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Ofgem, 9 Millbank, London, SW1P 3GE

27 July 2017

Dear James and Connections team,

Written response by RES to the Open letter consultation on the Incentive of Connections Engagement, summer 2017.

RES is one of the world's leading independent renewable energy companies working across the globe to develop, construct and operate projects that contribute to our goal of a secure, low carbon and affordable energy future. RES has been an established presence at the forefront of the renewable energy industry for over three decades. Our core activities are the development, design, construction, financing and operation of wind, solar and electricity storage facilities.

We have worked closely with many of the DNOs on their ICE plans, and continue to support distribution connection policy nationally through our role as Vice-Chair of the ENA DER Connections Steering Group (formerly the DG-DNO Steering Group). We continue to strongly welcome the principles of ICE, which we feel has led to measurable improvement in the service provided by DNOs across GB. We have embedded your response pro-forma into this letter, however I will preface this with a note on the present industry situation and DNO capabilities in response to some of the points in your consultation letter:

"Connecting when the networks are constrained As the networks have become more constrained it has become harder to get a connection in some areas. In these parts of the network, connection customers may face high costs and long waiting times [...] We want [DNOs] to ensure they use the capacity that is available in the most efficient way"

In each of the last two years I have showed you a slide with UKPN data demonstrating that approximately **55% of the "contracted-out" registered capacity in the EPN region is never used (but cannot be offered to new connectees)**. Similar statistics can be shown for other DNO regions. The DNOs have sought legal advice and pursued all existing powers; apart from a few anecdotal victories the great majority of this under-utilised capacity remains inaccessible to new entrants. At worst this completely blocks new connections, at best some of the capacity can be temporarily and insecurely used via a flexible connection – however this comes with significant financing risk, which increases the cost of capital for new connecting parties, restricting competition and increasing electricity costs. I can see no alternative solution other than for **the industry regulator to step in at this point and provide guidance on a practicable solution.**

I welcome the detail you have added on page 3 of your letter about the types of support you'd expect DNOs to offer. I have embedded below our experience of current practice:

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"DNOs should consider how they can support improved outcomes for connections stakeholders, wherever they are, over the coming year. We think some key outcomes are likely to be important, ensuring customers can expect:

□ Access to appropriate information to make investment decisions, including on where to connect across the networks. For example through:

- Using heat maps to clarify where capacity is available, where network services may be beneficial, and likely curtailment levels,

"likely curtailment levels" I believe should be a main focus for all DNOs for 2017/2018, whether a traditional or flexible connection solution is offered.

Heat maps provide broad-brush early stage information. Site-specific detailed information is now required on a business-as-usual basis, especially as projects progress towards critical investment decision milestones. No DNO is yet at a stage one could call 'best practice'.

- "Providing sufficient visibility of the nature and causes of constraint, and General information on the nature of constraint is normally available (e.g. a heat map will often indicate "upstream 132kV thermally constrained") but nothing yet gives a quantification of curtailment level. Worst case *instantaneous* values are readily available, but nothing with the granularity to make an informed commercial decision.

- "Timely and clear information on how network status across distribution and transmission may affect customers, and how interactions will be managed, including in the connections process.

The two Scottish DNOs perform a better job of communicating the nature and impact of any transmission issues for a new connection – whether process, queue, delay, liability or design. Both have been open to discussing alternative solutions.

Our experience with DNOs in England and Wales is that many front-line connection designers have yet to fully understand and take ownership for the transmission issues affecting their distribution-connecting customers. This includes for example clearly explaining the Statement of Works Appendix G trials, where a project sits in this process and the options available, along with being able to quantify the benefits of the trial.

□ "Access to an appropriate range of efficient and viable connection options to meet their needs through a streamlined connections process. For example through:

- Rolling out flexible connections or other approaches to investment ahead of need, such as consortiums, in constrained areas,

As stated in our 2016 response to your *constrained connections* consultation, the concept of consortiums (consortia?) is extremely unlikely to work in any but the very rarest of circumstances. A more flexible approach is needed which facilitates different timescales of projects in the same region, with a workable methodology for cost allocation cost should various projects succeed.

It is still **necessary to value the energy spilled in flexible connections** to help evaluate options for network investment. **It is not clear to us that this is happening, and this must be addressed immediately.**

- "Providing sufficient clarity around conditions and circumstances of curtailment, including in areas with transmission constraints, and

We agree this is important. Please see comment above on quantifying the "likely curtailment".

- "Offering a range of options to suit different circumstances, including where customers are looking to provide energy services, for example to the System Operator.

□ "Clarity about the point where new capacity will be needed.

I read this as meaning clarity on the threshold of contracted new capacity required to trigger a new capacity solution such as reinforcement. We would support this interpretation.

□ "Clarity about the availability of routes to bring forward new capacity. For example through:

- Consortium registers, and
- Flexible queue management (e.g. promoting customers in the queue if it will release capacity to enable others to connect more quickly or more cheaply) or other approaches.

□ Confidence that their requirements are adequately considered in network forecasting and planning. For example through clear and transparent processes for:

- Assessing the level of demand in an area, undertaking network forecasting and longer term planning, and
- Understanding customers' changing needs and the point where new capacity would be needed."

We have seen some work in this area. For example, WPD's strategic studies commissioned to look at the changing electricity requirements in the East Midlands and South-West.

We hope the comments contained in our response can be used to continue to improve connections service for 2018 and beyond.

Yours sincerely,



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Response template – Incentive on Connections Engagement June 2017

Question	Response																																
About you and your work																																	
1. What is the name of your company?	RES																																
2. Which DNO's ICE submission is your response related to (see Annex 2 for DNO map)? Please indicate clearly in your response to the questions below whether your comments refer to the DNO's plans as a whole, or to one of the DNO's licence areas. If you wish to provide a response to the ICE submission of more than one DNO, please use a separate template for each DNO.	<p>Rather than try to fill 5 separate sheets, we've chosen to respond on all of these DNOs in one form. We hope this is not too much of an inconvenience.</p> <p>We work actively in all DNO areas (except London). ENW we have least engagement with and therefore have omitted from this response. Our response is ordered geographically (starting North) and we have kept the same numbering in the following questions (e.g. #4 is always WPD).</p> <ol style="list-style-type: none"> 1. SSE 2. SPEN 3. NPg 4. WPD 5. UKPN <p>We understand that the main purpose of ICE is to improve connections customer service, something which is challenging to quantify for market segments such as EHV connections; we would have liked to have seen a separate question on the general experience of connections service. As it is, we have added comments from our practical experience against question 2, on the theme of whether a DNO "delivered" on service promises.</p>																																
3. What type of connection do you generally require? And for each type of connection, how many connection applications, including total MVA (Mega Volt Ampere) of connections have you made in the past year? Please note that we will assess storage within the relevant metered generation market segment.	<table border="1"> <thead> <tr> <th colspan="2">Type of connection</th><th>Total number of connections</th><th>Total MVA of connections</th></tr> </thead> <tbody> <tr> <td rowspan="4">Metered Demand Connections</td><td>Low Voltage (LV) Work</td><td></td><td></td></tr> <tr> <td>High Voltage (HV) Work</td><td></td><td></td></tr> <tr> <td>HV and Extra High Voltage (EHV) Work</td><td rowspan="2">Dozens</td><td rowspan="2">>200</td></tr> <tr> <td>EHV work and above</td></tr> <tr> <td rowspan="2">Metered Distributed Generation (DG)</td><td>LV work</td><td></td><td></td></tr> <tr> <td>HV and EHV work</td><td>Dozens</td><td>>2000</td></tr> <tr> <td rowspan="3">Unmetered Connections</td><td>Local Authority (LA) work</td><td></td><td></td></tr> <tr> <td>Private finance initiatives (PFI) Work</td><td></td><td></td></tr> <tr> <td>Other work</td><td></td><td></td></tr> </tbody> </table>	Type of connection		Total number of connections	Total MVA of connections	Metered Demand Connections	Low Voltage (LV) Work			High Voltage (HV) Work			HV and Extra High Voltage (EHV) Work	Dozens	>200	EHV work and above	Metered Distributed Generation (DG)	LV work			HV and EHV work	Dozens	>2000	Unmetered Connections	Local Authority (LA) work			Private finance initiatives (PFI) Work			Other work		
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Section 1: Looking Back report 2016-17

We want your views on how well the DNOs have performed over the last year

<p>1. Are you satisfied that the DNO had a comprehensive and robust strategy for engaging with connections stakeholders? Do you consider that the DNO implemented its strategy? If not, are you satisfied that the DNO has provided a reasonable and well-justified explanation?</p>	<p>Yes</p>
<p>2. Are you satisfied that the DNO had a comprehensive work plan of activities (with associated delivery dates) to meet the requirements of its connections stakeholders? Do you consider that the DNO delivered its work plan? If not, are you satisfied that the DNO has provided a reasonable and well-justified explanation?</p>	<p>1. SSE – We welcomed the actions on unused capacity, flexible options; also reinforcement info, DUoS visibility, post-acceptance process. In broad-brush terms, SSE is catching-up with some of the best practice which exists elsewhere.</p> <p>2. SPEN – We welcomed the detail on the customer experience. Pleased that SPEN identified improvements in process and communications with the transmission business (“EC9”), which we have previously experienced as a significant obstacle, and which evidently is an ongoing issue.</p> <p>3. NPg – we participated in NPg’s connections forum to develop the plan, which we support.</p> <p>Monthly updates of the data behind the heatmap is essential to render it useful (we think SPEN’s 3-month refresh is not).</p> <p>On managing connections in practice, we have seen strong improvements in a more customer-focussed approach from NPg. One criticism would be an apparently inflexible adherence to technical policy.</p> <p>4. WPD – we participated in WPD’s steering group to develop the plan; we fully support the suite of actions and ambition. We don’t enjoy the separation of KPIs into a separate document, which just makes the process of review more difficult.</p> <p>We are impressed by WPD being the first to launch an owners/operators forum, which was very successful. We praise WPD’s work on monitoring and streamlining land rights and consents. However, we think there is more to be done on effectively communicating the process and benefits of the SoW trial to affected customers.</p> <p>On managing connections in practice, WPD’s pragmatism and focus has been exemplary. A criticism would be the ongoing work on consistency, that the South Wales region appears to lag the other three for customer-focussed service.</p> <p>4. UKPN – we participated in UKPN’s steering group to develop the plan, which we fully support.</p> <p>We were pleased to see UKPN follow WPD in delivering a regular owners/operators forum. The continuing ANM</p>

	rollout remains welcome. We welcome the increased visibility of land rights and consenting processes. We haven't yet seen an example, but praise the action on making historic fault data available – a step towards visibility of "likely curtailment".
3. Do you consider that the DNO's work plan provided relevant outputs (e.g. key performance indicators, targets etc.)? Are you satisfied that the DNO has delivered these outputs? If not, do you view the reasons provided to be reasonable and well justified?	Yes.
4. Do you agree that the DNO's strategy, activities and outputs have taken into account ongoing feedback from a broad and inclusive range of connections stakeholders? If not, has the DNO provided reasonable justification?	On "ongoing feedback": We have seen SSE adopt the practice of "DG owners-operators forum" at our request, mid-year. We have seen workplan items we recommended to UKPN and to WPD which were adopted mid-year through their respective steering groups.
The following two questions refer to the specific areas we discuss in our letter – meeting the needs of all types of connections customers, and connecting when the networks are constrained.	
5. Do you consider that the DNO's activities and outputs over the past year were adequate in meeting the needs of all types of connection customers, including the particular needs of newer types of connection customers?	Key issues of " <i>likely curtailment</i> ", of <i>transmission impact</i> and the availability of <i>flexible solutions</i> – these apply as a priority to all connections, including newer types of customers. We consider that these issues are a priority above, for example, battery-specific connection policy guidance.
6. Do you consider that the DNO's activities and outputs over the past year were adequate in meeting the needs of customers looking to connect when the networks are constrained?	Please see cover letter. Heat maps have generally all been developed or improved, however all DNOs have a long way to go in providing usefully detailed and timely network constraint information.
Section 2: Looking Forward plans 2017-18	
We want your views on what the DNOs aim to achieve in the coming year	

7. Are you satisfied that the DNO has a comprehensive and robust strategy for engaging with connection stakeholders and facilitating joint discussions where appropriate?	Yes.
8. Do you agree that the DNO has a comprehensive work plan of activities (with associated delivery dates) that will meet the requirements of its connection stakeholders? If not, has the DNO provided reasonable and well-justified reasons? What other activities should the DNOs do?	<p>1. SSE – It is evident that SSE accepted criticism of previous plans with bolder targets for 2018.</p> <p>We look forward to SSE (North) launching an owners/operators forum after the successful model established by WPD and UKPN. We welcome the work on non-firm transmission access, and on constraints workshops (which we hope will lead to specific actions in 2018 leading to “likely curtailment” provision). Wayleaves process clarification as other DNOs have delivered is welcome.</p> <p>2. SPEN – The focus on practical project management improvement is welcome (named responsibilities, timely updates). However, the flexible connections action appears light, and ‘success’ for this issue is heavily dependent on SPEN making significant advancements in tackling the issues of Dumfries & Galloway, which we will watch closely and support where we can.</p> <p>Outage meetings with SPD are welcome and we have booked one for August. However, I would like to have seen more on “likely curtailment” (ref your letter, and our comments above).</p> <p>3. NPg – we participated in NPg’s connections forum to develop the plan, which we support.</p> <p>We look forward to NPg launching an owners/operators forum after the successful model established by WPD and UKPN. We welcome the rolled-over focus on understanding and better communicating the SoW process (and trials, sic). NPg’s flexible solutions development appears more limited than other DNOs, with one action on communicating the progress of Driffild ANM. We welcome the efforts to adopt UKPN’s best practice of a “service level agreement” to provide timely design info such as protections settings and fault level characteristics.</p> <p>4. WPD – we participated in WPD’s steering group to develop the plan, which we fully support.</p> <p>WPD’s actions on historic outage information, online portal, and maintenance frequencies are an important step towards better provision of “likely curtailment”, and probably sets it ahead of other DNOs on this issue.</p> <p>We look forward to WPD’s proposed heat map update, as the old version was extremely limited.</p> <p>5. UKPN – we participated in UKPN’s steering group to develop the plan, which we broadly support.</p> <p>We support the focus on improving and better communicating SoW. Welcome too is an overdue review</p>

	of the detail and presentation of connection offers for 'larger jobs'. Flexible connections development has not featured in this plan; we assume UKPN's 'FDG' rollout is documented elsewhere.
9. Do you consider that the DNO has set relevant outputs that it will deliver during the regulatory year (e.g. key performance indicators, targets, etc.)?	see answer to 8.
10. Would you agree that the DNO's proposed strategy, activities and outputs have been informed and endorsed by a broad and inclusive range of connection stakeholders? If they have not been endorsed, has the DNO provided robust evidence that it has pursued this?	Yes.
The following two questions refer to the specific areas we discuss in our letter – meeting the needs of all types of connections customers, and connecting when the networks are constrained.	
11. Do you consider that the DNO's planned activities and outputs will be sufficient to meet the needs of all types of connection customers, including the particular needs of newer types of connection customers? What other activities should the DNO undertake in this area?	The key issues of " <i>likely curtailment</i> ", of <i>transmission impact</i> and the availability of <i>flexible solutions</i> – these apply as a priority to all connections, including newer types of customers. We consider that these issues are a priority above, for example, battery-specific connection policy guidance.
12. Do you consider that the DNO's planned activities and outputs will be sufficient to meet the needs of customers looking to connect when the networks are constrained? What other activities should the DNO undertake in this area?	No. See cover letter on the work required, particularly under " <i>likely curtailment</i> ", and the need to value spilled energy from flexible connections in evaluating network investment options.