



DS3 Advisory Council

Voltage Control Discussion paper

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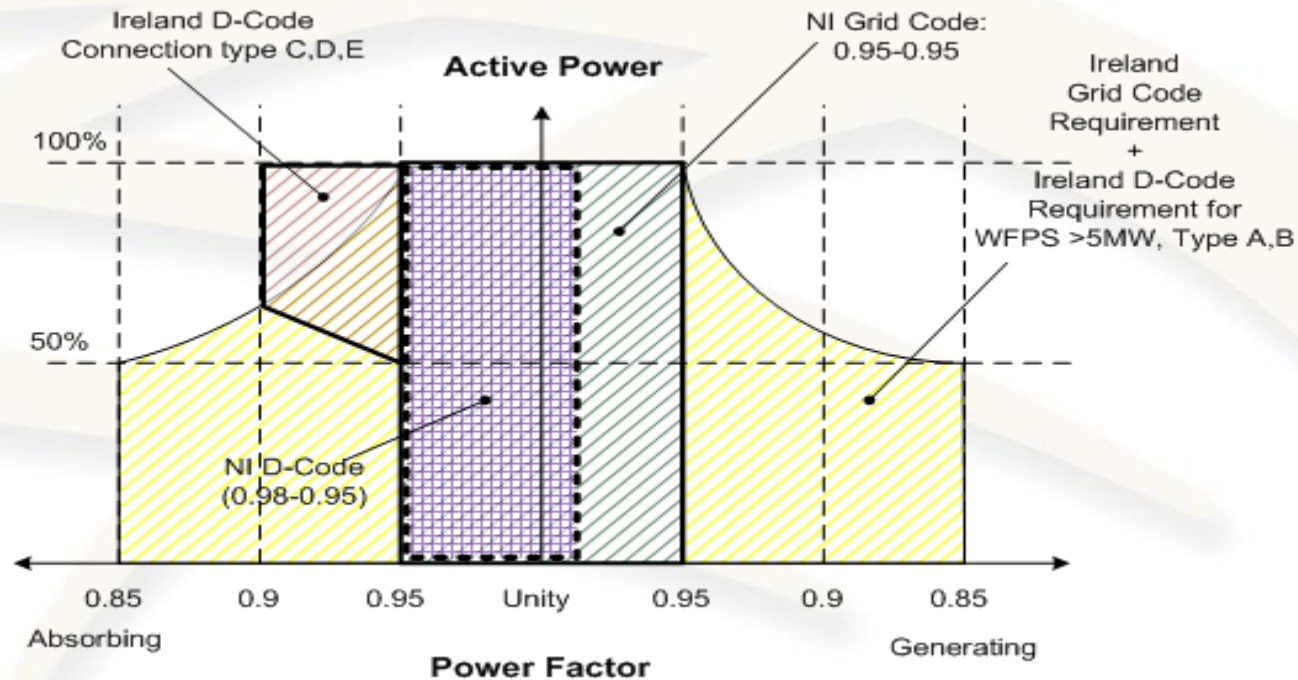
DS3 Voltage Control Discussion Paper

- **Advisory Council requested paper to be revised and updated**
 - Comments received and included
 - Added figures from actual events
 - Restructured and reworked multiple sections
- **Objective**
 - To provide the Advisory Council background on the challenges with managing system voltage and the approach being adopted by the TSOs
 - Is the approach correct? If not what else is required?
 - Have the appropriate Critical Success factors been identified?

The Challenges

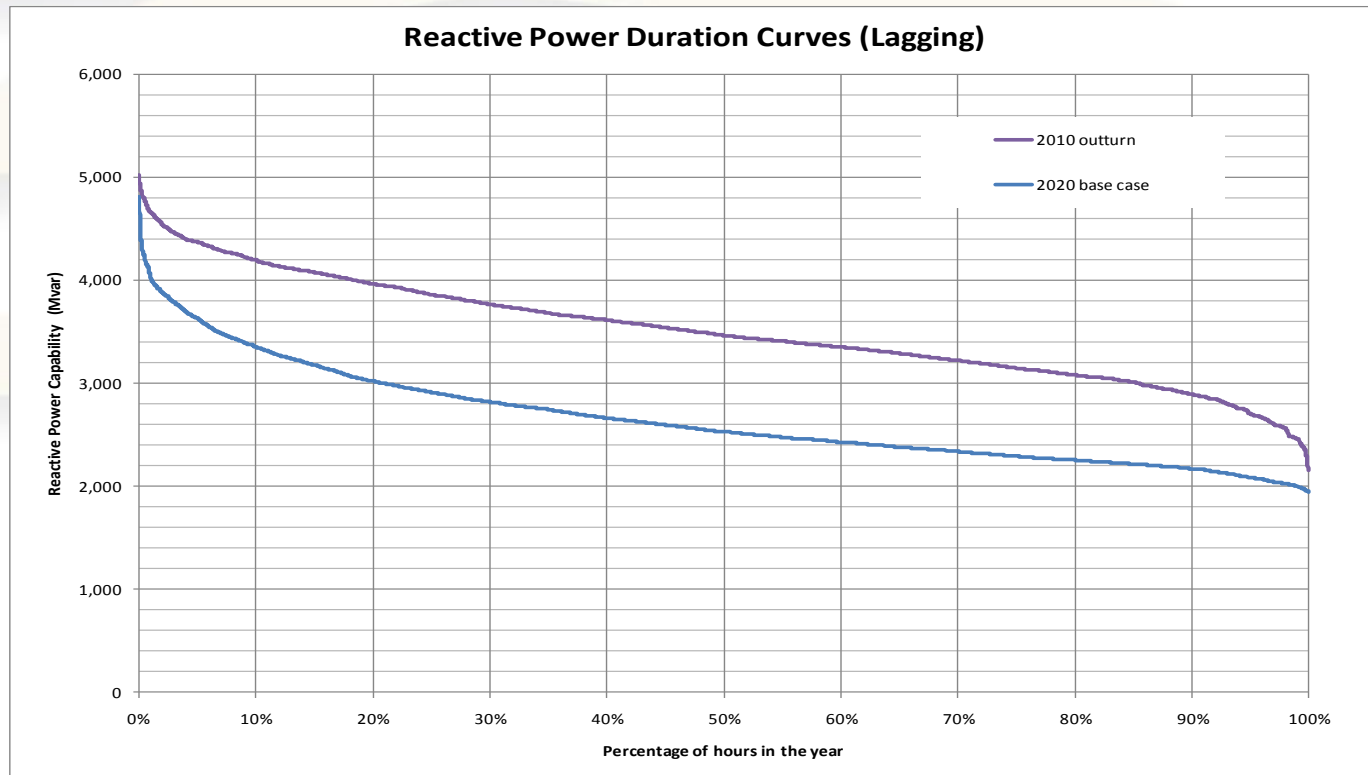
Mixed Requirements

Grid Codes and Distribution Codes differed on requirements



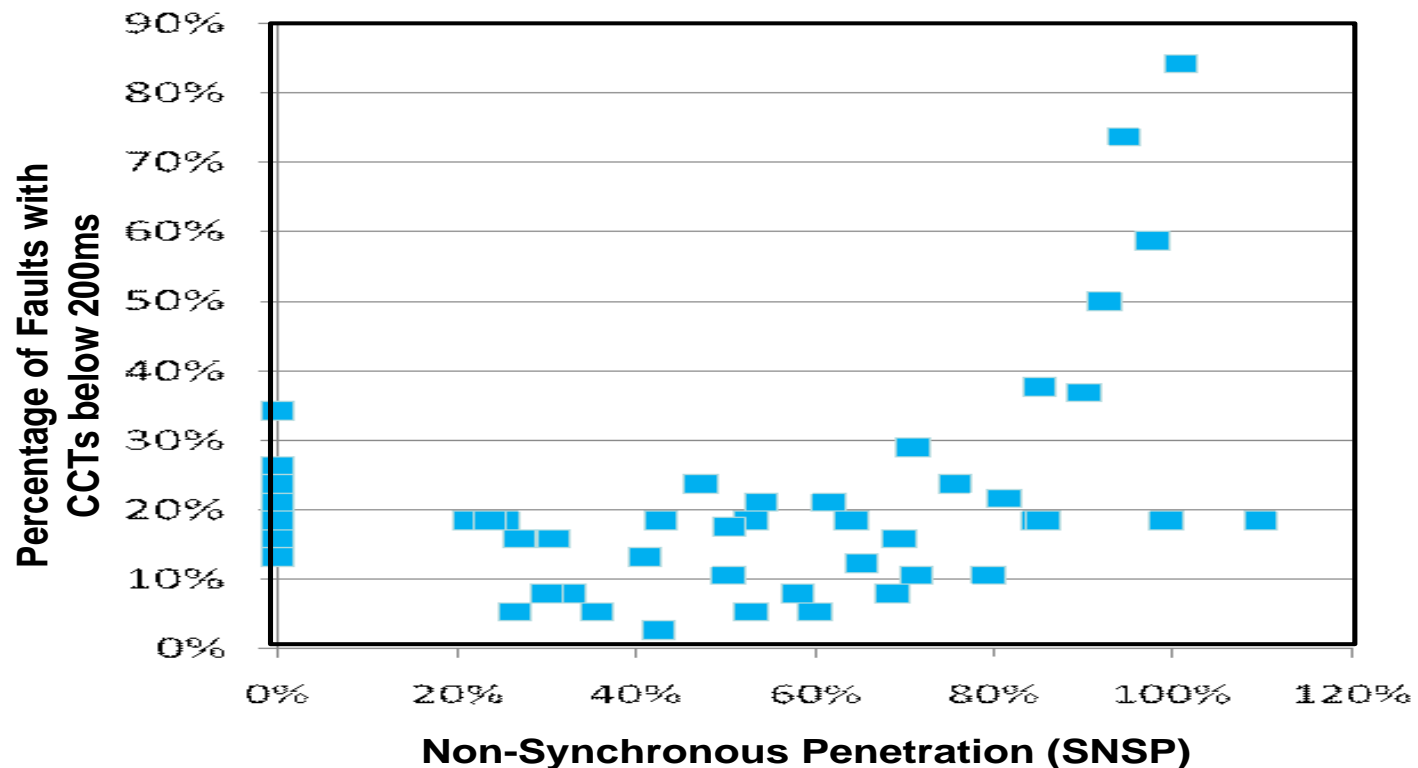
The Challenges

Replacing Synchronous with Windfarms Sources



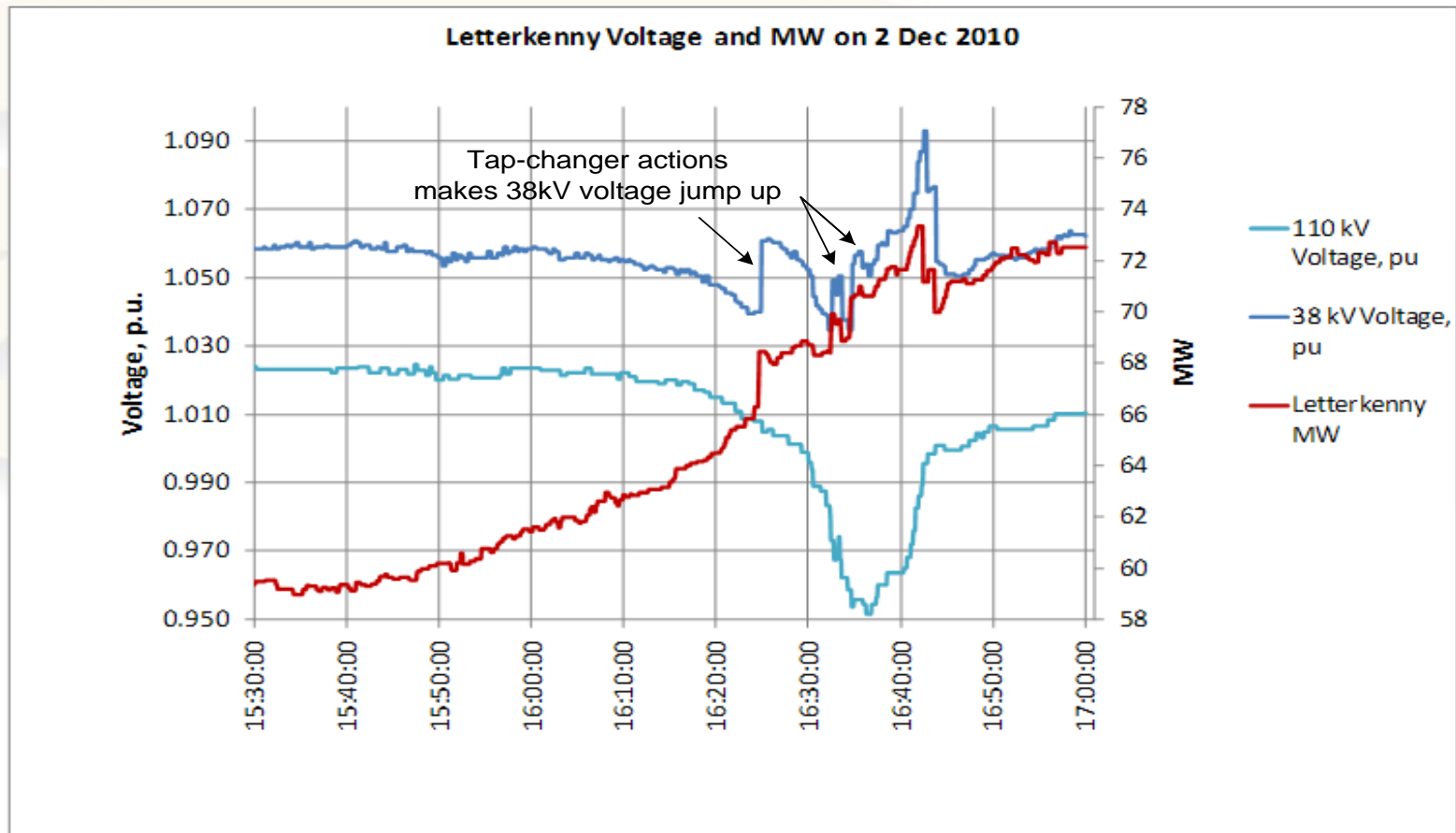
The Challenges

Compromising Integrity of Power System



The Experience

Evidence of reactive power issues



The Approach

Descriptor	Responsibility	Ind Tim	
Grid Code Steady state Reactive Power Control from Wind farms	TSOs, DSOs	Q3 2012	Capability
Grid Code Dynamic Reactive Power Provision from wind farms	TSOs, DSOs	Q4 2012	
Controllability of Wind farms	TSOs, DSOs	On-going	Control & Practice
Implementation of new standards	TSOs	Q1 2014	
Pilot Projects	TSOs, DSOs	Q1 2013	
Planning Studies	TSOs, DSOs	Q2 2013	
TSO Reactive Power Management Policy	TSOs	Q1 2014	Policy
TSO/DSO Voltage Control Policy	TSOs, DSOs	Q1 2014	

Discuss