Date: 28 July 2023

Dear NGESO,

Connections Reform Consultation - Eclipse Power Networks Response

Overview

Eclipse Power is pleased to respond to ESO's Connections Reform consultation. We have considered our responses as an IDNO, as that of an expectant Independent Transmission Operator, from a broad industry perspective, and as consumers too. Having participated actively in the previous stages of this exercise, we know that a lot of time and effort has been spent getting to this point, by all concerned. We share the concerns and frustrations of all players in getting to grips with a connections queue that must be able to deliver the connections needed to achieve our Net Zero targets, in a timely, efficient, and cost-effective way.

We have several big concerns, which are covered more fully in our responses to the questions:

1. The complexity of the options being consulted upon will mean that the changes will take too long to implement; we would like to see this exercise completed before April 2024, rather than the projected mid to late 2025.

2. Ambitious tactical solutions should be considered, for immediate impact, including our Independent Transmission Operator proposal.

3. Distribution and Transmission need to work together better. We need a more holistic view of the connections process, with much more transparency in the connections queue data. The current project progression process is not working.

4. A more centralised planning approach is not good; regional coordination and capacity signals would be better.

5. Whatever the outcome, ESO and the DSOs must address their resource and capability problems to be able to deliver and operate the connections process properly.

Responses to Questions

1   **Do you generally agree with our overall initial positions on each of the foundational design options and key variations? Are there any foundational design options or key variations that we should have also considered?**

Response   Agree, with additional suggestions

Rationale   The spread of options and key variations considered for the foundational design position was both broad and comprehensive.

We believe that increased consideration should also be given to tactical, more quickly implemented ideas, providing that they don't then themselves become a problem in the future. The various short-term industry plans that have been discussed recently help with this (particularly regarding the pruning of the current connection applications queue) but believe that they should be a lot more ambitious.

The process still also needs to change assumptions for power system modelling, as currently everything is worst case scenario. When this is compounded, it increases infrastructure costs and length of time to connect. This is especially so for Distribution

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connections which may not realistically have an impact on the Transmission system. The "Technical Limits" product from the ENA is a good development on this.

Suggestions The design options do not adequately consider a simple process to allow customers to advance in the queue if they are ready to leapfrog other stagnant queue positions. This process could be kept simple if it is transparent and based on situations where the customer has for example obtained Planning consents, completed Design and Funding is ready to go. This would enable the ESO to make an early decision to support ready to go customers. This is perhaps the present situation (TMO1) with added PQM. Whilst we recognise the problems discussed under TMA G regarding PQM, this approach could get a lot of battery storage and renewables, particularly solar, off the ground quickly.

We have suggested in previous discussions that an IDNO-type option for Transmission is the kind of ambitious change that should be being considered; the current industry players are struggling with the volume of applications, and an ITO option would help immediately.

2 **Do you agree with our initial view that the current issues with the connections process could potentially be addressed on an enduring basis through other, less radical, and lower risk means than the introduction of capacity auctions?**

Response Agree

Rationale Auctions can drive the wrong behaviours, the Capacity Market is locking in gas post 2035, so this would need to be incorporated into design.

However, auctions do have a place in the connection queue, connections can be reserved on the grid, and ESO can steer which technologies they want, and where. Customers may not like it, but it will thin out the congested queue for some technologies (e.g. BESS, Solar). This also could be done on a regional basis to support network efficiency. This would be like Pathfinder, but a more robust process.

3 **Do you agree with our initial view that the reformed connections process should facilitate and enable efficient connection under either a market-based (i.e. locational signals) or 'centralised' deployment approach (or an approach somewhere between the two), but not mandate which approach to follow?**

Response Disagree

Rationale Sitting on the fence is not an option here. The Connections Reform process needs to facilitate a simpler way to connect to the Grid. Our fear is that a centralised approach will slow down the queue, and that the resources that ESO will need to deliver this will be difficult to acquire.

Suggestions We would suggest ESO is more strategic and allocates capacity to the TOs (much like the TOs allocate to DNOs), and closely liaises with the new DSOs to improve the T&D interface. This is also discussed in our response to Q12.

Signalling is good but needs to be better thought through - the present TNUoS signalling is not nuanced enough to consider areas of high renewable resource, amongst other things

4 **Do you agree with our initial recommendation that TMA A to TMA C should all be progressed, irrespective of the preferred TMO?**

Response Agree

Rationale All three have strong merits and can contribute to a more robust and flexible connections process (with TMA C providing a safety net where specific customer needs apply).

Suggestions The DNO's are doing this better. Regarding TMA C, arbitrary optioneering is usually unhelpful, but a "tipping point" service as offered by SSEN could be welcome. This could also form part of pre-app discussions. This is repeated in our response to Q.27 - TMA C.

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5   **Do you agree with our initial recommendation on the introduction of a nominal Pre-Application Stage fee, discounted from the application fee for customers which go on to submit an application within a reasonable time period?**

Response   Disagree

Rationale   A Pre-Application Stage Fee will be a barrier to entry for smaller developers and could result in wasted spend. Robust pre-app resources to allow a level of required self-service ahead of pre-app would be sensible. At present these resources are limited or non-existent so the only way to gain info is a pre-app. The costs of this should be socialised via the application fees for those progressing.

Suggestions   This must be adequately resourced by the ESO and TOs.

Capacity needs to be considered in terms of voltage and thermal impact as well. This needs to be considered fully interactively with the processes and data that are being managed by the DNOs.

6   **Do you agree with the importance of the TMA A 'Key Data'? Please provide suggestions for any other key data that you suggest we consider publishing at Pre-Application Stage.**

Response   Agree

Rationale   This is a fundamentally important requirement to improve the quality of connections applications. Customers should be able, and encouraged to, self-serve ahead of pre-app. Information must be live, relevant, and easy to access.

Suggestions   In addition to the TEC Register being public once Bilateral Connection Agreements have been signed, the live application queue pre-signing should be visible as well as the DNO applications and demand connections. This will give customers the full picture on where best to connect. Currently we only see part of the jigsaw with the result that customers must take risks to connect, which in turn clogs up the queue.

7   **Do you agree with our initial recommendation with regard to TMA D (requirements to apply)?**

Response   Agree, with suggestion

Rationale   The suggestions for revised requirements for making a connection application apply are appropriate and measured. They should both increase the quality of the applications made and reduce speculative activity.

Suggestions   Adequate provision should be provided to allow changes later due to circumstances outside the developer's control, particularly for land-hungry technologies such as solar and other "edge cases".

8   **Do you agree with our initial recommendation with regard to TMA E (determination of enabling works), including that it is right to wait until the impact of the 5-Point Plan is known before forming a view on whether further changes to TMA E are required?**

Response   Agree, with observations

Rationale   Whilst agreeing with the thinking behind this, there appears to be some uncertainty/lack of clarity over how long it will be before the impact of the 5-point plan is deemed firm enough to be able to consider the TMA E proposals, and whether there need to be further changes. The incorporation of TMA E4 (anticipatory investment) into TMO4 is welcomed.

We believe that the impact upon Distribution needs better consideration here too, as Transmission impacts significantly upon Distribution.

Suggestions   There should be industry harmonisation around the definition of "non-firm", it appears this is being used for "flexible"/curtailable connections as well as the traditional meaning of not secure for first circuit outage. We would welcome the implementation of non-firm curtailable connections to allow connection ahead of enabling works, particularly for battery storage, or to allow quicker to deploy projects utilise capacity that is allocated to a project ahead in the queue but is not utilised, on an interim basis. These flexible products

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should have either interim or enduring options and could be provided for either customer or network benefit.

NGESO should liaise with the ENA and harmonise with similar products available on DNO networks. For all flexible connections, detailed curtailment and system data should be made available to customers to perform an impact assessment. Criteria for paying compensation for curtailment (or not) should be assessed.

9   Do you agree with our initial recommendation with regard to TMA F (criteria for accelerating 'priority' projects)?

Response   Agree

Rationale   The suggested approach strikes an appropriate balance, by incorporating politically defined criteria, and societal benefits, as well as the consideration of those projects which have demonstrated their readiness to progress.

Suggestions   It should be noted that NGESO are only suggesting that "shovel ready" is included. There are also advantages in a technocratic approach to accelerating projects that provide network benefit, but the criteria need to be clearly defined and could be too changeable. Likewise, any considerations of National Interest should be carefully considered to remain co-ordinated throughout political change and not negatively impact the queue. For example, the policy support behind offshore wind and nuclear has resulted in grid capacity being applied for and allocated ahead of quicker to deploy onshore projects.

10   Do you agree with our initial recommendation with regard to TMA G (queue management)?

Response   Agree

Rationale   RQM+ is superior to RQM due to the use of TMA F. However, PQM should be the ultimate end goal. Dynamic queue management will progress viable projects more quickly, while allowing slower projects that are still progressing, but perhaps not as quickly as thought, to connect later.

Suggestions   We believe that it is proportionate to apply PQM throughout the later CMP376 milestones, as significant investment would have been made to gain planning consent, for example, with the risk of being stranded under RQM - a potential negative impact for UK investment.

11   Do you agree these four TMOs present a reasonable range of options to consider for a reformed connections process?

Response   Agree

Rationale   We agree that the four TMO's present a reasonable range of options for further consideration, but are concerned that the implementation process may be too extended, as a result of incorporating the necessary licence and code changes for (e.g. TMOs 3 &4). We also fear that they provide further additional process to a current high-volume situation with lack of resource for ESO / NGET.

Suggestions   TMO4 is the most optimum, but we do believe a simple queue-jumping process to begin to alleviate the clogged queue could be implemented as stated in our response to Q1.

All these options will fail without more capacity in the transmission space either ESO or TO. Our ITO suggestion should be part of the solution, by offering immediate additional resource.

12   Do you think any of the four TMOs could be materially improved e.g. by adding, removing or changing a specific aspect of the TMO? If so, what and why?

Response   Agree

Rationale   TM04 could be improved with two windows per year rather than just one. But even with this, and other options, customers will naturally flood the windows. Accordingly, we do not see this solving the bigger issue.

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13   Are there any important TMOs we have missed?

Response	Yes
Rationale	Queue jumping (PQM dynamic queue management), with increased transparency of the live queue pre-contract, the DNO queue and the project progression status.
Suggestions	Fair allocation of queue position, such as a whole system queue, for DNO projects is still not fully addressed.

14   Do you think 'Submit Consent' is too early for Gate 2 in TMO2 to TMO4? If so, what milestone should be used instead and why?

Response	Disagree
Rationale	Submit Consent (as opposed to "Get Consent") is easier for the customers.
Suggestions	We would want to see visible progress by the TOs, e.g. secured land, outline design, confirmation of POC. Currently these can come too late for the customers for their development programme. TOs should be held to the same standard of milestone.

15   Do you agree that TMO4 should be the preferred TMO?

Response	Agree, with suggestions
Rationale	TMO4 is very comprehensive and ticks the design criteria boxes. However, the implementation is likely to take too long, and the concept of a single annual window feels very inflexible and likely to cause congestion.
Suggestions	Addition of transparency on regional capacity (please see our response for Q12).
	An impact assessment should be done with developers as an annual window is likely to increase competition and cost for land, pushing up costs for consumers. It could also threaten jobs. Will NGESO/TO have enough resource? What if a project is stuck in the ESO/TO system and misses a window, is there recompense? We suggest that at least two windows per annum are needed.

16   Do you agree with our design criteria assessment of the four TMOs? If not, what would you change any why?

Response	Agree
Rationale	The design criteria assessment appears sound, and as noted, puts TMO4 ahead of the others as a way forward. We believe that there are issues still not resolved, as described above in the response to Q15.

17   What are your views on the stated benefits and key challenges in relation to TMO4?

Response	Agree, with reservations
Rationale	These seem well developed, however the impact on developer business models for a windowed approach has not been fully considered. While the holistic network assessment may produce quicker connection dates in many cases, in some cases, post NGESO 5-point plan, a longer time to produce an offer could increase time to connect and delay net zero.

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18 **Do you think that there is a better TMO than TMO4? Whether that be TMO1 to TMO3, as presented, a materially different option, or a refined version of one of the four TMOs we have presented?**

Response   Agree, with reservations

Rationale   We agree that TMO4 is the best long-term option from the work conducted but have noted various reservations above. TMO4 won't reduce speculative applications at the early stages. TMO2 or 3 could allow more holistic planning of viable projects at a later stage if the earlier offer cannot be worsened to give an investable backstop.

Suggestions   We would like there to be a process for permitted queue-jumping, as noted in Q1. In reality, this would be initially TMO1, then TMO4, both with PQM.

19 **Do you agree with our views on DNO Demand in respect of the TMOs?**

Response   Agree

Rationale   The approach seems sensible. IDNOs should be treated similarly, currently Mod Apps are the only way to change embedded IDNO networks and these carry higher cost than other mechanisms like Project Progressions.

Suggestions   It would be better to ensure that the FES aligns with the DFES. Providing that changes are in alignment with them, they are fine. This would mean moving from wk24/48 as assessment tools.

20 **Do you have any views on the appropriate mechanism to incentivise accurate forecasting of requirements and avoid more RDC than is necessary being requested by DNOs?**

Response   Yes

Rationale   The concept of RDC does not solve the core issue, we should move towards a whole system queue. If RDC is used methodology needs to be robust, transparent, and agreed across all DNOs and managed using codified time bounds.

Inaccurate forecasting is not a material problem when compared to the other areas being addressed. This is particularly true since the DFES is extensively consulted upon and therefore can be considered a good reflection of future requirements. The networks would be well served to use the analysis that is produced in the FES and the DFES, to understand the changing nature of the networks, particularly when it comes to demand which is far less prone to wild swings because of the market or reaction to policy.

Suggestions   Will cancellation charges be associated with RDC and if so, who accounts for these before this capacity is allocated to projects?

21 **Do you agree with our views on the process under which DNOs apply to the ESO on behalf of relevant small and medium EG which impacts on or uses the transmission system, including that (under TMO4):**

i. DNOs should be able to request RDC via application windows to allow them to continue to make offers to EG inter-window; and

ii. resulting offers should be for firm access until relevant EG has reached Gate 2 (at which point they can request advancement and an earlier non-firm connection date)?

Response   Agree, with reservations

Rationale   Whilst we welcome changes to the T/D interface we feel this is a missed opportunity for much needed, radical change.

Suggestions   Arguably, an accepted DNO offer is progressed further than a new Transmission application. We should move towards a whole system queue, or at least allocate a Transmission queue position on acceptance of DNO offer; or consider assessing impacts on the entire system at the original application.

The RDC process is a welcome improvement, but more detail needs to be provided on how and when DNOs will request capacity, with measures to ensure that their request is proportionate and/or adequate, with rights of recourse if they are not. Code changes also need to be implemented to mandate DNOs to make these requests in a timebound

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manner. If current existing delays to Project Progression submissions are continued, then the impacts on missing a window could be hugely detrimental. RDC rights of granting, access/constraint also need to be clearly defined. Consideration also needs to be given to the impact of embedded customers with BEGAs and thus TEC, as well as tertiary connections on RDC. This should be considered in conjunction with the good work being undertaken by the ENA on Technical Limits to reduce the amount of transmission impact that needs to be assessed.

A clear and consistent process also needs to be applied to IDNOs applying for or changing a new supply point, with or without generation behind.

We would like to see RDC extended to IDNOs, so that they are not subject to different treatment or requirements as host DNOs in relation to modifications. Looking the other direction, the Third-Party Works process needs to be formalised and CMP328 progressed quickly. The same principles should apply here to ensure fairness and we would recommend changes to the ECCR to allow the spirit of DCP392 to be realised to allow fair apportionment of costs.

We would also urge another look at the Access and Forward-looking Charges SCR to include transmission connection assets within its scope. Consideration to the application of and to apply the principles of CAF on these assets should be explored. These changes could require further charging and code harmonisation.

22 **Do you agree that directly connected demand should be included within TMO4 and that the benefits and challenges are broadly similar as for directly connected generation?**

Response   Agree

Rationale   We would support the inclusion of all projects onto the CUSC Section 15 methodology as the current Final Sums methodology is unfair and not fit for purpose, potentially leaving the ESO and TOs over-secured. This methodology is currently a barrier to further electrification in relation to directly connected demand. We would support this change as being recommended in CMP417.

23 **Do you agree that TMO1 to TMO3 would require a separate offshore process, and that this would result in material disbenefits?**

Response   N/A to Eclipse Power - Offshore

24 **Do you agree that TMO4 is the most aligned to the direction of travel for offshore projects? If not, why?**

Response   N/A to Eclipse Power - Offshore

25 **Other than the Letter of Authority differences are there any other TMAs which have specific offshore considerations?**

Response   N/A to Eclipse Power - Offshore

26 **Do you agree with our views on network competition in the context of connections reform, including that TMO4 is the option which is most aligned with network competition as it includes the most design time at an early stage in the end-to-end process?**

Response   Agree

Rationale   This can allow appointment of competitive solutions during the design phase.

Suggestions   During the assessment window an option to use a competitively appointed ITO should be offered to deliver and adopt any connection assets, whether these would originally be privately owned or owned by the host TO.

27 **Do you agree with our initial recommendation related to each of the TMAs within this chapter? If so, why? If not, what would you change and why?**

Response   Agree broadly, with these observations:

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Rationale TMA A - A robust and detailed pre-app service is integral to the process. Self-service is important and NGESO/TOs should look to emulate the information provision given by DNOs as it is often rather opaque at transmission. This should be stored in a single place in an accessible format and ideally be live data. Self-service should not preclude a timely human interaction. SLAs should be developed for offering pre-apps within 2 weeks, not 4 months as can be at present.

TMA B - As above. Developers should be required to produce a clear pre-app request using the self-service tools.

TMA C - Arbitrary optioneering is usually unhelpful, but a "tipping point" service as offered by SSEN would be welcome. This could also form part of pre-app discussions.

TMA H - Fees. _Disagree_ on implementation of pre-app fee as this is a barrier to entry, detailed pre-app resources will reduce speculative pre-apps. A review of fees is welcome. Suggestion that a fee is invoiced during the assessment process, like DNOs to harmonise the process and not delay clock start. An offer could be withheld until a fee is paid (DNOs got a code change for this). Currently all NGESO app fees are refunded on connection.

TMA I - We agree that this shouldn't be progressed.

TMA J - we believe that an ITO approach could be inherently more collaborative and produce effective and efficient options. A tipping point assessment could be useful.

TMA K - We believe that this could offer quicker and more innovative ways to connect to the grid, so we are unclear why NGESO is not choosing to progress these. As per comments on question 8. There could be some crossover with the 5-point plan.

TMA L - Additional charges should not be introduced as they would be a barrier to smaller developers, so we agree with this. The current securities methodology may need updating to reflect the new nature of connections, in particular Final Sums should be abolished and replaced with CMP192 methodology using a concept of TIC. We understand this is already underway in CMP415 and fully support this. Presently large demand customers are discriminated against and securing against works already secured against in part by generation customers, leaving NGESO over-secured.

TMA M - This is sensible as often changes are not captured until later when a project is assigned to a project team. An annual review would capture changes on the network and allow the customer to keep abreast of developments.

TMA N - We agree with not progressing this. Material changes to be aligned with DNOs.

TMA O - We agree with this approach, however capacity reductions may also wish to be considered here to incentivise freeing up of capacity. Connection site changes could also be considered if out of the developer's control.

TMA P - Administrative, non-material changes should be processed in a quicker timeframe.

TMA Q - We would favour price control measures to enable compensation from ESO/TO for customers who are negatively impacted by ESO/TO delays. These organisations should be held to the same standards of queue management as customers.

TMA R - We do not favour additional charges pre-connection to hold capacity, so agree with this. A UIOLI approach could be beneficial but would need to be pre-agreed and over a defined set of time and conditions relating to capacity ramping and technology type. Capacity ramping provisions on DNO networks for IDNOs (over 10 years) could be replicated to facilitate greater electrification. It may be sensible to waive/reduce TEC reduction fees pre-connection to incentivise handing back of capacity that will not be realised due to changes in the development phase.

TMA S - We agree with the need to scope, rationalise, and clarify the disputes process.

28   **Do you agree with our current views in respect of the implementation period?**

Response Disagree

Rationale The complexity of the TMO4 proposals, and the ambition set for them will take time to implement. There seems to be a significant potential for challenge, possibly including even legal challenges for these proposals, by impacted groups. The required Code and possible

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Licence changes will likewise be subject to a lot of debate and negotiation - not everyone wants the same things, in the same way. The expectation that go-live can be achieved for September 2025, for TMO4, appears very optimistic. This will be a big impact upon ESO - can the resourcing be found quickly enough?

Suggestions If TMO4 is to be the way forward, it should be fast-tracked, to avoid the present extended process of code and licence review; again, it Is noted that resourcing will be a challenge, as well as the logistics.

<u>**It is our view that TMO4 implementation should be targeted for March 2024.**</u>

More needs to be done immediately to speed things up. Doing as much as possible to thin the queue out ASAP seems reasonable, as well as seeing through the "ESO 5-point plan" (but note earlier observation in the response to Q8 about this itself not taking too long).

29 **Do you agree with our current views in respect of transitional arrangements? What are your views on how and when we should transition to TMO4?**

Response Disagree

Rationale Whilst agreeing that TMO4 appears to be the best option overall, we are concerned that the complexity of the changes needed (and the potential for disagreements and extended debates) will make the process take longer than envisaged. <u>Note our suggestion in Q28 that this process be fast-tracked to mitigate this.</u>

If fast-tracking isn't possible, a stepped implementation should be adopted. ESO's concerns (p.99) regarding stepped approaches are noted, but they stem from the expectation that TMO4 can be implemented relatively quickly, and in not much more time than TMO2 or TMO3. As observed in the response to Q.28 above, we don't share ESO's optimism about this, for effecting the changes under "normal" (as opposed to a fast-tracked) approach, and therefore urge that a stepped approach to implementation be considered.

Suggestions Options for a stepped implementation:

1. Adopting TMO2 initially would enable incremental improvements from the TMO1 status quo, by introducing a Gate 2, and tightening up requirements at Gate 1. This approach could capitalise upon the ESO 5-point plan proposals quickly, especially with RQM. There is likely to be much churn in the next 2 years because of the combination of tactical changes being introduced, and TMO2 can be useful in this period.

2. We have suggested in Q1 that a "Queue-Jumping" approach be considered (essentially TMO1 with PQM), as an alternative to deploying TMO2 as an interim measure.

30 **What further action could Government and/or Ofgem take to support connections reform and reduce connection timescales, including in areas outside of connections process reform?**

Response The ideas and plans being published by OFGEM, ESO, TO's and DNO's, are all predominantly variations on these organisations' present roles, with more process being added.

Suggestions 1. System resilience and reinforcement is currently planned on an aggregated view of total capacities for each entity connecting to the grid. If onshore renewables, particularly where supply will be intermittent, can be complemented by appropriate storage to effect a local balance, the net impact on the wider grid can be reduced, particularly for Transmission Reinforcement. Recognising this and freeing up some of the current connection planning practices, could enable local solutions, benefitting local communities, to be brought forward much more quickly. This has been partially alluded to in actions 2 and 3 in the ENA Connections Action Plan. By going a little further and developing proposals which allow such complementary, locally co-developed schemes to be fast-tracked, this could be a game-changer for bringing in net zero.

2. At Eclipse Power, we believe that permitting an IDNO-type option at Transmission level would help resolve some local connection issues more quickly than the current position and would supplement and complement the Connection Reform proposals positively. An ITO/IDNO approach would fit particularly well with Suggestion 1 above.

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Conclusion

We agree that from the analysis and discussions conducted in this review, option TMO4 seems to be the most appropriate way forward. However, as noted above, we believe that a single annual window in the process will present many difficulties for both ESO and applicants, and so needs changing. The biggest problems we foresee with TMO4 are the time needed to implement it, and the potential for slowed progress because of the complex, centralised analysis needed to operate it; there is already a major problem with the resourcing and capability at ESO and the DSOs. We would like to this exercise completed before April 2024, rather than the projected late 2025.

The new approaches to addressing the connections queue in the consultation are needed, but we should not replace the current processes, with their known limitations, with others which add new complexities and different types of delays. We would like to see smaller scale, but ambitious, locally focussed expedient measures considered too. These can start to take effect quickly and we have made suggestions accordingly above. We believe that our ITO proposal would count as just such a smaller scale, ambitious measure.

Kind regards,

(PP) **Spencer Thompson**

Managing Director

Eclipse Power

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