

Flexibility Roadmap

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Why flexibility?



Efficient network operation

- Provide a lower cost solution to conventional reinforcement.
- Manage load uncertainty and avoid the risk of stranded assets.
- Promote competition in providing network solutions.
- Support more efficient maintenance and operation of the network.



DER to help meet decarbonisation targets

- Stimulate new markets to attract DER to connect.
- Provide the means to connect new DER without delays associated with reinforcement.



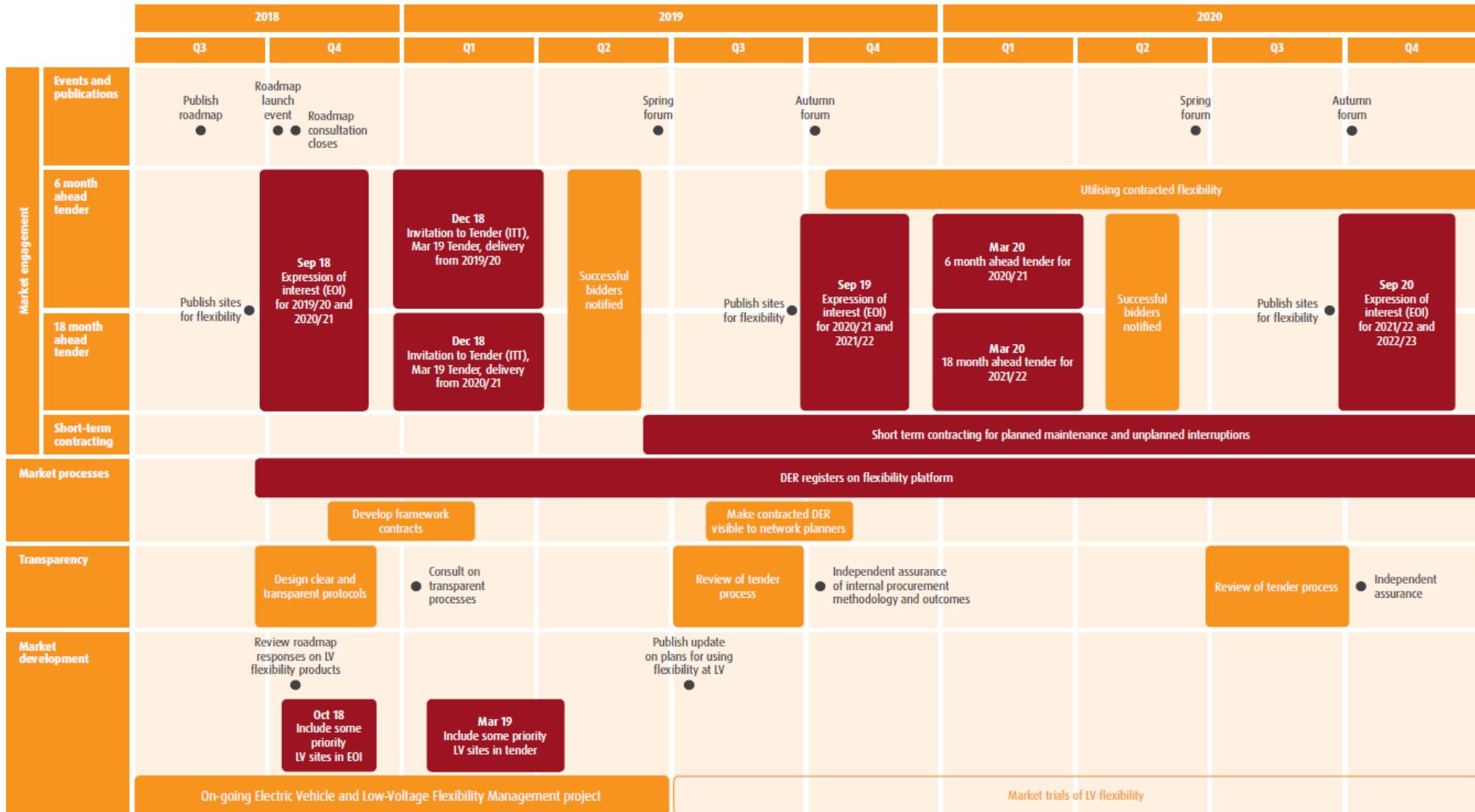
Whole system benefits

- Provide transparency on the distribution value of flexibility and the locations where it has value.
- Allow DER providers to 'stack' revenue opportunities in other markets, such as the wholesale and balancing services markets, so that the value of their flexibility to the system as a whole is maximised.
- Support the wider electricity system, e.g. by managing the load during peak demand periods through coordination with other transmission/distribution system operators.

Flexibility Needs & Products

Flexibility Products		Reinforcement Deferral	Planned Maintenance	Unplanned Interruptions	
				Pre-Fault Response	Post-Fault Response
Value Drivers		The present value of deferring capital expenditure	Managing unplanned interruption risk during planned maintenance	Customer Interruption (CI) and Minutes Lost (CML) incentives	Avoided cost of temporary generation and potentially CMLs
2023 Flexibility Potential (MW)		206	Available to eligible DER capacity		
High-Level Requirements	Location Specific	Yes			
	Response Time	30 mins maximum		<10 mins preferred, 30 mins maximum	
	Response Duration	Full availability window – case dependent. Pro-rated payment if available for part of window		3 hours. Pro-rated payment if available for part of window	
	DER Type	Generation, Storage and Load Reduction			Generation and Storage
Contracting Principles	Procurement Type	Competitive tenders or administratively set prices if low liquidity		Framework agreement. Optional updating of pricing through contract	
	Procurement Lead Time	6 months ahead and 18 months ahead	Case specific 1-12 months	DER applies if eligible	
	Payment	Availability and Utilisation		Utilisation only	
	Contract Term	1-4 years	Monthly or seasonal	Framework agreement	

Our Flexibility Roadmap



Maximising DER participation



Visibility of market opportunities for DER

- Publish heat maps showing areas of potential flexibility needs across our networks.
- Enable all DER, both existing and new, to register on a flexibility platform, providing details of their location and technical characteristics.
- Enable all interested DER to enter into framework contracts with UK Power Networks, agreeing as many of the common contracting and product principles as possible, thus making participation in future procurement events as easy as possible.



Enhanced Processes

- Integrate flexibility solutions into our network planning processes so that our planning and network management teams have visibility of available flexibility in areas where they are considering network reinforcement and other works programmes.
- Employ a common framework contract for all flexibility products in line with the terms used in our 2017 tender.
- Notify DER through a platform as and when market opportunities for flexibility emerge. In the longer term, we will seek to contract and settle DER through a platform.



Fairness and Transparency

- Establish clear and transparent protocols for appraising flexibility. We will make tender information publicly available, where it is commercially appropriate to do so.
- Get independent assurance of our internal procurement methodology and outcomes – this will be undertaken in 2019 with respect to the latest round of tenders we run and occur annually thereafter.

Future Flexibility products

The energy system is changing rapidly and we anticipate that we will need a range of other flexibility services in the future:

LV flexibility products

- EV and LCT penetration at residential level
- Potentially administered pricing

Whole system products

- Coordinate distribution connected resources for whole system benefits – DSO to TSO

Demand turn-up

- Manage export constraints

Thank you

