

Residential Prosumers in the European Energy Union

EAHC/2013/CP/04

Mapping the legal and regulatory framework in the 28 Member States, Iceland and Norway

Ireland



This study is part of the mapping of the legal and regulatory framework for residential prosumers in the 28 Member States, Iceland and Norway, within the project on Residential Prosumers in the European Energy Union EAH/2013/CP/04, and carried out by Milieu Ltd (Belgium), Chaussée de Charleroi, 112, B-1060 Brussels, tel: +32 (0)2 506 1000; web address: www.milieu.be

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National report on the regulatory framework for residential prosumers: Ireland

General Description of the national legal and regulatory framework

General

Renewable Energy: Targets, Policies and Measures

The development of renewable energy is central to the Irish government's overall energy policy¹. Ireland's ambitions for renewable energy and the related national targets are in line with the European Union's energy policy objectives and the targets set for Ireland under the Renewable Energy Directive². The government has published in May 2012 a Renewable Energy Strategy³ which reinforces the commitment to renewable energy, and sets out a number of concrete actions to develop renewable energy in the domestic market and for export.

The 2007 Energy White Paper entitled 'Delivering a Sustainable Energy Future for Ireland'⁴ described the actions and target for the energy policy framework out to 2020. The White Paper notably outlined strategic goals, the second of which is 'Accelerating the Growth of Renewable Energy Sources'. Ambitious targets for expanding the role of renewable energy were set, notably the 2020 targets of renewable sources attaining some 33%⁵ of electricity consumption, 12% of heat, and 10% of motor fuels consumption⁶. At this time, the government introduced a range of measures to encourage the development and deployment of renewable sources of energy, including the Renewable Energy Feed-In Tariff (REFIT) scheme, the biofuels obligation and grants for energy crops. Sector-specific capacity objectives for 2020 include the deployment of at least 800 MW of combined heat and power (CHP) capacity, and at least 500 MW of installed ocean energy capacity. The White Paper included a strong push to get communities to look at energy supplies⁷.

Ireland's National Renewable Energy Action Plan⁸ (NREAP) sets out how it intends to achieve the 16% renewable energy target across the electricity, heat and transport sectors. The Directive imposed a minimum 10% target in the transport sector; however, otherwise there is flexibility for the Member States to achieve the target as it so chooses across the three sectors. The NREAP also shows the technology mix that is expected to be used, the measures and reforms required to overcome the barriers to developing renewable energy, and how the national energy efficiency savings are factored into national energy projections to 2020. Ireland indicates that the overall 16% renewable energy target is to be achieved from around 40% renewable electricity (RES-E), 12% renewable heat (RES-H) and 10% renewable transport (RES-T). Ireland intends to meet the

¹ International Energy Agency, 'Energy Policies of IEA Countries: Ireland 2012 Review', 2012, p. 90 (hereinafter 'Energy Policies of IEA Countries: Ireland').

² Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources, amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC (text with EEA relevance).

³ Department of Communications, Energy and Natural Resources, 'Strategy for Renewable Energy: 2012-2020', May 2012, available at: https://www.teagasc.ie/media/website/crops/crops/RenewableEnergy_Strategy2012-2020.pdf.

⁴ Department of Communications, Marine and Natural Resources, 'Delivering a Sustainable Energy Future for Ireland', 12 March 2007, available at: http://www.seai.ie/About_Energy/Energy_Policy/European_Union_Drivers/EnergyWhitePaper12March2007.pdf.

⁵ This target, set in 2007, was subsequently increased to 40% in the 2008 Carbon Budget. This is in line with the way in which Ireland intends to reach its overall 16% under Directive 2009/28/EC, i.e. 40% renewable energy sources-electricity (RES-E), 10% transport (RES-T) and 12% heat (RES-H).

⁶ 'Energy Policies of IEA Countries: Ireland', p. 90.

⁷ Information obtained through consultation with stakeholder (Sustainable Energy Authority of Ireland, December 2016).

⁸ Department of Communications, Climate Action & Environment, 'National Renewable Energy Action Plan: Ireland', 2010, available at: [http://www.dccae.gov.ie/energy/SiteCollectionDocuments/Renewable-Energy/The%20National%20Renewable%20Energy%20Action%20Plan%20\(PDF\).pdf](http://www.dccae.gov.ie/energy/SiteCollectionDocuments/Renewable-Energy/The%20National%20Renewable%20Energy%20Action%20Plan%20(PDF).pdf) (hereinafter 'National Renewable Energy Action Plan: Ireland').

target domestically.⁹ The NREAP indicated that it continues to make good progress in working towards its ambitious 2020 objectives.

It should also be noted that the Electricity Regulation Act 1999¹⁰ liberalised the electricity sector in Ireland. As a result, the electricity market in Ireland is now fully open to competition, in accordance with the requirements of the EU Directives 96/92/EC and 98/30/EC, as of 19 February 2005.

The Act sets out the following measures:

- Full deregulation of the market for electricity generated using renewable forms of energy as its primary source;
- Priority dispatch of electricity generated from renewable energy sources;
- Establishment of the Commission of Electricity Regulation (CER) with a duty to encourage research and development into methods of generating electricity using renewable, sustainable and alternative forms of energy.¹¹

Moreover, the National Development Plan (NDP) 2007-2013¹² built on the progress made in the area of sustainable energy under the previous NDP 2000-2006¹³ by investing some €276 million under the Sustainable Energy Sub-Programme over the period 2007-2013.

In addition, on 1 May 2006, the Minister for Communications, Marine and Natural Resources announced the official launch of the REFIT scheme. The programme provides support to renewable energy projects over a fifteen-year period. The support mechanism is a change from the previous programme in that it is a fixed feed in tariff mechanism rather than a competitive tendering process. Applicants in REFIT must have planning permission and a grid connection offer for their projects and they will then be able to contract with any licensed electricity supplier up to the notified fixed prices.

The fixed price tariffs are:

Large wind energy (over 5 Megawatts) -> 5.7 cent per Kilowatt hour

Small wind energy (under 5 Megawatts) -> 5.9 cent per Kilowatt hour

Biomass (landfill gas) -> 7.0 cent per Kilowatt hour

Hydro and other biomass technologies -> 7.2 cent per Kilowatt hour¹⁴.

The scheme provides grant assistance to homeowners who intend to purchase a new renewable energy heating system for either new or existing homes. The scheme is administered by the Sustainable Energy Authority of Ireland (SEAI) and aims to increase the use of renewable energy and sustainable energy technologies in Irish homes¹⁵.

The share of renewable energy has increased significantly in Ireland's energy mix in recent years. The largest increase was recorded in renewable electricity, and in particular in onshore wind. These developments are commendable¹⁶. However, it should be noted that energy consumption in

⁹ Ibid, p. 91.

¹⁰ Electricity Regulation Act 1999, No. 23 of 1999, available at:

<http://www.irishstatutebook.ie/eli/1999/act/23/enacted/en/html> (hereinafter 'Electricity Regulation Act 1999').

¹¹ 'Policy Drivers' Sustainable Energy Authority of Ireland's website, available at:

http://www.seai.ie/Renewables/Renewable_Energy_Policy/Policy_Drivers/ (hereinafter 'Policy Drivers').

¹² Higher Education Authority, 'Ireland: National Development Plan 2007-2013: Transforming Ireland: A Better Quality of Life for All', January 2007, available at: http://www.hea.ie/sites/default/files/ndp_2007-2013.pdf.

¹³ EU Structural Funds, 'Ireland: National Development Plan 2000-2006', available at:

<http://eustructuralfunds.gov.ie/files/Documents/EconomicandSocialInfrastrucutreOP.pdf>.

¹⁴ 'Policy Support Mechanisms' Sustainable Energy Authority of Ireland's website, available at:

http://www.seai.ie/Renewables/Renewable_Energy_Policy/Policy_Support_Mechanisms/ (hereinafter 'Policy Support Mechanisms').

¹⁵ 'Policy Support Mechanisms'.

¹⁶ 'Energy Policies of IEA Countries: Ireland', p. 100-101.

2012 was based largely on fossil fuels, notably petroleum products, natural gas, and to a lesser extent solid fuels. The contribution from renewable energy sources was less significant in the overall energy mix at 7.2%¹⁷. Moreover, in January 2014, Ireland was referred to the Court of Justice of the EU (CJEU) for failing to fully transpose the EU's Renewable Energy Directive. The aspects of the EU Directive not yet transposed included the commitment that 10% of all transport energy would come from renewable sources by 2020, the management of grid access for renewable electricity and sustainability criteria for biofuels and bioliquids¹⁸. An infringement procedure for partial transposition of the Third Energy Package Electricity Directive was also referred to the CJEU in February 2014 for failing to adopt provisions related to unbundling of transmission system operators¹⁹.

1. What types of residential prosumers are there in your country on the basis of type of RES used and size of the installation?

Answer:

There are very few residential prosumers in Ireland and no distinguished types of residential prosumer²⁰. There is no feed-in tariff for prosumers in Ireland. It is almost impossible to make any money out of generating one's own electricity (one needs an export meter to get money from exporting electricity which is quite expensive and a prosumer doesn't get paid for surplus electricity they feed back to the grid). Therefore, most prosumers in Ireland only generate and consume their own electricity and do not make any money. That is why there are so few prosumers²¹. The following are examples of different types of micro-generators in Ireland: wind power (turbines), solar power (PV panels), small hydroelectric schemes, micro combined heat-and power and combined renewable micro generator and storage systems²². The following table provides the most current information (as of September 2014) from ESB Networks on the installed micro generators in Ireland²³.

<i>Current Installed Capacity for Micro generation in Ireland</i>	<i>Micro Generators</i>	<i>kW Installed Capacity</i>	<i>No. of Installations</i>	<i>Average Installation (kW)</i>
Micro Wind		3984.86	763	5.22
Micro Photovoltaic		1203.788	375	3.21
Micro CHP		72.91	15	0.53
LPG Gas		1.2	1	1.2
Micro Hydro		61.85	13	4.76
Total		5324.608	1167	4.56

One stakeholder interviewed also indicated that there are a lot of biomass boilers in homes and there are a few biomass heating networks run by communities e.g. Cloughjordan Ecovillage in Tipperary, and the Camphill Communities of Ireland²⁴.

¹⁷ http://epp.eurostat.ec.europa.eu/cache/ITY_PUBLIC/8-10032014-AP/EN/8-10032014-AP-EN.PDF.

¹⁸ European Commission, 'Renewable Energy: Commission refers Ireland to Court for failing to transpose EU rules', Press Release, 21 January 2014, available at: http://europa.eu/rapid/press-release_IP-14-44_en.htm; European Commission, 'Single Market Progress Report 2014: Ireland', 2014, available at: <http://ec.europa.eu/energy/en/topics/markets-and-consumers/single-market-progress-report>, p 117 (hereinafter 'Single Market Progress Report 2014: Ireland').

¹⁹ European Commission, 'Internal energy market: Commission refers Ireland to court for failing to transpose EU rules', Press Release, 20 February 2014, available at: http://europa.eu/rapid/press-release_IP-14-155_en.htm; 'Single Market Progress Report 2014: Ireland', p 117.

²⁰ Information obtained through consultation with stakeholder (Friends of the Earth Ireland, December 2016); Information obtained through consultation with stakeholder (Tipperary Energy Agency, December 2016).

²¹ Information obtained through consultation with stakeholder (Sustainable Energy Authority of Ireland, December 2016).

²² 'Connect a Micro-Generator', ESB Networks website, available at: <https://www.esbnetworks.ie/new-connections/generator-connections/connect-a-micro-generator> (hereinafter 'Connect a Micro-Generator').

²³ Irish Wind Energy Association, 'Wind Microgeneration: Step by Step Guide', 2014, p 4 (hereinafter 'Wind Microgeneration: Step by Step Guide').

²⁴ Information obtained through consultation with stakeholder (Friends of the Earth Ireland, December 2016).

2. What is the institutional framework & division of competences regarding residential prosumers in your country?

Answer:

The CER is Ireland's energy regulator with a range of economic, safety and customer functions. In 2014 the CER was also appointed as Ireland's economic water regulator. The CER's economic responsibilities in energy are to regulate the Irish electricity and natural gas sectors. As part of this role, CER jointly regulates the all-island wholesale Single Electricity Market (SEM) with its counterpart in Northern Ireland, the Utility Regulator (NIAUR) as part of the SEM Committee. The Committee consists of three NIAUR representatives, three CER representatives, an independent member and his deputy.²⁵

The Electricity Supply Board (ESB) owns the electricity transmission network assets and owns and operates the distribution network. The ESB is in charge of all electricity and the connection to the grid²⁶. EirGrid is responsible for the operation and development of the transmission system. ESB and Eirgrid are both state-owned. EirGrid has been certified as an independent transmission system operator for Ireland in 2013. The certification followed the decision of the European Commission²⁷ that the arrangements in place, if effectively implemented; clearly guarantee more effective independence of the Transmission System Operators (TSO) than would be the case under the other unbundling options²⁸.

There are various utility providers in Ireland including Electric Ireland, Bord Gáis Éireann (BGE) and Buy Ireland²⁹.

Bord Gáis Éireann (BGE) is a vertically integrated state owned company, with both transmission and distribution gas infrastructure (Bord Gáis Networks) and retail supply of gas and electricity (Bord Gáis Energy), although it has no interests in production activities. The system operator Gaslink is an independent subsidiary of Bord Gáis Éireann.

In 2010, BGE confirmed its intention to adopt the 'Independent Transmission Operator (ITO) model' by amalgamating Gaslink and Bord Gáis Networks, to form a new independent subsidiary. In 2013, CER certified BGE as an ITO subject to the completion of outstanding work items³⁰. The Irish Government is in negotiations to sell the retail arm of the business, and in December 2013 they announced their preferred bidder: a consortium of Centrica, Brookfield Renewable Power and iCON Infrastructure³¹. The State will retain ownership of the gas network (both transmission and distribution). Following the transaction, Bord Gáis Éireann will be fully ownership unbundled. The Planning Board has been appointed as the one-stop-shop (OSS) for the permitting of energy infrastructure Projects of Common Interest (PCI)³².

²⁵ 'Single Market Progress Report 2014: Ireland', p 117.

²⁶ Information obtained through consultation with stakeholder (Friends of the Earth Ireland, December 2016).

²⁷ Pursuant Article 9(9) of the Electricity Directive.

²⁸ Set out in Chapter V of the Electricity Directive; 'Single Market Progress Report 2014: Ireland', p 117.

²⁹ Information obtained through consultation with stakeholder (Construction PV, December 2016).

³⁰ CER/13/161, CER's ITO Certification Decision.

³¹ There was no update on progress by 17 March 2014.

³² 'Single Market Progress Report 2014: Ireland', p 121.

Specific Questions on the regulatory framework for residential prosumers**3. What is the regulatory framework for residential prosumers in your country?****General**

There is no specific regulatory, legal or policy framework for residential prosumers in Ireland³³. The European Communities (Renewable Energy) Regulations 2011³⁴ (as amended by the European Union (Renewable Energy) Regulations 2014³⁵) and the Sustainable Energy Act 2002 (Section 8(2) (Conferral of Additional Functions-Renewable Energy) Order 2011³⁶ regulate the renewable energy sector in Ireland.

3.1. What is the existing legislative framework regulating Renewable Energy Projects in your country?**Answer:**

The European Communities (Renewable Energy) Regulations 2011³⁷ (as amended by the European Union (Renewable Energy) Regulations 2014³⁸) and the Sustainable Energy Act 2002 (Section 8(2) (Conferral of Additional Functions-Renewable Energy) Order 2011³⁹ regulate the renewable energy sector in Ireland.

3.2. Does the Renewables National Action Plan include any objectives for residential prosumers (if so, please specify)**Answer:**

There is no mention of residential prosumers in Ireland's National Renewable Energy Action Plan (which was submitted to the European Commission in July 2010)⁴⁰.

3.3. Is there a definition (legal or regulatory) of residential prosumers (or self-consumption) in your country? If so, state it and describe the elements of this definition?**Answer:**

There is no legal or regulatory definition of residential prosumers (or self-consumption) in Ireland⁴¹. However, there is a definition of micro-generation provided by the ESB Networks (but which is not provided in any legislation, regulations or policy documents)⁴²:

³³ Information obtained through consultation with stakeholder (Friends of the Earth Ireland, December 2016).

³⁴ European Communities (Renewable Energy) Regulations 2011 (S.I. No. 147 of 2011), available at: <http://www.irishstatutebook.ie/eli/2011/si/147/made/en/print> (hereinafter 'European Communities (Renewable Energy) Regulations 2011').

³⁵ European Union (Renewable Energy) Regulations 2014 (S.I. No. 483 of 2014), available at: <http://www.irishstatutebook.ie/eli/2014/si/483/made/en/print> (hereinafter 'European Union (Renewable Energy) Regulations 2014').

³⁶ Sustainable Energy Act 2002 (Section 8(2) (Conferral of Additional Functions-Renewable Energy) Order 2011 (S.I. No. 148 of 2011), available at: <http://www.irishstatutebook.ie/eli/2011/si/148/made/en/print> (hereinafter 'Sustainable Energy Act 2002').

³⁷ European Communities (Renewable Energy) Regulations 2011.

³⁸ European Union (Renewable Energy) Regulations 2014.

³⁹ Sustainable Energy Act 2002.

⁴⁰ 'National Renewable Energy Action Plan: Ireland'.

⁴¹ Information obtained through consultation with stakeholder (Sustainable Energy Authority of Ireland, December 2016);
Information obtained through consultation with stakeholder (Friends of the Earth Ireland, December 2016).

⁴² Ibid.

A Micro-generator is defined as a source of electrical energy which operates in parallel with ESB Networks LV System and is rated up to and including: 25 amperes (6kW) at low voltage [230 volt] when the grid connection is single phase and 16 amperes (11Kw) at low voltage [230/400 volt] when the grid connection is three phase⁴³. Where multiple generating sources [of the same or varied technologies] are on the same site and share access to the same ESB Networks connection point, the aggregate rating must not exceed: 25A at low voltage, when the distribution system operator (DSO) network connection is single-phase and 16A at low voltage, when the DSO network connection is three-phase⁴⁴.

The vast majority of domestic and agricultural customers are connected to the single phase portion of the distribution grid (230V) and for those customers to be classified as microgenerators the maximum technical rating permitted is 5.75Kw. These ratings are in line with Irish conditions prescribed in European standard EN 50438. However, ESB Networks accept applications for generators up to 6kW⁴⁵.

4. What are the permitting requirements for each type of residential prosumer?

General

No permitting requirements for any type of residential prosumer or producer/generator of electricity/gas were found in any piece of renewable energy or sustainable energy legislation in Ireland. The only relevant piece of legislation found is the Electricity Regulation Act 1999⁴⁶ which provides legislation on licences and authorisations to generate and supply electricity.

Article 14 of the Electricity Regulation Act 1999 indicates:

- (1) ‘The Commission may grant or may refuse to grant to any person a licence-
 - (a) to generate electricity,
 - (b) to supply electricity to eligible customers,
 - (c) subject to section 28, to supply electricity to final customers which in aggregate does not exceed the amount of electricity which is available to the supplier and which is produced using renewable, sustainable or alternative forms of energy or electricity purchased, in place of such electricity, in accordance with the trading arrangements provided for in regulations to be made by the Commission under section 9 (1) (d), or
 - (d) to supply to the single premises of the main heat customer electricity which is produced using combined heat and power at the generating station from which that main heat customer is supplied with heat, or electricity purchased, in place of such electricity, in accordance with the trading arrangements provided for in regulations to be made by the Commission under section 9 (1) (d),
 on such terms and conditions as may be specified in the licence.
- (2) The Commission may grant to the Board a licence to supply electricity to eligible customers, subject to terms and conditions as may be specified in the licence.
- (3) Any licence granted under this section shall be deemed to contain a condition that it shall be subject to modification for the purposes of compliance with any enactment

⁴³ ‘Connect a Micro-Generator’

⁴⁴ ESB Networks, ‘Conditions Governing the Connection and Operation of Micro-generation’, March 2009, available at: <https://www.esbnetworks.ie/docs/default-source/publications/conditions-governing-the-connection-and-operation-of-micro-generation.pdf?sfvrsn=4> (hereinafter ‘Conditions Governing the Connection and Operation of Micro-generation’).

⁴⁵ ‘Solar Electricity: Microgeneration’, Sustainable Energy Authority of Ireland’s website, available at: http://www.seai.ie/Renewables/Solar_Energy/Solar_Electricity/Solar_Electricity_Microgeneration/ (hereinafter ‘Solar Electricity: Microgeneration’).

⁴⁶ Electricity Regulation Act 1999.

implementing, whether in whole or in part, Council Directive No. 96/92/EC of the European Parliament and of the Council of 19 December, 1996 concerning common rules for the internal market in electricity.

(4) An application for a licence under this section shall be in writing and be in such form and contain such information as the Commission may request.

(5) An application for a licence under this section shall be accompanied by such a fee, if any, as the Commission may determine to be appropriate, having regard to the application being made, and the Commission shall make information on such fees available on request.

(6) A licence granted by the Commission shall be subject to—

- (a) modification in accordance with section 19, or
- (b) revocation by the Commission in accordance with this Act.

(7) Where the Commission refuses to grant a licence to a person—

- (a) the person shall be notified, in writing, by the Commission of the reasons for the refusal,
- (b) within 28 days of the making of a refusal, the Commission shall notify, in writing, the Commission of the European Communities of the reasons for the refusal, and
- (c) the person may appeal the refusal in accordance with section 29.

(8) The holder of a licence granted under paragraph (a) of subsection (1) may supply electricity to the holder of a licence granted under paragraph (b), (c) or (d) of that subsection or to the Board.

(9) A licence granted under paragraph (b), (c) or (d) of subsection (1) shall not authorise the supply of electricity to an eligible customer or final customer until after the 19th day of February, 2000.

(10) For the purposes of subsection (1), ‘main heat customer’ means a person who has entered into a contract with a producer of combined heat and power to purchase, in a calendar year, an amount of heat produced by that producer, which amount of heat is greater than that contracted to be purchased in that year from that producer by any other person (if any).

(11) The Commission shall monitor licensees to ensure that they continue to conform to all the conditions and requirements of their licences.

(12) The Board shall be obliged to supply electricity to the holder of a licence under subsection (1) in accordance with the trading arrangements provided for in regulations to be made by the Commission under section 9 (1) (d)’.

4.1. Does your country recognize certain forms of self-consumption and subject prosumers to certain

- requirements,
- application fees and
- one-off costs

in order to give them a **permit or licence to generate energy**?

Answer:

As mentioned above, Ireland does not recognise any form of self-consumption or prosumers in its legislation, regulations or policy documents. As also mentioned above, section 14(1) of the Electricity Regulation Act 1999 indicates that one has to get a licence in order to generate and supply electricity/energy.

In Ireland customers with microgenerators up to the capacities outlined above (namely below 6Kw) can avail of a stream-lined, one page connection process (using form NC6⁴⁷). Customers who exceed the classification (230/400 V/10Kv, 20Kv, 38Kv and in some cases 110 Kv) must engage in a more demanding application (using form NC5⁴⁸) and connection process which costs money (1,600-1,700 euros ESB fee)⁴⁹.

Each customer shall therefore complete the Micro-Generation Installation Notification Form (Application Form NC6⁵⁰ or form NC5)⁵¹. Those connecting Micro-Generators are not required to apply to the Commission for Energy Regulation (CER) in order to receive an Authorisation to Construct/Licence to Generate as they are deemed to be automatically authorised and licensed by Order⁵².

Applicable Technical Standards

All installed micro-generators must comply with EN 50438 with the specific Irish protection Settings. Type testing must be carried out with the Irish Protection settings outlined in EN 50438. In accordance with EN 50438, each micro-generator shall have interface protection, as specified, which will include the following elements:

- Over Voltage
- Under Voltage
- Over Frequency
- Under Frequency
- Loss of Mains [LOM].

Settings shall be as specified in EN 50438 above. Every new micro-generator interface type and model, shall satisfy the conditions set out in 'Conditions Governing Connection and Operation of micro-generation' March 2009.

The earth electrode system should be installed in accordance with IEEE80 and IEC 1024-1⁵³.

International Standards

Certification schemes in the UK and USA require that small scale wind systems are tested by independent testing organisations and these are based on IEC standards which include:

- Product Design Evaluation (IEC 61400-2)
- Safety and Function (IEC 61400-2)
- Duration (IEC 61400-2)
- Acoustic Noise (IEC 61400-11)

⁴⁷ ESB Networks, 'Form NC6: Microgeneration Notification', August 2011, available at: [https://esbnetworks.ie/docs/default-source/publications/micro-generation-notification-form-\(nc6\).pdf?sfvrsn=4](https://esbnetworks.ie/docs/default-source/publications/micro-generation-notification-form-(nc6).pdf?sfvrsn=4) (hereinafter 'Form NC6: Microgeneration Notification').

⁴⁸ ESB Networks, 'Form NC5: Application for a New Connection', October 2012, available at: [https://www.esbnetworks.ie/docs/default-source/publications/new-generator-connection-application-\(nc5\)](https://www.esbnetworks.ie/docs/default-source/publications/new-generator-connection-application-(nc5)) (hereinafter 'Form NC5: Application for a New Connection').

⁴⁹ 'Solar Electricity: Microgeneration'; Information obtained through consultation with stakeholder (PV Construction, December 2016).

⁵⁰ 'Form NC6: Microgeneration Notification'.

⁵¹ 'Form NC5: Application for a New Connection'; 'Conditions Governing the Connection and Operation of Micro-generation'.

⁵² 'Connect a Micro-Generator'.

⁵³ 'Wind Microgeneration: Step by Step Guide', p. 16.

- Power Performance (IEC 61400-12) The CE mark should also be in evidence on the major elements of the micro generation system (turbine, inverter and controller). The CE mark is not a symbol of quality but does show that certain standards have been satisfied by the manufacturer⁵⁴.

An EN 50438 compliant inverter is necessary for a number of reasons. One of its functions is to convert direct current (DC) to alternating current (AC) which is the type of power utensils and appliances demand i.e. 'mains' electricity. Direct current is outputted by the controller and it needs to be inverted into AC. The inverter is also necessary to synchronise the output of the turbine with the electricity being drawn from the grid to ensure the occupant sees no interruption in their supply. It is also required to ensure electricity is not sent out to the grid in the event of a power cut - while technicians work on the power lines. An EN 50438 compliant inverter is a compulsory requirement with ESB Networks⁵⁵.

While there is currently no certification requirement in Ireland, Irish Wind Energy Association of Ireland (IWEA) recommends that equipment which is approved by the Microgeneration Certification Scheme in the UK or with similar accreditation are used, as this provides a certain level of quality assurance for the product. The SEAI intends to publish a list of wind turbine products that have met relevant standards of certification schemes abroad e.g. in countries mentioned above. It is also recommended that one contacts a qualified installer to install their turbine⁵⁶. The final sign-off of a grid connected turbine must be completed to ETCI (Electro-Technical Council of Ireland) standards. The electrician that the installation company provides should be a member of a certified trade body such as RECI (Registered Electrical Contractors of Ireland) and ECSSA (Electrical Contractors Safety & Standards Association).⁵⁷

4.2. Does the national legal/regulatory framework determine the contractual conditions under which prosumers are allowed to feed or sell their surplus back into the grid or to other consumers?

Answer:

There is no national legal or regulatory framework in Ireland which determines the contractual conditions under which prosumers are allowed to feed or sell their surplus back into the grid or to other consumers. One stakeholder interviewed is producing his own electricity from solar PV. He stated that if he is producing more PV than the house is using it is dumped directly back into the grid. If any surplus energy/electricity is produced, he does not get anything for it (in terms of money)⁵⁸. Another stakeholder confirmed that if one spills surplus onto the grid, they do not get paid for it- the surplus electricity is therefore pumped onto the grid for free⁵⁹. One of the stakeholders consulted highlighted that he thinks that Ireland is the only country this happens in⁶⁰. A lot of prosumers therefore install immersions in their homes and dump their surplus energy into the immersion which goes into the hot water tank instead of sending it back to the grid.⁶¹

⁵⁴ Ibid.

⁵⁵ 'Microgeneration', Sustainable Energy Authority of Ireland's website, available at: <http://www.seai.ie/Renewables/Microgeneration/>

⁵⁶ 'Wind Microgeneration: Step by Step Guide', p 10

⁵⁷ Ibid, p. 12.

⁵⁸ Information obtained through consultation with stakeholder (An Taisce, December 2016).

⁵⁹ Information obtained through consultation with stakeholder (Construction PV, December 2016).

⁶⁰ Information obtained through consultation with stakeholder (Construction PV, December 2016).

⁶¹ Information obtained through consultation with stakeholder (Tipperary Energy Agency, December 2016).

5. What are the rules applicable to the access to the grid?

General

In Ireland, access of electricity from renewable sources to the grid is subject to the provisions of Statutory Instrument 147 of 2011 as amended by S.I. No 483 of 2014 and direction from the CER⁶².

European Union (Renewable Energy) Regulation 2014 (S.I. No 483 of 2014)⁶³ (Access to and operation of grid):

- (1) 'In order to achieve the target assigned to the State and based on transparent and non-discriminatory criteria defined and published by CER—
 - (a) the transmission system operator and distribution system operator shall ensure that electricity generated from renewable sources may be transmitted and distributed,
 - (b) when dispatching generating units, the transmission system operator shall give priority to generating units using energy from renewable sources in so far as the secure operation of the electricity system permits, and
 - (c) subject to Part V of the Act of 1999 or the Single Electricity Market Trading and Settlement Code or both, as the case may be, a generator of electricity from renewable sources that is connected to the electricity system shall be able to sell and transmit such electricity at all times, whenever the source becomes available.
- (2) The implementation of paragraph (1) shall be at all times subject to the maintenance of the reliability and safety of the grid.
- (3) CER shall ensure that the transmission system operator or the distribution system operator, as appropriate, takes appropriate grid and market related operational measures in order to minimise the curtailment of electricity from renewable sources on the electricity system.
- (4) If significant measures are taken to curtail the renewable energy sources in order to guarantee the security of the electricity system and security of energy supply, the transmission system operator shall report to CER on those measures and indicate which corrective measures it is intended to take in order to prevent inappropriate curtailments.
- (5) CER shall take the appropriate steps required by Article 16 of the Directive'.

For grid connection for renewable energy sources/plants, Ireland is operating a group processing approach. Under this approach, grid connection applications are processed in groups, through a series of so-called "Gates", and plants are connected in groups as well. This approach aims to increase the reliability of the connection procedure for plant operators⁶⁴. Under the Group Processing Approach ('Gate') connection capacity has been reserved for renewable generation, including enough to specifically meet the 40% RES-E target in the context of the overall target addressed to Ireland under Directive 2009/28/EC. To date, there have been three 'Gates.' Gate 1 was finalised in December 2004 and processed applications amounting to 373 MW of renewable capacity. Gate 2 processed applications amounting up to 1300 MW and in 2008, the Commission for Energy Regulation approved Gate 3, which provides for 3900 MW of new additional renewable generation⁶⁵.

Generally, no formal procedure has been established for the actual grid connection request; yet, common elements of all application procedures can be identified and have been confirmed by a number of CER papers since 2004. Small renewable and low carbon installations (generally below 5MW) and also wind installations below 0.5 MW may be connected outside the group processing

⁶² RES-legal.

⁶³ European Union (Renewable Energy) Regulations 2014.

⁶⁴ RES-legal.

⁶⁵ 'Connection to the grid', RES-LEGAL's website, available at: <http://www.res-legal.eu/search-by-country/ireland/single/s/res-e/t/gridaccess/aid/connection-to-the-grid-30/lastp/147/> (hereinafter 'Connection to the grid').

approach, if a public good⁶⁶ benefit of the connection can be demonstrated. As for the cost for grid connection, Ireland is based on a shallow cost model. However, stakeholders also noticed that these shallow costs may be higher than in other Member States, as a large share of production sites is situated in the West of Ireland, requiring for the construction of new long connecting lines⁶⁷. Regarding the use of the grid, operators are obliged to provide an offer for use to every operator of an (renewable) energy plant. Grid operators are generally obliged to develop the grid system. However, individual plant operators do not have the right to demand grid expansion⁶⁸.

5.1. What is the inter-connection configuration used for each type of residential prosumer?

One of the stakeholders consulted doubts whether there is an inter-connection configuration used for each type of residential prosumer: she doubts they are clustered together before accessing the group. As there is no feed-in tariff for micro-generation (and therefore for residential prosumers) there is no financial incentive in terms of installing clusters⁶⁹.

According to one stakeholder who is producing his own electricity, in terms of accessing the grid the only connection the house has to the grid is the usual connection⁷⁰. Another stakeholder highlighted that the ESB can refuse connection. 10 houses are on a transformer with 100 kilowatt capacity- there is a limit to the capacity on any one transformer. If the kilowatt capacity is exceeding the local transformer capacity, the house cannot connect to the grid⁷¹.

5.2. Does the competence to determine the inter-connection configuration lie at State level or at a regional/lander level?

This question is not applicable to Ireland as indicated in the answer above there does not seem to be an inter-connection configuration for each type of residential prosumer in Ireland.

5.3. Are there any rules to ensure that prosumers are inter-connected to the distribution network/the grid?

There are no rules to ensure that prosumers specifically are inter-connected to the distribution network/the grid⁷². One has to connect any installation to the grid- it is illegal to have a private electricity wire and to sell to your neighbour for example⁷³. The Irish grid operators are obliged to provide a connection offer to every operator of a (renewable) energy plant if the plant operator has applied for such a connection (Sec. 34 (1) Electricity Regulation Act (ERA)). The grid operator is obliged to connect renewable energy plants without discriminating between any persons or classes of persons (Sec. 34 (8) Electricity Regulation Act (ERA)). The regulatory authority may decide that the connection of renewable energy plants shall be given priority (Sec. 9 (5) (e) ERA). So far, the regulatory authority has not taken such a decision. As indicated above, small plants may be treated outside the Group Processing Approach (GPA). In general, this rule applies to plants with

⁶⁶ RES Integration, 'Integration of electricity from renewables to the electricity grid and to the electricity market- RES-INTEGRATION: Final Report', 13 March 2012, p. 129 (hereinafter 'Integration of electricity from renewables to the electricity grid and to the electricity market- RES-INTEGRATION: Final Report').

⁶⁷ Ibid, p.130.

⁶⁸ 'Legal Sources on Renewable Energy', RES-LEGAL's website, available at: <http://www.res-legal.eu/search-by-country/ireland/>

⁶⁹ Information obtained through consultation with stakeholder (Sustainable Energy Authority of Ireland, December 2016).

⁷⁰ Information obtained through consultation with stakeholder (An Taisce, December 2016).

⁷¹ Information obtained through consultation with stakeholder (Construction PV, December 2016).

⁷² Information obtained through consultation with stakeholder (Sustainable Energy Authority of Ireland, December 2016).

⁷³ Information obtained through consultation with stakeholder (Friends of the Earth Ireland, December 2016).

a capacity of up to 5 MW (wind energy plants are considered small if they have a capacity of up to 0.5 MW), connection is in the public interest, a connection can be established faster outside the GPA, and the regulatory authority has granted exemption from the GPA (4.4 CER/05/049, CER/09/099)⁷⁴.

5.4. What are the grid access and grid use principles and rules for the energy generated by each type of residential prosumer?

There are no specific rules and principles on grid access and grid use for the energy generated by each type of residential prosumer⁷⁵.

There is, however, a requirement that prosumers must stop producing electricity if the grid goes off. ESB networks dominate the Irish electricity market in this instance as this is not required anywhere else in the world, it is extremely demanding and the max voltage frequency is much higher than what the grid works to⁷⁶.

Moreover, connecting to the grid for microgeneration is a straightforward process known as 'Inform and Fit' and can be managed by the prosumer's installer. A one page NC6 form from ESB Networks (ESBN) must be filled out by the applicant. There is no fee to make a domestic grid connection⁷⁷. Note ESB Networks require other information with the notification for a domestic grid connection including a type test cert, payment for import/export meter, and a valid ETCI Electrical Completion Certificate. If one wishes to connect a turbine larger than those covered under the microgeneration application process (i.e. 25A at low voltage [230V], when the DSO network connection is single-phase or 16A at low voltage [230/400V], when the DSO network connection is three-phase) a more detailed connection process is required. One will need to make an application to ESB Networks using application form NC5 form.⁷⁸

5.5. What are the network costs and charges for each type of residential prosumer?

There is no charge to connect a micro-generator to the ESB network provided it complies with EN50438, or equivalent⁷⁹. The current installation fee for installing an Import/Export meter is 340 euro (incl. VAT)⁸⁰.

Turbine systems costs vary depending on a number of factors. For a given suitable site the choice of turbine and supplier are the key factors which lead to a successful installation and a positive experience. Grid connected turbine systems generally range from approximately €20,000 to €30,000 for a 6kW unit and from €10,000 to €20,000 for a 3kW unit. A 1kW grid connected unit can cost from €3,000 to €7,000. The cost per kW is usually inversely proportional to the size of the unit i.e. as the unit size increases the price per kW decreases⁸¹.

⁷⁴ 'Connection to the grid'

⁷⁵ Information obtained through consultation with stakeholder (Construction PV, December 2016).

⁷⁶ Information obtained through consultation with stakeholder (Construction PV, December 2016).

⁷⁷ 'Wind Microgeneration: Step by Step Guide', p 13

⁷⁸ Ibid; ESB Networks, 'Form NC5A', October 2012, available at: [https://www.esbnetworks.ie/docs/default-source/publications/new-generator-connection-application-\(nc5a\).pdf?sfvrsn=4](https://www.esbnetworks.ie/docs/default-source/publications/new-generator-connection-application-(nc5a).pdf?sfvrsn=4).

⁷⁹ 'Connect a Micro-Generator'.

⁸⁰ Ibid.

⁸¹ 'Wind Microgeneration: Step by Step Guide', p. 10.

6. What are the incentives (e.g. through taxes or tariffs) for each type of residential prosumers?**General**

In Ireland, electricity from renewable sources is mainly promoted through a feed-in-tariff scheme (REFIT) that operates as a floor price. The entities entitled to this tariff are those suppliers that purchase electricity from renewable sources from generators with whom they have entered into a commercially negotiated REFIT Power Purchase Agreement (PPA). This regulatory system incentivises the generation of electricity from renewable sources. Nevertheless, a new renewable energy support scheme was expected to be introduced in 2016-however it is still under consultation⁸². It will be at least 2018 before anything happens⁸³. The REFIT schemes/supports are funded by the Public Service Obligation (PSO) which is paid for by all electricity consumers. The REFIT schemes have been designed to incentivise the development of renewable electricity generation in order to ensure Ireland meets its goal of 40% of electricity coming from renewable sources by 2020⁸⁴.

However, there is currently no support mechanism or feed-in-tariff scheme for micro generation and therefore for residential prosumers⁸⁵. As a result, residential prosumers are not common in Ireland⁸⁶. There are some grants for micro- renewable installations, but they are not easy to obtain and are not available to just any householder, they must form part of a sustainable community group who applies in a competitive process for a range of energy efficient and renewable measures once a year⁸⁷. Moreover, the Better Energy Homes scheme allows homeowners of dwellings built before 2006 to apply for a € 1,200 grant aid for the installation of a solar thermal installation⁸⁸.

There are also no policies supporting prosumers and no support mechanisms. There was only one scheme which was scrapped and hasn't been restated⁸⁹. Electric Ireland introduced a micro-generation scheme export payment rate of 9 cent per kWh. It is the only scheme that ever existed in Ireland. Electric Ireland withdrew the scheme for new customers from 31 December 2014⁹⁰. They however extended the scheme to their existing domestic customers until 31 December 2016⁹¹. Moreover, ESB Networks no longer offer its micro-generation support package of (i) a free installation of an import/export meter and (ii) support payment of 10 cent/kWh. Existing customers who successfully apply to the scheme by February 2012 will continue to receive support from ESB Networks until the fifth anniversary of their contract start date (ending 2014-2017)⁹².

Therefore, there are truly no incentives in Ireland to become a prosumer unless you self-consume everything you produce⁹³. As mentioned above, there is no scheme in Ireland like the UK's scheme to produce electricity and get paid as a prosumer⁹⁴. As there is an ongoing consultation process at the moment and no decisions have been made regarding a new scheme, people are in limbo and

⁸² RES-legal; Information obtained through consultation with stakeholder (Tipperary Energy Agency, December 2016).

⁸³ Information obtained through consultation with stakeholder (Tipperary Energy Agency, December 2016).

⁸⁴ 'REFIT Schemes and Supports', Department of Communications, Climate Action & Environment's website, available at: <http://www.dccae.gov.ie/energy/en-ie/Renewable-Energy/Pages/Refit-Schemes-Landing-Page.aspx>.

⁸⁵ Information obtained through consultation with stakeholder (Friends of the Earth Ireland, December 2016); Information obtained through consultation with stakeholder (Sustainable Energy Authority of Ireland, December 2016).

⁸⁶ Information obtained through consultation with stakeholder (Friends of the Earth Ireland, December 2016); Information obtained through consultation with stakeholder (Sustainable Energy Authority of Ireland, December 2016).

⁸⁷ Information obtained through consultation with stakeholder (Friends of the Earth Ireland, December 2016).

⁸⁸ RES-legal.

⁸⁹ Ibid.

⁹⁰ Information obtained through consultation with stakeholder (Construction PV, December 2016); 'Electric Ireland Micro-Generation Pilot Scheme', Electric Ireland's website, available at: <https://www.electricireland.ie/residential/help/micro-generation/electric-ireland-micro-generation-pilot-scheme> (hereinafter 'Electric Ireland Micro-Generation Pilot Scheme').

⁹¹ 'Electric Ireland Micro-Generation Pilot Scheme'

⁹² Ibid.

⁹³ Information obtained through consultation with stakeholder (Construction PV, December 2016); Information obtained through consultation with stakeholder (Tipperary Energy Agency, December 2016).

⁹⁴ Ibid.

as there are no incentives yet they are not going to invest in RES and become prosumers⁹⁵.

6.1. Does your country apply specific tariffs to prosumers

- to charge them for the electricity they draw from the grid for consumption?
- or to compensate them for the electricity they feed back into the grid?

Answer:

Under the scheme that existed (indicated above) one pays 9 cent per kWh for export otherwise no specific tariffs for prosumers exist to charge them for the electricity they draw from the grid for consumption⁹⁶. Prosumers do not get any money from the electricity they feed back into the grid. As indicated above, no feed-in tariff exists for micro-generation⁹⁷. Interestingly, for large industrial prosumers they can buy back surplus they feed back into the grid at SEM export price-2 cent/3 cent⁹⁸. It can therefore be seen that the policy in Ireland seems to promote large industrial prosumers while small-scale residential prosumers are given no incentives to produce their own electricity. No specific information was found to determine why this is the case.

6.2. Does your country

- tax prosumers in a specific way?
- allocate to them a certain part of the cost to upgrade the grid to accommodate the extra generation they feed into the grid?

Answer:

There are no tax incentives for prosumers, or any other incentives or support mechanisms for prosumers. Ireland therefore does not tax prosumers in a specific way or allocate to them a certain part of the cost to upgrade the grid to accommodate the extra generation they feed into the grid⁹⁹.

7. A. What are the conditions that may encourage residential prosumers (to entry into activity or during functioning)?

General

No market/economic incentives

As indicated above, there are no market/economic incentives for residential prosumers: nobody offers any tariff for prosumers. (However, technically a prosumer could get a REFIT for a wind turbine but it is more trouble than it is worth as from a regulatory point of view it takes 2-3 days to get and a prosumer would need to pay a consultant approximately 500 euros to get one¹⁰⁰. Moreover, there is no subsidy/feed-in-tariff for PV panels¹⁰¹. An export meter costs 340 euros and a prosumer would need to export a lot of energy for it to make sense to spend 340 euro on such a meter-it doesn't therefore pay to export¹⁰². These are clear barriers for such persons to enter into activity and become residential prosumers.

⁹⁵ Information obtained through consultation with stakeholder (Construction PV, December 2016).

⁹⁶ Information obtained through consultation with stakeholder (Construction PV, December 2016).

⁹⁷ Information obtained through consultation with stakeholder (Sustainable Energy Authority of Ireland, December 2016).

⁹⁸ Information obtained through consultation with stakeholder (Construction PV, December 2016).

⁹⁹ Ibid.

¹⁰⁰ Information obtained through consultation with stakeholder (Tipperary Energy Agency, December 2016).

¹⁰¹ Ibid.

¹⁰² Ibid.

B. What are the conditions that may act as barriers for residential prosumers (to entry into activity or during functioning)?

General

Onerous planning permission and grid connection processes

The **planning permission and grid connection processes** are extremely onerous and very costly for small developers. Grid access, often long waiting times, difficulties obtaining licences to sell electricity to the grid and significant backlogs mean the timelines are often too long and too expensive for community energy projects to survive. The timescales at present from application date to receiving a positive grid connection offer can be upwards of 5 years. For communities, without a secure funding stream in place these barriers can be insurmountable¹⁰³. Planning permission is needed if the installation is over 12 square meters which is also a significant barrier¹⁰⁴.

In terms of barriers to grid access, the main barriers to integration in the grid connection phase are: potential delays for grid connection due to the group processing approach and potentially higher shallow costs than in other Member States¹⁰⁵. The main barriers to integration in the grid operation phase are: challenges to apply the concept of priority dispatching under the Irish circumstances (40% RES-E target). The main barriers to integration in the grid development phase are: there is no right of RES producers to demand grid extension, if required for dispatching¹⁰⁶.

Onerous permitting procedures

In Ireland there are an excessive number of authorities involved in **permitting procedures**¹⁰⁷. Such permitting procedures are very lean even though several administrations must be involved¹⁰⁸. Moreover, the civil servants dealing with the permitting procedures are not familiar with renewables. This leads to confusion, delays or unmotivated denials of authorisations¹⁰⁹.

Barriers for communities

There are too many barriers which prevent communities from developing their own projects, and there is no mechanism to involve citizens in developer-led projects in a fair and equitable way¹¹⁰. A recent Eurobarometer survey showed 89% support for renewable energy targets in Ireland. However, amidst concerns with adverse local impacts and a perception of unequal participation in the benefits derived from national resources, some communities are actively resisting developments they feel they have no control over and see little benefit from¹¹¹.

For residential prosumers as a municipal community, one of the biggest challenges is securing access to funding and advice at initial project development stages when there remains considerable uncertainty and risk. **There are no national support structures for community groups to help with initial project development stages.** This was highlighted as a challenge by Community Power in Ireland.

Moreover, it is extremely complicated, costly, long and risky for a community energy project to connect into the National Electricity Grid. As indicated above, once connected to the National Electricity Grid, it is extremely difficult and often impossible for communities to get paid for the electricity they export. Communities also cannot generate electricity locally and use it locally by more than one user.

Social opposition

Social opposition, ranging from spontaneous neighbourhood protests to professional campaigns and legal suits at national level, have been mentioned as an increasingly severe barrier in Ireland¹¹². The opposition of the local population to overland high voltage lines is the main obstacle for the extension of the transmission grid: several appeals at court are blocking a further extension of the transmission grid. A lack of awareness raising is identified as a root cause for this situation: people generally in favour of RES often are lacking the necessary information regarding the linkage between the expansion of the grid and a further development of RES technologies¹¹³.

7.1. What are the metering systems for each type of residential prosumer? Do these systems provide adequate conditions for prosumers integration in the market?

There are no specific metering systems for each type of residential prosumer¹¹⁴.

Article 18 of the European Union (Energy Efficiency) Regulations 2014¹¹⁵ refers to metering concerning the regulated energy sector (electricity and gas):

‘(1) The CER shall ensure that, in so far as it is technically possible, financially reasonable and proportionate in relation to the potential energy savings, final customers for electricity and natural gas are provided with a competitively priced smart metering system that accurately reflects the final customer’s actual energy consumption and that provides information on actual time of use.

(2) A distribution system operator shall provide a final customer with a competitively priced individual meter where a new connection is made in a new building or a building undergoes major renovations, as set out in Directive 2010/31/EU.

(3) In a case where it is proposed to provide a final customer with a competitively priced individual meter when that customer’s existing meter is being replaced, the distribution system operator shall ensure that an assessment is carried out.

(4) The assessment at paragraph (3) shall consider whether it is technically feasible, financially reasonable and proportionate in relation to the potential energy savings for the final customer concerned.

(5) A competitively priced individual meter shall be provided in all cases except where the results of the assessment at paragraph (3) conclude that the provision of a competitively priced individual meter is technically impossible or not cost effective in relation to the estimated potential savings in the long term for the final customer concerned’.

However, two of the stakeholders interviewed indicated that there is no smart metering system in place in Ireland yet but that the government is talking about introducing such a system for consumers and producers¹¹⁶. At the moment, Ireland just has day and night meters¹¹⁷.

ESB Networks will also provide Import/Export metering where required¹¹⁸. Prosumers will require an import/export meter if they want to get paid for exported surplus electricity¹¹⁹. ESB Networks

¹⁰³ ‘Ireland’, Community Power’s website, available at <http://www.communitypower.eu/en/ireland.html> (hereinafter ‘Ireland’).

¹⁰⁴ Information obtained through consultation with stakeholder (Tipperary Energy Agency, December 2016).

¹⁰⁵ ‘Integration of electricity from renewables to the electricity grid and to the electricity market- RES-INTEGRATION: Final Report’, p.7.

¹⁰⁶ Ibid, p. 34.

¹⁰⁷ Ecorys, ‘Assessment of non-cost barriers to renewable energy growth in EU Member States- AEON: Final Report’, 10 May 2010, p. 24

¹⁰⁸ Ibid, p. 25.

¹⁰⁹ Ibid.

¹¹⁰ Friends of the Earth Ireland, ‘Community Energy Proclamation: Supporting Community Ownership of Renewable Energy’, available at: http://www.foe.ie/download/pdf/community_energy_proclamation.pdf (hereinafter ‘Community Energy Proclamation: Supporting Community Ownership of Renewable Energy’).

¹¹¹ Ibid.

¹¹² Ibid, p. 28.

¹¹³ Ibid, p. 78.

¹¹⁴ Information obtained through consultation with stakeholder (Construction PV, December 2016).

¹¹⁵ European Union (Energy Efficiency) Regulations 2014 (S.I. No. 426 of 2014), available at: <http://www.irishstatutebook.ie/eli/2014/si/426/made/en/pdf> (hereinafter ‘European Union (Energy Efficiency) Regulations 2014’).

¹¹⁶ Information obtained through consultation with stakeholder (Sustainable Energy Authority of Ireland, December 2016);

Information obtained through consultation with stakeholder (Construction PV, December 2016).

¹¹⁷ Information obtained through consultation with stakeholder (Construction PV, December 2016).

¹¹⁸ ‘Conditions Governing the Connection and Operation of Micro-generation’

¹¹⁹ Ibid, p. 14.

will send a quotation for installing an Import/Export meter. On completion of the writing, the electrical contractor will submit a validated wiring cert which will be sent to ESB Networks electronically¹²⁰. When the Micro-Generator has been installed and ESB Networks have received payment for the Import/Export meter along with the necessary ETCI electrical certification, they will install the Import/Export meter¹²¹. From 30 January 2009, all installations must be wired by a Registered Electrical Contractor by law and a completion certificate issued. Failure to do this will result in the refusal of an export meter¹²². It is not obligatory to install an import/Export meter in all circumstances. They will carry out checks on a person's existing meter to verify suitability of same. When an Import/Export meter is not installed, a person will not be able to apply to a supplier for payment and the exported units are not recorded¹²³. If one has an Import/Export meter they can get paid for exported electricity. One will also need to contact their Electrical Supplier to make sure they offer an export tariff¹²⁴.

The Import/Export metering system provides adequate conditions for prosumers integration in the market as if one has an Import/Export meter they can get paid for exported electricity. No other information is available regarding the metering systems to indicate that it provides adequate conditions for prosumers integration in the market.

7.2. What are the billing conditions for each type of residential prosumer?

There are no specific billing conditions for each type of residential prosumer¹²⁵. Article 19 of the European Union (Energy Efficiency) Regulations 2014¹²⁶ refers to billing concerning the regulated energy sector (electricity and gas):

‘(5) Smart metering systems installed in accordance with the Electricity Market Directive and the Natural Gas Market Directive shall enable accurate billing information based on actual consumption and final customers, notwithstanding the provisions of section 9M(5) of the Act of 1999 shall have the possibility of easy access to complementary information on historical consumption allowing detailed self- checks. Such complementary information shall include detailed data according to the time of use for any day, week, month and year.

These data shall be made available to the final customer by way of the internet or the meter interface for the period of at least the previous 24 months or the period since the start of the supply contract if this is shorter.

(6) Irrespective of whether smart meters have been installed or not, the CER shall place licence conditions upon energy suppliers to ensure that:

(a) to the extent that information on the energy billing and historical consumption of final customers is available, it be made available, at the request of the final customer, to an energy service provider designated by the final customer;

(b) final customers are offered the option of electronic billing information and bills and that they receive, on request, a clear and understandable explanation of how their bill was derived, especially where bills are not based on actual consumption;

(c) appropriate information is made available with the bill to provide final customers with a comprehensive account of current energy costs, in accordance with Annex VII and as required in the CER's code of practice;

(d) at the request of the final customer, the information contained in these bills shall not be considered to constitute a request for payment. In such cases, the CER shall ensure that suppliers of energy sources offer flexible arrangements for actual payments;

(e) information and estimates for energy costs are provided to consumers on demand in a timely

¹²⁰ ‘Connect a Micro-Generator’.

¹²¹ Ibid.

¹²² Ibid.

¹²³ ‘Connect a Micro-Generator’

¹²⁴ Ibid.

¹²⁵ Information obtained through consultation with stakeholder (An Taisce, December 2016).

¹²⁶ European Union (Energy Efficiency) Regulations 2014

manner and in an easily understandable format enabling consumers to compare deals on a like-for-like basis.

(7) Without prejudice to Regulation 9 of the European Communities (Internal Market in Electricity and Gas) (Consumer Protection) Regulations 2011 (S.I. No. 463 of 2011), the CER shall ensure that final customers receive all their bills and billing information for energy consumption free of charge and that final customers also have access to their consumption data in an appropriate way and free of charge’.

Regarding billing for electricity exported to the grid, when the meter has been installed, prosumers can contact their Electricity Supplier regarding payment arrangements. The prosumer will need to have an agreement with their Electricity Supplier to purchase the electricity exported and to supply the electricity imported. Both import and export must be with the same supplier¹²⁷.

Prosumers pay normally by way of a bill¹²⁸. After the micro-generator is installed, the cost of one’s electricity bill may fall because they may not be drawing as much power from the electricity network as previously. However, there is no change to one’s standing charge which remains the same¹²⁹. The bill is just reduced in January based on one’s electricity use¹³⁰.

One stakeholder interviewed is producing his own electricity through a heat pump and solar PV panels. He said that his bill is lessened by the amount of electricity the solar PVs produce. For example, in the summer he is getting one euro 50 cent from the PVs. In fact, the cost of heating his water is nothing as it comes from the PV and not electricity. The fridge is also covered by the PVs in the summer. He said there are no billing conditions-the bill is just lower- he is generating 370 euros of PV per year¹³¹.

7.3. Are there measures to encourage the creation of energy communities at municipal level, or other schemes to encourage inclusive development of the market?

DaysE provides a platform to raise funds for positive impact energy projects, through energy saving measures. The funds raised are used to help social enterprises and charities to reduce their energy costs¹³².

Friends of the Earth Ireland also issued a community energy proclamation supporting community ownership of renewable energy¹³³. Its vision is to make a transition to a clean, secure energy future for Irish citizens where communities- whether organised as co-operatives, voluntary associations or individual citizens- are active participants in energy planning, conservation, energy generation and energy distribution or ‘Community Energy’ as it is more commonly known. For individuals and community groups who are not in a position to develop their own renewable energy project, it is essential that they have the right to participate in developer-led projects in their areas. This must include more than just a consultation exercise, and more than compensatory ‘benefit’ or ‘gain’ payments. It must, rather, require developers to enter into partnerships with communities and offer them the opportunity of an equitable stake in any development. A fundamental shift in policy perspective is required that views citizens and communities as indispensable agents in securing our energy future, not obstacles to be negotiated. Government policy must: I. Recognise explicitly the positive role of citizens and communities as indispensable partners in the transition to a sustainable-energy future based on energy-saving, renewable energy generation and energy distribution II. Establish a policy framework to support Community Energy including a Target for Community Energy and commit to the following: • A Feed in Tariff for solar electricity; • A fair

¹²⁷ ‘Connect a Micro-Generator’

¹²⁸ Information obtained through consultation with stakeholder (Construction PV, December 2016).

¹²⁹ ‘Connect a Micro-Generator’

¹³⁰ Information obtained through consultation with stakeholder (Construction PV, December 2016).

¹³¹ Information obtained through consultation with stakeholder (An Taisce, December 2016).

¹³² <http://dayse.org/>

¹³³ ‘Community Energy Proclamation: Supporting Community Ownership of Renewable Energy’

export tariff for surplus grid-connected micro-generation; • A dedicated route to the national grid for community projects; • A renewable heat incentive that includes communities; • Providing a national community energy advice centre to support communities to become active participants in a more equitable energy future; • Capacity and capital supports for community actors to deliver energy efficiency and renewable energy projects and • Appropriate environmental assessment – particularly Strategic Environment Assessment - for all energy plans and policies.

Community Power in Ireland is a small, but growing industry. Unfortunately, there are significant barriers which hinder the success of these groups and projects, and as a result community led or community owned renewable energy in Ireland represents only a tiny fraction of overall energy generation and potential¹³⁴. There are only a handful of community owned energy projects in operation at present, however support is mounting and change is afoot. Wind Power and Bioenergy projects dominate the market at present.

In September 2013 Templederry Wind Farm (4.6 MW installed capacity) in Tipperary became the first entirely community owned Wind Farm to connect to the National Grid, and began selling renewable electricity for the benefit of its members. There are two other operational Wind Farms in Ireland within which there is a community benefit element; a 0.68 MW Wind Farm on Innis Meain in the Aran Islands that powers the island's desalination plant, and a 0.66 MW Wind Farm in Burtonport, Donegal that supplies electricity to a fish processing plant. A further five community owned developments are currently in progress and are likely to be constructed over the coming years, pending grid connection and financing.

A number of Bioenergy developments also exist. All space heating and hot water at The Cloughjordan Eco Village is provided via a district heating system powered from an onsite wood chip boiler and solar panels which is operated by a not for profit group. The Callan Nexus project in Kilkenny is responsible for installing wood pellet district heating systems at various sites for Camphill Communities – a charity working with people with an intellectual disability. There are also an increasing number of Community Energy Efficiency Cooperatives that operate across the country.¹³⁵ There is the better energy communities programme run by SEAI¹³⁶.

Camphill Communities also undertake a number of renewable energy projects. For example, Camphill Communities won the Sustainable Energy Community Award for their Better Energy Communities project which involved energy upgrades to 78 buildings including commercial, residential and community buildings. The measures included biogas electricity generation systems, biomass boilers, solar panels and a wind turbine. The annual energy savings are estimated at €300K which is equivalent to a 20% reduction in energy use¹³⁷.

'Energy co-operatives Ireland' also support community based renewable energy co-operatives at every stage of their development, guiding them through the legal process of setting up a co-operative, advising them on their dealings with state agencies, introducing them to their network of co-operatives where they can learn from best practice examples, and helping them communicate their message locally and nationally¹³⁸.

¹³⁴ Community Power, 'Community Energy for Ireland: Executive Summary', available at: http://www.communitypower.eu/images/Leaflet_Community_Energy_Ireland.pdf

¹³⁵ 'Ireland'

¹³⁶ Information obtained through consultation with stakeholder (Friends of the Earth Ireland, December 2016).

¹³⁷ 'Community Award', Sustainable Energy Authority of Ireland's website, available at: http://www.seai.ie/Your_Business/Sustainable_Energy_Awards/Winners-2016/Community/

¹³⁸ <http://www.energyco-ops.ie/>

- 7.4. Are there rules facilitating the creation of energy cooperatives to provide a legal entity to energy communities? Are there measures facilitating other type of schemes and if so which ones?

No rules/legislation facilitating the creation of energy cooperatives to provide a legal entity to energy communities were found online or discovered through consultation with stakeholders. Moreover, no measures facilitating other types of schemes were found.

Energy Co-Operatives Ireland is working on the EU cooperative movement and deals with all types of cooperatives. As indicated above, they support community based renewable energy co-operatives at every stage of their development, guiding them through the legal process of setting up a co-operative, advising them on their dealings with state agencies, introducing them to their network of co-operatives where they can learn from best practice examples, and helping them communicate their message locally and nationally¹³⁹.

- 7.5. What are the procedures/provisions for establishing cooperatives for prosumers? Are they more simple/less costly than those for other schemes?

There are no special rules/procedures for establishing cooperatives for prosumers. One can just form a cooperative if they wish. There are only three or four cooperatives in Ireland. There are also other groups who form cooperative style structures but these are not cooperatives but limited companies¹⁴⁰.

8. Other questions on the regulatory framework

- 8.1. What are the complaint handling procedures for each type of residential prosumer?

No procedures/provisions for establishing complaint handling procedures for each type of residential prosumer exist in Ireland. This may be due to the fact that nobody is getting paid in Ireland for the surplus electricity which they feed back to the grid¹⁴¹. Prosumers do not have a lobby voice as a group¹⁴². They still have consumer rights (under the European Union (Consumer Information, Cancellation and Other Rights) Regulations 2013¹⁴³ which implements Directive 2011/83/EU into Irish law) and can make complaints to the Ombudsman¹⁴⁴. Moreover, CER's Customer Care Team¹⁴⁵ provides a free dispute resolution service. In 2015 the CER's Customer Care Team received 3,884 contacts from customers, a decrease of 30% from the total number of contacts logged in 2014¹⁴⁶. The reasons that customers contact the ECT vary, from straightforward requests for information to complex complaints. Complaints in 2015 mainly focused around billing and account issues, charges and metering problems¹⁴⁷.

¹³⁹ <http://www.energyco-ops.ie/>

¹⁴⁰ Ibid.

¹⁴¹ Information obtained through consultation with stakeholder (Sustainable Energy Authority of Ireland, December 2016); Information obtained through consultation with stakeholder (Friends of the Earth Ireland, December 2016).

¹⁴² Ibid.

¹⁴³ European Union (Consumer Information, Cancellation and Other Rights) Regulations 2013 (S.I. No. 484/2013), available at: <http://www.irishstatutebook.ie/eli/2013/si/484/made/en/print>.

¹⁴⁴ Information obtained through consultation with stakeholder (Sustainable Energy Authority of Ireland, December 2016); Information obtained through consultation with stakeholder (Friends of the Earth Ireland, December 2016).

¹⁴⁵ 'Customer Care', Commission for Energy Regulation's website, available at: <http://www.cer.ie/customer-care>.

¹⁴⁶ Commission for Energy Regulation, 'Commission for Energy Regulation Energy Customer Care Team: Annual Report 2015', 2016, available at:

<https://www.cer.ie/docs/001080/CER16145%20Customer%20Care%20Team%20Annual%20Report%202015.pdf>.

¹⁴⁷ Ibid, p. 2.

8.2. Are there any specific redress procedures available only to residential prosumers?

No information was found and through consultation with stakeholders on any specific redress procedures which are only available to residential prosumers¹⁴⁸.

¹⁴⁸ Information obtained through consultation with stakeholder (Friends of the Earth Ireland, December 2016).

Country fiche (Summary and ranking)

The **country fiche** below summarises the information from the report and ranks the **level of favourable impact** of measures in relation to its favourable impact to the take up of residential prosumers.

Country fiche	Ranking Low/Medium/High
General Description of the national regulatory framework - Types of residential prosumers Very few residential prosumers (no distinguished types reported). It is almost impossible to profit from generating one's own electricity. Different types of microgenerators: wind power (turbines), solar power (PV panels), small hydroelectric schemes, micro combined heat and power, combined micro generator, storage systems, biomass boilers in homes, biomass heating networks run by communities. Given the fact that there are very few residential prosumers in Ireland and it is almost impossible to make money out of generating one's own electricity, there are no incentives for people to become prosumers, this is therefore ranked as low. - Institutional framework - Commission for Energy Regulation (CER) - Electricity Supply Board (ESB) - Eirgrid - Electric Ireland - Bord Gais Eireann (BGE) - Buy Ireland The current institutional framework provides adequate support for the small RES installations and their functioning. - Applicable legislation, plans and objectives No specific regulatory, legal or policy framework for residential prosumers. Policy and legal framework for renewable energy is the following: - Renewable Energy Strategy 2007 Energy White Paper 'Delivering a Sustainable Energy Future for Ireland' - Renewable Energy Action Plan (no mention of residential prosumers) - National Development Plan 2007-2013 - REFIT scheme - Electricity Regulation Act 1999 - European Communities (Renewable Energy) Regulations 2011(as amended by the European Union (Renewable Energy) Regulations 2014) - Sustainable Energy Act 2002 (Section 8(2) (Conferral of Additional Functions-Renewable Energy) Order 2011 As there is no legislative or policy support for prosumers specifically (only renewable energy), this has a low favourable impact. - Definition of residential prosumers No definition of residential prosumers (or self-consumption) in Ireland.	Low High Low Low

Definition of micro-generation provided by the ESB Networks: A Micro-generator is defined as a source of electrical energy which operates in parallel with ESB Networks LV System and is rated up to and including: 25 amperes (6kW) at low voltage [230 volt] when the grid connection is single phase and 16 amperes (11Kw) at low voltage [230/400 volt] when the grid connection is three phase. Where multiple generating sources [of the same or varied technologies] are on the same site and share access to the same ESB Networks connection point, the aggregate rating must not exceed: 25A at low voltage, when the DSO network connection is single-phase and 16A at low voltage, when the DSO network connection is three-phase.

As there is no definition of residential prosumer (or self-consumption) this is ranked as low.

Specific Questions on the regulatory framework for residential prosumers

Permitting requirements for each type of residential prosumer

Low

- No permitting requirements for any type of residential prosumer were found in any piece of renewable energy or sustainable energy legislation. Electricity Regulation Act 1999 provides legislation on licences and authorisation to generate and supply electricity generally.
- Customers with microgenerators up to the capacities outlined above (namely below 6Kw) can avail of a stream-lined, one page connection process (using form NC6). Customers who exceed the classification (230/400 V/10Kv, 20Kv, 38Kv and in some cases 110 Kv) must engage in a more demanding application (using form NC5) and connection process which costs money (1,600-1,700 euros ESB fee).
- All installed micro-generators must comply with EN 50438 and with the specific Irish protection settings. The final sign-off of a grid connected turbine must be completed to ETCI (Electro-Technical Council of Ireland) standards. The electrician that the installation company provides should be a member of a certified trade body such as RECI (Registered Electrical Contractors of Ireland) and ECSSA (Electrical Contractors Safety & Standards Association).
- There is no national legal or regulatory framework in Ireland which determines the contractual conditions under which prosumers are allowed to feed or sell their surplus back into the grid or to other consumers. If a prosumer spills surplus onto the grid they do not get paid for it.
- The permitting requirements for residential prosumers have a low favourable impact. This is due to the fact that there is no national legal or regulatory framework in Ireland on permitting requirements for residential prosumers specifically (apart from the EAR 1999) and which determines the contractual conditions under which prosumers are allowed to feed or sell their surplus back into the grid or to other consumers.

Rules applicable to the access to the grid

Medium

- Access of electricity from renewable sources to the grid is subject to the provisions of Statutory Instrument 147 of 2011 as amended by S.I. No 483 of 2014 and direction from the CER. A GPA for grid connection for renewable energy sources. Small renewable and low carbon installations (generally below 5MW) and also wind installations below 0.5 MW may be connected outside the GPA, if a

public good benefit of the connection can be demonstrated. As for the cost for grid connection, Ireland is based on a shallow cost model.

- Connecting to the grid for microgeneration is a straightforward process known as 'Inform and Fit' and can be managed by your installer. A one page NC6 form from ESB Networks (ESBN) must be filled out by the applicant. There is no fee to make a domestic grid connection. Note ESB Networks require other information with the notification for a domestic grid connection including a type test cert, payment for import/export meter, and a valid ETCI Electrical Completion Certificate. If one wishes to connect a turbine larger than those covered under the microgeneration application process (i.e. 25A at low voltage [230V], when the DSO network connection is single-phase or 16A at low voltage [230/400V], when the DSO network connection is three-phase) a more detailed connection process is required. One will need to make an application to ESB Networks using application form NC5A form.
- It is doubtful whether there is an inter-connection configuration used for each type of residential prosumer- as there is no feed-in tariff there is no incentive in terms of installing clustering.
- There are no rules to ensure that prosumers specifically are inter-connected to the distribution network/the grid. One has to connect any installation to the grid- it is illegal to have a private electricity wire and to sell to your neighbour for example.
- There is no charge to connect a micro-generator to the ESB network provided it complies with EN50438, or equivalent. Grid connected turbine systems generally range from approximately €20,000 to €30,000 for a 6kW unit and from €10,000 to €20,000 for a 3kW unit. A 1kW grid connected unit can cost from €3,000 to €7,000. The cost per kW is usually inversely proportional to the size of the unit i.e. as the unit size increases the price per kW decreases.

Judging by the positive and negative aspects of the rules concerning accessing the grid (e.g. grid connected turbines are expensive, connecting to the grid for microgeneration seems to be a straightforward process (i.e. below 230 V) but is a more detailed process over this amount, no charge to connect a micro-generator, etc.) it can be concluded that this has a medium favourable impact overall.

Incentives (e.g taxes and tariffs) for each type of residential prosumers

Low

- No support mechanisms, policies supporting prosumers or feed-in tariff scheme for micro generation
- Electric Ireland micro-generation export payment scheme scrapped for new customers from 31 December 2014
- ESB no longer offer their micro-generation support package
- Some grants for micro-generation renewable installations- not easy to obtain, not available to any householder (must form part of a sustainable community group), competitive application process
- Better Energy Homes Scheme: homeowners of dwellings built before 2006 can apply for a € 1,200 grant aid for the installation of a solar thermal installation
- No incentives for prosumers unless they self-consume everything they produce
- No scheme to produce electricity and get paid as a prosumer
- No specific tariffs for prosumers exist to charge them for the

electricity they draw from the grid for consumption or to compensate them for the electricity they feed back into the grid.

- Ireland does not tax prosumers in a specific way or allocate to them a certain part of the cost to upgrade the grid to accommodate the extra generation they feed into the grid.

As there are really no incentives for prosumers, this can be ranked as a low favourable impact.

Conditions encouraging or acting as barriers for residential prosumers

Low

- No market/economic incentives
- No national support structures for community groups to help with initial project development stages
- Planning permission needed for installations over 12 square meters
- Excessive number of authorities involved in permitting procedures, civil servants dealing with the permitting procedures are not familiar with renewables- leads to confusion, delays, unmotivated denials of authorisations.
- Problems with the grid connection process: application backlogs, timelines too long, potential delays for grid connection due to the GPA, too expensive (higher shallow costs than in other Member States)
- Extremely difficult to get paid for electricity they export
- Social opposition to overland high voltage lines is the main obstacle for the further extension of the transmission grid. Lack of awareness raising is the main cause of such social opposition.

These barriers can be concluded as having a low favourable impact.

Metering systems for each type of residential prosumer

Low

- No specific metering systems for each type of residential prosumer
 - Article 18 of the European Union (Energy Efficiency) Regulations 2014 refers to metering concerning the regulated energy sector (electricity and gas).
 - No smart metering system in place in Ireland (just day and night meters).
 - ESB Networks provide Import/Export metering where required. Prosumers need such a meter if they want to get paid for exported surplus electricity. Costs 340 euro and need the necessary ETCI electrical certification before they will install it. A Registered Electrical Contractor by law must install it.
- Low favourable impact as it costs a lot to install an import/export meter (a prosumer needs such a meter in order to get paid for his exports) and no smart metering system in Ireland.

Billing conditions for each type of residential prosumer

Low

- No specific billing conditions for each type of residential prosumer.
- Article 19 of the European Union (Energy Efficiency) Regulations 2014 refers to billing concerning the regulated energy sector (electricity and gas)
- Billing for electricity exported to the grid: when the meter has been installed, prosumers can contact their Electricity Supplier regarding payment arrangements. The prosumer will need to have an agreement with their Electricity Supplier to purchase the electricity exported and

to supply the electricity imported. Both import and export must be with the same supplier. - Prosumers pay normally by way of a bill. After the micro-generator is installed, the cost of one's electricity bill may fall because they may not be drawing as much power from the electricity network as previously. However, there is no change to one's standing charge which remains the same. The bill is just reduced in January based on one's electricity use. There should be specific billing conditions for residential prosumers not just paying a standing charge and getting reimbursed once a year based on one's electricity usage. This acts as a barrier for people becoming residential prosumers- there needs to be some billing incentive to get people to become prosumers. I would therefore rank this as low also.	
Measures to encourage the creation of energy communities at municipal level - DaysE provides a platform to raise funds for positive impact energy projects. - Friends of the Earth Ireland also issued a community energy proclamation supporting community ownership of renewable energy. - There are only a handful of community owned energy projects in operation at present. Wind Power and Bioenergy projects dominate the market at present: Templederry Wind Farm (4.6 MW installed capacity) in Tipperary, two other operational Wind Farms in Ireland within which there is a community benefit element; a 0.68 MW Wind Farm on Innis Meain in the Aran Islands and a 0.66 MW Wind Farm in Burtonport, Donegal. Bioenergy developments: The Cloughjordan Eco Village, The Callan Nexus Project, Kilkenny. Camphill Communities also undertake a number of renewable energy projects. There are not many measures to encourage the creation of energy communities (only DaysE and Friends of the Earth's proclamation). I would therefore also rank this as low.	Low
Rules facilitating the creation of energy cooperatives (simplicity/cost as compared to other schemes/Commonality of cooperatives as the legal status for energy communities - No rules/legislation facilitating the creation of energy cooperatives to provide a legal entity to energy communities was found - No measures facilitating other types of schemes were found - There are no special rules/procedures for establishing cooperatives for prosumers. One can just form a cooperative if they wish. - 'Energy co-operatives Ireland' support community based renewable energy co-operatives at every stage of their development, guiding them through the legal process of setting up a co-operative, advising them on their dealings with state agencies, introducing them to their network of co-operatives where they can learn from best practice examples, and helping them communicate their message locally and nationally As there are no rules/legislation facilitating the creation of energy cooperatives to provide a legal entity to energy communities, no measures facilitating other types of schemes and no special rules/procedures for establishing cooperatives for prosumers, I would also rank this as low.	Low

Other questions on the regulatory framework - Complaint handling procedures for residential prosumer - No complaint handling procedures for residential prosumers specifically exist in Ireland - Prosumers don't have a lobby voice as a group - Still have consumer rights (under the European Union (Consumer Information, Cancellation and Other Rights) Regulations 2013 which implements Directive 2011/83/EU into Irish law) and can make complaints to the Ombudsman. - CER's Energy Customers Team provides a free dispute resolution service This could be evaluated as having a medium favourable impact.	Medium
- Redress procedures available only to residential prosumers - No information found on any specific redress procedures which are only available to residential prosumers. This can therefore be considered as having a low favourable impact.	Low

Executive summary

Ireland does **not have specific regulatory, legal or policy framework** for residential prosumers and, therefore, there is no legal definition of this concept. There are very few residential prosumers in Ireland and no distinguished types of residential prosumer¹⁴⁹. There is no feed-in tariff for prosumers in Ireland. It is almost impossible to make any money out of generating one's own electricity (a prosumer doesn't get paid for surplus electricity they feed back to the grid).

There is no legal or regulatory definition of residential prosumers (or self-consumption) in Ireland¹⁵⁰. However, there is a definition of micro-generation provided by the ESB Networks (but which is not provided in any legislation, regulations or policy documents)¹⁵¹: A Micro-generator is defined as a source of electrical energy which operates in parallel with ESB Networks LV System and is rated up to and including: 25 amperes (6kW) at low voltage [230 volt] when the grid connection is single phase and 16 amperes (11Kw) at low voltage [230/400 volt] when the grid connection is three phase¹⁵².

Costumers with microgenerators up to 6Kw can avail of a stream-lined, one-page connection process, while those exceeding that capacity must engage in a more demanding and costly application. There are no specific permitting requirements for any type of residential prosumer which determines the contractual conditions under which prosumers are allowed to feed or sell their surplus back into the grid or to other consumers. The Electricity Regulation Act 1999 provides legislation on licences and authorisation to generate and supply electricity in a general way. All installed micro-generators must comply with EN 50438 and with the specific Irish protection settings. If a prosumer spills surplus onto the grid they do not get paid for it

There are no rules to ensure that prosumers specifically are inter-connected to the distribution network, but connection is compulsory. **Connecting to the grid** for microgeneration is a straightforward process that can be managed by the installer. There is no charge to connect a micro-generator to the ESB network provided it complies with EN50438, or equivalent. There **are no support mechanisms, incentives, policies supporting prosumers or feed-in tariff scheme for micro generation**. There are some grants for micro-generation renewable installations for sustainable community groups. No specific tariffs for prosumers exist. There are no specific metering systems for each type of residential prosumer. A few platforms encourage the creation of energy communities. Finally, there are no rules facilitating the creation of energy cooperatives or other kind of scheme and no complaint handling or redress procedures.

It is worth noting that in January 2014, Ireland was referred to the CJEU for failing to fully transpose the EU's Renewable Energy Directive. The aspects of the EU Directive not yet transposed included the commitment that 10% of all transport energy would come from renewable sources by 2020, the management of grid access for renewable electricity and sustainability criteria for biofuels and bioliquids¹⁵³. An infringement procedure for partial transposition of the Third Energy Package Electricity Directive was referred to the CJEU in February 2014 for failing to adopt provisions related to unbundling of transmission system operators¹⁵⁴. Finally, both procedures were closed because Ireland corrected the transposition of the norms.

¹⁴⁹ Information obtained through consultation with stakeholder (Friends of the Earth Ireland, December 2016); Information obtained through consultation with stakeholder (Tipperary Energy Agency, December 2016).

¹⁵⁰ Information obtained through consultation with stakeholder (Sustainable Energy Authority of Ireland, December 2016); Information obtained through consultation with stakeholder (Friends of the Earth Ireland, December 2016).

¹⁵¹ Ibid.

¹⁵² 'Connect a Micro-Generator'

¹⁵³ European Commission, 'Renewable Energy: Commission refers Ireland to Court for failing to transpose EU rules', Press Release, 21 January 2014, available at: http://europa.eu/rapid/press-release_IP-14-44_en.htm; European Commission, 'Single Market Progress Report 2014: Ireland', 2014, available at: <http://ec.europa.eu/energy/en/topics/markets-and-consumers/single-market-progress-report>, p 117 (hereinafter 'Single Market Progress Report 2014: Ireland').

¹⁵⁴ European Commission, 'Internal energy market: Commission refers Ireland to court for failing to transpose EU rules', Press Release, 20 February 2014, available at: http://europa.eu/rapid/press-release_IP-14-155_en.htm; 'Single Market Progress Report 2014: Ireland', p 117.