The Role of the Malta-Italy Interconnector

In an Integrated Mediterranean Energy Market
Project Context for Malta

- Malta: An Isolated Island Grid
- Peak Demand: >400 MW
- Two local HFO Fired Power Stations
- Security of Supply Issues
- System Stability Issues
Interconnector Infrastructure

- Alternating Current Interconnection
- 200MW Capacity
- 98km of Submarine Cable
- 19km of Land Cable in Sicily
- One Terminal Station in Sicily
- Terminal Station and Voltage Conversion in Malta
Relevance of the Malta-Italy Interconnector

• A Cross-Border Submarine Link
• North-South Mediterranean Link
• Small Capacity but approximately 50% of National Demand
• Exposed New Capacity Dispatch Management Requirements
• Technology Limitations
• **A Relevant Test Case:** Lessons Learnt
Lessons Learnt: Infrastructure

• Financing
• Sea-bed rights
• Landing Permits
• Environmental Issues
• National vs Regional Priorities
• Political Support is Required to Implement
Lessons Learnt: Operational Issues

- Reactive Power
- Operating Losses
- No Load Losses
- Security of Supply
- Onward Transmission Network
- Ancillary Services
- Sharing Capacity Reserves
Lessons Learnt: Market Issues

• Vertically Integrated Utilities
• Single Buyer vs a Fully Competitive Market
• Physical Constraints Hindering Free Market
• Onward Transmission Costs / Congestion Charges
• Balancing Costs
• Load Profiles of Sending/Receiving Countries
Lessons Learnt: Regulatory Issues

- Unbundling of Vertically Integrated Utilities
- Cross Border CO$_2$ Emissions
- National vs Regional Dispatch Priorities
- Network Codes need to be adapted
Lessons Learnt: The Case for Renewables

• Malta increasing its share
• Synergies: Surplus Generation and Spinning Reserve
• Geographic Coupling renewable resources with Demand
• Renewables compete with Conventional
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