Data Communications Company

Conclusions

On the delivery plan for Network Evolution – Communications Hubs and Networks

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1. Executive Summary

Context

The Network Evolution Programme (NEP) is a Data Communications Company (DCC) initiative geared towards defining and delivering future-proof Communications Hubs & Networks (CH&N) with an efficient supply chain and a targeted longevity of at least 15 years. Maintaining Smart functionality over the longer term will require the introduction of new Communications Hubs (CHs) which use the newer 4G network. DCC has stood-up a CH&N Programme to assess options for and then implement a chosen solution to achieve this.

On 29 January 2021 DCC was Directed by BEIS to produce an implementation plan for CH&N and on 6 April 2021 DCC published a draft consultation for review and comment. This consultation closed on 7 May 2021, and this document sets out DCC's conclusions on the plan in light of stakeholder feedback.

DCC received 10 responses to the consultation, from Energy Suppliers and an Energy Supplier trade body, a Meter Asset Provider, a Device Manufacturer, an energy data company, and a regulated co-operative of Energy Suppliers.

Strategic considerations

DCC received a number of comments from stakeholders on broader points in relation to the CH&N Programme overall, as well as those in response to the 16 asked specifically in relation to the delivery of the plan. Strategic comments related to the Business Case that underpins the transition to 4G CHs and how this was being considered alongside the proposed delivery plan. They included:

- Whether and when the programme Business Case will be updated to reflect the current plan and conclusion of commercial negotiation. We can confirm that this is the case and that DCC will update and share with industry the Costs Benefit Analysis in June 2021 to reflect the dates in the plan we will submit to BEIS for approval, and the latest view of the SMIP roll-out. DCC will continue to share information with stakeholders, subject to any commercial sensitivity considerations, and will provide a view of the costs and benefits at the conclusion of the commercial negotiations.
- Whether the programme should cover the North Region as well as the Central and South Region. DCC's position in relation to the geographical scope of the programme is unchanged: whilst the programme is not considering the implementation of the 4G solution in the north region in the scope of this current delivery, DCC's procurement includes options for 4G services in the North which are technically feasible that could be considered at a future date and subject to a future business case.
- Whether a Single Band Communications Hubs (SBCH) was necessary and whether it is preferable to undertake Dual Band Communications Hubs (DBCH) delivery only. DCC's view that SBCH delivery, in accordance with the timetable of the plan submitted, de-risks the overall delivery and protects the early delivery of benefits. DCC anticipates that this position will be supported by the updated business case that it will be sharing in due course.
- The date at which mobile network operators may choose to sunset 2G/3G capability is currently unknown. DCC has made assumptions about this within its Cost Benefit Analysis, with those assumptions being based on independent research conducted for DCC and on the various contractual end dates DCC has in place with its communication service providers. While the economic impact of a delay to sunsetting is not currently known, DCC's analysis shows that acting

now to mitigate the risk of 2G/3G sunsetting is the best option for industry. DCC will be providing an updated Cost Benefit Analysis in June 2021 which will provide modelling of the different scenarios.

- What the approach would be to the management of SMETS1 Device replacement. DCC will work with industry on a roadmap for the replacement of SMETS1 devices. The business case includes an assumption that no SMETS1 devices remain installed after the time that their supporting communications contract reaches its final expiry. Industry and DCC costs associated with SMETS1 Devices that are replaced prior to the end of their economic life are included within the Cost Benefit Analysis.

Testing

Specifically relating to the DCC delivery plan, there was broad support for DCC's shift-left testing strategy, with respondents stressing the importance of a sufficiently broad and deep testing scope, working with the SEC Panel's Testing Advisory Group (TAG) and using sufficient numbers of devices during testing. A majority of respondents supported not mandating user testing, but it was noted it was important that Users are able to complete testing. DCC has been and will continue to work with both the SMDA and AltHAN Co to support Energy Suppliers' interoperability testing.

Go-live

DCC described the proposed approach for go-live, including that there would be two go-live decision points, with a majority of respondents supporting the approach, and the concept of an Initial Pallet Validation phase with devices on the production environment ahead of mass manufacture. DCC is not amending its governance approach based on this feedback.

CH Transition

Our consultation considered the transition for industry as a whole from 2G/3G CHs to 4G CHs and set out proposals for a 'CH Transition Roadmap' – which DCC intended to develop with industry which would set out its approach to managing these issues. Respondents provided valuable feedback on the extent of DCC's assessment in this area, suggesting additional points to consider, including how Mesh CHs would be managed, ordering and forecasting arrangements, and use of CHs in installation training. We will build these into the roadmap as we develop it with stakeholders.

Lessons learned, contingency, interaction with other plans

We set out our lessons learned and received welcome feedback on these, with several additions proposed. We will capture these and use this learning as we develop the plan. We also set out our proposed approach to using contingency. We will keep this at the 2 months proposed in the consultation, to be held by BEIS and requested through their Smart Metering Implementation Programme's transitional governance. DCC included in its consultation an analysis of the programme's interaction with other change programmes happening in industry. The large majority of respondents agreed with DCC's assessment and stressed the importance of ensuring dependencies between the change programmes are effectively managed, which we agree with and will do.

Risks, assumptions, issues and dependencies

There was broad support for the assessment of risks and opportunities set out alongside the plan. Most respondents agreed with DCC's set of assumptions with some seeking clarity on those included. On the

re-flashing of CHs, we see this as a beneficial means to improve efficiency across industry but it is our view that its inclusion in the initial delivery plan must come at a cost and in a timeline that fit within the business case benefits. We cannot definitively confirm its inclusion at this stage in our procurement approach, but as this concludes we will continue to discuss the provision of this capability with prospective service providers. If it is not something that is made available with the provision of the minimum viable product 4G CHs we will consider its inclusion in subsequent upgrades (subject to cost/benefit analysis).

Dependencies listed were also broadly supported, with respondents suggesting others to capture, including the availability of devices and components in light of the global Covid 19 pandemic and silicon shortage, and our interdependency with AltHAN solutions are they are designed and delivered. We agree and will capture these.

Programme Opportunities

DCC presented potential opportunities within the programme, seeking views on whether these should be incorporated into the plan or not. In keeping with DCC's aim to ensure that the plan strikes a balance between the challenges and opportunities in delivering it, and builds on our experience of delivery to date, at this stage we're not planning to introduce the opportunities identified in the consultation. Instead, we will adopt the position proposed by one respondent whereby we make the assessment of opportunities (and threats) an ongoing activity which we will incorporate into programme governance.

Customer engagement

DCC's final questions related to customers' journey during the delivery of the plan, and the engagement we have planned during its life. We welcome customers' feedback on DCC's assessment and will add additional suggestions provided – for example engagement with the AltHAN Co – into DCC's forward plan. We will also ensure customers are involved in our review of the plan at the control points included in it. As well as engaging via governance forums (SEC Panel and sub-committees; SMIP groups), DCC will engage through our Quarterly Finance Forum and DCC led webinars. Key updates will also be shared on the DCC website, our customer portal, and partner newsletters.

Changes to the plan and next steps

There have only been minor changes to the plan which we have submitted to the Secretary of State for their approval. These include:

some minor updates to the milestone table to reflect changes to dates ahead of the first control points, as follows:

- SVTAD submission: DCC has moved this date to the end of July from mid-June to accommodate the development of the governance proposals contained in the document.
- LOI: To allow DCC flexibility during this important late stage in the procurement process for DBCH, we have removed this date from the plan. It is possible that, through DCC's disaggregated procurement process, we may by finalising arrangements with several new service providers over a number of days during this time.
- DSP LLD: We have moved the date of this milestone from the middle of August to the end of September to allow DCC additional time to finalise these designs. We will manage delivery of the

WAN gateway updates with the successful vendor for this capability. This amendment does not impact later milestones to deliver 4G communications hubs.

- Confirmation of scope of regulatory change: We have added additional granularity on this subject, by:
    - Adding to milestone 2 that we will confirm the regulatory (SEC) baseline for testing at the same time that we submit lower level testing documentation for approval; and
    - Introducing a new milestone for the confirmation of regulatory changes needed to support the implementation of the CH Transition Roadmap.

  We will use the existing milestone as a backstop to confirm any other changes that are required.

We have moved the milestone and extended the end date of the Operational Performance Testing (OPT) to align with the end of UIT, as DCC intends to continue this activity throughout UIT as well as SIT.

2. Introduction and Context

2.1. The Network Evolution Programme

1. The Network Evolution Programme (NEP) is a Data Communications Company (DCC) initiative geared towards defining and delivering the organisation's future operating capability. It comprises four sub-programmes:

- **Network Evolution Communication Hubs & Networks:** Designing and procuring future-proof Communications Hubs & Networks (CH&N). We require a technology with a targeted longevity of at least 15 years so that the full benefit of CH assets' operational life is realised from the point of installation;
- **Network Evolution DSP:** Designing and procuring data services which are secure and sustainable, with a reduced operating cost, capable of rapid and cost-effective change in response to market and customer demand.;
- **Network Evolution Security & SMKI:** Procure a replacement or extension to the Smart Metering Key Infrastructure (SMKI) security (TSP) service in a cost-effective way; and
- **Network Evolution Test Automation:** Designing and implementing automated testing of the SEC releases to achieve faster and lower-cost testing.

2.2. The Communications Hubs and Networks Programme

2. The Network Evolution Communication Hubs & Networks programme is geared towards defining and delivering future-proof Communications Hubs & Networks (CH&N) with an efficient supply chain and a targeted longevity of at least 15 years. Maintaining Smart functionality over the longer term will require the introduction of new CHs which use the newer 4G network. DCC has stood-up a CH&N Programme to assess options for and then implement a chosen solution to achieve this.

3. The programme aims to maximise value for money and ensure that DCC continues to meet the needs of its customers in the medium and long term, supported by a flexible commercial model that supports effective change and drives value for money for DCC Users. The CH&N Programme aims to deliver the following outcomes for DCC and its customers:

- Ongoing secure connectivity, capacity and longevity of devices as cellular technology evolves;
- Protection of investments already made and promotion of future value for money for customers; and
- Flexibility to allow future change to support industry evolution.

4. DCC currently delivers Smart Metering services over 2G/3G through two distinct families: SMETS1 and SMETS2. Each family has its own arrangements for Communication Service Providers (CSPs), covering the provision of network services and the devices (Communications Hubs), and in the case of SMETS1, the Communications Hubs are not provided by the DCC.

5. Maintaining Smart functionality over the longer term will require the introduction of new CHs covering all premises in GB, which use the newer 4G network. The CH&N Programme will assess options for and then implement a chosen solution to achieve this. We have followed the Treasury

Green Book[1] guidance to develop an Outline Business Case ahead of the finalisation of a Full Business Case for our approach.

6. DCC's Licence includes a requirement for DCC to submit the Busines Case to the Secretary of State for the Department for Business, Energy and Industrial Strategy (BEIS) for their review ahead of certain procurements covering its core service provision. DCC has used its Outline Business Case inform its Invitation to Tender for the work required under the programme. Following the evaluation of responses and selection of a preferred bidder, DCC finalise the Full Business Case and submit it to BEIS for confirmation.

2.3. Secretary of State's Direction for the CH&N Plan

7. On 29 January 2021 DCC was Directed in accordance with Condition 13B of the DCC Licence to produce an implementation plan for two[2] elements of the 'Network Evolution Arrangements', including for CH&N, to be submitted to the Secretary of State for approval by 4 June 2021. On 6 April DCC consulted with stakeholders on draft plans[3] covering the CH&N elements of the Network Evolution Arrangements. The consultation closed on 7 May 2021 and DCC has been considering responses to the consultation and finalising the plan in light of stakeholder feedback.

8. This document summarises the responses received to the 16 questions set out in the consultation, as well as other comments and feedback received, and DCC's conclusions in light of this feedback. It also sets out the changes to the plan DCC has made, as well as the final plans that DCC is submitting to the Secretary of State for approval alongside the publication of this document.

- **Section 3** of this document sets out responses received to the 16 questions asked, as well as DCC's conclusions in response to the feedback received.
- **Section 4** considers additional points raised by stakeholders which did not relate specifically to the questions asked, and DCC's response to them.
- **Section 5** summarises the changes to the plan, and associated risks, assumptions, issues and dependencies that DCC has made in response to feedback.
- **Section 6** set out DCC's next steps in terms of plan delivery and stakeholder engagement.
- **Appendix A** presents the plans on a page for Single Band and Dual Band Communications Hubs delivery.
- **Appendix B** includes the final set of Milestones that DCC is submitting to the Secretary of State in accordance with the Direction issued under Condition 13B of the DCC Licence.

[1] The Green Book is guidance issued by HM Treasury on how to appraise policies, programmes and projects, and the use of monitoring and evaluation before, during and after implementation.
[2] The Direction also required an implementation plan Network Evolution Arrangements for ensuring continuity in the provision of data services. The implementation plan for these arrangements will be subject to a separate consultation.
[3] DCC's CH&N approach includes two plans covering Single Band Communications Hub and Dual Band Communications Hubs.

3. Questions – feedback and DCC conclusions

9. DCC Received 10 responses from stakeholders, comprising: 5 Energy Suppliers; 1 trade body representing some Energy Suppliers; 1 Meter Asset Provider; 1 Device Manufacturer; 1 energy data company; and 1 regulated co-operative of Energy Suppliers.

10. We have summarised the key points made in relation to each question in the subsections of this chapter. Where respondents have made points which are not directly related to the question posed, these are considered in section 4 covering broader points raised. Where respondents have reiterated points across numerous questions, we have set out our response for the most relevant question, or in our response to broader points raised. Copies of all responses in full were shared with the Secretary of State to inform their decision as to whether or not to approve DCC's plan.

3.1. Testing (Questions 1 and 2)

11. DCC set out its testing approach for the delivery of the CH&N plan, including a proposition to undertake broader and more comprehensive testing earlier in the testing process (especially during PIT) – referred to as 'shift-left' – and our proposals for not mandating user testing based on this approach, the DCC view being that sufficient testing by DCC during PIT and SIT should remove any dependency on user testing in UIT prior to moving to an Initial Pallet Validation activity. We asked respondents for their views on the testing approach overall, and whether there were any missing or unnecessary steps.

3.1.1. Question 1

Question 1	**Do you support DCC's shift-left strategy for testing, including that there are no obligations on DCC Users to undertake testing? If not, please explain why.**

Response summary

12. There was broad support in principle for DCC's shift-left strategy, including from all energy suppliers and their trade body. Several respondents stressed the importance of ensuring the breadth and depth of testing to be undertaken would be sufficient, and the need to work with the SEC Panel's Testing Advisory Group (TAG). Respondents also stressed the importance of using sufficient numbers of devices during testing, asking for more clarity regarding what DCC considers to be an adequate amount.

13. On the proposal for not mandating user testing, the energy supplier trade body noted that its members are generally comfortable with the prospect of not mandating testing, and their expectation that many would voluntarily undertake this testing. They suggested that DCC ensures TAG (and SEC Panel) is comfortable with this approach from a governance perspective. They also suggested that DCC considers a mitigation plan in the unlikely event that no Supplier opts to participate in the relevant DCC testing activity.

14. One Energy Supplier stressed that there must be an optimum number of Service Users involved in UIT and PIT, with this providing sufficient coverage of devices previously deployed and to be deployed in future. They suggested that, to incentivise such Energy Supplier Participation, the DCC should consider offering to cover the reasonable costs incurred for testing.

DCC conclusions

15. DCC welcomes support for the shift-left approach, and the importance of sufficient test coverage. We fully intend to involve TAG in the approval and agreement of the breadth and depth of the testing undertaken in PIT and SIT, as well as engaging them on the testing approach overall. In June 2021 DCC issued its draft consultation on the SEC Variation Testing Approach Document (SVTAD) which details the role of TAG in ensuring that test coverage in PIT and SIT is appropriate. In terms of the breadth of device models and combinations to be used in such testing, DCC has been developing a Device Model Combination document that DCC proposes will be approved by TAG, setting out its methodology for how it will select the models and combinations it will use for testing. We will also share this with the TDEG members (to the extent that confidentiality and commercial sensitivity allows) to ensure they are sighted and can provide their views.

16. Regarding the risks of insufficient numbers of participants voluntarily undertaking UIT and IPV, we will act on the suggestion that DCC ensures that TAG and Panel are comfortable with this voluntary approach and seek their views throughout the testing process.

17. Whilst DCC is of the view that the proposed testing regime will allow DCC to prove readiness without a dependency on User testing, DCC is encouraged by the suggestion that many suppliers will participate in testing without being mandated, we agree with respondents that it is sensible to develop a mitigation plan for maintaining a voluntary approach. DCC considers that the industry needs to identify what the minimum number of participants and the extent of testing required during these phases. DCC proposes to ask the SEC Panel and its sub-committees to oversee this activity, and to recommend how the identified outcomes can best be achieved.

18. Where it becomes apparent that this agreed level of participation may not materialise, DCC will escalate this to SMIP Transitional Governance to seek views on remedies. These could include introducing an obligation on suppliers such as a duty to cooperate (akin to the one introduced for suppliers to support the MHHS programme), or more specific provisions in the SEC. We will use the second control point in the plan as a point at which to confirm whether or not we will introduce any regulatory requirement for Parties to participate in UIT and IPV.

19. We agree that there is value in having a broad set of participants in testing and, as noted above, will seek stakeholder support through the approval from TAG for DCC's testing coverage in PIT and SIT, and by sharing our more detailed proposals for testing with TDEG.

20. On the subject of covering costs of testing to incentivise participation, this is an approach that would require a change to the Smart Energy Code (SEC) to set out details on the extent of reasonable testing. We do not consider it an essential change to the testing arrangements for this programme, as there are strong incentives on energy suppliers to ensure that their systems, devices and processes work as intended with newly provided CHs. We would further note that DCC has no objection to this arrangement in principle, and that stakeholders may wish to raise a change to the SEC to revise how the costs of testing are recovered (in general and/or in relation to programme testing) in order to introduce this approach.

3.1.2. Question 2

Question 2	**Do you support DCC's testing approach for the CH&N programme. Are there steps missing or unnecessary activities? Please provide a rationale for your position**

Response summary

21. The majority of respondents supported DCC's testing approach. Those who did, and others who neither supported nor objected to DCC's proposals, added suggestions and sought further clarification on a number of points. No respondents objected to the approach set out in the consultation.

22. Clarifications sought and comments made included:

- If and when DCC would be submitting CHs to the Smart Metering Design Assurance scheme (SMDA) for independent assurance and testing, noting a preference for this to happen before UIT.
- That DCC should include compatibility testing between CHs and the Alt HAN Solution so that interoperability is assured.
- Further detail on the technical steps to consider and risk manage the co-existence of 4G and the sub-GHz ZigBee signal which is used in the HAN.
- Whether and when device specifications would be locked or frozen to support stable testing.
- What, if any, business processes would be simulated in PIT.
- That clarity should be provided on the Component Integration Function and steps DCC is taking to ensure performance to time.

DCC conclusions

23. DCC welcomes the additional comments and queries provided in relation to its testing approach. As noted in the consultation document, DCC will be utilising the Test Design and Experts' Group (TDEG) to collaborate on the depth and breadth of testing and will use this forum to seek views on the technical points raised in the consultation. DCC also proposes that TAG will approve the testing documentation used to govern both PIT and SIT.

24. On engagement with SMDA, DCC has been working with SDMA to support current device assurance activities it will undertake, and we intend to continue this throughout the delivery of the CH&N Programme. This has included the provision of CHs currently in use by DCC as well as agreeing test scripts to support Suppliers' interoperability testing carried out under the scheme. We do intent to provide 4G CHs to the SMDA so that they can support SMDA's ongoing device assurance activities, and will so do once they are mature, from UIT onwards.

25. DCC has recently started working with the AltHAN Company on testing, and we plan to continue to do so on an ongoing basis to support their roll-out. Risks of sub-GHz and 4G signal co-existence are ones we are alert to and have factored this into our testing plans. It will be tested initially during PIT with additional scenarios to be developed and incorporated into SIT and further detail will be set out in the testing documentation associated with this phase.

26. We can confirm that we will be simulating business processes in PIT, and, should our governance proposals be adopted, these will be agreed by TAG by virtue of their approval of the testing documents which will govern this test stage. We would encourage stakeholders to engage with us through TDEG to ensure their own processes are made known to DCC so we can plan how we will use these in the most effective way. Finally, on Component Integration, we have sought to ensure bids received to undertake this role are of the highest quality, as we recognise the importance of this function. CIT, undertaken by the Component Integrator, will provide an integration test phase, where all service providers can test their product(s) in an integrated environment using real components utilised in the programme. It will have a real DSP, Device Manager, WAN, as well as CHs and other HAN Devices.

3.2. Readiness for Live (Questions 3 and 4)

27. The consultation described the proposed approach for go-live, including that there would be two go-live decision points. One following the completion of any user testing undertaken, and ahead of the deployment of code into the production environment, and another following a period of initial validation of new CHs (Initial Pallet Validation or 'IPV') and ahead of a decision to start the mass manufacture of 4G CHs.

3.2.1. Question 3

Question 3	**Do you support DCC's proposals for go-live using two milestones in readiness for Initial Pallet Validation and Mass Manufacture? Please provide a rationale for your response.**

Response summary

28. 7 respondents supported DCC's go-live proposals of using the two milestones, welcoming the concept of IPV introduced for this delivery programme as well as the fact that DCC's Live Services submission to BEIS would be underpinned by a recommendation from the SEC Panel. 1 respondent neither supported nor objected to the proposals but noting the milestones would provide industry an opportunity to consider the programme and whether to move forward. 2 respondents did not comment.

29. Several asked questions about the go-live process, including whether the 2-month window for initial pallet validation as proposed would be long enough. One respondent noted the proposals for 'fixing-forward', where DCC would, from the point of mass manufacture, seek to resolve any device defects through firmware upgrades at or following installation. They did not support this proposal if it was not going to be supported by re-flashing capability (whereby CHs could have any issues or defects resolved ahead of their delivery to energy suppliers for installing). They also suggested whether DCC should hold a volume of 2G/3G CHs in the supply chain during the early stages of mass roll-out to further mitigate risks to installation rates.

DCC conclusions

30. In light of responses received, DCC will continue with a 2-stage go-live process as set out in its consultation. We consider the 2-month window for IPV to be sufficient, and that it strikes a balance between the need for energy suppliers to assure their own readiness to receive 4G CHs

and the need to commence mass-manufacture as planned in support of the CH&N Business Case. We will review this, and the duration of the go-live process overall, at each of the 2 control points set out in the plan.

31. On DCC's proposals for fixing-forward, we recognise that post-installation forward upgrades over-the-air are not always possible or appropriate. We are therefore seeking a sensible and pragmatic approach that supports the Business Case and ensures timely delivery of 4G CHs that are capable of being installed and commissioned during one site visit. This includes exploring a number of mitigations associated with device transition, which we intend to discuss with stakeholders as part of the CH Transition process. One of these is the shift-left testing approach, which implements many of the lessons learned DCC has captured and protects against many of the issues associated with this approach. We see re-flashing capability as a beneficial means to improve efficiency across industry but it is our view that its inclusion in the initial delivery plan must come at a cost and in a timeline that fits within the business case benefits. As DCC completes its procurement we will continue to discuss the provision of this capability with prospective service providers. If it is not something that is made available with the provision of the minimum viable product 4G CHs we will consider its inclusion in subsequent upgrades (subject to cost/benefit analysis).

32. Regarding the ongoing supply or stockpiling of 2G/3G CHs, this is something we want to continue to discuss with stakeholders and especially energy suppliers, and our approach to doing this is set out in the CH Transition Roadmap (which we consider in more detail in our response to question 6).

3.2.2. Question 4

Question 4	**Do you support DCC's proposals for non-mandated IPV, including that there are no obligations on DCC Users to undertake this activity? If not, please explain why.**

Response summary

33. 3 Energy Suppliers supported our proposals for non-mandated IPV, with one other, and the energy supplier trade body neither supporting nor objecting. Of these respondents, several noted that many suppliers expected to participate in IPV activities.

34. 1 Energy Supplier and 1 energy data company did not support the proposal. The reason for their objection was a concern that non-mandated testing would lead to a small number of voluntary participants, comprising larger and more well-resourced Energy Suppliers, and that these participants alone would not identify issues affecting some Device Model Combinations that were being (or were being planned to be) used on in the production environment. It was also noted that this testing should include a representative sample of different IT systems, DCC adapters and managed service providers.

DCC conclusions

35. We note risks raised over lack of participation in IPV, and the breadth of devices used, and our view is that the proposals for monitoring proposed participation, and escalation to SMIP Transitional Governance to consider remedies (as set out in response to question 1) sufficiently

mitigate these risks. We will use control point 2 to confirm whether or not we will introduce any regulatory requirement for Parties to participate in IPV.

3.3. Device Transition (Questions 5 and 6)

36. The transition for industry as a whole from 2G/3G CHs to 4G CHs is a key element of the plan. DCC set out its analysis of the issues that would need to be managed during the transition between devices and also set out its proposals for a 'CH Transition Roadmap' – which DCC intended to develop with industry which would set out its approach to managing these issues.

37. DCC asked two questions in this area, one on the issues set out, seeking view on whether or not its assessment was complete, and one on proposals for the CH Transition Roadmap, and whether these were supported by stakeholders.

3.3.1. Question 5

Question 5	**Do you consider DCC's assessment of the issues for transition to 4G CHs to be complete? Please provide a rationale for your response.**

Response summary

38. 4 Energy Suppliers and the Energy Supplier Trade Body supported DCC's assessment. 1 Energy Supplier, 1 Meter Asset Provider and 1 other respondent did not. Amongst those who did not, and some of those who did support DCC's assessment, respondents offered additional suggestions for inclusion. Those were:

- That there did not appear to be any consideration of Mesh[4] CHs currently used by DCC.
- That there was no consideration of T3 Aerial[5] installations and how these would be handled.
- That DCC should start to plan now for 4G sunset and ensure lessons learnt from this programme were captured and used.
- That there should be a clearer view on the handling of SMETS1 CHs and the approach to their management and replacement.

39. One Energy Supplier suggested that the understanding of costs had not yet been sufficiently considered and should be included in the consideration of CH transition.

DCC conclusions

40. DCC has considered the impact of the programme on the Mesh CHs currently used by DCC. We have assumed that there will be no requirement for Mesh installations once we have transitioned to 4G CHs and we want to incorporate our approach to current Mesh devices (notably their

[4] Where there is an area that has a mobile reception black spot, Mesh uses communications hubs in the vicinity of the black spot to connect to the mobile network

[5] A T3 Aerial is a high gain aerial, that is external to the CH, that achieves better connectivity to the mobile network in areas of poor reception.

replacement) into our CH Transition Roadmap. We would welcome customers' insight and experience as we do this.

41. We agree with the suggestion that we should start now to capture lessons learned in readiness for 4G sunsetting and will do this as part of DCC's ongoing programme management, and ensure that it is built into the CH Transition Roadmap.

42. We set out our position in relation to the handling of SMETS1 devices in Section 4 of this document, but can confirm there is an assumption that no SMETS1 devices remain installed after the time that their supporting communications contract reaches its final expiry.

43. On the issue of costs, the plan set out in our consultation is built on a robust business case that has been developed over several months with input and engagement from stakeholders. The decision to implement this programme depends on a net positive cost-benefit analysis and it is for this reason that the programme business case will be updated and submitted to the Secretary of State – who owns the overall national business case for Smart Metering – who will have the opportunity to object to any associated procurement if the programme does not support national smart metering objectives. We agree with the respondent that costs are critically important, and that these are being considered under the programme, but through the business case rather than specifically through the CH Transition Roadmap.

3.3.2. Question 6

Question 6	**Do you support DCC's approach for managing industry's transition to 4G CHs? Are there steps in the roadmap that are unnecessary or others that have not been included?**

Response summary

44. 4 Energy Suppliers and their trade body, along with one energy data company supported DCC's approach. Other respondents neither supported nor objected to DCC's approach. Respondents offered views on steps that should also be included in the Roadmap, and other issues for consideration, including:

- Including clear assumptions on the management of SMETS1 assets currently installed.
- Changes to CH forecasting and ordering arrangements to support transition.
- Alignment with current and any future SEC modification proposals.
- That DCC should utilise industry expertise – for example members of the DCC Supply Chain Working Group – to support the development of the Roadmap.
- The availability of Training CHs.

DCC conclusions

45. DCC is grateful for the inclusion of these suggestions, all of which are important points which should be considered as part of Transition.

46. We have set out our response to managing SMETS1 devices, including manging replacement of assets, in Section 4. Changes to CH forecasting and ordering are being actively considered by DCC and will form part of DCC's commercial management and the CH Transition Roadmap. We plan to consider all proposed SEC modifications for impacts on the CH&N programme, and will support the SEC change process (as we do already) by providing an assessment of the impact of the programme and associated design freezes on proposed SEC modifications. We intend that the technical specifications to which the MVP 4G CH will align are discussed with BEIS, SEC Panel and confirmed to all key stakeholders prior to baselining. We propose that this takes place at the first control point in the plan and is reviewed at the second.

47. We will add these to the issues we have captured and look forward to discussing them with stakeholders as we develop the CH Transition Roadmap. DCC has included requirements for training CHs to be made available as well as training resources in its procurement pack. We will be able to confirm how this is made available once the procurement process concludes.

3.4. Lessons learned (Question 7)

48. DCC provided a summary of the lessons learned that it will apply to the CH&N programme. We asked respondents for their comments, including whether there were any lessons that we had not indicated, or those which should not be included.

Question 7	**We would welcome comments on DCC's lessons learned. Are there any we have not listed, or lessons in the list which should be discounted?**

Response summary

49. Whilst some respondents agreed that the list was comprehensive, several respondents suggested a number of other lessons learned that should be factored into the programme. These included a number of broad points relating to the business case for the programme overall, as well as those more specifically related to programme delivery. Those delivery focussed points included:

- That DCC should have a plan for T3 aerials and avoid requiring them for any new network;
- That there should be a clear plan for managing areas of the network where there is currently no WAN, nor any plans for it to be provided;
- That testing should consider and ensure device interchangeability as well as interoperability;
- That noise performance should be a specific lessons learned and a strategy built into the programme to manage this;
- That future impacts on 4G network performance from broader energy sector developments like decentralised generation, storage and smart homes should factor into the enduring solution;
- That there need to be solutions identified early to manage overrunning testing (e.g. extended hours);

- That DCC's experience of managing service provider contracts through programme delivery should be included
- That it will be necessary to manage inter-operational issues with manufacturers and that there should be support for this as well as device maintenance and releases;
- That the scope of the Instrumented Test Communications Hub (ITCH) needed to be clearly set; and
- That there should be sign off by end-users (DCC customers) on e2e test scenarios deployed

DCC conclusions

50. DCC has set out its response to the broader points relating the overall programme in section 4 of this document. We agree that the points raised that specifically relate to programme delivery are useful inclusions that should inform DCC's approach. Some of these are already captured in DCC's detailed programme documentation. Those which have not been will be added, and DCC will continue to engage with stakeholders on all the lessons learned captured so their management is understood.

51. Considering those specifically raised:

- On T3 aerials, DCC does not intend for them to be needed on any 4G network and our procurement has been developed accordingly;
- On 4G coverage, we expect issues of no WAN to be significantly reduced by the delivery of the new network. Our procurement requirements factor in the role of our network and devices in supporting broader energy sector developments and we will continue to review these;
- On contract management, DCC seeks to continuously build on its extensive experience of contract management. We have applied these lessons into our procurement process to date and will continue to do so through the conclusions of this process and on into mobilisation, delivery and operation;
- On testing, DCC's testing coverage is approved by TAG, and will set out proposals in relation to device interoperability and interchangeability for their approval;
- Regarding issues that are found in testing, DCC intends to deliver, retest and then release as part of the test phase cycles, and DCC will be managing these with suppliers with input from the appropriate governance bodies; and
- The scope of ITCH will allow wider stakeholders, including meter manufacturers to do early integration testing, debug and facilitate issue resolution arising from the testing.

3.5. Contingency (Question 8)

52. DCC set out its proposals for managing contingency in the plan, including that, where opportunities identified were not incorporated, 2 months of contingency should be held by BEIS under the Joint Implementation Plan which DCC could request if needed. DCC sought stakeholders' views on this proposal.

Question 8	**Do you support DCC's approach to managing contingency for CH&N delivery? Please explain why.**

Response summary

53. The majority of respondents supported DCC's approach to managing contingency. Two Energy Suppliers neither supported nor opposed the proposal, though did note the ambitious nature of the proposed contingency and that time for contingency governance might impact the speed and which the plan could be changed and the impact this may have on the benefits case.

54. One supplier did not support the approach, stating their concerns regarding DCC proposing an approach that does not include some contingency in the critical path plan.

DCC conclusions

55. DCC recognises the importance of a prompt delivery and the benefits this provides to the overall benefits case for smart metering. On this basis, we consider that having centrally held contingency that can be called on as needed, strikes a sensible balance between building in contingency that may not be needed, or not including any at all. Irrespective of whether it is held by BEIS and requested, or factored into the critical path, the key to managing it will be to communicate clearly and early to all stakeholder in terms of plan progress and confidence. We intend to do this through BEIS transitional governance forums as well as SEC governance, and will also ensure we communicate to all stakeholders as suggested in responses to this consultation.

56. We do not consider that the speed at which contingency can be granted poses a risk to the programme, given our experience to date of managing contingency requests through the JIP. On this basis we intended to progress as planned and hold 2 months contingency, which reflects our decision not to implement opportunities identified in the plan at this stage (instead keeping these under review and considering whether to implement them as part of an ongoing programme management), which we set out in our response to question 14. We will review this allocation at both of the control points which are incorporated into the plan.

3.6. Plan interactions with other change (Question 9)

57. DCC set out its assessment of interaction of the CH&N delivery plan against the other change programmes happening in industry, including those where DCC is leading (e.g. SMETS1), and those where DCC is contributing to industry change managed elsewhere (e.g. the Switching Programme and the Market Wide Half-Hourly Settlement Programme (MHHS)). We should view on whether this assessment was complete and correct.

Question 9	**Do you agree with our assessment of external change which could impact or be impacted by CH&N delivery? Is there change that we have not considered?**

Response summary

58. The large majority of respondents agreed with DCC's assessment and stressed the importance of ensuring dependencies between the change programmes (both impacting and being impacted by the CH&N programme) were captured and managed. Specific comments and queries raised in relation to external change included:

- The extent to which the CH&N programme would benefit other programmes through its delivery as planned, and whether these had been or will be factored in the programme cost-benefit analysis.
- To what extent the programme had built a holistic assessment of overall change in industry, specifically noting that proposed SEC modifications may impact or be impacted by the CH designs.
- Specifically, to what extent the Market-wide Half-Hourly Settlement Programme is expected to be dependent on the CH&N programme.

DCC conclusions

59. DCC welcomes the comments provided and the additional insight that respondents' assessment of change provides. It is valuable to have a broad set of stakeholders consider the impacts of the delivery across the many industry change programmes in order to build up as complete a picture as possible.

60. DCC will factor the comments and suggestions raised in responses into its portfolio management and we will continue to consider change holistically throughout CH&N delivery. Where there is external change that impacts the programme, we plan to raise this at the relevant governance forums to ensure it is understood across industry.

61. DCC will use its established formal assurance and governance mechanisms to ensure its change programmes are managed and delivered effectively alongside wider industry change. Having baselined requirements as part of the Invitation to Tender, the CH&N programme, like all other DCC programmes, is subject to formal change control processes to assess the impact of wider industry change activity on the programme, including SEC Modifications.

62. DCC will deliver a solution to meet the Ofgem and industry requirements for MHHS through modification to the SEC. It is DCC's view that the solution design itself is unlikely to depend on the introduction of 4G CHs. However, alongside other factors such as customer choice regarding meter installation, data and supplier tariff arrangements, the final CH&N approach has the

potential to impact the Ofgem business case for introduction of MHHS. Given DCC's involvement in both programmes we will continue to ensure that programme progress (including final designs and delivery milestones) is reported to Ofgem and Elexon (as the SRO for the MHHS programme).

3.7. Dependencies and assumptions (Questions 10 and 11)

63. DCC presented the key assumptions that underpin the plan, as well as the dependencies on which the plan's delivery relies, asking two questions on these seeking respondents' views on whether they were complete.

3.7.1. Question 10

Question 10	**Do you agree with our assumptions for CH&N delivery? Are there any which have not been included but should have been?**

Response summary

64. The majority of respondents agreed with the assumptions that DCC presented alongside the plan. 1 large supplier agreed the assumptions were intuitive but were yet to be confirmed. Respondents provided several comments in relation to the assumptions set out, including:

- That DCC should refine the assumption that no user testing is required, to reflect the position that no user testing will be mandated, and that user testing was expected.
- That the assumption on whether re-flashing was included in the plan should be clarified.
- That DCC should add a timeframe to the period during which no significant changes are made to the technical specifications.
- Concern that the assumptions meant there would be no ongoing support of 2G/3G Mesh installations.

DCC conclusions

65. We welcome respondents' consideration of the assumptions we have included in the plan. Regarding the comments raised, comments on User testing are set out in our response to question 1. Additionally, DCC is required to ensure it has the capability to support any user testing demands in this period.

66. We have set out our position on re-flashing in our response to question 3. In terms of the plan, our assumption is that re-flashing capability is not something that must be included in the plan, but that we will explore its inclusion, including at a later stage of the programme (i.e. in any upgrades to the minimum viable product). DCC will update its assumption log to reflect this.

67. We agree it would be helpful to add a timeframe for freezes to the technical specifications as part of this assumption and will propose that this is set before the approval of final design, further details are set out in paragraph 46. As we note in our response to question 5, we intend to confirm our approach to the management of support for Mesh CHs in the CH Transition Roadmap.

3.7.2. Question 11

Question 11	**Do you agree with our assessment of dependencies for CH&N delivery? Are there any which have not been included but should have been?**

Response summary

68. Respondents broadly supported DCC's assessment of dependencies, with several suggesting additional dependencies and ways to ensure these would be realised. These included:

- Considering whether DCC should provide funding support for meter manufacturers in testing to ensure sufficient engagement.
- That the dependency on the availability of 4G CHs and their components should be added to the list, noting the current impact of Covid-19 on countries which may be involved in the manufacture of devices.
- That there should be an interdependency on the development of 4G CHs and compatibility and interoperability with the AltHAN solution.

DCC conclusions

69. As set out in our response to question 1, we do not intend to seek to amend the funding arrangements in the SEC for testing as part of this programme, but note that SEC Parties are able to propose changes to how testing costs are managed under the SEC if they wish. Currently DCC will provide space at DCC's test laboratories for testing against the DCC System and Comms Hubs and will continue to do so. We have added the availability of 4G CHs (including test variants) to the dependencies we will monitor for the programme. We agree it will be essential for smart metering as a whole for new 4G CHs and the AltHAN solution to interoperate and will continue to engage with AltHAN as it develops its technical solutions to manage this interdependency.

3.8. Risks and Opportunities (Questions 12 and 13)

70. DCC set out the key programme risks it had identified as having the ability to impact on programme delivery. We also set out some of the opportunities DCC could seek to employ as a way to deliver the plan more quickly, seeking respondents' views on these.

3.8.1. Question 12

Question 12	**Do you agree with our assessment of risks for CH&N delivery? Are there any which are not included but should have been?**

Response summary

71. There was broad support for the risks listed in the consultation, with most of those who responded to this question agreeing, and no respondents disagreeing with our assessment. Respondents raised several strategic risks relating to the business case for the programme in response to this question, including:

- The potential for the obsolescence and sunsetting of the 4G band ahead of the forecast life of 4G assets.
- The potential for 2G/3G sunsetting taking place later than assumed which would impact the economic analysis included in the business case
- That delayed dependencies would impact the validity of the business case

72. As with DCC's assessments of assumptions and dependencies, respondents provided additional comments on the risks set out, including:

- Significant testing issues arising during UIT and IPV which would impact the provision of 4G CHs at volume.
- The risk of CPA certification for CHs being delayed.
- The risks to roll-out overall due to a lack of compatibility with Alt HAN solutions

DCC conclusions

73. We are grateful for respondents' insights into DCC's assessment. For those strategic and business-case-impacting risks set out, we set out our response to these in Section 4 of this consultation. For those specifically relating to the delivery of the plan against the milestones we plan to submit to BEIS, we agree that those raised should be logged and captured and will incorporate into DCC's detailed RAID log any which are not already included.

3.8.2. Question 13

Question 13	**Do you agree with our assessment of opportunities for CH&N delivery? Are there any which are not included but should have been?**

Response summary

74. A large majority of respondents agreed with DCC's assessment of opportunities, with two energy suppliers neither agreeing nor disagreeing with those set out. One of those energy suppliers suggested that further opportunities could exist where DCC did not decide to apply its disaggregation strategy for the provision of DBCHs, and that the approaches chosen by DCC in procuring 4G SBCH and 4G DBCH devices, and associated network services will be a significant factor in determining the pace and simplicity of delivery.

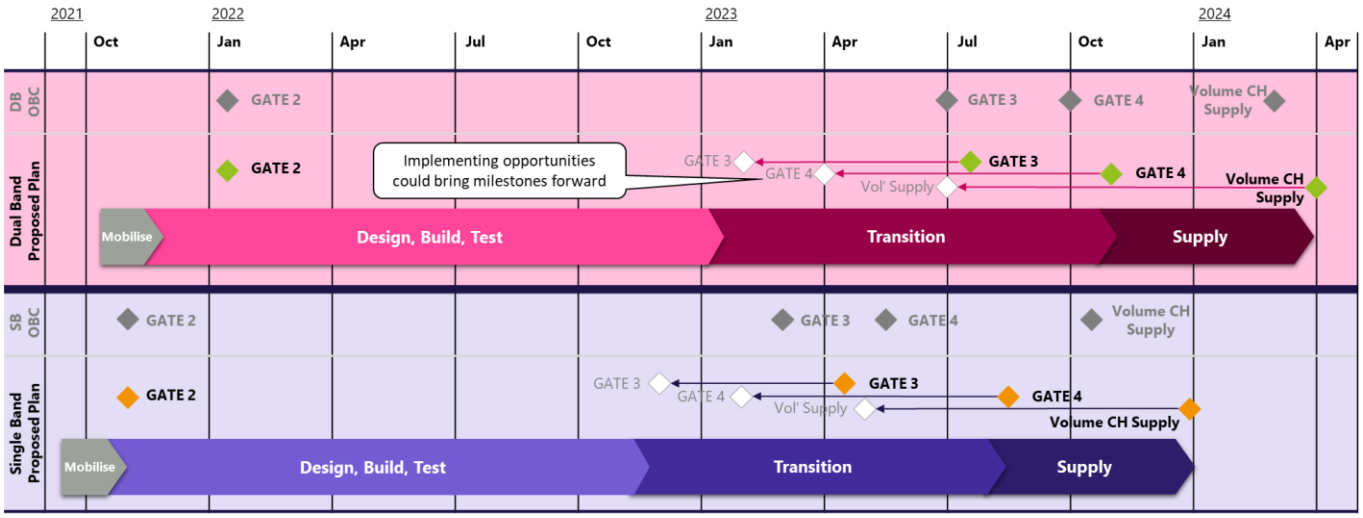
DCC conclusions

75. DCC welcomes respondents' confirmation of its assessment, and the additional suggestions provided. In developing our approach, we have been mindful of the need to balance the speed of delivery with a solution which is cost-effective, so that overall we provide the most benefit to our customers and the industry as a whole. It remains DCC's view that the combination of the aggregated approach for SBCH and disaggregated approach for DBCH delivery, as well as our contract and vendor management overall, delivers this.

3.9. Programme opportunities and threats (Question 14)

76. DCC sought respondents' views on whether or not DCC should incorporate programme opportunities identified into the plan.

Question 14	**DCC would welcome respondents' views on the opportunities described above and whether or not DCC should incorporate these into the plan.**



Response summary

77. 8 of the 10 respondents provided views on the opportunities identified, raising a number of points for DCC to consider. These included:

- The rejection of the idea of DCC not providing early-life-support, noting its positive experience of this in previous DCC programmes.
- Whether the proposal to reduce lead times for CH manufacture was an enduring aim of the programme and not just one for the initial provision of CHs.
- The rejection of the proposal to undertake fewer testing cycles in SIT, noting that one end of cycle test does not evidence that a test / group of tests are repeatable and stable.
- That opportunities should be kept under review as an ongoing process.

DCC conclusions

78. The feedback on the opportunities proposed is gratefully received. Based on the responses overall, and – as set out in the consultation – DCC's aim to ensure that the plan strikes a balance between the challenges and opportunities in delivering it, and builds on our experience of delivery to date, we will not at this stage seek to introduce the opportunities identified in the consultation into the formal plan we submit to the Secretary of State. Instead, we will adopt the position proposed by one respondent whereby we make the assessment of opportunities (and threats) to be an ongoing activity of the project, which we will incorporate into programme governance. We anticipate including reassessment of opportunities at both of the control points included in the plan as a minimum.

3.10. Customer Journey and engagement (Questions 15 and 16)

79. Given the impact on DCC's customers that will be caused by the changes proposed in the plan, DCC set out its assessment of the key customers steps that would be required under the plan, and it's proposals for engagement with stakeholders during the delivery of the plan. We asked two questions on these topics.

3.10.1. Question 15

Question 15	**Do you agree with DCC's assessment of the key customer steps required to support delivery of the plan? Are there any that are not required or any that have not been included? Please provide a rationale for your response.**

Response summary

80. 3 respondents indicated their support for the approach, with a further 4 neither agreeing nor disagreeing with the steps set out. One respondent noted the review points proposed in the plan and suggested their involvement in the discussion in regarding these. One respondent suggested the replacement of 2G/3G CHs prior to the network no longer being available was an omission that should be added. Another respondent noted their expectation that DCC would engage with the AltHAN Company to ensure impacts on the AltHAN solution and risks to shared stakeholders were understood.

81. One respondent used the question to note its disagreement with the proposal for DCC to 'fix-forward', where, in the case that defects are discovered in customer testing after the UIT window has closed, if CHs can be commissioned and take an over the air firmware upgrade, they will be fixed through firmware updates post go-live rather than seeing Communications Hubs returned. They noted this would mean they would be required to hold a large stock of CHs they could not use.

DCC conclusions

82. We welcome customers' feedback on DCC's assessment and will add those suggestions made – for example engagement with the AltHAN Co – to DCC's forward plan. We will also ensure customers are involved in its review of the plan at the control points set out. If it is necessary to revise the plan milestones we expect to consult with industry to seek views ahead of any changes.

83. Our response to the point raised regarding 'fix-forward' is set out in our conclusions in response to question 3. As mentioned, DCC will continue to consider re-flashing capability where cost effective to incorporate, which could mitigate these risks or holding stock which is not immediately available for use and should re-flashing not be available, other ways of mitigating any risks. We will also ensure that the CH Transition Roadmap factors in these issues, and will work with customers to develop and finalise this.

3.10.2. Question 16

Question 16	Do you support DCC's proposals for engagement with stakeholders during the delivery of the plan? Please tell us why.

Response summary

84. 4 respondents supported the proposals outlined, and along with others who neither supported nor objected to the proposals, set out suggestions for DCC to consider. These included.

- Engagement with the AltHAN Co.
- Engagement with SMIP Transitional Governance as well as SEC Governance groups
- Additional, high level and summary material for impacted stakeholders who were not regularly in attendance at these sessions, possibly replicating the approaches used in the SMETS1 programme.

85. One respondent queried whether the Outline Business Case that has been used to inform the plan was still being used and whether stakeholders will have a further opportunity review it, noting their concern that that the overall costs of such a technology refresh are not being surfaced.

DCC conclusions

86. The suggestions raised for inclusion in the engagement plan are welcome, and DCC is grateful for the support received for those steps set out. Throughout the next phase of the programme, DCC will be updating industry outside SEC/SMIP fora on the progress of the programme and if and when there is customer impact. We will include AltHAN Company engagement into our plans. Engagement will be in our Quarterly Finance Forum and DCC led webinars when deemed appropriate. Key updates will also be shared on the DCC website, our customer portal, partner newsletters and EUK. Small Suppliers will be updated at both the Small and Independent Suppliers Forum.

87. We expect to engage with customers at each of the control points we have included in the plan. We had planned to engage regularly with SMIP Transitional Governance and this remains the case. We will add this specifically into our plans.

88. Our response to the query regarding the Business Case is set out in Chapter 4, below.

4. Additional points raised by stakeholders

89. DCC received a number of comments from stakeholders on broader points in relation to the CH&N Programme overall, with several queries regarding the Business Case that underpins the transition to 4G CHs and how this was being considered alongside the proposed delivery plan.

90. The purpose of DCC's consultation was driven by the Direction it received from BEIS to develop the delivery plan for the programme, and whilst we acknowledge the fundamental dependency on a robust business case for change, the consultation therefore focussed on how the programme should be delivered, as opposed to whether or not it should be delivered. It is for this reason that the questions asked focussed on implementation.

91. We have set out our position in relation to those points raised in relation to the Business Case in the table below:

Point Raised	DCC Response
Whether and when the Business Case will be updated to reflect the current plan and conclusion of commercial negotiation	**DCC will update and share with industry the Costs Benefit Analysis in June 2021 to reflect the dates in the plan we will submit to BEIS for approval and the latest state of the SMIP roll-out. DCC will continue to share information with stakeholders, subject to any commercial sensitivity considerations, and will provide a view of the costs and benefits at the conclusion of the commercial negotiation**.
Whether the programme should cover the North Region	**Our position in relation to the geographical scope of the programme is unchanged. The risk of 2G / 3G sunsetting, which drives the primary benefits in the business case, does not apply in the North. Therefore, the introduction of cellular services in the North into the scope of the programme would complicate and risk delivery dates. Accordingly, the Network Evolution Programme is not considering the implementation of the 4G solution in the north region in the scope of this current delivery**. **The current procurement includes options for 4G services in the North which are technically feasible that could be considered at a future date and subject to a separate Business Case**
Whether a SBCH was necessary and whether it is preferable or DBCH delivery only	**It remains DCC's view that SBCH delivery, in accordance with the timetable of the plan submitted, de-risks the overall delivery and protects the early delivery of benefits. DCC's business case supports this position and DCC is of the view that the updated business case to be submitted in June 2021 will continue to support this position.**
The potential for the obsolescence and sunsetting of the 4G band ahead of the forecast life of 4G assets.	**Contracts placed will ensure that the economic life of the 4G comms hubs and services can be fulfilled.**

The potential for 2G/3G sunsetting taking place later than assumed which would impact the economic analysis included in the business case	**The date at which mobile network operators may choose to sunset 2G/3G capability is currently unknown. DCC has made assumptions about this within its Cost Benefit Analysis, with those assumptions being based on independent research conducted for DCC and on the various contractual end dates DCC has in place with its communication service providers. While the economic impact of of a delay to sunsetting is not currently known, DCC's analysis shows that acting now to mitigate the risk of 2G/3G sunsetting is the best option for industry..**
What the approach would be to the management of SMETS1 Device replacement	**For the purposes of the business case, there is an assumption that no SMETS1 devices remain installed after the time that their supporting communications contract reaches its final expiry (as initially negotiated by Energy Suppliers, or extended as part of adoption of SMETS1 CSP contracts by DCC).** **Industry and DCC costs (remaining finance costs that were incurred in purchase of assets and installation of meters and CH in households) associated with both SMETS1 CH and meters, and 2G/3G CHs that are replaced prior to the end of their economic life are included within the CBA and the OBC. DCC intends to discuss these alongside our CH Transition activity.**

92. DCC has and will continue to engage with stakeholders on the business case in a way that ensure that its commercial negotiations with prospective service providers are not compromised.

5. Changes to the plan

93. In light of the consultation responses received, and taking into consideration the current status of DCC's procurement process, DCC at this stage does not consider it necessary to make any significant amendments to the milestone table set out in Appendix B the consultation document. We have introduced control points into these plans, and whilst not asking respondents specifically for views on these, received comments in support of them.

94. We stated in the consultation that the plan may need to be refined and introduced these control points (once procurement is complete, and again once we have finalised lower level designs) on that basis. It is our view that these are the most appropriate points to review the plan, as well as the assumptions, dependencies, risks and opportunities and, if necessary, propose refinements to them.

95. DCC has introduced some minor updates to the milestone table to reflect changes to dates ahead of the first control points, as follows:

- SVTAD submission: DCC has moved this date to the end of July from mid-June to allow for discussions with TAG on their role in governance ahead of the SVTAD consultation.

- LOI: To allow DCC flexibility during this important late stage in the procurement process for DBCH, we have removed this date from the plan. It is possible that, through DCC's disaggregated procurement process, we may by finalising arrangements with several new service providers over a number of days during this time.
- DSP LLD: We have moved the date of this milestone from the middle of August to the end of September to allow DCC additional time to finalise these designs. We will manage delivery of the WAN gateway updates with the successful vendor for this capability. This amendment does not impact later milestones to deliver 4G communications hubs.
- Confirmation of scope of regulatory change: We have added additional granularity on this subject, by:
    - Adding to milestone 2 that we will confirm the regulatory baseline for testing at the same time that we submit lower level testing documentation for approval; and
    - Introducing a new milestone on 1 September 2021 setting out the proposed regulatory changes needed to support the implementation of the CH Transition Roadmap. We expect to consult and conclude on these before end of 2021.

  We will use the existing milestone as a backstop to confirm any other changes that are required.

96. We have moved the milestone and extended the end date of the Operational Performance Testing (OPT) to align with the end of UIT, as DCC intends to continue this activity throughout UIT as well as SIT.

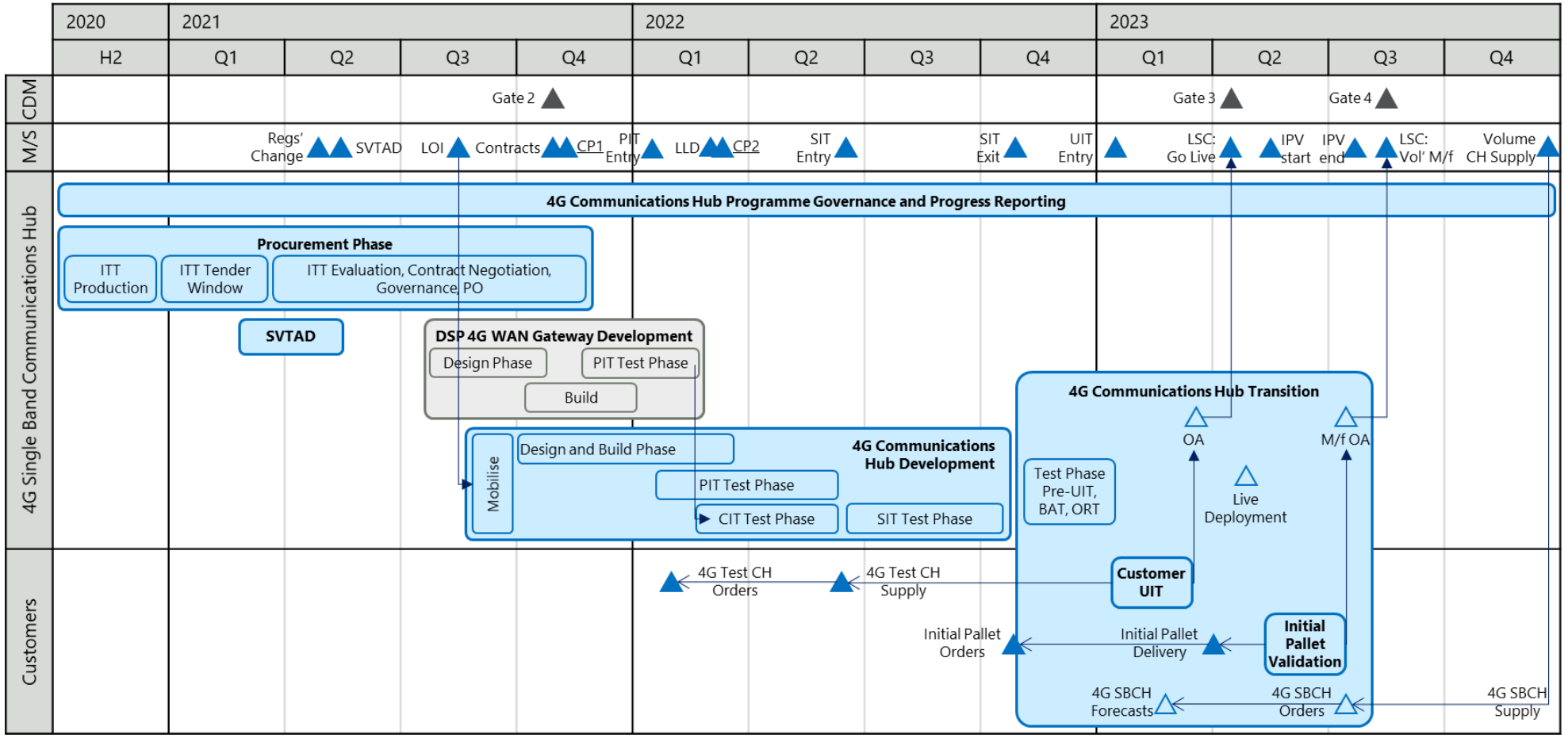
97. Plans on a page for both of the SBCH and DBCH plans are set out at Appendix A, with the Milestone Table which forms the formal plan to be submitted to the Secretary of State at Appendix B.

6. Next Steps

98. DCC has submitted the Milestone Table to BEIS on 4 June 2021 in accordance with the Direction of 29 January 2021. We anticipate that the Secretary of State will shortly make a determination on whether or not to approve the plan. Where approved, the plan will be incorporated into the Joint Industry Plan and its progress monitored through SMIP Transitional Governance.

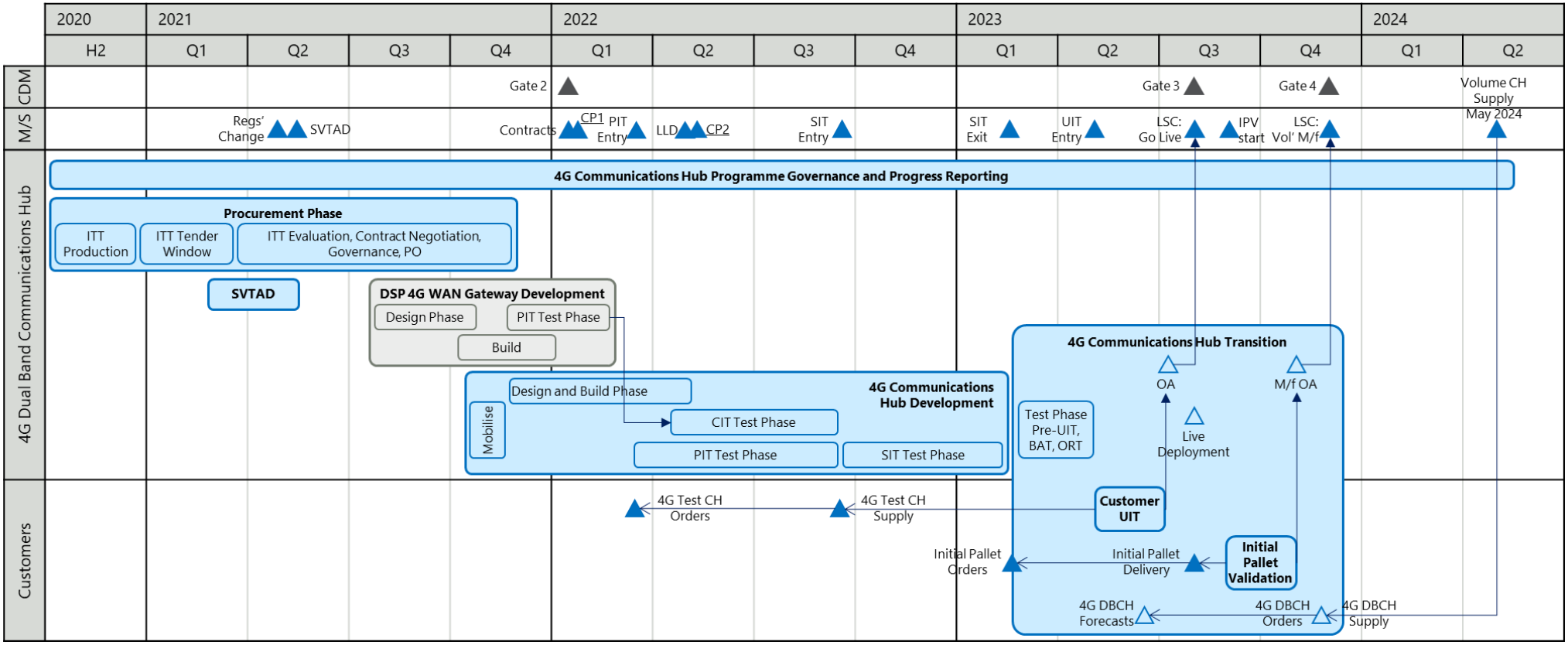
Appendix A – Plans on a Page

Indicative Single Band CH schedule



Duration of DSP WAN Gateway Development (in grey) is being finalised and timings are indicative

Indicative Dual Band CH schedule



Duration of DSP WAN Gateway Development (in grey) is being finalised and timings are indicative

Appendix B – Licence Condition 13B Milestone Table

#	Milestone	SB CH Est. Date	DB CH Est. Date	Description
1	SVTAD submission	31 Jul 2021		DCC submission of the CH&N SVTAD to BEIS (further to SEC Party and SEC Panel consultation) setting out testing framework for CH&N testing (SB and DB)
2	Lower level testing document submission and confirmation of regulatory baseline for testing	30 Sep 21	31 Oct 21	DCC submission of lower level testing documentation to TAG for approval, and confirmation of the regulatory baseline against which testing will be undertaken.
3	LOI	15 Aug 2021		Letter of Intent issued to successful vendor to enable advance SBCH designs to commence ahead of final negotiations completing and contract signatures
4	DSP LLD	30 Sep 2021		Low level designs for DSP change to support SBCH and DBCH approved by DCC's CFDA (Cross Functional Design Authority)
5	Final Business Case submission	27 Sep 2021	22 Oct 2021	DCC will submit its full business cases to BEIS covering for their review and confirmation that they do not object to DCC's procurement.
	Confirmation of regulatory change to support CH Transition	01 Sep 2021	01 Sep 2021	DCC will set out to industry its proposals for the scope of any regulatory changes required to support CH Transition activities along with plans for its delivery.
6	Confirmation of remaining scope of regulatory change	8 Nov 2021	3 Dec 2021	DCC will set out to industry the scope of any other regulatory changes needed for the CH&N programme along with plans for its delivery.
7	Contracts Signed	29 Nov 2021	24 Dec 2021	DCC will sign contracts with CH&N Service Providers, subject to the Secretary of State confirming no objection on the basis of the Full Business Cases.
-	*Control Point 1*	29 Nov 2021	24 Dec 2021	Point at which DCC will review the delivery plan and its associated assumptions

#	Milestone	SB CH Est. Date	DB CH Est. Date	Description
8	DSP WAN gateway testing complete	15 Feb 2022		DCC will have completed any testing of the DSP WAN Gateway for SBCH and DBCH ahead of CIT.
9	LLD Complete	1 Mar 2022	1 May 2022	Completion of all vendor low level designs approved with DCC CFDA for CH, DM, WAN and Logistics changes
-	*Control Point 2*	1 Mar 2022	1 May 2022	Point at which DCC will review the delivery plan and its associated assumption
10	PIT Start	15 Jan 2022	15 Mar 2022	Start of PIT phase for CH, DM, WAN and Logistics change, subject to earlier TAG approval of the corresponding TAD(s).
11	OPT Start	15 Jan 2022	15 Mar 2022	Start of DCC's Operational Performance Testing, comprising non-functional and business acceptance tests.
12	Test 4GCH Orders	1 Feb 2022	15 Mar 2022	Test CHs ordered by Testing Participants. (Test CHs will include logging capability and capable of use with or without the WAN)
13	RF Noise limits confirmed	15 Jun 2022	15 Aug 2022	DCC confirmation of RF noise limits for devices to be installed with 4G CHs, following consultation
14	PIT Complete	15 Jun 2022	15 Aug 2022	DCC gets Panel approval of Completion of PIT phase for DSP, CH, DM, WAN and Logistics change
15	SIT Start	15 Jun 2022	15 Aug 2022	Start of the SIT after successfully meeting entry gate criteria
16	Test 4GCH Supply	15 Jun 2022	15 Aug 2022	Test CHs ordered are supplied to Testing Participants
17	SIT Complete	1 Nov 2022	15 Jan 2023	DCC gets Panel approval of Completion of the SIT phase
18	Initial Pallet Orders	1 Nov 2022	15 Jan 2023	CHs required for IPV are available for ordering by Suppliers

#	Milestone	SB CH Est. Date	DB CH Est. Date	Description
19	CPA Certification received	1 Nov 2022	1 Jan 2023	Safety certification of device for production installations in consumers' homes
20	UIT Window Start (Customers)	15 Jan 2023	1 Apr 2023	Start of the UIT Window based on agreed set of entry criteria
21	UIT Window Complete (Customers)	15 Mar 2023	1 Jun 2023	End of the UIT window based on an agreed set of exit criteria
22	OPT End	15 Mar 2023	1 Jun 2023	Completion of all non-functional and performance related testing as part of preparation towards operational readiness
23	LSC: Go-live Submission	24 Mar 2023	9 Jun 2023	Live Services Criteria submission to BEIS for consideration to start IPV and deploy changes to Live Systems
24	LSC: Go-live Decision	15 Apr 2023	1 Jul 2023	Response from BEIS for approval to deploy changes to Live systems
25	Initial Pallet Supply	15 Apr 2023	1 Jul 2023	CHs ordered for IPV phase are delivered to customers
26	Initial Pallet Validation Start	15 May 2023	1 Aug 2023	Start of the Initial Pallet Verification pilot window in production
27	Initial Pallet Validation Complete	15 Jul 2023	1 Oct 2023	Completion of the Initial Pallet Verification pilot window in production
28	LSC: Volume M/f submission	25 Jul 2023	9 Oct 2023	Live Services Criteria submission to BEIS and SEC Panel for consideration for DCC's Volume Manufacturing Decision
29	LSC: Volume M/f decision	15 Aug 2023	1 Nov 2023	Decision from BEIS to approve Volume Manufacturing, following receipt of SEC Panel advice
30	Volume 4G CH Supply	15 Dec 2023	1 Apr 2024	Start of Volume Supply of 4G Communications Hubs