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Thursday 12th June 2014

John Pierce Chairman Australian Energy Market Commission PO Box A2449 Sydney South NSW 1235 Lodged Electronically

Dear Mr Pierce,

RE: ERC0158 Connecting Embedded Generators under Chapter 5A Rule Change Consultation Paper

The Clean Energy Council (CEC) works with more than 550 solar, wind, hydro, bioenergy, energy storage, energy efficiency, cogeneration, geothermal and marine energy businesses to accelerate the transformation of Australia's energy system into one that is smarter, cleaner and more consumer-focused. Its priorities are to:

- create the optimal conditions in Australia to stimulate investment in the development and deployment of world's best clean energy technologies;
- develop effective legislation and regulation to improve energy efficiency, and;
- work to reduce costs and remove all other barriers to accessing clean energy.

As previously made clear the CEC welcomes open and frank discussion on connection processes for all generators. The CEC's membership is predominately composed of generation developers across the full spectrum of the electricity generation industry with the remaining members being businesses which advocate for cleaner energy and the supporting industry.

Connection processes are clearly extremely important to the CEC's members. The CEC thanks the Commission for consideration of this rule change proposal.

As requested by the Commission the CEC has prepared this submission on a factual basis. It primarily relies on evidence collected through a survey of the experiences of connecting parties in jurisdictions which have adopted the National Energy Customer Framework (NECF).



The survey identifies that, while there have been improvements in the negotiated connection process, there are still significant deficiencies. One key finding from the survey is that a large number of micro-embedded generators, which Chapter 5A expects to connect with a more 'streamlined' AER approved model standing offer, are connecting under the more cumbersome negotiating framework. This is having a significant impact on these organisations.

After considering the survey results, the CEC remains of the view that the proposed rule change will go some way to resolving the issues identified previously as they are still clearly evident.

In considering whether the negotiating framework is working effectively the CEC has taken a 'first principles' approach. In this case this includes considering whether the NER's negotiatearbitrate arrangements and the principle of countervailing market power are effectively supported by the negotiating framework embedded within Chapter 5A.

The survey results supporting this submission indicate that this is not the case. As a result the CEC's rule change request seeks to bring into Chapter 5A a clear set of obligations, which for the most part are consistent with the remainder of the National Electricity Rules (NER).

Please do not hesitate to make contact on the details below to discuss this submission.

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1 CEC Survey of Embedded Generator Connection Experiences

In order to inform the CEC's response to the Commission's Consultation Paper the CEC has undertaken a survey of embedded generators.

The survey asked 15 questions addressing both qualitative and quantitative aspects of the connection process. For comparative purposes the survey covered the whole NEM, and other Australian states. Overall there were 95 responses, with each response representing a number of installations where the connection was negotiated.

Separating responses from NECF states resulted in a set of 45 responses, relating to experiences with the negotiated connection process under Chapter 5A. Almost all responses related to solar installations. Many of these responses relate to multiple projects, and subsequently multiple connection experiences.

For reference, the survey responses for NECF states – with confidential content removed – are attached to this submission for reference. The AEMC has also received more detailed responses separately.

In the initial instance the survey captured some high level information about the parties connecting, the size of the generators being connected and other related matters. Some of the main related outcomes include:

- The respondents generally submitted a response relating to multiple connection experiences, with 60 % referring to less than 5 separate connections in the last 2 years, and 25 % referring to less than 50. As a result it is difficult to extract exactly how many individual connections the survey responses relate to. Based on these results a conservative estimate could be more than 100 separate connections.
- A large proportion (65 %) of responses relate to the connection of generation rated below 30 kW. These would generally be compliant with AS 4777, and therefore micro-embedded generators¹ which should expect to be processed as a Basic or Standard Connection.
- The majority of respondents represent small organisations, with 56 % having less than 5 employees, and only 15 % exceeding 20 employees. For responses which related to micro-embedded generators, 86 % employ less than 10 people. In comparison 50 % of respondents representing larger generators employ more than 10 people.

The survey respondents were broadly in support of the CEC's proposed changes.

The remainder of the survey results are discussed within the context of the issues noted by the Commission in the Consultation Paper.

¹ As defined in Chapter 5A.

Clean Energy Council | AEMC – ERC0158 Connecting Embedded Generators under Chapter 5A Rule Change | Consultation Paper Submission



1.1 Experience with the application of Chapter 5A

The responses to the survey's preliminary questions provide some key indicators as to how the Chapter 5A negotiated connection process is being applied in practice.

Recalling that the MCE, in creating Chapter 5A, intended that customers have "access to new connections or alterations meeting their requirements in a fair and certain manner, and as quickly as reasonably possible"², the survey asked respondents if they believed this objective was being met.

Some 60 % of respondents disagreed. Considering only responses relating to connections for non-registered embedded generators³ this increased to 71 %, despite these organisations generally being slightly larger and therefore slightly more sophisticated. In relation to micro-embedded generators, half disagreed.

When asked whether the negotiation process was clear or not, an even proportion of responses answered yes and no. However, when asked whether the rules for negotiating a connection were clear, this result leaned towards the rules being unclear. For micro-embedded generator negotiated connections some 40 % of respondents were unsure.

This outcome reflects the fact that a very small portion of respondents rely on the rules for their information source when navigating the connection process. Some 86 % of respondents rely on the DNSP. Where micro-embedded generators have negotiated their connections 92 % rely on the DNSP for information. Across all results the NER is the least relied on source of information.

Respondents were asked a series of questions on how the negotiated connection process has influenced their businesses, effectively summarising a negotiated connection process "report-card". Respondents indicated that matters relating to timeframes, costs and information availability have had a negative to significantly negative impact on their businesses, with the worst impact being from process timeframes.

Interactions with the DNSP also perform poorly, along with the commercial terms of connection agreements. Some DNSPs are imposing export limitations⁴ on embedded generators, which is having a significant negative impact on those businesses affected (discussed later).

A further question asked if the connection process has improved over the last two years, since the introduction of Chapter 5A. Of these results most responses either suggested it had improved slowly, or had become worse. For negotiated micro-embedded generator connections, 56 % of respondents believe it has not improved or gone backwards. Larger

² 2009, MCE, *National Energy Customer Framework, Second Exposure Draft*, p. 17, available: <u>www.mce.gov.au</u>, p. 15.

³ i.e. > 30 kW.

⁴ In these cases the DNSP prevents any export to the grid from the generator, effectively preventing the generator from accessing the network's power transfer capability. This requires additional protection equipment which adds significant costs to the generator installation.

Clean Energy Council | AEMC – ERC0158 Connecting Embedded Generators under Chapter 5A Rule Change | Consultation Paper Submission



generators were more positive with only 25 % suggesting the process had become more difficult. Overall these results are more consistent with those expected from experience gained over time, rather than an improved connection process.

In the Consultation Paper the Commission notes that reflecting the NEO, an efficient connection process "would have the following characteristics:

- meets the reasonable needs of embedded generator connection applicants;
- supports connection services being priced in a cost reflective manner;
- supports connection services being provided at least cost; and
- does not undermine the security and reliability of the distribution network."⁵

Based on the experiences of connecting parties in following the Chapter 5A negotiated connection process, it appears that only the final point is being prioritised.

While security and reliability are clearly a high priority, the NEO expects that a balance is struck between competing objectives. As the negotiated connection process is clearly prioritising the objectives of one party, rather than providing this balance, the Negotiating Framework in Chapter 5A is clearly not operating effectively.

⁵ AEMC 2014, *Connecting Embedded Generators Under Chapter 5A, Consultation Paper*, 15 May 2014, Sydney, p. 31.

Clean Energy Council | AEMC – ERC0158 Connecting Embedded Generators under Chapter 5A Rule Change | Consultation Paper Submission



2 Consideration of Issues Raised

With regards to embedded generator connections the expectations of networks have changed dramatically since Chapter 5A was developed by the MCE, and since the CEC lodged the rule change request.

Significant industry experience has been gained by both DNSPs and embedded generators. On balance the CEC's survey results are indicate that, despite this learning curve, there is still a long way to go. The issues identified by the CEC in the rule change request largely remain relevant. The following discussion reflects on these issues, as presented by the Commission.

2.1 Treatment of micro-embedded generation

As suggested in the rule change request the negotiated connection process has become the default process for embedded generators whose connection may be more 'difficult' than a basic connection. A significant number of micro-embedded generators are being processed as negotiated connections.

Chapter 5A clearly intended that these generators would be eligible for a model standing offer, unless augmentation is required. Although not a direct survey question, it seems extremely unlikely that all the negotiated micro-embedded generator connections have required network augmentation to connect, given their volume in the survey results.

As the Commission's Consultation Paper indicates the as a *retail customer*, a microembedded generator should be connected under a basic connection service and have access to an applicable model standing offer. The CEC believes that Chapter 5A⁶ and the AER's Connection Charge Guidelines⁷ also confirm that this class of retail customers are to be exempted from paying for augmentation of the DNSP's network beyond an extension.

This background is a clear indication of the NER's intent: to provide a model standing offer, and subsequent streamlined connection process for all micro-embedded generators. The CEC's survey results are demonstrating that this is largely not occurring in practice.

As noted by the CEC in the rule change request, the clear lack of prescription within the negotiating framework is allowing the intended outcomes of Chapter 5A to be deferred. Organisation sizes indicate that micro-embedded generators are the least equipped to negotiate their connections effectively resulting in this deferral is clearly having a significant impact.

⁶ Cl. 5A.E.1(b).

⁷ AER Connection Charge Guideline, cl. 7.1.1 (noting that this clause only refers to *non-registered embedded generation* being ineligible for exemption).

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2.2 Structure and timing of the connection process

In the rule change request the CEC set out concerns with the structure and timing of the connection process. The CEC maintains these views and notes that the proposed process structure is consistent with the Commission's Final Determination on the Chapter 5 rule change in many aspects. In particular, with the provision of information early in the process, and the NER being specific about what information is required.

With regards to timing of the process the CEC's survey results show that, while both high priorities, achieving a connection agreement within the tightest timeframe possible is a lower priority to achieving a connection agreement in a certain timeframe. Currently, Chapter 5A allows the DNSP to stop-the-clock with information requests, repeatedly in some instances⁸. However, the NER has no obligations on a DNSP with regards to being clear about what information it requires.

This situation creates an extremely uncertain environment for investment. Especially considering that the generator is carrying all of the risks associated with this uncertainty, but has no way of managing that risk. This is demonstrated by a survey question. Respondents were asked if they agreed that they were unable to manage their risks and costs effectively: 55 % of responses agreed or strongly agreed while only 12 % disagreed.

2.3 Information requirements and availability

The CEC's survey results indicate that a lack of information, both publicly and from the DNSP, and changes to information during the connection process are a significant concern for connecting parties.

The CEC believes that the information requirements set out in the proposed rule change are reasonably required to support an effective negotiation process. The principles on which negotiation under the NER are based are unable to work effectively in the absence of clear requirements for information and obligations on both parties.

The proposed changes to cl. 5A.C.3(a)(3) are of particular relevance to this matter. The proposed change only realigns the purpose of the information to be provided to that already contemplated under cl 5.5(c).

The concept of countervailing market power has been shown to be problematic even for the largest of generator connections⁹. The CEC's survey results indicate that organisations applying for connection under the Chapter 5A negotiating framework are generally far less sophisticated than organisations developing transmission-connected generation.

The survey results show that about 40 % of the respondents agree or strongly agree that the obligations on both DNSPs and generators are vague. Compounding this is the fact that the vast majority of connection applicants are relying heavily on the DNSP for information on the

⁸ CEC, Rule Change Request, p-p. 20-21.

⁹ AEMC, Transmission Frameworks Review.

Clean Energy Council | AEMC – ERC0158 Connecting Embedded Generators under Chapter 5A Rule Change | Consultation Paper Submission



connection process. These outcomes make a clear case for the NER to be unambiguous about obligations at each stage of the negotiating process.

2.4 Power transfer capability

Under Chapter 10 of the NER power transfer capability is defined as "*The maximum permitted power transfer through a transmission or distribution network or part thereof*"¹⁰.

Contrary to the Commission's interpretation¹¹ of this term, there is no relationship to a *connection point*. Power transfer capability refers to the *network's* capability to *transfer* energy.

There are two issues related to the treatment of power transfer capability by Chapter 5A.

Obligations on DNSPs

As power transfer capability refers to the network's capability the NER's expectations on DNSPs extend far beyond the physical connection point. DNSPs are tasked with maintaining their networks to allow for sufficient power transfer capability to ensure network users have access to sufficient capability to supply energy at an appropriate quality. In addition to this obligation, the NER expects that NSPs consider the impacts that a new connection application may have on an existing connection agreement in relation to registered participants in Chapter 5¹². Although casually described, Chapter 5A also expects that the DNSP *may* consult with other *"users of the network"* who may be adversely affected by a new negotiated connection¹³.

These points combined clearly show that the obligations in relation to power transfer capability extend beyond the connection point. The CEC believes that a connection agreement for any generator sets out the terms under which the local *network* will accept energy from that generating system. This contract then obliges the DNSP to make reasonable endeavours to operate and maintain their networks to allow this transfer, along with other planning obligations.

Noting that power transfer capability is generally non-firm, the DNSP is still expected to consider existing connection agreements in relation to planning and expanding the network. If a situation arises which may result in the DNSPs contractual obligations being unable to be met (from a new connection agreement for example) the DNSP *must* be obliged to advise the affected party.

Reducing the NER's description of energy transfer across the network to the connection point is a clear diminishing of what are already considered *reasonable* obligations on DNSPs.

¹⁰ NER, Chapter 10, p. 1163.

¹¹ Consultation Paper, p. 21.

¹² NER, cl. 5.3.5(d).

¹³ NER, cl. 5A.C.3(a)(4).

Clean Energy Council | AEMC – ERC0158 Connecting Embedded Generators under Chapter 5A Rule Change | Consultation Paper Submission



The rules should remain consistent. The CEC's rule change request only seeks to reinforce this consistency¹⁴.

The CEC also notes that the expectation to use "*reasonable endeavours to make a connection offer that complies with the embedded generator applicant's requirements in respect of power transfer capability*"¹⁵ is consistent with NER cl. 5.5(e)¹⁶.

Export limitation and prevention

While the CEC's survey did not address power transfer capability directly, it did consider the implications of DNSPs limiting or preventing the export from embedded generators.

Of the survey respondents nearly 57 % stated that export limitations imposed by the DNSP were having a negative or significant negative impact on their business. In addition a further 62 % agreed or strongly agreed that this was unjustified.

Limitations on export from embedded generators can impose significant additional costs on the generator to install protection equipment which would otherwise not be needed. In many cases there are alternative technical solutions which could be applied. However, since the Chapter 5A negotiating framework is non-prescriptive the opportunities for the generator to fully understand alternative opportunities are significantly diminished.

As noted in the CEC's rule change request DNSPs are not best placed to impose these commercial decisions onto connection applicants. The negotiating framework must provide the generator the opportunity to address this issue, and place such decisions into the hands of the party best placed to manage the risk.

2.5 Fees and charges

Similarly to the consultation on the Commission's Chapter 5 rule change, connection costs were clearly a high priority in the CEC's survey results.

Negotiating process fees

The rule change request seeks to prevent the DNSP from charging for the provision of information until a complete connection application is received. There are two main arguments for this approach:

- 1. The charge becomes linked to the information provided in the first instance. The DNSP then has an incentive to provide sufficient information to the connection applicant to receive a completed negotiated connection application.
- 2. The DNSP is carrying a small risk that they may not recover the cost, if no application is submitted. The DNSP then has an incentive to streamline the management of

 ¹⁴ Noting that the CEC's rule change request is also consistent with Commission's Chapter 5 determination.
¹⁵ Consultation Paper, p. 23.

¹⁶ Meaning that, as noted by the Commission, this was not considered in the Chapter 5 rule change, the CEC's expectation is no higher than already anticipated by Chapter 5.

Clean Energy Council | AEMC – ERC0158 Connecting Embedded Generators under Chapter 5A Rule Change | Consultation Paper Submission



information internally and deliver it to the connection applicant efficiently to reduce this risk.

Noting that a negotiated connection is a negotiated service, it is reasonable to anticipate that DNSPs should accept this very small risk, given the clear benefits of complete information being provided to connection applicants as efficiently as possible.

Cost breakdowns

In relation to cost breakdowns, the Chapter 5A negotiating framework should remain consistent with the recent Chapter 5 rule change determination.

Recovery of costs for load growth

In addition to the arguments made in the rule change request, in relation to cl. 5A.E.1(c)(4), the CEC believes that Chapter 5A is inconsistent to the principles relating to charging for negotiated distribution services.

In particular cl. 6.7.1(3) refers to the incremental costs above the network's performance requirements. This clause expects that the negotiated service only extends to the level of service required to efficiently maintain network performance. Therefore, additional costs for future load growth related investment which is not needed by a generator should not be borne by that party.

The CEC notes that this issue is unrelated to that considered during the deliberations over the Chapter 5 rule change, where the proponents sought to exempt generators from augmentation costs if performance was at above a certain level¹⁷. The CEC's rule change request does not contemplate that generators should be exempt from the costs of augmentation, only that these costs need to be efficient and related to the generator's needs.

Proposed relationship between information and connection costs

The rule change request expects that DNSPs are exposed to a very small level of risk by limiting connection costs to those which could be identified with the information provided to the generator. As this risk can easily be managed by the DNSP through the provision of complete information, the CEC does not believe that there is a significant issue in meeting this expectation.

2.6 Dispute resolution

A further issue has been identified in relation to dispute resolution.

The lack of prescription within the negotiating framework permits DNSPs to develop their connection policies with broad freedom. Where a dispute arises the AER is likely to refer to the connection policies, if there is little prescription in the NER. However, if both are vague it is unclear how the AER would make a determination.

¹⁷ Consultation Paper, p. 26.

Clean Energy Council | AEMC – ERC0158 Connecting Embedded Generators under Chapter 5A Rule Change | Consultation Paper Submission



A conflict of interest arises because it is likely that there is an incentive on DNSPs to limit the prescriptiveness of their connection policies.

The principle of negotiate / arbitrate which is embedded into the NER requires an effective and accessible arbitration or dispute resolution mechanism. In order to work effectively dispute resolution requires a sufficient level of prescriptiveness embedded within the NER to overcome this conflict.

2.7 Accessing the Chapter 5 connection process

There may be cases where Chapter 5 could be an applicable process for non-registered embedded generators. However, caution should be applied in the way this occurs in the NER. If adopted into Chapter 5A, an obligation must be placed on the DNSP to meet the connection applicant's request to use Chapter 5.

This option should not be by 'agreement' between the parties. In order to ensure that benefits are realised it should be the connection applicant's decision and the NER must oblige the DNSP to meet this expectation.

2.8 The Commission's Assessment Framework

While the CEC agrees with the assessment framework proposed by the Commission there is a need for the assessments made to consider both sides of each argument. For example the criteria of administrative burden needs to consider the efficiencies that arise when a DNSP can establish processes internally to streamline effort, against the combined benefits experienced by each individual connection applicant from having clear, timely information on which to base commercial decisions.

CEC Grid Connection Experiences Survey Results (SA, Tas, ACT, NSW) - cleaned

12/06/2014

1. How many employees are in your organisation?



2. In the last two years how many grid-connections, or installs, has your organisation undertaken where the connection was negotiated with the Distribution Network Service Provider?

Note: a negotiated connection is for a generator rated between 30 kW and 5 MW, but also for more complicated connections below 30 kW that may have required a technical assessment or project size reduction.



Mean: 2.16 Response: 45

3. In general, what was the size of these generators?

Please enter each relevant size range.



Response: 45

4. Roughly what percentage of these projects has received a Connection Agreement from the Distribution Network Service Provider?

A Connection Agreement is the final connection contract which outlines all of the agreed terms for connection, and provides certainty of these terms.



5. Which state or territory were these projects installed in?



6. Is the process for negotiating a connection clear to you?



41.86% (18)

7. Do you believe that the negotiation process is supported by clear rules?

Clear rules could outline the connection process clearly, the obligations on each party, the level of information you receive, and its timing, or the timeline for receiving a Connection Agreement, for example.



8. Do you believe that the connection process meets your requirements in a fair and certain manner, and as quickly as reasonably possible?



60.47% (26)

9. Where do you find information on the connection process?



Response: 43

10. Did you use an external consultant to assist you with the connection process?

For example, you may have used an engineering firm to assess the technical matters for the connection.



72.09% (31)

11. The connection process can involve many aspects.

Please use the selections below to rate how each aspect of the process has influenced your business, based on your experiences.

Note: -2 = significant negative impact; -1 = negative impact; 0 = no impact or neutral; 1 = positive impact; 2 = significant positive impact; N/A = not applicable or unsure.



		-2	-1	0	1	2	N/A	Mean
1	Costs of the connection process (DNSP charges)	15.79% (6)	26.32% (10)	42.11% (16)	2.63% (1)	0% (0)	13.16% (5)	2.84
2	Costs of the physical connection assets	18.42% (7)	26.32% (10)	34.21% (13)	2.63% (1)	0% (0)	18.42% (7)	2.95
3	Changes to costs during the process	18.42% (7)	42.11% (16)	26.32% (10)	0% (0)	2.63% (1)	10.53% (4)	2.58
4	Timeframe for the whole connection process	39.47% (15)	34.21% (13)	15.79% (6)	5.26% (2)	5.26% (2)	0% (0)	2.03
5	Timeframes for DNSP responses to queries	31.58% (12)	36.84% (14)	15.79% (6)	7.89% (3)	5.26% (2)	2.63% (1)	2.26
6	Timeframe for DNSP to respond to Connection Applications	26.32% (10)	42.11% (16)	23.68% (9)	5.26% (2)	2.63% (1)	0% (0)	2.16
7	Level of publicly available information	15.79% (6)	28.95% (11)	44.74% (17)	7.89% (3)	2.63% (1)	0% (0)	2.53
8	Level of technical information provided by the DNSP	21.05% (8)	28.95% (11)	36.84% (14)	7.89% (3)	5.26% (2)	0% (0)	2.47
9	Changes to information	21.05% (8)	28.95% (11)	36.84% (14)	2.63% (1)	5.26% (2)	5.26% (2)	2.58
10	Negotiating with the DNSP	28.95% (11)	15.79% (6)	47.37% (18)	0% (0)	7.89% (3)	0% (0)	2.42
11	Assistance recieved from the DNSP	28.95% (11)	13.16% (5)	39.47% (15)	10.53% (4)	5.26% (2)	2.63% (1)	2.58
12	Export limitations imposed by the DNSP	36.84% (14)	18.42% (7)	28.95% (11)	0% (0)	2.63% (1)	13.16% (5)	2.53
13	The commercial terms of Connection Agreements	18.42% (7)	21.05% (8)	44.74% (17)	2.63% (1)	0% (0)	13.16% (5)	2.84
14	The testing and commissioning process	10.53% (4)	21.05% (8)	50% (19)	7.89% (3)	7.89% (3)	2.63% (1)	2.89
15	Safety requirements	5.26% (2)	7.89% (3)	57.89% (22)	15.79% (6)	5.26% (2)	7.89% (3)	3.32

12. In the CEC's proposed rule change we set out a range of issues with the connection process as it is currently.

Please use the selections below and, based on your experiences, indicate your perspective on the following statements.

Note:

-2 = strongly disagree; -1 = disagree; 0 = neutral;1 = agree;2 = strongly agree;N/A = not applicable or unsure. 100



		-2	-1	0	1	2	N/A	Mean
1	Connection costs are unclear until very late in the process	5.71% (2)	8.57% (3)	28.57% (10)	42.86% (15)	14.29% (5)	0% (0)	3.51
2	The timing of the connection process is uncertain	8.57% (3)	5.71% (2)	22.86% (8)	45.71% (16)	17.14% (6)	0% (0)	3.57
3	The connection process can take too long	8.57% (3)	8.57% (3)	17.14% (6)	37.14% (13)	25.71% (9)	2.86% (1)	3.71
4	Information available to the generator is limited	8.57% (3)	2.86% (1)	31.43% (11)	42.86% (15)	14.29% (5)	0% (0)	3.51
5	DNSPs frequently request more information	8.57% (3)	8.57% (3)	22.86% (8)	37.14% (13)	20% (7)	2.86% (1)	3.6
6	Informaton is not forthcoming from DNSPs	8.57% (3)	5.71% (2)	34.29% (12)	25.71% (9)	22.86% (8)	2.86% (1)	3.57
7	The commercial terms of Connection Agreements are risky	0% (0)	5.71% (2)	37.14% (13)	22.86% (8)	22.86% (8)	11.43% (4)	3.97
8	The obligatons on DNSPs are vague	8.57% (3)	5.71% (2)	28.57% (10)	34.29% (12)	20% (7)	2.86% (1)	3.6
9	The obligatons on generators are vague	11.43% (4)	5.71% (2)	34.29% (12)	31.43% (11)	8.57% (3)	8.57% (3)	3.46
10	The DNSP sticks to a defined process	8.57% (3)	17.14% (6)	40% (14)	17.14% (6)	14.29% (5)	2.86% (1)	3.2
11	The connection process should treat generation differently to load	5.71% (2)	2.86% (1)	28.57% (10)	22.86% (8)	40% (14)	0% (0)	3.89
12	Dispute resolution processes are not clear	5.71% (2)	8.57% (3)	25.71% (9)	31.43% (11)	25.71% (9)	2.86% (1)	3.71
13	DNSPs are unjustifiably preventing export to the grid	2.86% (1)	8.57% (3)	25.71% (9)	22.86% (8)	40% (14)	0% (0)	3.89
14	You are unable to manage your risk and costs effectively	2.86% (1)	8.57% (3)	28.57% (10)	28.57% (10)	28.57% (10)	2.86% (1)	3.8

13. In the CEC's rule change we set out a series of proposed improvements to the connection process.

Please consider each of the following suggested improvements. Based on your experiences, please provide an indication of each one's priority in improving the connection process.

Note: 1 - very low priority; 2 - low priority; 3 - neutral; 4 - high priority; 5 - very high priority; N/A - not applicable or unsure.



		1	2	3	4	5	N/A	Mean
1	Clear connection cost breakdowns	0% (0)	0% (0)	22.86% (8)	31.43% (11)	37.14% (13)	8.57% (3)	4.31
2	Allowing the generator time to analyse the connection's technical limits and provide solutions to the DNSP	0% (0)	2.86% (1)	48.57% (17)	34.29% (12)	2.86% (1)	11.43% (4)	3.71
3	Obligations on DNSPs to provide complete information early in the process	2.86% (1)	0% (0)	22.86% (8)	37.14% (13)	31.43% (11)	5.71% (2)	4.11
4	Clear technical standards for connection available from an early stage	2.86% (1)	2.86% (1)	8.57% (3)	40% (14)	40% (14)	5.71% (2)	4.29
5	Standardised approaches for generator connection where appropriate	0% (0)	8.57% (3)	5.71% (2)	48.57% (17)	28.57% (10)	8.57% (3)	4.23
6	Visibility of the commercial terms of a Connection Agreement from an early stage	0% (0)	8.57% (3)	17.14% (6)	42.86% (15)	25.71% (9)	5.71% (2)	4.03
7	Clear obligations on DNSPs and generators in the rules	0% (0)	2.86% (1)	20% (7)	37.14% (13)	34.29% (12)	5.71% (2)	4.2
8	Allowing generators to export to the grid where desired	0% (0)	0% (0)	28.57% (10)	22.86% (8)	34.29% (12)	14.29% (5)	4.34
9	Enhanced access to dispute resolution processes	2.86% (1)	8.57% (3)	28.57% (10)	25.71% (9)	25.71% (9)	8.57% (3)	3.89
10	Enhanced access to a DNSPs legal team to negotaite commercial matters	2.86% (1)	8.57% (3)	40% (14)	25.71% (9)	14.29% (5)	8.57% (3)	3.66

14. In general, when navigating the connection process what do you prioritise?

Please use the scale below to indicate your priorities.

This question is optional, but will provide useful information for us to support our arguments on improving the connection process.

Note: 1 - very low priority; 2 - low priority; 3 - neutral; 4 - high priority; 5 - very high priority; N/A - not applicable or unsure.



Mean

3.59

4.24

4.15

4.36

4.22

4.12

3.79

4.33

4.03

4

15. Over the last two years would you say that the grid connection process has



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