

## Getting more out of our electricity networks by reforming access and forward-looking charging arrangements

### A submission by the University of Bath – Professor Furong Li

Ofgem's consultation on reforming access and forward-looking charging arrangements of electricity networks is timely and moves in the right direction. Against a high uncertain future, the proposal aims to provide some degree of certainty for future network investment and improve network sharing between differing types of customers. This is particularly beneficial to renewable generation and flexible demand, as they do not require full network capacity all the time. Through well-designed sharing systems, the volume of customers that could be serviced by the existing network will increase very substantially, which should in turn lead to a substantially reduced share of the use of system costs, across the extended base of existing and new network customers.

We welcome the proposal for improving the definition of network access for customers, however we have concerns regarding the proposal for this to start with small users. **Following this path, there is serious risk that the reform would only deliver benefits in the distant future, as there are significant barriers that are likely to limit the benefits seen by this customer group in the near term.** These barriers include: i) small users will have very little energy knowledge and understanding to be able to define their required network access for a long time to come, ii) the approach requires major consumer engagement and intervention which takes time, and iii) it would take even longer time to develop customer energy knowledge even if smart meter roll-out nationwide is on time. There are other options that are likely to deliver near-term benefits and do not require mass understanding, education, and intervention right from the start.

We also welcome the proposal for improving locational and temporal signals at the lower voltages, releasing spare capacity from the existing network to improve network efficiency and reduce future network investment. **There appears however to be a significant missed opportunity here, to tap into the existing capacity reserved for contingencies, which could be used to service intermittent and/or interruptible customers when the network is intact.**

Finally, little consideration appears to be given to the impact on future network investment requirements from introducing local markets, particularly where a local market would remove or create more network problems, or where local markets could trade different types of energy products. Market operators could be the best agents to define network access rights for small customers as they would have incentives and resources to interpret customers' needs. **The lack of consideration of local market opportunities would seriously limit the appropriateness of the reforms into the future.**

We believe that the consultation travels in the right direction against a highly uncertain future, but requires further thinking with regard to the specific details to not miss near-term opportunity and to be better future-proofed. We think it would be appropriate to develop roadmaps for network access and charging arrangement with different sophistication and granularity, and identify the right technical, commercial and social conditions for introducing the most appropriate granularity or sophistication. We would be pleased to discuss the above remarks.