

# Charging for short term access

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CISG

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# Introduction

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- ◆ Industry is considering shorter term products?
  - ◆ TAR, TASG, PJM models, academics
- ◆ Short term products
  - ◆ ETEC -SO non obligated release – ex ante
  - ◆ [Transfer – bilateral transfer of nodal TEC -ex ante]
  - ◆ [Sharing or zonal TEC – exante or expost]
  - ◆ Overrun – ex post
- ◆ All fundamentally trade access, but with different risks
- ◆ Focus on overrun
  - ◆ Basic principles apply to other short term products
  - ◆ Clearly different issues ex-ante and ex post
- ◆ Existing charge is asset based
  - ◆ Assumes no increase in SO costs
  - ◆ Proposed products change this

# Overrun Introduction

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- ◆ Why?
  - ◆ Queue
  - ◆ Intermittency
  - ◆ Low load factors, more natural sharing
  - ◆ Encourages trading?
- ◆ What is it?
  - ◆ Export above TEC
- ◆ How do we charge for an overrun product?
- ◆ Two questions:
  - ◆ How do we calculate volume?
  - ◆ How do we determine price?
- ◆ This presentation discusses options, and initial assessment of the pro and cons of each option
  - ◆ Looking for industry views.....

# Assumptions

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- ◆ Exercise of locational market power is an Ofgem issue
- ◆ Overrun complements:
  - ◆ Sharing
  - ◆ SO Non obligated release
  - ◆ Other products
  - ◆ Long term product - TEC

# Common elements

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- ◆ Local asset charge:
  - ◆  $(CEC - TEC) * \text{£/kW}$  – generic TNUoS
  - ◆ Installed asset based – specific connection
- ◆ Commoditisation of the residual (MWh)
- ◆ Individually significant developments
- ◆ Settlement based similar to BSUoS
  - ◆ Volumes & prices removed from BSUoS

# Overrun volume / tariff level?

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- ◆ Overrun volume:
  - ◆ By unit (sub nodal)
  - ◆ PS (nodal-ish)
  - ◆ Company (zonal)
    - ◆ Net zonal implies zonal TEC – reduced need to sharing / trade at a company level
    - ◆ Gross zonal- all parties treated the same wrt overrun (is actually PS – sum over PS overrun and charge at a company level)
- ◆ Tariff
  - ◆ Investment based tariff defined on a zonal basis,
  - ◆ Definition of overrun tariff on a nodal basis may create perverse incentives
  - ◆ Nodal much more complex (less liquidity, more rules)
- ◆ For this discussion, assume:
  - ◆ a gross zonal basis ( zonal overrun tariff)

# How do you determine price?

## *Option 1 – Manual Calculation*

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- ◆ Manual degut of constraint costs for period concerned
- ◆ Presented at TASG
- ◆ Only methodology can be audited (PGs)
  - ◆ Process rather than data
- ◆ Calculate prices in a black box, publish results d+2
- ◆ Remove these cost from BSUoS

## *Option 1 – Manual Calculation*

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- ◆ Pros
  - ◆ Reasonably cost reflective
  - ◆ Process largely exists
- ◆ Cons
  - ◆ Subjective
  - ◆ Potentially open to dispute
    - ◆ Our actions on the day
    - ◆ Our post event assessment
  - ◆ Labour intensive
  - ◆ Not transparent
  - ◆ Post event publishing of prices

# How do you determine price?

## *Option 2 – Fully Automatic*

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- ◆ Develop software
- ◆ Use bids/offers taken in RT
- ◆ Subtract national energy price (LMP- $\lambda$ )
- ◆ Price set per node or zone\*
- ◆ Initial prices published relatively near to RT
- External models tend to:
  - zonal is nodal - nodal price for short term & zonal longer term creates unwanted interaction
  - Combined with energy
- Consider simpler, zonal, transmission only rules

## *Option 2 – Fully Automatic*

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- ◆ Pros

- ◆ Repeatable
- ◆ Auditable
- ◆ Objective (subject to constraints input)
- ◆ Nodal ? (future proof)

- ◆ Cons

- ◆ Objectivity subject to transparency of constraints and other inputs (line ratings etc.)
- ◆ Complex
- ◆ It's a software project (expensive, late, risky etc)
- ◆ Governance process and ongoing developments
  - ◆ We won't get it right first time
  - ◆ Similar to BSC users will want to propose changes
- ◆ Nodal zonal interaction

# How do you determine price?

## *Option 3 – Approximation*

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- ◆ Use a reference price, approximation e.g. TNUoS multiplier
- ◆ Excess / deficit passed through BSUoS
- ◆ Pros
  - ◆ Simple
  - ◆ Predictable
  - ◆ Better than licence breach
  - ◆ Provides certainty
- ◆ Cons
  - ◆ Not cost reflective
  - ◆ Price determination, 5 6 or 7 times
  - ◆ Ongoing justification / governance
  - ◆ Charging when there is no restriction
    - ◆ need a basic on/ off switch?
    - ◆ Option 2a only apply when zone or system constrained

# Overrun tariff

## *Option 3b – Approximation+*

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- ◆ Tariff would be higher of
  - ◆ TNUoS commoditised (possibly multiplied) – reserve
    - ◆ Optional – is it really needed
  - ◆ Average cost of constraints by zone over previous x days
    - ◆ Calculated using superBAR
    - ◆ Possible switch for day night weekday / weekend
- ◆ Use of a trigger (create a margin)
  - ◆ More cost reflective on day
- ◆ More cost reflective than basic multiplier
- ◆ Many other options for incremental improvements
  - ◆ Calculate charge based on assumed volume of ST users based on feasible bids and offers
  - ◆ Simple is the pro....don't over complicate

# How do you determine price?

## *Option 4 – Link to Short Term Trades*

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- ◆ Require short term access trades to be reported
  - ◆ Liquid market
- ◆ Central mechanism for trading (at least reporting)
- ◆ Include ETEC prices
- ◆ Pros
  - ◆ Transparent methodology and process
  - ◆ Market based
- ◆ Cons
  - ◆ Poor liquidity
  - ◆ Relies on reporting (central trading or auction)
  - ◆ Transparency of posted trade
    - ◆ Trades within company
  - ◆ Negative impact of flexible trading
  - ◆ Interaction with sharing

# How do you determine price?

## *Option 5 – Multiple approaches*

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- ◆ Maximum of a number of factors (as per gas)
  - ◆ TNUoS multiplier
  - ◆ Short term trades
  - ◆ Past constraints
  - ◆ Forecast future constraints
- ◆ Some pros and most of the cons of the each

# Initial thoughts

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- ◆ All are still options
- ◆ Possible approach:
  - ◆ Start with basic overall set on a proxy – e.g. multiple of TNUoS
  - ◆ Develop more complexity if required (e.g. align with Ops system replacement)
- ◆ For discussion.....
- ◆ Way forward..