

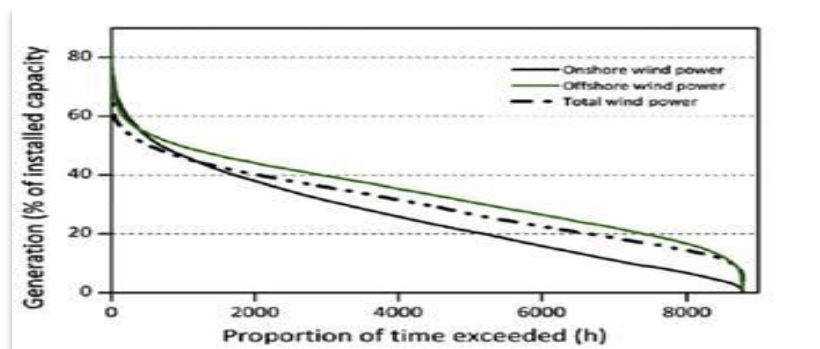
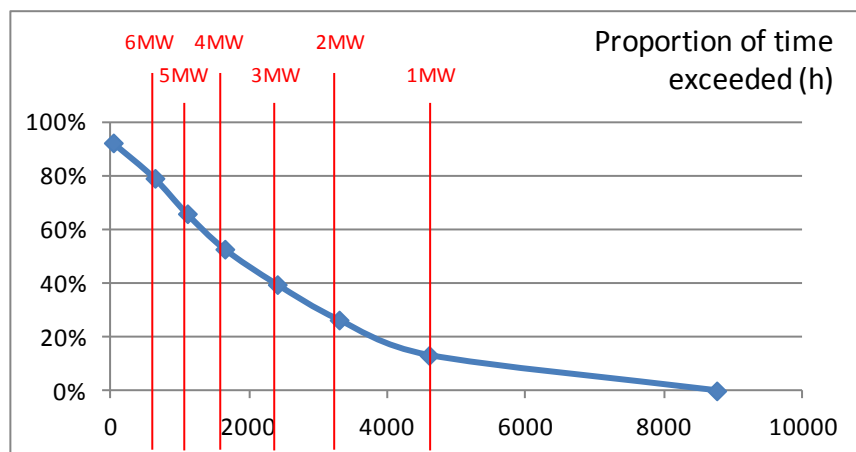
LCN Fund Full Submission

Supplementary Answer Form

Tick if this answer is Confidential: ☐

Tick if this answer has been provided verbally: ☐

Project code:	WPDT205	Question Number	15
Question date	30/09/2013	Answer date	30/09/2013
Submission section question relates to	Bi-Lateral Panel Session		
Topic	Technical		
Question	Please provide a graph showing an output duration curve (i.e. hours against MW) for the wind farm. Illustrate the points on the curve at which the wind farm would be constrained.		
Notes on question			
Answer	<p>The following graph represents the output duration curve for the wind farm data used within the model. Please note that this data has been achieved by using the existing wind farm data and uplifting it to reach the same capacity factor of that anticipated with the new turbines.</p> <p>The net result of the above approach is to effectively model a 7.6MW wind farm with output capped at 6MW. The problem with this approach is that it accentuates the top end generation and underestimates the bottom end. The impact of this is that the wind farm output is excessively curtailed by the model. Additionally, as can be seen by comparing the output duration curve for the modelled data Vs the average data for UK onshore windfarms shown below it, the level at which generation will be diverted into the electrolyser is significantly understated as demonstrated by the steeper gradient in the line modelled. Consequently electrolyser utilisation is also understated.</p> <p>The hours above which the wind farm output would be constrained for given levels of solution capacity (i.e. unconstrained network capacity plus the electrolyser capacity) are shown in red.</p>		



Source: A 2020 GB transmission network study using dispersed wind farm power output, Renewable Energy 37, 2012

Attachments

Verbal
Clarifications
(Consultants
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