		Digital Twins for Energy Resilient Grids	
	Question	Response	
1	What TRL are you looking at in this competition? (TRL, Technology Readiness Level)	We are looking for solutions that are at a prototyping or testing stage rather than research projects and projects that are pre-commercialisation. In TRL terms we are looking more at levels 4-8. If you are doing Experimental Development then a lower % of costs are claimable (this is standard rules) We have allowed for Industrial Research (4-6) and Experimental Development (6-8). Funding rates are different. In the brief says that are eligible for funding Industrial Research projects and Experimental development. More information on the definition here: Categories of research and development – UKRI (link from the published competition on the IFS portal)	
2	What % of project cost is covered by this opportunity--does this vary depending on organisation size? What about research organisations?	Yes. Please check the details in the competition brief, "eligibility" section under "funding" https://apply-for-innovation-funding.service.gov.uk/competition/1887/overview/09b8337a-cfea-46a1-a03a-b8ecf9b4ac51#eligibility	
3	Can you have international partners?	You can have unfunded international partners or international subcontractors. As part of your application, you will need to justify this and explain clearly why. For example; when the skills are not available within the UK.	
4	The comment around England (was it created in or used in - can't remember exactly) - can you expand on that a bit please?	The work on the project must be carried out in the UK and the outputs from the porject must be exploited within the UK	
5	When you say '...results to be exploited in England...." - are we not covering devolved nations here?	See Above - the devolved nations are all in scope. The use of "England" was a typo in the slides.	
6	I'm working with an organisation that wants to develop digital twins for a particular type renewable decentralised energy generation asset, which will then be used to optimise it. The interaction with legacy software and connecting it to the internet will have security issues. Would a national fleet-level project exploring this security issue be in scope for this project, or is it only for network-level assets?	We are looking for solutions that are either on the network or interface directly with the network. It also depends on what is meant by 'fleet' e.g. a vehicle fleet. If you would like further clarity then please email more details to us at support@iuk.ukri.org and we can look in more detail at your proposed scope	
7	Are you interested in modelling the behaviour of customer assets (EVs, HPs, PV inverters, BTM Batteries, etc) within digital twins?	Please see question 6 Cyber Resilience: https://www.gov.uk/government/collections/cyber-resilience	

8	Are you interested in modelling the behaviour of customer assets under non-normal conditions (extreme weather events, cyber security attacks, etc) and the implications of these for electricity system stability?	Please see question 6
9	Do energy assets have to be on-grid or can they be off-grid?	Please see question 6
10	I am concerned about Cyber attacks on the Renewables sector that cause physical damage, BESS in particular. Are we seeing an increase in risk or frequency of attacks that might also lead to impact on the grid? I am looking for examples please.	Please refer to NCSC and Ofgem regarding cyber threats."https://www.ncsc.gov.uk/collection/operational-technology/https://www.ncsc.gov.uk/blog-post/protecting-internet-facing-services-public-service-cnihttps://www.ofgem.gov.uk/publications/analysing-cyber-security-industrial-control-systems"
11	Hi there - Does 'All Work in UK' include also all of subcontractors' resources/ specialist engineers etc? Thanks Tony	International subcontractors are allowed within this competition. However, you must be able to justify this clearly within your application as to why the work could not be carried out in the UK.
12	Is there going to be any means of testing the alignment of submission concepts while they are in development before submission? It feels like something on these lies would be useful in light of the broad scope. We don't want to waste anyone's time!	If you have a potential proposal and you would like us to check the scope, please send it to us at support@iuk.ukri.org and we will respond to you directly. Please quote the competition name in your correspondence.
13	do we hav to find the suitable site for competition?	You will need to find the appropriate means to demonstrate your technology. You can demonstrate testing in end user or real world conditions. This can be physical or virtual as applicable.
14	Will there be any follow-on funding available (or planned) for this call? Appreciate the amount of funding available is not huge and the follow-on funding might encourage more end users to participate?	There is currently no follow on funding identified. However, this competition is part of a larger investment programme (Building a Secure & Resilient World) with the potential for additional funding.
16	Following on from the question about EV's HP's etc from David, we have clients with multi MW generation on-site that is grid connected. They are enrolled in STOR, BR schemes etc with national grid but the grid has limited visability on asset availability etc. Would these types of assets be of interest as it would facilitate these types of grid events?	The scope of this competition is to improve the cyber resilience of the energy grid through the enablement and development of digital twin technology. For full details please visit the competition brief https://apply-for-innovation-funding.service.gov.uk/competition/1887/overview/09b8337a-cfea-46a1-a03a-b8ecf9b4ac51. For specific scope queries please to email us on support@iuk.ukri.org
17	Are physical assets such as pylons in scope?	The competition scope is explained in the competition brief: https://apply-for-innovation-funding.service.gov.uk/competition/1887/overview/09b8337a-cfea-46a1-a03a-b8ecf9b4ac51. The scope covers the resilience of energy grids to cyber threats, looking specifically through the lens of the development of digital twinning. The whole energy network is in scope in this context. If you have a specific scope query then please email support@iuk.ukri.org

18	Is the competition looking at cyber security or interoperable digital twins?	We are looking at both. Digital twinning technology will become increasingly important to manage a flexible energy grid and in order to be able to develop a twin then we must be able to ensure that it is secure to cyber threats. "Your project must:Enable, support or deliver digital twins in energy networks.Improve the cyber resilience of the energy networks.Improve access to high quality and interoperable data in energy networks.Engage with end users in its development.Applicants must demonstrate how they enable, support or deliver each of these requirements in order to meet the scope. Examples: a project that delivers cybersecurity by enabling secure data interoperability that will support a future digital twin project for an end user. Or a project that delivers a prototype digital twin for cybersecurity pentesting using realtime high quality data from a customer environment."
19	Resilient to what?	The competition is to ensure that the grid is resilient to the cyber threats faced by an increasingly federated energy system. The resilience to cyber threats created by increased data sharing, use of AI, open data and digital twin development will lead to more resilience in our overall future energy system Cyber Resilience: https://www.gov.uk/government/collections/cyber-resilience
20	Are university spin-outs able to enter the competition as the lead partner? This entity in question is a trading arm of the university acting as a cosultancy so it doesn't have shares. How does UKRI view this type of organisation?	If you are a UK registered business then you are able to lead a project. If you are not then you would be eligible to be part of a project as collaborative partner Read the funding rules here: https://www.ukri.org/councils/innovate-uk/guidance-for-applicants/general-guidance/funding-rules/#contents-list
21	Can a single SME propose a project on our own with no partners?	No. This competition is open to collaborations only.
22	If we must have another partner do you have any contacts at National Grid or UK Power Networks (UKPN) or UK Power Distribution?	Following feedback from the event we are just reviewing whether we can support this type of request. We will be able to confirm at the applicant briefing."It is recommended that applicants seek to connect with the other projects listed here: https://apply-for-innovation-funding.service.gov.uk/competition/1887/overview/09b8337a-cfea-46a1-a03a-b8ecf9b4ac51#supporting-information Applicants may also utilise the Mural board. Other potential ways to find partners are to sign up to the OFGEM SIF newsletter: https://ukri.innovateuk.org/ofgem-sif-subscription-sign-up"

23	Is 3D Structural Resilience and 3D digital twinning of the power generation and distribution network in the scope of this call?	No, the scope of this competition is to improve the cyber resilience of the energy grid through the enablement and development of digital twin technology. For full details please visit the competition brief https://apply-for-innovation-funding.service.gov.uk/competition/1887/overview/09b8337a-cfea-46a1-a03a-b8ecf9b4ac51. For specific scope queries please to email us on support@iuk.ukri.org