

Agenda

Meeting name	GC0063: Power Available
Meeting number	11
Date of meeting	8 October 2014
Time	13:00 – 16:30
Location	National Grid, Warwick

Attendees

Name	Initials	Company
Mike Edgar	ME	National Grid (Chair)
Rob Wilson	RW	National Grid (Technical Secretary)
Antony Johnson	AJ	National Grid
Jeremy Caplin	JC	National Grid
Leonardo Costa	LC	Ofgem
David Beaumont	DB	Ofgem
John Norbury	JN	RWE
Mick Chowns	MC	RWE
Guy Phillips	GP	E.ON
Isaac Gutierrez	IG	ScottishPower
Campbell McDonald	CMD	SSE
Joe Duddy	JD	RES
Konstantinos Pierros	KP	Enercon
Hannah McKinney	HM	DONG Energy
Guy Nicholson (by teleconference)	GN	Element Power
Zoltan.Zavody	ZZ	RenewableUK
Frankin Rodrick	FR	National Grid
Yanik Luenen	YL	Vattenfall
Peter Waghorn	PW	Transpower
Niall Duncan	ND	Senvion

1 Introductions & Apologies

1. Mike Edgar for National Grid (ME) welcomed the attendees to the meeting and noted that the intention was that this would be the final meeting of the workgroup to recap the progress made and to consider the content of the final report to the Authority following the discussion of the draft at the May 2014 GCRP and subsequent considerations.
2. Leonardo Costa for Ofgem (LC) in introducing himself clarified that Ofgem's interest was in listening to the debate to help facilitate their assessment of the final report when this is submitted.

2 RenewableUK Discussion

3. Zoltan Zavody of RenewableUK summarised the issue that the report had sought to address in facilitating the participation of the wind industry in frequency response and reserve (FRR) markets. The benefits of this to the wider wind industry are that:
 - There will be less need for industry wide curtailment
 - It is a commercial opportunity
4. ME added that the longer that the current situation persists, in which wind farms are less able to participate, the more likely that retrospectivity could become an issue in terms of

the way in which any solution would be applied. GN raised a question about how the Power Available signal, proposed as a solution, was going to be used. ME agreed that this was a valid concern which would be explored further later in the agenda.

2 Progress Summary and Objectives

5. RW summarised the objectives of the day and the progress of the workgroup. The objectives are to understand the need case for the change being proposed and the alternatives, and then to agree what will be submitted to Ofgem in the revised final report. After the presentation of the draft report to the Authority at the May GCRP, discussions have continued with all key parties culminating in a special additional session of the Generator Services Group which took place on 16 Sept 2014.
6. CMD asked if the consultation responses were going to be looked at during the meeting, given that this was the first meeting of the workgroup since Nov 2013 and since the consultations took place. RW replied that it was unlikely that there would be sufficient time to run through all the responses in detail although the key issues raised would be covered. The full set of responses was published in the draft of the report as discussed at the June GCRP.

[Note that two consultations took place for Power Available, a Workgroup Consultation which ran from 20 December 2013 to 27 January 2014 and asked for respondents' views on the options developed as potential solutions, and an Industry Consultation (7 March to 7 April 2014) which developed further the option supported by the majority of respondents and asked specifically for views on this to help inform the final report. A draft of the workgroup consultation was circulated to the workgroup and the GCRP in November 2013 and was then presented at the November 2013 GCRP. The draft Industry Consultation, which included the responses to the Workgroup Consultation, was circulated to the workgroup for comment in March 2014 before it was published. It also then formed the basis (with the addition of the consultation responses) for the draft Report to the Authority as presented to the May 2014 GCRP and published on the GCRP website]¹.

3 Summary of the Needcase

7. RW presented a summary of the need case and explained that by 2020 there could be significant periods of time with very little conventional flexible generation running. Alternative sources of ancillary services must therefore be secured, of which wind would be the prime candidate. The timescales of the take-up of wind may be subject to some uncertainty which would dictate the pace at which conventional plant would be displaced but the concept is straightforward. RW went on to summarise that as presented at the RenewableUK Generator Services Group meeting, the need case was separated into two parts:
 - The identification of the issue and the need to do something – or the increasing need to understand the real time capability of wind farms when curtailed; and
 - The best option to take this forward.

4 Restatement of Options

8. RW presented the options as developed by the workgroup being:
 - Option 1 - Standardisation of MEL which would require MEL submissions that would be expected to vary with forecast intermittent energy source, where the update frequency was a variable to be determined by the User;
 - Option 2 - Dynamic MEL (Power Available signal used to calculate MEL), with an update frequency of 10 minutes; and

¹ [Square brackets, where used in these notes, indicate additions made after the meeting but included to provide clarification]

- Option 3 - Power Available Data via SCADA i.e. the submission of Power Available as an operational metering signal which would be fed to the National Grid Control Centre via SCADA with the redefinition of MEL used to indicate electrically connected capacity. This would apply to new wind farms connecting after a specific date, provisionally agreed to be April 2016.

The National Grid view, following the workgroup consultation and taking into account the views of respondents to this, was that option 3 provided the best compromise in terms of delivering the SO requirements and being acceptable to Users from a cost perspective.

9. Two further options were added for consideration having been proposed following the previous workgroup discussions:
 - 3(a) Similar to option 3 – but without the redefinition of MEL. So purely the provision of a power available signal
 - 3(b) Retrospective application of option 3, so applying to all wind farms
10. HM asked if maintaining the status quo was an option? RW explained that it always is, although in the discussions at the RenewableUK Generator Services Group (GSG) there was a consensus that something needed to be done to facilitate and enable wind farm provision of response & reserve.

Defect - and consideration of PA/PN/MEL data

11. JN asked what is the defect that the workgroup had sought to address given that the Grid Code provisions as they stand can be made to work (and do for conventional generation) so how much additional effort should be put in for intermittent generation and is it appropriate to put something different in place? JN added that Power Available could be viewed as a proxy for MEL/PN as these parameters do not really work for wind. ME expressed NG's view that the deficiency concerned the reliability of MEL data and that any such deficiency in PN data, to the extent it existed, was a matter for the BSC. ME also noted that following Ofgem's review of cashout arrangements, there was a stronger incentive on wind farms to improve wind forecasting and PN accuracy which was likely to mitigate concerns.
12. JN stated that during the course of the workgroup the deficiency as identified in C11 did change and that the data submitted to NG for operational purposes (MEL, PA) and Elexon for BOA settlement (PNs) should be aligned. ME agreed that the Power Available workgroup originally set out to consider Power Available in the context of both MEL and PN data, however following discussion by the workgroup the deficiencies identified were refined to the ability of the System Operator to understand headroom when wind was curtailed in order to establish reserve and response levels.
13. With reference to the existing Grid Code requirements, CMD stated that wind is Grid Code compliant so it is capable of providing ancillary services. AJ agreed that the Grid Code requires wind farms to be capable of providing frequency response, but there is a question about how best to utilise this. Wind does behave differently. CMD agreed that the question is of facilitation not capability. JN added that the underlying problem is the intermittency of wind generation although referring back to an earlier point, if the GC was applied rigorously then the status quo would be fine.
14. CMD reiterated that while wind farms have invested in the capability to comply with the Grid Code in these areas - investment is there but the return is not. Wind farms have the capability to provide these services but they are not called on. This can also be affected by a number of issues including price and boundary limitations.

PA Signal

15. In response to the point in RW's presentation that a PA signal is generally available at each wind farm and is in fact used in compliance testing, CMD stated that not all manufacturers will use exactly the same specification of PA signal. The definition of the signal in a code mod is therefore critical as it needs to be replicated across all manufacturers and may in some cases require additional work. ME added that the Power Available definition has been developed by the workgroup to allow for the differing approaches by manufacturers and relies on good industry practice. It was recognised that the signal would have a level of inaccuracy but this was likely to be manageable as it should be predictable to some extent but equally would be significantly better than the systems currently in place.
16. LC clarified that when this mod finally comes to Ofgem, it will need to be considered against the GC objectives – so will the modification help or undermine each of these? One objective is to minimise the cost. It would be very helpful to Ofgem to understand this in more detail and it would be useful if anyone that had further information on the costs of each option could provide this. RW replied that while the cost of each option was consulted on, the answers received were relative rather than absolute. Option 2 is considered more expensive, particularly when applied retrospectively, while the majority view was that option 3 would have a minimal cost particularly where it was specified during the design phase of a project.
17. JN asked whether wind speed measurements could be used instead of Power Available and therefore avoid the need for a modification. AJ replied that wind speed was added to the Grid Code requirements in 2005 and whilst it is similar to PA in some ways, it does not go far enough since there is not a measure of turbine availability and the wind speed / power curve is different for different manufacturers, some of which have sophisticated patented control arrangements.
18. JN stated that the presentation showed just the NG view. RW agreed that the material had been prepared by National Grid but had also tried to maintain a balanced view of opinions held by the group. In terms of what was presented in the draft report this also took into account the opinions expressed by workgroup members and by respondents to the consultations.
19. ZZ asked how quickly NG could use option 3. ME suggested it was probably in a matter of months from when a decision was made. For some existing wind farms it would probably also be a matter of months in provision of the PA signal so end-to-end it would not take long. A lot of system issues are manifesting now in terms of limitations in FRR usage but so far in small numbers/limited circumstances. ME concluded the discussions so far by summarising that NG want to try to cover everyone's points and have tried to structure the agenda to ensure that all points could be addressed, however there would be an opportunity to note any matters not covered.

6 Using the Power Available signal

20. AJ presented how Power Available is being used, including:
- How National Grid envisage using the PA signal;
 - A manufacturer's view of the PA signal; and
 - Current practices and usage in Ireland
21. AJ summarised the proposed way in which the PA signal will be used as:
- PA is on top of existing signals and would be fed into the EFS (Energy Forecasting System) which will be modified so that relevant short term forecasts will be replaced by Power Available data. EFS will be linked to other systems such that it can easily take PA data from SCADA.

- EBS is configured such that for a wind BMU it can use either PN or the generation forecast from EFS to define the output four hours ahead. In EBS the delay between the metered value and the time at which the BMU is assumed to be at forecast / PN is user configurable. The delay time in EBS will be reduced to a small value, so that EBS assumes that the BMU will soon be at PA.
 - EBS will assume that after a BOA that the BMU will return to the 'PN' which is replaced by forecast which is replaced by PA. It will then calculate headroom, response holding etc from the difference between the BOA level and the assumed position at the end of the BOA, which is PA.
 - This will not impact on any of the Elexon systems which will continue to be sent the BOA levels and the PNs and will continue to calculate BOA volume against PN as at present.
22. JN stated that there could be a better definition of what total data requirements from wind farms are. Some other data requirements could be relaxed if we are increasing the total amount of data required by adding a PA signal. JC replied that his team has an objective to look at wind farm data in total and see if this is more usable for some wind farms than others.
23. GN summarised that PA is an estimate of the current wind power but is not a forecast in itself. ME agreed that it is focused from real time to next 15 mins. Conversely PNs are focused on forecasting ahead of time. GP asked how PA would be used in forecasting? ME said that in effect it wouldn't, commercially, as its purpose is to facilitate operation of the system and the provision of ancillary services.
24. JN asked where PN fits into this. JC replied that this only comes in after a couple of hours. PNs are used to calculate cost of the BOA. PA would not be used in relation to BOAs unless there was a change under the BSC. ME added again that PN is a reasonable basis on which to make commercial decisions for BOA volumes over a settlement period but is not sufficient to meet minute by minute operational needs which require greater granularity.
25. GP asked how long the user configurable time would be and how often PA would be submitted. JC answered for user configurable time maybe a minute so that this comes out of the equation. ME said that an assumption under option 3 as it is SCADA is that this will be automatically updated every 5 seconds.
26. JD asked if National Grid have a view on whether option 3 applying to post-2016 connected wind would be sufficient to meet system operator needs, or whether under option 3 it would be necessary to look also at existing wind farms? ME replied that he expected to have commercial discussions with existing wind farms to provide sufficient volumes of response services but these would be on a non-mandatory commercial basis. CMD added that he believed that retrospectivity should be highlighted to Ofgem as a separate piece of work.
27. HM asked what level of accuracy will PA have? ME replied that this is not specified within the definition and relies on good industry practice in a similar way to other Grid Code data items. KP said that if a problem in the turbine system reduced active power this should be reflected in PA. ME considered that these elements were included within the definition of the Power Available signal e.g. that all electrical and mechanical restrictions should be reflected. KP went on to note that most, if not all, wind turbine manufacturers provide power available signals and, in the case of Enercon, they do not anticipate doing anything different than they currently do in Ireland where accuracy is more tightly defined.
28. AJ stated that CC.6.3.7 of the Grid Code required wind farms over 50MW to have the capability to provide frequency response for which compliance testing is also undertaken. As part of the compliance test a PA signal is required for local testing purposes. MC

clarified that for compliance testing, the signal is provided internally from each turbine while a wider PA signal (as discussed under option 3 of the working group) needs communication and its use is also different.

29. LC for Ofgem stated again that highlighting the costs to industry parties in providing PA would be very useful. JN asked whether OEMs would be likely to charge generators for the PA technology. HM added that there will be a fair range of costs, on an individual basis and by manufacturer. CMD said it will depend on the age of the fleet and he also noted that Siemens has a new product in this area. MC did not agree with the Siemens headroom function. MC added that plant not providing a PA signal wouldn't be able to participate in the market for FRR services. JD noted that those parties who did not provide PA could consider investing in order to provide the signal, participate in the FFR service provision and obtain associated revenue.
30. CMD stated that there does not appear to be any confidence in existing signals leading to the non-participation of wind farms in FRR but why? RW said it was to do with the quality and consistency of MELs. AJ added that Ireland have a PA signal and use it to facilitate their market.
31. AJ presented a summary of how compliance testing to demonstrate response capability is carried out. NG instructs the target power output to a defined target level below PA which therefore gives headroom. This is then used to show the response that can be provided and is tested against this to deliver up to the PA. An actual recording from a real wind farm under test was presented as an illustration. While in normal running the wind farm monitors actual system frequency, for the purposes of the test, a simulated frequency signal was injected.
32. MC asked how NG would use PA going forwards. ME summarised that this would be in the same way as MEL is used for 'fuelled' generation at the moment.

7 Market Wind Data & Use of MEL

33. JC presented slides reflecting wind market data provision and usage.
34. HM asked if PA is reflected in BOA volumes and PW asked if settlement would be still done using PNs? ME restated that PA was of use operationally but would not be used commercially for BOA volumes - which would still reflect PNs as would be used in settlement. GP added that if PA was used to calculate reserves on wind, traders or market participants would not be aware of their position but this would be of value in order for Balancing Mechanism strategies to be optimised.
35. ZZ asked if it was not inevitable that there would be a subsequent BSC mod to move to settle BOA volumes against PA? CMD said that he didn't want any connection from PA to any future mod. ME stated National Grid's view that changes to PN for wind were not necessary as it would need a fundamental change to treat a significant part of the market in a different way. In any event, recent changes to cashout arrangements would strengthen incentives on improving PN accuracy. ZZ stated that it is reassuring that this is not the design of the proposal.
36. PW noted that parties calculate and submit MEL differently and therefore there is inconsistency. HM agreed that there is a lack of clarity in the application of the MEL definition to wind power. JN asked, if PN data for wind farms is not used operationally, then what pressure will be put on parties to improve their PNs and why? If the PNs are not used operationally then their accuracy should not be reported as a significant incident according to the GC. ME reiterated that the deficiency identified concerned MEL and the ability of the System Operator to manage reserve and response. NG in its capacity as

System Operator has the ability to use its own forecasts or PN data from wind farms. Following the changes to cashout arrangements, NG expects PN data to improve further.

8 Trialling Rationale & Requirements

37. GN and CMD summarised considerations for trialling in demonstrating functionality and proving that the end-to-end process can work. CMD asked whether any trialling could also be done for MEL.
38. ME stated that NG do not see what questions would be answered with a trial. The earlier presentation has shown that, from the use of a PA signal in testing and the ability of manufacturers to provide and use PA in Ireland, we already know that it is possible. ME asked if anyone could provide a view on what the benefit of a trial would be? GN reaffirmed his view that trialling would answer a lot of questions and would be helpful to know before a Grid Code change that the solution worked and was effectively defined. It was however noted that trialling could add additional time delays into the process ahead of rolling out a solution.

6 Proposal Effective Dates

39. RW summarised that under option 3, the effective date of the proposal was first set to apply to wind farms connecting after April 2015. Subsequent to consultation responses this was extended to April 2016. It is not proposed to change this further. The later a decision is made the more that retrospective application needs to be considered. Any trial would need to be clear about the benefits and be weighed up against a delay in decision.
40. Options 1&2 redefine MEL to achieve a greater degree of accuracy and as this must be on a universal basis apply equally to all parties, existing wind farms included (option 3 does redefine MEL but to a measure of overall capacity which is less contentious). Their effective dates were not explored during the workgroup but would need to include a consideration of the time that it would take to apply the changes to existing plant.
41. ZZ pointed out that extending the workgroup to consider PNs or to reflect a BSC mod would further extend the timescales.

6 Conclusions & Way Forward

42. ME suggested that in NG's view, while in some respects from a System Operator perspective option 2 would be the best solution due to its universal application, option 3 appeared to represent the best compromise from a cost perspective for users.
43. LC stated that there are 3 options available; each would, if effective, add competition to the market. Ofgem wish industry to come up with the solution and to figure out how to facilitate the provision by wind of FRR.
44. GP stated that either of options 1 or 2 would increase the accuracy and therefore value of MEL. GP then asked if the PA signal under option 3 could be made publicly available? Options 1 and 2 do it automatically as MEL is already made available to the market. Knowing this would be useful for parties to understand their positions in the market. RW stated that in theory this would be possible and could be explored.
45. JN noted that the only dynamic data that the markets see will be PNs and questioned whether NG should take steps to encourage wind farms to improve PN forecasting. ME replied that for many wind farms PNs are not accurate but there are recently introduced market changes that incentivise all users to improve their forecasting and by implication, PN data. JN noted that NG does not always rely on PN data from wind farms. ME

highlighted that the deficiency identified by the workgroup concerned MEL and that any issues with PN would need to be addressed under the BSC. AJ added that to take this forward avoiding further delay it would be preferable to avoid the inclusion of modifications to PN which are not within the scope of what Power Available is seeking to achieve, which is a better measure of headroom in operational timescales, and which are not contingent upon the Power Available proposed Grid Code modification.

46. CMD said that he wanted something in the final report to reflect that PA signals are not to be used for BSC purposes in the future to penalise the generators but would be happy to provide the information if the control centre would use the information only for FRR. JN added that the future is uncertain and it is not possible to be categorical about any future change to the BSC. CMD restated that he would like a clear indication that this modification has nothing to do with the BSC.
47. ME reiterated that all parties want to make wind a success, and that the role of the System Operator is to help facilitate this but there is a need for pragmatism. PW asked if consensus had been delayed due to PN issues? ME stated that it should be possible to proceed acknowledging that the option as recommended in the draft final report is the 'least worst'.
48. IG stated that the PA signal needs more specifying, including, if the signal is for whatever reason unavailable, does NG then go back to using MEL or is there a penalty? Irish market financial penalties are quite high. RW replied that this had not been addressed but it was not envisaged, if PA was implemented, that NG would go back to using MEL as the Irish market is different and for the reasons already explored FRR is not currently facilitated using MEL. JD stated that there were lessons to be learned from implementation of PA in Ireland. AJ proposed that the requirements or spec of the signal could be detailed in a User's BCA but other work group members expressed the view that this may lack transparency [the BCA could, as with other aspects of the technical appendices, replicate those requirements set out in the Grid Code though]. GP added that if the PA signal was unavailable it would probably prevent the User participating in the FRR market until it was restored and JD stated that if there were any issues around implementation then clear definitions should be provided.
49. ME stated that as part of the workgroup process, the consultations identified option 3 as the best supported option and now NG and Ofgem were struggling to see what the issues with doing this were. CMD stated that it needs separation of purpose of PA and the accuracy of PN. ME restated that the deficiency as identified is not to do with PN and that this should be taken forwards under the BSC if considered necessary.
50. ME asked what the objectives of a trial would be as also asked earlier in the meeting? JD postulated that at present the PA signal is only used locally in compliance; a trial may facilitate proving the process end to end but the benefits of a trial were not clear. If concerns were expressed about an option, can the definition be improved to allay fears?
51. LC noted that option 2 increases competition but acknowledged that some stakeholders have reservations about this in terms of costs and retrospective application. CMD said that there should be no discrimination against small generators who would have to do a CBA to provide a PA signal. LC went on to say that wind is becoming a major part of the industry. While there is no question that wind has the capability to provide FRR, there is a question of whether the current system is able to provide sufficient confidence to the SO to facilitate successful wind participation in the market. LC continued, asking if the difficulties were down to cost effectiveness or development of the options? LC then summarised the argument to hinge around two questions:
 - Could achieving confidence in MEL be the solution? There is agreement that this is not there at present.

- So then, in that case, which of the options is the best? Or which other options are there? Is the concern the cost of implementation?

52. GP expressed a preference for option 1 but hesitancy on option 2 due to costs, and that he could live with option 3 if not retrospective. He added that it is hard to put actual costs on options.
53. LC stated that there was recognition from all parties that there is a problem. The MEL solution is acknowledged to be more expensive, although one benefit is perhaps in public domain information. CMD said that for options involving update of MEL in the gate closure period, MEL updates are mainly manual which is not really tenable and so would need to be at least partially automated. ME said that a proper CBA would be very difficult to provide. CMD added that a PA signal is wholly automatic as a plus point. MEL is a guess still.
54. JD stated that option 2 may not be implemented consistently by all wind generators. Option 3 has the advantage of consistency.
55. JC stated that it would be useful to add to the report how NG would use the data, and what would be included in BCAs. GP stated that addressing the question of how information would be provided to the market would be useful as well. ME suggested that questions on market information should be captured in the report.
56. JN asked what would happen to parties not caught by PA? ME confirmed that the SO would be likely to enter into discussions with those interested in voluntarily providing PA. JN continued that 3 categories of users will be created by this mod under option 3 being pre-2016 not caught, post-2016 without PA specification in their BCA (ie BCA issued before PA goes live) and post-2016 with BCA requirements.
57. ME noted that a variation to option 3 had been proposed that removed the redefinition of MEL to connected capacity. However, it was agreed that it would be preferable to leave the option as proposed because the provision of connected capacity data to the market and System Operator would support more effective wind forecasting. CMD noted that if MEL were set at connected capacity it would not restrict output as could currently be the case.
58. LC asked if the workgroup were able to recommend an option? Or are there any other versions of any options? Choosing the option along with a monetary value attached to it for comparison would be helpful for Ofgem. GN stated that option 3 without the retrospective element is an acceptable outcome. CMD agreed.
59. ME asked if all Workgroup members can accept the non-retrospective version of option 3 as the least worst solution? On no further comment, ME concluded that this was an accepted position by the workgroup and there was no dissent. He acknowledged that the definition of PA must clarify what to do in the event of a failure of the signal. MC added that even to implement the simplest option there are some complications.
60. RW stated that he would now revise the workgroup report and would then circulate this to the workgroup for comment. CMD asked if the workgroup had had sight of the final workgroup report? RW replied that several iterations of the draft report had been circulated to the workgroup and these also formed the basis for the workgroup and public consultations. The final draft of the report, which was derived from the Industry Consultation, was circulated to the GCRP and was discussed at the May GCRP meeting when it became apparent that further engagement with stakeholders was necessary.

POST-MEETING UPDATE:

Prior to the production of the meeting notes, RW circulated in an email on 9/10/14 a summary of the conclusions and next steps from the meeting as follows:

- (i) The workgroup agreed that there is a need to do something to allow effective wind farm provision of response & reserve services, noting that this is not an issue of capability but of facilitation.
- (ii) Of the options presented, the 'least worst' alternative was agreed by the workgroup to be option 3 – the provision of an additional power available signal. This would be a requirement for new connectees to the system from April 2016 [as in the last draft report discussed at the May GCRP meeting].
- (iii) For existing parties or those that will connect before April 2016, there will be no mandated requirement for this signal. It is however likely that to facilitate provision of response & reserve services, National Grid will approach specific parties to seek an agreement to provide the power available signal or that some of these parties will likewise be interested in providing this to enhance their participation in the response & reserve markets.
- (iv) It was further discussed that a variation to option 3, removing the redefinition of MEL and so making a cleaner modification which has zero impact upon existing signals, could be a preferred way forward. This point was rejected by the workgroup which agreed to leave the MEL provisions in as noted in point 57 above.
- (v) National Grid is going to redraft the final report to the Authority and will circulate this to the workgroup for comment. We will aim to do this by 31 Oct (firming up the estimate of 'a couple of weeks' as given in the meeting) to also give the chance to reflect any comments made on these meeting notes.
- (vi) When this report is circulated, other than the general content, responses are invited on what else is required before its formal submission to the Authority – namely whether further discussion at GCRP would be beneficial or whether there is a requirement for a further public consultation. Re-consulting would normally be required where the conclusions have changed and/or there have been significant changes to the legal text.