NTS Exit Capacity Definition

Temporal Consideration

DISG, 2nd November 2004

National Grid Transco

UK Transmission

Overview

- Key objectives of product design
- Trade-offs between objectives in terms of temporal definition
- Analysis of options
  - Costs
  - Price stability
  - Complexity
  - Demand management
  - Efficiency of signal
- Summary of analysis
- Views

National Grid Transco

Key Trade-offs

- Extent of promoting ability for users to demand an appropriate quantity of exit capacity
- Ability to ensure economic and efficient development, maintenance and operation of the system and be cost reflective
- Range of options for the commercial regime
  - Allocation of rights in a 12-month block
    - Daily also available through short term allocation
  - Allocation of rights in 12 monthly bundles
    - Daily also available through short term allocation
- Hence balance to be struck

Present NTS Exit Arrangements

Capacity / Exit Pt	Who Books	Process/Duration	Level of capacity	Other
NTS Supply Points	Driven by registration of SOQ	Booked monthly. One month duration [Limited ability to reduce SOQ, so it equates to an Annual tranche]	Equal to SOQ. Level ? phys.max. (24.SHQ)	Facility for Capacity Trading & Transfer
NTS CSEPs	Shipper books.	Annual tranches but can amend mid-yr.	Agg. SOQ (F&I) ? phys .max.(24.SHQ)	Facility for Capacity Trading & Transfer
Inter-Connectors	Driven by registration of SOQ As for NTS supply pts.	Annual tranches but can amend mid-yr.	Agg. SOQ (F&I) ? phys .max.(24.SHQ)	DCH Voucher Scheme. Capacity Trading & Transfer
Storage Sites	No firm capacity booked. (Shippers register int. capacity only)	N/A	N/A	N/A

New Arrangements

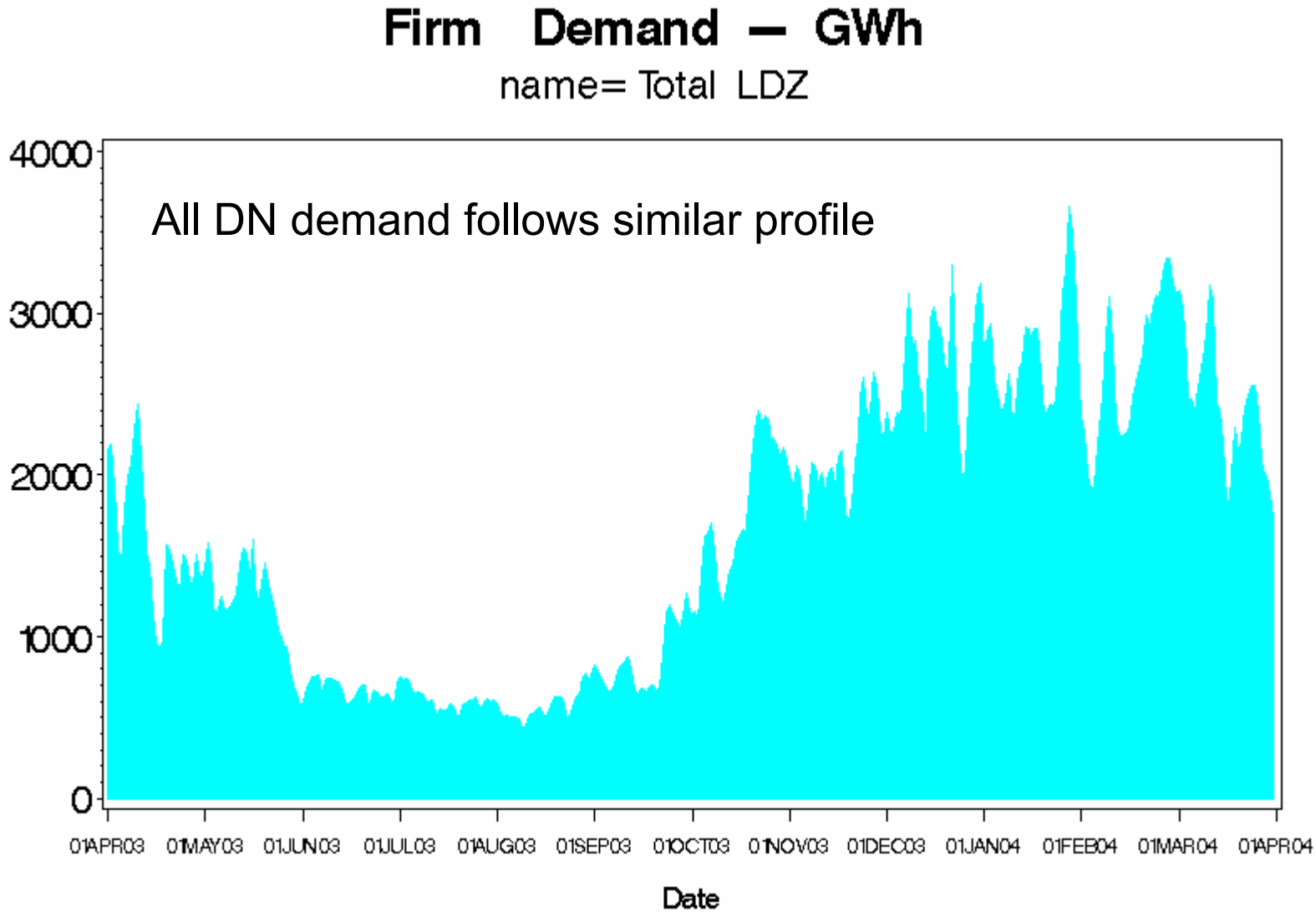
- Expressed as a daily right
- Bundled into monthly or annual (or other) blocks

- Expectaion that the licence will identify:
  - Baseline quantity
  - Reflective of max capability
  - Single annual quantity

Exit Capacity Costs

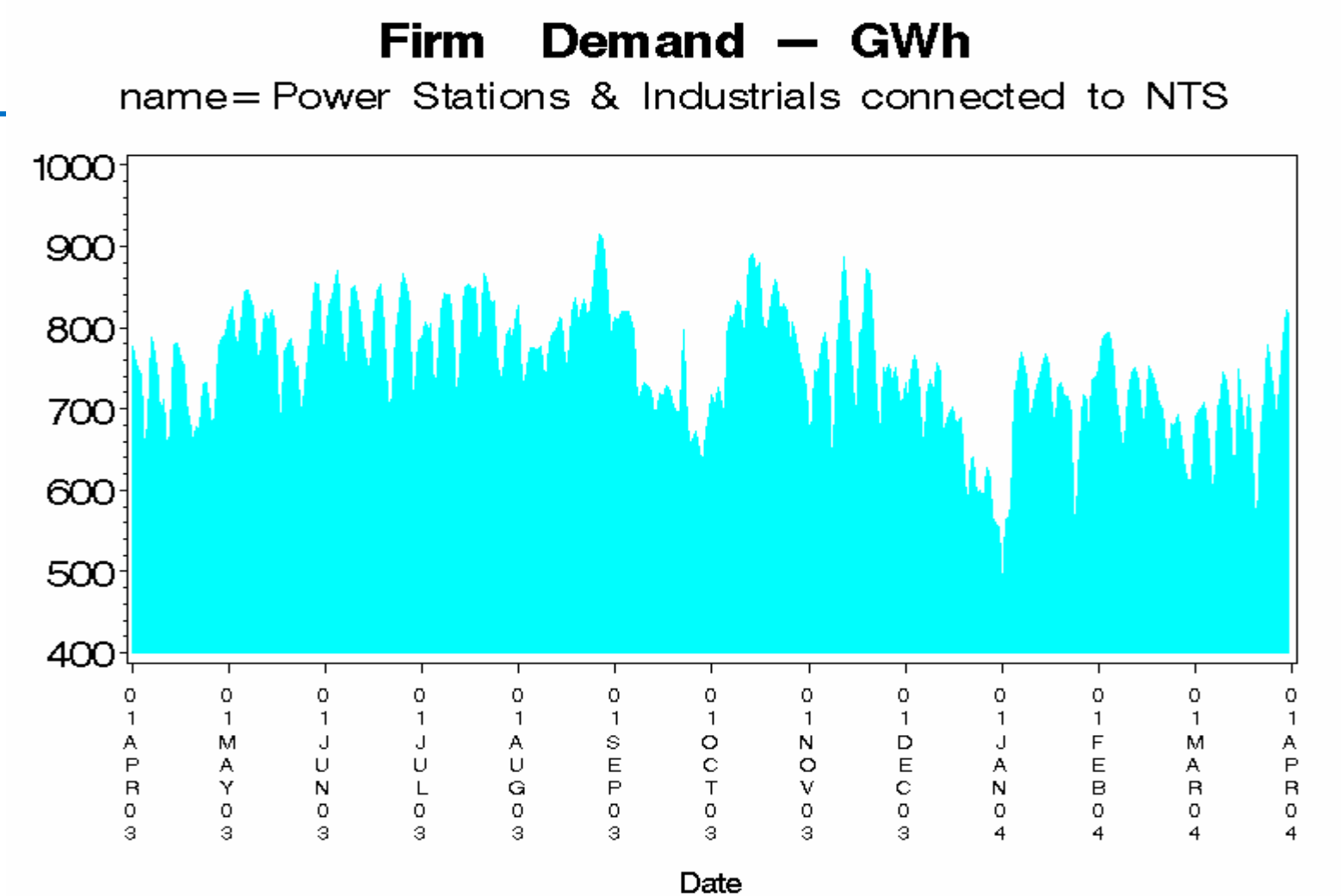
- Majority of Exit Capacity costs assumed to be driven by peak.
  - Possibly zero off-peak.
  - Similar electricity analysis suggested 90:10.
    - *Hence low incentive to profile off-peak demand*.
  - Large parts of northerly areas are subject to a minimal 0.0001 p/pkd kWh/day charge.
  - Typical annual NTS exit capacity charge for a 150 GWh site is:
    - £63,000 p.a. in the South West.
    - £162 p.a. in parts of the north.
    - *Hence low annual charges further reduce incentives for off-peak profiling.*
  - Hence NGT suggests that the key purpose should be to understand user requirements at peak periods.

Coincidence of Peaks



National Grid Transco

Coincidence of Peaks



National Grid Transco

Coincidence of Peaks

- Analysis shows
  - For direct connects demand tends to be flat
    - Limited exceptions, ie, Bacton Interconnector
  - For DNs maximum demand is driven by peak winter considerations
    - Very little diversity
  - Therefore limited number of parties who would benefit from demanding a sub-annual product

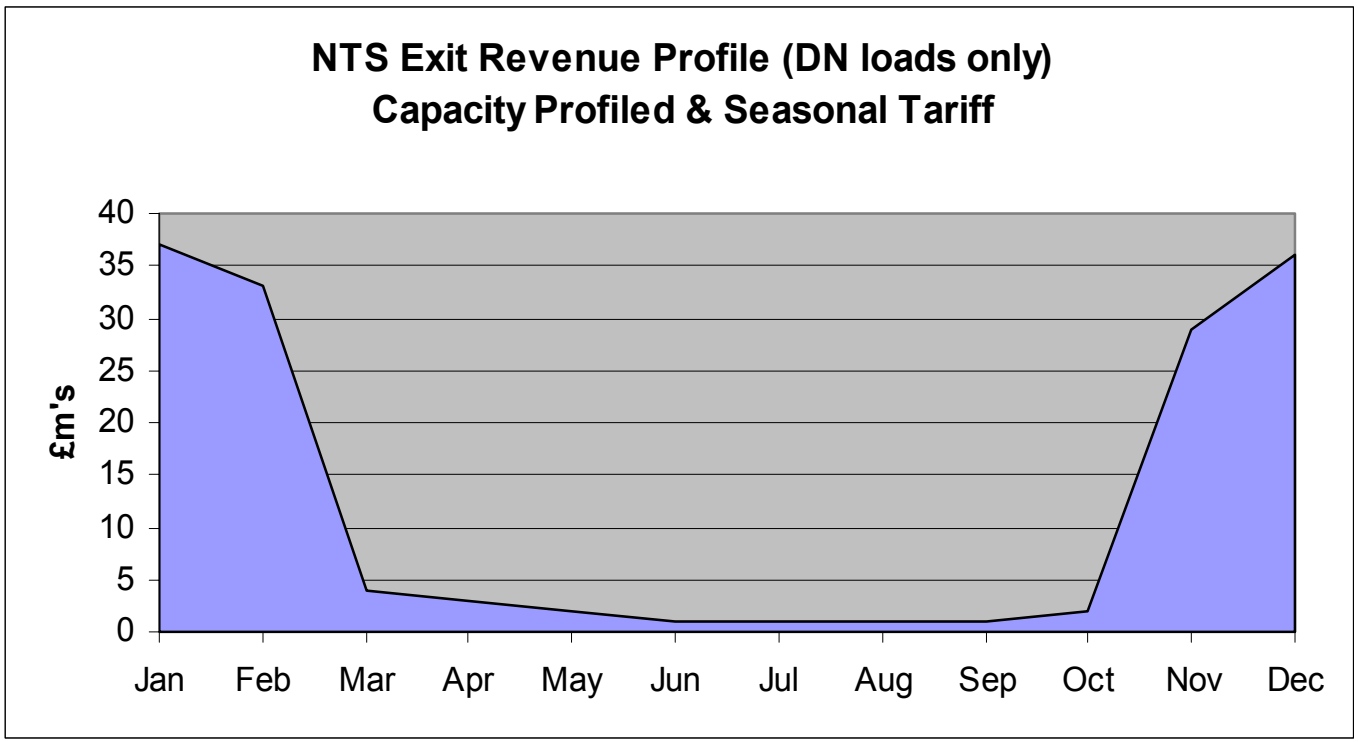
Complexity

- Monthly
  - May need more auctions
    - month ahead auction
  - Bidding process more complex
    - Additional periods
    - Differing prices for each period
    - Leading to difficulty in bidding for strips
  - Incentive framework
    - How to price for capacity expansion
    - Differing prices for various periods leads to reliance on npv tests

- Annual
  - Frequency
    - Single yearly allocation
  - Bidding process
    - based on single price per year
  - Incentive framework
    - Determination of validity of offering annual blocks of incremental capacity

Revenue Stability

- Monthly Booking Based on Standard Profile and Assuming 90% of Income Recovered Between October and March



National Grid Transco

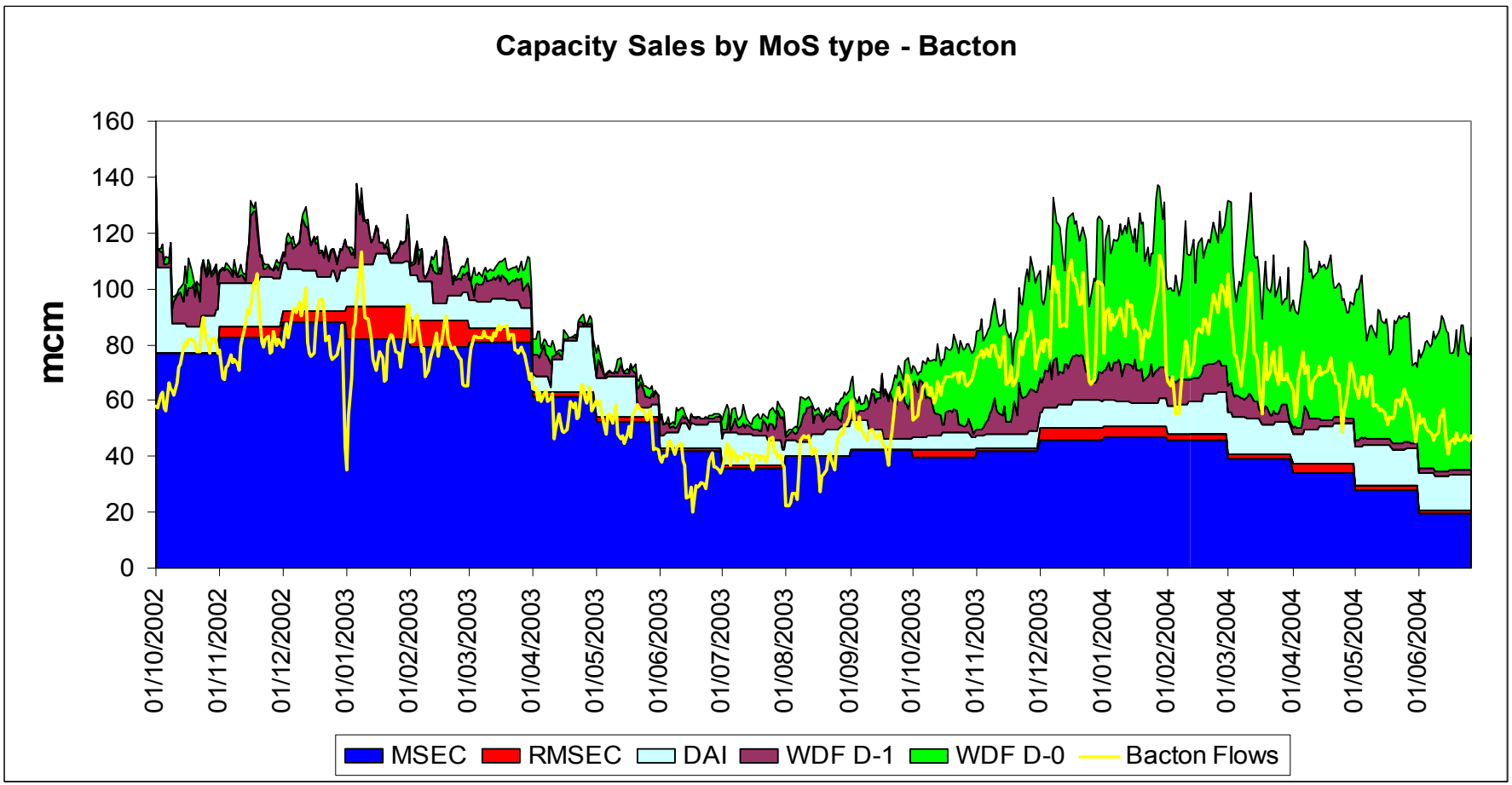
Pricing Stability

- Combination of:
  - seasonal pricing
  - monthly booking
- Leading to:
  - less predictable year on year price adjustments

Regulation

- With either annual or monthly blocks
  - Incentives to register capacity at year ahead stage are undermined if obligations to offer capacity at zero price remain active until the gas day
  - Remedies include
    - Earlier gate closure or
    - Application of common reserve prices
  - Bacton experience…

Bacton Experience



National Grid Transco

Demand Management

- Monthly
  - May lead to lower levels of capacity being allocated long-term
  - Leading to reduced ability to contract on a forward basis
- Annual
  - More likely to have a “full” release during annual capacity auction
  - Leading to ability to contract on a forward basis

Fear of operational efficiencies being reduced if reliance is placed to heavily on prompt

Efficiency of Signal

- Monthly
  - Provides indication of Peak
  - Some off-peak information
  - Further load / duration information is required
- Annual
  - Provides indication of peak
  - No off-peak information
  - Further load / duration information is required

National Grid Transco

Summary

	Annual	Monthly
Customer Impact	No change	Benefits customers with peak demands away from winter period.
Opportunities to obtain capacity	No change from above	Might require an additional month ahead release process.
Trading options for profiling capacity	1. Buy daily capacity 2. Facilitated trade 3. Turndown contracts	1. Buy daily capacity 2. Facilitated trade 3. Turndown contracts 4. Buy monthly capacity
Pricing Instability	No change	Less predictable
Efficient signals	Efficient at peak, but of no value off peak	Efficient at peak, but of less value off peak
Costs	No change	Extra cost created by greater complexity

Assessment Against Exit Reform Aims

	Monthly model	Annual model
Protect Customers	Efficient allocation possible	Likely to hold 'excess' capacity for limited periods
Promote competition	Efficient allocation reduces need for trading	More reliant upon trading across nodes
Economic and efficient development. Maintenance and operation	Provides specific information about where, when and how much. However signal undermined by licence obligations to offer up to the day	Less specific information arising from capacity sales and trading. Opportunity to enter into forward demand management contracts is improved.
Avoiding undue discrimination	Ability to sculpt demand is facilitated through monthly release in addition to daily release and trading	Ability to sculpt demand is dependent upon daily release and trading
Cost reflective charges	Cost reflective prices per month are possible.	Cost reflectivity driven by peak costs

Our View

- From our analysis, we would recommend an annual approach as we are unsure of the benefits gained from sub-annual booking of exit capacity
- The number of users who would benefit from a monthly product seem to be few (majority have a winter peak) – could buy capacity day ahead
- Sub-annual appears to introduce complexity and pricing volatility for limited additional benefit
- Would welcome other views