Representation - Draft Modification Report

UNC 0621; 0621A; 0621B; 0621C; 0621D; 0621E; 0621F; 0621H; 0621J; 0621K*; 0621L

Amendments to Gas Transmission Charging Regime

* Amendments to Gas Transmission Charging Regime and the treatment of Gas Storage

Responses invited by: 5pm on 22 June 2018

To: enquiries@gasgovernance.co.uk

Representative:	Julie Cox
Organisation:	Energy UK[1]
Date of Representation:	15 June 2018
Support or oppose implementation?	0621 - Comments 0621A - Comments 0621B - Comments 0621C - Comments 0621D - Oppose 0621E - Comments 0621F - Oppose 0621H - Comments 0621J - Comments 0621K – Comments 0621L - Comments
Expression of Preference:	

General Comments on Relevant Objectives

Standard Relevant Objective:

a) The optional charge is an important feature that seeks to maintain the efficient and economic operation of the system, without it there are incentives to bypass the NTS

[1] The views developed in this response are not supported by Equinor

which if built would mean that allowed revenue would then be recovered over a reduced demand base. Most proposals apart from 0621B and 0621C do not provide

for an optional charge beyond the interim period or a significantly reduced benefit as Transmission services revenue recovery charges are expected to be zero or very low.

A further factor here is the specific capacity discount for storage facilities, analysis by Storengy and WWU has shown that a 50% discount simply avoids double-charging in relation to storage flows. It was calculated that 86% better reflects the value storage provides in relation to efficient and economic operation of the system and for system balancing.

Overall 0621B and 0621C positive

b) n/a

c) The removal of existing contract volume and revenue before calculating the reference prices leads to a greater distortion between the prices paid by existing contract holders and those making new capacity purchases. Whilst this has been a feature of the regime for some time due to entry capacity purchases made on a fixed price basis not being indexed in any way, the situation becomes extreme in the enduring period which is inconsistent with the licencee's obligations to avoid undue preference in the supply of transportation services.

Energy UK acknowledges that existing contracts have been purchased in monthly or quarterly blocks which cannot be changed whilst new purchases can be profiled more closely to meet expected flows. Energy UK is not convinced this is sufficient to offset the price disparity in the enduring period and expects Ofgem to consider this in its impact assessment, along with whether this creates a barrier to entry.

Overall 0621L positive, it mitigates the distortion in some respects but those with enduring period with FCC that excludes existing contracts negative. 0621B none assuming price differences similar to now

d) Effective Competition is very much linked to cost reflective charges, but the CWD model is not cost reflective rather it is a cost allocation approach, there is also the potential to distort competition in the enduring period where all charges are capacity based. Some of this is counteracted by the optional charge.

A positive impact on competition would be if charges were more predictable and stable which is a feature in the interim period where charges are based on stable and predictable input values of obligated capacity. It is not known whether National Grid's forecast for FCC in the enduring period will lead to stable charges

Overall mods with enduring period based on National Grid forecast capacity negative, 0621B none to show it is relatively better than others due to ongoing use of obligated capacity as the FCC.

For additional commentary see below (para 17-21):

e) n/a

f) n/a

g) There are aspects of the proposals that are compliant, but others that are not so all are listed as blank as 'none' is not appropriate.

See further commentary below under response to Ofgem's questions, (para 112-117)

Charging Methodology Relevant Objective:

a) The CWD methodology is a cost allocation methodology rather than a cost reflective methodology it does not reflect forward looking marginal costs and leads to high

prices at entry points close to entry points. Where there is spare capacity in the system the forward looking marginal cost will be low, close to zero. In this case the revenue recovery charges should not distort behaviours but in the enduring period more revenue is moved into capacity charges which are not cost reflective and can lead to distortions.

Retention of the optional charge is a mitigating factor

Applying a multiplier of 1 to short term capacity products is not cost reflective since the cost of providing such capacity is very low. – see additional comments below

All CWD mods negative, although the 0621B is less distortionary as it moves less cost to capacity charges, except at IPs where TAR NC does not allow a commodity revenue recovery charge. The IP at Bacton exit is expected to be constrained with the reverse flow of BBL from October 2019. LINK

This may create different market conditions for interconnectors at Bacton vs non-IP points and therefore justify different treatment.

The postage stamp model may be a fair way to allocate costs in a fully unconstrained system, but it is not clear to what extent the system is unconstrained, particularly at exit where there is a lot of PARCA activity and network investment may be needed in the future if there is investment in transmission connected gas fired generation. So retaining some locational diversity in charges may be appropriate.

aa) none of the proposals suggest a reserve price of zero, so consideration needs to be given to avoiding undue preference and promoting competition – which relates back to standard relevant objectives c and d

b) All proposals seek to address developments in the transportation business, such as the need to comply with new EU Regulations, and the fact that the network is no longer experiencing wholesale growth. The proposals do this by various means but all are positive for this relevant objective. Assessment against the other relevant objective should determine the best outcome for customers. The objectives in relation to cost reflectivity and competition will be most important in this regard.

c) As standard relevant objective d

d) n/a

e) As standard relevant objective g

Standard Relevant Objective:	0621 **a)** Negative **c)** Negative **d)** Negative **g)** 0621A **a)** Negative **c)** Negative **d)** Negative **g)** 0621B **a)** Positive **c)** None **d)** None **g)** 0621C **a)** Positive **c)** Negative **d)** Negative **g)** 0621D **a)** Negative **c)** Negative **d)** Negative **g)** 0621E **a)** Negative **c)** Negative **d)** Negative **g)** 0621F **a)** Negative **c)** Negative **d)** Negative **g)** 0621H **a)** Negative **c)** Negative **d)** Negative **g)** 0621J **a)** Negative **c)** Negative **d)** Negative **g)** 0621K **a)** Negative **c)** Negative **d)** Negative **g)** 0621L **a)** Negative **c)** Positive **d)** Negative **g)**

Charging Methodology Relevant Objective:	0621 **a)** Negative **aa)** Negative **b)** Positive **c)** Negative **e)** 0621A **a)** Negative **aa)** Negative **b)** Positive **c)** Negative **e)** 0621B **a)** Negative **aa)** None **b)** Positive **c)** None **e)** 0621C **a)** Negative **aa)** Negative **b)** Positive **c)** Negative **e)** 0621D **a)** Negative **aa)** Negative **b)** Positive **c)** Negative **e)** 0621E **a)** Negative **aa)** Negative **b)** Positive **c)** Negative **e)** 0621F **a)** Negative **aa)** Negative **b)** Positive **c)** Negative **e)** 0621H **a)** Negative **aa)** Negative **b)** Positive **c)** Negative **e)** (continued overleaf)

Charging Methodology Relevant Objective (continued):	0621J **a)** Negative **aa)** Negative **b)** Positive **c)** Negative **e)** 0621K **a)** Negative **aa)** Negative **b)** Positive **c)** Negative **e)** 0621L **a)** Negative **aa)** None **b)** Positive **c)** Negative **e)**

Reason for support/opposition and preference: Please summarise (in one paragraph) the key reason(s)

1. Energy UK recognises that UNC modification proposal 0621 has led to a record number of alternatives being raised, this is in part due to being advised that this was the best way for issues to be considered, where they did not feature in National Grid's proposal. This makes the assessment by respondents challenging as information on which to base analysis to fully understand the differences between the proposals has only been made available late in the process, such that there was insufficient time for the workgroup to consider this information and provide evidence based comment in the workgroup report. Furthermore there were errors found in the analysis presented at a National Grid (NG) led workshop on 30th May which were only corrected and re-issued on 13th June, effectively shortening the time available to provide evidence based comment in responses. Energy UK considers that if this analysis had formed part of the workgroup report then it is likely that the consultation would have been referred back to the workgroup or at the very least the consultation re-issued and extra time provided for responses.

2. Energy UK notes that many of the alternatives reflect only minor changes to NG's 0621 proposal, that reflect particular issues that had been discussed at length but NG had decided not to include in its proposal. It is the case that these proposals then largely mirrored changes in NG's 0621 proposal during the workgroup development phase. This then appears to give weight in numbers to certain features of the proposals, but we would caution this being given weight to assessment by the UNC Panel and Ofgem, when in fact it is a consequence of lack of time to develop more sophisticated alternatives as NG's final position only became clear in early May.

3. Charging is often a divisive issue even when the revenue pot remains static as changes can lead to commercial consequences, impacts on profitability and in some cases business viability. Given these potential impacts Energy UK is concerned that a least-worst option may be chosen rather than an option which is best for the GB gas market and consumers. This may arise due to insufficient time to undertake analysis by industry and / or Ofgem in its impact assessment OR because there is no single proposal that includes all the features of the best options for GB.

4. We urge Ofgem to consider how such a situation should be managed, whilst seeking to comply with EU Regulation 2017/460 (TAR NC), to avoid detrimental impacts on GB customers.

5. Consultant Study

6. Energy UK retained Frontier Economics (FE), an economic consultancy, to help us understand how the proposed changes to the transmission charging regime

   - create a cost or a benefit for the economy, and in particular whether new charges could result in any adverse consequences beyond those arising from a redistribution of allowed revenue recovery from charges;
   - better satisfy the relevant objectives for the UNC in relation to charging; and
   - better satisfy Ofgem's statutory duties.

7. FE assessed the CWD methodology against the status quo, LRMC based approach. Two variants of the CWD methodology were considered, one using the obligated capacity for the Forecasted Contracted Capacity (FCC) and using forecast booking values for the FCC. Note FE were not asked to assess the impact of the treatment of existing contracts.

8. The Executive summary of the report is included as Appendix 1, the full report is available LINK

9. The models were assessed against six main themes:

   - Cost reflectivity;
   - Effective competition;
   - Security of supply; and
   - Cost recovery
   - Effect on end consumers
   - Compliance

10. Key Points

11. Cost reflectivity

12. Network charges should reflect the forward looking marginal costs that users impose on the network through a change in their use to achieve an economic outcome. Economic theory suggests it is always relevant to set marginal cost related prices. However where there is spare capacity the marginal cost may be low or zero. This suggests that a methodology that results in lower reference prices is more efficient than a methodology that results in higher reference prices.

13. The CWD model also shifts some cost recovery from commodity to a capacity basis, which may not be passed onto wholesale gas prices. This may distort flows if some shippers (with supplies at higher cost entry points) no longer purchases entry capacity.

14. The CWD model appears worse than the status quo since it allocates historical costs locationally and is not a forward looking cost based methodology.

15. The obligated capacity variant reduces some of these distortions since it moves less cost from commodity to capacity.

16. Energy UK therefore does not support options which use National Grid's forecast capacity as an input to the CWD methodology. This suggests 0621B which uses obligated capacity is the least worst of the options

17. Effective Competition

18. Effective competition generally follows where charges are cost reflective so the issues above are pertinent.

19. There could also be impacts on competition, if certain approaches to charging effectively exclude some sources of gas from the market and if volatility in charges and NBP prices affect barriers to entry.

20. As above, the obligated capacity variant reduces some of these distortions relative to the forecast capacity variant since it moves less cost from commodity to capacity.

21. Due to the potential impact on competition Energy UK does not support options which use National Grid's forecast capacity in the CWD model.

22. Security of Supply

23. Security of supply is linked to the number of competing physical sources of gas, so if the charging arrangements were to impact this then there could be an impact on security of supply

24. The move away from cost-reflective tariffs by the introduction of the CWD model and the shift of revenue recovery from commodity to capacity increases the potential for distortions means.

25. Under the CWD model storage loses its current exemption from revenue recovery which could impact its profitability or bring forward closure of existing assets. The increase in multipliers for short term capacity and reduction in interruptible capacity discounts will also impact storage. These factors may also impact investment to bring additional supply to GB – in this respect there are particular concerns regarding the high entry prices at St Fergus in the enduring period.

26. The table below shows this by comparing 0621 with 0621B, with the orange boxes highlighting the total cost of flowing gas using interruptible capacity as this reflects that most capacity purchased at St Fergus is on an interruptible basis so it would be inappropriate to compare the firm prices.

27. Table 1 St Fergus prices

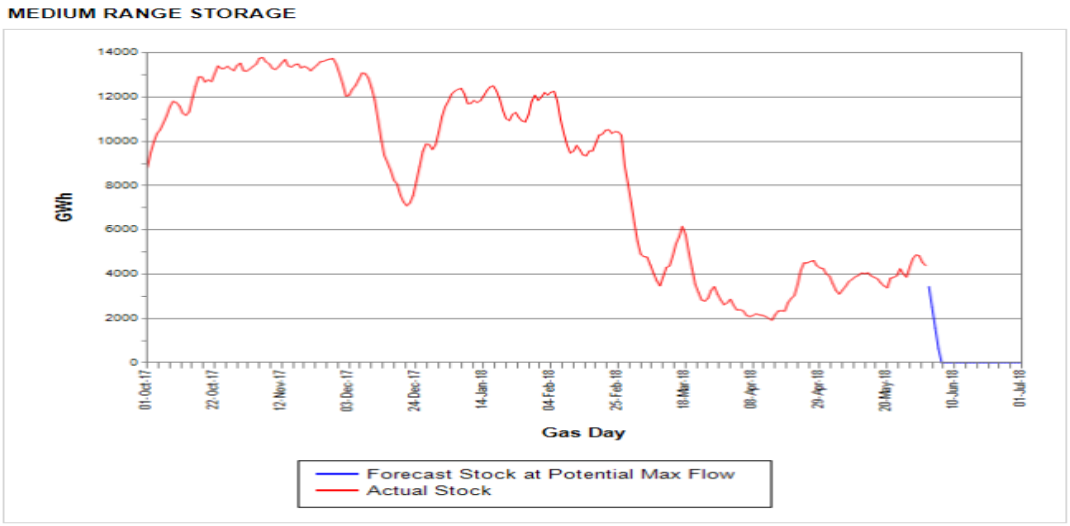
St Fergus prices p/kWh/d	0621	0621B
17/18 firm entry	0.0488	0.0488
17/18 int entry	0	0
17/18 revenue recovery	0.0434	0.0434
17/18 total firm	0.0922	0.0922
17/18 total int	0.0434	0.0434
19/20 firm entry	0.0242	0.0242
19/20 int entry	0.0218	0.0218
19/20 revenue recovery	0.0360	0.0360
19/20 total firm	0.0602	0.0602

19/20 total int	0.0578	0.0578
21/22 firm entry	0.0842	0.0228
21/22 int entry	0.0758	0.0205
21/22 revenue recovery	0	0.0384
21/22 total firm	0.0842	0.0612
21/22 total int	0.0758	0.0589

Prices from workbooks dated 13/6/18

28. Energy UK considers that the viability of storage facilities is important to ensure security of supply and support overall market efficiency as they provide market participants with useful resources for trading and optimisation of gas purchases and balancing positions all year round. See graphic below which shows storage being utilised dynamically through the year. We note that even in early June gas is flowing from storage to meet demand, even at a demand level of 150mcm.

28.1. Graph 1. Mid-range storage stock levels



29. Energy UK has concerns with proposals that increase the cost of using storage as such costs are likely to be refelcted in NBP prices and passed onto customers. In consdieration of this and the points above we have reservations with proposals which include a 50% specific capacity discount as we consider this insufficeint to ensure storage continues to provide this important role in the market. The proposals also include diverse treatment with respect ot revenue recovery charges; whilst all contnue with flows in and out of storage (apart from own use gas) being exempt from all commodity charges in the interim period there are different approaches in the enduring period. Some proposals limit exclusions from revenue recovery charges to historical contracts, as above we have reservations awith this approach

30. Cost Recovery

31. Efficient cost reflective charges may not recover all costs which have been incurred, additional charges to ensure cost recovery should therefore seek to create minimal changes in behaviours relative to an efficient set of charges.

32. The current LRMC model makes revenue recovery charges volatile form year to year, the CWD model may improve this if the model inputs are stable. Where the obligated capacity is used as the FCC the CWD variant is more likely to result in more stable prices than the forecast capacity variant.

33. Setting short term multipliers to 1 and reducing the discount from interruptible capacity will also tend to lead to more stable changes, albeit with negative impacts on cost reflectivity, competition and security of supply.

34. Energy UK supports stable and predictable charges as these are most likely to foster competition, therefore we do not support approaches which use forecast capacity, as the proposals are silent on how a forecast would be established for the enduring period so it is not possible to comment on its stability.

35. Effect on end consumers

36. FE notes that a move to CWD along with other features of the proposals is likely to increase costs for electricity consumers, as gas transmission charges will overall increase for gas fired generation. This is through a combination of effects, including the loss of short term and interruptible capacity discounts form NTS exit capacity, an increase in the cost of 'short-haul' transportation and higher capacity costs

37. For proposals which include an enduring period the short-haul benefits are very much reduced once commodity based revenue recovery charges disappear at the start of the enduring period. This applies to all proposals apart from 0621B and 0621C.

38. Energy UK therefore cannot support these proposals, even though we acknowledge the intention is to develop a new solution for the network optional charge as it is now called, there are no assurances that this will actually happened and be implemented in time. No details are included in the proposals so we cannot support something that does not exist.

39. Compliance

40. FE felt overall that the CWD Model has relatively low risk of non-compliance with TAR NC, but it did note that there is a small risk that a capacity based revenue recovery charge at IPs may be considered discriminatory.

41. Below we provide a summary of the key features of each proposal and how it varies from 0621, with a commentary on how this affects the relative merits of each in respect of the relevant objectives.

42. 0621

43. This proposal is not considered to produce particularly cost reflective charges since it utilises the CWD model, and in the enduring period moves to the use of forecast values (with no methodology for how they would be determined) which further shifts revenue recovery from non-distortive commodity to capacity charges.

44. The application of a specific capacity discount for storage of 50% is not considered sufficient to reflect the value storage provides to the system and security it provides to the market. This level of discount does not recognise the shorter distances gas will travel to final demand once it is withdrawn from storage.

45. The optional commodity charge becomes the network optional charge with a capacity based approach for IPs. The formula is also indexed by RPI, which is a reasonable approach and a distance limit introduced. The distance limit is arbitrary but recognised by some as a practical measure. However there is no mechanism / formula that will apply for the network optional charge in the enduring period once transmission services revenue recovery commodity charge are eliminated. This lack of clarity is a concern, assurances of a future modification / development process to deliver a solution cannot be guaranteed, this is a negative factor for this proposal.

46. The mod fails the cost allocation assessment which means it is more likely to be prone to cross subsidy and discrimination. Ofgem will need to explain how this is justifiable as per the EU TAR NC.

47. 0621A

48. As 0621 apart from:

49. The 86% specific capacity discount takes better account of the value of storage and the distances travelled by gas once withdrawn from storage for supply to end consumers. This is therefore considered more cost reflective than 0621

50. 0621B

51. This proposal is not considered to produce particularly cost reflective charges since it utilises the CWD model which is a cost allocation approach. However as obligated capacity is used as the FCC on an enduring basis which avoids all revenue shifting to non-cost reflective capacity charges (except at IPs) it is more cost reflective than 0621 and the other proposals which include an enduring period with forecast values used for the FCC.

52. Commodity charges for revenue recovery are less distortive than capacity charges

53. The 86% specific capacity discount takes better account of the value of storage and the distances travelled by gas once withdrawn from storage for supply to end consumers. This is therefore considered more cost reflective than 0621.

54. With respect to the network optional charge this includes an enduring solution which provides a degree of certainty to parties which utilise the optional charge, this is positive for this proposal relative to others which do not have clarity on the network charge in the enduring period

55. 0621C

56. As 0621 apart from:

57. The 86% specific capacity discount takes better account of the value of storage and the distances travelled by gas once withdrawn from storage for supply to end consumers. This is therefore considered more cost reflective than 0621

58. The absence of supporting analysis makes it difficult to assess the merits of this proposal with respect to the optional charge. It is really positive that this seeks to provide an enduring solution that does not change significantly at the start of the enduring period, when some other proposals do not address this, but there has been insufficient time to consider, however this is a better option than proposals that do not address the issue for the enduring period at all. (all apart from 0621B)

59. The proposal also promotes flow-based commodity Transmission Services Revenue Recovery charges for existing contracts at both IPs and non-IPs in the transition and enduring periods. This is aimed at retaining the status quo charging contracts for them, ensuring there is no different treatment for IPs versus non-IPs and that they make a fair contribution to meeting overall revenue recovery targets. This also provides some protection form the risk that National Grid's capacity forecast in the enduring period diverges from bookings, where most other proposals could see a change to the capacity based revenue recovery charge within year.

60. 0621D

61. As 0621 apart from

62. The absence of an optional charge from implementation leads Energy UK not to support this as it consider an optional charge is needed to help to offset the unreasonably high, non-cost reflective charges that the CWD model establishes at exit points that are close to entry points. This would encourage by-pass pipeline to be built which would have a negative impact on the efficient and economic operation of the pipeline

63. The 86% specific capacity discount takes better account of the value of storage and the distances travelled by gas once withdrawn from storage for supply to end consumers. This is therefore considered more cost reflective than 0621

64. The use of the square root of distance in the CWD distance matrix has a moderating effect on some of the more extreme prices but there seems no justification for it other than it being a half-way house.

65. The Proposer, a DNO, offers a form of optional charge on its own network so it is surprising that it finds fault with the transmission charging methodology in this respect

66. 0621E

67. As 0621 apart from:

68. A longer interim period for exit and historical contracts attracting commodity based revenue recovery charge in enduring period and storage not paying revenue recovery charges in the enduring period.

69. The extended interim period for exit will allow more time for National Grid to assess changes in booking behaviour from implementation in 2019 and before needing to establish its own forecast. In addition this will ensure that prices bid in the recent T-4 electricity capacity market

auction remain broadly consistent with those understood at the time of bidding, this will facilitate competition on a level playing field between those parties.

70. The retention of commodity based revenue recovery charges at non-IP points (apart from storage) seeks to address an issue that has been very contentious though the development process, where capacity contracts were booked some-time ago a change to capacity based revenue recovery charges could not have been foreseen. So this retains sanctity of contracts, and important principle for regulatory certainty, both now and in the future. This also provides some protection form the risk that National Grid's capacity forecast in the enduring period diverges from bookings, where most other proposals could see a change to the capacity based revenue recovery charge within year.

71. 0621F

72. As 0621 apart from:

73. The application of a capacity discount at bi-directional interconnectors on the basis that these end isolation of Member States and flows can act like a storage facility.

74. Energy UK is not aware of analysis that demonstrates the magnitude of revenue that would then be shifted to other points, but has concerns this may not be complaint with Article 7d.

75. There is no overwhelming evidence for the application of a 50% discount at bi-directional interconnectors, the value is selected as the default that applies for the specific capacity discount for storage but this is not shown to be cost reflective.

76. The approach for the period from 2021 is complex and can lead to uncertainty in charges

77. 0621H

78. As 0621 apart from:

79. Historical contracts not paying revenue recovery charges at IPs in the interim or enduring period nor at non-IP points in the enduring period.

80. Whilst we appreciate the issues around historical contracts having been committed to some time ago when the proposed changes could not have been foreseen, exempting these contracts on revenue recovery charges could be considered unfair, and leads to undue preference towards existing contract holders in the enduring period. See graphic in response to Ofgem question 4 below for an indication of the disparity in charges.

81. 0621J

82. The 86% specific capacity discount takes better account of the value of storage and the distances travelled by gas once withdrawn from storage for supply to end consumers. This is therefore considered more cost reflective than 0621

83. The postage stamp reference price methodology leads to a uniform price at entry points and separately at exit points, apart from where specific capacity discounts apply. These prices are not cost reflective. This is a significant departure from prices that vary geographically region

and may go some way to address the issue of outlier prices, eg high prices at exit close to entry points.

84. This approach would be more suitable where the system is fully unconstrained, and cost recovery is the only objective. However whilst there are few constraints, the current level of PARCA activity suggests investment may still be required at some locations where substitution may not be possible such that some geographic signal would remain appropriate, on the grounds of cost reflectivity, competition and signals for connections to support economic and efficient operation of the system . We note that whilst PARCA activity has mostly been in respect of exit capacity that on 14th June 2018 a PARCA window has opened for Entry capacity in the south west which may be a constrained location.

85. 0621K

86. As 0621 apart from:

87. The 86% specific capacity discount takes better account of the value of storage and the distances travelled by gas once withdrawn from storage for supply to end consumers. This is therefore considered more cost reflective than 0621

88. A 100% off peak / interruptible discount on entry and exit capacity at storage only is proposed but we feel this is not fully justified and the case that otherwise the charge exceeds the marginal cost of provision of such a service would also apply at other points, not only storage point because of their bi-directional nature.

89. 0621L

90. As 0621 apart from:

91. Existing contracts are retained within the values for FCC used as inputs to the CWD reference price methodology in the interim and enduring period, this is more like the counterfactual detailed in TAR NC and compliant with article 6.3. It also avoids the majority of cases where a 0 value for FCC lead to a 0 reference price which then needs a mechanism to create a value which may not be compliant with TAR NC Article 6.4, most of these are in the enduring period

92. As this approach creates charges that allocate revenue across network points free of distortions introduced by netting off existing contracts, which those contracted prices are preserved and under recovery is then attributed fairly across all points, so that new capacity purchases are not at inflated prices. This may be considered more cost reflective and better with respect to promoting competition than 0621.

93. It is also the case that all other things being equal reference prices will not be affected by existing contract expiry as would be the case for 0621 and alternative that net off existing contracts prior to calculating reference prices.

Implementation: *What lead-time do you wish to see prior to implementation and why? Please specify which Modification if you are highlighting any issues.*

94. Interactions with mod 0636 will need to be considered, since if certain options are implemented the 621 proposals would need to be amended, analysis rerun and justifications re-written, and there is no provision in the Modification Rules for this once an FMR is

submitted to Ofgem. The Joint Office outlined in its request to Ofgem for a 'View' that there is a governance vacuum in some scenarios. Once a response is received there will be an opportunity to better understand the potential impact on the implementation of any of the 0621 modification proposals.

95. Aside from this Energy UK Members will need as much time as possible to ensure their own systems are modified to work effectively with the new central systems under the new rules. Time will also be required to consider new contracting strategies and reflect the new charging structure in customer contracts. Timing is also important with respect to interactions with the electricity market and the next capacity auction, which 0621E sought to address. Essentially the interim period would need to be extended further to help address this issue and ensure gas transmission charges are appropriately reflected in bids. The next capacity market auction is due to be held in February 2019. Therefore an early decision by Ofgem is desirable.

96. Energy UK understands that Ofgem will undertake a regulatory impact assessment of all the proposals against the existing rules as the baseline. We acknowledge that Ofgem is not required to provide a 'minded-to' positon as part of a modification impact assessment, but that it often does particularly where the proposals are complex or there are multiple alternatives. We also note that a 'minded-to' preference does not bind Ofgem to confirming that decision at a later stage. Given the large number of alternatives in this case we think it would be very helpful to provide a 'minded to' decision at the time the impact assessment is issued for consultation as this would begin to narrow down the range of possibilities as the time for implementation approaches. If Ofgem is unable to express a minded-to preference for a single option it would still be helpful if the range of possibilities were reduced as this would most likely reduce the range of possible prices.

97. From a practical viewpoint the final consultation for ACER could focus on the minded-to option(s) rather than there being ten variants included in this document.

Impacts and Costs: *What analysis, development and ongoing costs would you face?*

98. As a trade association - none

Legal Text: *Are you satisfied that the legal text will deliver the intent of the Solution? Please specify which Modification if you are highlighting any issues.*

99. Energy UK has not reviewed the legal text for all the proposals

Modification Panel Members have requested that the following questions are addressed:
Please specify which Modification your views relate to.

100. Do you believe there is specific issues that should be considered by Ofgem's Regulatory Impact Assessment?

Section 10 of the Draft Workgroup report contains a comprehensive list of topics, below are some further issues:

101. Whole system impacts across energy markets, including:

101.1. Impact on electricity prices as increased capacity costs are passed through via the capacity mechanism or commodity prices. These costs arise not only from a shift to more capacity based charges but also reduced discounts for off-peak capacity, the optional commodity charge (now called the network optional charge in 621 mods) and that no network optional charge exists from 2021 for many proposals.

101.2. Impact on gas-fired generators that have committed to capacity mechanism contracts four years ahead based on NTS charges that may bear little resemblance to those that apply at the time. Both for price setters and price takers

101.3. Impact on the gas and electricity market in Northern Ireland as part of the UK market, and the wider Irish market as linked to properly functioning regional markets with the European Union[2]

101.4. Impact on cross border trade more generally TAR NC Article 7e requires reference prices not to distort cross border trade.

102. The impact of increased recovery of allowed revenue from capacity charges on NBP prices, and customer gas prices. Particularly with respect to higher St Fergus entry capacity prices.

103. The impact on competition, security of supply and wholesale prices if storage assets were no longer viable and closed

104. Whether the price difference and distortion created in the enduring period at entry by excluding the existing contracts (volume and revenue) is offset by existing capacity holders having longer term bookings whilst new capacity purchasers can profile bookings. Also whether this creates a barrier to entry

105. Impact of increased PARCA security costs, and User Commitment Amounts on investment

106. Ofgem will also need to provide evidence as to why the costs of provision of short term capacity vary by location

107. Cost allocation assessment.

108. Overall Ofgem will also need to explicitly consider a number of trade-offs; including;

- whether proposals 'sufficiently compliant' even if not compliant in all regards with TAR NC
- Cost reflectivity and on impact on competition

109. Impact on revenue flows as TO and SO, and hence on customers, following the implementation of any option where the discount for interruptible / off –peak capacity reduces to 10% and is assigned to TO from SO – following a licence change (if completed in time)

110. <u>The Impact on domestic and other DN connected customers and suppliers from :,</u>

- the changing geographic recovery of revenue.
- increased capacity charges, including vulnerable customers where standing charges may reflect this change in suppliers' fixed costs

[2] Section 3.43

https://www.ofgem.gov.uk/publications-and-updates/impact-assessment-guidance

- The impact on domestic and other DN connected customers of the timing and manner of pass-thru of NTS exit capacity charges as ECN charges by DNs given the two year lag in DN revenue adjustments.

- Risks of charges being unpredictable from the above.

- Uncertainty arising from potential for changes in DN capacity booking behaviour

111. Energy UK also seeks assurances from Ofgem regarding the proposed default tariff cap for domestic customers such that it will take adequate account of these regional variations in gas transmission charges as they are implemented, recognising the mechanisms by which they are reflected in domestic customers bills. Also ensuring that the mechanism to update the cost allowance is flexible enough to address the impact of these reforms over time.

112. Ofgem requested that the following questions be included as part of the consultation. Panel agreed to include these:

113. The rationale in the report for having an interim period and using the obligated capacity as the Forecasted Contracted Capacity (FCC) is to avoid significant changes to charges and have a period to understand how booking behaviour changes. How does this compare to having two structural changes to charges (one at the start of the interim period and another at the enduring period)?

113.1. The rationale for the interim period (which is enduring for 0621B) goes beyond what is stated above, indeed it may be better to ask what is the rational for the enduring period.

113.2. The starting point for using obligated capacity as the FCC is so that the values are published well in advance, are not open to manipulation and are stable so that stable charges will be established. Stable, predictable charges are best suited to furthering competition objectives as suppliers are then able to efficiently incorporate these into their tariffs with little risk premium to manage uncertainties, such that competition is then based on issues that are within the influence of the supplier.

113.3. At the time of the proposals no methodology is available to understand how NG will establish FCC values based on a forecast and there is considerable uncertainty about how RIIO2 may affect allowed revenues and baseline. It is therefore difficult to see how any proposal with a step change from the interim to enduring period can be implemented when this creates significant uncertainty in charges and may distort competition. It is also the case that no analysis has been carried out to consider the variation in charges that could arise from errors in forecasting FCC values, year on year variability and the impact this could have on revenue recovery charges and K.

113.4. Furthermore booking behaviour will change due to the increase in price of short term and interruptible / off-peak products at both entry and exit. It may be that bookings more closely match flows but there will be other factors to consider particularly at exit where the range of products is limited, and there is a risk of substitution leading to loss of baseline capacity.

114. What (if any) consequences do you see from 'interim contracts' being allocated at QSEC and AMSEC auctions in 2019 given the timings of these auctions in the UNC and possible date of Ofgem decision on UNC621? What options are there to deal with these consequences and what impact would these options have?

114.1. There is an interaction between the date of allocation of capacity in these auctions and the date of Ofgem's decision on 0621 and whether the capacity secured through such auctions will be considered as historical contracts or not. This means whether the price paid for capacity is fixed for the duration of the contract or floats subject to the prices calculated each year.

114.2. This uncertainty will impact bidding strategies for these auctions, parties will be unwilling to commit to long term capacity if the price of that capacity could increase significantly as is seen at most entry points at the transition from the interim to enduring period.

114.3. For example in the recent QSEC allocations substantial volumes of capacity have been secured at Cheshire and Fleetwood at 0.0001 p/kWh whilst the price from October 2021 according to the 0621 workbook[3] would be 0.0167 and 0.0219 respectively.

114.4. A way to address this would be a further UNC modification that may require urgent status so that it is clear whether capacity secured in the 2019 QSEC and AMSEC auctions will be treated as historical capacity or not. Clearly this decision will impact the volume and price of existing contracts excluded from the reference price calculation for all mods apart from 0621L and hence the revenue to be recovered from capacity purchased in subsequent allocations / short term processes.

114.5. An associated issue is that historical contracts will lose their exclusion from revenue recovery charges upon transfer to another party in the enduring period. This is an issue because it only became apparent very late in the development process that this was the intent of NG's 0621 proposal, such that there was limited time to discuss and address this via alternative proposals.

114.6. This will also impact on the revenue and volume excluded from the reference price calculation increasing uncertainty of charges in the enduring period.

115. Do you consider the proposals to be compliant with relevant legally binding decisions of the European Commission and/or the Agency for the Co-Operation of Energy Regulators?

115.1. Compliance is a concept that should be black and white with a yes / no answer. However there is scope for interpretation of the EU rules and consequently potential for a variety of solutions to be broadly compliant with most, if not all, rules. It may also be that in trying to achieve compliance with some rules weakens compliance with other rules. There is likely to be a trade-off between the degree of compliance and achievement of wider EU and UNC objectives. Ultimately compliance is for a lawyer to determine, whilst our comments flow from the normal meaning of the words that form the legal text.

115.2. Main features that are compliant:

115.3. Article 4.1 – the attribution of costs as transmission or non-transmission services seems complaint

[3] https://www.gasgovernance.co.uk/0621/Analysis

115.4. Article 6.3 requires the same reference price methodology to be applied at all entry and exit points 0621L meets this by not excluding existing contracts in the calculation of entry reference prices

115.5. 0621J uses equalization as an adjustment to reference prices this mechanism is allowed under Article 6.4

115.6. All the 0621 variants include a commodity revenue recovery charge at non-IPs points and at least in the interim period, if such a charge is compliant in the interim period we can see no reason for it not being compliant as an enduring solution. A commodity base revenue recovery charges is allowed by exception, subject to NRA approval by Article 4.3 which identifies a number of criteria, as follows:

- Levied for the purpose of managing revenue under / over recovery
- Calculated on the basis of forecasted or historical capacity allocations and flow or both
- Applied at points other than interconnection points
- Applied after the NRA has made an assessment of its cost reflectivity and its impact on cross-subsidisation between interconnection points and other points

115.6.1. These criteria seem to be met by all the proposals; with respect to the assessment that revenue recovery charges need to be cost reflective see below under comments in paragraph 114 as a counter to this. It is also the case that GB has unlike other Members States used a commodity charge for revenue recovery for some time, with proposals to change this by GCM 19[4] being rejected by Ofgem in 2010. At the time Ofgem did not consider there were cross subsidies in the regime. Ofgem and BEIS also lobbied to ensure that a commodity based revenue recovery charge was permitted by TAR NC, so it would seem somewhat odd to reverse this thinking without full justification as this undermines regulatory certainty.

115.7. Article 9 requires the application of a 50% or greater capacity discount for storage capacity

115.8. Article 13 – multipliers are within the allowed range, seasonal factors are not used

115.9. Article 14 – calculation of reserve prices for no-yearly standard capacity products – this is consistent with the approach proposed

115.10. Article 16 requires that the price of interruptible capacity at IPs reflects; the probability of interruption – a simplified approach has been adopted that broadly meets this criterion

115.11. Article 17 1 a & b – the proposals are compliant with minimizing under / over recovery

115.12. Articles 23,24,25 relate to floating payable price which is being introduced at IPs (and other points) for new capacity purchases

[4] https://www.ofgem.gov.uk/sites/default/files/docs/2010/08/gcm019_decision_signed_0.pdf

115.13. Article 26 & 27 Consultation – this is in hand but will need to consider the proposals against the CWD counterfactual defined in TAR NC Article 8

115.14. Article 28 consultation on discounts, multipliers and seasonal factors is provided for by the UNC modification process if necessary

115.15. Article 32 – Publication notice period – existing rules provide for this

115.16. Article 35 – Existing contracts – all proposals ensure that existing contracts pay the fixed capacity price agreed at the time of booking

115.17. Main features where compliance is uncertain:

115.18. Article 5.6 requires a justification by the NRA for cost allocation assessments > 10%

115.19. Article 6.3 requires the same reference price methodology to be applied at all entry and exit points, all variants apart from 0621L do not meet this since existing contracts are excluded before the calculation of entry reference prices

115.20. Excluding existing contracts leads to an FCC value of 0 being input into the CWD calculation, this leads to a 0 price at some points. This situation is not anticipated by TAR NC. However, the mechanism for establishing a non-zero price is not one of those permitted in Article 6.4. This is mainly an issue for mods that include an enduring period and exclude existing contracts, all apart from 0621B and 0621L.

115.21. Article 8.1 suggests that where entry and exit points cannot be combined in a flow scenario that combination of exit points shall not be taken into account. The proposed CWD models are not compliant with this as they assume flows are possible to/ from every entry / exit point. Whilst the difficulties in removing certain routes is appreciated it is possible this may overcome some of the non-cost reflective charges generated by the CWD model.

115.22. Article 17.1 c the proposals with a step change from the interim to enduring regime may not be compliant with this which suggests significant differences between the levels of tariffs in two consecutive tariff periods should be avoided to the extent possible

115.23. Article 19.4 requires TSOs to use one regulatory account, it is proposed to use one account with sub-divisions

116. *In what way do you consider the reference price methodologies proposed (Capacity Weighted Distance (CWD), CWD using square root of distance and Postage Stamp) to be cost reflective and meet the criteria in Article 7 of TAR?*

116.1. **Article 7a – aims at enabling network users to reproduce the calculation of reference prices and their accurate forecast**.

116.2. This is achieved to some extent by the models published by NG for each 621 variant. Albeit there are a number of uncertainties, including;

116.2.1. The uptake of the newly defined network optional charge (NOC) and revenue from this, as this will impact the revenue to be recovered from other points.

116.2.2. The ability to accurately forecast charges is directly linked to knowledge of the input parameters to the models. 0621B which uses obligated capacity for the FCC meets this objective better than the other alternatives since the FCC values in the enduring period for those proposals are not known, and there is uncertainty over how they will vary year on year.

116.2.3. The treatment of capacity allocated in 2019 QSEC and AMSEC which is linked to the date Ofgem makes a determination on this suite of proposals also limits the ability of parties to accurately forecast charges

116.3. **Article 7b intends the methodology to take into account the actual costs incurred for the provision of transmission services considering the complexity of the transmission network**.

116.3.1. These methodologies are cost allocation rather that cost reflective approaches. Economic theory suggests that cost reflectivity requires tariffs to reflect the forward looking costs that users impose on a network through a change in their use. In a system with declining demand and spare capacity the incremental marginal costs are likely to be low or close to zero. Therefore it could be said that all options are less cost reflective than a long run marginal cost approach albeit we recognise the weaknesses in the current pricing framework.

116.3.2. Distortions in the use of capacity will arise where charges are not cost reflective. Approaches which shift more revenue onto capacity charges will risk more distortions than approaches which do not. Therefore a CWD approach based on obligated capacity has lower capacity charges which will be less distortive than a CWD approach based on forecast capacity. A postage stamp approach with applies the same charge at all points (subject to specific capacity discounts) is not cost reflective, if some locational diversity in charges is considered appropriate.

116.3.3. It is also the case that the CWD model leads to high exit charges for points close to entry points which cannot be cost reflective for use of a very small part of the network

116.3.4. The prices in the table 2 below demonstrate this. The prices are currently lowest for Pembroke and Peterhead which are both close to large entry points, with Langage having the highest charge being distant from entry points, with Didcot somewhere between the two price levels.

116.3.5. Pembroke and Peterhead see significant price rises in both the interim and enduring period highlighting a key weakness of the CWD model with respect to cost reflectivity. Didcot has the cheapest price in the interim period, whilst Langage has the most expensive price albeit similar to Pembroke and Peterhead even though it is a long way from any entry point since the weighted average distance for these three points is similar.

Table 2. Firm exit capacity prices at certain power stations

Firm exit price on p/kWh	Didcot	Langage	Pembroke	Peterhead
	Middle of country remote from entry	South West remote from entry	South west Wales adjacent to large entry point	North east Scotland adjacent to large entry point

17/18	0.0204	0.0419	0.0001	0.0001
19/20 0621	0.0129	0.0186	0.0172	0.0181
21/22 0621	0.0246	0.0352	0.0333	0.0223

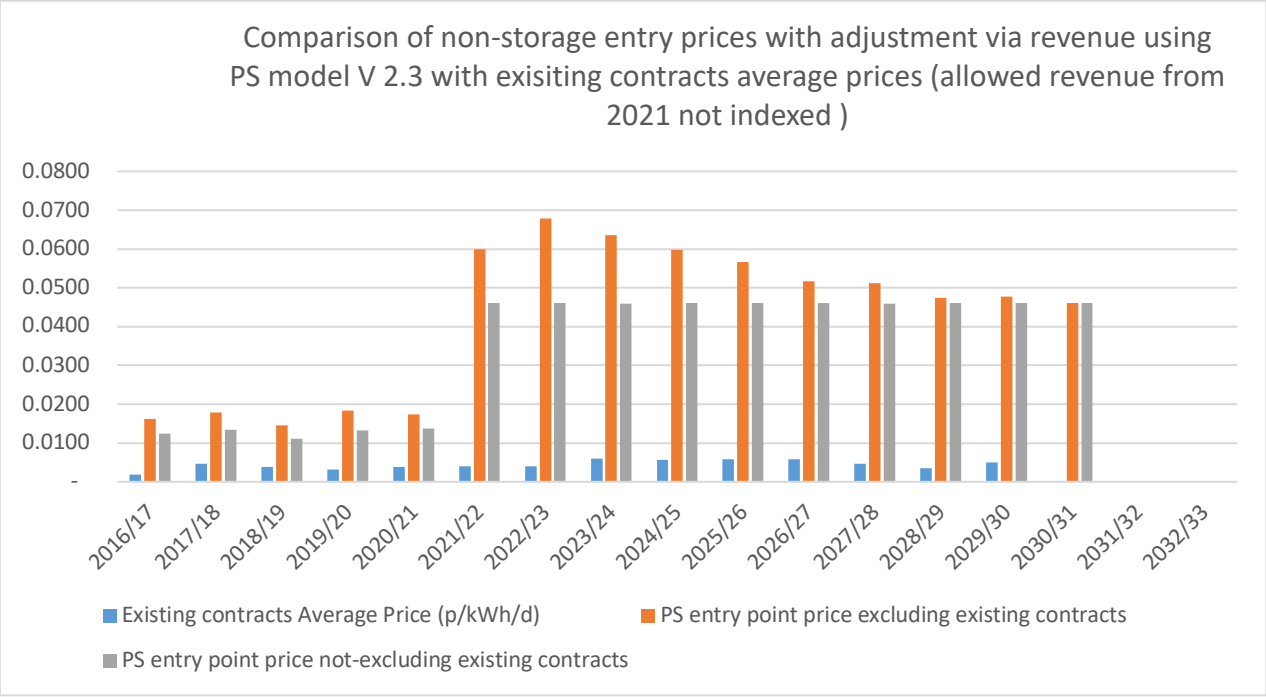
116.3.6. It can also be said that since the CWD uses distance as a cost driver with higher charges the greater the weighted average distance and distance that gas 'travels' then there is some small element of cost reflectivity. 0621J uses the postage stamp methodology which does not include distance but shares costs across all points equally (subject to specific capacity discounts).

116.3.7. All the 621 variants apart from 0621L exclude existing contract volume and revenue before the charges for other points are calculated. The revenue related to these contracts was fixed at the time of allocation and as per Article 35 is protected under TAR NC. However if that price was not cost reflective at the time or is not cost reflective now then removing the revenue associated with these contracts will load additional revenue onto new contract purchases at entry, which will further distort the cost reflectivity of those charges with consequential impacts on competition.

116.3.8. There is only limited information available on prices paid for existing contracts however the volume and revenue is available for each year, the average price paid which remains fixed for the duration of the contract is shown in blue in the graph below. The orange and grey bars represent the average price at a non-storage entry point with the existing contracts excluded and included in the reference price calculation using the postage stamp model. (A summary of existing contract volumes, average price and the data used for the graph below are in appendix 2).

116.3.9. The step change in the orange and grey bars in 2021 is due to the change in the FCC values from obligated to National Grid's forecast.

Graph 2. Average Price Comparison



116.3.10. The blue bars for existing contracts could be the most cost reflective as the reserve prices in the auctions were derived using the LRMC methodology or potentially the unit cost allowance calculation. However these values were fixed at the time of allocation and have not been indexed to current prices so if they were cost reflective at the point of purchase they are no longer reflective of current costs. Information is not available to determine what these values would be if they had been indexed but in any case all proposals load this missing indexation value onto new capacity purchases.

116.3.11. Ofgem confirmed its GTCR policy view in November 2015[5] as below that:

116.3.12. *Our view is that floating capacity charges should apply to all contracts from the date of implementation, including those taken out under the current regime. We consider this would avoid market distortions between users buying the same entry point capacity for the same period but paying different charges depending upon the date they entered into the their obligation to pay.*

116.3.13. At the time, Ofgem acknowledged that the treatment of existing contracts at IPs was uncertain. Now that the TAR NC position is clear and all proposals extend the treatment of existing contracts to all points and to the date of implementation of a 0621 proposal, it is clear that Ofgem will agree this creates a distortion in the market, although Ofgem's open letter of February 2017[6] makes no comment on this issue, which is surprising given that the TAR NC position with respect to existing contracts was clear by then. The omission of the existing contracts issue and recognition of its interactions with key features of the regime namely capacity charges for new capacity purchase and commodity revenue recovery charges is rather serious since Ofgem had previously recognised the distortion that could be created whilst simultaneously rejecting the use of a commodity revenue recovery charge that would go some way to reduce this distortion.

116.3.14. The graph above shows that existing contracts are a medium term issue into the early 2030's and so that distortion will persist for some time. We would assume that Ofgem would therefore look favourably on proposals which reduce this distortion. 0621B does this most effectively by using the obligated capacity on an enduring basis, this reduces the price differential between existing capacity and new capacity bookings, with residual revenues being collected by a uniform commodity charge (except at IPs) which will not distort competition. 0621L also addresses this issue by retaining the existing contract volume and revenue as part of the inputs to the CWD calculation, this reduces the reference prices relative to proposals which exclude these contracts, but this proposal moves to FCC values based on a NG forecast from 2021 which increases the differential between existing contracts and new purchases. However this remains less distortionary than proposals which exclude the existing contracts in the enduring period.

116.3.15. Also in November 2015 Ofgem stated:

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[5] https://www.ofgem.gov.uk/sites/default/files/docs/2015/11/gtcr_confirmation_of_policy_view_and_next_steps.pdf

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[6] https://www.ofgem.gov.uk/publications-and-updates/open-letter-european-union-network-code-harmonised-transmission-tariff-structures-gas-tar-nc

116.3.16. The introduction of floating capacity charges would ensure that all users who benefit from the availability of a reliable network contribute towards the historical costs. It transfers the burden of revenue under-recovery from the current commodity charge to the new floating capacity charge. We consider this would be more cost reflective and would ensure that NGGT has better information for network management.

116.3.17. There are two points here

- Cost reflectivity is not explained in terms of reflecting forward looking marginal costs and seems to be at odds with economic principles.

  Ofgem's view seems to stem from the desire for all parties top make a contribution to the historical costs of the network as all parties benefit from the network, however that is already achieved through a commodity charge for revenue recovery.

- Ofgem seems to consider that where bookings diverge from flows that there are misleading signals to NG in the management and operation of the network.

  We consider that nominations rather than capacity bookings are key to the way in which NG manages the networks and that the PARCA framework is used to signal future capacity needs beyond baselines also that there is no cost to NG of bookings being short term rather than long term. Ofgem needs to more fully justify this premise if it maintains that bookings more closely matching flows is desirable.

116.3.18. Ofgem also seems to consider that revenue recovery charges should be cost reflective in its February 2017 letter[7]

116.3.19. We do not believe that the current use of non-locational commodity charges, levied for the purposes of managing under- and over-recovery of transmission services revenue should be continued as we do not consider them to be cost reflective in the context of TAR NC as their derivation does not incorporate the required cost drivers.

116.3.20. TAR NC refers to cost drivers of capacity and distance in the context of reference prices not revenue recovery charges.

116.3.21. Also in the electricity Targeted Charging Review (TCR)[8] Ofgem has stated that

116.3.22. Cost reflectivity is less directly relevant for residual charges; however it is important that residual charges do not unduly distort the signals provided by forward-looking charges which are intended to be cost reflective…residual charges do not relate to specific costs that any user imposes.

116.3.23. Instead Ofgem is proposing to assess residual charges against the principles of reducing distortions, fairness and proportionality and practicality. For electricity this leads to a capacity based revenue recovery charge in order to

[7] https://www.ofgem.gov.uk/system/files/docs/2017/02/gas_transmission_charging_policy_view_21_feb_2017.pdf

[8] https://www.ofgem.gov.uk/system/files/docs/2017/03/tcr-consultation-final-13-march-2017.pdf

minimise distortions that could arise from behind the meter generation. In gas there is no parallel issue of behind the meter generation so a uniform commodity charge would seem to be consistent with these principles.

116.3.24. The TCR approach seems more consistent with economic principles and hence likely to lead to efficient outcomes in customers' interests.

116.3.25. As cost reflective charges are closely linked with effective competition, the treatment of existing contracts and the shift in revenue to capacity charges will likely have a detrimental impact on competition through the distortions created.

116.3.26. Multipliers

116.3.27. Energy UK recognises that all the proposals adopt a common approach to multipliers for short term capacity of 1, even though Ofgem invited the industry to consider and justify the appropriate level given that it had expressed its view that short term discounts should be reduced. We consider that relatively little attention was given to this issue with all proposers following National Grid's lead and setting multipliers to one. Whilst we agree this does not differentiate between short and longer term bookings it is not a cost reflective option, and should not be justified as such.

116.3.28. The rational for discounts for short term capacity comes from economic theory of short-run marginal cost pricing. This suggests that the costs of providing network capacity to any one shipper on any one day would be insignificant. Ofgem noted this in its December 2014[9] consultation and felt the need to reconsider the degree to which this applies in practice, given the unconstrained nature of the network, switching to short term capacity and consequential uncertainty in the location of flows entering the network. Ofgem felt the current situation is not sustainable.

116.3.29. We don't think the cost to NGGT of accommodating a significant number of short-term users is zero. Short-term users already pay the full rate of the commodity charge, contributing to the recovery of NTS fixed costs. However, we also think that a lack of any locational signals may create inefficiencies in the short-term use of the NTS. Under the current arrangements, shippers buying within-day or interruptible daily capacity face the same uniform charge (commodity only) at all entry points – even though the costs NGGT incurs in providing access may be different.

116.3.30. Ofgem notes that short term users make a contribution to historical cost via the commodity charge, no evidence is provided here or elsewhere by Ofgem that the costs of providing short term access vary by location. Therefore evidence needs to be provided to support Ofgem's position, or accept that uniform commodity charges provide a contribution to fixed costs.

116.3.31. We also note from this statement that Ofgem would appear to oppose a postage stamp model since capacity charges do not vary by location.

[9] https://www.ofgem.gov.uk/sites/default/files/docs/2014/12/gtcr_policy_position_0.pdf

116.3.32. Energy UK would also like to refer back to Ofgem's decision letter regarding GCM19[10]. This contains a number of statements linked to the reasons for reducing short term discounts at that time.

116.3.33. Reflecting the fact that the SRMC of daily entry capacity is relatively low, Ofgem considers it appropriate that the reserve price for such capacity is lower than the reserve price for longer term capacity i.e. the Long Run Marginal Cost (LRMC). GCM19 would move further away from this position by basing the daily entry capacity auction reserve prices on the LRMC.

We consider that the setting of artificial barriers such as a floor price which was higher than the SRMC would have an adverse impact on competition.

Ofgem therefore does not agree that the current arrangements give undue preference to those booking capacity in the short-term.

116.3.34. This change in policy position away from economic principles, is a concern in the context of regulatory certainty. However as the proposals do not include a range of options on multipliers we do not comment on this further, nor did we consider this in our assessment against the relevant objectives.

116.4. **Article 7c requires the methodology to aim at ensuring non-discrimination and prevent undue cross-subsidisation including by taking account of the cost allocation assessments in Article 5.**

Capacity cost allocation comparison index (%)

2019/20 – Transition Period

Proposal	0621	0621A	0621B	0621C	0621D	0621E	0621F	0621J	0621H	0621K	0621L
Cost Allocation Result	14%	8%	8%	8%	-1%	14%	69%	-13%	14%	8%	10%

2021/22 – Enduring Period

Proposal	0621	0621A	0621B	0621C	0621D	0621E	0621F	0621J	0621H	0621K	0621L
Cost Allocation Result	37%	36%	8%	36%	22%	40%	97%	1%	37%	36%	29%

116.4.1. The results of the cost allocation assessments are summarised above, this information is taken from the preliminary ACER consultation issued at the same time as the consultation for 0621. These have not attracted much discussion during the

[10] https://www.ofgem.gov.uk/sites/default/files/docs/2010/08/gcm019_decision_signed_0.pdf

development of 0621 proposals however where the capacity cost comparison index exceeds 10% this needs to be justified. All proposals apart from 0621B have values greater than 10% for the interim and/or enduring period but not explanation is offered. We seek clarification of what a negative value means.

116.4.2. Taken in isolation this would seem to suggest that 0621B is the only proposal with limited cross subsidies and discrimination.

116.5. Article 7d requires the methodology to aim at ensuring that significant volume risk related particularly to transports across an entry-exit system is not assigned to final customers within that entry-exit system.

116.5.1. An assessment of compliance with this article will need to consider the cost allocation test referred to above. It will also need to consider where under / over recovery of revenue at interconnection points arising through deviations in the values used to determine the capacity based revenue recovery charges are allocated. If there is a single K value then a portion if this will be allocated to final customers.

116.6. Article 7e requires the methodology to aim to ensure that the resulting reference prices do not distort cross-border trade

116.6.1. Ofgem will need to explicitly consider this in its impact assessment.

116.6.2. Generally trade between markets will be driven by differences in market prices, taking into account network costs. Where capacity is purchased long term this may be considered a sunk cost, and may not influence day to day trading decisions. However where short term capacity is procured to enable cross border trade the capacity and any revenue recovery charges will be considered as part of the trading decision.

117. The proposals have different combinations of specific capacity discounts for storage sites and bilateral interconnection points. In what way do you consider the different combinations facilitate effective competition between gas shippers and gas suppliers?

117.1. Proposals that include a 50% specific capacity discount for storage capacity do so as this is the minimum required to achieve compliance, based on the simple premise that this avoids double counting of charging. This is not justified on it being cost reflective, which promotes competition.

117.2. The 86% discount included in several proposals is based on analysis carried out by WWA[11] [12] which sought to determine a more cost reflective discount given than gas which enters a storage facility is then subsequently delivered to meet demand locally and so does not use the 'whole system'. Given that this is more cost reflective, this will promote competition.

[11] https://www.gasgovernance.co.uk/ntscmf/170717

[12] https://www.gasgovernance.co.uk/0621/280318

117.3. Applying a discount for gas flowing in /out of the system via bidirectional interconnectors is harder to justify as its main role is connecting markets, and flows will be determined by the relative prices of those markets. The use of the system therefore does not meet the same cost reflective criteria as an embedded storage facility which serves the local market. Gas that is exported or imported will use the whole system in flowing to and from the interconnection point, and if a discount was applied may not be making a fair contribution to network charges. Furthermore the application of a discount at bidirectional points may favour cross border flows (imports) over domestic production leading to a distortion to competition and potentially favour exports above domestic supply.

Are there any errors or omissions in this Modification Report that you think should be taken into account? *Include details of any impacts/costs to your organisation that are directly related to this.*

118. A clear omission is analysis in the modification report.

119. We think initial analysis should have been conducted much earlier in the process to help understand the different proposals and their comparison. Such analysis may then have led to refinement of the proposals and more focussed comments in the work group report supported by 'evidence' from the analysis. However given the time available this was not possible.

120. Errors were found in the analysis that was provided in parallel with the consultation and Energy UK remains concerned that further errors or inconsistencies could still be found.

Please provide below any additional analysis or information to support your representation

121. Energy UK anticipates that further interpretive and comparative analysis will be undertaken after responses have been submitted.

Appendix 1 – Executive Summary from Frontier Economics' report for Energy UK on Gas Transmission Charging Review Analysis

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EXECUTIVE SUMMARY

Context

Gas transmission charges have been the subject of significant recent debate. At the European level, Regulation 2017/460 was approved, establishing a network code on harmonised transmission tariff structures for gas (TAR NC) that leads to a number of requirements for change for Member States.

Ofgem launched the Gas Transmission Charging Review (GTCR) in 2013, published its policy position in 2014, confirmed the position in 2015 and updated it in February 2017.

Subsequently, National Grid National Transmission System (NTS) raised Uniform Network Code (UNC) Modification UNC 621, which aims to introduce a new gas transmission charging regime that is both consistent with European regulations and which, they argue, will also better satisfy a number of domestic tariff objectives.

Energy UK has engaged Frontier Economics and LCP to help them analyse how proposed changes to gas transmission charges could:

- create a cost or a benefit for the economy, and in particular whether new charges could result in any adverse consequences beyond those arising from a redistribution of allowed revenue recovery from charges;
- better satisfy the relevant objectives for the UNC in relation to charging; and
- better satisfy Ofgem's statutory duties.

Charging models that we consider

Several different variants of UNC 621 have been proposed, most of which are based on the Capacity Weighted Distance (CWD) approach to setting reference prices.

Our main focus is to assess the CWD approach against the status quo charging model as the counterfactual. We assess the CWD approach that is Energy UK's interpretation of modification proposals and industry discussions to date. We do this qualitatively for two variants of the CWD approach: one that uses obligated capacity and one that uses forecast capacity to set tariffs.

While TAR NC describes the CWD methodology for setting reference prices for entry and exit tariffs, it does not require that this methodology is implemented. Indeed, in March 2018 Ofgem signalled to the UNC 621 workgroup that it would consider a reference price methodology other than CWD and that it would consider an entry:exit split other than 50:50.

Given this development, we also consider different design choices that could serve to avoid potential issues with the CWD based charging models.

The two charging models we assess are as follows:

- Status quo charging model (LRMC); and
- CWD approach.

The following table summarizes the main aspects of the status quo and CWD charging models.

Figure 1 Charging models that we consider

	Status quo Model	CWD Model*
Reference price method	LRMC	CWD
Entry / exit split	50/50	50/50
Complementary revenue recovery adjustments (TO charges)	Uniform commodity based charge	Uniform commodity based charge (capacity on IPs)
Floating reference prices	No, fixed	Yes, at all points
Storage discount on capacity prices	0%	50%
Storage (and IP) discount on complementary revenue recovery charges	100% (not IPs)	100% (not IPs)
Day ahead firm product reserve prices	Ref. Price * 0.67 at entry and Ref. Price at exit	Ref. Price
Within day firm product reserve prices	Ref. Price * 0 at entry and Ref. Price at exit	Ref. Price
Interruptible reserve price	0	Ref. Price

Source: *Frontier*

Note: ** With the CWD Model we consider two variants, one whereby obligated capacity is released and another whereby forecast capacity is released. With forecast capacity the expected complementary revenue recovery charge is small or even zero.*

Criteria for assessment

We develop criteria for assessing the charging models from the relevant objectives of the UNC, Ofgem's statutory duties and the requirements of the Third Energy Package, including TAR NC. We combine the three sets of criteria into four themes that we use for the assessment:

- Cost reflectivity;
- Effective competition;
- Security of supply; and
- Cost recovery.

In addition, the charging model must be compliant with TAR NC.

Cost reflectivity

Network charges should reflect the forward looking marginal costs that users impose on the network through a change in their use. This is important to achieving an economically efficient outcome: if charges are cost reflective, users will internalise the network costs which they cause when making a decision about how to use the network. This will in turn ensure that overall value chain costs are optimised, and that customer interests are protected.

If there is an excess capacity in some locations as a result of a reduction in network use over time, then the marginal cost of using capacity may be close to or equal to zero. If there is spare capacity everywhere and no demand growth is expected, the marginal cost of capacity

everywhere may be zero. At this point, marginal cost based signals for capacity look very similar to postage stamp charges, i.e. uniform capacity charges throughout the network.

Efficient cost reflective charges may not recover all costs which have been incurred. Therefore, additional charges are required to recover costs. Such charges should have as an objective creating minimal changes in behaviour relative to a set of efficient charges. This implies that cost recovery charges should be structured in such a way as to target price-insensitive uses of the network, taking into account equity issues.[13]

Effective competition

Here we focus on other potential effects from the approach to entry and exit pricing on the effectiveness of the competitive process itself. These typically relate to the impact that the regime has on:

- the number of different physical gas sources competing to serve demand;
- the ease with which shippers can enter and exit the market, and hence the liquidity of the NBP and the degree of competition on downstream markets; and
- the risk profile of shippers.

Different approaches to charging could result in impacts from:

- changes in availability of various sources of gas to compete at the NBP if certain approaches to pricing effectively exclude some sources of gas from the market;
- reductions in the volatility of charges, reducing risk for shippers which should represent a reduction in the barriers to entry to shipping; and
- increases in the level of potential NBP price volatility, increasing risk for shippers and representing a potential increase in barriers to entry.

Security of supply

There is an overlap between the number of competing physical sources of gas and security of supply. If a particular approach to network pricing precludes (at some price levels) gas entering GB profitably through a particular route, then it will clearly have an impact on competition and expected NBP prices and, in the limit, it will also effect security of supply.

There may also be a security of supply effect in relation to domestic infrastructure, for example, if a particular pricing methodology resulted in high charges to gas storage sites at a level which jeopardised their future profitability.

[13] For example, it may be seen as inequitable to target a disproportionately large share of cost recovery on a user or group of users simply because they are less likely to change behaviour. For example, a system that set higher cost recovery related exit charges for more efficient gas fired power stations (because they are less likely to change gas consumption patterns because they are always in merit) is likely to be seen as inequitable, even if such a charging regime were found to be economically more efficient.

Cost recovery

It is important that network companies can recover their allowed revenue. Here we consider the stability and predictability of its cash flows and the surety of revenue recovery.

Other

GEMA's duty to protect the interests of GB consumers could be interpreted as, all things equal, to minimise the cost to GB gas and power consumers. Therefore, we also assess the cost to GB gas and power consumers.

Assessment

Compliance

We take the view that the CWD Model has relatively low risk of non-compliance with TAR NC.

Cost reflectivity

In terms of cost reflectivity, the CWD Model appears to be worse than the status quo since it aims to allocate *historical costs* locationally and is therefore not a forward looking marginal cost based methodology.

Of the two CWD Model variants, obligated capacity would result in lower average reference prices than the forecast capacity variant (with complementary revenue recovery charges being correspondingly higher for the obligated capacity variant). If it is expected that spare capacity in Britain will be a major feature of the gas transmission network going forward, then marginal costs are likely to be low. This suggests that a methodology that results in lower reference prices is more efficient than a methodology that results in higher reference prices.

Under CWD some cost recovery shifts from a commodity to a capacity basis because CWD aims to allocate historical costs. A capacity charge means that shippers cannot pass on the entry charges directly into wholesale gas prices. This may distort flows if some shippers (e.g. those with higher cost supplies) no longer purchase entry capacity. The obligated capacity variant would reduce some of the potential distortions introduced by the CWD Model since it would move less cost recovery from commodity to capacity.

Effective competition

Much like the assessment of cost reflectivity, in terms of effective competition, the CWD Model appears to be worse than the status quo. Of the two CWD Model variants, obligated capacity would reduce some of the potential distortions introduced by the CWD Model since it would move less cost recovery from commodity to capacity.

Security of supply

The move away from cost reflective tariffs under the status quo to non-cost reflective charges under the CWD Model and the shift of revenue recovery from commodity to capacity charges is likely to increase the potential for distortions to the use of capacity compared to the status quo. As with the effect on competition this could deter investment in new supply or lead to earlier closure of existing supply.

Under the CWD Model, storage would lose its current exemption from revenue recovery (since revenue recovery is shifted to capacity charges). This could inefficiently reduce the profitability of storage, delaying investment or bringing forward closure.

Finally, the increase in multipliers on short duration firm capacity and on interruptible capacity under the CWD Model prevents capacity prices falling to reflect short run marginal cost where there is spare capacity. This would tend to increase the likelihood of investment delay and accelerated closure of supply and storage.

Cost recovery

Under the status quo charging model, volatile LRMC prices make complementary cost recovery charges unstable from year to year. The CWD Model may result in more stable prices and revenue recovery than the status quo. However, whether CWD prices are indeed more stable depends on the assumptions used to determine CWD prices. Of the two variants, obligated capacity is likely to result in more stable prices.

The move from fixed reference prices under the status quo to floating reference prices under the CWD Model would also tend to support stable tariffs.

Under the CWD Model, setting short term multipliers and the multiplier on interruptible capacity to 1.0 would also tend to support stable revenue recovery compared to having large discounts on short term firm capacity products and on interruptible capacity.

Effect on end consumers

Whether a move to CWD or the improvements to CWD increase or decrease costs for gas consumers is an empirical question.

However, a move to CWD is likely to increase costs for electricity consumers. Currently, gas fired power plants are able to buy short-term exit capacity or pay the cheaper short haul charge, minimising capacity payments for gas transportation. Under the UNC 621 proposals, there is no short-term discount at entry or exit and hence gas fired power plants must incur the full capacity charge at exit. This would increase electricity prices through either the wholesale electricity price or the Capacity Market price, or a combination of both.

This effect could be reduced or avoided by continuing to allow the power sector discounts for short term capacity and for short haul capacity.

Possible areas of improvement to the CWD model

The CWD model is not perfect and could potentially be improved in a number of areas and which would require further analysis. However, these additional changes have not been proposed as part of UNC Modification 621.

CWD could potentially be made more cost reflective by moving to a postage stamp model for capacity charges, with low multipliers on short term firm capacity products and on interruptible capacity. Although postage stamp tariffs are not cost reflective by design they could effectively be cost reflective with increasing spare capacity on the GB network. In addition, low multipliers for certain products would allow the price of capacity to reflect marginal costs.

Moving in the direction of a 0:100 entry/exit split would allow lower reserve prices on entry and hence more cost reflective tariffs in the context of spare capacity, and it would reduce distortions by recovering revenue from load. However, no model with a 0:100 split has been put forward. Even with a 50:50 entry/exit split, low multipliers on short term firm capacity could allow cost reflective tariffs on entry.

Applying a 100% discount on entry and exit capacity charges at storage and exempting IPs from complementary revenue recovery charges would reduce the likelihood of making capacity uneconomic at storage and IPs, respectively, potentially improving effective competition and security of supply. Low multipliers on short term firm capacity products and on interruptible capacity would also allow storage and interconnectors largely to avoid capacity related cost recovery charges (CWD inherently includes an element of cost recovery in capacity charges) reducing the likelihood of inefficiently deterring storage use or investment, potentially improving effective competition and security of supply. However, exempting IPs from complementary revenue recovery charges would allow transit flows from the UKCS or LNG import terminals to flow to the continent without contributing to the cost of the GB gas network. This would increase the burden of cost recovery on GB gas consumers

These potential improvements to the CWD Model would have varying effects on revenue stability. A postage stamp approach to charging would likely result in more stable tariffs and certainty in tariff recovery from year to year than either the status quo or CWD Model. However, use of discounts for short term firm capacity and interruptible capacity would increase the ability of shippers to avoid paying capacity charges, tending to reduce the certainty of revenue recovery from year to year. Moving to recover a greater proportion of revenues from exit would reduce this problem.

Conclusions

Overall, the qualitative assessment suggests that some aspects of the CWD Model would better meet the objectives of transmission charging than the status quo but other aspects would not.

The CWD Model appears to be more compliant with TAR NC than the status quo although CWD has some risks to compliance, e.g. around the multiplier on interruptible capacity.

However, the CWD Model appears worse than the status quo in terms of cost reflectivity and effective competition. Of the two CWD Model variants, the obligated capacity variant is likely to distort outcomes less than the forecast capacity variant because the obligated capacity variant shifts less cost recovery onto capacity.

The CWD Model may result in more stable prices and revenue recovery than the status quo. However, this depends on the assumptions used to determine CWD prices. The obligated capacity variant is likely to result in more stable prices than the forecast capacity variant. The move from fixed reference prices under the status quo to floating reference prices under the CWD Model and setting short term multipliers and the multiplier on interruptible capacity to 1.0 would also tend to support stable tariffs.

Finally, the CWD Model would no longer provide a short-term discount at exit and hence gas fired power plants would incur the full capacity charge at exit under this model. This additional cost is likely to result in higher electricity prices which Ofgem could see as being detrimental to consumers.

The aspects of the CWD Model that appear worse than the status quo could potentially be improved although the potential improvements discussed in this report are not currently being considered as part of UNC Modification 621. The main areas for potential improvement centre on making tariffs more cost reflective and targeting cost recovery at less price sensitive users.

Appendix 2 – Existing Contracts Data – prior to allocations in 2018

Entry Point	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33
Avonmouth	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bacton IP	211,850,257.18	135,532,701.56	89,136,101.67	89,258,918.60	92,162,298.55	44,200,041.86	28,676,367.86	28,916,392.61	28,598,630.05	-	-	-	-	-	-	-	-
Bacton UKCS	255,185,717.92	248,808,024.80	243,317,684.86	239,339,580.51	210,556,462.93	203,081,277.90	198,902,231.44	274,357,136.38	196,760,730.51	152,373,059.19	-	-	-	-	-	-	-
Burton Point	39,656,912.17	31,243,264.59	14,936,970.81	11,545,376.78	7,134,731.11	-	-	-	-	-	-	-	-	-	-	-	-
Barrow	98,691,763.19	83,639,566.25	75,516,797.68	45,116,444.12	28,613,480.99	25,140,906.36	17,878,570.79	15,836,387.01	372,130.67	-	-	-	-	-	-	-	-
Barton Stacey	90,000,000.00	90,000,000.00	90,000,000.00	90,246,575.34	44,876,712.33	-	-	-	-	-	-	-	-	-	-	-	-
Canonbie	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cheshire	514,110,000.00	466,327,071.78	514,110,000.00	515,518,520.55	514,110,000.00	514,110,000.00	514,110,000.00	515,518,520.55	514,110,000.00	514,110,000.00	514,110,000.00	515,518,520.55	514,110,000.00	514,110,000.00	514,110,000.00	515,518,520.55	234,456,800.00
Caythorpe	90,000,000.00	90,000,000.00	90,000,000.00	90,246,575.34	90,000,000.00	90,000,000.00	90,000,000.00	90,246,575.34	44,876,712.33	-	-	-	-	-	-	-	-
Dynevor Arms	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Easington (not incl. Rough)	614,523,291.93	740,130,504.45	732,283,664.59	705,809,099.05	551,783,516.18	333,966,265.25	584,865,279.71	492,740,191.83	439,116,023.77	393,349,125.85	326,978,082.22	241,660,273.97	-	-	-	-	-
Fleetwood	-	-	-	-	-	-	-	-	86,301,369.86	-	-	-	-	-	-	-	-
Glenmavis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Garton	420,000,000.00	420,000,000.00	420,000,000.00	421,150,684.93	420,000,000.00	420,000,000.00	279,616,438.36	70,191,780.82	-	-	-	-	-	-	-	-	-
Hole House Farm	283,440,000.00	283,440,000.00	283,440,000.00	284,216,547.95	283,440,000.00	283,440,000.00	283,440,000.00	284,216,547.95	283,440,000.00	283,440,000.00	118,440,000.00	118,764,493.15	118,440,000.00	-	-	-	-
Hatfield Moor (onshore)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hornsea	100,674,794.52	100,674,794.52	50,742,739.73	51,306,547.95	50,742,739.73	50,742,739.73	50,742,739.73	-	-	-	-	-	-	-	-	-	-
Hatfield Moor (storage)	5,424,657.53	5,424,657.53	5,424,657.53	5,484,931.51	5,424,657.53	5,424,657.53	-	5,484,931.51	5,424,657.53	-	-	-	-	-	-	-	-
Isle of Grain	608,296,985.80	643,392,876.71	643,392,876.71	645,212,876.71	643,392,876.71	623,338,082.19	623,338,082.19	595,075,890.41	482,435,616.44	422,600,000.00	422,600,000.00	423,757,808.22	350,000,000.00	-	-	-	-
Milford Haven	876,298,630.14	876,298,630.14	876,298,630.14	929,038,356.16	649,178,082.19	574,383,561.64	398,904,109.59	393,408,219.18	361,095,890.41	361,095,890.41	361,095,890.41	199,452,054.79	197,260,273.97	160,273,972.60	-	-	-
Partington	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rough	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Fergus	253,741,793.21	243,377,936.57	121,747,002.15	71,325,207.77	50,907,040.28	26,953,626.24	22,724,183.88	15,591,894.80	5,236,705.81	3,005,859.55	-	-	-	-	-	-	-
Teesside	163,817,316.01	123,628,749.79	95,112,509.79	81,794,006.44	51,920,075.96	34,038,113.08	9,764,066.78	1,866,477.68	863,413.63	181,819.73	-	-	-	-	-	-	-
Theddlethorpe	26,073,373.67	16,769,692.16	10,700,821.92	8,573,424.66	-	-	-	-	-	-	-	-	-	-	-	-	-
Wytch Farm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Capacity (kWh/d)	**1,737,950,769.19**	**4,598,688,470.87**	**4,356,160,457.58**	**4,285,183,674.37**	**3,694,242,674.49**	**3,228,819,271.78**	**3,102,962,070.32**	**2,783,450,946.06**	**2,448,631,881.02**	**2,130,155,754.73**	**1,743,223,972.63**	**1,499,153,150.68**	**1,179,810,273.97**	**674,383,972.60**	**514,110,000.00**	**515,518,520.55**	**234,456,800.00**
Total Revenue (£/annum)	**11,562,418.03**	**78,607,734.24**	**59,783,632.15**	**49,698,418.00**	**50,986,340.57**	**46,506,799.90**	**45,842,709.85**	**60,559,773.46**	**50,339,439.78**	**45,066,118.26**	**37,394,005.75**	**25,210,526.90**	**15,151,880.75**	**12,180,664.26**	**187,650.15**	**188,164.26**	**85,576.73**
Average Price (p/kWh/d)	**0.0018**	**0.0047**	**0.0038**	**0.0032**	**0.0038**	**0.0039**	**0.0040**	**0.0060**	**0.0056**	**0.0058**	**0.0059**	**0.0046**	**0.0035**	**0.0049**	**0.0001**	**0.0001**	**0.0001**

Values for graph in response to Ofgem question 5

	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33
Existing contracts Average Price (p/kWh/d)	**0.0018**	**0.0047**	**0.0038**	**0.0032**	**0.0038**	**0.0039**	**0.0040**	**0.0060**	**0.0056**	**0.0058**	**0.0059**	**0.0046**	**0.0035**	**0.0049**	**0.0001**	**0.0001**	**0.0001**
PS entry point price excluding existing contracts	0.0162	0.0179	0.0145	0.0183	0.0173	0.06	0.0678	0.0636	0.0597	0.0566	0.0517	0.0512	0.0474	0.0477	0.0461		
PS entry point price not-excluding existing contract	0.0124	0.0134	0.0111	0.0133	0.0138	0.046	0.046	0.0459	0.046	0.046	0.046	0.0459	0.046	0.046	0.046		