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Electricity Transmission Advanced Procurement Mechanism – Consultation response CONFIDENTIAL

Dear Sir/Madam,

Further to you publishing your consultation document on an Advance Procurement Mechanism for use by electricity Transmission Owners to secure equipment supplies to drive net zero, we are pleased to provide our response as below. Please treat this response as confidential due to this document containing commercial secrets of GE Vernova.

Please do feel free to contact us if you require further clarification.

Regards

Peter Grove

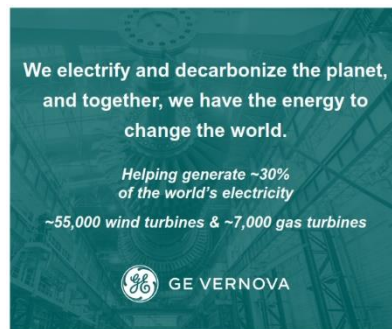
Disclaimer

This document is issued to Ofgem to assist them in their deliberations regarding their proposal for an Advance Procurement Mechanism. GE Vernova offers this as an opinion based on GE Vernova's view of market conditions and possible future demand. None of the information contained within is to be relied upon and is without warranty whatsoever. GE Vernova reserves the right to amend any detail of this document in future.

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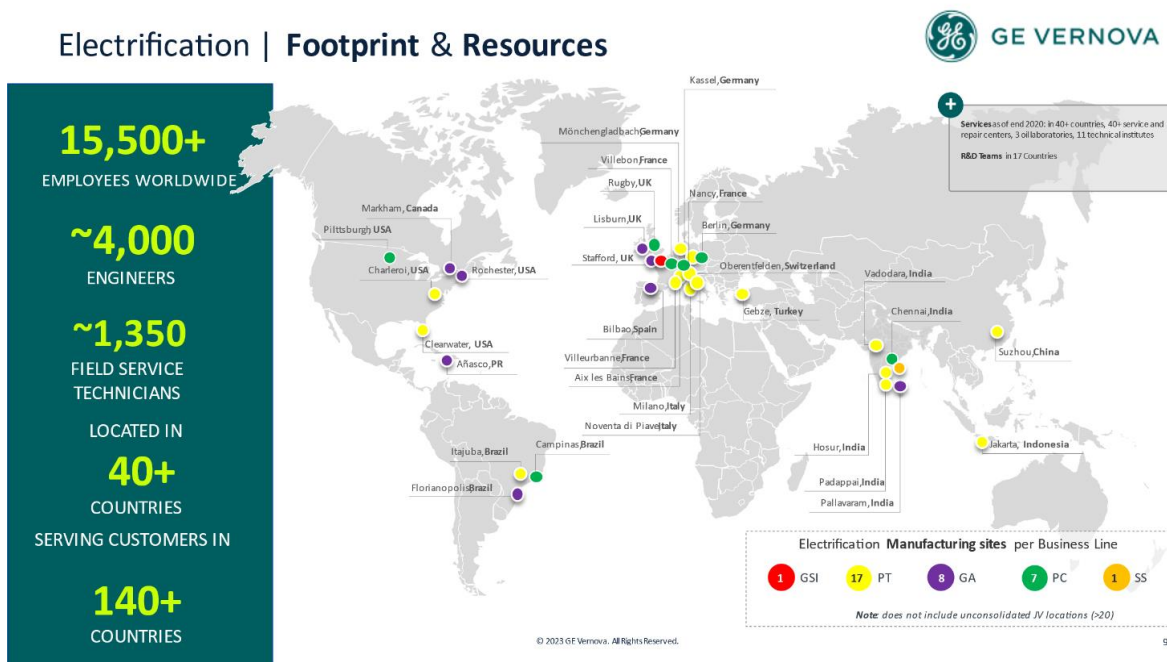
About GE Vernova

Having previously being part of General Electric, on 2nd April 2024 GE Vernova became a stand-alone, global, diversified manufacturing, technology and services company, listed on the New York Stock Exchange.



Within GE Vernova, Grid Solutions serves customers globally, with over 15,000 employees (including ~1,000 in the UK). We provide power utilities and industries worldwide with equipment, systems and services to bring power reliably and efficiently from the point of generation to end power consumers. Grid Solutions is focused on addressing the challenges of the energy transition by enabling the safe and reliable connection of renewable and distributed energy resources to the grid.

Grid Solutions global footprint is set out below:



Grid Solutions regularly engages with UK TOs and DSOs and its solutions are found in volume across all parts of the UK and beyond. Specifically, for TOs and DSOs, Grid Solutions supplies complete substation solutions or discrete substation products including switchgear, transformers and other wound plant, power flow and power quality devices along with associated protection and control devices.

Grid solutions has seen very high growth in demand for its products, solutions and services from the United States and Europe. Other geographical regions are also growing. Grid Solutions has already taken some actions to address the recent high lead times that have resulted and lead times for some products have partially recovered but demand for our main high voltage products is forecasted to increase, further pressurising lead times. Please see figure 1 demonstrating lead time evolution for the main product types listed in Table 1 of your consultation paper.

Figure 1



It is difficult to predict available capacity and hence future lead times as large orders anywhere from Europe can significantly change the landscape quickly in our European factories as we operate on a global first come first served basis.

Based on our current understanding of the UK demand for equipment, it is likely that both equipment supply, and site resources will be at risk of further increased lead times and potential supply chain increased costs driven by high demand, compared to current levels. Greater transparency from TOs on projects and their timelines would help clarify forecast demand and related timing to enable us to understand better future implications and seek to spread future demand and avoid unsustainable peaks and troughs. The APM and the commitment this brings, would significantly help in this respect and enable manufacturers such as ourselves to invest more meaningfully and plan capacity and resources further ahead. It must be emphasised however, that commitment is needed for

meaningful sustainable investment as we do not need to look too far back in recent history to understand how sudden political changes have negatively impacted our industry.

Many large customers across Europe are now looking to secure their HV equipment supply by the use of long-term frameworks and slot reservations mechanisms however this can be challenging due to future cost unknowns and the high level of global political uncertainties. In addition, due to lack of technical resources in the sector, final design information can be late causing missed factory slots and inefficient use of resources & materials and delayed deliveries.

To secure capacity to deliver HV equipment we would need frameworks with volume commitments in place. These frameworks would require a non-returnable deposit typically 20% of current estimated total value. Equally important is the timely provision of final design information at the appropriate manufacturing stage, without which, materials may not be available in time for the allocated factory slot. By way of example, please see figure 2 below that has been employed in the UK for GIS supply.

Figure 2 – GIS early works orders

Months before required delivery	Requirements from Customer	GEV commitments
>24	<ul style="list-style-type: none"> Estimate of number of bays PO for 20% of estimated value 	GEV will advise generic bay price. GEV will confirm delivery is achievable and place project into manufacturing schedule necessary to achieve required delivery. GEV will analyse overall demand forecast and investments necessary to respond.
24	<ul style="list-style-type: none"> Confirmed number of bays Final technical specifications & requirements 	GEV will commence engineering and confirm manufacturing slot.
23		GEV will advise final price
21	<ul style="list-style-type: none"> Valid PO for full amount less deposit paid 	
21-13	<ul style="list-style-type: none"> Drawing approval 	GEV will issue drawings and action any amendments required (1 iteration only)
13	<ul style="list-style-type: none"> Engineering is frozen 	

The 20% deposit would be non-refundable in the event of cancellation. 21 months prior to delivery, the full purchase order is required, and a cancellation curve will apply thereafter.

Please see figure 3 below that details current position on timescales for advance procurement, fungibility and required deposits.

Figure 3 **T = Ex Works Delivery Date**

	Deposit required	Degree of fungibility	Full & final spec date	Final price confirmation	Full PO date
Power Transformers	20%	Fair until T-28 months unless standardised.	T- 28 months	T-26 months	T-24 months
GIS	20%	Reasonably until T-24 months	T- 24 months	T-23 months	T-21 months
AIS Live Tank	20%	Good	T-14 months	T-13 months	T-12 months
AIS Dead Tank	20%	Good until T-17 months	T-17 months	T-16 months	T-15 months
AIS Disconnectors / Earth Switches	20%	Good until T-12 months	T-12 months	T-11 months	T-10 months
Air Cored Reactors	20%	Poor - Standardisation required	T-17 months	T-16 months	T-15 months

To address some specifics of the consultation, we would advise the following:

Volumes

A good understanding of volumes and associated commitment need to be clear at the start of any advanced procurement. A small tolerance can be accepted but factory slots will be reserved and as such the number of units will also be reserved. Significant changes in the number of units will result in production gaps potentially unable to be utilised by other projects, or an insufficient slot where we are unable to produce the complete number of units required. Please also bear in mind that any storage, for example of excess units, will have to be the responsibility of the TO or Contractor.

Fungibility

Though some high voltage products required by TOs are to a great degree standard and therefore fungible, other products are only fungible in the earlier stages of the APM and once specifications are finalised become more difficult to use for alternative projects due to either specific configuration of standard parts (to suit site specifics) or specific parts such as current transformers in GIS or dead tank circuit breakers.

Some products are reasonably fungible, but some standardisation is required to restrict the number of permutations employed in APM. An example of this is air insulated disconnectors which can have different post insulators and earth switch locations. Finally, power transformers may often have specific technical requirements such as a specific impedance envelope, therefore there will be very limited fungibility once specifications are finalised and even before may not be fully fungible.

Timescales

It is important that any APM is not perceived as a mechanism to finalise specifications closer to the required delivery dates. There will remain multiple supply chain and resource restrictions which still need to be recognised even with better planning and investment. It can be effective to enable manufacturers to plan better, invest for the future and avoid unsustainable highs and lows in manufacturing as well as mitigating the risk of extended lead times and multiple delays in projects across the UK. Timescales provided in this document are our best estimation based on current market view, however as we already know things can change rapidly if customers seek to secure large volumes. Within the context of bulk orders, capacity reservation and supply chain/resource management, a rolling plan would need to be established with clear committed quantities and delivery timescales.

Non-returnable Deposit

We are beginning to witness customers becoming more challenged to finalise technical requirements in the required timescales, possibly due to lack of experienced engineers and the increased number of projects being worked on by individual engineers. One might be excused for thinking that early manufacturing slots brought about by cancelled or postponed projects would be attractive to customers, however we are finding in reality that often they are unable to finalise designs in time to utilise the such early slots and therefore a key to advance procurement is sufficient funds to allow TOs/Contractors to carry out this engineering at the appropriate time and a non-returnable deposit that would go some way to covering our costs in the event of the slot not being taken up later during the procurement cycle. We have therefore fixed a value of 20% of the estimated order value as this deposit.

It should also be noted that final prices would be provided closer to required delivery as we are unable to fix our costs several years in advance. We would work with our customers to ensure customers are kept up to date with any abnormal cost escalations and provide sufficient justifications in such cases.

Most Constrained Equipment & Services

We are finding that 400kV/ 275kV equipment, Power Transformers and HVDC schemes to be most constrained. This is predominantly as a result of historical low volumes being demanded by the market and significant upturn in demand realised and forecast. In addition, we have concerns regarding the availability of sufficient skilled site installation services to install and commissioning this equipment. This is where avoiding the boom-bust scenarios of the past by early commitment and future project transparency can have significant impact allowing manufacturers to further ramp up production and resources to address the medium-term increased demand that is thought will exist over several years. Planning and smoothing future demand evenly across the years avoiding peaks and market saturation across all disciplines in the industry (e.g. Installation, commissioning, engineering, and factory capacities) seem to be paramount and instrumental to successfully deliver the demand driven by the energy transition targets.

End of Response
