



Commission for Energy Regulation

An Coimisiún um Rialáil Fuinnimh

ESBCS Domestic Micro-generator Export Tariff Decision Paper

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Abstract:

The Commission published PES's export tariff proposal for consultation on the 12th of December 2008. During the consultation window, the Commission received 46 responses. The background of respondents was diverse, comprising domestic micro-generators, energy agencies, manufactures of micro-generation technologies, business groups, suppliers, political representatives and members of the general public. The respondents highlighted various issues surrounding micro-generation including Feed in Tariffs (FiT's), technology costs, SME's participation, safety standards, market constraints and the creation of a framework for micro-generation.

Target Audience:

This decision paper is for the attention of members of the public, the energy industry and all interested parties.

Related Documents:

- [CER/08/259](#) Commission consultation paper on ESBCS Domestic Micro-generator Export Tariff Proposal
- [CER/08/259 \(A\)](#) ESBCS Micro-generation Tariff Proposal
- [CER/07/208](#) Arrangements for Micro-generation

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1.0 Introduction

1.1 The Commission for Energy Regulation

The Commission for Energy Regulation ('the Commission') is the independent body responsible for overseeing the regulation of Ireland's electricity and gas sectors. The Commission was initially established and granted regulatory powers over the electricity market under the Electricity Regulation Act, 1999. The enactment of the Gas (Interim) (Regulation) Act, 2002 expanded the Commission's jurisdiction to include regulation of the natural gas market, while the Energy (Miscellaneous Provisions) Act 2006 granted the Commission additional powers in relation to gas and electricity safety. The Electricity Regulation Amendment (SEM) Act 2007 outlined the Commission's functions in relation to the Single Electricity Market (SEM) for the island of Ireland. This market is regulated by the Commission and the Northern Ireland Authority for Utility Regulation (NIAUR). The Commission is working to ensure that consumers benefit from regulation and the introduction of competition in the energy sector.

1.2 Purpose of this paper

The purpose of this paper is to outline and describe the Commission's decision with regard to ESBCS's Domestic Micro-generator Export Tariff Proposal. This Commission carried out a full public consultation on this topic (12th December 2008) and has considered fully the comments and submissions received. Issues raised throughout the consultation process will be addressed in this paper, as well as outlining the final decision.

1.3 Comments Received

The Commission received 46 submissions to the consultation paper (CER/08/259) and would like to thank all those who submitted a response. Submissions were received from the following organisations and individuals:

ORGANISATIONS	INDIVIDUALS
Activation Energy	Avril Doyle
AirEn Services	Dan Holland
Association of Irish Energy Agencies	Donal O' Riordain
Carbon Tracking Ltd	Dr. David Swann
Cell Energy Ireland	Fran O' Connor
Cork City Energy Agency	Gerry Wrixon
Eco Evolution	John Byrne
Energy Profile Building & Energy Consultants	John Mullen
Fingleton White & Co	Len Jones
Galway Energy Agency	Mary Bermingham
IBEC	Michael Byrne
Irish Hydro Power Association	Dr. Niall McMahon
Irish Liquefied Petroleum Gas Association	Dr. Noel Barry
Irish Wind Energy Association	Patrick Twomey
Kinviro	Philip Cheasty
Lir Environmental Research	PJ & Sarah Hathaway
Micro Energy Generation Association of Ireland	Simon Coveney
Munster Wind Turbines	Thomas Sheils
Piccolo Energy	Tom Atkins
Sunpeak Ireland	
Sunstream Energy Solutions	
Surface Power	
Sustainable Energy Association	
Sustainable Energy Ireland	
Turbotricity Wind Systems	
Wexford Renewable Energy Strategic Committee	
Viridian Power & Energy	

1.4 Legislative Basis

The functions of the Commission for Energy Regulation in relation to electricity are set down in section 9 of the Electricity Regulation Act 1999 (“the 1999 Act”), as amended by subsequent Statutory Instruments. National regulatory authorities have been given additional functions under EU Directive 2003/54/EC. Regulation 3 of the recently enacted SI 60 (European Communities (Internal Market in Electricity) Regulations 2005) provides for the amendment of Section 9 of the 1999 Act for the purposes of assigning additional functions to the Commission. In particular, Regulation 3 of SI 60 requires the Commission to consider proposals from ESB operating as Public Electricity Supplier (PES) in relation to tariffs and their underlying costs. Regulation 3 also provides the Commission with the power, following an examination of proposals from PES in relation to underlying tariff costs, to issue directions to the Public Electricity Supplier in relation to such costs underlying any charge to final customers.

1.5 Structure of this paper

This paper is structured in the following manner:

Section 1

- Introduction.

Section 2

- Provides background information on the regulatory framework for micro-generation.

Section 3

- Outlines the Commission's decision regarding ESBCS's export tariff proposal.

Section 4

- Reviews comments received and details the Commission's response and decision.

Section 5

- Summary.

2.0 Background

The European Directive 2001/77/EC imposes an obligation on EU Member States to implement measures that facilitate the generation of electricity from renewable sources in order to reduce greenhouse gas emissions, enhance security of supply and improve economic competitiveness.¹ A key component of the Directive is for the 25 EU Member States to increase their share of electricity generated from renewable resources to 21%. Additionally, the Government's energy white paper 'Delivering a sustainable energy future for Ireland' established targets regarding the generation of electricity from renewable energy sources, including a commitment to achieve 15% of Ireland's electricity demand from renewables by 2010 and 33% by 2020.²

In an effort to expedite Government efforts in meeting its European obligations and adhering to targets put forward under the White Paper, the Commission has taken relevant measures given its functions and duties including the provision of a framework for arrangements on micro-generation, the commencement of a smart metering pilot scheme and an undertaking to complete a review of Demand Side in the Single Electricity Market (SEM). The Demand Side Review will take place in 2009 and will be completed on an All-Island basis in conjunction with NIAUR and relevant stakeholders.

The 'Arrangements for Micro-generation' decision paper CER/07/208, outlined the technical and commercial arrangements for micro-generation including installation, safety, notifications to the network operator and metering for micro-generators that rate at or below 11kW. In relation to the commercial arrangements, the Commission stated in CER/07/208 that there should be a proper reward for the value of electricity exported to the network by micro-generators. In its decision, the Commission noted that under the SEM there is a prospective route for micro-generators to be rewarded. The micro-generator could dispose of its output to a supplier, which would reduce the supplier's requirements for pool electricity. In such an event the value of the output would be derived from the price of electricity in the pool thus providing an appropriate signal for its value at any time.

Within CER/07/208, the Commission encouraged electricity suppliers to develop payment arrangements for micro-generators. Consequently, ESBCS as the Public Electricity Supplier (hereby referred to as PES) made a submission to the

¹ Directive 2001/77/EC on the promotion of electricity produced from renewable energy sources in the internal electricity market. The date for the implementation of this Directive was October 2003 and for new Member States, May 2004. Under the Directive, renewable energy was defined as wind power, solar power, geothermal power, hydro power, wave power, tidal power, biomass and biogas generation.

² Government White Paper 'Delivering a sustainable energy future for Ireland. The energy policy framework 2007 – 2020'. The target of 33% has subsequently been revised upwards to 40%.

Commission, which would facilitate the payment for output of micro-generators in the market. The Commission published PES's export tariff proposal for consultation on the 12th of December 2008. During the consultation window, the Commission received 46 responses to PES's export tariff proposal. The background of respondents was diverse, comprising domestic micro-generators, energy agencies, manufactures of micro-generation technologies, business groups, suppliers, political representatives and members of the general public.

The respondents highlighted various issues surrounding micro-generation including Feed in Tariffs (FiT's), technology costs, SME's participation, safety standards, market constraints and the creation of a comprehensive framework for micro-generation. The Commission has summarised these responses, which are reviewed in section 4.

3.0 Commission's Decisions

Following consideration of the comments received from interested parties, the Commission approves PES's proposal, as submitted in Commission consultation paper CER/08/259. The main points within the decision paper are as follows;

- The offer is limited to domestic customers of PES only. However, as stated in CER/08/259, the Commission encourages all suppliers to offer innovative products, which reward appropriately for any export by micro-generators.
- The PES is requested to address the taxation issues that restrict it from extending the export tariff to SME's in order to enable export payment to SME's during the 2009/10 tariff year.
- The export tariff proposal is an interim tariff and will expire at the end of 2010. The tariff is in response to a Commission request to reward domestic micro-generators appropriately for exported electricity pending the development of an enduring industry solution.
- Given the interim nature of the export tariff the Commission does not see merit in the PES amending current billing systems until a permanent solution regarding the treatment of exported electricity is developed. Consequently, the export tariff payments will be provided on an annual basis outside the current billing system.
- The export payment is linked to the economic cost of procuring electricity in the wholesale market. The value of the export payment offered by the PES is 9.00c / kWh, which will be available to eligible customers until 30th September 2009, and revised accordingly for the 2009/2010 tariff year. The tariff is derived from forecasted run of wholesale price movements, using PLEXOS modelling software.
- The development of a long term investment policy and any premium is a matter for Government policy and is outside the Commission's remit.

4.0 Responses and Commission's Decisions

The remainder of this document reviews the responses to the issues raised in the consultation paper, and the Commission's views on the comments made.

4.1 Export Tariff

The PES's interim export tariff for domestic micro-generators allocated a tariff value of 9.00 cent per kWh, which is linked to the wholesale electricity price for all verified metered units exported to the network.

4.1.1 Respondents' Comments on Export Tariff Payment

The general consensus amongst respondents was that the tariff proposed by PES is not conducive to increasing uptake of micro-generation. Some respondents suggested that there should be no discrimination with regards to a unit of electricity, and that a micro-generator should receive an export tariff that equals the import tariff. Respondents also requested clarification on whether PES's domestic export tariff would be indexed linked or remain a flat rate for the duration of the offer.

4.1.2 Commission's Response to Comments

The Commission is cognisant of the view amongst some micro-generators that the export tariff should be equivalent in monetary value to the retail (import) tariff. However, the retail price charged by a supplier to a final customer for a unit of electricity is not equivalent to the wholesale price paid by the supplier to a generator in the Single Electricity Market (SEM). Additional costs, other than SEM costs, are incurred by suppliers and included in the retail tariffs (e.g. transmission and distribution charges). Consequently, the Commission does not deem it appropriate for PES to equate a micro-generator export tariff to the retail (import) tariff for the supply of a unit of electricity.

In relation to comments regarding indexation, the interim export tariff offered by PES is a flat rate. The tariff is derived from forecasted run of wholesale price movements, using PLEXOS modelling software. The PLEXOS model includes fuel and carbon prices, assumptions for generator operation costs and planned maintenance schedules. The 9.00 c /kWh will be valid until the end of the current tariff year (i.e. 30th September 2009) and revised accordingly for the 2009/2010 tariff year as part of the scheduled annual tariff review.

4.1.3 Respondents' Comments on Export Tariff Structure

Respondents suggested that micro-generators be regarded as an early stage technology and supported with an attractive Feed in Tariff (FiT) that incorporates the positive externalities associated with micro-generation (i.e. enhanced security of supply and reduced greenhouse gas emissions).³ Consequently, respondents recommended the provision of either an all-inclusive fixed tariff i.e. a FiT that provides an overall level of remuneration or a premium tariff to micro-generators that is paid on top of the wholesale electricity market price. Respondents suggested that the FiT be financed through the Public Service Obligation (PSO) levy.⁴

As electricity generation costs vary according to renewable technologies, respondents also suggested that the export tariff should incorporate technology specific tariffs, which are initially set at a high premium and reduced incrementally, as the technology costs decline due to the effects of technological learning and economies of scale. Respondents emphasised the German and Spanish FiT models as benchmarks for any PES tariff proposal on micro-generation. Additionally, respondents highlighted that the UK Government has facilitated the deployment of renewable energy technologies through the Renewables Obligation Certificate scheme.

4.1.4 Commission's Response to Comments

The development of a long term investment policy and any premium/support is a matter for Government policy and is outside the Commission's remit. Additionally, the information gathered by the PES from the interim export tariff, will provide valuable information in terms of time and scale of export, which is critical if an enduring solution regarding export tariff structures is to be developed.

4.1.5 Respondents' Comments on Embedded Benefits

Respondents expressed concern that an export tariff linked solely to the wholesale price does not reflect the benefits of embedded generation including reduced system losses. Respondents also requested that standing charges for a

³ A Feed in Tariff can be defined as a policy instrument whereby renewable energy generators receive a premium price for energy produced.

⁴ The Minister for Communication, Energy and Natural Resources has set out a Public Service Obligation that requires PES to purchase electricity from specified sources, including sustainable, renewable and indigenous sources. The PSO levy is charged to all electricity customers and is designed to recoup the additional costs incurred by ESB PES in meeting this obligation.

micro-generator should be adjusted to reflect the avoided transmission and distribution losses.

4.1.6 Commission's Response to Comments

While micro-generators can potentially reduce system losses, the size of the avoided loss is subject to the scale of generation and the local load. Currently, there is insufficient market information to quantify the effect of micro-generation on distribution losses. With reference to comments received regarding the application of standing charges, micro-generators will continue to incur the prevailing standing charge. The standing charge covers costs regarding the upkeep of the network necessary to bring electricity supply to a customer. These costs have to be met irrespective of the amount of electricity used or exported back onto the grid.

4.2 Billing & Payment

The PES proposes to pay the domestic micro-generator for units exported on an annual basis by means of an electronic funds transfer to a nominated bank account.

4.2.1 Respondents' Comments

Respondents in general are opposed to an annual payment and requested that micro-generation payments correspond with bi-monthly electricity bills. One respondent suggested the introduction of a credit system, which would involve no exchange of money. Essentially, for every five units exported onto the grid from a renewable generator, they would receive four credits against their bill from PES.

4.2.2 Commission's Response to Comments

The export tariff offered by the PES is an interim tariff, which will expire by the end of 2010. The tariff is in response to a Commission request to appropriately reward domestic micro-generators (currently less than 100 in the Irish market) for exported electricity until a long term strategy can be developed. The Department for Communication Energy and Natural Resources (DCENR) have commissioned Sustainable Energy Ireland (SEI) to undertake a study, which is designed to evaluate the potential for small and micro-scale generation and to recommend measures to provide the deployment of appropriate technologies.

The Commission notes that if the PES were requested to provide a bimonthly export payment or issue credits, it would require amendments to their existing billing system, resulting in increased costs for the PES and ultimately for all customers of the PES. Considering the temporary nature of the tariff and potential for increased costs, the Commission does not see merit in PES amending current IT systems until a permanent industry solution regarding the treatment of exported electricity is developed.

4.3 Eligibility

PES propose to restrict the offer of an export tariff to domestic micro-generators due to technical VAT and other taxation issues.

4.3.1 Respondents' Comments

The majority of respondents are not clear on why the proposal is limited to domestic customers only. In particular, respondents cannot understand how the VAT issues would hinder the extension of this proposal to classes of customers other than domestics. Additionally, respondents requested that an amendment be made to CER/07/208, by removing the association of domestics from micro-generation and realigning its definition along international best practice. Respondents stated that micro-generation is universally defined as the generation of electrical power below 50kw.

4.3.2 Commission's Response to Comments

PES procurement arrangements must be in compliance with statutory obligations and internal governance procedures e.g. tax clearance certificates and self-invoicing. Developing a framework for the registration and payment of business customers, could potentially delay the implementation of an export tariff, consequently the Commission believes that PES should proceed with the offering of an interim export tariff for domestic micro-generators. However, the Commission recommends that PES addresses any potential outstanding issues in relation to non-domestic customers.

The definition of micro-generation is in accordance with European standards, as set out by the European Committee for Electrotechnical Standardisation (CENELEC). The Commission's decision paper CER/07/208 defines the technical parameters for micro-generation as 25A with a single low voltage (230V) connection, and or 16A with a three phase low voltage (400V) connection, which is in accordance with European standards. In practice, these definitions would cover domestic micro-generators that are rated at or below 11kW.

4.4. Respondents' Comments on barriers to micro-generation

Respondents stated that micro-generation has the potential to provide a valuable contribution in reducing Ireland's carbon emissions but it is constrained by limited financial returns. Various market constraints were highlighted including the cost of equipment and installation, lack of certainty, and technical problems pertaining to grid integration. Respondents stated that under the 1999 Electricity Regulation Act, the Commission is required to ensure that the system operator gives priority to generating stations using renewable, sustainable or alternative energy sources when selecting generating stations.

Additionally, respondents purported that no financial appraisals can be conducted on the installation of micro-generators, without a defined future strategy for potential income. Respondents suggested that uncertainty regarding a future export tariff, limits micro-generators access to finance, as financial institutions would be reluctant to provide financing, without a guaranteed income stream.

Respondents stated that micro-generators need high support, long term contracts, guaranteed or priority access to grid, which will lower investment risks and result in higher deployment of micro-generation. Consequently, respondents requested a combination of grants and an appropriate financial package to offset the capital costs associated with the purchasing of micro-generation technologies e.g. reduced VAT rates on renewable energy technologies.

4.4.1 Commission's Response to Comments

The Commission notes respondents' comments, however the issue of market constraints impacting on micro-generators is outside the scope of this paper. As stated in section 4.1.2, the development of a long term investment policy and a premium is a matter for Government and is outside the Commission's remit. A decision regarding the application of the PSO funding would require a direction from the DCENR. Additionally, any potential amendment to VAT rates, regarding the purchase of micro-generation technologies would require approval from the Department of Finance.

4.5. Respondents' Comments on smart metering & micro-generation

Respondents expressed concern over the lack of information regarding smart metering, the selection process for the smart metering trials and requested that the smart metering program give priority to existing renewable micro-generators by providing them with smart meters. Respondents also requested clarification

on whether micro-generators would receive interval or smart meters and which party incurs the cost for the installation of the meter.

Additionally, some respondents queried the association of micro-generation with smart metering, stating that electricity from micro-generators exported to the grid can be measured by the installation of an additional electromechanical meter rather than having to rely on smart metering. One respondent maintained that smart metering is an expensive solution just to enable time of use (ToU) pricing and that its funding should be directed towards micro-generation. The respondent stated that existing night rate meters could be amended to include critical peak periods in order to facilitate ToU tariffs.

4.5.1 Commission's Response to Comments

The objective of the smart metering trial is to test across the national population how a smart metering system in conjunction with energy efficiency initiatives can assist customers in reducing the amount of electricity they consume and shift time of use consumption. The smart metering project consists of a separate technology and customer behaviour trial for both residential and SME's. In order to ensure statistically robust results, the Smart Metering Steering Group needed to ensure that participants for the residential trials are representative of the total population. This was achieved by taking a stratified random selection of residential customers and inviting their participation. This ensures there is an unbiased spread of customers across different geographical regions, different levels of electricity usage and different types of customers.

While the residential customer behaviour trials are limited to PES customers, independent supplier's business customers are involved in the SME trials, and will be subject to ToU pricing and demand side management stimuli. The scope of the smart metering trials also includes gas customers, prepayment meters and micro-generation. Additionally, the Commission is currently working with industry participants to finalise details on the installation of suitable metering technologies for micro-generators.

The Commission decision paper CER/07/208, confirmed that the first 100 micro-generators applying to the DSO to have an interval meter installed, will not be charged the cost of the meter but are charged for the cost of installation. The Commission will review this limit in the event that a significantly large amount of micro-generators having interval meters installed.

With reference to comments received on smart metering expenditures, the installation of smart meters is a key commitment under the programme for Government, as a means to facilitate demand reduction. The potential introduction of smart meters will bring added benefits including increased billing

accuracy and more innovative tariff products, which cannot be achieved through amendments to night rate meters.

4.6. Respondents' Comments on a framework for micro-generation

Feedback from respondents highlighted a need for a co-ordinated response from the Commission, DCENR, SEI and industry in order to provide a clear strategy for micro-generation that incorporates an economic, legislative and technical framework.

4.6.1 Commission's Response to Comments

The Commission has provided a foundation for the development of micro-generation through the publication of a technical framework, as stated in the 'Arrangements for Micro-generation' decision paper. Additionally, the Commission has approved the introduction of an export tariff for PES customers and invited all suppliers to offer products, which reward micro-generators appropriately for any export. However, the issue of financing micro-generation is outside the Commission's remit as stated in section 4.1.4. While the Commission is amenable in contributing towards the formulation of a FIT structure, the issue of funding is an issue for Government policy.

4.7. Respondents' Comments on the role of Independent Suppliers

Respondents suggested that the Commission seek export tariff proposals from independent suppliers, and/or make it a requirement under current licensed suppliers. Additionally, some respondents expressed concern that the provision of an export tariff by the PES will create a barrier to competition for independent suppliers entering the residential market. One respondent queried the channelling of funding through the PES and recommended that a similar scheme similar to the Winter Peak Demand Reduction Scheme (WPDRS) be developed to allow all suppliers to provide an export tariff.

4.7.1 Commission's Response to Comments

With respect to comments received on the role of independent suppliers, the Commission does not have a legal mandate to instruct suppliers to offer an export tariff. The introduction of an export tariff, which is financed by the PES will not act as a barrier to competition, as independent suppliers are not restricted from entering the residential market or from offering an export tariff. As stated in CER/08/259, the Commission encourages all suppliers to offer innovative products, which enable micro-generation.

4.8 Respondents' Comments on Safety Standards

Respondents claimed that the area of installer competency is not considered in the tariff proposal. While respondents acknowledge that the DSO has developed a process for grid connection, this process excludes product standards on the generation source and installer training standards. Additionally, respondents queried how various generation sources are identified to suppliers, installers, consumers and the DSO.

4.8.1 Commission's Response to Comments

Under Section 4 of the Energy (Miscellaneous Provisions) Act 2006, the Commission has the responsibility to regulate the activities of electrical contractors with respect to safety. In order to achieve this objective, the Commission has defined the scope of electrical works in decision paper CER/09/009.⁵ Essentially, controlled works are those electrical works that require certification and can only be certified by a Registered Electrical Contractor who is registered with one of the Electrical Safety Supervisory Bodies.

Certification provides the customer with verification that the installation has been carried out and tested in line with the relevant technical rules, in this case the "National Wiring Rules". The definition of controlled works covers major electrical installation works and subsystems including micro-generators. However, the issue of product standards is outside remit of the Commission, as it is an issue for the National Standards Association of Ireland and the National Consumer Agency of Ireland. Similarly, the issue of identifying generation sources is outside the scope of this decision paper.

5.0 Summary

Having reviewed responses to PES proposal, the Commission approves the introduction of an export tariff for its domestic micro-generation customers and requests that PES address potential issues that restrict non-domestic customers from availing of the export tariff. The Commission notes industry's concerns regarding barriers to micro-generation, and is willing to contribute to a Government directed solution regarding the promotion and financing of micro-generation in order to ensure a successful transition to a low carbon economy.

⁵ CER/09/009 'Definition of the Scope of Controlled Works'. Decision Paper.