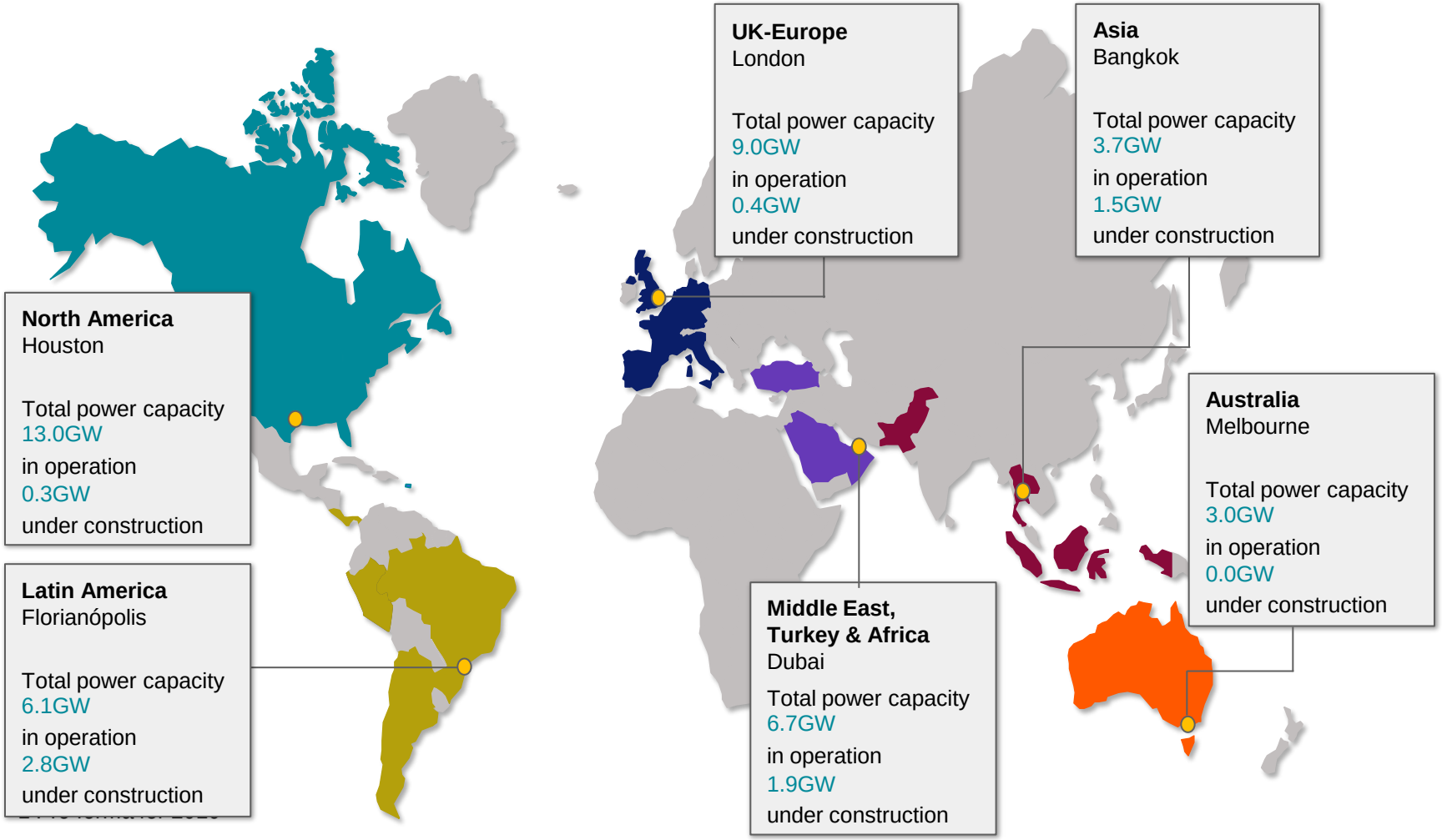
# Electricity Market Reform – The case for capacity payments

*Steve Riley, CEO and President, IPR UK-Europe*

Nomura Utilities Conference,  22 June 2011, London,

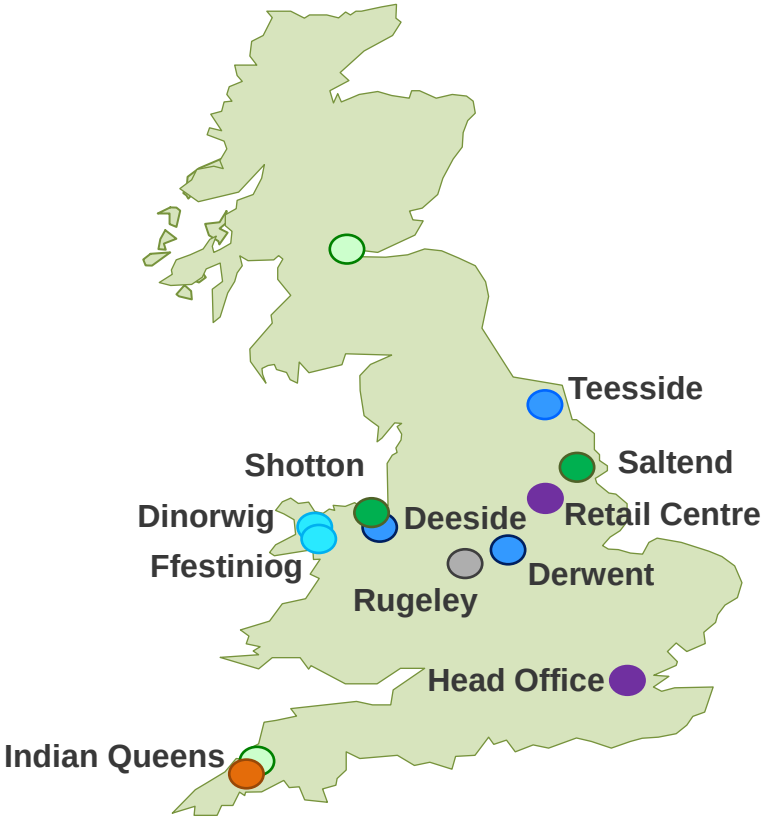
# International Power has a global footprint




*Note: All GW numbers are on a net (by ownership) basis as at 31 December 2010*

International Power
GDF SUEZ

# International Power in the UK




- Pumped hydro (2088 MW)
- Gas (2600 MW)
- Gas/Cogen (1407 MW)
- Oil (129 MW)
- Coal (1026 MW)
- Onshore wind (20 MW)
- Head Office/Retail Centre

- Largest Independent generator in the UK
- 9.2 GW gross (6.1 GW net)
- Total generation in 2010 of 25.6 TWh or 8.0% of UK production
- Operate in baseload, mid-merit, and peak markets
- Provide services for the system operator
- Developing renewable portfolio in the UK
- Thriving retail business supplying Industrial and Commercial sector
- Employ just over 1000 people

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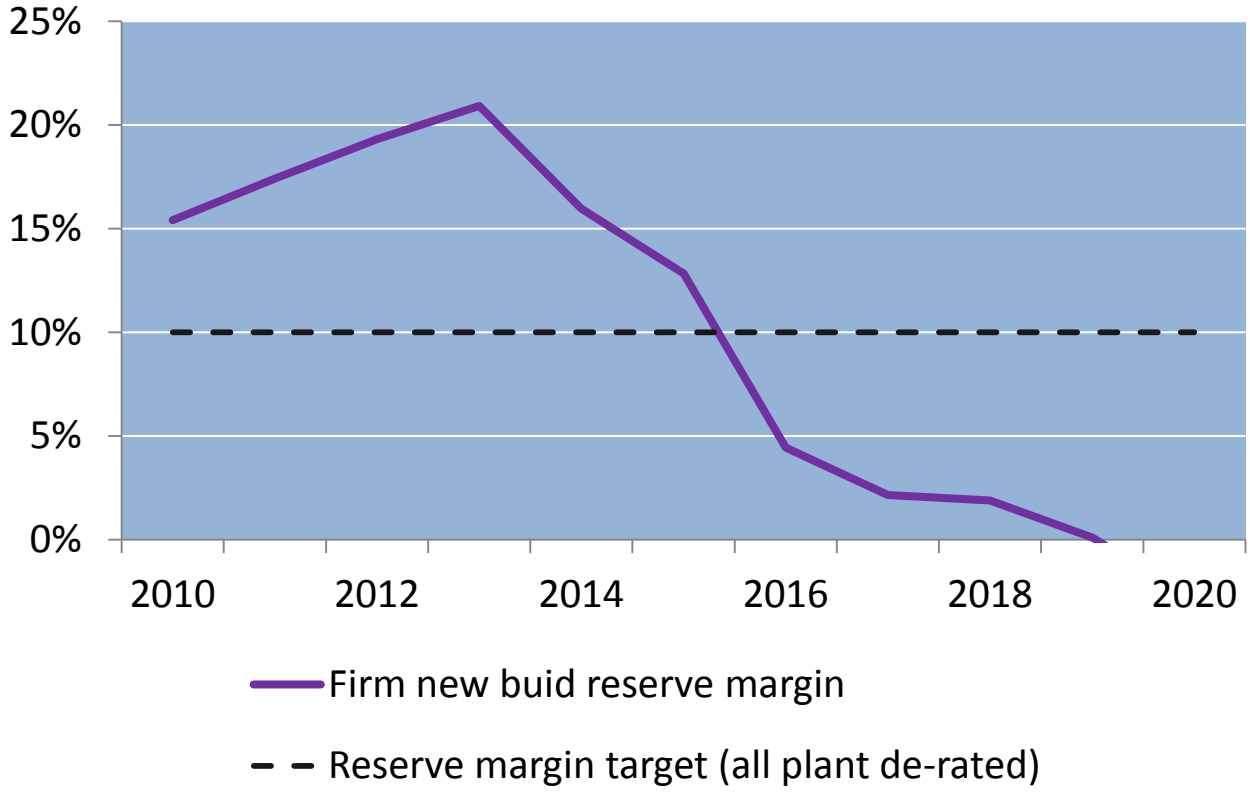
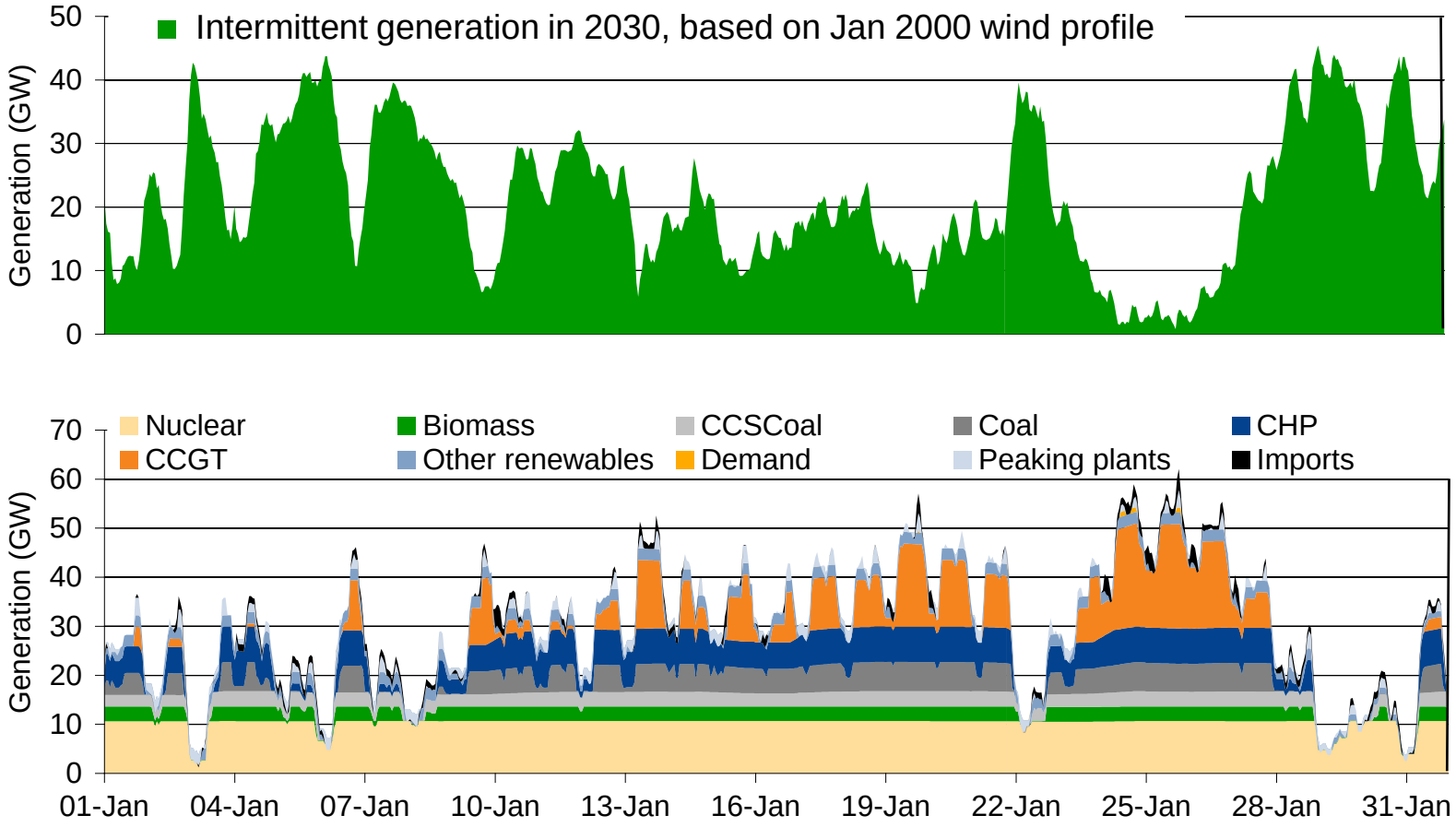
# Evolution of the generation sector




*Source: IPR Analysis, Feb 2011*

*Notes: Total peak demand includes peak demand met by embedded generation; Renewable capacity has been de-rated to account for lower contribution to peak; capacity at peak excludes contribution from interconnectors; does not include plant consented or in the planning process.*

# Greater flexibility needed in the future




*Source - Gas: At The Centre of a Low Carbon Economy Future, A review for Oil & Gas UK, Poyry, September 2010*

# Establishing the need for capacity payments

***Policy will transform energy market***

- Dramatic shift in relationship between capacity and energy
- Interventions for low carbon capacity will impact wholesale market
- Nature of 'peaking plant' will change

***Increasing wind capacity will impact conventional generation***

- Lower load factors for fossil plant
- Increased pressure on plant reliability

***Significant flexibility challenge will emerge***

- Range of generation 'gaps'
- Potential 20 GW hourly swings, 41 GW daily swings
- Increased need for shorter term balancing

***'Targeted' Capacity Mechanism concerns***

- Designed to meet marginal peak capacity needs – does not meet flexibility requirements
- Will distort what is left of market, leading to 'slippery slope'
- Unnecessary extension of SO role

# Comparing capacity resources in the US market

| Capacity need [1] | Real Time Demand Response | Imports [2] | Generators |
|---|---|---|---|
| ▪ *Deep Emergency Actions* | ✓ | ✓ | ✓ |
| ▪ *Moderate Emergency Actions* | ✓ | ✓ | ✓ |
| ▪ *Real time avoidance of an emergency* | ✗ | ✓ | ✓ |
| ▪ *Day Ahead Avoidance of an emergency* | ✓ | ✓ | ✓ |
| ▪ *Real Time economic dispatch (intra-hour)* | ✗ | ✗ | ✓ |
| ▪ *Real Time economic dispatch (hourly)* | ✗ | ✓ | ✓ |
| ▪ *Day ahead energy market* | ✗ | ✓ | ✓ |

*Notes : (1), Example from ISO-NE 'market' (Independent System Generator – New England); (2), scale of contribution limited and may not always be available*

# Lessons from US capacity market

***On capacity payments mechanisms***

- Primary aim to create price signals to attract new investment and ensure security of supply
- Policy makers need to ensure out-of-market entries do not depress capacity price signals, avoiding adverse financial impact on those existing generators who provide system integrity
- An ideal capacity market design should yield differentiated capacity payments:
  - based on the levels of service the resources are required to provide
  - to resources based on locational reliability

***On the contribution of Demand Side Measures***

- Can serve as an integrated part of capacity supply but cannot provide the same levels of service as conventional generators
- Can contribute to an *apparent* capacity oversupply, depressing capacity prices, and discouraging new investments

# Prevailing views on capacity payments in the UK

| Vertically integrated company (1) | Position on capacity payment | Independent Generator company | Position on capacity payment |
|---|---|---|---|
| Centrica | Yes, reserve market | International Power | Yes, wider |
| EDF Energy | Yes, 'targeted' on low carbon | Drax | Yes, wider |
| E.ON UK | No | Intergen | Yes, flexible cap |
| RWE NPower | No | DONG | Yes, targeted |
| Scottish and Southern | Yes, market wide | ConocoPhillips | Yes, wider |
| Scottish Power | Yes, for all firm plant | Eggborough | Yes, wider |
| | | ESBI | No |
| National Grid | Not at this time | Statkraft | No |

*Source: Energy Spectrum, Cornwall Energy, Issue 283, 6 June*
*Note (1): National Grid included as the System Operator; position taken from their Submission*

# Summary

- Potential for more volatility in UK generation towards 2030
  - Intermittent generation requires a highly flexible portfolio
- DECC should develop a broad capacity mechanism for flexible plant, addressing security of supply challenges
  - A ‘targeted’ capacity approach will accelerate plant closures
  - The nature, scope and timing of a capacity mechanism is very important
- IPR’s portfolio makes an important contribution to the UK’s generation sector
  - IPR remains actively engaged in the Energy Market Reform debate