

Reactive Compliance Monitoring



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Background

- Intended to curtail payments for provision of Reactive Power when:
 - Reactive Power (lag/lead) delivered without being Instructed
 - Providers fail to comply with Instructions to provide Reactive Power

- Expected to save ~£500k p/a in payments

Feedback from the Community

- Communication was poor
 - Yes – we'll learn from this experience and do better next time
- 3 Minute monitoring and 50MVA_r appear to be arbitrary decisions made by National Grid
 - Propose we hold a mini consultation over these points

- Causes as dis-incentive for providers to be available if all payments within a settlement period are ruled non-compliant
- CUSC provisions are set out to be cost-reflective, this approach appears not to be so
- The binary logic could result in providers being unable to recover the variable cost of providing reactive power
- In order to validate payments Providers may have to invest heavily in their settlement systems

2 Minute Achievement Time

BC2.8.4 Action Required from BM Units

- (a) Each **BM Unit** (or **Generating Unit**) will comply in accordance with BC2.8.1 with all **Ancillary Service** instructions relating to **Reactive Power** properly given by **NGET** within 2 minutes or such longer period as **NGET** may instruct, and all other **Ancillary Service** instructions without delay, unless the **BM Unit** or **Generating Unit** has given notice to **NGET** under the provisions of BC2.8.3 regarding non-acceptance of **Ancillary Service** instructions.

As measurements are recorded only once per minute, National Grid have adopted a 3 minute check period to ensure that 2 full minutes have elapsed following an instruction

Mini Consultation 1

National Grid believes a 3 minute achievement time offers a pragmatic solution given the granularity of measurements available.

Does the community believe:

1. The 2 minute stipulation in the Grid Code (BC2.8.4) should be adhered to
2. Monitoring equipment with the capacity for <1minute updates should be installed, and the 2 minute stipulation adhered to.
3. A 3 minute achievement time is appropriate

>50 MVAr Exception Trigger

- Trigger level recognises that some requests are unachievable within 2/3 mins should multiple tap changes be required
 - Assumption of 50MVAr was adopted
 - “Best fit, one size fits all”

Mini Consultation 2

National Grid believes that an exception trigger level of 50MVAr

Does the community believe:

1. The “one size fits all, assumption of 2 tap changes” approach is appropriate given the expected level of investment likely to be required should systems require modifying?
2. A value other than 50MVAr should be applied globally
3. A different methodology should be adopted applying provider specific exception trigger levels

CUSC Appendix 3, Section 1

U_{lead} = leading Mvarh produced by the relevant **BM Unit** at the **Commercial Boundary** in the relevant **Settlement Period** measured by metering meeting the requirements of Appendix 4 and as specified in the relevant **Mandatory Services Agreement** and/or **Market Agreement** where the **User** has complied with a **Reactive Despatch Instruction** in accordance with **Grid Code BC 2**, otherwise 0;

U_{lag} = lagging Mvarh produced by the relevant **BM Unit** at the **Commercial Boundary** in the relevant **Settlement Period** measured by metering meeting the requirements of Appendix 4 and as specified in the relevant **Mandatory Services Agreement** and/or **Market Agreement** where the **User** has complied with a **Reactive Despatch Instruction** in accordance with **Grid Code BC 2**, otherwise 0;

U = the total Mvarh (leading and lagging)

where

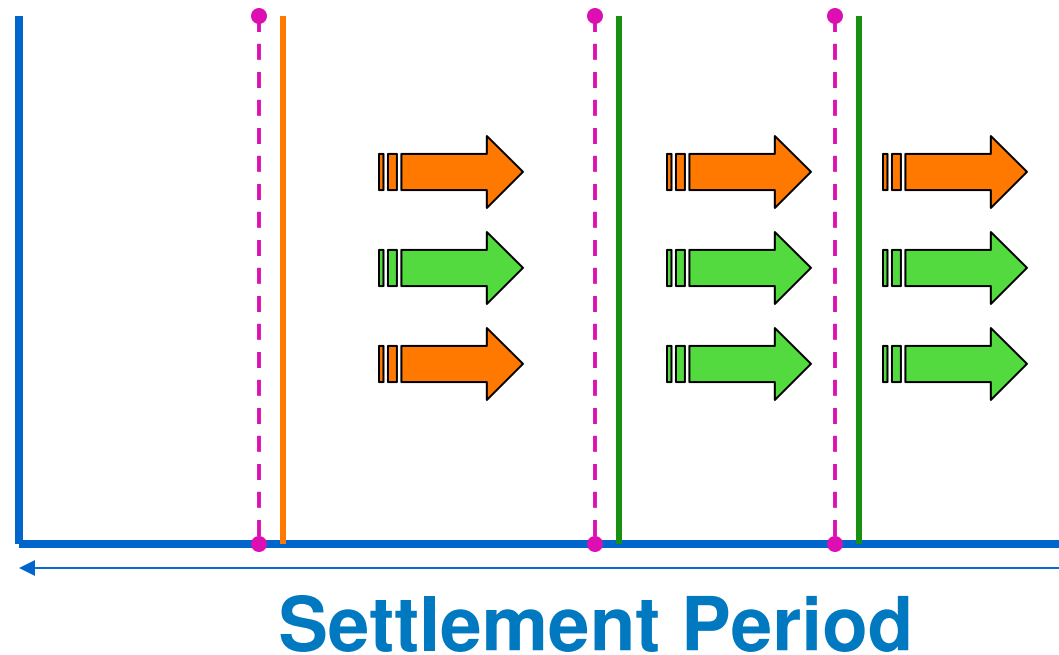
$$U = U_{lead} + U_{lag} \quad [Mvarh \text{ per Settlement Period per BM Unit}]$$

Where:

Tolerance = +/- 25MVar*

Achievement Time = 2mins

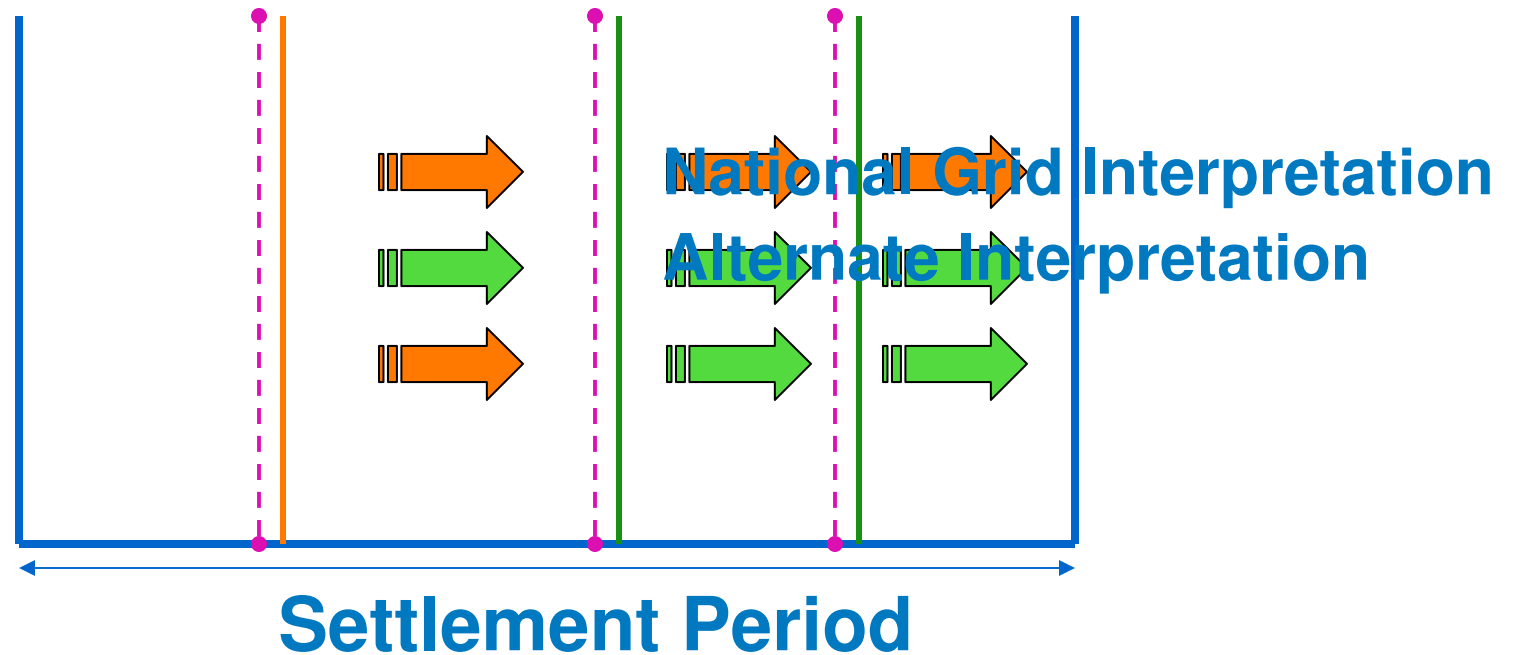
Multiple Instructions within a Settlement Period



3 Outcomes:

1. **No Payments Made**
2. **Payment made for all instructions**
3. **Payments made for compliant instructions only** ⁷

Multiple Instructions within a Settlement Period



3 Outcomes:

1. No Payments Made
2. Payment made for all instructions
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Are Existing Requirements Fit for Purpose?

- Providers should be recompensed for delivery, not for non-delivery
- Payments should only be made where an instruction has been issued
- Compensation should be cost reflective
- Easy to measure / monitor
 - Are the existing requirements still fit for purpose?
 - Should there be a “performance” element?

Mini Consultation 4

National Grid believes that existing arrangements meet the requirements set out in CUSC, but recognise that the wording of those requirements may not achieve their intended purpose

Does the community believe:

1. National Grids interpretation of CUSC is appropriate and the existing arrangements (subject to agreement with the community) should be made formal and included within the requirements of CUSC?
2. National Grids interpretation of CUSC is appropriate and that CUSC offers the flexibility for these interpretations to exist outside formal governance and no CUSC mod is required.
3. National Grid have mis-interpreted the requirements of CUSC and BSSG should review the Reactive Compliance Monitoring methodology.
4. National Grid should revert to the previously existing settlement methodology and work with the BSSG and the wider industry to develop appropriate monitoring and a settlements methodology that identifies and potentially recovers the unnecessary costs that may be incurred by providers not following instructions.

Next Steps

- National Grid believes we are in compliance, both word and spirit of, an existing CUSC requirement
- National Grid intend to continue to apply Reactive Compliance Monitoring
 - Consult on 3 min monitoring and 50MVA_r exception trigger questions
 - Review instances of multiple instructions within a settlement period
- National Grid will circulate the Algorithm to BSSG
- Industry to Review and feedback ahead of January Meeting
 - Does National Grid Methodology comply with existing requirements set out under CUSC / Grid Code?
 - Does the community consider the requirements set out under CUSC / Grid Code as fit-for-purpose ?

Settlements Forum



Settlements Teams Forum

- The National Grid Settlements Team will hold a Settlements Forum in the afternoon following February's Ops Forum
- Aimed primarily at your Settlements teams
- Both new and existing providers
- Encourage stonger working ties between our teams

Outline Agenda

- Meet the Team
- Explore the relationship our customers wish to have with us
- New developments and the future of Settlement services
- Overview of National Grid Settlement processes and key dates

- Mix of Presentations and Workshops

Invitations

- Invitations will be issued shortly
- Please extend invites to anyone in your organisation who you feel would benefit from attending
- RSVPs to Bea.Ennim@uk.ngrid.com by Jan 28th

Doing More...

- Ops Forum
 - http://www.nationalgrid.com/uk/Electricity/Balancing/operational_forum/
- Settlements Team
 - 01926 654613
 - settlement.queries@uk.ngrid.com.
 - <http://www.nationalgrid.com/uk/Electricity/Balancing/services/settlement/>
- Settlements Forum
 - Follow February Ops Forum
 - Contact number above for more info