

Response to CER/15/284: Review of Connection and Grid Access Policy: Initial Thinking & Proposed Transitional Arrangements

Document prepared by Tom Bruton, Principal Consultant, BioXL

Status: FINAL FOR SUBMISSION

Date: 28/1/16

Submission: By email to Electricityconnectionpolicy@cer.ie

With reference to consultation document issued by CER at:

<http://www.cer.ie/document-detail/Review-of-Connection-and-Grid-Access-Policy/1060>

About the Irish Bioenergy Association

IrBEA (www.irbea.ie) was founded in 1999. Its role is to promote the bioenergy industry and to develop this important sector on the island of Ireland. The association's main objectives are to influence policy makers to promote the development of bioenergy, and to promote the interests of members. Improving public awareness, networking and information sharing, and liaising with similar interest groups are other key areas of work in promoting biomass as an environmentally, economically and socially sustainable energy resource. The organisation is a self-governing association of voluntary members (180+) and is affiliated to AEBIOM, the European Biomass Association, and EBA, the European Biogas Association.

Summary

The CER is proposing far-reaching measures which will potentially affect all forms of export generator connection offers > 11kW. The Irish Bioenergy Association (IrBEA) supports and accepts the need to implement changes to the connection offer process.

The existing connection policy had allowed the majority of bioenergy projects to obtain grid connection offers over a reasonable time horizon. This is no longer the case, and IrBEA fully supports the CER opinion that the connection offer process is no longer fit for purpose.

IrBEA understands the need for a revision of the group processing approach (GPA) but states a special case for connection of small-scale bioenergy projects. **IrBEA is recommending a threshold for processing small-scale bioenergy projects of 1 MW or less outside of the GPA.**

Transition Measures

The CER is proposing short-term measures (suggested to 30/6/16) prior to the implementation of an enduring connection policy. It is hard to have confidence that an enduring policy could be decided by the CER by 30/6/16, so any transitional arrangements are likely to have a higher impact than anticipated.

IrBEA fully supports the incentivisation of releasing existing contracted capacity. In most cases, bioenergy project designs are fixed, and sunk capital costs have already been made around a given capacity. For smaller connections (below 2MW), a 10% increase in capacity may not be significant.

A suggested solution in this instance is to have a 2-tier approach as follows:

Existing MEC	Maximum increase in capacity
< or equal 2MW	20%
> 2 MW	10%

IrBEA is also recommending that extension in MEC not be subject to additional criteria on firm access or the triggering of deep reinforcements. This discriminates against projects which would be commercially and technically capable of operating on a non-firm connection basis.

Enduring Connection Policy

The falling costs of solar PV and its flexibility have been key drivers in clogging up the non-GPA queue. Solar PV seems on course to absorb all affordable capacity at DSO level if measures are not taken to ensure fair access to the grid.

Neither climate change nor decarbonisation of the electricity system are mentioned as high-level principles of the CER in framing an enduring connection policy. This should be rectified. Facilitating

the conversion of waste to energy and mitigation of agricultural emissions should also be a high-level policy consideration of the CER.

IrBEA does not accept the contention by the CER, that just because there are no binding RES-E targets post 2020, that this should lessen the priority for connection of renewables to the grid. There will be an enduring requirement for connection of renewable generators which should be a high priority for the CER. Even assuming attainment of the 40% RES-E target, the fact remains that 60% of electricity and 84% of overall energy consumption will still be based on fossil fuels.

The principle of acquiring planning as a precondition of a connection offer is appropriate and should improve access to grid. IrBEA is recommending that if planning is to be linked with grid connection offers, then superior availability of grid intelligence be available. IrBEA suggests that conditional offers be made, subject to attainment of planning. Other practical concerns about spurious planning applications and exemptions arise which need consideration by the CER.

IrBEA fully supports the elimination of a secondary market in grid capacity as a high level objective.

IrBEA is recommending a threshold for processing small-scale bioenergy projects of 1 MW or less outside of a GPA. IrBEA supports a similar 1MW threshold (independent of technology) for projects with a demonstrated community ownership, or public interest.

IrBEA requests that the following unique aspects of bioenergy should be taken into account in framing any decision:

- The dispatchable nature of bioenergy: Run hours and capacity factor should be important considerations in assessing network efficiency, not just the initial capital requirement.
- The tandem delivery of renewable heat from biomass/biogas CHP units, supporting delivery of overall RES targets
- The parallel attainment of waste and environmental policy objectives
- The fixed location of biomass projects: Projects are usually designed based around a given feedstock and its availability. The proximity principle¹ is a critical part of waste policy and suggests that projects should proceed where the feedstock is available.
- The scale of bioenergy projects is much smaller than conventional fossil-fuel generators.
- The decentralised nature of bioenergy projects and potential agricultural feedstocks means rural diversification and rural employment is supported.

IrBEA is also asking that grid application and modification fees be reviewed and aligned with connection offer policy, so that smaller projects can pay fees appropriate to their scale.

¹ The Proximity Principle highlights a need to treat and/or dispose of wastes in reasonable proximity to their point of generation. The principle works to minimise the environmental impact and cost of waste transport

Table of Contents

1	Introduction & Background	5
1.1	Format of IrBEA Response	5
2	Proposed Transitional Arrangements	5
2.1	Release of Existing Capacity	5
2.2	Existing Connections Seeking to Increase Capacity	6
2.3	Allocation for System Services	6
3	Enduring Connection Policy	7
3.1	High Level Principles and Approach	7
3.1.1	Climate Change and Decarbonisation	7
3.1.2	Waste Management and Agricultural Emissions	8
3.1.3	Planning	8
3.1.4	Conditional Offers - Network Intelligence/Feasibility	9
3.1.5	Other High Level Principles	9
3.2	Key Connection Criteria	9
3.2.1	Renewable Targets	10
3.2.2	Interconnection	10
3.2.3	Treatment of Non-GPA applications	10
3.2.4	Community and Public Projects	11
3.2.5	Planning considerations	11

1 Introduction & Background

The Irish Bioenergy Association (IrBEA) supports and accepts the need to implement changes to the connection offer process.

The CER is proposing far-reaching measures which will potentially affect all forms of export generator connection offers > 11kW.

A previous decision CER/09/099 “Treatment of Small, Renewable and Low Carbon Generators outside the GPA”, (i.e. the non-GPA process), by the CER set out policy for the processing of connection offers.

In practice, this has meant that all non-wind applicants below 5MW stayed out of the GPA, and larger non-wind projects also stayed outside the GPA, provided local connection conditions allowed this to happen.

The existing connection policy had allowed the majority of bioenergy projects to obtain grid connection offers over a reasonable time horizon. This is no longer the case, and IrBEA fully supports the CER opinion that the connection offer process is no longer fit for purpose.

In 2015, there has been an unprecedented level of non-GPA applications, which means the majority of future generator applications face very long delays and high cost constraints in connecting to the grid.

1.1 Format of IrBEA Response

A draft response was prepared and circulated to over 180 members of IrBEA for approval and feedback prior to submission of a final response to the CER. The consultation process was also advised to IrBEA members via weekly newsletter.

The document presents a coherent view from across the bioenergy industry of the key principles and impact of proposed policy changes on their activities.

2 Proposed Transitional Arrangements

The CER is proposing short-term measures (suggested to 30/6/16) prior to the implementation of an enduring connection policy.

It is hard to have confidence that an enduring policy could be decided by the CER by 30/6/16, so any transitional arrangements are likely to have a higher impact than anticipated.

The CER is seeking views on the following proposed changes:

- Release of existing capacity;
- Existing connections seeking to increase capacity
- Units seeking to provide System Services required by the TSO

2.1 Release of Existing Capacity

IrBEA fully supports the incentivisation of releasing existing contracted capacity.

In addition to refunding the 1st Stage payment, substantial application or modification fees may have been paid, and some element of this cost should also be refunded.

There may also be cases where a 2nd stage payment has been made, and contracted parties may wish to avail of the option of releasing this capacity back on to the system also.

Regarding the timing of payment, uptake of the offer will be improved if some or all of the refund is front-loaded.

2.2 Existing Connections Seeking to Increase Capacity

For smaller connections (below 2MW), a 10% increase in capacity may not be significant.

Bioenergy plant does not tend to be modular in nature, in the same way that solar PV, or to some extent wind turbines are modular. As plant is running 24/7, it is not generally installed at a capacity above MEC, as is the case for wind generation.

In most cases, bioenergy project designs are fixed, and sunk capital costs have already been made around a given capacity.

In the case of typical biogas generators (say 500kW), an additional capacity increase of 20% would be needed to justify an additional generator or change of generator.

A suggested solution in this instance is to have a 2-tier approach as follows:

Existing MEC	Maximum increase in capacity
< or equal 2MW	20%
> 2 MW	10%

IrBEA is also recommending that extension in MEC not be subject to firm access or the triggering of deep reinforcements. This discriminates against projects which would be commercially and technically capable of operating on a non-firm connection basis, or with some level of deep reinforcement. Typically smaller scale bioenergy projects have less onerous financial constraints and more flexibility to adapt their project based on connectivity options available.

2.3 Allocation for System Services

From a bioenergy perspective, there is no great justification or need to provide favourable connection conditions to DS3 projects although IrBEA recognise how some such projects will likely be required to support the achievement of the 2020 targets.

It would be prejudicial to the development of rural, decentralised bioenergy projects if DS3 projects are given capacity on the DSO system to the exclusion of bioenergy projects. Connection of DS3 projects to the TSO that triggers deep reinforcements for other DSO connections would give rise to similar concerns.

3 Enduring Connection Policy

The existing connection policy had allowed the majority of bioenergy projects to obtain grid connection offers over a reasonable time horizon. This is no longer the case, and IrBEA fully supports the CER opinion that the connection offer process is no longer fit for purpose.

The falling costs of solar and the modular and flexible nature of solar generators have been key drivers in clogging up the non-GPA queue. Solar PV seems on course to absorb all affordable capacity at DSO level if measures are not taken to ensure fair access to the grid.

3.1 High Level Principles and Approach

The list of high level principles are relevant, but neither climate change nor decarbonisation of the electricity system are even mentioned as a high-level principle of the CER in framing an enduring connection policy. Climate change mitigation should certainly be included as a high-level principle of the CER in determining grid connection policy.

From the perspective of bioenergy, the high level principal of efficient waste management and the curtailment and mitigation of agricultural emissions are also very important considerations.

3.1.1 Climate Change and Decarbonisation

It is not correct to take the view that the RES-E 2020 targets will be delivered, and that this should reduce the prioritisation of capacity explicitly for renewable electricity generation up to and beyond 2020.

Longer term thinking, post 2020 is required. EU leaders reached agreement on a new Climate and Energy Policy Framework for 2030² at the October 2014 European Council meeting in Brussels. The agreement commits the EU to:

- reducing greenhouse gas emissions by 40% by the year 2030, compared with 1990 levels
- a target of at least 27% for renewable energy and energy savings by 2030

IrBEA does not accept the contention by the CER, that just because there are no binding RES-E targets post 2020, that this should lessen the priority for connection of renewables to the grid. Just because there is no quantified post 2020 target does not mean there will not be an enduring requirement for connection of renewable generators. Even assuming attainment of the 40% RES-E target, the fact remains that 60% of electricity and 84% of overall energy consumption will still be based on a fossil fuel supply chain with a poor security of supply outlook.

Aside from this, it is disappointing that our long-term thinking seems to be framed by EU-level agreements and the threat of fines for non-compliance with same. Irish energy policy makers should be more assertive and show independent thinking and leadership in setting out national energy goals and objectives, which are appropriate to the poor energy security context in Ireland. This should be done in a balanced way, also mindful of affordability and competitiveness.

² http://ec.europa.eu/clima/policies/2030/index_en.htm

Bioenergy has an important role to play in future energy decarbonisation policy, while also encouraging direct investment within the Irish economy, creating jobs and improving energy security for Irish citizens.

3.1.2 Waste Management and Agricultural Emissions

Many bioenergy projects are as much motivated by efficient waste management as energy generation.

Bioenergy plays a key role in supporting national and EU environmental policies.

Anaerobic digestion and other waste-to-energy projects play a major part in the diversion of large volumes of organic waste from landfill, in line with mandatory EU targets. The EPA³ has highlighted an increased risk in 2016 due to economic growth that Ireland will not meet targets to divert biodegradable waste from landfill.

Equally at farm-level, anaerobic digestion supports the principal of reducing waste at source and reducing the risk of pollution of local watercourses.

The Climate Action and Low-Carbon Development Bill 2015⁴ which was enacted in October 2015 and sets out statutory obligations in relation to the development of a National Mitigation Plan, incorporating measures relating to the four sectors responsible for the bulk of Ireland's CO₂ emissions – Transport, Agriculture, Electricity Generation, and the Built Environment.

The challenge facing the agriculture sector to moderate its GHG emissions (32% of Ireland's total) and convert to a low carbon sector in the context of ambitious growth outlined in Food Harvest 2020⁵ can be addressed by bioenergy.

Mitigation of agricultural emissions should be a high-level policy consideration of the CER.

Facilitating the conversion of waste to energy should also be a high-level policy consideration.

3.1.3 Planning

It is clear that planning is an overriding consideration for wind generation or large scale developments. The principle of acquiring planning as a precondition of a connection offer is appropriate and should improve access to grid.

A number of practical difficulties arise in the case of bioenergy, such as:

- Smaller-scale bioenergy projects may be exempt from planning
- Projects using farm waste, commercial waste or solid biomass may be integrated within existing infrastructure
- There is a concern that simple planning applications expedited solely for securing grid capacity may emerge, which do not necessarily reflect the final feedstock, infrastructure or technology used

³ <http://www.epa.ie/irelandsenvironment/waste/#.Vp4uA1KaVro>

⁴ <http://www.environ.ie/en/Environment/Atmosphere/ClimateChange/>

⁵ <http://www.agriculture.gov.ie/agri-foodindustry/foodharvest2020/>

- Planning can be an expensive process. Many project developers would prefer to ascertain the viability of grid connection prior to embarking on a potentially lengthy and costly planning pathway. The concept of a conditional offer is outlined below which would go some way to addressing this concern.
- If the location of grid becomes attached to a fixed location, subject to planning consent, we would recommend reducing the DSO and TSO application and modification fees to reflect this.

3.1.4 Conditional Offers - Network Intelligence/Feasibility

IrBEA is recommending that if planning is to be linked with grid connection offers, then superior availability of grid intelligence be available. IrBEA suggests that conditional offers be made, subject to attainment of planning. Some certainty is required prior to a planning process, particularly with regard to grid route choice, and the commercial viability of grid connection. Planning authorities are requesting an increasing level of integrated assessment of generator and grid connection assets.

The existing DSO feasibility study service is of very limited value. By the time the limited appraisal is carried out, the network intelligence acquired is already out-of-date. IrBEA has previously provided feedback to the CER that improved transparency of access to grid maps and grid infrastructure can support better project planning from a grid perspective.

As well as the availability of some form of grid feasibility service there is the need for more publically available information on the distribution system. This has been available in Britain since deregulation and it seems to have been an oversight the same steps were not taken in Ireland.

This would hopefully discourage spurious or ill-considered applications for capacity.

3.1.5 Other High Level Principles

The Irish Bioenergy Association fully supports the elimination of a secondary market in grid capacity as a high level objective.

Projects are challenging enough and have more than sufficient cost barriers without adding the need to acquire grid off a third party.

IrBEA also very much supports the need for stability and certainty in planning access to the grid.

3.2 Key Connection Criteria

There is some overlap in the consultation paper between high-level principles and key policy drivers.

The CER seeks opinion under the following headings, in addition to the high-level principles outlined:

- Renewable targets
- Interconnection
- Treatment of non-GPA applicants
- Grid access considerations

IrBEA addresses these under the relevant subheading below, or with reference to other parts of the document.

3.2.1 Renewable Targets

As mentioned under the high-level principles, it is disappointing that climate change mitigation does not appear to be a central policy focus of the CER in network connectivity.

It is essential that renewable energy generators be given high priority access to the grid, regardless of 2020 targets.

For bioenergy in particular, there is overlapping delivery of renewable heat and renewable electricity targets.

Ireland has a major shortfall in the delivery of renewable heat. There is a national target of 12% RES-H delivery by 2020, which is proving extremely challenging to meet in the current market conditions. By facilitating connectivity of solid biomass CHP, anaerobic digesters and other bioenergy projects with capability of useful heat generation, the CER is also supporting the parallel delivery of renewable heat.

As mentioned in the discussion of high-level principles, bioenergy is about much more than electricity generation. Connection of bioenergy generation facilitates national waste policy and also encourages mitigation of agricultural emissions.

3.2.2 Interconnection

IrBEA has no particular view on interconnector assets. We would wish to avoid that any priority given to interconnectors would cause constraints on any DSO-connected bioenergy assets.

3.2.3 Treatment of Non-GPA applications

This is the most fundamental area of change discussed.

The existing connection policy had allowed the majority of bioenergy projects to obtain grid connection offers over a reasonable time horizon under the non-GPA rule-set. This is no longer the case, and IrBEA fully supports the CER opinion that the connection offer process is no longer fit for purpose.

The falling costs of solar and the modular and flexible nature of solar generators have been key drivers in clogging up the non-GPA queue. Solar PV seems on course to absorb all affordable capacity at DSO level if measures are not taken to ensure fair access to the grid.

IrBEA recommends that the following aspects of bioenergy should be taken into account in framing any decision:

- The dispatchable nature of bioenergy: Most plants run 24/7 and make efficient use of the network. Run hours and capacity factor should be important considerations in assessing network efficiency, not exclusively the initial capital requirement for network assets.
- Some bioenergy projects include onsite consumption of the electricity generated, but would still require export capacity to facilitate 24/7 operation.
- The tandem delivery of renewable heat from biomass/biogas CHP units, supporting delivery of overall RES targets
- The parallel attainment of waste and environmental policy objectives

- The fixed location of biomass projects: Projects are usually designed based around a given feedstock and its availability. Given there will in many cases be daily feedstock deliveries and long-term planning and sustainability implications associated with biomass logistics, it does not make sense that bioenergy project location is dictated solely by efficiency of grid connection. The proximity principle⁶ is a critical part of waste policy and suggests that projects should proceed where the feedstock is available.
- The scale of bioenergy projects is much smaller than conventional fossil-fuel generators.
- The decentralised nature of bioenergy projects and potential agricultural feedstocks means rural diversification and rural employment is supported.

In 2011 IrBEA with support of SEAI commissioned DKM economic consultants and RPS Group to prepare an extensive analysis of the socio-economic opportunities of bioenergy in Ireland, even over the short horizon of 2020⁷.

The highlights of this conservative and credible analysis were:

- 3,600 new permanent jobs to be created by meeting 2020 RES targets
- €1.5 billion of direct investment into the Irish economy
- €430m per year spent on operating new energy facilities
- Reduce Ireland's energy import bill by 7.5%
- Sustaining family farm incomes through new biomass supply chains

IrBEA understands the need for a revision of the group processing approach but states a special case for connection of small-scale bioenergy projects. IrBEA is recommending a realistic threshold for priority connection of small-scale bioenergy projects of 1 MW or less outside of a GPA.

IrBEA also recommend that the grid application fees be revised to reflect changes in the grid connection priority. It would no longer be appropriate that a 1MW and a 4MW project would pay the same application fee⁸, and that smaller scale projects should pay a lower fee commensurate with the smaller scale connection offer.

3.2.4 Community and Public Projects

IrBEA supports a similar 1MW non-GPA threshold (independent of technology) for projects with either a demonstrated community ownership, or public interest.

Due to the challenges and timing in achieving momentum, public buy-in and acceptance in either a community-led or public-sector project, we do not feel that grid connectivity should be an additional barrier to discourage action, or in other words “striking while the iron is hot”.

3.2.5 Planning considerations

This issue has been discussed under the high-level principles section.

⁶⁶ The Proximity Principle highlights a need to treat and/or dispose of wastes in reasonable proximity to their point of generation. The principle works to minimise the environmental impact and cost of waste transport

⁷ <http://www.irbea.ie/index.php/news/59-socio-economic-report-on-bioenergy-published>

⁸ Currently the non-refundable fee is in the range €8,500 to €9,000 depending on the need for shallow works.



IrBEA is recommending that if planning is to be linked with grid connection offers, then superior availability of grid intelligence be available. IrBEA suggests that conditional offers be made, subject to attainment of planning. Some certainty is required prior to a planning process, particularly with regard to grid route choice, and the commercial viability of grid connection. Planning authorities are requesting an increasing level of integrated assessment of generator and grid connection assets.

Other issues relating to planning exemptions and potential for spurious or disingenuous planning applications have been raised under the high-level principles section.