Commission for Energy Regulation
An Coimisiún um Rialáil Fuinnimh

ESBN Electric Vehicle Pilot & Associated Assets

Consultation Paper

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Regulating Water, Energy and Energy Safety in the Public Interest

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Executive Summary

In March 2014, following a public consultation[1] on a proposal by ESB Networks (ESBN), the CER published a Decision Paper entitled "Decision on ESB Networks Electric Vehicle Pilot" (CER/14/057) ("the Decision Paper"). The Decision Paper set out the CER's approval for ESBN's proposed pilot project on Electric Vehicles (EVs) and to recover the associated costs of the pilot project through Distribution Use of System charges. As part of this approval the CER required ESBN to prepare a report on the findings of the EV pilot, along with any recommendations to address the effects of EVs on the distribution system. The Decision Paper stated that the EV charging infrastructure installed as part of the pilot would not be put on ESBN's Regulatory Asset Base (RAB) and that the ownership of the infrastructure would be decided by the CER after the pilot had concluded. ESB eCars conducted this pilot on behalf of ESBN. The purpose of the trial was to assess the impact of EV's on the distribution network.

This Consultation Paper requests comments on ESB eCars' proposal on the ownership of the assets and views on the EV Pilot Report, which is published alongside this paper. The ESB eCars' proposal evaluates four options for the ownership of the assets:

1) Assets become part of the RAB: With future Opex covered from DUoS and arrangements made for users of the system to purchase electricity from a supplier(s). In addition, the CER may opt to support additional Capex to support future expansion;

2) Sale of Assets via public tender in a Single Lot to a third party: With potential for a covenant to prevent disaggregation;

3) Sales of Assets via public tender in Multiple Lots to third parties: With assets sold to multiple owners;

4) ESB eCars ownership: With no future regulation of user cost recovery tariff and no additional regulatory support. As part of this arrangement, ESB eCars would operate the system on a commercial basis.

ESB eCars' propose option 4, where ESB eCars take ownership of the infrastructure and operate it on a commercial basis.

Notwithstanding ESB's stated preference for option 4; the CER is keen to seek views, from the electricity, transport and other relevant sectors, on the merits of the four options set out; and the potential for other options. In doing so, the CER has set out

[1] 22 of the 23 respondents to the consultation supported ESBN's proposal

a range of objectives it proposes to take into account in reaching a decision. The CER has not yet formed a view as to whether ESB's preferred option, option 4 may, or may not, achieve the best balance of outcomes against the objectives. We are particularly interested in the views of stakeholders with competence, experience or interest in operating EV infrastructure.

The following objectives are proposed by the CER:

- Ensure the CER's policy does not create barriers to competition in the market for provision of EV charging services;
- Ensuring the EV charging service is appropriately operated and maintained;
- Ensuring the best use of the assets in terms of facilitating the growth of the EV industry;
- Ensuring any costs or benefits seen by the DUoS customer are appropriate; and
- Open access to charging points as a way to facilitate National Policy in relation to EVs.

The Decision Paper allowed ESB Networks to recover €25m through DUoS for the purposes of the development of an electric vehicle pilot project. However, ESB eCars noted in their proposal[2] that the actual cost of the pilot was greater than the original estimate, at just over €33m. €3.2m of this was covered through EU funding. ESB eCars have written to the CER requesting recovery of the remaining €6.1m (which has been provided by ESB Group).

The CER requests respondents' views on the ESB eCars' proposal regarding funding in relation to the additional expenditure on the trial.

[2] Description and Evaluation of Potential Options regarding the Future of the Assets developed during the ESB Electric Vehicle Pilot - Financial Context, pg. 7

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Glossary of Terms and Abbreviations

Abbreviation or Term	Definition or Meaning
CER	Commission for Energy Regulation
DSO	Distribution System Operator
EV	Electric Vehicle
DUoS	Distribution Use of System

1 Introduction

1.1 Background

In March 2014, following a public consultation[3] on a proposal by ESB Networks (ESBN), the CER published a Decision Paper entitled "Decision on ESB Networks Electric Vehicle Pilot" (CER/14/057) ("the Decision Paper"). The Decision Paper set out the CER's approval for ESBN's proposed pilot project on Electric Vehicles (EVs) and to recover the associated costs of the pilot project of €25 million through Distribution Use of System charges. As part of this approval the CER required ESBN to prepare a report on the findings of the EV pilot, along with any recommendations to address the effects of EVs on the distribution system. The Decision paper stated that the EV charging infrastructure installed as part of the pilot would not be put on ESBN's Regulatory Asset Base (RAB) and that the ownership of the infrastructure would be decided by the CER after the pilot had concluded. ESB eCars conducted this pilot on behalf of ESBN.

This Consultation Paper requests comments on ESB eCars' proposal on the ownership of the assets and views on the EV Pilot Report, which is published alongside this paper.

1.2 Related documents

- CER/13/240: Consultation on ESB Networks Proposed Electric Vehicle Pilot
- CER/14/057: Decision on ESB Networks Electric Vehicle Pilot
- ESB Networks Electric Vehicle Pilot – R&D Project Submission Summary
- ESB Networks, Preparation for EV's on the Distribution System – Pilot Project Implementation Document
- Directive 2014/94/EU of the European Parliament and of the Council

1.3 Structure of this paper

This consultation paper is structured as follows:

- **Section 1**, introduction and background.
- **Section 2**, provides an overview of the legal context for the operators of EV charging infrastructure and ESB eCars' proposals
- **Section 3**, outlines conclusions and next steps.

[3] 22 of the 23 respondents to the consultation supported ESBN's proposal.

1.4 Responding to this Consultation

The deadline for submitting responses to the CER regarding the funding for EV pilot project and appropriate treatment of the assets is **17.00 Friday, 25th November 2016**. Responses to this consultation should be sent to Mantas Vencius (mvencius@cer.ie) at the CER. Please note that the CER intends to publish all responses received unless it is marked confidential. Where your responses includes confidential information please put it in a separate annex where possible.

2 Overview

2.1 Policy and Targets

Integration of the energy and transport sectors is expected to increase over the coming decades through the integration of electric vehicles and alternative fuels into the transport sector. This move is expected to be particularly strong in Europe due to the leading role the EU has taken in relation to areas such as energy efficiency, promotion of renewable energy and climate change.

Arising from policy objectives to decarbonise transport, reduce reliance on oil and promote the use of cleaner fuels, the European Commission developed and published the "Clean Power for Transport: A European Alternative Fuels Strategy"[4] in 2013. The aim of this document was to establish a long-term policy framework to guide technological development and investment in the deployment of alternative fuels and to give confidence to consumers.

Based on the 2013 Strategy, in November 2014 the Alternative Fuels Infrastructure Directive 2014/94/EU of the European Parliament and of the Council (the "Directive") was published. The Directive requires Member States to develop national policy frameworks (NPFs) for the market development of alternative fuels and related infrastructure. The intent of the Directive is to support greater uptake of alternative fuels through the establishment of targets for supporting infrastructure and through common technical standards for such infrastructure across all EU Member States. Article 4 imposes an obligation to all EU Member States to establish and support the connection of EVs and EV charging infrastructure. The Directive 2014/94/EU is currently being transposed into Irish law and this is expected to be finalised by the end of the year.

The adoption of EVs has been identified as a key strategy in achieving energy efficiency, renewable energy and climate mitigation targets.[5] The Renewable Energy Directive 2009/28/EC[6], which forms part of the EU Climate and Energy Package, sets Ireland a binding 10% target for renewable energy in transport by 2020 (RES-T). Ireland has a target of 50,000 EVs by 2020, and for all new cars to be zero emissions capable by 2030.

This national policy will increase EV ownership in Ireland and increase the demand for publicly accessible charging infrastructure. Therefore it is necessary that the regulatory framework put in place by the CER regarding EVs is sufficiently flexible in order to allow the market to develop and facilitate the growth of the EV industry in Ireland. Additionally the regulatory framework must be cost-effective and seek to avoid any cross-subsidies between EV owners and electricity customers generally.

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[4] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2013:0017:FIN:EN:PDF
[5] National Energy Efficiency Action Plan 2014, Department of Communications, Energy and Natural Resources
[6] http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32009L0028&from=en

2.2 Legal Context

While ESB eCars is currently the predominant operator of EV public charging infrastructure in Ireland, other parties may enter this market. This section sets out the current legislation relating to the supply of electricity to the operators of EV charging point. EV operators are required to enter into a contract with a supplier for the supply of electricity to their premises (including any EV charging infrastructure on their premises) and can offer access to their EV charging infrastructure on a commercial basis. The operators of charging infrastructure are not required to hold a supply licence as the service they are offering is access to their EV charging infrastructure and not supplying electricity to a premises. It is noted that this is arrangement provides a low barrier to entry for third party operators and allows the industry to develop in a flexible way. Therefore, the current legislative arrangements may facilitate the expansion of the current network of EV charging infrastructure and, accordingly facilitate the growth of the EV industry in Ireland more generally.

The legislative basis is set out in the Electricity Regulation Act 1999 (as amended) (the "Act"). The operator of the infrastructure (and the owner of the premises it is on) would be considered a "final customer" under the Act.

The Act defines supply as:

> *"...supply through electric lines to final customers for consumption"*

And a final customer as:

> *"...a person being supplied with electricity at a single premises for consumption on those premises"*

And a single premises as:

> *"…one or more buildings or structures, occupied and used by a person, where each building or structure is adjacent to, or contiguous with, the other building or structure."*

While it is noted that the charging of vehicles for the purposes of transport was not envisaged when the legislation was drafted, the CER considers that treating the operator of the infrastructure to be a "final customer" is consistent with the intent of the Act and is consistent with the market arrangements currently in place. The CER also notes that the Directive has not been transposed and that the implementing legislation may introduce provisions relating to EVs. The CER work with the relevant Departments to ensure the legislation is appropriately implemented. However, current legislation does appear to be consistent with Directive 2014/94/EU. Article 4(8) of the Directive states that:

> *"Member States shall ensure that operators of recharging points accessible to the public are free to purchase electricity from any Union electricity*

supplier, subject to the supplier's agreement. The operators of recharging points shall be allowed to provide electric vehicle recharging services to customers on a contractual basis, including in the name and on behalf of other services providers."

This appears to introduce a clear distinction between an operator of the infrastructure, who must be free to contract with a supplier, and the supplier, whose customer is the operator. And it makes clear that the contractual relationship is between the operator and the EV user.

2.3 Funding for the EV Pilot

In approving the funding of the EV pilot, the CER was cognisant of European and national policy regarding alternative fuels, and the potential impact that this would have on the take up of alternative fuels for transport, including EVs. Given this policy to increase the ownership of EVs it is important to understand the impact that EVs may have on the distribution system. As part of this pilot ESB eCars installed and operated charging infrastructure across the country. In the Decision Paper the CER approved €25m to cover these costs. However, ESB eCars have stated that the actual cost of the pilot was greater than the original estimate, at just over €33m. €3.2m of this was covered through EU funding and ESB eCars are seeking recovery of the remaining €6.1m (which has been provided by ESB Group) through DUoS tariffs. The factors contributing to this additional cost are set out in the ESB eCars proposal. In their submission ESB eCars stated that due to the emergent state of the electro-mobility industry, ESB eCars have had to react to changes in the industry, which have had cost implications. This additional expenditure includes:

- Upgrading the Charge Point Management System to a next generation version to meet the requirements of the 2014 EU Alternative Fuels Infrastructure directive and provide EV drivers with reliable "real time" information on the status of the EV chargers;
- Expanding and retrofitting the fast charger fleet so as to accommodate the new CCS (Combined Charging System) charger protocol introduced during 2012 by the German car industry, allowing the introduction into Ireland of vehicles by Volkswagen, BMW and Audi;
- Replacing a number of the early 'pilot grade' chargers that proved to be unreliable with more reliable models;
- Introducing 24/7 customer service and developing the technical capability to remotely reset chargers in order to ensure that EV drivers are not stranded; and
- Reserving the EV charging spaces in Ireland's major urban areas solely for EV use by marking them so as to prevent petrol/diesel vehicles from blocking them.

ESB eCars have requested recovery of the remaining €6.1m (which has been provided by ESB Group). The CER requests respondents' views on the ESB eCars proposal regarding the recovery of the additional €6.1m in funding.

2.4 Ownership of the Charging Infrastructure

2.4.1 CER Objectives

The CER has set the following objectives for its policy on the ownership of the assets:

- Ensure the CER's policy does not create barriers to competition in the market for provision of EV charging services;
- Ensuring the EV charging service is appropriately operated and maintained;
- Ensuring the best use of the assets in terms of facilitating the growth of the EV industry;
- Ensuring any costs or benefits seen by the DUoS customer are appropriate; and
- Open access to charging points as a way to facilitate National Policy in relation to EVs.

The CER will evaluate the ESB eCars' proposals, and any proposals from respondents to this consultation against these objectives. The CER also seeks views on whether any conditions should be attached to the ownership of the assets.

2.4.2 Options

The Decision Paper required ESB Networks to design the EV trial in such a way that the assets and infrastructure could be sold to a third party. As the trial has now concluded ESB eCars has submitted its proposal on the future of the charging infrastructure. These options are set out in the ESB eCars proposal and can be summarised as follows:

1. **Assets become part of the Regulated Asset Base (RAB):** In this case future Opex would be covered from DUoS and arrangements made for users of the system to purchase electricity from a supplier(s). In addition, the CER may opt to support additional Capex to support future expansion;

2. **Sale of Assets via public tender in a Single Lot to a third party:** With potential for a covenant to prevent disaggregation (splitting up into subsequent lots);

3. **Sales of Assets via public tender in Multiple Lots to third parties**: With assets sold to multiple owners; and

4. **ESB eCars ownership:** With no future regulation of user cost recovery tariff and no additional regulatory support. As part of this arrangement, ESB eCars would operate the system on a commercial basis.

The ESB eCars' submission proposes option 4, ESB eCars ownership, as the preferred option.

Notwithstanding ESB's stated preference for option 4, the CER welcomes views as to whether this option appropriately values the assets and the impact this may have on others looking to compete to own, operate and develop EV charging infrastructure.

The CER is keen to seek industry views on the merits of the four options set out; and the potential for other options. In doing so, the CER has set out a range of objectives it proposes to take into account in reaching a decision. The CER has not yet formed a view as to whether ESB's preferred option, option 4 may, or may not, achieve the best balance of outcomes against the objectives. We are particularly interested in the views of stakeholders with competence, experience or interest in operating EV infrastructure.

Views from respondents regarding the current, or future value of the assets and the impact that the options may have on other parties seeking to develop and operate their own charging infrastructure would be welcome.

The CER requests respondents' views on these proposals:

- Do you agree with the ESB eCars proposed four options?
- Are there other ownership models the CER should consider?
- What is your recommended option?
- Under your recommended option how would CER ensure that the current value of the assets is adequately reflected?

3 Conclusion & Next Steps

The CER welcomes comments on any of the issues raised in this consultation paper, the ESB eCar proposals, and the report on the EV Pilot. The CER will consider all the submissions it receives prior to making a final decision. In summary the CER asks the following questions:

1. Funding of the EV trial:
    a) The CER requests respondents' views on the ESB eCars proposal regarding funding in relation to the additional expenditure on the trial.
2. CER objectives in relation to EV policy:
    a) Do you agree with the CER's objectives for EV policy?
    b) Are there other objectives the CER should consider?
    c) Do you consider conditions should be attached to the ownership of the assets? If so, what kind of conditions should be added?
3. ESB eCars Proposal:
    a) Do you agree with the ESB eCars proposed four options?
    b) Are there other ownership models the CER should consider?
    c) What is your recommended option?
    d) Under your recommended option how would CER ensure that the current value of the assets is adequately reflected?

The deadline for submitting responses to the CER regarding the funding for EV pilot project and appropriate treatment of the assets is **17.00 Friday, 25th November 2016**. Responses to this consultation should be sent to Mantas Vencius (mvencius@cer.ie) at the CER.

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