

*Electricity Network Innovation Competition Full Submission*  
**Supplementary Answer Form**

**Project: EVOLUTION**

Tick if this answer has been provided verbally: ☐

Project code	SPD/EN/01	Question Number	15
Question date	18 August 2015	Answer date	20 August 2015
Submission section question relates to	4.1		
Topic	Benefits		
Question	On page 22 you refer to “..restructuring the system architecture..”. Can you expand on what is meant by this?		
Notes on question			
Answer	<p>Currently the system operator takes sole responsibility for real time operational balancing with the majority being fulfilled using large centralised generation plant. They have however stated recently that there will be a paradigm shift over the next fifteen years that will move a minimum of 50% of balancing capacity to distributed assets. By doing so by means of direct interaction with participants they will require the distribution networks to be able to be both flexible but potentially also capable of accepting vastly increased load and generation capacity. Neither the SO or TO have any visibility of the power flows within the distribution networks so it is potentially unworkable where the distribution network is expected to be able to operate reliably and at best possible value to customers when they have little or no influence to manage increasingly dynamic impacts of customer behaviour. A new system architecture requires to be developed along with operating rules that would facilitate localised markets that are able receive operational instruction from TO / SO and have all the appropriate monitoring, control and settlement arrangements to respond in an optimised fashion.</p>		
Attachments			