

Power System Operation 2009-2010

Michael Kelly

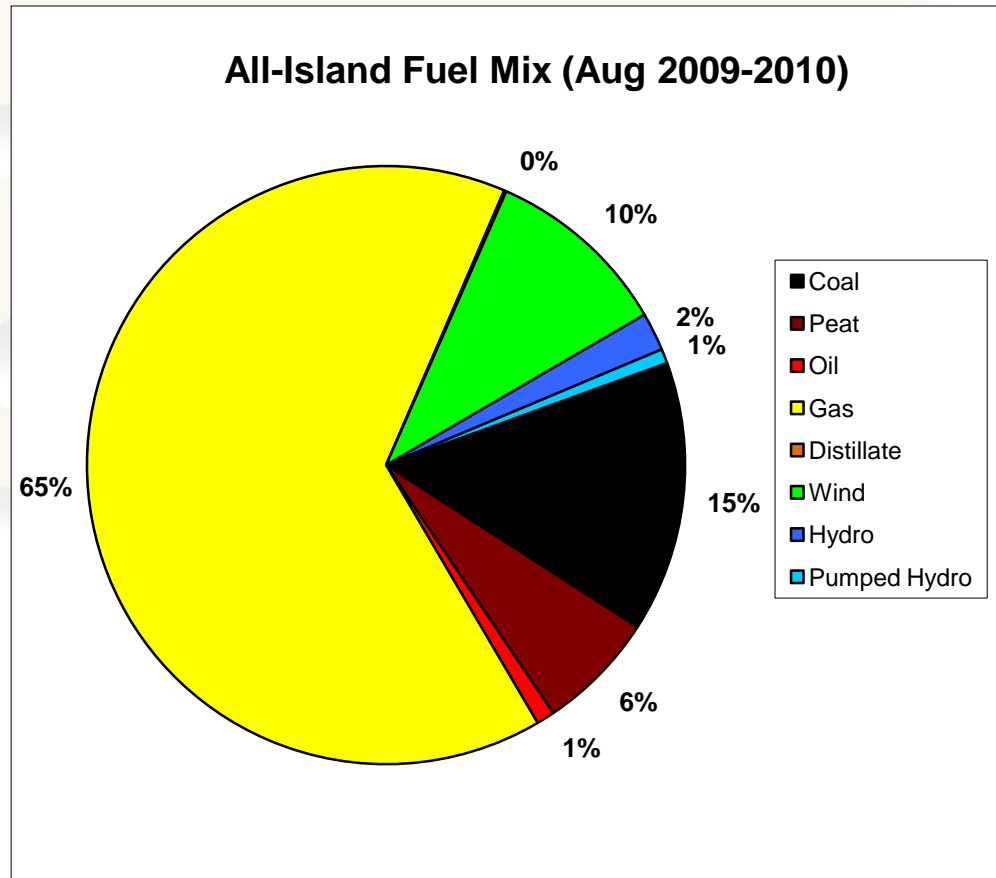


Structure

- Interesting Facts and Figures
- Operational Initiatives
- Overcoming Adversity



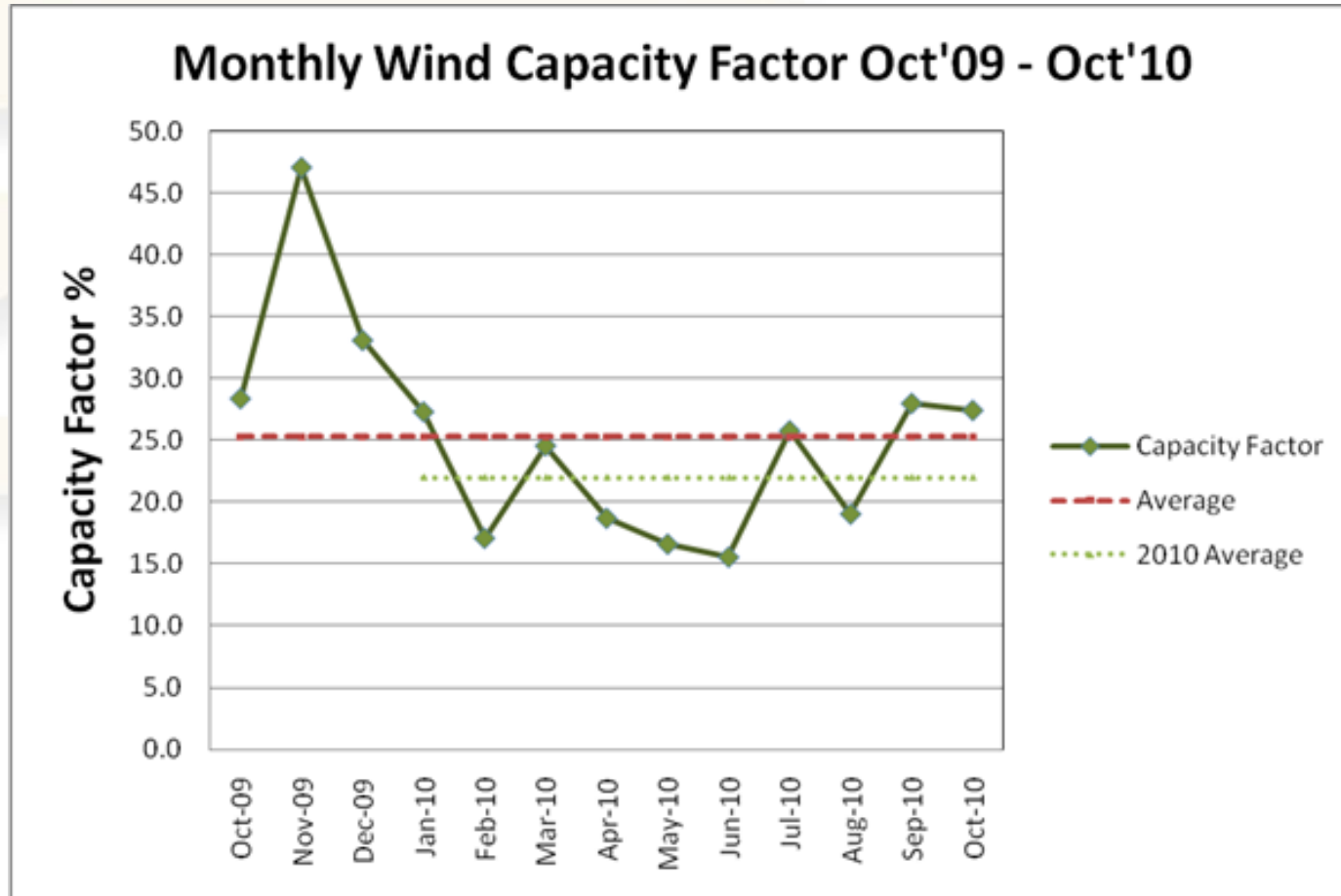
All Island Fuel Mix



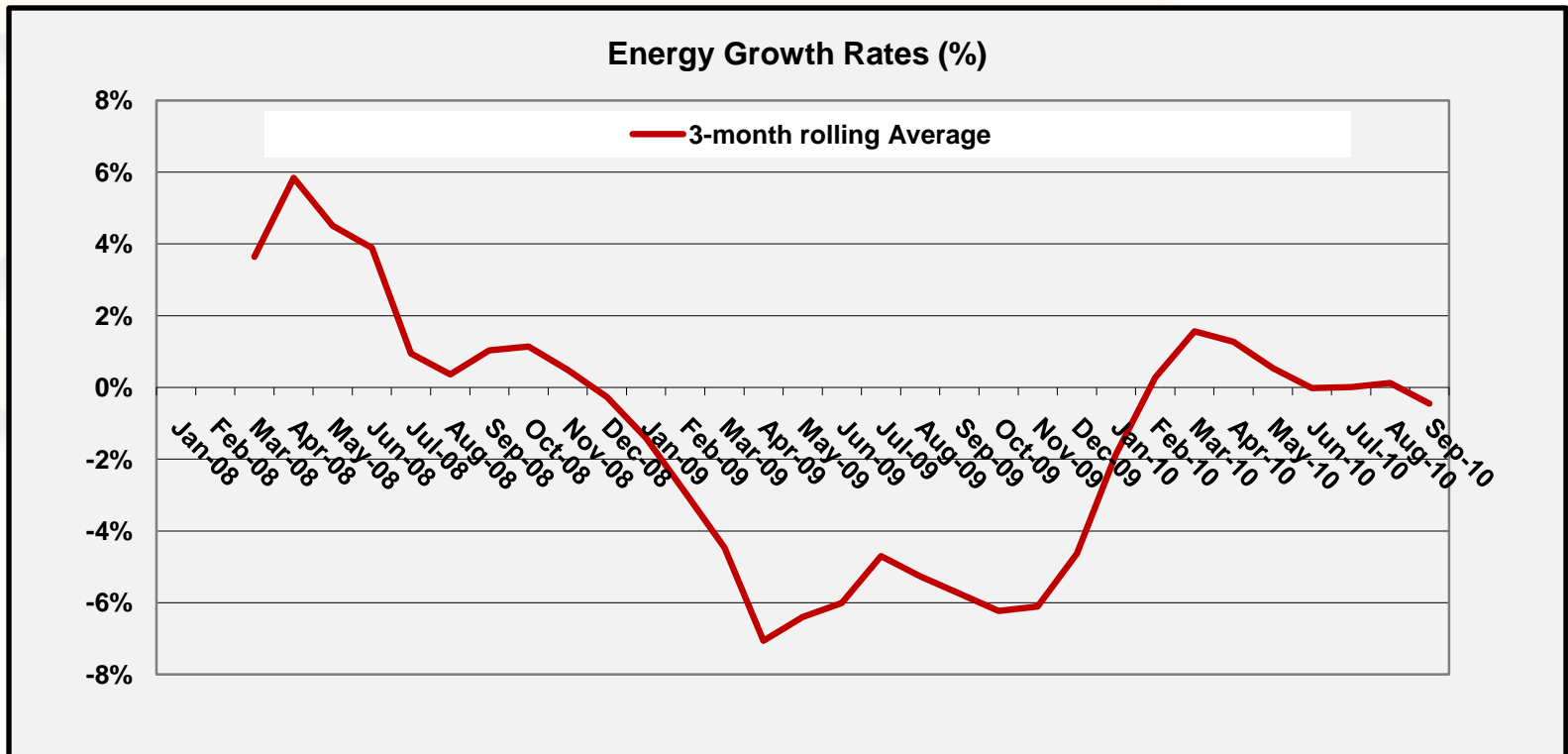
Rol
Wind reached 50% of
system demand 5th April
06:00 hrs, Demand
2191MW
Wind = 1092 MW

NI
Wind reached 50% of
system demand 4th July
04:30 hrs, Demand 558
MW
Wind = 280 MW

Wind Capacity Factor



All Island Demand Growth



Capacity Changes

Plant Commissioned		Plant Type	Date	Capacity [MW]
Aghada	AD2	CCGT	Apr-10	432
Edenderry	2 x OCGT	CCGT	Sep-10	116
Whitegate	WG1	CCGT	Oct-10	444
Wind		Wind	Ytd	253
Total				1245
Plant De-Commissioned		Plant Type	Date	Capacity [MW]
Poolbeg	U1,U2, U3	Gas/Oil	Mar-10	467 ^x
Marina	(Steam)	Gas/Oil	Mar-10	30
Total				497
Net				748

Whitegate WG1



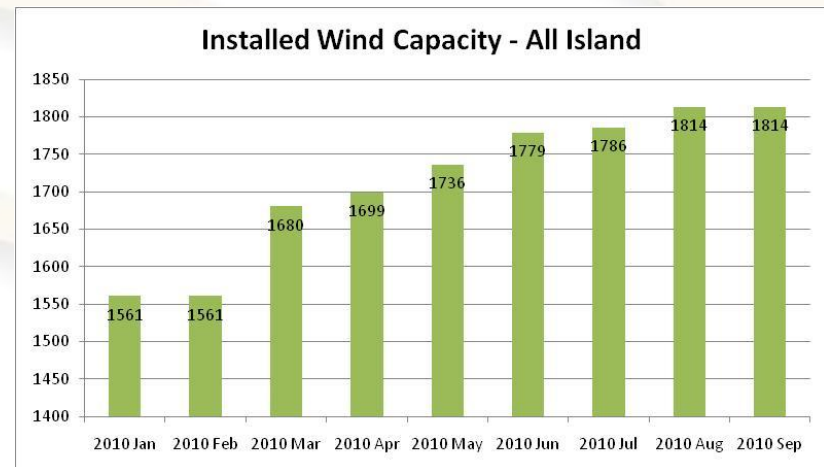
Edenderry



Capacity Margin

Winter 2010/2011

- Conventional = 9138 MW
 - 446 MW forced out for winter 2010/2011
- Wind = 1814 MW
- Peak = 6440 MW
- Margin ~ 36%



Effective and Efficient



**Asset and
Operational
based solutions**



Achieving more with less

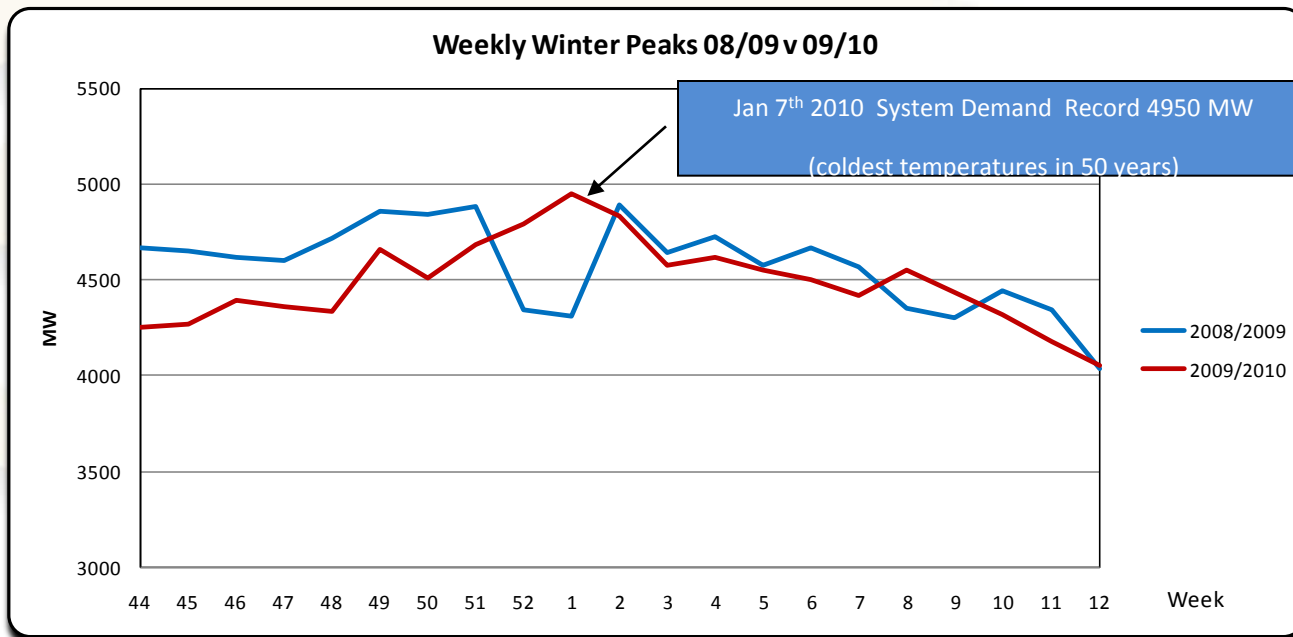
- WSAT
- Dynamic Line Rating
- Special Protection Schemes
- Wind Dispatch Capability
- Voltage support
 - Static sources v's generation run cost.

Events

- Sustained very cold weather
 - Increased demand
 - High plant forced outage rate
 - Single mode of failure
- Ice Storm
- Things you can't forecast!

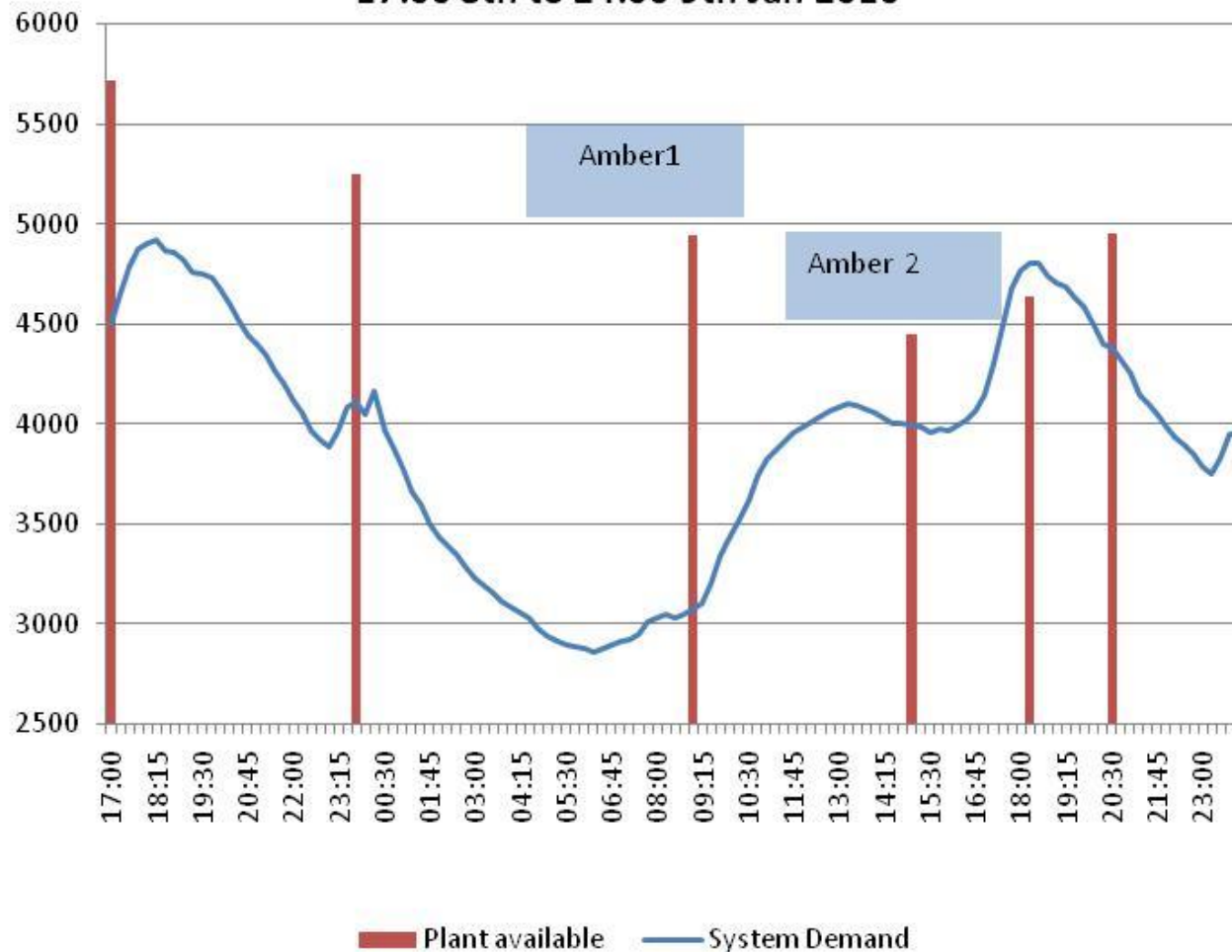


Demand Response



Demand - Generation Availability

17:00 8th to 24:00 9th Jan 2010

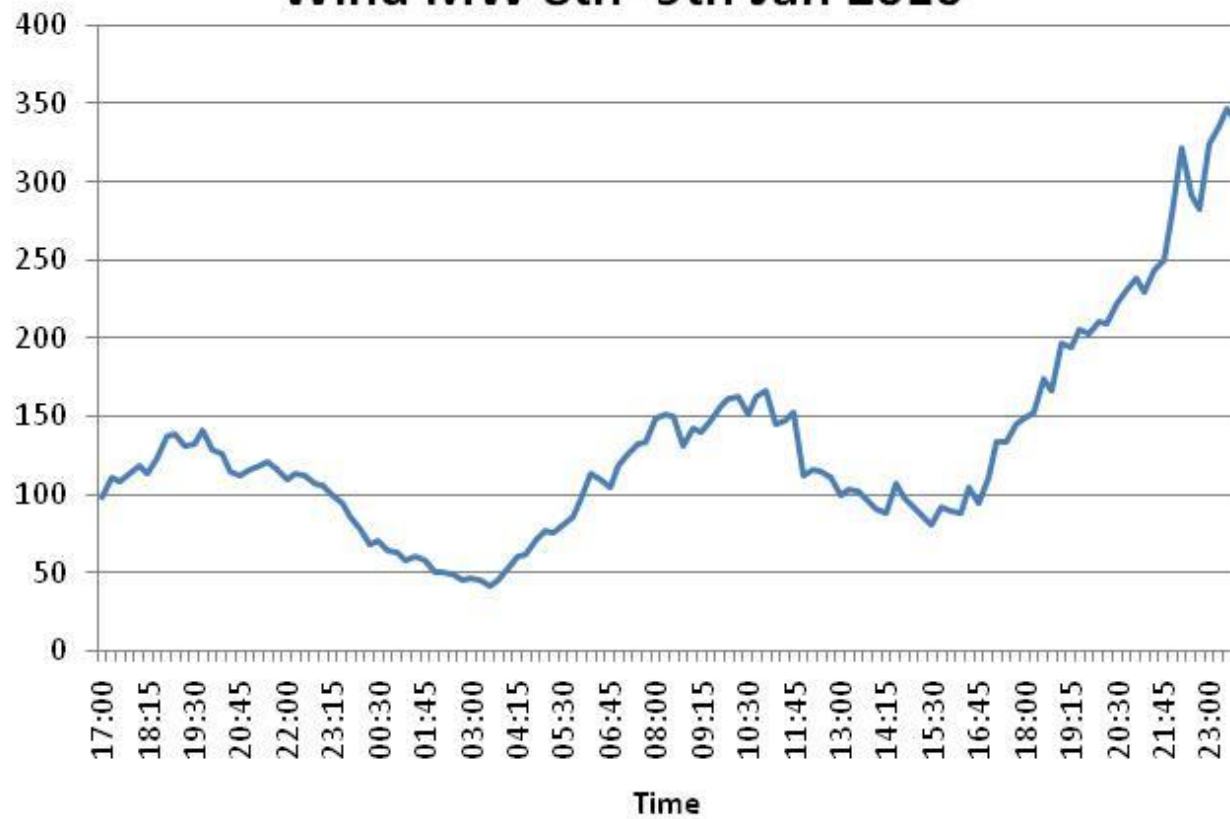




BRENDAN WOODS



Wind MW 8th -9th Jan 2010



Plant Changes

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Jan 9th 2010 Amber Level 2 Alert - System Generation & Availability

