

BSSG / CAP169 Notes & Actions

2 April 2009

1. Attendees:

Malcolm Arthur	MA	Chair
Carole Hook	CH	National Grid
Campbell McDonald	CMc	SSE
Chris Proudfoot	CP	Centrica
Claire Maxim	CM	EoN
Claver Chitambo	CC	RES
James Evans	JE	BE
Jonathan Atyeo	JA	GdF
Katharine Clench	KC	National Grid
Peter Twomey	PT	UU
Raoul Thulin	RT	RWE

2. Reactive

2.1 CAP169

CAP169 was raised by National Grid in February. The Amendment Proposal contains 3 parts:

Part 1 - Provision of Reactive Power from Power Park Modules. This looks to amend various sections of CUSC to accommodate the provision of Reactive Power from Power Park Modules.

Part 2 – Looks to extend the current obligation on National Grid to offer reactive power terms to all large generators, upon request from a large power station with a reactive capability below 15Mvars.

Part 3 - Recognition of Distribution Network Imposed Restriction on Reactive Power. The Proposed Amendment seeks to facilitate partial reactive payment to those embedded generators that have a DNO connection condition that prevents instruction by National Grid to 0MVar.

CAP169 Terms of Reference

AGREEMENT – the group agreed that The revised ToR.

Part 1 – Power park modules

At the previous meeting, the following main points were raised:

- Is the change to commercial and technical boundaries only associated with reactive power provision?

Answer - Yes

- Is there an overlap with the provision of reactive power from embedded generation?

Answer - No

- Do the reactive meters that are not located on the commercial boundary have internal compensation to determine the reactive power at the commercial boundary?

Answer - Need to consider on a case by case basis what is provided

- What is the governance for changing the 'Methodology for the Aggregation of the Reactive Power Metering' document?

ACTION – To consider governance of methodology (National Grid)

In addition to the above points, the modification proposal states that EDL and EDT will need to be updated to allow an instruction to be sent to a Power Park Module. The group questioned why this was the case.

ACTION – Why is there an impact on EDL and EDT? (National Grid)

[For clarification, there will be no retrospective application of the change and also there is no change for sites under construction; although some wind farms already connected that have blank reactive capacity tables in their MSA will have to comply with the proposal if implemented.]

Following implementation of CAP169 amended MSAs will be issued for Power Park Modules (which currently have MSAs with blank capability tables).

AGREEMENT – The group agreed that Part 1 of the modification as drafted should proceed to the consultation stage.

ACTION – Resend the legal text for all to comment (All)

Part 2 – Looks to extend the current obligation on National Grid to offer reactive power terms to all large generators upon request from large power stations with a reactive capability below 15Mvars.

AGREEMENT – at previous meeting.

Part 3 - Recognition of Distribution Network Imposed Restriction on Reactive Power.

Part 3 Possible Alternatives

CH presented National Grid's thoughts on the alternatives discussed at the previous meeting. There were a number of potential alternatives:

Alternative 1 - Restriction to be extended to all embedded generators with an MSA unable to receive an instruction (without referring to 0 MVar)

Alternative 2 - Remove the capability requirement on embedded generators (or some other form of specific MVar removal)

Alternative 3 - Generators with DNO restrictions that prevent the generator's reactive output passing through 0 should get paid the full reactive payment when providing MVars due to a National Grid instruction. At other times, when the generator is producing MVars but unable to comply with the National Grid instruction, the generator would receive the following payments;

- 20% of the reactive power price
- Zero payment

Alternative 4 - Generator does not get paid for MVars produced when operating in specified MVar output ranges

Alternative 5 – Include both connection restrictions and long term operational restrictions in the proposal for 20% payments

Alternative 6 – Remove Part 3 from the modification.

National Grid stated that they were unlikely to support:

- *alternative 1* National Grid is keen for the proposal to be drafted tightly to ensure it covers the specific restriction under consideration, and a key element relates to the ability to turn off payment through instructing the generator to 0
- *alternative 2* steady state capability inherently provides dynamic capability, and National Grid believes the original amendment proposal provides the appropriate balance between payment for the capability and inability to access the service
- *alternative 3* would require significant settlement system changes and would be complex to administer.

JE suggested that embedded generators under such connection restrictions should not be paid at all for the provision of reactive power. Such embedded generators are not paying access costs and may in fact be contributing to a requirement for additional balancing actions, and therefore causing an overall increase in costs system users.

RT suggested that alternative 3 seemed like a more 'correct' solution rather than applying a blanket 20% for all output levels, but acknowledged the associated complexities. National Grid's initial view is that alternative 3 would require change to their systems and would be complex to implement.

National Grid stated that they may support alternative 4 but would not be raising it as an alternative and it would have significantly higher complexity than the original amendment proposal. The group suggested that alternative 4 would be difficult to implement due to the average meter readings across the ½ hour and therefore it would be difficult to determine if and when the generator would have been operating the specified ranges and for how long.

National Grid stated that they would need to consider further the impact and changes needed to implement alternative 5. The group thought that there was some merit in the alternative but thought the incentive would be to remove the restriction prior to the 12 months but only for a temporary time. In addition, it was thought that there may be an interaction between a new generator connecting that may cause a restriction on an existing generator. An alternative could be that the DNO picks up the costs during the 'temporary' restriction although how this could be done is not known. The group also asked how the temporary restriction would be implemented; i.e. prospective or retrospective.

Action – Would a new generator cause restrictions on an existing generator (PT)

Action – Consider development of alternative 5 into a working group alternative amendment (National Grid)

The group agreed that alternative 6 would be beneficial should be developed into a working group alternative to ensure that any ongoing issues with part 3 do not prevent implementation of parts 1 and 2.

Action – Develop working group alternative for alternative 6 (National Grid)

Action – Develop other alternatives into a working group alternative(s) (All)

CM requested that National Grid provide a view on a further possible alternative which would involve removal of the steady state reactive capability from

embedded generators under such restrictions. This would mean only dynamic capability would be required and payment would be made accordingly.

Action – Provide view on possible alternative (National Grid)

CAP169 Grid Code Change

The group discussed the relevant Grid Code changes that may need to be implemented. The changes needed are associated with Part 3 of the modification regarding how National Grid would be informed of any DNO restrictions

If alternative 5 is raised as a working group alternative amendment the Grid Code amendment will also need to cover communication of long term operational restrictions.

Action – To consider the method / process for informing National Grid of DNO restrictions (All)

In addition the group discussed what Grid Code obligations an MSA puts on a generator.

Action – Determine any additional Grid Code obligations for generators with a MSA (National Grid)

CAP169 Timescales

There is a risk that the Grid Code panel will ask for a working group to assess the impact of CAP169. This may impact on the implementation timescales.

The group suggested that a meeting in mid May to discuss the Grid Code changes and finalise the alternatives would be beneficial.

2.2 Reactive market tender review

KC gave an overview of the consultation responses and the main themes.

Generally the consultation was well received.

The aim is to implement the changes in time for TR26.

3. Frequency Response Discussion

National Grid outlined the current methodology for determining the HF response at SEL with the control room.

4. Next meeting

Arranged at Warwick on 21 April 2009 – 1000 to 1400.

[N.B. this meeting has subsequently been cancelled].