EEA/EECA FlexTalk Project - EA Technology Report Webinar – Q&A

	Question	Answer
1.	Any NZ Flex reports comparing OpenADR to IEEE2030.5 and EEBUS?	Yes, the EA Technology report (International Review of Open Communication / Standards or Protocols for Flexibility Management) scope includes a comparison of the various protocols. (Yogendra Vashishtha – EA Technology) Yes, NZ work has been done in this area and we will be pulling this into our final FlexTalk report for industry on our observations of implementing and trialling OpenADR and review of wider communication protocols. (Stuart Johnston - EEA)
2.	Are the various protocols software based or will they require hardware changes to implement them?	At the moment they are software based, but when you talk of the gateways and you know how this final communication will happen, it might lead to different hardware requirements. But what we are talking here [and within EA Technology report] is the software to communicate. (Yogendra Vashishtha – EA Technology)
3.	EV's are typically charged during off peak times so how do you see this helping to shift peak load?	In the future off-peak times may not be as consistent day to day or could differ by location. EDBs may need to dispatch flexibility resources in a more dynamic or geographically targeted way which this could help with (Evie Trolove – Orion/FlexTalk Design Team)
4.	Can you comment on: 1) the key factors that caused the UK DNOs to have enough confidence to make the shift to a "flexibility first" approach? and 2) What commercial structures were successful in the early days in incentivising and developing consumer engagement?	1) Innovation trials is a big thing. DNOs were given the ability and significant funding via OFGEM to carry out innovation trials this enabled them to prove that you could get flexibility, how reliable that was, what kind of price points they would need to offer. So also we're saying that in some cases, DNO's are procuring flexibility at this point kind of ahead of need to stimulate market so that at the point when they require that flexibility in anger they're able to go out to the market and get it through. This sends a signal to get this market primed and ready for peak load growth that they see happening in five years' time, meaning all

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		that fun down the line. And they have got the option if they go out to the market and they can't find flexibility, then conventional enforcement, other forms of smart solutions remain an option. So it's not flexibility or nothing. It's let's try flexibility first. (Esther Dudek – EA Technology) Adding to Esther's point - innovation funding not only built confidence and evidence in flex, but also the "know how" across the sector to enable flex services. This report shows the scale and focus of innovation funding to enable distribution system operation up to 2019 (Evie Trolove – Orion/FlexTalk Design Team) 2) In terms of the commercial structures, successful in the early days of developing consumer engagement – what is being mostly contracted is from larger industrial sites, we are seeing more involvement of community energy resources, particularly through EV charging, this is because tariff structure reward and this has helped shift consumer awareness in the UK in the last 2 winters. A particular scheme from National Grid very much focussed on peak reduction and that has really improved public awareness of the idea of the time of use actually matters (Esther Dudek – EA Technology)
5.	In order for consumers to become more involved with supporting flexibility there needs to be cost benefits. How do we think networks and retailers will be able to pass down these benefits?	The core advantage of the flexibility is to avoid the network augmentation. So I think that is already passed down into terms of the increasing the network utilization. So the way it works is that whatever infrastructure we have at this point in time, if we can utilize it to the maximum without upgrading just for the peak demand, which is only used rarely, then that means we are making efficient and prudent investment in the network development which in terms of the distribution charges, and in terms of the overall market charges it will be passed on to the consumer and benefit even the end customer. (Yogendra Vashishtha – EA Technology) It will allow by augmenting that and actually managing some of the constraints at the local level using non-network solutions. It'll also then enable the customers the bottom end to actually access other markets so potentially be aggregated up into

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		the wholesale markets as well and other markets across the board. So it'll actually then open up that value stack for customers. (Stuart Johnston - EEA)
6.	Are there examples where jurisdictions use of both of these two "leading" protocols rather than committing to one or the other for the specific use cases? Are there any significant drawbacks aside from having to support two protocols to making both available as options rather than committing to one?	In jurisdictions observed in EA Tech report , because of the cost involved for implementing they have not gone for both at the same time, but people have tried. So you will see in the report that, people have tried and they are asserting the other one. Most jurisdictions satisfy the immediate requirements, so if there is a specific need at one particular time in that jurisdiction. They have seen what is the best at this point in time, not what is coming up, and they have gone that pathway to start doing the trials and collecting the knowledge. But at the same time, the same jurisdictions are also studying and even setting up the frameworks to evaluate all the standards. You know, you will see in the report that you know, they are saying okay, let's see what all the standards are. And, you know, evaluate them on these criteria's like, interoperability, that they are open standards, cybersecurity, backward forward compatibility. Every jurisdiction is going ahead in implementing either API's or one particular standard to solve a problem or to run the trial basically, and to create more knowledge of what would be required in future but at the same time, most of the jurisdiction are studying like this study in New Zealand is doing (FlexTalk) a doing and there are several other is in our reference, we have actually given in the report saying they have set up the framework to evaluate all the standards available, and they have put the results and saying what what are the pros and cons what are the limitations of each and every standards that are very much available? And you know, please see the report and you will see how they're doing that. (Yogendra Vashishtha – EA Technology)
7.	We see a lot of constraints are very localised, e.g. at the grid edge on small LV networks. Did any trials try to achieve Flexibility / shifting peak load at a LV transformer level?	With a limited number of EV charges involved in project Flextalk, it didn't look at targeting at the transformer level but EDBs did allocate the chargers to a logical grouping or asset on their networks with each having several "targets" to choose from (or to group together) that covered a number of EV chargers. OpenADR has a fairly comprehensive targeting mechanism that allows for multiple target areas, asset names or even ICPs to be passed in the demand management messages to the flexibility

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		supplier. (Terry Paddy – Cortexo / FlexTalk Technical Lead)
8.	Presentation mentioned NZ flex interest in batteries. But limited NZ PV installation. Australian customer interest in BTM BESS is driven by onsite PV generation and islanding. NZ interest in BTM BESS driven by?	Whilst PV installations often steal the limelight when discussing battery storage, it is essential we all recognise the numerous benefits batteries can bring on their own. From enhancing grid flexibility and stability, to enabling time-of-use energy management, providing backup power, promoting renewable energy integration, and reducing carbon emissions, battery storage systems are a vital component in our journey towards a sustainable and resilient energy future. As renewable energy technologies develop, we mustn't overlook the significant role that stand alone battery storage can play in improving our energy systems. (Stuart Johnston - EEA)
9.	When could we see trials for flexibility in NZ?	There's lots already Simon - trials and real life implementation. One example is Lincoln and another is resi-flex (Evie Trolove – Orion/FlexTalk Design Team) Also – Aurora/solarZero Upper Clutha non-network solution is real life flexibility solution. And of course the FlexTalk OpenADR 2.0 trial, of which we will be publishing final report in April. See EEA FlexTalk webpage for project updates / insights. (Connie Dunbar – EEA FlexTalk Project Lead)
10.	Did you consider expanding the use of ripple control for the operation of flexibility resources (other protocols would still be required for availability of flexibility for the EDB)?	The use of Ripple Control was outside the original scope of the Flextalk project as it was designed primarily to test the OpenADR protocol. However, as the project progressed the team did acknowledge that ripple control is an important tool that EDBs could utilise in enabling flexibility, as it is an established, cheap and robust communication infrastructure, and could be considered in the project design of Flextalk 2.0. (Stuart Johnston - EEA)