poles, specifications etc.

One of the other organisations that need to be engaged is the Un-Metered Register a section of the ESB responsible for management and updating of the public lighting inventory for the public lighting stock of the country also need to be involved in the project from the offset.