BEFORE THE COMPETITION AND MARKETS AUTHORITY

IN THE MATTER OF APPEALS UNDER SECTION 11C OF THE ELECTRICITY ACT 1989 AND SECTION 23B OF THE GAS ACT 1986

B E T W E E N:

(1) CADENT GAS LIMITED
(2) NORTHERN GAS NETWORKS LIMITED
(3) SOUTHERN GAS NETWORKS PLC AND SCOTLAND GAS NETWORKS PLC
(4) WALES AND WEST UTILITIES LIMITED
(5) SCOTTISH HYDRO ELECTRIC TRANSMISSION PLC
(6) SP TRANSMISSION PLC

Appellants

and

THE GAS AND ELECTRICITY MARKETS AUTHORITY

Respondent

RIIO-2 PRICE CONTROLS
RESPONSE TO APPEALS ON TOTEX MODELLING, EFFICIENCY AND LICENSING

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I. INTRODUCTION, BACKGROUND AND SUMMARY

A. INTRODUCTION

1. This is the response of the Gas and Electricity Markets Authority ("**GEMA**") to the appeals brought by the Appellants under s. 23B of the Gas Act 1986 ("**GA86**") and/or s. 11C of the Electricity Act 1989 ("**EA89**") against modifications to their licences made by GEMA by a decision dated 3 February 2021 under s. 23 GA86 and s.11A EA89. The Licence Modifications give effect to GEMA's price control determinations under the new price control regime known as RIIO-2.

2. The Competition and Markets Authority ("**CMA**") gave permission to appeal to the Appellants under s. 23B(2) GA86 and/or s. 11C(3) EA89 by decisions dated 31 March 2021.

3. This response responds to the following grounds of appeal advanced by these Appellants:

   (1) The appeal grounds relating to GEMA's ongoing efficiency challenge (Cadent Gas Limited's ("**Cadent's**") Ground 1C; Northern Gas Network Limited ("**NGN's**") Ground 3; Southern Gas Network Plc and Scotland Gas Network Plc's (together, "**SGN's**") Ground 4; Wales and West Utilities Limited's ("**WWU's**") Ground E; and SP Transmission Plc's ("**SPT's**") Ground 3). In its permission decision, the CMA directed that these grounds of appeal should be considered together.

   (2) The appeal grounds relating to GEMA's decisions concerning the licence modification process (WWU's Ground D, SPT's Ground 4 and Scottish Hydro-Electric Transmission Plc's ("**SHE-T's**"[1]) Ground 3). In its permission decision, the CMA directed that these grounds of appeal should be considered together.

   (3) The appeal grounds relating to GEMA's decision with respect to the catch-up efficiency benchmark (SGN's Ground 4 and NGN's Ground 4B).

[1] SHE-T trades as SSEN Transmission, so in some documents this Appellant is referred to as "SSEN".

(4) Cadent's appeal ground relating to LTS rechargeable Diversions Costs (Ground 1A).

(5) Cadent's appeal ground relating to London regional factors (Ground 1B).

(6) WWU's appeal ground relating to repex (Ground C).

(7) NGN's appeal ground relating to the Business Plan Incentive (Ground 4A).

4. GEMA has filed a separate response which responds to the appeal grounds brought by the above and other Appellants in relation to cost of equity, cost of debt, tax clawback and transmission network use of system charges.

5. The Appellants challenge various decisions taken by GEMA with respect to the RIIO-2 price control. RIIO-2 regulates the prices for the electricity and gas transmission and gas distribution sectors for a five-year period from 1 April 2021 to 31 March 2026. GEMA's decision-making in respect of the RIIO-2 price controls has involved a complex assessment by GEMA based on substantial data, comprehensive expert analysis, extensive consultation over almost four years, and the careful balancing of regulatory objectives. The licence modifications implementing RIIO-2 are the product of that work, and of the interaction of a broad range of factors considered by GEMA in accordance with its statutory duties. GEMA is confident that the process it has followed has delivered a result that is well-founded and consistent with its principal objective of protecting the interests of existing and future consumers and its wider duties.

6. There are a large number of potential interlinkages between the matters appealed (see Mr Kaul's First Statement, §§10-122; and Dr Wagner's First Statement, §§12-21). With the GD costs assessment process, these interlinkages stem, in large part, from the use of a *comparative* benchmarking analysis. As a result of this comparative analysis, changes to just one GDN's costs (e.g. excluding various rechargeable LTS Diversions costs forecast by Cadent from the model– see its Ground 1A) will affect the efficiency scores of <u>all</u> GDNs. GEMA considers that hypothetical discussion of various possible interlinkages would, at this stage, be unmanageable and disproportionate. As indicated in earlier correspondence with the CMA and the parties, GEMA therefore proposes that submissions on remedies should be made following Provisional Determinations (should

such submissions be needed). The CMA has confirmed in correspondence that (i) it will take interlinkages into account;[2] and (ii) *"the appropriate time to consider submissions on remedies is after the CMA's Provisional Determinations, which is the approach usually followed by the CMA and which we intend to follow in this appeal"*.[3]

B. SUMMARY OF GEMA'S RESPONSE

7. GEMA's position is that decisions which are the target of the appeal grounds addressed in this response cannot be said to be wrong on any of the grounds identified at s. 23B(4) GA86 and/or s. 11E(4) EA89. The appeal grounds are without merit and should be dismissed in summary for the following reasons.

8. **Ongoing Efficiency**. The appellants (Cadent, NGN, SGN, WWU and SPT) contend in summary that GEMA's core efficiency challenge of 0.95% for capex and repex and 1.05% for opex was unjustified insofar as it failed to have any or any proper regard to evidence which suggested that such a stretching efficiency challenge was not appropriate. The appellants further contend that the innovation uplift (i.e. the 0.2% uplift to the core efficiency challenge intended to reflect the benefits of innovation funding at RIIO-GD1) was unjustified insofar as it double-counts efficiency savings and is based on various unjustified assumptions. The appellants' contentions are without merit in summary for the following reasons:

   (1) GEMA's decision as to the OE challenge was an exercise in regulatory judgmentwhich involved a holistic and qualitative assessment of various competing pieces of evidence. GEMA's approach (which reflects that taken by the CMA in its decision on Ofwat's water price control, "**PR19**"[4]) was to stand back and assess the evidence in the round. In so doing, GEMA properly had regard to the evidence which the appellants allege it failed to consider.

[2] CMA Letter of 30 October 2019, §14. **[TSUB1/01]**
[3] CMA Letter of 20 April 2021. **[TSUB1/02]**
[4] Note that, where GEMA relies on the CMA's PR19 determinations, it has had regard to *provisional* determinations. In keeping with per the CMA's "Note to parties on extension and revised timetable" of 15 April 2021, GEMA intends to make any submissions arising from the CMA's *final* determinations in its reply (currently due by 10 May 2021) on the Appellants' representations concerning the same (currently due by 23 April 2021).

(2) GEMA determined that a stretching core OE challenge was justified on the basis of various factors including: (i) evidence from growth accounting analysis undertaken by its economic consultants; (ii) its judgment that regulated monopolies with certainty over revenue streams should be able to achieve significant efficiency gains; (iii) the network companies' own efficiency forecasts, which were not out of line with the OE challenge GEMA adopted; and (iv) regulatory precedent in the form of the OE challenges set in other price controls. GEMA made no error in exercising its regulatory judgment in this way. GEMA's decision was further justified given the material outperformance of the network companies against actual allowances at RIIO-1.

(3) With respect to the innovation uplift, GEMA reasoned that network companies had received significant funding during RIIO-1 through various innovation mechanisms which were funded entirely by consumers up front and aimed in part to drive efficiencies. GEMA reasonably considered that the consumers were entitled to a fair rate of return in respect of that investment which it broadly estimated at 0.2%. GEMA properly considered the risks of double-counting in reaching its decision but reasonably decided that the innovation uplift was nevertheless justified.

9. **Licence modification process**. Three Appellants, SPT, SHE-T and WWU, appeal the drafting of specific licence conditions, on the basis that they allow decisions to be implemented (and/or subsidiary documents to be published and amended) in defined scenarios during the course of the price control without proceeding through a statutory modification process under ss.11A-H of the Electricity Act 1989 ("EA89") / s.23-23G of the Gas Act 1986 ("GA86") (i.e. the "Statutory Modification Procedure").These are grounds of appeal without merit. There are express statutory powers that facilitate the modifying of conditions and making of Directions through the licence i.e. other than by recourse to the Statutory Modification Procedure. The primary legislation expressly recognises that these powers exist alongside the Statutory Modification Procedure. After extensive consultation on its licence drafting principles, GEMA approached carefully the analysis of when such alternative powers should be implemented in licence conditions at the outset of the price control (as opposed to being capable of implementation ouly through the Statutory Modification Procedure). It has thereby

committed no error of law, and its exercise of regulatory judgment in this manner is not otherwise apt to be interfered with.

10. **Catch-up efficiency benchmark**. GEMA decided to set a challenging catch-up efficiency benchmark for the gas distribution networks ("**GDNs**") at the 75th percentile in the first year of RIIO-GD2, with a glidepath over three years to the 85th percentile in the fourth and fifth years of RIIO-GD2. SGN and NGN contend that GEMA's decision departs from regulatory precedent and was not supported by the evidence, in particular because GEMA's model was not sufficiently robust to support an efficiency benchmark higher than the upper quartile. These grounds are without merit. GEMA's decision as to the catch-up efficiency challenge was an exercise of regulatory judgmentwhich was not wrong on any of the statutory grounds. In exercising its judgment, GEMA had proper regard to the following factors:

    (1) The fact that all GDNs had materially outperformed against their allowances at RIIO-GD1;

    (2) The fact that GEMA had significantly improved data at RIIO-GD2 compared to RIIO-GD2, which led it to have confidence that its modelling could support a higher efficiency benchmark; and

    (3) The fact that its decision as to the efficiency benchmark sat firmly within the reasonable range of catch-up efficiency challenges implied by previous regulatory decisions.

11. **LTS rechargeable Diversions Costs**. Cadent (Ground 1A) argues, in summary, that "*rechargeable*" LTS Diversions costs (which were recoverable from third parties rather than consumers) should have been excluded from GEMA's regression analysis. This ground amounts to nothing more than a disagreement with GEMA's exercise of its expert regulatory judgment in determining an appropriate way to carry out efficiency assessments and how it treats LTS rechargeable Diversions costs in its modelling. Cadent's criticisms are without merit:

    (1) GEMA had a compelling rationale for including *gross* costs (i.e. all costs regardless of whether they were funded by third parties) in the regression analysis rather than *net*

costs. GDNs' overall efficiency is best assessed on the basis of all costs incurred by networks, regardless of how these costs are funded; GEMA's approach ensured the effective operation of the top-down model; GEMA acted fairly and consistently with respect to all GDNs; any volatility caused by variable LTS Diversions costs was addressed through various mechanisms, including excluding large, typical projects from the regression; and GEMA's approach is supported by regulatory precedent.

(2) Having carried out an extensive consultation on "modern equivalent asset value" ("MEAV") and other cost drivers, GEMA was entitled to conclude that (i) MEAV was the most appropriate driver available to it; and, (ii) regressing gross LTS Diversions costs with reference to MEAV was preferable to omitting LTS rechargeable Diversions costs from the regression analysis altogether. To ensure the effectiveness of the single econometric model, GEMA was right to regress costs where possible. Cadent has not proposed any alternative cost driver to MEAV and tacitly accepts its use in relation to LTS non-rechargeable Diversions.

(3) GEMA's approach did not penalise or unfairly discriminate against Cadent. Cadent is not alone in recording significant rechargeable capex cost. Any risk of potential unfairness caused by variable costs and short-term inconsistencies has been addressed.

12. As set out below, GEMA has identified a specific issue on LTS diversions in terms of how identifiable atypical capex projects were excluded from the regression analysis. In short, GEMA previously applied a £5m financial materiality threshold on a *net* basis, but has concluded that applying the threshold on a *gross* basis would best satisfy the objective of this threshold and be more consistent with GEMA's wider approach to costs assessment. Details of GEMA's proposed modification in this regard, and its expected benefits, are set out at section IX below. Subject to, and in part *because of*, this modification (which affects only LTS Diversions costs) Cadent's ground of appeal should not be allowed.

13. **London regional factors**. Cadent (Ground 1B) contends that GEMA's approach to regional factors did not sufficiently control for the increased cost of operating in London. This, too, amounts to nothing more than a disagreement with GEMA's exercise of expert regulatory judgment. Cadent's arguments are without merit:

(1) Ground 1B(1): GEMA acted at all times within its expert margin of discretion when carefully exercising its judgment as to whether claims put forward by Cadent were robustly evidenced and whether they related to exogenous factors (rather than the London GDN's inefficiency). GEMA also applied its materiality threshold fairly and transparently.

(2) Ground 1B(2): GEMA rejects the suggestion that the "efficiency gap" between the London GDN and Cadent's other GDNs is unrelated to the London GDN's relative inefficiency. Cadent proposes a drastic and arbitrary remedy of treating the London GDN as equally efficient to Cadent's West Midlands GDN. This proposal is entirely contrary to the efficiency benchmarking framework, contradictory in of itself (in that it continues to accept the outcome of the benchmarking analysis for all other GDNs), significantly reduces the incentive on Cadent London to deliver future efficiency improvements beyond that of Cadent's non-London GDNs and incentivises Cadent to allocate inefficient costs to its London GDN. Moreover, the arguments and evidence raised in support of Cadent's proposed remedy are seriously flawed.

14. **Repex**. WWU (Ground C) argues that its repex allowance should be increased to an amount which significantly exceeds that which WWU requested in its Business Plans. The basis of WWU's appeal is its assertion that GEMA has not provided it with what it regards to be "*sufficient remuneration*" (Notice of Appeal, §C9.1), from which it reasons backwards that GEMA must therefore have failed to have regard to relevant considerations and/or erred in law. This appeal is without merit:

(1) WWU expressly does not appeal GEMA's decision to use a 'top down' approach to its modelling, yet its objections on repex undermine that process in various respects.

(2) GEMA's modelling took into account the relevant factors of sparsity, urbanity and regional labour costs on which WWU now relies. WWU also relies on increased labour costs, citing a report from Oxera which GEMA considers has severe limitations. Labour costs are also accounted for through RPE indexation.

(3) The WWU's focal point is evidence of tender costs which it provided to GEMA very late in the process of assessing its costs. GEMA considered this evidence, and had

concerns about (*inter alia*) its quality. GEMA's caution was well-founded. On WWU's own evidence, if GEMA had accepted this tender evidence, WWU would have been provided with more funding than it already accepts it can deliver the work for (Notice of Appeal, §C1.11); in other words, over-funded at the expense of consumers.

15. **Business Plan Incentive**. NGN challenges Stage 4 of the Business Plan Incentive ("BPI") mechanism (Ground 4 of its appeal). Ground 4 is in three parts:

(1) Ground **4A(I)** challenges GEMA's decision, in the exercise of its broad regulatory judgment, as to "*the absolute level of the reward*" provided at BPI Stage 4 (Notice of Appeal §417). This challenge is without merit and amounts to nothing more than disagreement with GEMA on the basis that, in NGN's view, BPI Stage 4 "*results in a reward that is too small*" (Notice of Appeal, section 3.2.1).

(2) Ground **4A(II**) challenges GEMA's application of its Final Determinations ("**FDs**") methodology in the calculation of the BPI Stage 4 reward, specifically treating technically and non-technically assessed costs as part of a single calculation. Having reviewed the licence modifications and the Price Control Financial Model, GEMA accepts that there was an inadvertent inconsistency between the intentions of GEMA's FDs (Chapter 10 of the Core Document) and the calculations which were used to derive the BPI Stage 4 rewards in the PCFM. This is described in further detail in the fourth witness statement of Dr Michael Wagner at Section H. GEMA therefore does not defend Ground 4A(II), but instead invites the CMA to direct the required correction for NGN's incentive at BPI Stage 4. This would change the BPI Stage 4 reward for NGN from £5.1m to £8.5m[5] and should dispose of this sub-ground of appeal.[6]

(3) Ground **4B** alleges that GEMA has set an "*excessively challenging efficient cost benchmark at the 85th percentile*" and "*has failed adequately to take account of the adverse*

[5] GEMA notes however that, in directing the required correction, the CMA may choose to take into consideration interlinkages (including Ground 4B of NGN's appeal) which could impact the final level of any BPI Stage 4 reward.

[6] The CMA is also invited to make a minor correction to NGN's Stage 3 penalty, for the reasons explained in §57-59 of Dr Wagner's fourth witness statement. In short, GEMA has become aware of a spreadsheet error, which (when corrected) slightly *decreases* NGN's Stage 3 penalty from £3.0m to £2.8m.

impact of the decision on the frontier company under the BPI Stage 4 calculation" (section 4, §461). This challenge, on efficiency benchmarking, raises substantively the same issue as the other appeals on this issue and is flawed for the same reasons: this is addressed in **Section IV** of these submissions and see §10 above.

C. RELEVANT BACKGROUND: GEMA's PROCESS AND TOTEX ALLOWANCES

16. This section sets out factual background relevant to the appeal grounds addressed in this response and in particular:

    (1) An overview of GEMA's decision-making process at RIIO-2;

    (2) An overview of how GEMA set totex allowances for the GDNs at RIIO-GD2.

(i) Overview of GEMA's decision-making process

17. GEMA developed its costs assessment process in a way which built on its experiences of the RIIO-GD1 price control, its other previous price controls (e.g. RIIO-ED1), and price controls set by other regulators (e.g PR19, which has run in parallel with the development of the RIIO-2 price control).

18. In developing its framework to costs assessment, GEMA engaged in a thorough and transparent process of consultation and discussion with GDNs and other stakeholders. An overview of that process is provided in the First Witness Statement of Akshay Kaul (see, in particular, section D). In summary, GEMA's decision-making framework involved the following:

    (1) Framework Consultation (March 2018). Following the publication of an open letter in July 2017, GEMA consulted on the RIIO framework (i.e. the broader set of cross-sectoral rules and methodologies) for the GD and gas transmission sectors in March 2018.

    (2) Cost Assessment Working Groups ("CAWGs") (June 2018 to September 2020). GEMA ran a series of working groups for GDNs and other stakeholders (such as consumers

groups) throughout its decision-making process, covering a range of topics. 16 individual CAWGs were held over a two year period.

(3) Framework Decision. (July 2018). At this juncture, and in light of recommendations made by CEPA, GEMA made various substantive decisions (e.g. reducing the price control period from 8 years to 5).

(4) Sector-Specific Methodology Consultation ("SSMC") (December 2018 to March 2019). During the SSMC, GEMA consulted on a range of methodological issues – e.g. the pros and cons of top-down and bottom-up modelling, the principles for assessing appropriate costs drivers, or the criteria by which company-specific pre-modelling adjustment claims should be assessed. This consultation also addressed interlinkages issues – i.e. matters thrown up by interrelationships between various components of the costs assessment framework.

(5) Sector-Specific Methodology Decision ("SSMD") (May 2019). In the SSMD, GEMA made decisions on many (although not all) matters which had been consulted on during the SSMC.

(6) Tools for costs assessment consultation (June 2019 to August 2019). In the "tools for costs assessment" consultation, GEMA consulted on the specific tools and techniques for cost assessment – e.g. modelling choices or use of drivers.

(7) Submission of business plans (December 2019). GDNs provided business plans containing proposed expenditure and outputs for RIIO-GD2, as well as incurred costs over GD1. Business plans were used by GEMA to inform its approach to Draft Determinations.

(8) Draft Determinations ("DDs") and consultation (July 2020 to September 2020). GEMA set out in DDs its detailed proposals for costs assessment. These proposals were then subject to consultation. This was also accompanied by extensive engagement with companies via bilaterals, supplementary question (SQ) and Draft Determinations Question (DDQ) processes. As a result, various changes were made to GEMA's approach when it came to Final Determinations.

(9) Final Determinations ("FDs") (December 2020). GEMA's FDs set out, inter alia, GEMA's final approach to costs assessment and each GDN's totex allowances for the RIIO-GD2 price control.

(10) Statutory consultation to licence modifications (December 2020). During the statutory consultation, GEMA sought to ensure that license amendments fully reflected the decisions made in SSMD and FDs. During this process, GEMA also sought to identify any technical errors in the modelling and FDs documents through the Final Determinations Question (FDQ) process.

(11) Decision on licence modifications, and publication of revised FD documents (February 2020). Post-GEMA addressed any errors identified in its FDs through the Final Determination Question (FDQ) process and published these at the same juncture as its license modification decisions.

19. Following the filing of GDNs' appeals, GEMA considered its approach to the costs assessment process in light of the complaints raised in the Notices of Appeal. As a result of this review, GEMA identified two specific issues which it now considers warrant consideration by the CMA:

(1) GEMA considers that a £5m materiality threshold for excluding identifiable atypical capex projects from the regression analysis should be applied on a *gross* basis, rather than the *net* basis adopted at FDs. Details of GEMA's proposed modification in this regard, which overlaps with Cadent's Ground 1A on LTS Diversions costs (and strengthens GEMA's arguments in response to this ground) are set out at section IX below.

(2) BPI – as explained above at §15(2), GEMA has identified two corrections to NGN's BPI reward (as to Stage 4 and Stage 3).

20. GEMA considers that, due to interlinkages between various elements of the GD2 price control, it is not yet clear how the above two issues should be dealt with as part of the CMA's final determinations. GEMA therefore proposes that any direction the CMA makes in relation to these two issues should be considered at a later stage, and that the

parties should have the opportunity to make submission on these matters (as well as any other issues on remedy).

(ii) Overview of how GEMA set totex allowances for the GDNs at RIIO-GD2

21. GEMA assesses the efficient level of costs that will enable GDNs to maintain safe and reliable networks and deliver an appropriate level of service. An overview of GEMA's costs assessment process is set out in Dr Wagner's First Statement. What follows is a high-level summary.

22. GEMA's costs assessment process covers total controllable expenditure (totex). Totex is made up of three components: opex, capex, and repex. Each of these components itself contains various costs activities.

(1) Operating expenditure (opex) is the cost of the day-to-day operation of the network, including repairs, maintenance, and overheads costs.

(2) Capital expenditure (capex) is the investment in long-term network assets.

(3) Repex is the ongoing programme of replacement of old metallic gas mains and services with new plastic pipes.

23. One way of determining the efficient level of GDNs' costs is by assessing performance on a comparative basis through benchmarking analysis. Adopting a comparative analysis (i.e. calculating GDNs' relative efficiency scores) allows GEMA to set allowances with respect to an efficiency benchmark which reflects the costs of a "notional" efficient company. This process attempts to mimic the effects of a competitive market to ensure that GDNs become more efficient and that consumers receive value for money. It also overcomes issues associated with information asymmetry between GEMA and GDNs.

24. GEMA used regression analysis to assess 86% of GDNs' submitted costs and conduct the benchmarking exercise. Regression analysis involves use of an econometric model to establish a relationship between costs and a relevant set of costs drivers. In GD2, GEMA employed a single, top-down model, which modelled totex costs on an aggregate

basis, as opposed to a series of "bottom-up" models for separate costs categories. GEMA considers that this approach best accounts for trade-offs between cost activities, cost complementarities, and potential reporting inconsistencies across GDNs. This approach was in contrast to GD1, where GEMA adopted a mixture of "top-down" and "bottom-up" models.

25. The main driver used in the regression analysis was a Composite Scale Variable ("CSV"). The CSV is a weighted average of multiple cost drivers. Its use allowed GEMA to incorporate "bottom-up" considerations in the regression analysis. A component of the CSV was a scale driver called "modern equivalent asset value" ("MEAV"). MEAV corresponds to the current replacement value of an asset. The sum of a GDN's MEAVs provides a proxy for the scale and complexity of its network**.**

26. For GD2, GEMA decided to assess costs on a *gross* basis, rather than a *net* basis – i.e. including in the regression analysis costs which are recovered from third parties rather than consumers. GEMA adopted this approach because it considered that it was right to assess efficiency in relation to overall expenditure. To prevent GDNs from double recovery of costs, GEMA converted totex allowances to a net basis after modelling.

27. Before undertaking its benchmarking analysis, GEMA subjected costs to "pre-modelling adjustments" or "data normalisations". These were undertaken to ensure that GDNs were benchmarked on a like-for-like basis. By way of example, GEMA made various pre-modelling adjustments to account for "regional factors" – i.e. cost variations caused by GDNs' operating environments rather than efficiency.

28. In addition to regression analysis to determine GDNs' relative efficiency, GDN relied on two other tools to asses costs:

    (1) Non-regression analysis was undertaken in respect of 8% of GDNs' submitted costs. GEMA opted for non-regression analysis where it considered that costs were not adequately represented by cost drivers in the regression model.

    (2) Ofgem assessed the remaining 6% of totex via technical assessment– i.e. undertaking an expert review of technical and engineering information. Costs were subject to

technical assessment where they had unique characteristics and were therefore not suited to modelling techniques.

29. The results of the regression analysis and non-regression analysis were combined to set efficiency scores and identify an appropriate efficiency score benchmark, which applied across regression and non-regression analysis components. All GDNs with costs above the benchmark were set a "catch-up" efficiency challenge (this did not apply to the most efficient GDN, NGN whose costs were below the benchmark)

30. For GD2, GEMA set a dynamic benchmark: at the 75th percentile of the GDNs' efficiency scores distribution for the first year of the price control, with a gradual increase in the second and third years (a "glidepath"), and at the 85th percentile for the last two years.

31. In addition to the "catch-up" challenge set by the benchmarking analysis, GEMA applied an additional efficiency adjustment to all totex costs (including those assessed by technical assessment). This was made up of a "core efficiency challenge" of 0.95% per-annum for capex and repex and 1.05% per-annum for opex, onto which GEMA added an "innovation uplift" of 0.2% per-annum. The overall purpose of the "ongoing efficiency" adjustment is to incentivise all GDNs (including the most efficient) to become more productive and innovate over the price control.

32. As to the BPI, this mechanism was designed to "*encourage network companies to submit ambitious Business Plans that contain the information Ofgem required to undertake a robust assessment*" of the licensees' Business Plans (FDs core document, §10.15). The BPI comprises four stages of rewards and penalties and reflected GEMA's position that high quality Business Plans were essential to enable it to have sufficient, high quality information to set the price control that delivers for consumers at a reasonable cost. (FDs, §10.33).

D. LEGAL FRAMEWORK

33. This section sets out the legal framework and relevant principles in an appeal to the CMA against a licence modification decision by GEMA as follows:

(1) GEMA's statutory duties;

(2) The statutory grounds of appeal;

(3) The standard of review to be applied by the CMA and the scope of GEMA's regulatory discretion; and

(4) Materiality.

(i) GEMA's statutory duties

34. Sections 4AA GA86 and 3A(1) EA89 establish GEMA's principal objective as follows:

"The principal objective of …[GEMA] in carrying out [its] functions under this Part is to protect the interests of existing and future consumers in relation to [gas conveyed through pipes/electricity conveyed by distribution systems or transmission systems]."

35. This is further clarified in s.4AA(1A) GA86/ s.3A (1A) EA89, which states:

"Those interests of existing and future consumers are their interests taken as a whole, including – (a) their interests in the reduction of [gas/electricity]-supply emissions of targeted greenhouse gases; [...] (b) their interests in the security of the supply of [gas/electricity] to them; and (c) their interests in the fulfilment by the Authority, when carrying out its designated regulatory functions, of the as designated regulatory objectives."

36. Sections 4AA(1B) GA86 and 3A(1B) of the EA89 impose a duty on GEMA in respect of the principal objective:

"[GEMA] shall carry out [its] functions under this Part in the manner which…[it] considers is best calculated to further the principal objective, wherever appropriate by promoting effective competition between persons engaged in, or in commercial activities connected with, the [shipping, transportation or supply of gas conveyed through pipes/generation, transmission, distribution or supply of electricity or the provision or use of electricity interconnectors]."

37. Sections 4AA(1C) GA86 and 3A(1C) EA89 impose a further duty on GEMA to have regard to the interests of consumers. Those sections provide:

"Before deciding to carry out functions under this Part in a particular manner with a view to promoting competition as mentioned in subsection (1B), […] the Authority shall consider – (a) to what extent the interests referred to in subsection (1) of consumers would be protected by that manner of carrying out those functions; and (b) whether there is any other manner (whether or not it would promote competition as mentioned in subsection (1B)) in which […] the Authority … could carry out those functions which would better protect those interests."

38. Particular regard must be had to the interests of certain specified groups of consumers. Sections 4AA(3) GA86 and 3A(3) EA89 provide:

(3) In performing the duties under subsections (1B), (1C) and (2) … the Authority shall have regard to the interests of–

(a) individuals who are disabled or chronically sick;

(b) individuals of pensionable age;

(c) individuals with low incomes; and

(d) individuals residing in rural areas;

but that is not to be taken as implying that regard may not be had to the interests of other descriptions of consumer.

39. Sections 4AA(6) GA86 and 3A(6) EA89 deal with the temporal scope of the concept of a "consumer" for the purposes of the obligations set out in ss.4AA GA86/3A EA89. It states, "*in subsections (1C), (3) and (4) references to consumers include both existing and future consumers*".

40. Further duties are imposed by s.4AA(2) GA86/ s.3A(2) EA89:

"In performing the duties under subsections (1B) and (1C), … the Authority shall have regard to:

(a) the need to secure that [so far as it is economical to meet them, all reasonable demands in Great Britain for gas conveyed through pipes are met/all reasonable demands for electricity are met];

(b) the need to secure that licence holders are able to finance the activities which are the subject of obligations imposed by or under this Part [and other relevant legislation]; and

(c) the need to contribute to the achievement of sustainable development."

41. In carrying out functions pursuant to s.4AA GA86/ s.3A EA89, GEMA "may" also have regard to the interests of consumers in respect of water, gas or telecommunications. Sections 4AA(4) GA86 and 3A(4) EA89 provide:

"(4) The Secretary of State and the Authority may, in carrying out any function under this Part, have regard to–

(a) the interests of consumers in relation to [electricity conveyed by distribution systems or transmission systems (within the meaning of the Electricity Act 1989)/gas conveyed through pipes (within the meaning of the Gas Act 1986)]; and

(b) any interests of consumers in relation to–

(i) communications services and electronic communications apparatus, or

(ii) water services or sewerage services (within the meaning of the Water Industry Act 1991),

which are affected by the carrying out of that function."

42. Pursuant to s.4AA(5) GA86 and s.3A(5) EA89, subject to subsections (1B) and (2) and to GEMA's duty to carry out functions in a manner best calculated to further delivery of policy outcomes under s.132(2) of the Energy Act 2013, GEMA must carry out its respective functions in a manner which it considers is best calculated:

> *"(a) to promote efficiency and economy on the part of [licensees] and the efficient use of [gas conveyed through pipes/electricity conveyed by distribution systems or transmission systems];*
>
> *(b) To protect the public from dangers arising from the [conveyance of gas through pipes or from the use of gas conveyed through pipes/generation, transmission, distribution or supply of electricity] or the provision of a smart meter communication service; and*
>
> *(c) to secure a diverse and viable long-term energy supply,*
>
> *and shall have regard, in carrying out those functions, to the effect on the environment of activities connected with the [conveyance of gas through pipes /generation, transmission, distribution or supply of electricity] or the provision of a smart meter communication service."*

43. Finally, as regards the exercise by GEMA of its statutory functions, s.4AA(5A) GA86 and s.3A(5A) EA89 provide:

> *"In carrying out their respective functions under this Part in accordance with the preceding provisions of this section the Secretary of State and the Authority must each have regard to –*
>
> *(a) the principles under which regulatory activities should be transparent, accountable, proportionate, consistent and targeted only at cases in which action is needed; and*
>
> *(b) any other principles appearing to him or, as the case may be, it to represent the best regulatory practice."*

(ii) Statutory grounds of appeal

44. The potential grounds of appeal against licence modification decisions are set out in s.23D(4) GA86 and s.11E(4) EA89, which are identical. The CMA *"may allow the appeal only to the extent that it is satisfied that the decision appealed against was wrong on one or more of the following grounds"* (emphasis added). Those grounds are as follows:

(1) *"that GEMA failed properly to have regard to any matter mentioned in subsection (2)* [i.e., GEMA's relevant statutory duties]";

(2) *"that GEMA failed to give the appropriate weight to any matter mentioned in subsection (2)";*

(3) "*that the decision was based, wholly or partly, on an error of fact*";

(4) "*that the modifications fail to achieve, in whole or in part, the effect stated by GEMA by virtue of [section 23(7)(b) GA86/ section 11A(7)(b) EA89]*"; or

(5) "*that the decision was wrong in law*".

45. These grounds are exhaustive. In *SONI Limited v Northern Ireland Authority for Utility Regulation* (CMA, 10 November 2017), the CMA explained that "*[t]he test is whether the CMA is satisfied the regulator's decision was wrong on one or more of the statutory grounds and that the error was material*" and "*the test is not whether the decision under appeal was "unreasonable"* (§3.35).

46. Section 23D(5) GA86 and s.11E(5)EA89 provide, "*[t]o the extent that the CMA does not allow the appeal, it must confirm the decision appealed against.*"

(iii) Standard of review and regulatory discretion

47. By s.11E(2) EA89 and s.23D(2) GA86, in determining an appeal the CMA must have regard, to the same extent as is required of GEMA, to the matters to which GEMA must have regard in carrying out its principal objective under s.3A EA89/s.4AA GA86; in the performance of its duties under those sections; and in the performance of its duties under ss.3B and 3C EA89/s.4AB and 4A GA86 (i.e. to guidance on social and environmental matters, and to health and safety).

48. Pursuant to s.11(3) EA89 and s.23D(3) GA86, in determining the appeal, the CMA may have regard to any matters to which GEMA was not able to have regard, save that the CMA must not have regard to matters which GEMA would not have been entitled to have regard in reaching its decision had it had the opportunity of doing so.

49. In the first appeal brought under s. 11C of the EA 1989, in *British Gas* at §3.26, the CMA adopted the reasoning of the Competition Commission in an earlier appeal under s.175 of the Energy Act 2004 in *E.ON UK plc* (CC, 10 July 2007):

> "*As a specialist appellate body charged with considering whether a decision of GEMA is wrong, the function of the CC is to provide accountability in relation to the substance of code modifications decisions. However, leaving to one side errors of law, it is not our role to*

substitute our judgment for that of GEMA simply on the basis that we would have taken a different view of the matter were we the energy regulator." (at §5.11)

50. Therefore it is not the CMA's role to substitute their judgment for that of GEMA simply on the basis that they would have taken a different view of the matter if it had been the regulator (at §3.27 in *British Gas*) (see further *SONI Limited* at §3.36).

51. On the contrary, the CMA in *British Gas* at §3.28 adopted the further explanation given by the CC in relation to the statutory test (emphasis added):

> "*…our role is to determine whether GEMA's decision is wrong, because it failed properly to have regard to, or failed to give the appropriate weight to, the matters to which GEMA must have regard, or because GEMA has erred in law or fact. In our view, this test clearly admits of circumstances in which we might reach a different view from GEMA but in which it cannot be said that GEMA's decision is wrong on one of the statutory grounds. For example, GEMA may have taken a view as to the weight to be attributed to a factor which differs from the view we take, but which we do not consider to be inappropriate in the circumstances.*"

52. In *Firmus Energy (Distribution) Limited v Northern Ireland Authority for Utility Regulation* (CMA, 26 June 2017), at §3.20 the CMA summarised the relevant principles from the CC and CMA decisions in the *E.ON* and ED1 Determinations as to when a decision is "wrong":

> *"(a) It is for the appellant to marshal and adduce all the evidence and material on which it relies to show that the regulator's decision was wrong.*
>
> *(b) An appeal is against the decision, not the reasons for the decision. Therefore, it is not enough for the appellant to identify some error of reasoning; the appeal can only succeed if the decision cannot stand in the light of that error.*
>
> *(c) Where the appellant contends that the regulator ought to have adopted an alternative price control measure, it is for the appellant to deploy all the evidence and material it considers will support that alternative.50 It must show that its proposed alternative price control measure should be adopted.*
>
> *(d) Usually an appellant will succeed by demonstrating the flaws in the decision and the merits of an alternative solution. Also, the courts have not ruled out the possibility that there could be a case in which an appellant succeeds in so undermining the foundations of a decision that it cannot stand, without establishing what the alternative should be. In such a case, if there is no other basis for maintaining the decision, the CMA would be at liberty to conclude that the decision was wrong but that it could not say what decision should be substituted. Disposal of the appeal without substituting an alternative decision is not unknown, but is expected to be rare.*

(e) If the CMA is satisfied that the regulator's decision was correct, then the fact that the regulator's consultation process was deficient ought not to matter, unless that process was so deficient that the CMA cannot be assured that the regulator did indeed get it right.

(f) Where a decision of the regulator requires an exercise of judgment, the regulator will have a margin of appreciation. The CMA should apply appropriate restraint and should not interfere with the regulator's exercise of judgment unless satisfied that it was wrong.

(g) A regulator's assessment of the adequacy of the evidence and material before it will not be wrong unless it is outwith the range of reasonable conclusions.

(h) If the CMA concludes that the decision can be supported on a basis other than that on which the regulator relied, then the appellant will not have shown that the decision was wrong and will fail."

53. The CMA's starting point is the error the regulator is alleged to have made; it will not pre-empt the regulator's decision by considering whether it should have started from a different place, as explained in *SONI Limited v Northern Ireland Authority for Utility Regulation* at §3.29:

"we consider that it is not appropriate for the CMA to start by considering an alternative approach and to say that if that approach is considered superior, then there is an error. The first question for the CMA is whether there has been an error in the regulator's approach, not whether am [sic] alternative approach might be better. The question of what alternative approach should be adopted is primarily relevance once an error has been identified."

54. The type of error that GEMA is alleged to have made also affects the approach the CMA will take.

55. First, where GEMA's decision is alleged to include an error of fact, the CMA will determine whether GEMA was correct in its conclusions as to primary facts, or inferences that it drew from those facts. The CMA in *British Gas* at §3.30 adopted the CC's reliance on the Court of Appeal's decision in *Azzicurazioni Generali Spa v Arab Insurance Group* [2003] 1 WLR 577, which reasoned as follows (emphasis added):

"where the correctness of a finding of primary fact or of inference is in issue, it cannot be a matter of simple discretion how an appellate court approaches the matter. Once the appellant has shown a real prospect (justifying permission to appeal) that a finding or inference is wrong, the role of an appellate court is to determine whether or not this is so, giving full weight of course to the advantages enjoyed by any judge of first instance who has heard oral evidence. In the present case, therefore, I consider that (a) it is for us if necessary to make up our own mind about the correctness or otherwise of any findings of primary fact or inference from primary fact that the judge made or drew and which the claimants challenge, while (b) reminding

ourselves that, so far as the appeal raises issues of judgment on unchallenged primary findings and inferences, this court ought not to interfere unless it is satisfied that the judge's conclusion lay outside the bounds within which reasonable disagreement is possible. In relation to (a) we must, as stated, bear in mind the important and well recognised reluctance of this court to interfere with a trial judge on any finding of primary fact based on the credibility or reliability of oral evidence."

56. Further, the CMA in *SONI Limited* took into account the view of the CC in the *E.ON* decision that (emphasis added):

"…the specialist regulator may well have an advantage over the CC in finding the relevant primary facts. In some respects, the advantage may be less than that which the trial judge has over the Court of Appeal, because [the regulator's] decisions are not based on the evidence and cross examination of witnesses. [The regulator] nevertheless has an advantage of experience, and will often have the benefit of having conducted a consultation with the industry… For these reasons, the CC will be slow to impugn [the regulator's] findings of fact" (§5.16).

57. Secondly, as is clear from the passages cited above, where the alleged error lies in the judgment GEMA has made about an unchallenged primary fact or inference, provided GEMA has not made an error of law, the CMA should not substitute its own judgment simply because it would have taken a different view had it been in the position of the regulator. In other words, there is a field of possible judgments in which GEMA may exercise its regulatory discretion lawfully, and reasonable people may disagree about the judgment which is ultimately made. *SONI Limited* summarised the correct approach at §3.32 and §3.36:

"As regards the exercise of discretion, we have taken into account that the CC and CMA have consistently applied the principle in regulatory appeals that the statutory test admits of circumstances in which we might reach a different view from the regulator, but in which it cannot be said that the regulator's decision was wrong on one of the statutory grounds. It is not the CMA's role to substitute our judgment for that of the regulator simply on the basis that we would have taken a different view of the matter, had we been the regulator….

… we consider that there is an important difference between the CMA making up our own mind about the correctness or otherwise of any findings of primary fact, or inference from primary fact, made in the Price Control Decision, which is permissible, and the CMA substituting our judgment for that of the regulator simply on the basis that we would have taken a different view of the matter, had we been the regulator, which is not permissible."

58. Thirdly, where the alleged error lies in GEMA's evaluation of a fact, as distinct from a finding of primary fact, the CMA will regard this at it would an exercise of regulatory discretion. The CMA in *British Gas* at §3.31 explained (emphasis added):

"We also agree that where the errors relate to evaluations of fact by GEMA rather than conclusions of primary fact then we should approach such evaluations in the same way that we approach the exercise of discretion."

59. Fourthly, where an error of law is alleged, the CMA must make its own decision as to what was the correct conclusion, without showing deference to GEMA's reasoning or regulatory discretion.

60. Importantly, the CMA in *British Gas* rejected the submission by SSEPD that an appeal under the EA89 involved a rehearing, in particular, that it required the CMA to form its own view on matters such as *"whether the weight given to certain considerations was appropriate or whether proper regard had been given to certain matters"* (§3.33). In doing so, SSEPD emphasised the expertise of the CMA and its power to substitute its own decision for that of GEMA in the event that an appeal is allowed, indicating that the statutory scheme intended appeals to be by way of rehearing (§3.34). As a result, SSEPD submitted that the proper approach was an appeal "on the merits" involving a "rehearing" (§3.35).

61. The CMA concluded (at §§3.42-3.44):

"We are accordingly not persuaded by SSEPD's argument that we are required by the statutory scheme to adopt the approach it put forward. The provisions of EA89 require the CMA to consider whether GEMA's decision was wrong by reference to the statutory grounds. We do not agree that the provisions require the CMA to substitute its decision for that of GEMA simply because it would have reached a different view without enquiring as to whether that decision was wrong. We consider that the approach we have taken has enabled the CMA to engage with the merits of the decision under appeal and to conclude whether it was right or wrong in accordance with the statutory requirements…

Our view is therefore that the CMA should not substitute its views for GEMA's solely on the basis that it would have taken a different approach (eg on issues of the weight to be attached to particular considerations), but the standard of review goes further than the traditional heads of judicial review. The key question is whether GEMA made a decision that was wrong on one of the prescribed statutory grounds. To that extent, the merits of GEMA's decision must be taken into account and we have done so.

Our determination in this appeal reflects the application of a standard of review that is in line with the approach set out above. We consider that this approach is consistent with the approach taken by the CC in energy code appeals, and by the Courts in relation to appeals under the Communications Act 2003; it reflects the government's intention in implementing the relevant appeal provisions; and it accords with the submissions as to the standard of review put forward by the main parties in these appeals."

62. Accordingly, the standard of review applied by the CMA is more intense than the approach taken by the courts in an application for judicial review, but falls short of a full rehearing or appeal on the merits. The CMA will take into account the merits of GEMA's decision, but the question for the CMA will be whether GEMA's decision was wrong on one of the statutory grounds and not whether the CMA would have made the same decision as GEMA, had it been in the regulator's position. The position is encapsulated as follows:

> *"[The CMA is] not only able, but required by EA89, to consider the merits of the decision under appeal, albeit by reference to the specific grounds of appeal laid down in the statute": British Gas Trading v GEMA [2015] at §3.24.*

63. Two further points bear emphasis in relation to the standard of review and regulatory discretion. First, the impact of uncertainty, and second, the comparability of other statutory appeal frameworks.

64. As to uncertainty, where a regulator is making decisions that address present and future uncertainties, the regulator enjoys a greater margin of appreciation. In *R v DG of Telecommunications* [1999] ECC 314 at §26, Lightman J held:

> *"If (as I have stated) the court should be very slow to impugn decisions of fact made by an expert and experienced decision-maker, it must surely be even slower to impugn his educated prophesies and predictions for the future."*

65. The CMA recognised the role of uncertainty in its response to GEMA's request for clarification regarding "materiality" on 30 October 2019 (the "**30 October Response**") at §§8-9:

> *"Many decisions taken by regulators involve judgment and an estimation of what might happen in an uncertain context, and the CMA is not expected to impose its own judgment in place of that of the sector regulator provided that the regulator's response is reasonable. In that sense, there may be examples where it is not a material error to choose one from a range of options for the price control, even where that decision might in itself have a material effect on the appellant.*
>
> *This would reflect precedent that, under the energy appeal regimes, the CMA is not intended to be a 'second-tier' regulator making a re-review of detailed assumptions within a price control. The CMA's appeal framework in the energy sector seeks to correct wrong regulatory decisions, not to undertake a fresh review using its own regulatory judgmentwhere more than one approach may be applied."*

66. Finally, as regards comparable appeal frameworks, many of the Notices of Appeal advance arguments with reference to the CMA's decision in PR19. As a result, it is helpful to briefly set out the CMA's statutory function in respect of an appeal against a PR19 decision.

67. Under the Water Industry Act 1991, following Ofwat's price control decision, a regulated water company may make a request, and Ofwat's decision is referred to the CMA for a re-determination, i.e. the CMA considers the matter afresh under s.12 of the Water Industry Act 1991.

68. It follows that where the CMA has made a different decision to Ofwat, it has not made a finding that the decision was "wrong" on any ground similar to s.23D GA86/ s.11E EA89. The nature of the CMA's review is fundamentally different in this context.

69. The CMA itself appreciated the difference in the appeal framework between energy and water sector appeals in its 30 October Response, although it still recognised the importance of regulatory judgment(§§8-9):

> *"The CMA's appeal framework in the energy sector seeks to correct wrong regulatory decisions, not to undertake a fresh review using its own regulatory judgmentwhere more than one approach may be applied This is different to the approach for re-determinations, applicable in other sectors such as the water sector, though even here the CMA would always exercise some restraint on issues of regulatory judgment."*

(iv) Materiality

70. Where the CMA finds that GEMA has made an error on one of the five statutory grounds for appeal, that error must have a material effect on the price control decision in order for the decision to be "wrong". The following principles are relevant to materiality:[7]

(1) The materiality of an alleged error may not be capable of full assessment until after permission to appeal has been granted. Section 11E(4) EA89 and s. 23B(4)

[7] See generally the CMA's Open Letter on Energy Licence Modification Appeal, 30 October 2019, **[TSUB1/03]** §§3-11

GA86 permit the CMA to decide not to allow an appeal where, after permission has been granted, it becomes apparent that the result of an error is immaterial.[8]

(2) Where the financial impact of the alleged error is low, this is an indication that the error is not material. The CC has made reference to "0.1%" as a size of error which was clearly not material and this has been referred to in subsequent cases, although it is not a "bright line" test.[9]

(3) Other factors relevant to materiality include whether the cost of addressing the error would be disproportionate to the value of the error; whether the error is likely to have an effect on future price controls; and whether the error relates to a matter of economic or regulatory principle.[10]

(4) Many decisions taken by regulators involve judgment and an estimation of what might happen in an uncertain context, and the CMA is not expected to impose its own judgment in place of that of the sector regulator provided that the regulator's response is reasonable.[11] In that sense, there may be examples where it is not a material error to choose one from a range of options for the price control, even where that decision might in itself have a material effect on the appellant.[12]

(5) Clear and obvious factual errors should be corrected even where the impact of the error is low value.[13]

(6) Issues that appear large in value may not be "material" when considered in the broader framework of an appellant's price control, in particular where there

[8] CMA letter of 30 October 2019, **[TSUB1/03]** §10.
[9] *Firmus Energy (Distribution) Limited v NIAUR* [2017], **[TSUB1/04]** §3.24

[10] *British Gas Trading Limited v GEMA* [2015], **[TSUB1/05]** §3.61, *Northern Powergrid (Northeast) Limited and Northern Powergrid (Yorkshire) plc v GEMA* [2015], **[TSUB1/06]** §3.58

[11] *British Gas Trading Limited v GEMA* [2015], **[TSUB1/05]** §3.43, *E.ON UK plc v GEMA* [2007], **[TSUB1/07]** §5.11 and *SONI Limited v NIAUR* [2017], **[TSUB1/08]** §§3.29 and 3.36.

[12] *E.ON UK plc v GEMA* [2007], **[TSUB1/07]** §5.12, *Hutchison 3G UK Limited v Office of Communications* and *British Telecommunications plc v Office of Communications* [2009] §1.33 and *Firmus Energy (Distribution) Limited v NIAUR* [2017], **[TSUB1/04]** §3.19

[13] CMA's Open Letter on Energy Licence Modification Appeals, 30 October 2019, **[TSUB1/03]** §5

are interlinkages between different elements of the price control assessment. For example, an appeal which sought to overturn one decision which forms part of a series of interlinked decisions might be rejected on the grounds that overall the proposed change to the decision under appeal is not a material issue when considered with the interlinked impacts.

71. GEMA further submits that the test of materiality should be applied to each of the specific errors advanced by an Appellant. The important statutory safeguard would be subverted if it were open to Appellants to advance a series of individual errors each of which had a de minimis impact on the price control but which were alleged in the aggregate to have a material effect. The CMA's Open Letter on the Energy Licence Modification Appeals dated 30 October 2019 stated, *"what appears to be a large error may only arise due to the presentation of an aggregation of smaller and potentially immaterial errors"* (§5). The CMA must be satisfied with respect to each alleged error that it is sufficiently material to warrant further attention.

II. ONGOING EFFICIENCY

NB: references in the form (MW2 x) *in this section are to the second witness statement of Dr Michael Wagner. References in the form* (GK1 x) *are to the first witness statement of Gary Keane. GEMA relies on the contents of those witness statements in full in addition to the submissions below.*

A. INTRODUCTION AND SUMMARY

72. Five appellants – Cadent Gas Limited ("**Cadent**"), Northern Gas Network Limited ("**NGN**"), Southern Gas Network Plc and Scotland Gas Network Plc (together, "**SGN**"), Wales and West Utilities Limited ("**WWU**") and SP Transmission Plc ("**SPT**") - appeal the Gas and Electricity Authority's ("**GEMA's**") decision in relation to the ongoing efficiency ("**OE**") challenge.

73. The OE challenge is an annual adjustment to totex allowances to reflect the cost savings from efficiency and productivity gains which GEMA considers even the frontier company should be able to achieve. At Final Determinations ("**FDs**"), GEMA set the OE challenge at 1.15% for capex and repex and 1.25% for opex. The OE challenge comprised a "core efficiency challenge" of 0.95% for capex and repex and 1.05% for opex, onto which GEMA added an "innovation uplift" of 0.2%. The purpose of the innovation uplift was to reflect the efficiency gains which GEMA considered should be achievable by virtue of the innovation funding which had been provided by various regulatory mechanisms at RIIO-1.

74. The relevant appellants contend in summary that the core efficiency challenge was unjustified insofar as it failed to have any or any proper regard to evidence which suggested that such a stretching efficiency challenge was not appropriate. They further contend that the innovation uplift was unjustified insofar as it double-counts efficiency savings and is based on various unjustified assumptions. The appellants' contentions are without merit in summary for the following reasons:

    (1) GEMA's decision as to the OE challenge was an exercise in regulatory judgmentwhich involved a holistic and qualitative assessment of various competing pieces of evidence. GEMA's approach (which reflects that taken by the Competition and Markets Authority ("**CMA**") at the 2019 water price review ("**PR19**")) was to stand back and assess the evidence in the round. In so

doing, GEMA properly had regard to the evidence which the appellants allege it failed to consider.

(2) GEMA determined that a stretching core OE challenge was justified on the basis of various factors including: (i) evidence from its consultants regarding the potential ongoing efficiency achievable during RIIO-2, including evidence from growth accounting analysis; (ii) its judgment that regulated monopolies with certainty over revenue streams should be able to achieve significant efficiency gains; (iii) the network companies' own efficiency forecasts, which were not out of line with the OE challenge GEMA adopted; and (iv) regulatory precedent in the form of the OE challenges set in other price controls. GEMA made no error in exercising its regulatory judgmentin this way. GEMA's decision was further justified given the material outperformance of the network companies against actual allowances at RIIO-1.

(3) With respect to the innovation uplift, GEMA reasoned that network companies had received significant funding during RIIO-1 through various innovation mechanisms which were funded entirely by consumers up front and aimed in part to drive efficiencies. GEMA reasonably considered that the consumers were entitled to a fair rate of return in respect of that investment. GEMA's consultants, CEPA, agreed that innovation funding should have improved the potential for productivity improvements in RIIO-2. CEPA estimated in broad terms that an increase in annual OE of up to 0.2% would provide a reasonable return to consumers on the innovation funding provided in RIIO-1. GEMA properly considered the risks of double-counting in reaching its decision but reasonably decided that the innovation uplift was nevertheless justified. In particular, GEMA considers that innovation funding was additional to the network companies "business as usual" innovation investment, and so should deliver additional efficiencies.

75. GEMA was entitled to impose on the Appellants ambitious efficiency and productivity targets. Absent the ordinary dynamics of competition and the pressures to generate efficiencies that rivalry can bring, it is a core part of GEMA's statutory role that it seeks to drive efficiency within regulated monopoly businesses. The imposition of the OE

challenge is a key part of that regulatory exercise and one that should benefit electricity consumers in the UK over the period of RIIO-2 (and beyond). Whilst it is inevitable that the scope for increased efficiency in these businesses is difficult to assess, GEMA considers that it was plainly entitled on the basis of the evidence and analysis before it to conclude that such an efficiency challenge was reasonable. Standing back, GEMA's overall challenge cannot be said to be excessive or wrong when it is considered that the water sector has been found to be able to make efficiency improvements of 1% a year, and the energy sector is a technologically more dynamic sector and has received significant and specific innovation funding for over 10 years (whereas water has not).

B. BACKGROUND AND GEMA'S DECISION

76. As part of the price control, Ofgem proposes to adjust allowances each year to reflect ongoing efficiency and productivity gains which should be achievable by the licensees. It refers to this adjustment as the ongoing efficiency challenge. Ongoing efficiency concerns the volumes of inputs which are required to achieve a given output. The rationale is that, year on year, a lower volume of inputs should be required to achieve a given output.

77. Ofgem also proposes to adjust allowances for real price effects ("**RPEs**") – i.e. the likely movement in prices for various inputs such as labour and materials beyond inflation – according to an index. RPEs concern the prices of the inputs required to achieve a given output.

78. The combination of the two adjustments is known as the "frontier shift". The frontier shift reflects the rate at which a company changes its outputs relative to its inputs. It captures changes in both the volume of inputs needed to produce a given level of output (or output produced for a given level of inputs) and in the price of inputs used. In other words, frontier shift is ongoing efficiency net of RPEs.

79. A summary of GEMA's decisions at Draft Determinations ("**DDs**") and FDs is provided below.

(i) Draft Determinations

The First CEPA Report

80. Prior to DDs, Ofgem commissioned an analysis from CEPA entitled "RIIO-GD2 and RIIO-T2: Cost Assessment – Frontier shift methodology paper" (27 May 2020) ("t**he First CEPA Report**"). Ofgem relied on the First CEPA Report in making its proposals in DDs.

81. The First CEPA Report suggested a reference range of 0.5%-1.2% for ongoing efficiency for capex and repex and 0.7%-1.4% for ongoing efficiency for opex. CEPA had considered a range of evidence in reaching that proposal, including:

    (1) A growth accounting analysis based on the EU KLEMS database (a database on measures of economic growth, productivity, employment, capital formation, and technological change at the industry level for all European Union member states, Japan, and the US). The growth accounting analysis sought to produce estimates of the annual efficiency gains in comparator industries.

    (2) Forward-looking productivity forecasts for the UK economy from the Office for Budget Responsibility ("**OBR**") and Bank of England ("**BoE**").

    (3) The effect of innovation funding which had been provided to licensees at RIIO-1 through various regulatory mechanisms, including the Network Innovation Allowance ("**NIA**") and the Network Innovation Competition ("**NIC**").

    (4) The forecasts of OE which the network companies had themselves provided when submitting their business plans.

82. The analysis of the EU KLEMS data involved CEPA making choices about certain variables including: (i) the time period over which data was analysed; (ii) the productivity metrics; (iii) output metrics; and (iv) the proper comparator industries

which could be used as a basis for estimating achievable ongoing efficiency for network companies[14].

83. As to (i), CEPA proposed to use the period 1997-2016, reflecting two complete business cycles for which data was available, on the basis that productivity is generally expected to move in line with business cycles[15] . CEPA relied on the data from the OBR on the output gap in determining the relevant business cycles[16].

84. As to (ii), CEPA considered the following measures of productivity: (i) total factor productivity (covering labour, capital and intermediate inputs, and seen as more relevant to capex); (ii) labour productivity (seen as more relevant to opex); and (iii) labour and intermediate inputs productivity (also seen as more relevant to opex). CEPA decided to use total factor productivity ("**TFP**") for capex and repex and labour productivity ("**LP**") for opex.

85. As to (iii), CEPA considered two common measures of output productivity, namely "gross output" ("**GO**") and "value added output" ("**VA**"). The former measures the simple aggregate of output by a company. The latter measures the gross output minus the value of "intermediate inputs" required to produce the final output. Intermediate inputs are inputs other than capital and labour, consisting in matters such as energy, materials and third-party services. The inputs for the "value added" output metric are therefore labour and capital only. The result is that apparent productivity changes resulting from variations in the use of intermediate inputs are excluded from the "value added" metric. The First CEPA Report noted that there is no consensus over whether "gross output" or "value added" output is the appropriate measure of productivity[17], stating *"There has been a long-standing debate over which definition of output is more relevant for measuring ongoing efficiency"* and *"As each measure has advantages and disadvantages, no consistent expert view has emerged on which one should be preferred."* CEPA concluded that it would be "*good regulatory practice*" to consider the information provided by *both* methods when developing a range for ongoing efficiency estimates. This would further be consistent with Ofgem's approach in RIIO-1 and Ofwat's approach in the 2019 price

[14] First CEPA Report, p. 10 **[TSUB2/01]**
[15] First CEPA Report, Table 2.1 **[TSUB2/01]**
[16] First CEPA Report, p.11 **[TSUB2/01]**
[17] First CEPA Report, p.12 **[TSUB2/01]**

review ("**PR19**")[18] . However, when determining a reference range or value which would form the starting point for an OE challenge, CEPA decided to use VA measures. This was because[19] :

(1) The estimates using VA measures sat close to the highest OE values proposed by the network companies in their business plans. The estimates using GO measures however were in some cases below the lowest OE values proposed by the network companies.

(2) The 2019 EU KLEMS database did not *"include all of the data traditionally required to reproduce GO TFP estimates"* and CEPA had *"had to use an approximation to construct the GO measures shown in this report"* which might *"work less well for LP than for TFP measures"*.

86. As to (iv), CEPA proposed to use the unweighted average productivity of various directly comparable industries (including construction, wholesale and retail trade such as the repair of motor vehicles) and the weighted average of all industries (excluding certain industries such as health and social services) in order to generate baseline estimates of productivity[20].

87. CEPA used the growth accounting analysis to arrive at a baseline figures which could inform the OE challenge[21].

88. Having arrived at baseline figures, CEPA went on to consider what an appropriate reference range would be for the ongoing efficiency challenge, having regard to several additional factors, including: (i) giving weight to "gross output" figures derived from the analysis of the EU KLEMS data in addition to "value added" measures[22]; and (ii) productivity growth forecasts from the OBR and BoE (which in some respects were lower than the baseline figures suggested by the EU KLEMS analysis)[23] .

[18] First CEPA Report, p.12 **[TSUB2/01]**
[19] First CEPA Report, p.32 **[TSUB2/01]**
[20] First CEPA Report, p.12-13 **[TSUB2/01]**
[21] First CEPA Report, Table 3.1 **[TSUB2/01]**
[22] First CEPA Report, p.36 **[TSUB2/01]**
[23] First CEPA Report, p.34-36 **[TSUB2/01]**

89. A final important factor which CEPA considered in arriving at the reference range was the effect of the innovation funding which was provided to network companies during RIIO-1. CEPA determined that an adjustment of up to 0.2% could be made to ensure that customers could receive a reasonable return on the investment that they had in effect provided in respect of innovation at RIIO-1. It reasoned in summary as follows:

(1) Over the course of RIIO-1, GEMA had provided significant innovation funding to network companies – in excess of £330m – through the NIA, the NIC.

(2) Nevertheless, "*the link between the increased innovation spend and the overall level of potential efficiencies to be achieved in RIIO-2 remains unclear*"[24].

(3) Evidence from other sectors suggested that there was a link between increased research and development ("**R&D**") and efficiency gains. In particular, the findings of Bond & Guceri (2016) estimated that "*total factor (revenue) productivity is on average about 14% higher at the establishments which have substantial R&D themselves, compared to those with no R&D activity*". This was consistent with the view that a company that invests in R&D or innovation should become more productive in the near future[25].

(4) CEPA did not, however, identify "*robust evidence for establishing a firm quantitative relationship between innovation funding in RIIO-1 and the scope for frontier efficiency improvements in the energy network sector*"[26].

(5) It therefore considered the issue from a different perspective: "*what would different assumptions on ongoing efficiency driven by innovation mean for the return effectively received by consumers on the innovation funding they provided to companies in RIIO-1. This can be seen as being akin to treating consumers as investors*". CEPA therefore "*estimated a baseline for what cost savings to consumers*

[24] First CEPA Report, p.21 **[TSUB2/01]**
[25] First CEPA Report, p.22 **[TSUB2/01]**
[26] First CEPA Report, p.23 **[TSUB2/01]**

would be required in order to make providing the innovation allowances seem a reasonable investment"[27] .

(6) Estimating a reasonable return for consumers involved judgments in multiple areas. CEPA therefore tried to keep the analysis "*simple*" and proceed on the basis of several "*simplifying*" assumptions which it set out in the First CEPA Paper.[28] CEPA concluded that an annual efficiency improvement of up to 0.2% would represent a reasonable return on consumers' investment over RIIO-1. CEPA further conducted sensitivity analysis on some of the assumptions it had made and concluded that 0.2% remained a reasonable estimate[29] .

90. On the basis of all these considerations, CEPA proposed the following ranges for the OE challenge: (i) 0.5%-1.2% for capex and repex; and (ii) 0.5% to 1.4% for opex. It suggested that Ofgem, in selecting a single figure for ongoing efficiency, specifically to consider: (i) giving some weight to the GO measures from EU KLEMS; (ii) productivity forecasts from the OBR and BoE; and (iii) ensuring a reasonable return for consumers from the innovation funding provided in RIIO 1.

Ofgem's position at DDs

91. At DDs, GEMA consulted on applying an ongoing efficiency challenge of 1.2% per year for capex and repex and 1.4% for opex for all network companies.[30] In doing so, GEMA sought to "*to set network companies a stretching ongoing efficiency challenge that helps deliver value for money for consumers throughout the RIIO-2 price control*".[31] With reference to the specific points which CEPA had raised for consideration, GEMA stated as follows:

(1) As to "gross output" measures, GEMA stated[32] :

We have considered giving some weight to GO measures from EU KLEMS. However, we believe that the practical difficulties in estimating GO (as highlighted in the CEPA report) limit the weight that can be reasonably placed

[27] First CEPA Report, p.23-24 **[TSUB2/01]**
[28] First CEPA Report, p.24, 26 **[TSUB2/01]**
[29] First CEPA Report, p.25-26 **[TSUB2/01]**
[30] DD Core Document, §5.36 **[TSUB2/02]**
[31] DD Core Document, §5.31 **[TSUB2/02]**
[32] DD Core Document, §5.38 **[TSUB2/02]**

on them (compared to VA measures). We therefore do not think it is appropriate to give any weight to GO measures. GO measures typically result in lower productivity results than VA, so excluding them from our analysis results in a higher proposed level for ongoing efficiency.

(2) As to the productivity growth forecasts, GEMA stated[33] :

> *We have considered including productivity growth forecasts from the Office of Budget Responsibility (OBR) and the Bank of England (BoE). These forecasts are influenced by short and medium term risks to the economy such as the UK's exit from the European Union and COVID-19. In the context of a rising trend in longer term productivity forecasts, we do not wish to place significant weight on such economy-wide and short-term forecasts, as network companies are not exposed to these short-term risks (to volume and revenue) as their comparators in the wider economy and are better able to withstand any short-term shocks. OBR and BoE forecasts may therefore underestimate productivity in network companies and are not appropriate for setting ongoing efficiency.*

(3) As to the ongoing efficiency benefits realised through innovation funding provided in RIIO-1, GEMA stated that, *"by providing innovation funding throughout RIIO-1 and previously, we believe that customers have effectively provided the network companies with additional upfront allowances and that this should have drive efficiency"*[34]. GEMA accepted that a 0.2% annual ongoing efficiency would represent a reasonable return on the investment provided by consumers. It further considered *"whether some of the innovation funding may have resulted in quality of service improvements (rather than cost reductions), which would be more difficult to capture through productivity metrics"*. GEMA nevertheless considered that *"there are sufficient levels of gains that are likely to come from lower costs that this should be accounted for, and this should result in them achieving at least 0.2% additional ongoing efficiency"*[35].

(4) GEMA finally considered that *"it is possible that network companies could achieve ongoing efficiencies in excess of the range proposed by CEPA"* in particular because network companies were *"less exposed to negative shocks"* and the lack of

[33] DD Core Document, §5.39 **[TSUB2/02]**
[34] DD Core Document, §5.40 **[TSUB2/02]**
[35] DD Core Document, §5.41 **[TSUB2/02]**

competitive pressure meant that they should be able to place greater management focus on achieving high efficiency gains[36].

(ii) Final Determinations

The Second CEPA Report

92. Prior to FDs, GEMA commissioned a further paper from CEPA entitled "RIIO-GD2 and T2: Cost Assessment – Advice on Frontier Shift policy for Final Determinations" (27 November 2020) ("**the Second CEPA Report**"). The Second CEPA Report addressed certain issues raised by consultees in response to DDs and informed the decision taken by GEMA at FDs. It further gave separate and specific consideration to the impact of COVID-19 on the OE challenge.

93. As to the relevance of the growth accounting analysis, CEPA stressed that, *"There is not a single combination of period, productivity measures, and comparator sectors that can be described as an exact match for the frontier productivity improvements that could be achieved by energy network companies over RIIO-2"*[37].

94. As to the appropriate time period for the growth accounting analysis, CEPA re-iterated that GEMA should use the period 1997 to 2016. This was notwithstanding that UK productivity growth had in general been weak over the past decade. CEPA did not accept that it would be appropriate to discount longer-term productivity trends; focussing solely on the most recent business cycle would *"place excess weight on the impact of the global financial crisis and would risk locking the sector into a self-reinforcing low productivity cycle"*[38].

95. As to the appropriate output metrics, CEPA re-iterated that GEMA should consider both GO and VA, which would be in line with recent regulatory precedents[39] .

[36] DD Core Document, §5.42 **[TSUB2/02]**
[37] Second CEPA Report, p.14 **[TSUB2/03]**
[38] Second CEPA Report, p.23 **[TSUB2/03]**
[39] Second CEPA Report, p.24 **[TSUB2/03]**

96. As to the appropriate productivity metrics, CEPA acknowledged the point made by network companies in response to DDs that it would be inconsistent to apply an OE challenge based solely on LP measures to all opex, because opex includes non-labour costs. It therefore recommended that LP estimates should be one of the factors taken into account alongside TFP measures and other pieces of evidence in order to set the OE challenge for opex[40].

97. As to the appropriate comparator sets of industries, CEPA acknowledged that there was "*no perfect comparator set for the energy networks*" but equally "*it is also not credible to say that the energy networks may not be able to replicate or benefit from some of the improvements in productivity achieved in the wider economy in sectors outside the closest comparators*"[41]. It proposed to use the same targeted and economy-wide comparator sets as it had proposed in the First CEPA Report.

98. With respect to the other evidence to inform the OE challenge beyond the growth accounting analysis:

    (1) CEPA advised that GEMA should place little, if any, weight on economy-wide productivity forecasts such as those from the OBR and BoE. This was because these were heavily influenced by COVID-19 and the effects of the pandemic on energy networks was highly uncertain. The impact of COVID-19 should instead be treated separately[42] .

    (2) CEPA maintained that GEMA should have regard to the network companies own forecasts of OE in their business plans[43].

99. On the basis of the above considerations, the Second CEPA Report proposed that the lower bound of the OE challenge should be 0.5%. It further advised GEMA to consider other factors which in its view would support a more stretching OE challenge of up to 0.95% for capex/repex and 1.05% for opex[44]. These other factors were:

[40] Second CEPA Report, p.27 **[TSUB2/03]**
[41] Second CEPA Report, p.27 **[TSUB2/03]**
[42] Second CEPA Report, p.30-31 **[TSUB2/03]**
[43] Second CEPA Report, p.34 **[TSUB2/03]**
[44] Second CEPA Report, p.7 **[TSUB2/03]**

(1) Regulatory precedent, including the CMA's provisional OE challenge at PR19 of 1.0%.

(2) The OE challenges of 1.0% or higher set by the most ambitious companies.

(3) Placing greater weight on VA productivity measures and/or economy-wide historical productivity improvements.

(4) Consideration of LP measures in setting the OE challenge for opex.

(5) Placing less weight on the wider productivity slow-down in recent years.

(6) Considering the large productivity decline in 2009 as an outlier.

(7) The benefits of innovation funding provided in RIIO-1 in improving the potential for the network companies to achieve productivity levels closer to those in the better performing competitive sectors.[45]

100. CEPA did not give any further consideration to the additional innovation uplift because GEMA determined that it would take that issue forward itself.

GEMA's position at FDs

101. At FDs, GEMA decided to set an ongoing efficiency challenge of 1.15% per year for capex and repex and 1.25% for opex (FDs Core Document[46]. The OE challenge included an innovation uplift of 0.2%. Its reasoning in summary was as follows.

102. GEMA believed that TFP and LP measures from sources like the EU KLEMS could underestimate the scope for efficiency gains within regulated sectors such as electricity and gas networks in Great Britain. This was because "*not only are network companies less*

[45] CEPA noted: "This is a different issue to whether innovation funding provides a specific top-up on productivity potential above those higher performing sectors. Even DD responses that criticised the innovation top-up on the OE challenge noted that one of the drivers for innovation funding was to encourage the sector to match investment in innovation that would be seen in other sectors (rather than necessarily investment in excess of those sectors). There will be multiple types of benefits from innovation of which improved scope for cost savings is one." (Second CEPA Report, p. 8 **[TSUB2/04]**)
[46] RIIO-2 Final Determinations – Core Document, §5.20 **[TSUB2/05]**

exposed to negative shocks, but also the lack of competitive pressure means they should be able to place greater management focus on driving high efficiency gains." This supported an OE challenge at the top end of the range proposed by CEPA[47].

103. GEMA expressly gave "*some weight*" to GO measures and on that basis "*reduced the level of the efficiency challenge*". Furthermore, the range presented in the Second CEPA Report (including the figure representing the top-end of the range) had itself taken into account GO measures (see GK §154]). However, there were practical difficulties in estimating GO which limited the weight that could reasonably be placed on GO as opposed to VA measures.

104. GEMA did not consider that there was compelling evidence to revise its position as to the appropriate time period and the comparator sets and their weightings[48] .

105. GEMA decided not to make any specific COVID-19 adjustment to its OE challenge, citing CEPA's analysis. GEMA stated[49]:

> *Our decision is therefore to address any potential impacts of COVID-19 as part of the RIIO-2 closeout process. By waiting until closeout, we will ensure we have sufficient time series data to make a proper assessment of whether COVID-19 has had any impact on the trend level of ongoing efficiency. In relation to PR-19, the CMA was also of the view that Ofwat should consider the impacts of COVID-19 as part of an industry-wide process, rather than attempting to estimate any specific adjustment to OE.*

106. GEMA stated that its OE challenge "*reflects our view that the innovation funding provided by consumers since 2007 should deliver efficiency benefits over and above those achieved in the wider economy, in comparator sectors, and beyond the range indicated by EU KLEMS*"[50]. GEMA noted the comments of stakeholders that there might be double-counting with efficiency improvements captured in the EU KLEMS data, and further acknowledged CEPA's comments with respect to double-counting. It stated, however:

> *We believe the energy sector has enjoyed explicit and additional innovation funding over and above general allowances, and beyond any comparator sectors, including water. This funding has been totally unique to energy network companies. While*

[47] RIIO-2 Final Determinations – Core Document, §5.21 **[TSUB2/04]**
[48] RIIO-2 Final Determinations – Core Document, §5.23 **[TSUB2/04]**
[49] RIIO-2 Final Determinations – Core Document, §5.25 **[TSUB2/04]**
[50] RIIO-2 Final Determinations – Core Document, §5.26 **[TSUB2/04]**

companies will have baselined some savings from past innovation projects, this will only account for findings and benefits known at this point in time. We would expect to see additional benefits come to light over the course of RIIO-2, as the full benefits of past innovation continue to be realised and all benefits become known. An additional innovation challenge over and above that indicated by EU-KLEMS and set for the water sector, is therefore reasonable and necessary in the energy sector.

107. GEMA cross-checked its headline 1.2% efficiency challenge with the efficiency actually achieved to date in RIIO-GD1. This indicated that NGN as the frontier company had been able to realise ongoing efficiencies in excess of 1.2% per annum, in addition to the OE challenge that had been applied in RIIO-1 and embedded in the allowances. Similar high-level analysis indicated the same position for the TOs. This gave GEMA comfort that its OE challenge was achievable[51].

108. GEMA finally noted that its final decision was consistent with regulatory precedent and expectations set out by the companies themselves[52]. It set an OE challenge higher than that which the CMA had set at PR19 in Provisional Findings on the basis of: (a) differences between the energy and water sectors; (b) differences in specific relevant contextual circumstances (i.e. innovation allowances in RIIO-1); (c) the energy sector specific evidence and assessment under the RIIO-2 process; and (d) the responses of a wide range of stakeholders to DDs[53].

109. It is apparent from the above that, in reaching its final decision at FDs, GEMA did not adopt an approach whereby it started with the reference range proposed by CEPA (or a lower bound of 0.5%, as proposed in the Second CEPA Report) and then make adjustments to that reference value in order to reflect its consideration of various factors. Rather, GEMA adopted a qualitative approach whereby it stood back and assessed the evidence in the round. Its approach in this respect resembled that which the CMA adopted in its Provisional Findings. In the Provisional Findings report[54] and the Final Report[55], the CMA stated that that it had considered "*a number of factors in the round*"[56].

[51] RIIO-2 Final Determinations – Core Document, §5.27 **[TSUB2/04]**
[52] RIIO-2 Final Determinations – Core Document, §5.28 **[TSUB2/04]**
[53] RIIO-2 Final Determinations – Core Document, §5.28-5.29 **[TSUB2/04]**
[54] PR19 Provisional Determinations, §4.377 **[TSUB2/05]**
[55] PR19 Final Determinations, §4.616 **[TSUB2/06]**
[56] PR19 Final Determinations, §4.616 **[TSUB2/06]**

As further explained in GK1 in the annex[57], GEMA's approach of considering the evidence in the round further resembles the regulatory approaches taken in other price controls (such as RP5 and RIIO-1).

C. RESPONSE TO THE GROUNDS OF APPEAL: CORE EFFICIENCY CHALLENGE

110. The appellants' challenges to the core efficiency challenge consist broadly in, first, the following arguments concerning the growth accounting analysis which (among other things) informed GEMA's OE challenge:

(1) Arguments in relation to the time-period of 1997-2016;

(2) Arguments in relation to the GO and VA output metrics;

(3) Arguments in relation to the appropriate comparator set; and

(4) Arguments in relation to the TFP and LP metrics.

111. Secondly, certain appellants have raised arguments in relation to further justifications put forward by GEMA for the overall level of the OE challenge. In particular:

(1) It is contended that GEMA wrongly relied on the level of outperformance forecast by the energy network companies themselves.

(2) It is contended that GEMA was wrong to cross-check the overall level of its OE challenge by reference to the historical efficiency gains of the frontier company.

(3) Certain appellants argue that there has been an unwarranted departure from regulatory precedent.

(4) It is also contended that GEMA has failed properly to take into account the effects of COVID-19.

[57] Annex: Regulatory precedent on OE challenge and use of historical productivity values submitted along Gary Keane's witness statement

(5) NGN contends that the overall OE challenge is disproportionately challenging for the frontier company.

112. Each of these points is addressed in turn below. In many cases, however, the appellants' arguments appear to be premised on the assumption that, because GEMA set a core efficiency challenge which corresponded to the top of the range proposed by CEPA in its Second Report, it must therefore have placed little or no weight on the various factors which CEPA would have considered would justify a lower core efficiency challenge. However, as explained above at §109, GEMA did not adopt an approach of making specific adjustments to the OE challenge to reflect the weight it attached it various pieces of evidence. Its approach was to consider the evidence qualitatively and in the round. Accordingly, to the extent that the appellants suggest that it can be inferred that GEMA had little or no regard to various factors, the suggestion is incorrect and misunderstands GEMA's reasoning.

(i) The time period 1997-2016

113. SGN, NGN, SPT and Cadent all contend that GEMA has erred insofar as, in considering the results of the growth accounting analysis of EU KLEMS data, it has placed insufficient weight on productivity in the period post-2008, which shows a marked slow-down in productivity since the financial crisis and represents a structural break from previous periods: SGN, §499(ii); NGN, §334(i); SPT, §62; Cadent, §3.124. These arguments are without merit for the reasons given below.

114. **First**, the relevant appellants are wrong to contend that GEMA *"ignored"* the period of lower productivity in the period after 2008. GEMA did in fact have regard to it insofar as it relied on the evidence from CEPA's growth accounting analysis, which used the period of 1997-2016. As CEPA noted in its Second Paper, using the time period of 1997-2016 meant that GEMA *"places some weight on the strong pre-crisis period (1997-2006) and also on more recent trends since the crisis (2006-2016) when productivity growth has been*

subdued"[58] . Use of that period was "*contrary to the implication in many of the DD responses from network companies that our analysis ignores that period"*[59].

115. **Second**, the relevant appellants are also wrong to contend that GEMA erred in not placing greater weight on the period after 2008. Such contentions are premised on the allegation that there has been a structural break in productivity since the financial crisis such that productivity growth will in general be lower in the future[60]. However, CEPA considered this point in detail as it applied to the energy sector and reached the appropriate conclusion: "*Putting more weight on a shorter period (i.e. since 2008) in setting the OE challenge would represent an assumption that the global financial crisis has created a structural break in the long-term productivity of the UK economy, and also the energy network sector. However, it is not yet clear that the evidence exists for such a strong assumption when it is challenging to confidently identify a structural break in long-term productivity growth*"[61]. In doing so, CEPA considered academic analysis and stated correctly that "*there is no firm consensus view amongst macroeconomists on the primary causes, or indeed the extent to which the current weaker trend amounts to a structural break"*[62]. Furthermore, CEPA noted that a reason for using a longer time period was that "*often so-called structural shifts in economic fundamentals have turned out to be much less permanent than has been claimed at the time"*[63]

116. In those circumstances, GEMA appropriately decided to place weight on <u>both</u> the period after the financial crisis <u>and</u> the period before it. GEMA considered 10 years of data from the period prior to the financial crisis, in which productivity improved at a higher rate (1997-2006) and 10 years of data including the financial crisis onwards (2007-2016) during which there was a slow-down in productivity. Cadent's contention that GEMA placed more weight on the period prior to the crisis is therefore incorrect[64]. Placing greater weight on the period after the crisis would have been inappropriate as (as CEPA noted) it "*would risk locking the sector into a self-reinforcing low productivity cycle*"[65]. Further reasons why it was appropriate for GEMA to strike a balance between capturing long-

[58] Second CEPA Report, p.23 **[TSUB2/04]**
[59] Second CEPA Report, p.19 **[TSUB2/04]**
[60] Cadent NoA, §3.124; SPT NoA, §62(1); SGN NoA, §499(i); NGN NoA, §334(i).
[61] Second CEPA Report, p.20 **[TSUB2/04]**
[62] Second CEPA Report, p.20 **[TSUB2/04]**
[63] Second CEPA Report, p.20 **[TSUB2/04]**
[64] Cadent NoA §3.126
[65] Second CEPA Report, p.23 **[TSUB2/04]**

term trends and more recent data through using the time period 1997-2016 are set out at GK1, §§145-151.

117. **Third**, even if there were clear evidence of a structural break, GEMA correctly considered that utilities have the protection offered by regulated revenue streams from a monopoly service. As CEPA noted, this should give them greater ability to protect innovation and investment activity and maintain scale during periods of low or negative productivity growth in the wider economy than comparable competitive sectors facing much greater uncertainty over demand[66] . Cadent disputes this point at NoA, §3.125, arguing that the "targeted comparator set" experienced lower productivity growth over the period of 1997-2016 than the economy as a whole. However, the sectors included in the targeted comparator set are not regulated monopolies but competitive sectors and so do not enjoy protected revenue streams.

118. **Fourth**, GEMA's approach aligns with that adopted by the CMA at PR19. In its Provisional Findings, the CMA placed weight on the period prior to 2008. It used a time period of 1990-2007, disregarding submissions made by the water companies that only the post 2008 period should be used on the basis that it had seen a marked slow-down in productivity[67]. As to the argument that productivity had decreased following the financial crisis, the CMA stated: "*Overall, we provisionally decide not to apply a specific quantitative downwards adjustment but consider the lower post crisis productivity growth as a factor in the round when coming to our final frontier shift estimate*."[68] . The CMA maintained this approach in its Final Report, relying on the period of 1990-2007 and not making a specific quantitative downwards adjustment (instead considering the post crisis growth "in the round")[69]. GEMA too considered the post-crisis period in the round in reaching its final decision.

119. Cadent makes the separate argument that GEMA excluded 2009 as an outlier in considering the results of the EU KLEMS analysis and this its decision to do so constitutes bad regulatory practice[70]. This argument is factually wrong: GEMA did not

[66] Second CEPA Report, p.23 **[TSUB2/04]**
[67] CMA PR19 Provisional Determinations, §§4.319-4.320 and §4.324 **[TSUB2/05]**
[68] CMA PR19 Provisional Determinations, §4.328 **[TSUB2/05]**
[69] CMA PR19 Provisional Determinations, §§4.533-4.537 **[TSUB2/05]**
[70] Cadent NoA, §3.123

treat 2009 as an outlier, nor can it be inferred from its decision at FDs that it did. As explained above, GEMA approached the evidence in the round.

120. WWU makes the further separate argument that CEPA was wrong to select the period of 1997-2016 as a parameter for the growth accounting analysis because this period does not constitute two business cycles as CEPA contends[71]. As explained at GK1 §148, however, CEPA conducted an appropriate analysis of recent business cycles based on the OBR's estimates of the output gap[72]. WWU's evidence does not suggest that that analysis was wrong[73].

(ii) The "gross output" and "value added" productivity metrics

121. SGN, NGN, SPT, WWU and Cadent all contend that GEMA has placed no or insufficient weight on gross output productivity metrics in setting its core efficiency challenge[74]. These arguments are without merit for the following reasons.

122. **First**, GEMA did in fact place weight on GO measures and in doing so reduced the level of the OE challenge[75] . Furthermore, the range presented in the Second CEPA Report (including the figure representing the top-end of the range) had itself taken into account GO measures as explained at §104 above. Consideration of GO measures was one of the reasons why CEPA's upper bound in its Second Report was lower than that presented in its First Report (albeit several competing considerations informed the movement of the upper bound, as fully explained at GK §§122-133. To the extent that the appellants suggest that GEMA did not in fact place any weight on GO measures, the suggestion is incorrect[76].

123. **Second**, GEMA's decision not to consider GO measures solely was further well-justified:

[71] WWU NoA, §E4
[72] Second CEPA Report, p.18-19 **[TSUB2/03]**
[73] See further GK1, §§146-151.
[74] SGN, §499(ii); NGN, §334(ii); SPT, §60; WWU, §E5; Cadent, §§3.113-3.116
[75] RIIO-2 Final Determinations – Core Document, §5.22 **[TSUB2/04]**
[76] See §40 above

(1) GEMA noted correctly that there were practical difficulties in estimating GO which limited the weight that could reasonably be placed on them. CEPA noted in its First Paper that the EU KLEMS database did not include all the data required to reproduce GO TFP estimates and it had therefore had to approximate[77].

(2) As CEPA further noted in its First Paper, the use of GO measures generated estimates which were in many cases *lower* than the lowest estimates which had been put forward by the network companies themselves. The lower OE forecast the companies submitted was 0.5% - but OE estimates could be as low as 0.1% (or negative depending on the time period used[78]. This suggested that GO measures might underestimate total productivity gains.

(3) As CEPA further noted, VA measures have an advantage in estimating LP insofar as they are far less sensitive than GO labour productivity measures to changes in the vertical structure of different firms in the sample set – for example, if a firm uses outsourcing to replace labour with intermediate inputs[79] (see further the explanation in GK1 §§156-157).

124. **Third**, regulatory practice supports placing weight on both measures. Table 2.2 of the Second CEPA Report summarised the use of GO and VA measures in previous regulatory decisions [80]. In PR19, the CMA stated in both Provisional Findings and its Final Report that weight should be placed on the VA metric because there was a theoretical basis for doing so and "*the gross output estimates may be more prone to error. This is because producing consistent sets of gross output measures across sectors requires careful treatment of intra-sector flows of intermediate products which may be difficult empirically*"[81]. Similarly, the Utility Regulator's ("**UR's**") decision on 2017-2022 gas distribution price control ("**GD17**") notes the treatment of VA and GO in the Competition Commission's ("**CC's**") determination on the 2013-2017 Northern Ireland electricity transmission and distribution price control ("**NIE RP5**"), summarising that: "*The CC took a balanced view of*

[77] As noted above at §14.2
[78] First CEPA Report, Table 2.3 **[TSUB2/01]**
[79] First CEPA Report, p. 12 **[TSUB2/01]**
[80] Second CEPA Report, Table 2.2 **[TSUB2/03]**
[81] CMA PR19 Final Determinations, §5.444 **[TSUB2/06]**

both productivity measures. They noted that neither measure perfectly captures the productivity changes that could be expected in a company's cost base"[82]. The witness statement of Gary Keane further notes that consultancy reports produced on behalf of the water companies for PR19 (including by Oxera) explored both GO and VA measures[83].

125. **Fourth**, regulatory precedent did not dictate that GEMA should place greater weight on GO measures, or at least equal weight on both GO and VA measures (as certain appellants contend[84]. As CEPA noted, there has been a "*long-standing debate*" over which definition of output is more relevant for measuring OE[85]. There is therefore no clear regulatory or other consensus as to which is more appropriate or the weight to be ascribed to each. In those circumstances, GEMA was entitled to have regard to the practical difficulties associated with GO in relying on VA measures.

126. SGN and NGN raise the further argument that it was inconsistent for GEMA to apply productivity estimates based on VA measures to the entirety of controllable totex[86]. This argument is premised on the incorrect contention that the OE challenge was based entirely on productivity estimates based on VA measures (which it was not for the reasons given above). Further and in any event, as CEPA made clear in its Second Report[87]: (i) trying to identify a subset of expenditure that corresponds to VA spending would create the risk of spurious accuracy in the context of a qualitative consideration of various pieces of evidence; and (ii) regulators had not attempted such an exercise in previous price controls.

(iii) The use of comparator sets

127. SGN, SPT, Cadent, WWU and NGN contend that GEMA has erred by placing no or insufficient weight on productivity improvements achieved by the targeted comparator

[82] Annex C: Frontier Shift, p. 22 **[TSUB2/07]**
[83] GK1, §155.
[84] SPT NoA, §60(1); Cadent, NoA §3.114; Cadent, NoA §3.114
[85] First CEPA Report, p. 12 **[TSUB2/01]**
[86] SGN NoA, §499(iv); NGN NoA, §335
[87] Second CEPA Report, pp. 24-25 **[TSUB2/03]**

set from the EU KLEMS growth accounting analysis, instead relying excessively or exclusively on the economy-wide comparator set[88].

128. These arguments too are without merit. GEMA did as a matter of fact have regard to the targeted comparator set constructed by CEPA in addition to the economy-wide comparator set. As explained above, in generating indicative values from the growth accounting analysis, CEPA considered productivity estimates from both the unweighted average of certain comparable sectors and the weighted average of the entire economy (excluding certain sectors such as health). CEPA growth accounting analysis informed GEMA's final decision. To the extent that the appellants seek to infer that no weight was placed on the targeted comparator set, the inference cannot properly be drawn for the reasons given at §109 above.

129. GEMA's decision to have regard to an economy-wide comparator as well as the targeted comparator set was further well-justified:

(1) As CEPA advised, "*there is no comparator set of sectors that can exactly map onto the energy networks*"[89] and "*We acknowledge that there is a subjective element in selecting the sectors for inclusion in the targeted comparator set. This supports consideration by Ofgem of multiple pieces of evidence when setting the OE challenge*."[90].

(2) CEPA further correctly advised that: "*It is also not credible to say that the energy networks may not be able to replicate or benefit from some of the improvements in productivity achieved in the wider economy in sectors outside the closest comparators. There is no solid dividing line that can be drawn between the activities carried out in the energy network sector and some of the activities done in sectors that do not look like close comparators. There will be opportunities for energy network companies to learn from productivity improvements from other sectors and implement them in their own activities*"[91].

[88] SGN, §499(iii); SPT, §63; Cadent, §§3.117-3.121; WWU, §E7; NGN, §334(iii)
[89] Second CEPA Report, p. 27 **[TSUB2/03]**
[90] Second CEPA Report, p. 28 **[TSUB2/03]**
[91] Second CEPA Report, p. 27 **[TSUB2/03]**

(3) Using an economy-wide comparator set was also consistent with taking to account economy-wide productivity forecasts from BoE and OBR[92]. The appellants inconsistently assert that it was wrong for GEMA to have regard to an economy-wide comparator while also asserting that GEMA should have had greater regard to such economy-wide forecasts[93].

130. WWU makes the further point that the targeted comparator set which CEPA has selected is in any event inappropriate insofar as it excludes other natural monopoly regulated industries such as water[94]. This point is misconceived. The purpose of the growth accounting analysis is to provide an external benchmark from competitive sectors for productivity improvements which might be achievable in the energy sector. The OE target is intended to challenge the energy network companies to achieve the same productivity improvements that would be achievable in the wider competitive economy. It would be inconsistent with these objectives to include regulated monopolies such as water companies in the comparator set[95].

(iv) The "labour productivity" and "total factor productivity" metrics

131. Certain appellants raise a variety of arguments in relation to GEMA's use of LP and TFP productivity measures as follows:

(1) WWU, SGN and NGN contend that it is conceptually wrong or inconsistent to use LP measures for opex, given that opex also includes non-labour costs[96].

(2) WWU contends that the use of LP assuming constant capital is inconsistent with, and not found in, existing economic literature[97].

(3) WWU contends that where measures are applied inconsistently across components – characterised by a mixture of partial and TFP – the average will

[92] Second CEPA Report, p. 27 **[TSUB2/03]**
[93] SPT, §62(1); Cadent, §3.124; NGN, §334(i); SGN, §499(i) and Frontier Ongoing Efficiency Report, §6.2.6.
[94] WWU, NoA §E7.7
[95] Second CEPA Report, p. 28 **[TSUB2/03]**
[96] See WWU NoA, §E6.6; SGN NoA §499(v); NGN NoA, §335).
[97] WWU NoA, §E.6.4

not then also correspond to TFP (and, thus, the benchmark TFP performance of targeted sectors), regardless of the partial productivity definition being applied [98].

132. As to the first argument, GEMA did not incorrectly consider LP measures alone in setting an OE challenge for the entirety of opex:

(1) As noted in the First and Second CEPA Report, there is significant regulatory precedent for the use of LP measures when setting the OE challenge for opex[99]. This is because of the high share of labour costs in opex.

(2) CEPA's Second Report nevertheless acknowledged that *"rather than being the sole or main source of information on where to set the OE challenge for opex, LP estimates should be one of the factors taken into account alongside TPF measures and other pieces of evidence"*[100].

(3) GEMA considered both the LP and TFP estimates contained in CEPA's Reports in reaching its final decision.

133. As to the second argument, WWU's assertion is incorrect. LP measures were previously considered in relation to an OE challenge for opex by both GEMA at RIIO-GD1 and RIIO-T1 and the Competition Commission in RP5[101].

134. The third argument is a further attempt to impugn GEMA's use of LP measures in relation to opex. It is without merit for the reasons given above.

(v) The ability of regulated monopolies to achieve productivity improvements

[98] WWU NoA, §E.6.5
[99] First CEPA Report, p. 11 **[TSUB2/01]**; Second CEPA Report, p. 25 **[TSUB2/03]**
[100] Second CEPA Report, p. 26 **[TSUB2/03]**
[101] GK1, §158.

135. SPT, SGN, NGN and WWU further challenge GEMA's conclusion that regulated network companies can achieve greater productivity improvements than the wider company on the basis that it is contrary to economic theory[102].

136. However, GEMA was entitled to conclude that the energy networks are more resilient to negative shocks because of the monopolistic nature of the sector. Monopolies do not face the same macroeconomic uncertainty and usually have a good visibility on their investment. Demand for energy is further relatively inelastic. The network companies can therefore continue to invest in more productive ways of carrying out their activities with greater stability. GEMA denies that this reasoning is *"contrary to economic theory"* as certain appellants have contended[103].

(vi) The ongoing efficiency forecast by network companies

137. Several appellants contend that GEMA was wrong to rely on the ongoing efficiency forecasts which the network companies themselves had provided insofar as these do not support an ongoing efficiency challenge of 1.15% for capex and repex and 1.25% per year for opex. In particular, the appellants assert that GEMA wrongly stated that SGN's ongoing efficiency target was 1% (in reality, it is 0.83%)[104]. SPT further dispute GEMA's presentation of its ongoing efficiency forecast.

138. The energy network companies' OE forecasts (submitted with their business plans) are set out in the Second CEPA Report at p. 33. GEMA was entitled to have regard to these forecasts in determining the OE challenge (as the CMA did in considering the OE challenge at PR19 Provisional Findings)[105]. They indicated for example that an OE challenge based solely on GO measures might be too low insofar as it could be lower than even the lowest forecasts provided by the companies themselves (of c. 0.5%). They further indicated that the OE challenge was not out of step with the most ambitious OE assumptions made by the network companies themselves. National Grid Gas Transmission and National Grid Electricity Transmission for example had assumed OE of 1.1% for opex. Further and in any event, the companies' own forecasts represented

[102] SPT, §61; NGN, §378 (cf. §333); SGN, §451; WWU, §§E9.2-E9.3
[103] see e.g. NGN NoA, §333
[104] SGN NoA, §§507-510; NGN NoA, §336
[105] CMA PR19 Provisional Findings, p.184 **[TSUB2/05]**

one among many pieces of evidence to which GEMA had regard in determining the level of the OE challenge. Accordingly, to the extent that either SGN or SPT dispute the forecasts which GEMA attributed to them (as to which see further GK1 §§74-79), this does not undermine the reasonableness of GEMA's overall decision.

(vii) The historical outperformance of network companies

139. As explained above, in FDs GEMA conducted a cross-check of its overall OE challenge by estimating the level of efficiencies achieved to date in RIIO-1. A high-level assessment indicated that NGN, as the frontier, was able to realise ongoing efficiencies of over 1.2% per annum - over and above the OE challenge applied in RIIO-1 which is already embedded in the allowances. Other GDNs had indicated that they have got closer to NGN over the course of RIIO-GD1. This indicated the OE level was reasonable and achievable.

140. SGN and WWU have queried the validity of GEMA's cross-check[106]. It is notable, however, that NGN itself does not dispute that it has achieved efficiencies of over 1.2% throughout RIIO-GD1 (although it does suggest that the same efficiencies might not be achievable again: NoA, §344). Accordingly, it does not appear to be seriously in dispute that GEMA's high-level assessment was incorrect.

141. As to the Appellants' suggestion that GEMA's "cross-check" was inconsistent with the advice given by CEPA that GEMA should not use the historical productivity performance of the network companies to inform the OE challenge, there is no such inconsistency. As explained in GK1 §§188-196, CEPA's advice was that GEMA should not rely on a specific econometric technique called Data Envelopment Analysis[107]. GEMA did not use such a method at FDs – its reference to NGN's performance was no more than a cross-check.

142. GEMA has further considered the implied efficiency gains which would be achieved by the network companies under the extreme assumption that all of the companies significant underspend against RIIO-1 allowances was attributable to efficiency

[106] SGN NoA, §§512-513; WWU NoA, §E9.6
[107] Paras §§189-197.

improvements (see MW2 §§130-133). The annualised average for gas distribution is 3.14% and the annualised average for transmission is 4.35%. Although GEMA recognises that not all the underspend can be attributed to efficiency improvements, it is reasonable to suppose that some can be; and this is further consistent with the network companies own statements to the effect that efficiency improvements have contributed to the underspend. This lends some support to the notion that a challenging OE target is appropriate.

(viii) Regulatory precedent

143. SGN, NGN and Cadent further contend that GEMA's ongoing efficiency challenge represents an unwarranted departure from regulatory precedent[108].

144. The relevant regulatory precedents are summarised at Table 2.2 of the Second CEPA Report [109]. Contrary to the appellants' contentions, GEMA cannot be said to have erred in setting an OE challenge higher than that adopted in previous price controls:

(1) Although GEMA may have regard to relevant regulatory precedents, they are not binding on it. There is no regulatory principle that 1.0% represents a hard ceiling on the permissible OE challenge. The specific circumstances of each price control must be considered.

(2) In GEMA's judgment, the particular circumstances of RIIO-2 justified a stretching OE challenge above that set by other regulators in different contexts. In particular, the energy network companies had had the benefit of very significant innovation funding during RIIO-1, in respect of which consumers were entitled to see a return. The CMA set an OE challenge of 1.0% at PR19 notwithstanding that water companies had not received analogous funding in the past.

(ix) The impact of COVID-19

[108] SGN, §504-505; Cadent, §§3.128-3.129; NGN, §§319(vi) and 384(iii)
[109] Second CEPA Report, p.16 **[TSUB2/03]**

145. As explained above, GEMA decided to address the impacts of COVID-19 as part of the RIIO-2 closeout process. This would ensure that it had sufficient time series data to make a proper assessment of whether COVID-19 had had any impact on the trend level of OE[110].

146. Several appellants contend that GEMA has wrongly failed to take into account the impact of COVID-19, which militates against any decision to "aim up"[111]. NGN in particular contends that COVID-19 will affect its ability to deliver ongoing efficiencies and that it should not have to bear the costs associated with the pandemic without certainty as to how these should be treated.

147. GEMA's decision cannot be said to be wrong. GEMA specifically asked CEPA to consider the impact of COVID-19 on OE in the Second CEPA Report. Its analysis was in summary as follows:

(1) Although COVID-19 had had a widespread impact across the economy, the critical questions were (i) whether, and to what extent, these effects are likely to apply to the network companies, and (ii) what is the impact on productivity trends in the energy network sector.

(2) The scale of the impact of COVID-19 on the productivity of network companies during RIIO-2 was uncertain and difficult to predict, depending on many factors such as the duration of the pandemic and the length of time for which social distancing measures remained in place.

(3) CEPA had not seen compelling evidence of the impact of wider economic changes on energy network companies themselves. The emerging ONS productivity data showed that labour productivity trends in 2020 varied across different industries, with for example, improved productivity in the water sector, and the energy industry being less affected than the wider economy.

[110] RIIO-2 Final Determinations – Core Document, §5.25 **[TSUB2/04]**
[111] NGN, §§337-341; SGN, §500; Cadent, §3.139

(4) Although social distancing might have an impact on productivity, the scale was uncertain and none of the companies had provided evidence either to quantify it or indicate how long the impact might persist.

(5) It was uncertain exactly what the net impact has been on companies' capital programmes, since whilst many schemes might have been delayed or paused, other works might have been brought forward to take advantage of a period of reduced economic activity. There was some evidence that on-site worker productivity has improved, and that construction companies have been able to identify working practices that should be retained going forwards, including greater acceptance of remote working and video inspections. The crisis could enable the network companies to identify additional productivity improvements in the delivery of work, which might not have been fully incorporated within their business plan submissions but could be realised during RIIO-2.

(6) In these circumstances, COVID-19 did not alter CEPA's assessment of the reliability of EU KLEMS data. In fact, little, if any, weight should be put on economy-wide productivity forecasts given the scale and unevenness of economic disruption caused by COVID-19.

148. In light of the uncertainties associated with the effect of COVID-19, GEMA reasonably decided that it would be better addressed through the close-out mechanism. Any adjustment to the OE challenge, or conscious decision to aim-down, would have risked an arbitrary lowering of the OE challenge on the basis of insufficient evidence.

(x) The level of the OE challenge for the frontier company

149. NGN raises the further argument that the OE challenge is disproportionately challenging for the frontier company and that it will distort its incentives to further reduce its costs[112]. This criticism is without merit. The OE challenge is by definition the level of ongoing annual efficiency which GEMA considers even the most efficient company – i.e. NGN – should be able to make. Accordingly, it is misconceived to assert

[112] NoA, §§343-345

that the OE challenge disproportionately affects the frontier company. Further and in any event, companies behind the frontier are similarly affected insofar as they are encouraged to achieve catch-up efficiencies in addition to the OE challenge. NGN's argument therefore identifies no error in GEMA's approach.

D. RESPONSE TO THE GROUNDS OF APPEAL: 0.2% UPLIFT

150. The relevant appellants challenge GEMA's 0.2% uplift in summary on the following grounds:

(1) They contend that GEMA was wrong to conclude that energy network companies could achieve efficiency or productivity improvements over and above the wider economy.

(2) They allege that GEMA has double counted efficiency gains which were already included in the business plans which licensees submitted.

(3) They contend that the innovation uplift was premised on various incorrect or unsafe assumptions, and in particular an assumption that innovation funding was given at RIIO-1 in order to drive cost efficiencies.

151. Each of these points is addressed in turn below.

(i) Alleged errors in the conclusion that licensees can achieve productivity improvements over and above the wider economy

152. The appellants contend that GEMA erred in applying the additional 0.2% uplift insofar as it reasoned incorrectly that network companies, which had received specific innovation funding over the course of RIIO-1, could for this reason achieve greater productivity improvements than those achieved in the wider economy or in comparator sectors from the EU KLEMS analysis. The appellants make the following particular arguments:

(1) SGN contends that GEMA had an insufficient basis on which to conclude that historical innovation funding should lead to higher productivity in the sector

relative to the wider economy. In particular, it argues that it is *"not possible to meaningfully use differences in R&D spend to infer what level of overall productivity can be achieved by one sector relative to others"* because (for example) innovation is one of a large number of drivers of productivity improvements, and the same level of spending on innovation can lead to very different impacts on productivity[113].

(2) All of the appellants which have challenged GEMA's ongoing efficiency challenge contend that GEMA's 0.2% innovation uplift double counts productivity improvements resulting from R&D spending which is already embedded in the results of the EU KLEMS growth accounting analysis[114].

(3) SGN and NGN make the related argument that GEMA has assumed incorrectly that the innovation funding provided by consumers during RIIO-1 was entirely incremental to the R&D spending in comparator sectors[115].

153. GEMA maintains that its decision to add an innovation uplift of 0.2% represented a reasonable exercise of its expert regulatory judgmentand that it did not err in determining that network companies should be able to deliver these additional efficiencies.

154. **First**, GEMA was correct to identify a link in principle between the substantial innovation funding (in excess of £330m) which network companies had received during RIIO-1 and efficiency improvements. Its conclusion in this respect was supported not only by academic evidence of a quantitative relationship between R&D spending and productivity improvements in production industries but also by evidence from the companies themselves (see §89(3) above). In particular, the First CEPA Report noted that, *"some network companies provided specific examples of areas in which RIIO-1 innovation spending will result in efficiency improvements in RIIO-2"*[116] . As explained in MW2 §§75-81, there is further evidence that the innovation projects funded at RIIO-1 will continue to deliver increased efficiencies at RIIO-2. Accordingly, GEMA had a sound basis for

[113] SGN NoA, §§434-440
[114] SGN, §§444-454; SPT, §59(4); Cadent, §§3.131.-3.133; WWU, §E8.3; NGN, §359
[115] SGN, §§442, 446; NGN, §§365-370
[116] First CEPA Report, p. 23 **[TSUB2/01]**

reasoning that the innovation funding provided at RIIO-1 should in principle deliver efficiency gains and that some of these efficiency gains should be realised during RIIO-2.

155. **Second**, GEMA did not overlook the risks of double-counting efficiency gains from R&D spending which were already captured in the results of the growth accounting analysis. GEMA was made aware of the risks by the First CEPA Report, which stated, "*The EU KLEMS dataset will already take into account some of the productivity growth captured in Bond & Guceri (2016). Therefore, there may be some scope for double-counting if the full relationship between innovation and productivity was used to estimate an innovation-related top-up to the ongoing efficiency estimates produced by EU KLEMS analysis*"[117] . In FDs, GEMA expressly referred to the arguments concerning "*double counting as the EU KLEMS dataset used in the assessment already captures productivity growth resulting from innovation*"[118] . GEMA nevertheless reasonably considered that the innovation uplift was justified. As explained in the second witness statement of Dr Michael Wagner[119]:

(1) Innovation funding differs in certain important respects from innovation spending undertaken in competitive sectors. In competitive sectors, companies must fund innovation themselves from their own profits or by diverting resources from other activities and assume the risk associated with this investment. The innovation funding provided to the energy network companies, however, was entirely funded by consumers without risk to the relevant licensees. GEMA was therefore correct to say at FDs that innovation funding had been "*entirely unique*" to the network companies.

(2) Furthermore, the innovation funding provided at RIIO-1 represents additional funding over and above any investment which the network companies may themselves make in order to drive innovation. Although the incentives of network companies to invest in R&D may be different from those which exist in competitive sectors, network companies can and should invest in innovation from their retained profits. Accordingly, innovation funding represents an

[117] First CEPA Report, p. 22 **[TSUB2/01]**
[118] RIIO-2 Final Determinations – Core Document, §5.26 **[TSUB2/04]**
[119] MW2 §§115-126

additional resource for the network companies not enjoyed in the competitive sectors considered through the growth accounting analysis.

(3) A further distinction between the benefits derived from innovation spending in competitive sectors and those derived from innovation funding by the network companies is that network companies are required to share the results of successful innovation projects for the benefit of the sector as a whole. The efficiency gains thereby achieved are shared more widely or more quickly than they would be in competitive sectors.

(4) GEMA was therefore justified in accepting the *"different perspective"* from which CEPA considered the impact of innovation funding on OE – namely, what different assumptions on OE driven by innovation would mean for the return effectively received by consumers on the funding provided during RIIO-1 as quasi-investors. The focus of CEPA's analysis was therefore on the level of efficiency savings which would constitute a reasonable return for consumers, rather than a precise forecast of the efficiency improvements achievable by network companies as a result of innovation funding.

(5) CEPA's estimation of the appropriate level of the uplift was intended to be simple and recognised that it would be difficult to deliver a highly accurate forecast of the efficiency savings which would in fact result from the innovation funding. It deliberately proceeded on the basis of *"simplifying assumptions"*[120] . Given the inherent difficulties in assessing the efficiency gains which could be achieved as a result of innovation funding, CEPA had consciously eschewed this approach and instead adopted a broad analysis which sought to arrive at a reasonable figure.

(6) In these circumstances, it cannot be said that GEMA erred in applying an innovation uplift of 0.2%. The uplift was justified on the basis that it would represent a reasonable return for consumers on the significant and unique funding provided during RIIO-1. It was consciously calculated at a high level

[120] First CEPA Report, p24 **[TSUB2/01]**

and on the basis of simplifying assumptions. It does not therefore follow from the risk of double-counting that GEMA's decision was wrong.

156. **Third**, certain appellants contend that GEMA inappropriately commented that energy network companies had received innovation funding "*over and above comparator sectors, including water*", arguing that the water sector is irrelevant and the appropriate comparison is with the R&D spending in the wider economy[121]. This criticism is misplaced. A comparison with water is relevant in determining in the round whether GEMA's OE challenge is justified when compared with that imposed on the water sector. At PR19, the CMA determined that an OE challenge of 1.0% would be appropriate notwithstanding that the water sector had received no analogous innovation funding in the past. This high-level comparison is a further indication that GEMA's OE challenge cannot be said to be wrong.

(ii) Alleged double-counting with baseline costs contained in business plans

157. All of the appellants which have challenged GEMA's ongoing efficiency challenge contend that GEMA's 0.2% innovation uplift double counts productivity improvements which were already embedded in network companies business plans and which have therefore fed through into their allowances[122].

158. These arguments do not establish that GEMA's decision to apply the 0.2% uplift was wrong.

159. **First**, GEMA expressly acknowledged that there might be double counting with business plans: "*While companies will have baselined some savings from past innovation projects…*"[123]. CEPA had expressly drawn this risk to GEMA's attention in its First Paper[124]. GEMA did not overlook it.

160. **Second**, to the extent that any efficiency gains included in network companies' business plans were included in their embedded ongoing efficiency assumptions, those efficiency

[121] See SGN NoA, §448
[122] SGN, §§455-458; SPT, §59(1); Cadent, §§3.134; WWU, §§E8.4-E8.5 and E8.11; NGN, §§361-364
[123] RIIO-2 Final Determinations – Core Document, §5.26 **[TSUB2/04]**
[124] First CEPA Report, p26 **[TSUB2/01]**

gains were stripped out along with all other embedded ongoing efficiency, obviating the risk of double-counting. As explained at MW2 §§45-48, GEMA specifically asked network companies to explain any embedded ongoing efficiency assumptions in their business plans and further explain how these were related to innovation funding. Although the companies indicated that some ongoing efficiency was attributable to past innovation funding, they did not explain how much (as CEPA noted in its First Report[125]). GEMA stripped out the companies own embedded ongoing efficiency assumptions for the purposes normalising the companies' costs and added back its own OE challenge. Accordingly, it follows that any efficiency gains from past innovation funding which were included in the embedded ongoing efficiency assumptions were removed from submitted costs prior to the addition of the OE challenge.

161. **Third**, as further explained at MW2 §§115-126, the network companies informed GEMA that they would achieve further efficiencies from innovation funding during RIIO-2. However, although GEMA requested companies to report on innovation impacts within their business plans, the companies did not provide clear information on the extent that these planned efficiencies had been included in their business plan forecasts. Accordingly, to the extent that there was any double-counting, this was a result of the companies' failure to provide clarity on the extent to which the benefits of innovation funding have been captured within their embedded OE assumptions.

162. **Fourth**, for the reasons given at §155 above, the innovation uplift represented a broad estimate of the level of efficiency returns which would provide consumers with a reasonable return on the investment provided at RIIO-1. It was a high-level estimate based on simplifying assumptions. Accordingly, it cannot be said to be wrong even if there were some double counting with efficiency savings found in business plans.

163. Certain appellants further refer to the CMA's final determinations in the RIIO-ED1 appeal brought by Northern Powergrid ("**the NPG Determination**") and contend that GEMA in this case too has failed to evidence or justify its assumption that there are

[125] First CEPA Report, p23 **[TSUB2/01]**

further efficiency savings which have not been baselined in network companies' business plans[126].

164. In the NPG Determination, the CMA considered NPG's contention that GEMA's adjustment to its allowances to reflect efficiencies and benefits from the use of smart grids and meters ("**Smart Grid Benefits**" or "**SGBs**") was unjustified. NPG in particular contended that GEMA's adjustment double counted SGBs which were already embedded in NPG's business plan and had wrongly assumed that network companies had underestimated SGBs. The CMA determined that GEMA did not have a sufficient evidential basis to make a specific SGB adjustment in FDs. It concluded at §§4.142:

> *"Taking all of the evidence into consideration, we are not satisfied that GEMA had established that there was risk of a material underestimation of SGBs that had not been adequately addressed through GEMA's general cost benchmarking exercise. We therefore determine that the SGB adjustment that GEMA applied to NPG was not justified and that GEMA's decision was wrong because of an error of law and/or an error of fact."*[127]

165. The CMA's reasoning in the NPG Determination is not, however, applicable to GEMA's decision with respect to the OE challenge. In the NPG Determination, the CMA determined that there was no evidence to support GEMA's decision to make an SGB adjustment, because SGBs were already embedded in the companies' business plans. In the case of the innovation uplift, however: (i) it is reasonable to suppose that efficiency gains embedded in network companies' embedded OE assumptions will have been stripped out; and (ii) to the extent they have not, this is a consequence of the network companies' failure to provide clarity on the extent to which the benefits of innovation funding have been captured within their embedded OE assumptions for the reasons given at §161 above.

[126] SGN, §§431, 460-467

[127] Northern Powergrid (Northeast) Limited and Northern Powergrid (Yorkshire) plc v the Gas and Electricity Markets Authority, §§4.142 **[TSUB2/08]**

(iii) Alleged flawed assumptions underpinning the 0.2% uplift

166. All of the appellants which have challenged GEMA's ongoing efficiency challenge contend that the assumptions underpinning the 0.2% uplift proposed by CEPA are flawed. Further and more particularly, it is contended that:

(1) CEPA's proposal rests on the false assumption that all of the benefits which accrued to customers from innovation spending during RIIO-1 were costs savings. In fact, some funded projects delivered other benefits, such as assisting with the transition to net zero[128].

(2) The 0.2% figure is itself an assumption[129].

(3) CEPA's proposal rests on the false assumption that all of the benefits of RIIO-1 funding will be realised during RIIO-2. In fact, many benefits were delivered during RIIO-1 itself[130].

(4) CEPA has further assumed unsafely that: (i) the innovation spend is entirely additional to what network companies would have undertaken in the absence of innovation mechanisms[131]; and (ii) the benefits from innovation last for 20 years[132].

167. For the reasons given at §155 above, GEMA denies that its decision can be said to be wrong on the basis of the consciously simplifying assumptions on which CEPA relied in its analysis. CEPA's estimate was intended to be broad and did not attempt to estimate with a high degree of accuracy the savings which would result from the innovation funding. GEMA's decision as to the final OE challenge was an exercise of regulatory discretion which considered various pieces of evidence in the round, including the level of efficiency gains which could be reasonably expected from innovation funding during RIIO-1.

[128] SGN, §§478-480; SPT, §59(2); Cadent, §3.137; WWU, §E8.7; NGN, §374(ii)(a)
[129] SGN, §§417-420; NGN, §374(i).
[130] SGN, §§481-482; NGN, §374(ii)(b).
[131] NGN, §375; SGN, §476
[132] NGN, §375; cf. SGN, §§476, 489).

E. RESPONSE TO CADENT'S ARGUMENT IN RELATION TO EMBEDDED OE

168. Cadent raises a discrete argument that GEMA wrongly assumed that the OE which was embedded in its business plan was 0.5% when the true value was 0.94%. Cadent therefore contends that any remedy ordered by the CMA in respect of the OE challenge should both correct the embedded OE assumption of 0.94% and apply a revised OE target (which Cadent contends should be 0.94%). The net result of these changes would be to increase Cadent's OE allowance by £73m[133].

169. GEMA denies that it made any error in determining that Cadent's embedded OE was 0.5%. As explained in detail at MW2 §§144-159, GEMA used Cadent's "central" target of 0.5% because it indicated that the other figure it had provided as an estimate of its overall efficiency (0.94%) included some catch-up efficiency. Despite having several opportunities to clarify its position, Cadent did not suggest that 0.94% was in fact the correct figure – on the contrary, it asked that GEMA's 0.5% assumption should be correctly applied to all of its licensees. Further and in any event, Cadent's contention that 0.94% is the correct figure is parasitic on its other arguments under Ground 1, relating to London regional factors and LTS Rechargeable Diversions Costs (see §3.141, *"once the errors in this appeal are corrected, Cadent's GDNs set the efficiency benchmark for GD2 and therefore the entire 0.94% figure represents [OE]"*). Given that those further grounds are without merit, Cadent's argument in relation to embedded OE falls away.

F. CONCLUSION

170. For all the reasons given above, the CMA is invited to dismiss the grounds of appeal advanced by SGN, NGN, SPT, WWU and Cadent in relation to GEMA's OE challenge.

[133] Cadent NoA, §§3.140-3.142

III. LICENCE MODIFICATION ISSUES: APPEAL OF LICENCE CONDITIONS PERMITTING (1) MODIFICATION OTHER THAN BY THE STATUTORY MODIFICATION PROCEDURE (2) THE ISSUE AND AMENDMENT OF ASSOCIATED DOCUMENTS

NB: references in the form (MZ1x) *in this section are to the First Witness Statement of Min Zhu of* 23 April 2021. *GEMA relies on this statement in full as well as the submissions below.*

A. OVERVIEW OF GEMA'S RESPONSE TO GROUNDS OF APPEAL

(i) Introduction

171. Three Appellants, SPT, SHE-T[134] and WWU, appeal the drafting of specific licence conditions, on the basis that they allow decisions to be implemented (and/or subsidiary documents to be published and amended) in defined scenarios during the course of the price control without proceeding through a statutory modification process under ss.11A-H of the Electricity Act 1989 ("**EA89**") / s.23-23G of the Gas Act 1986 ("**GA86**") (i.e. the "**Statutory Modification Procedure**").

172. These are grounds of appeal without merit. There are express statutory powers that facilitate the modifying of conditions and making of Directions through the licence i.e. other than by recourse to the Statutory Modification Procedure. The primary legislation expressly recognises that these powers exist alongside the Statutory Modification Procedure. That enables GEMA to set out, at the outset of the price control, the framework for how it will respond to events during the price control, which increases regulatory uncertainty. The regulatory flexibility thereby permitted to GEMA is important in ensuring the price control remains workable and efficient. GEMA has approached carefully the analysis of when such alternative powers should be implemented in licence conditions at the outset of the price control, and when any such changes should be capable of implementation only through the Statutory Modification Procedure; it has thereby committed no error of law, and its exercise of regulatory judgment in this manner is not otherwise apt to be interfered with.

[134] SHE-T trades as SSEN Transmission, so in some documents this appellant is referred to as "SSEN".

173. GEMA further considers the use of processes set out in the licence condition in appropriate cases, as opposed to only making in-period changes through the Statutory Modification Procedure, to be necessary and appropriate: (MZ1 §§10-16, 30-39, 61-68)

(1) There are an increased number of Uncertainty Mechanisms ("UMs") in RIIO-2 compared to RIIO-1, which arises in particular because the drive towards Net Zero is creating uncertainty about exactly how or where investment will be required.

(2) The ability to have recourse to alternative processes results in a price control that is responsive and workable, of particular importance in the changing energy landscape; GEMA's preferred approach will also enable outcomes to be delivered more quickly during the operation of the RIIO-2 price control.

(3) The use of such processes further ensures that up-to-date information is reflected on the face of the licence in a timely fashion.

(4) The availability of these processes avoids the disproportionate administrative burden, on both GEMA and stakeholders, of multiple Statutory Modification Procedures during the course of the price control, in the context of a higher ratio of allowances through UMs than in RIIO-1.

(ii) <u>The Grounds of Appeal</u>

174. The grounds of appeal can broadly be categorised between two alternatives:

(1) An allegation that GEMA does not have the *vires* to implement decisions during the course of the price control by any method other than the Statutory Modification Procedure because it is alleged that would be a circumvention of the Statutory Modification Procedure; and/or

(2) An allegation that, notwithstanding that GEMA has the *vires* to do so, it was for some other reason unlawful for it to make provision for such a power in the specific context or manner in which it did so.

175. SHE-T's third ground of appeal is premised on the former complaint (i.e. *vires*, paragraph 3(1)). As SHE-T characterised the ground of appeal in its letter to the CMA dated 24 March 2021 paragraph 3.1: *"This ground is a* vires *argument which requires the CMA to rule on the correct interpretation of the statutory scheme and the true ambit of GEMA's statutory powers"*.

176. As to SPT, GEMA had understood, from the drafting of SPT's fourth ground of appeal paragraphs 73 to 79, that it also pursued the former argument. However, in response to GEMA's submissions on permission, by letter dated 24 March 2021, SPT clarified that it does not take a pure *vires* point. It explained (paragraph 8) "*SPT is not saying that it is never permissible for GEMA to introduce a licence condition providing for further matters to be specified by Direction, but rather that these specific RIIO-T2 licence conditions [i.e. identified in paragraph 66 of its Notice of Appeal] frustrate the policy and purposes of the Act*".

177. WWU, whose ground of appeal focuses on the use of 'subsidiary documents' (in particular, the lawfulness of licence conditions permitting the creation and amendment of 'Associated Documents' and the 'Price Control Financial Instruments' ("**PCFIs**")), expressly does not take any *vires* argument (see Notice of Appeal D4.1). It recognises that the use of powers to set out obligations and/or provisions in subsidiary documents "*might be suitable where, for example, it is necessary and/or helpful for all market participants to follow certain processes and procedures on an industry wide basis or where flexibility may be needed in order to respond to wider government policy or initiatives*" (see Notice of Appeal D4.3). Rather, WWU's Ground of Appeal D is an example of the latter form of objection (*i.e.* §175(2), above).

178. The licence conditions challenged by the three Appellants are summarised in **Table 1** of the Annex to the First Witness Statement of Min Zhu. Ms Zhu's statement considers these conditions in detail in the body of her statement, e.g. "re-opener" licence conditions (i.e. if uncertain events in defined categories occur during the course of the price control, a re-opener mechanism in a licence condition allows a licensee or GEMA to propose an adjustment to allowed revenue, usually with a very specific scope or external trigger). **Table 2** of Ms Zhu's Annex sets out the drafting of the licence conditions challenged as insufficient by SPT (on vague, non-specific grounds). **Table 3** of Ms Zhu's Annex summarises the eighteen Associated Documents across the Gas

Distribution sector for RIIO-2 (governed by licence conditions which are, largely, under the "Other" column in Table 1 of the Annex).

B. LEGAL FRAMEWORK

179. Section 7 EA89 sets out the general *vires* of GEMA in respect of licences (emphasis added):

> *7. – Conditions of licences: general.*
>
> *(1) A licence may include –*
>
> *(a) such conditions (whether or not relating to the activities authorised by the licence) as appear to the grantor to be requisite or expedient having regard to the duties imposed by sections 3A to 3C; …*
>
> *(3) Without prejudice to the generality of paragraph (a) of subsection (1), conditions included in a licence by virtue of that paragraph may require the licence holder –*
>
> *(a) to comply with any Direction given by GEMA or Secretary of State as to such matters as are specified in the licence or are of a description so specified; …*
>
> *(5) Conditions included in a licence may contain provision for the conditions–*
>
> *(a) to have effect or cease to have effect at such times and in such circumstances as may be determined by or under the conditions; or*
>
> *(b) to be modified in such manner as may be specified in the conditions at such times and in such circumstances as may be so determined.*
>
> *(6) Any provision included by virtue of subsection (5) above in a licence shall have effect in addition to the provision made by this Part with respect to the modification of the conditions of a licence.*
>
> *(6A) Conditions included in a licence may provide for references in the conditions to any document to operate as references to that document as revised or re-issued from time to time.…*

180. Sections 11A-H EA89 set out a statutory procedure for modification of licence conditions, and for appeal of any such modification to the CMA (as is being exercised here). Pursuant to section 11A, before a modification comes into effect, GEMA must consult for at least 28 days (s.11A(2) and (3)), and the modification may not take effect

within 56 days of the date of publication of the decision to proceed with the making of the modification (s.11A(8) and (9) i.e. to facilitate the appeal to the CMA).

181. There are equivalent statutory provisions for the Gas Act 1986 ("GA86"). The general *vires* of GEMA are set out in s.7B (emphasis above):

> *"… (4) A licence may include –*
>
> *such conditions (whether or not relating to the activities authorised by the licence) as appear to the grantor to be requisite or expedient having regard to the duties imposed by section 4AA, 4AB and 4A above …*
>
> *(5) Without prejudice to the generality of paragraph (a) of subsection (4) above –*
>
> *(a) conditions included by virtue of that paragraph in a licence may –*
>
> *(i) require the holder to comply with any Direction given by GEMA or the Secretary of State as to such matters as are specified in the licence or are of a description so specified; …*
>
> *(6) Conditions included in a licence may –*
>
> *(a) impose requirements by reference to designation, acceptance or approval by GEMA, the Secretary of State or the Health and Safety Executive; and*
>
> *(b) provide for references in the conditions to any document to operate as references to that document as revised or re-issued from time to time.*
>
> *(7) Conditions included in a licence may contain provision for the conditions to –*
>
> *(a) have effect or cease to have effect at such times and in such circumstances as may be determined by or under the conditions; or*
>
> *(b) be modified in such manner as may be specified in the conditions at such times and in such circumstances as may be so determined.*
>
> *(8) Any provision included in a licence by virtue of subsection (7) above shall have effect in addition to the provision made by this Part with respect to the modification of the conditions of a licence. …"*

182. Section 23-23G GA86 sets out a Statutory Modification Procedure. Section 23 sets out the steps before a modification comes into effect in the same way as section 11A EA89 (see paragraph 180 above).

183. The Statutory Modification Procedure (i.e. ss.11A-H EA89 and ss.23-23G GA86) was introduced by the Electricity and Gas (Internal Markets) Regulations 2011/2704 (the

"**2011 Regulations**"), in response to the obligations under the 'Third Package' of European energy measures.

184. The processes which may be specified in licence conditions as alternatives to the Statutory Modification Procedure, *e.g.* that GEMA may issue a Direction on a matter specified in the condition, pursuant to section 7 EA89 and section 7B GA86, are sometimes referred to by GEMA as 'self modification'. Licence conditions may also provide for the issuance or amendment of "Associated Documents" i.e. subsidiary documents sitting outside the licence providing information, requirements and guidance (see Special Condition 1.1). (MZ1 §§27, 53)

C. FACTUAL BACKGROUND

(i) Overview

185. GEMA, as the statutory regulator, has substantial discretion as to how it chooses to go about determining the efficient costs that will be incurred by a licensee over the duration of the price control, and about how to counteract the asymmetry of information between it and the licensees and how to deal with uncertainties.[135] That includes substantial discretion as to the balance that it chooses to strike between *ex ante* precision at the outset (i.e. the amount of baseline allowance), and responsiveness to matters that may change over the course of the price control (i.e. variable allowances). Various different approaches might be taken by a regulator to deal with these challenges. GEMA, after careful consideration and extensive consultation on its licence drafting principles, believes it has struck the right balance between certainty at the outset, and responsiveness to matters that may change over the course of RIIO-2. (MZ1, Figure 1, §42)

186. It is necessary for the price control to remain responsive in two main ways during its operational phase, which also applied during RIIO-1.

187. First, there are "Uncertainty Mechanisms" ("**UMs**"):

[135] In the First Witness Statement of Akshay Kaul, Director of Networks at Ofgem of 23 April 2021, he explains the problem of information asymmetry faced by regulators, which is likely to be exacerbated by a changing energy system with the "rapid emergence of new technologies": paragraphs 36 to 50.

(1) As set out in §7.2 of the FDs core document, there are five main types of UM that GEMA is using in the RIIO-2 price control: notably, 're-opener' mechanisms. (MZ1 §§63)

(2) Re-opener mechanisms are the most common form of UM, and relate to matters where it is recognised that events in defined categories may occur during the course of the price control which affect allowed revenue for the licensee, but the matters cannot be predicted with any certainty at the outset. A re-opener mechanism is set out in a licence condition and allows a licensee or GEMA to propose such an adjustment to allowed revenue, usually with a very specific scope or an external trigger of some kind e.g. a change in Government policy relating to a specific cost or policy area. (MZ1 §63.5)

(3) There are an increased number of Uncertainty Mechanisms in RIIO-2 as compared to RIIO-1. That arises in particular in RIIO-2 because, while the drive towards Net Zero (i.e. net zero carbon emissions by 2050) is creating an unprecedented demand for investment in the network, it is not currently clear exactly how or where that investment will be required. That results in a significant shift in the ratio of baseline allowances (those set up front at the start of the price control) compared to allowances flowing through uncertainty mechanisms; this is estimated to be potentially a ratio of 50:50 or 60:40 in RIIO-2, as compared to closer to 80:20 in RIIO-1. (MZ1 §16)

(4) Licensees recognise the importance of incentive and Uncertainty Mechanisms, and responsiveness during the price control period; for example, SHE-T has identified £1.3bn to £2.8bn of investment, which it did not include in its Business Plan, because its intention is that this investment will come, as appropriate, through UMs. (MZ1 §64)

188. Second, there are circumstances where the allowance for licensees is contingent upon delivery of the consumer outcome for which they were funded. This is reflected through Price Control Deliverables ("PCDs"), in particular. (MZ1 **Section E**) Adjustments to allowances associated with Evaluative PCDs by way of 'self' modification would only be considered if the licensee failed to deliver the consumer outcome for which they were funded. There are an increased number of PCDs in RIIO-2 compared to RIIO-1: Evaluative PCDs could see GEMA assessing the delivery of up to 35 different PCDs in the Electricity Transmission sector alone. (MZ1 §§78-79, 83)

189. For the increased number of UMs and PCDs in particular GEMA has decided that the most suitable regulatory approach, including one that confers the greatest certainty and transparency, is to set out in licence conditions at the outset how those adjustments will be made using mechanisms in the licence; in other words, the licence has capacity, through a built-in framework, to respond to "known unknowns" while ensuring that principles of public law fairness (including consultation) are adhered to. An alternative approach would simply be to use the Statutory Modification Procedure to modify the licence whenever such a modification became necessary. GEMA considers that such an approach is sub-optimal: the better approach is the transparent, built-in framework for responding to "known unknowns" during the course of the price control. (MZ1 §67, 83)

190. The ability to have recourse to alternative processes set out in the licence, as opposed to only making such changes through the Statutory Modification Procedure, also has the following advantages, namely that it: (MZ1 §§10-16, 31-42, 61-68)

(1) Results in a price control that is both responsive and flexible, of particular importance in light of the changing energy landscape and transition to Net Zero.

(2) Enables outcomes to be delivered more quickly during the operation of the RIIO-2 price control, compared to the rigidity of the Statutory Modification Procedure (which, for example, includes a 56-day standstill period before a change can come into effect).

(3) Enables up-to-date information to be reflected on the face of the licence in a timely fashion.

(4) Avoids a disproportionate administrative burden, on GEMA and stakeholders, of multiple Statutory Modification Procedures during the course of the price control, in the context of a higher ratio of allowances through UMs compared to RIIO-1.

191. The main mechanisms /documents in the price control challenged by SHE-T, SPT and/or WWU are set out in the First Witness Statement of Min Zhu and the Annex thereto. The following mechanisms/documents may be amended during the course of the price control other than through the Statutory Modification procedure. Each is addressed in more detail in Ms Zhu's statement:

(1) **Price Control Deliverables ("PCDs").** (MZ1 **Section E**). PCDs link price control funding to the delivery of outputs specified in the licence. PCDs can either allow

allowances to be recovered mechanistically (i.e. allowances are automatically recovered in accordance with the relevant formula set out in the licence), or evaluatively (i.e. requiring GEMA to review the delivery of PCD outputs). For Evaluative PCDs, the licence condition provides for an adjustment power if an outcome is not "fully delivered". As explained above in §188, the PCD framework is clearly set out and it is likely to require numerous decisions by GEMA; this is exactly the type of case for which the statutory power to provide an *alternative* process to the Statutory Modification Procedure was intended. (MZ1 §83) The detailed methodology of the evaluation is set out in the PCD Associated Document: the "*PCD Reporting Requirements and Methodology Document*". GEMA carefully considered consultation responses that the information in this document ought to be contained in the licence (MZ1 §90), but decided that more detail and explanation was required than can appropriately be contained in the licence itself.

(2) **Large Onshore Transmission Investment ("LOTI")** (MZ1 **Section F**). This 're-opener' licence condition, i.e. a UM, provides licensees with a route to apply for funding for large investment in the network, to meet decarbonisation needs in RIIO-2 for example. Projects coming through the LOTI re-opener would not have been funded at the time of setting the RIIO-2 Price Control due to insufficient certainty regarding their need, scale and/or timing. GEMA has provided a robust assessment process through which GEMA can ensure such proposals represent value for money for consumers. This largely replicates the purpose and processes of a previous licence condition in RIIO-1: the Strategic Wider Works re-opener from RIIO-ET1. The LOTI condition provides that an amendment, to specify a new LOTI deliverable and associated allowance, may be implemented by Direction, as opposed to the Statutory Modification Procedure, only if not "*significantly different*" to the licensee's application; following feedback in licence drafting working groups, GEMA decided this limitation was appropriate for LOTI, including because of the characteristics and scale of LOTI projects. (MZ1 §97, 104).

(3) **Medium Sized Investment Projects ("MSIP")** (MZ1 **Section G**). This is another 're-opener' licence condition, i.e. a UM, which allows GEMA to scrutinise the need for and cost of projects with more unusual characteristics. MSIP projects must cost less than £100 million per project. The projects captured by the MSIP re-opener mostly reflect uncertainties that were identified by licensees in their Business Plans as requiring UMs. There is an annual submission window for MSIP, so GEMA may set new MSIP

allowances at multiple different times during RIIO-2, for the three ET licensees. GEMA considers that this sort of regular updating of values in the licence is an example of why its statutory power to use alternative processes to the Statutory Modification Procedure exists. (MZ1 §§111-116).

(4) **Network Asset Risk Metric ("NARM").** (MZ1 **Section H**). NARM is a complex policy mechanism that aims to forecast long-term network asset risk and secure the risk reduction benefits associated with asset health. NARM sets requirements on licensees across all sectors to deliver an acceptable level of asset health across their networks. This is defined by their performance relative to their Baseline Network Risk Outputs ("**BNRO**") (a deliverable target metric), which are set out in each licensee's Network Asset Risk Workbook ("**NARW**"). Another Associated Document, the NARM Handbook, sets out the methodology for calculating relevant funding adjustments and penalties to reflect a licensee's performance relative to its BNRO and provides guidance on NARM. The relevant licence condition provides that GEMA may, following consultation, amend the NARW or the NARM Handbook by Direction. GEMA considers that it is appropriate that this level of complex technical detail is contained in ADs rather than in the licence itself, and that these documents facilitate the understanding of the relevant rules and requirements, as they provide explanations of the detail of specific elements of NARM. (MZ1 §121-130)

(5) **Price Control Financial Instruments ("PCFIs").** (MZ1 **Section I**). The Price Control Financial Model ("**PCFM**") and Price Control Financial Handbook are collectively the **"Price Control Financial Instruments"** or "**PCFI**", and they have the status of a licence condition. The PCFI have a unique status in calculating allowed revenues such that, in theory, an update to the PCFI could significantly affect the price control. Therefore, GEMA must consider whether modifications to the PCFI carried out under the PCFI licence condition i.e. *not* through the Statutory Modification Procedure, would be likely to have a "*significant impact*". If a PCFI modification is considered to have a "*significant impact*", the Statutory Modification Procedure must be used. The PCFI condition existed under RIIO-1 but it included a provision effectively enabling a licensee to 'veto' GEMA's proposal to make modifications under the PCFI licence condition if the licensee considered the modification would have a "*significant impact*". GEMA decided not to retain this licensee 'veto' for RIIO-2: instead, as the independent regulator, it will decide whether it must use the Statutory Modification Procedure,

taking into account licensees' views. The PCFM Guidance is an Associated Document. Unlike the PCFI, it does not have the status of a licence condition. GEMA does not consider it is required to apply the same modification process to the Guidance as to the PCFI itself. (MZ1 §§147-150).

(6) **Net Zero 're-opener'.** (MZ1 **Section J**). This is another example of a UM. The purpose of this mechanism is to introduce an increased level of adaptability into the RIIO-2 price control by providing a means to amend the price control in response to changes connected to the meeting of the Net Zero targets, which have an effect on the costs and outputs of network licensees: for example, technological advances. There is a materiality threshold of 0.5% and the condition has a prescribed scope. (MZ1 §151, 155).

(7) **Uncertain Non-Load Related Projects** (MZ1 **Section K**). UNLRP is a re-opener condition (i.e. a UM) specific to SPT, which would be triggered by SPT to ensure appropriate funding for six specific projects ranging in value from £3m to £70m. GEMA considers that this regular, but relatively low value, updating of the licence is appropriately addressed by the process in the licence condition, to fund SPT projects once their need, scope and costs are more certain.

(8) **Access Reform change** (MZ1 **Section L**). Another re-opener (i.e. a UM), ARC is an adjustment mechanism, enabling GEMA to reduce allowances to reflect any reduced costs which may flow from GEMA's Access Reform review. GEMA considered such an amendment can appropriately be made other than through the Statutory Modification Procedure. Any reduction to allowances will match the reduction to licensees' costs resulting from the review. This re-opener is intended to enable consumers to benefit from any such reduced costs.

(9) Associated Documents across Gas Distribution (MZ1 **Section M).** There are various "ADs" in RIIO-2. They are ancillary documents which provide information, requirements and guidance that it would be disproportionate to include in the licence itself. (MZ1 §§53-58, 167). The ADs in the GD sector are summarised in Table 3 to the Annex of Ms Zhu's witness statement.

(ii) Consultation and Licence Development

192. The RIIO-2 licence was developed through working with stakeholders throughout the period of setting the price control through bespoke working groups and consultation.

193. Ofgem created Licence Drafting Working Groups ("**LDWG**") in September 2019, consisting of members of the Ofgem team and network company representatives. Ofgem consulted on its drafting of individual licence conditions, the licence drafting principles and the approach to 'self-modification' of licence conditions through the monthly LDWGs.

194. In September 2020, GEMA published the "RIIO-2 Informal Licence drafting consultation for Transmission, Gas Distribution and Electricity System Operator licences" ("**Informal Licence Drafting Consultation**"). (MZ1 §21[136])

195. Chapter 3 of the Informal Licence Drafting Consultation addressed Associated Documents, i.e. "*documents created under the licence conditions that supplement those conditions and are subordinate to them. They are important for licensees participating within RIIO-2 schemes as they provide information, requirements and guidance that are not proportionate for inclusion in the licence conditions*" (para 3.1; it was also clarified that the Price Control Financial Instruments were not subordinate to the licence). Ofgem also set out proposed Principles of Use for Associated Documents (see further §202 below). It was explained that there would be at least a 28-day consultation on the content of any Associated Document (para 3.4), and that the content of Associated Documents were being developed in specific working groups (para 3.7). Paragraph 3.8 included a list of intended Associated Documents for RIIO-2. (MZ1 §§172-178)

196. Chapter 4 addressed the Price Control Financial Instruments. In relation to the Governance of Price Control Financial Instruments, Ofgem explained that it was planning to remove some of the Variable Value Methodologies from the handbook and include them elsewhere; also (at para 4.37):

> "*The second reason for the changes is to amend the self-modification process for the Price Control Finance Instruments to reflect that as an independent regulator we should be determining whether to use the self-modification process after considering all relevant evidence. The effect of the proposed changes is to extend the factors that we will consider in deciding whether a modification has "significant impact" to include all relevant evidence and to remove the*

[136] MZ1 Exhibit A - Informal Licence Drafting Consultation

prohibition on us using the self-modification power where the licensee reasonably considers that the proposed modification would be likely to have a significant impact. Licensees will still be able to put forward their views on the modification and the use of the self- modification power through the Price Control Financial Model Working Group and/or during the consultation period required by the licence"

197. The purpose of the Price Control Financial Model ("**PCFM**") Guidance was explained to be to (para 4.55): "set out the change control process and to require licensees to comply with it when entering PCFM Variable Values into the PCFM and during the AIP". (MZ1 §148)

198. Chapter 5 addressed re-opener licence conditions, explaining (para 5.23): (MZ1 §40)

"We propose that a re-opener licence condition will set out:

• the scope of the re-opener i.e. the circumstances in which the re-opener can be triggered;

• when an application can be made, which will ordinarily be one week and at the end of January in the relevant year;

• how an application should be made, including what information the licensee should provide, which will be supplemented by the Re-opener Guidance and Application Requirements Document;

• what costs can be included in an application; and

• who can trigger a re-opener i.e. the licensee and/or GEMA."

199. Ofgem also outlined its proposal to enable the creation and amendment of an Associated Document that will provide further detail on how licensees should prepare re-opener applications (para 5.24).

200. Appendix 1 set out the proposed *RIIO-2 Licence Drafting Principles* (MZ1 §23, **Figure 1**[137]):

*"**Making changes to the licence conditions or obligations and Associated Documents***

In RIIO2 we will use the following processes most commonly:

- *full licence modifications using the statutory process.*
- *self-modification procedure. This will not include the option for licensees to require GEMA to use the statutory process. However, we will make sure self-*

[137] MZ1 Exhibit A - Informal Licence Drafting Consultation

modification procedures have a remit appropriate for challenge by way of judicial review rather than an appeal to the CMA and where potentially the self-modification procedure has a very wide remit include some curtailment such as the "significant" test in the PCFI condition.

- *Directions*
- *consents.*

We may also use:

• approvals;

• determinations;

• designations (in electricity you can only designate an area, contract, document or thing, not a person);

• acceptance (gas only); and

• trigger – where a licence condition takes effect or ceases to have effect if certain circumstances arise or at certain times.

We will avoid two stage consultations, where we consult on whether we are going to consider an issue or the scope of the issue before consulting on the substantive decision.

In general, we will avoid deeming things, such as values or entries in a table, in the licence as changed. Instead we will actually change the value or entry using a self- modification procedure. This avoids the need to find various Directions in order to understand the licence."

201. In WWU's consultation response, it stated that in its opinion, all ADs "should be available in their final form no later than" the date of publication of FDs. Ofgem disagreed: in its view this deadline was not reasonably practicable. In fact, however, and despite the constraints imposed by the Covid-19 pandemic, more than half of the eighteen Associated Documents in the Gas Distribution sector have already been published in final form and fourteen have been published in draft form. (MZ1 §§60, 178)

202. In February 2021, following the consultation, Ofgem published its *"Decision on principles of use for RIIO-2 Associated Documents"*. Ofgem decided on the Principles as follows: (MZ1 §179)

> *"[1] Associated Documents must have a logical title, giving the reader a sense of what it will contain and use relevant words from the licence condition in the title.*

[2] The licence must set out whether the licensee is required to comply with an Associated Document, use best or reasonable endeavours to comply with it or simply to have regard to it. The Associated Document may also contain other useful information that the licensee doesn't have to comply with.

[3] The licence must set out the circumstances in which the licensee has to comply with or have regard to the Associated Document, either by setting this out in a standalone paragraph or where this is very clear from the nature of the Associated Document.

[4] The relevant licence condition must set out clearly what the Associated Document will encompass.

[5] Associated Documents should only be used where more detail and explanation is required, beyond that in the relevant licence condition.

[6] There should be a clear division between Associated Documents such that they do not cover the same ground.

[7] The relevant licence condition must set out the change control process that applies to the relevant Associated Document.

[8] There is no need for the licence to state that "the licensee does not need to comply with [the Associated Document] until it has been issued", as that is inherent in the process of issuing Associated Documents.

[9] Obligations on licensees must be drafted clearly whether in the licence condition or the Associated Document, so licensees can be sure what is expected of them.

[10] Associated Documents must be published in a timely fashion bearing in mind the specifics of the Associated Document and the obligations in question."

203. In the course of Ofgem's consultation process (MZ1 §23, Figure 1), stakeholders set out their views on the use of self-modification particularly in relation to four areas: Housekeeping Modification; PCFI; Competition Proxy Model; and LOTI re-opener. In light of feedback from licensees, Ofgem considered the appropriateness of using self-modification processes on a case-by-case basis, and decided as follows: (MZ1 §§50-52)

(1) A restriction on the use of self-modification was inserted into the licence in relation to LOTI re-opener; the PCFI; and the Housekeeping Modification[138]: see §§192(2) and 192(5) above. In particular, it was expressly set out that an amendment may be

[138] The Housekeeping Modification is addressed at (MZ1 §51). The Housekeeping Modification is not challenged although, like the conditions which *are* challenged, it enables GEMA to have recourse to a process other than the Statutory Modification Procedure for making in-period modifications.

implemented by Direction, as opposed to the Statutory Modification Procedure, only if those changes would not be likely to have a "*significant impact*" SpC 8.1 (Governance of the GD2 PCFI), or would not be "*significantly different*" (SpC 3.13 on LOTI). For the Housekeeping Modification a definition of "Housekeeping Modification" was included to restrict the use of the power in this condition.

(2) In the version of the Competition Proxy Model condition included in the September 2020 RIIO-2 Informal Licence Drafting Consultation, Ofgem proposed that, rather than using self-modification, the Statutory Modification Procedure would be used to implement CPM Project Assessment Decisions (i.e. decisions setting key financial parameters), whilst self-modification would still be used in relation to a number of other decisions made under the condition. Ultimately, Ofgem decided not to include the CPM condition as part of the RIIO-2 licence modifications.

204. Ofgem also decided to provide a consistent drafting structure in licence conditions providing for self-modification, in accordance with a template which provided for the scope of the adjustment to be identified in the condition itself (e.g. "*a direction adjusting the value of the X term*"), and for the text of the proposed Direction (and the reasons for it) to be published and consulted upon by Ofgem for at least 28 days, prior to the Direction being made. (MZ1 §§40-41)

D. SHE-T GROUND 3

205. SHE-T contends that each of the licence conditions which it appeals is "*ultra vires and wrong in law, and therefore fall to be set aside by the CMA under section 11E(4) of EA 1989*" (Notice of Appeal para 6.6(b)).

(1) In particular, SHE-T contends that "*the decisions that GEMA is purporting to empower itself to make by way of "Direction" during the price control cannot in substance be distinguished from the (provisional) totex determination that GEMA has made at the outset of the price control. Since the substance (and potentially the extent) of the decisions covered by these mechanisms is the same as that in GEMA's Final Determination, the mandatory statutory scheme for the implementation of price control decisions … must equally apply to GEMA's decisions in this regard*" (Notice of Appeal para 6.21).

(2) In support of its argument that it is "*outside GEMA's statutory powers*" to so "*circumvent*" the Statutory Modification Procedure (Notice of Appeal para 6.27), SHE-

T relies on what it submits are two related justifications (which are in fact indistinct), namely that (i) the EA89 sets out a complete statutory code for the process to be followed when implementing, or making a material amendment to, a price control or any part thereof (para 6.28(a)); and (b) use of any alternative power unlawfully "*frustrate[s] licensees' statutory right to appeal and the remedies provided to licensees by statute*" (Notice of Appeal para 6.28(b)).

206. SHE-T's submissions are wrong in law.

207. SHE-T's ground of appeal is premised on its assertion that "*Parliament clearly intended that decisions on price control matters should always take effect by way of section 11A(1) modifications*" (Notice of Appeal para 6.30). That is contradicted by express statutory provision. Section 7(6) EA89 explains that that any provision included pursuant to s. 7(5) EA89, i.e. a licence condition providing for the conditions to be modified as specified in the licence condition, "shall have effect in addition to the provision made by this Part with respect to the modification of the conditions of a licence" (emphasis added). Parliament has therefore expressly addressed the question of whether there is procedural exclusivity in the manner of modifying a licence condition, and has confirmed that there is not.

208. When Parliament introduced the Statutory Modification Procedure pursuant to the 2011 Regulations, if it had wanted to make this the exclusive procedure for modifying licence conditions (or the exclusive procedure in certain circumstances), it would have amended section 7(6) EA89. Parliament chose not to do so.

209. SHE-T does not improve its position by seeking to rely on the general presumption of statutory interpretation that general provisions do not override specific provisions:

(1) The purpose of any such general presumption is to divine the legislative intent. There is no room for such a presumption where the legislative intent has been made express. (As the presumption was expressed in the case on which SHE-T relies, *R v Liverpool City Council ex parte Baby Products Association* (2000) 2 LGLR 689, "*A power conferred in very general terms plainly cannot be relied on to defeat the intention of clear and particular statutory provisions*" (emphasis added).)

(2) It is in any event inaccurate to characterise the power in s.7(5) EA89 as the general power, and the Statutory Modification Procedure as the specific power. They are simply two alternative procedural routes.

210. These two points are dispositive of SHE-T's ground of appeal. However, it is additionally highly persuasive that a very similar argument has already been considered and dismissed by the CMA in its decision in *SONI Limited v Northern Ireland Authority for Utility Regulation* (Final Determination, 10 November 2017) ("*SONI*").

211. In *SONI*, the appellant made substantially the same argument that SHE-T now advances, which is addressed in "*Error 5: No suitable right of appeal to the CMA*" (paragraphs 6.137-171). Specifically, the appellant alleged that the regulator had made a decision that was wrong in law: "*by failing to provide a suitable right of appeal concerning decisions regarding cost recovery for Significant Projects*" (para 6.137).

212. The energy regulator, the Northern Ireland Authority for Utility Regulation ("**NIAUR**"), was the equivalent body to GEMA in Northern Ireland. As part of its price control decision modifying the appellant's electricity transmission licence, the NIAUR determined that future decisions regarding costs recovery for "Significant Projects" would be approved or rejected without further modification of the licence; rather, this would be a decision made under the terms of the licence. Such a decision would therefore be amenable to challenge by judicial review, rather than being appealable to the CMA under Article 14B of the Electricity (Northern Ireland) Order, SI 1992 No 231 (NI).

213. The appellant contended that its inability to appeal the NIAUR's future cost recovery decisions to a specialist body, the CMA, ran counter to the statutory scheme (§6.143):

> *"SONI submitted that the decision was inappropriate because Parliament had provided for an appeal of licence modifications to be made to a specialist body, the CMA, and so appeals against related decisions of the UR should be made to the same specialist body, not simply subject to judicial review."*

214. The CMA rejected that argument.

215. It first concluded that EU law does not require an appeal to the CMA, despite (as is also true in respect of the Statutory Modification Procedure's introduction by the 2011

Regulations) the right of appeal to the CMA having been implemented in response to an obligation in an EU Directive. The CMA held (§§6.161-164, emphasis added):

> *6.161 It is for the Government to decide where appeals against decisions of the regulator should be heard. The Electricity Order provides that appeals against licence modification decisions of the regulator should be determined by the CMA. Appeals against other (non-licence modification) decisions of the regulator are by way of judicial review.*
>
> *6.162 There is clear authority from the Court of Appeal that judicial review is a suitable form of review of a regulator's decision and, moreover, that judicial review is sufficiently flexible to meet whatever standard of review is required under EU law. …*
>
> *6.164 Just as judicial review was considered to be sufficiently flexible to comply with requirements of EU law [*by the Court of Appeal in *T-Mobile (UK) Ltd & Telefonica 02 UK Ltd v Office of Communications [2008] EWCA Civ 1373], we consider that it is also sufficient to meet the standard of review required by Article 37(17) of the Electricity Directive. There appears therefore to be no basis for a claim that the lack of a right of appeal to the CMA against a disputed decision as to the costs of Significant Projects is contrary to the requirements of the EU Third Energy Package, or is in some way not a 'suitable' right of appeal against a decision of the regulator."*

216. The CMA then considered whether there was any other legal issue arising from the lack of an express appeal right, and concluded that there are *"no grounds … for finding that such proceedings would breach SONI's right to a fair hearing, or the principles of natural justice"* (§6.168). It further held, at §6.169:

> *"We do not consider that any risk for SONI arising from disputed decisions will be increased by virtue of the fact that SONI does not have an express right to seek permission to appeal to the CMA and must challenge a disputed decision by seeking permission for judicial review. The process of judicial review is well understood and sufficiently certain that it should not adversely affect SONI's financeability to make certain decisions subject to judicial review, rather than an appeal to the CMA."*

217. The CMA concluded (§§6.170-171):

> *"6.170 For the reasons given above we consider that the UR [i.e. Utility Regulator] has not abused its discretion; that SONI has a suitable right of appeal against disputed decisions of the UR; that this right of appeal complies with the requirements of the Electricity Directive; that SONI will have a right to a fair hearing; that the right of appeal complies with the requirements of natural justice and good regulatory practice; and that any uncertainty created by disputed*

decisions will not be increased for SONI by reason of an appeal being brought by judicial review.

6.171 For these reasons we are satisfied that SONI does have a suitable appeal mechanism open to it as regards decisions of the UR concerning cost recovery for Significant Projects and PCNPs, and that the UR was not wrong in not providing SONI with an express right of appeal to the CMA."

218. SHE-T has contended, by its letter to the CMA dated 24 March 2021, that *SONI* falls to be distinguished because the arguments in that case were not *"a* vires *argument, i.e. taking issue with whether the UR had the power in law under the Northern Ireland statutory scheme (i.e. the equivalent of EA 89) to make this type of decision other than by way of statutory licence modification"* (paragraph 3.4(b)). However, to the extent that SHE-T maintains the argument that GEMA's approach is unlawful because it "circumvents" the right of appeal to the CMA and leaves SHE-T with only judicial review against a decision (i.e. SHE-T Notice of Appeal para 6.28(b)), then the reasoning is highly relevant and persuasive. The reasoning in *SONI* shows why it is without legal merit to suggest that the mere existence of the statutory appeal right to the CMA in s. 11C EA89 means that GEMA is prevented from taking or implementing decisions in the course of a price control that would instead be subject to judicial review.

219. Judicial review is an adequate alternative remedy in respect of such decisions, as Parliament clearly knew and intended. SHE-T's characterisation of such decisions taken during the course of the price control as being *"unappealable"* (Notice of Appeal para 6.20) is, therefore, misleading – any decision taken by GEMA during the course of the price control is amenable to judicial review. The decision would be challengeable on all standard grounds of public law legality; in particular, (i) GEMA has made express in the licence drafting the requirement for it to consult on any Direction/decision it is making, (ii) such decision would need to be taken within the confines of the enabling licence power – that would include, for example, the assessment of whether a decision was "significant" for the purposes of the LOTI and PCFI – and, (iii) such decision and Direction would be subject to GEMA's statutory duties in EA89 and GA86.

E SPT GROUND 4

220. SPT challenges the ability to make future Directions in licence conditions in seven different categories, as set out in paragraph 66 of its Notice of Appeal. The ground of appeal is formed of two parts: (1) an alleged failure to draft the licence conditions as

required by s.7 EA89 (paragraphs 68 to 72); and (2) an alleged circumvention of the procedural protections in the Statutory Modification Procedure (paragraphs 73 to 79).

(i) Alleged failure in drafting

221. At paragraph 72 of its Notice of Appeal, SPT contends that the identified licence conditions are *ultra vires* s.7(3)(a) EA89 and/or s.7(5)(b) EA89 because they "*do not sufficiently specify the circumstances and criteria for future Directions*". The ground of appeal is not otherwise explained, and so it is difficult to decipher the basis for SPT's objection. To assist the CMA in its consideration of this argument, in the Annex to the First Statement of Min Zhu is **Table 2,** in which Ofgem has set out the relevant drafting for each licence condition in turn. As is clear from Table 2, SPT's bare and unparticularised allegation is without merit: the drafting in each case makes sufficiently clear when the power in the condition can be used. Ofgem accepts however that there are some inadvertent drafting errors in some licence conditions, which will be 'tidied up' at the earliest opportunity by way of a Statutory Modification Procedure or as part of Ofgem's housekeeping modification process. (MZ1 §§188-191)

(ii) Alleged circumvention of procedural protections

222. The second part of SPT's ground of appeal (Section I4, paragraphs 73 to 79) contends that the Special Conditions identified above "*also cut across the legislative scheme in EA 1989*".

223. As addressed above, SPT has clarified that this ground of appeal is brought on the premise that GEMA does, in principle, have the *vires* to modify licence conditions (or take decisions under the powers in licence conditions) using the powers in s.7(3) and 7(5) EA89, such that to do so does not of itself "*cut across the legislative scheme in EA 1989*". SPT's ground of appeal must therefore be premised upon there being something inherent in the particular subject matter of the identified Special Conditions that in their view means GEMA loses the ability to make any modification pursuant to the powers in section 7 and instead make it necessary to use the Statutory Modification Procedure. The only suggestion in the Notice of Appeal as to what such matters might be, in paragraph 78 of the Notice of Appeal, is the reference to: "*especially in situations involving sums material to the price control and likely to involve detailed factual and/or economic inquiry*".

224. First, GEMA does not accept the premise of the ground of appeal. There is no strict dividing line, depending on the sums involved and the level of factual and/or inquiry, that renders the use of the Statutory Modification Procedure mandatory (whether by reference to the statutory wording, or any existing principle of public law).

225. However, GEMA has decided to reserve certain modifications to the Statutory Modification Procedure. SPT's challenge therefore reduces to a *Wednesbury* rationality challenge to GEMA's decisions as to which matters are appropriate to be reserved only to the Statutory Modification Procedure; which can be determined through a process governed by the licence itself; and which may use either of these two processes.

226. GEMA has distinguished between matters which it adjudges should be amended by the Statutory Modification Procedure, and which by alternative means – and that includes the PCFI and LOTI conditions, where GEMA has created a 'significance' threshold to distinguish between the two methods. In order for this ground of appeal to succeed, SPT would need to show that GEMA has acted unreasonably – so unreasonably such that no reasonable authority could have come to the determination – in drawing that dividing line, such that it is right and proper for the CMA to interfere with GEMA's expert regulatory judgment. That is a threshold that SPT does not meet in its Notice of Appeal or subsequent correspondence, and could not meet, in light of the careful and considered delineation in approach adopted by GEMA in relation to the methods of licence modification.

227. Second, in any event and without prejudice to the first point, GEMA submits that the seven situations raised by SPT, where s.7 EA89 modification may be used, at paragraph 66 of its Notice of Appeal are all circumstances where, as the expert regulator, it formed the view that it is appropriate for it to do for the reasons set out in detail in Ms Zhu's statement in **Sections E-K**. See §191 above, (1)-(7).

228. This second aspect of SPT's appeal therefore takes it no further than its first and is without merit.

229. The relief sought by SPT is that all such changes must be made pursuant to the Statutory Modification Procedure, which would be impractical and unworkable for Ofgem and would also adversely impact on licensees, resulting in a slow, non responsive regulatory process and an undue regulatory burden.

230. For all the above reasons, the CMA is respectfully requested to dismiss SPT's Ground 4.

F. WWU GROUND D

231. WWU objects to GEMA's use of Associated Documents and PCFIs (together referred to as 'subsidiary documents'). It contends that every reference to an Associated Document in the licence drafting should be substituted so that the subsidiary document has the same status as the licence condition (Notice of Appeal para D7.3(a)). WWU then further engages in its own exercise of licence drafting at para D7.3(b); it proposes the introduction of a 'significant impact' test for every Associated Document, which would require the Statutory Modification Procedure to be used where the impact was significant, and the question of 'significance' itself to be assessed in accordance with a framework and factors identified by WWU at para D7.3(b)(ii)-(iii). In the alternative, WWU submits that GEMA should be required to mirror any modification to a subsidiary document "*so as to provide for WWU to recover, by way of pass-through, the costs incurred by it in consequence of the amended requirements and/or Ofgem's subsequent interpretation of the requirements*" (Notice of Appeal para D7.4).

232. WWU's ground of appeal is, in substance, simply a disagreement with GEMA's approach, and a request that the CMA replace the licence drafting as to the modification of Associated Documents with WWU's own preference.[139] That is not a legitimate basis for requiring the CMA to intervene.

233. At best, the appeal amounts to a challenge to the process followed by GEMA i.e. that GEMA failed properly to have regard to its statutory objectives (Notice of Appeal paras D1.1-D1.3, D2.9). The legal basis for the appeal is that GEMA must have failed to have regard to its statutory duties under s.4AA(2)(b) and s.4AA(5A) GA86. These provide:

> "*(2) In performing the duties under subsections (1B) and (1C), the Secretary of State or GEMA shall have regard to -- …*
>
> *(b) the need to secure that licence holders are able to finance the activities which are the subject of obligations imposed by or under this Part, the Utilities Act 2000, Part 5 of the Energy Act 2008 or section 4, Part 2, or sections 26 to 29 of the Energy Act 2010 …*

[139] See, e.g. Notice of Appeal para D2.12: *"Ofgem is wrong to adopt the approach it has in respect of the licence modifications relating to subsidiary documents"*

(5A) In carrying out their respective functions under this Part in accordance with the preceding provisions of this section the Secretary of State and GEMA must each have regard to –

(a) the principles under which regulatory activities should be transparent, accountable, proportionate, consistent and targeted only at cases in which action is needed; and

(b) any other principles appearing to him or, as the case may be, it to represent the best regulatory practice."

234. As the Court of Appeal held in *R (Pharmaceutical Services Negotiating Committee and anor) v Secretary of State for Health* [2018] EWCA Civ 192, [2019] PTSR 885 at [82]: "*it is well established that any consideration by the court of compliance with a duty to "have regard" to a particular factor involves a review of the process and not the merits*". And, at [84]: "*The weight, if any, to be given to relevant factors in such circumstances is thus essentially a matter for the public body assigned by Parliament to make the relevant decision; and the courts have emphasised the importance of not imposing too high a burden on such decision-makers*".

235. The approach of WWU is to suggest that the obligation to "*have regard*" to the broad principles outlined above can somehow be converted into a guarantee of substantive outcome (i.e. here, that there would no use of subsidiary documents with a status lesser than that of the licence, and/or the introduction of a "significance" test in more conditions that GEMA considered appropriate). That is without legal basis. GEMA had regard to its statutory duties in reaching its conclusions about the appropriate, efficient and proportionate implementation of the RIIO-GD2 price control. Indeed, at Notice of Appeal para D6.14, WWU draws attention to the various different consultation processes that were engaged in by Ofgem in order to ensure that it had regard to the gamut of licensees' concerns in formulating its final approach.

236. In particular, Ofgem consulted widely on its licence drafting principles, and carefully considered the responses to its Informal Licence Drafting Consultation in September 2020 (and WWU's in particular).(MZ1 §177)

237. The alternative legal basis for its ground of appeal identified by WWU (Notice of Appeal D2.10) is a suggestion that the licence conditions fall to be quashed by the CMA because they "*fail to achieve, in whole or in part, the effect that is stated by Ofgem in the notice published under section 23(7)(b) of the Gas Act*". This legal basis for the ground of appeal is obscure, and not further explained. The relevant intention of GEMA was to create a power

pursuant to which specific identified detail and/or guidance may be produced and amended pursuant to the licence condition – and the licence condition achieves that in its drafting. This attempt to construct a legal basis for WWU's disagreement therefore likewise fails.

238. Without prejudice to the foregoing, the detail of WWU's grounds of objection are responded to below.

239. WWU objects to two separate categories of subsidiary documents:

(1) Associated Documents are (as defined in Special Condition 1.1) documents "*issued and amended by GEMA by Direction in accordance with the special conditions*" of the licence. They are documents that provide information, requirements and/or guidance (RIIO-2 Informal Licence Drafting Consultation, para 3.1). Associated Documents were used in RIIO-GD1, in particular: Regulatory Instructions and Guidance ("**RIGs**"), Data Assurance Guidance, and NIA Governance Document; and

(2) Price Control Financial Instruments. These documents were also used in RIIO-GD1. See the description at paragraph 192 above.

(i) <u>Associated Documents</u>

240. There is a fundamental misconception at the centre of WWU's appeal of the use of Associated Documents. WWU contends that the introduction of detail and guidance to explain and inform the primary obligations in licence conditions leads to regulatory uncertainty. However, the converse is true: the setting out of guidance and detailed expectations in the price control makes regulation *more* predictable and transparent: they provide information, requirements and guidance that are not included in the licence conditions themselves. Many Associated Documents are over 30 pages long. (MZ1 §§54) The logical conclusion of WWU's arguments is either to dispense with Associated Documents entirely (which would be contrary to GEMA's expert assessment that these documents bring benefits in terms of governance, clarity, and certainty) and/or to include all such detail within the licence itself (which would render the licence unwieldy, unworkable, and inaccessible). (MZ1 §§53-59, 166**)**

241. A further misconception in WWU's Notice of Appeal is its repeated suggestion that GEMA would seek to amend Associated Documents during the price control period,

materially and without good reason. For example, at paras D3.12-13, WWU contends that Associated Documents "*can be amended by Ofgem on a unilateral basis at any time – and therefore without any of the safeguards that are available for licensees in respect of licence modifications*" such that Ofgem has "*given itself absolute discretion to change the framework and WWU's rights and obligations in relation to changes to the framework*". Similarly, at para D4.9, WWU suggests that Ofgem is "*aiming to afford itself complete unreasonable and disproportionate discretion*". These hyperbolic assertions are wrong. GEMA can amend the Associated Documents only in accordance with the process set out in the licence: that includes a 28-day consultation on any proposed changes. Further, GEMA can lawfully act only in accordance with its principal objective and statutory duties. GEMA has, in any event, laid out the framework pursuant to which it was to act, in detail, in the Final Determinations document. If a licensee considers that GEMA has acted unlawfully, all such actions are subject to the supervisory jurisdiction of the High Court and the licensee can bring an application for judicial review. (MZ1 §§56-58, 167-168**)**.

242. At para D4.6, WWU objects to the increased number of Associated Documents in RIIO-2 as compared with RIIO-1. It is true that there are more Associated Documents in RIIO-2. However:

(1) GEMA is not obliged to keep its approach static as between price controls.

(2) The increase in the number of Associated Documents is a product of the fact that there are a greater number of relevant mechanisms in the RIIO-2 price control, requiring guidance. GEMA does not agree with WWU that this creates significantly greater uncertainty than in RIIO-1. (MZ1 §184)

(3) GEMA has determined that its use of subsidiary documents is appropriate and important: they provide guidance, further clarity on requirements, transparency on how re-opener applications will be assessed, and help to ensure licensees justify any increase in their baseline allowances (in the interests of consumers). (MZ1 §§58, 183)

243. WWU also complains about the fact that not all Associated Documents have yet been finalised. This complaint is non-specific and vague. To assist the CMA, Ofgem has prepared **Table 3** to the Annex of Ms Zhu's statement, which provides an overview of all Associated Documents in the Gas Distribution sector. The CMA will observe that:

(1) Nine of these eighteen documents have already been published in final form, and fourteen out of the eighteen Associated Documents have already been published in a draft form for consultation; the remaining four are all expected to be published by the Q3 of 2021. (MZ1 §170)

(2) The licence in any event makes it clear to licensees what the purpose of each Associated Document is. For example, SpC 5.2.10-11, in relation to the RIIO-2 Network Innovation Allowance, provides for GEMA to issue and amend the RIIO-2 NIA Governance Document by Direction. SpC 5.2.13 explains:

> *The RIIO-2 NIA Governance Document will make provision about the governance and administration of the NIA, including:*
>
> *(a) the definition of "unrecoverable NIA expenditure";*
>
> *(b) the eligibility criteria, which RIIO-2 NIA Projects must meet;*
>
> *(c) the information that is to be published by the licensee before RIIO-2 NIA Projects can begin;*
>
> *(d) the circumstances in which the licensee will require approval from GEMA before beginning a RIIO-2 NIA Project, and the processes and procedures for that approval;*
>
> *(e) arrangements for ensuring that learning from RIIO-2 NIA Projects can be captured and disseminated by the licensee to other Gas Transporter licensees;*
>
> *(f) the reporting obligations in respect of RIIO-2 NIA Projects (which may include reporting in respect of the funding and the completion of such projects, and the provisions of the RIIO-2 NIA Governance Document); and*
>
> *(g) arrangements relating to the treatment of intellectual property rights in respect of RIIO-2 NIA Projects.*

(3) As explained above, Ofgem consulted specifically on its use of Associated Documents in Chapter 4 of its Informal Licence Drafting Consultation and reached a considered view on principles governing their use: see paragraph 203 above.

244. WWU's wide-ranging objection to the use of Associated Documents is therefore without merit. Associated Documents perform an important subsidiary role in providing clarity, detail and transparency as to how the price control will operate. Whether or not they have yet been published does not undermine the legality of their use.

(ii) PCFIs

245. The PCFIs have a different status to Associated Documents; indeed the PCFI itself has a unique status. (MZ1 §§136, 146)

246. As to the difference between the PCFIs change procedure for RIIO-2 as compared with RIIO-1: WWU is correct that GEMA has not continued the power that licensees previously had to veto a decision by Ofgem to use the self-modification process: see paragraph 192(5) above (cf para D4.11 of its Notice of Appeal). However, the requirement to assess the significance of a modification has not been removed. In particular, GEMA is still required to undertake the assessment specified in Part B of SpC 8.1 (Governance of the GD2 Price Control Financial Instruments), namely:

> *"8.1.3 Before initiating any modification of a GT2 Price Control Financial Instrument, GEMA will assess whether that modification would be likely to have a significant impact on any of the following persons:*
>
> *(a) the licensee;*
>
> *(b) any other Gas Transporter Licensee in whose licence a condition equivalent to this one has effect;*
>
> *(c) any person engaged in the shipping, transportation, or supply of gas conveyed through pipes or in the generation, transmission, distribution, or supply of electricity; and*
>
> *(d) energy consumers (whether considered individually, as a whole, or by reference to any class or category) in Great Britain."*
>
> *8.1.4 In making the assessment required by paragraph 8.1.3, GEMA will have regard to all relevant factors including:*
>
> *(a) any impact which an intended modification would be likely to have on any component of the licensee's Allowed Revenue or SO Allowed Revenue or on any value, rate, time period, or calculation used in the determination of Allowed Revenue or SO Allowed Revenue; and*
>
> *(b) in respect of modifications to the GT2 Price Control Financial Model, any views expressed by the GT2 Price Control Financial Model Working Group"*

247. If a licensee did not agree with GEMA's proposal to use the self-modification process, then it could respond to that effect in GEMA's consultation on its proposal. Such a consultation is mandated by SpC 8.1.7.

248. At para D4.19 of its Notice of Appeal, WWU objects to the introduction of **PCFM Guidance**, in accordance with **SpC 8.2** (Annual Iteration Process for the GD2 Price Control Financial Model).

249. However, there is no legal error in introducing this further document. The PCFM Guidance reflects a change in approach from RIIO-1, when Ofgem formally performed the Annual Iteration Process ("**AIP**") to RIIO-2, when licensees will perform the first iteration of the AIP themselves. The PCFM Guidance assists licensees in undertake this AIP exercise. It is impossible for WWU to show that GEMA has acted irrationally by deciding *not* to require the formal Statutory Modification Procedure to amend this document. (MZ1 §149)

250. WWU's suggestion that Ofgem has failed to be transparent about the use and purpose of the PCFM Guidance is, further, without merit. GEMA explained the purpose of this document in its Informal Licence Drafting Consultation in September 2020 (at para 4.55). (MZ1 §147) The PCFM Guidance was published in draft form for consultation on 12 April 2021. The final publication of the PCFM Guidance will be directed by, at latest, 1 June 2021. (MZ1 §150)

251. WWU objects on the basis that the PCFM Guidance will include requirements as to the calculation of "variable values" but those are, first and foremost, licence-driven requirements. The Guidance simply provides guidance and instructions on how to calculate those values. The PCFM Guidance further would and could not be changed without a consultation and the attendant opportunity for WWU to make representations about any proposed changes (and for the eventual decision to be subject to judicial review).

252. WWU also objects to the possibility of "conflicting provisions" arising from the interaction between the PCFM and the Guidance (para D4.26 of its Notice of Appeal). Even if that were a valid concern (which is not accepted), it is properly catered for by a clear hierarchy between the respective documents. As explained in the PCFH: (MZ1 §136)

> *"In any case of conflict of meaning between these documents, the following order of precedence applies:*
>
> *a) the relevant licence conditions*

b) the handbook

c) the RIIO-GD2 PCFM

d) Associated Documents including PCFM Guidance

e) Final Determinations…. "

253. There are, accordingly, good reasons for the approach adopted by GEMA to the PCFIs. The potential to modify the documents is carefully circumscribed as between Direction and Statutory Modification Procedure. GEMA has not erred or otherwise gone wrong such as to justify the requested, substantial intervention by the CMA with this structural framework of the RIIO-2 price control.

G. CONCLUSION

254. For all the above reasons, the Appellants have identified no good reason for their requested wide-ranging interference with the licence drafting adopted by GEMA to implement an efficient and proportionate regulatory approach for giving effect to the decisions it has reached in respect of RIIO-2. The CMA is respectfully asked to dismiss SHE-T Ground 3, SPT Ground 4, and WWU Ground D.

IV. THE CATCH-UP EFFICIENCY BENCHMARK

NB: references in the form (MW5 x) *in this section are to the fifth witness statement of Dr Michael Wagner. GEMA relies on the contents of those witness statements in full in addition to the submissions below.*

A. INTRODUCTION AND SUMMARY

255. Southern Gas Networks Plc and Scotland Gas Networks Plc (together "**SGN**") (by their Ground 4) and Northern Gas Network Limited ("**NGN**") (by its Ground 4B) challenge GEMA's decision to set the benchmark for efficient costs at the 85th percentile, with a glide path to reach that threshold over 3 years[140].

256. The efficiency benchmark represents the level of costs which GEMA considers a notionally efficient GDN should be able to achieve. In essence the appellants' complaints are that the threshold is excessively challenging[141]. GEMA accepts that such a threshold will not be easy for less efficient GDNs to achieve. It has not been GEMA's intention to set easy targets in RIIO 2. Setting a tough efficiency target is well within the reasonable scope of GEMA's regulatory discretion. It is not wrong. Instead it pursues GEMA's regulatory objectives and will benefit consumers.

257. GEMA used a process of econometric modelling, which generates totex projections for the GDNs for GD2 and which provides indications of the GDNs' relative efficiency. It has a choice about where to set the efficiency benchmark within the range of the results from the modelling process. It could for example be set at the median – i.e. at the halfway point between the least efficient GDN and the most efficient, or "frontier", GDN – or it could be set at the frontier, in which case all GDNs would be required to meet the highest benchmark of efficiency. GDNs performing behind the benchmark have their totex allowances reduced to the benchmark and are expected to "catch up" to it.

258. In FDs, GEMA determined that the efficient costs benchmark should be set not at the frontier but at the 85th percentile between the least efficient network company and the

[140] The glide path is the shift from the upper quartile, i.e. 75th percentile, to 85th percentile of the efficiency frontier.

[141] Albeit that NGN's further complaint is that such a challenge for the industry does not give enough incentive to the frontier efficient network company to make further savings: NoA, §482.

frontier network company, together with the glide path described below. This is a higher percentile than was used in the previous price control. In RIIO GD1, the 75th percentile was used.

259. Alongside setting the higher benchmark, however, GEMA also introduced a glide path whereby the efficient cost benchmark was set at the upper quartile for the first year of RIIO GD2, increasing over a three-year period to the 85th percentile, which will be the efficient benchmark for the last two years of RIIO GD2. The net result of this was that the average efficiency benchmark over GD2 is 81%.

260. SGN and NGN contend that GEMA's decision was not supported by the evidence, in particular because GEMA's model was not sufficiently robust to support an efficiency benchmark higher than the upper quartile (SGN Ground 4A and NGN Ground 4B). They further raise issues regarding the statistical testing GEMA conducted with respect to its model and allege errors and shortcomings which they say undermine the confidence that can be placed in the model. SGN raise the further discrete point that GEMA wrongly applied the efficiency benchmark to costs that had been removed from the model in order to account for regional differences (SGN Ground 4B). The appellants' grounds are premised on the contentions that (i) the sole or principal factor to which GEMA was required to have regard in setting this more challenging efficiency benchmark was its confidence in the robustness of the model and (ii) GEMA set a materially more challenging efficiency benchmark at GD2 than at GD1 or in other regulatory contexts.

261. The appellants' grounds of appeal are without merit. GEMA set the efficiency benchmark (and glide path) using its expert judgment and having regard to a range of factors. Its judgment cannot be said to be wrong on any of the statutory grounds. The principal factors which justified GEMA's decision to raise the efficiency benchmark were as follows:

    (1) GEMA was entitled to consider in its discretion that the model was more reliable than at GD1 and in any event sufficiently robust to support an efficiency benchmark at the 85th percentile with a glide path over three years. GEMA's confidence in the model was principally driven by the materially

improved data it had collected during GD2 following a series of measures introduced since GD1 to improve the quantity, quality and comparability of the data gathered from GDNs. Other factors which supported GEMA's confidence in the data included: (i) the fact that it was able to use historic data from GD1 as well as forecast data for GD2, which increased the time-series of data it could rely upon; (ii) the normalisations and pre-modelling adjustments it had made to reduce the variation between submitted costs which did not relate to efficiency; and (iii) testing which indicated that the model was robust.

(2) GEMA's confidence in the results of its model was in any event one of the range of factors which GEMA considered in exercising its regulatory judgmentas to where the efficiency benchmark should lie. Other factors included:

a. The fact that all GDNs had consistently and materially outperformed on their allowances at RIIO-GD1. This suggested that, even if the model was not materially more reliable at GD2 than at GD1, a decision to tighten the catch-up efficiency challenge was justified; and

b. The fact that all GDNs had expressed a desire in their Business Plans to operate at the efficiency level of the frontier network company.

(3) GEMA further made appropriate allowances for the inevitable imperfections in the modelling process by introducing a glide path which materially mitigated the impact of the higher efficiency benchmark.

(4) The fact that other regulators in other industries may set efficiency benchmarks at different levels does not impugn the decision of GEMA in this case. Contrary to the Appellants' assertions, GEMA's efficiency benchmark was well within the range of regulatory precedents and not materially more challenging than the benchmark set at RIIO-GD1 when considered in absolute terms. In the light of this and the other factors summarised above, it cannot be said that GEMA's efficiency benchmark is unduly challenging or unjustified.

B. BACKGROUND AND GEMA'S DECISION

(i) GEMA's decision in relation to the efficiency benchmark

262. At DDs, GEMA proposed to set the efficiency benchmark at the 85th percentile. At DD Core Document[142], it stated, "*For gas distribution companies we propose a benchmark frontier for modelled costs at the 85th percentile. We believe this is consistent with setting high but achievable expectations for GDNs' future efficiency gains, building on the improvements they were funded to deliver over RIIO-GD1.*"

263. GEMA's position represented a development from the approach it had adopted in previous price controls, including GD1, where it had set the efficiency benchmark at the upper quartile.

264. At FDs, following consideration of the responses from stakeholders, GEMA revised its position and decided to set the efficiency benchmark at the 85th percentile for the last two years of GD2, with a three year straight-line glide path[143] from the upper quartile over the first three years of GD2. It did so in order to provide "*a continuum from the level of efficient performance the GDN's committed to achieve by the end of RIIO-GD1*".[144] Its reasoning for setting the efficiency benchmark at this level, higher than the level which had been set for GD1, was in summary as follows.

265. First, GEMA noted that GDNs had consistently outperformed with respect to their allowances during GD1[145]. GEMA reasoned:[146]

> "*From a regulatory perspective, the choice of the level of benchmark efficiency is not purely an academic exercise but also needs to consider the sector's history of catch-up efficiency challenge. The 85th percentile might represent an unduly tough challenge for sectors which have not faced, achieved, and indeed outperformed, high levels of catch-up efficiency challenges before. However, this is not the case for the GDNs, which*

[142] §5.10, **[TSUB4/01]**

[143] That is, the efficiency benchmark is raised incrementally on a straight-line basis in the second, third and fourth years of the price control from the upper quartile in the first year to the 85th percentile in the fourth year.

[144] §3.25, **[TSUB4/02]**

[145] §3.25, **[TSUB4/02]**

[146] §3.32, **[TSUB4/02]**

have experienced significant efficiency gains over the previous price controls and continued outperformance in RIIO-GD1. In this respect, we consider that setting the efficiency target at the 85th percentile is not a significant increase from the 75th percentile set in RIIO-GD1."

266. The outperformance of GDNs relative to both totex allowances and the forecast costs submitted in the Business Plans in GD1 is summarised in table 1 below. It is evident that every GDN is forecast to outperform materially against GD1 allowances and against their own forecast costs. The lowest level of outperformance against actual allowances (by Cadent's East of England operator) is forecast to be 1.6%, while the highest level of outperformance (by WWU) is forecast to be 19%. The industry average outperformance compared to actual spending is forecast at 10.3%, which is nearly £2bn, while outperformance compared to their GD1 BPDT submissions is forecast at 22.6%, or £5.0bn.

Table 1: RIIO-GD1 forecast actual vs. allowed and submitted spend.

GDN		RIIO-GD1 Forecast (2019/2020 prices)						
		BPDT submissions	Adj'd Allowance[1]	Actual (forecast)	Variance - Submitted vs Actuals		Variance - Allowance vs Actuals	
		£m	£m	£m	£m	%	£m	%
Cadent	EoE	3,284	2,886	2,839	(445.6)	(13.6%)	(47.4)	(1.6%)
	Lon	3,152	2,565	2,404	(747.8)	(23.7%)	(160.3)	(6.3%)
	NW	2,520	2,152	2,055	(465.2)	(18.5%)	(97.2)	(4.5%)
	WM	1,864	1,675	1,498	(365.9)	(19.6%)	(177.2)	(10.6%)
NGN	NGN	2,543	2,238	1,960	(582.9)	(22.9%)	(277.9)	(12.4%)
SGN	Sc	2,066	1,806	1,482	(583.9)	(28.3%)	(323.5)	(17.9%)
	So	4,176	3,660	3,185	(990.6)	(23.7%)	(475.0)	(13.0%)
WWU	WWU	2,698	2,275	1,843	(854.6)	(31.7%)	(431.4)	(19.0%)
Industry		**22,303**	**19,257**	**17,267**	**(5,036.5)**	**(22.6%)**	**(1,990.0)**	**(10.3%)**

[1] Adjusted allowance - includes adjustment for Tier 2A and additional allowances for Physical Site Security, Street works (incl. forecasted), London Medium Pressure adjustment, fuel poor and Xoserve. These costs do not include PCFM policy adjustments.

267. GEMA recognised that "*some of the RIIO-GD2 mechanisms aim to mitigate outperformance*" but disagreed that "*further cost efficiency gains cannot be achieved in future.*"[147] As explained MW5 §47-55, outperformance should be possible notwithstanding the measures that have been put in place at GD2 to mitigate it (in particular the outperformance arising from the treatment of RPEs at GD1). For example, at the midpoint of GD1, it was noted that GDNs would outperform their allowances by 12% and estimated, with the data available at the time, that RPEs could account for only 4% of this outperformance[148].

[147] §3.28, [**TSUB4/02]**

[148] §4.15, **[TSUB4/03]**

268. Second, all but one GDN had expressed an ambition in their Business Plans to operate at the efficiency level of the frontier network company, which GEMA considered to be reasonable and achievable.[149] Cadent in particular said that its progress with efficiency should "*take us to the frontier*" and that "*Based on our assessment our plan is 2.2% ahead of our forecast of an upper quartile efficient level over the RIIO-2 period*"[150]. NGN stated, "*We are proud to have led the performance frontier for the Gas Distribution Networks in the UK over the last 15 years. (...) However, we believe more can be achieved. We strive to continue lifting the industry's definition of frontier performance*"[151]. SGN further stated, "*we are committed to delivering a further £76m productivity gains in GD2, a rate three times the national average forecast by the Bank of England. We believe that this will maintain our position among the most efficient network in the sector*"[152].

269. Third, although setting the efficiency benchmark marginally higher than the upper quartile represented a development from regulatory precedent, GEMA did not accept that previous regulatory decisions represented a "*hard ceiling on the potential future levels of efficiency benchmark that a regulator could reasonably choose to apply*".[153] Further, there was no academic consensus that the upper quartile should be a ceiling for the efficient costs benchmark.[154]

270. Fourth, setting a challenging efficiency benchmark aligned with the regulatory goal of ensuring monopoly companies have the same incentives to deliver efficiency saving as they would in a competitive market.[155]

271. Fifth, GEMA considered its model to be sufficiently robust to support a move to an efficiency benchmark higher than the upper quartile. Its confidence in the model was driven by: (i) appropriate pre-modelling adjustments; (ii) the increased length of time series data at RIIO GD2; (iii) improved data quality; and (iv) the good statistical performance of the regression model at FDs. Further details regarding GEMA's

[149] §3.27, **[TSUB4/02]**

[150] **[TSUB4/04]**
[151] **[TSUB4/05]**
[152] **[TSUB4/06]**
[153] §3.27, **[TSUB4/02]**

[154] §3.31, **[TSUB4/02]**

[155] §3.33, **[TSUB4/02]**

modelling process and the factors which drove its increased confidence in the model are set out below.

(ii) <u>The overall level of GEMA's efficiency benchmark</u>

272. GEMA's econometric modelling generated modelled costs for each network company which are then compared with the network company's (adjusted) submitted costs forecasts to generate an efficiency score. The efficiency score is the ratio between the forecast and the modelled costs. For instance, if the modelled cost for a network company is £100m and the submitted forecast cost is £95m, the efficiency score is 0.95 or 95%. An efficiency score higher than 1 (or 100%) signals a network company's relative inefficiency, while an efficiency score lower than 1 points to relative efficiency compared to the average. The efficiency benchmark is then set at a particular point within the distribution of the network companies' efficiency scores, such as the upper quartile (i.e. the point ¾ of the distance as measured from the second ranked network company to the third ranked network company). Table 2 below shows the efficiency score of each GDN at FDs, together with the level of efficiency challenge at the 75th and 85th percentile. It reveals that the difference between the 75th percentile and the 85th percentile is relatively small (0.18%).

Table 2: RIIO-GD2 Final Determinations efficiency scores.

GDN	**FD - Efficiency Scores**
NGN	92.23%
WWU	96.61%
85th percentile	96.63%
75th percentile	96.81%
NW	96.87%
EoE	96.96%
Sc	98.33%
WM	98.99%
So	104.78%
Lon	108.59%

273. Although GEMA sought to set a challenging efficiency benchmark, following consideration of the responses received from consultees in response to DDs, it decided at FDs to introduce a glide path to the 85th percentile which further reduced the difference between its chosen efficiency benchmark and the upper quartile. GEMA was conscious that, with that glide path, the level of the efficiency benchmark was not materially higher than it would be if the upper quartile had been used. As further explained MW5 §73, the strength of the efficiency challenge in absolute terms will vary according to the distance between the benchmark and the industry average level of efficiency. Accordingly, it will depend on: (i) the dispersion of efficiency score; (ii) the position of particular network companies within the dispersion; and (iii) the percentile chosen. As Dr Michael Wagner explains, as a result of the dispersion of efficiency scores at GD2, the strength of the challenge implied by the efficiency benchmark at GD2 is in fact materially similar to that which would be implied by use of the upper quartile. Moreover, it is similar to that used at GD1 (and, in relation to some models used at GD1, *less* challenging) and sits well within the range of regulatory precedents.

(iii) GEMA's modelling at RIIO 2

274. This section sets out a summary of certain key inputs into and steps in GEMA's cost assessment process at GD2 which are necessary for an understanding of why GEMA

had sufficient confidence in the robustness of the model to support its efficiency benchmark.

Data quality measures

275. At the initial stage of the cost assessment process, GEMA collected data from GDNs through: (i) the Business Plans submitted by the network companies; (ii) the Business Plan Data Templates; and (iii) the supplementary question (SQ) process, whereby GEMA asked network companies for further information or clarification in respect of the data they had submitted.

276. The quality, detail and comparability of the data which GEMA collected for the purposes of the GD2 cost assessment process was a key material distinction from the situation which had pertained at GD1, when the relevant measures which were aimed at improving data quality were not yet in place. In summary, and as further explained at MW5 §57-61, the relevant measures were as follows.

(1) GEMA introduced Regulatory Instructions and Guidance ("**RIGs**") which provided a framework for the collection of data from the GDNs during the RIIO-GD1 period in a consistent format. The RIGs informed GDNs of the data which GEMA wished to collect and the level of detail required and provided guidance on how it should be gathered and reported. The RIGs have improved the consistency of the reported data and so increased the accuracy of the benchmarking.

(2) At the GD1 price control, GEMA introduced Standard Licence Condition ("**SLC**") A55, a licence condition concerning data quality. SLC A55 requires licensees to undertake data assurance activities such as internal expert reviews and external audits to reduce and manage the risk of incomplete or inaccurate reporting to GEMA. The increased assurance in relation to data collected during GD1 has improved GEMA's confidence in the reliability of that data.

(3) GDNs were required to publish annual reports for the first time during GD1, giving details of their performance against agreed outputs and incentives and their overall financial performance. These annual reports undergo internal and

external quality assurances and are available to the public. Accordingly, they materially improve transparency between the GDNs and give GEMA greater confidence in the data which it gathers from them.

(4) In relation to the data gathered for GD2, GEMA undertook an extensive and iterative process of raising supplementary questions in relation to the information contained in GDNs' Business Plans. In total, GEMA asked over 1,000 questions on policy, engineering and costs aspects of GDN submissions. In doing so, it gathered significant further information and a better understanding of the GDNs' data. This fed into increased confidence in the pre-modelling normalisation of GDNs' costs (see further below).

277. The result of these measures was that GEMA had a high degree of confidence in the data which was inputted into its regression analysis (as to which see further below). Improved data was apt to lead to more robust results.

Pre-modelling normalisation and adjustments

278. Prior to modelling, GEMA undertook pre-modelling data normalisation and adjustments. For example, GEMA made adjustments to submitted costs to account for regional factors (such as urbanity or sparsity) and to strip out embedded assumptions of ongoing efficiency, which varied from network company to network company. The purpose of the pre-modelling adjustments was to: (i) "*to ensure comparability between GDNs, which is crucial for a robust benchmarking analysis*"; and (ii) "*to remove costs that we do not consider have been justified during our review*".[156] In summary, GEMA undertook the following normalisations, which it considered to be appropriate and to ensure comparability between the GDNs submitted costs:[157]

(1) GEMA removed from each GDNs' submitted costs the company's assumption of its ongoing efficiency (i.e. the amount by which it considered the notionally efficient GDN would be able to reduce costs year on year through productivity

[156] §3.21, **[TSUB4/02]**

[157] §1.7-1.15, **[TSUB4/07]**

improvements, and so excluding any catch-up efficiency). This assumption was referred to as the "embedded ongoing efficiency".

(2) Exclusions were made for historical costs which were previously classified as controllable costs but are now classified as non-controllable costs (e.g. Xoserve, PPF Levy costs). Moreover, GEMA excluded capex relating to historical large projects (above £5m), in order to align with its approach for forecast large projects, and maintain a consistent dataset over the 13-year period. It also excluded pass-through items and costs it proposed to be subject to an uncertainty mechanism.[158]

(3) Volume related adjustments were made to specific cost activities that did not satisfy a needs case, such as asset management repex programmes which did not meet GEMA's Cost Benefit Analysis payback criteria.

(4) Reclassifications were made where GEMA considered that a GDN reported certain cost activities incorrectly or differently to the majority of GDNs.

(5) GEMA removed certain costs for separate assessment, in particular technical assessment or non-regression assessment. Costs removed in this way included costs relating to large capex projects, street works, repex diversions and similar categories.[159]

(6) In order to ensure comparability between GDNs, GEMA applied pre-modelling adjustments to submitted totex costs to reflect differences in regional labour, urbanity and sparsity. These adjustments reflected the fact that the costs of operating in different areas inevitably varies (for example, because labour costs in London are higher than in other parts of the country), and allowed for a range of network company specific factors to be reflected in the modelling.

Regression analysis

[158] § 1.9, [**TSUB4/07]**
[159] § 1.12, [**TSUB4/07]**

279. Following the above pre-modelling adjustments, GEMA undertook econometric regression analysis in order to model costs for each GDN for GD2. In simple terms, the regression analysis seeks to estimate the relationship between a cost driver[160] and totex. It does so by fitting a "line of best fit" between the dependent variable (totex) and the explanatory variable (the cost driver).

280. The reliability of the estimates of the relationship between totex and costs drivers which are generated from the regression analysis will be improved if: (i) there is a greater amount of input data on totex and costs drivers (i.e. there is a larger sample size); and (ii) the quality of the data is improved. Two features of the model set out below are relevant for present purposes.

281. First, the model used 13 years of cost data: 7 years of historical data from GD1; and 6 years of forecast data from GD2. This represented a material increase in the length of time series data from GD1, where GEMA was able to use only four years of historical data (2008-2009 to 2011-2012) and two years of forecast data (2013-2014 and 2025-2026). Not only did GEMA have a longer time series of data at GD2, but, for reasons given at §§276-278 above, it also had a higher degree of confidence in the quality of data it received from GDNs and the comparability of that data.

282. Second, GEMA adopted a single top-down model with a composite scale driver (CSV):

    (1) A single top-down model represented a different approach from the approach GEMA had adopted at GD1, where GEMA had used both top-down and bottom-up models which were then combined using equal weight. GEMA considered that "*that using a single top-down model better accounts for cost complementarities, trade-offs and potential reporting inconsistencies between GDNs than alternative approaches*".[161]

    (2) The use of a CSV was a pragmatic means of incorporating relevant costs drivers notwithstanding the limits to the sample size imposed by the fact that there

[160] For a description of a cost driver please see the First Witness Statement of Dr Michael Wagner on the cost assessment in gas distribution sector [MW1].
[161] §1.18, **[TSUB4/07]**

were only 8 GDNs. In this respect, GEMA noted that *"the inclusion of a relatively high number of drivers in the model specification is normally not considered appropriate from an econometric perspective. However, missing out relevant drivers of costs might limit the explanatory power of the model itself. A way to conveniently address this issue is to use a composite scale variable"*.[162] The CSV is the weighted average of different drivers. It ensures a parsimonious model (i.e. a single driver) while incorporating as much information as possible.

Testing the results of the regression analysis

283. GEMA further carried out various tests of its modelled results in order to verify the robustness of the model. These were:

(1) GEMA considered the range and distribution of efficiency scores which were generated by its regression analysis. If the analysis had produced a very wide range of scores, this might indicate that it was not credible. Equally, if there were clear outliers, this might indicate that relevant drivers had been omitted from the regression analysis. GEMA noted that the range of efficiency scores at FDs was 0.19, which was a substantial decrease from the DDs range of 0.28. GEMA stated that this confirmed that *"the methodological changes made following stakeholders' responses and additional analysis has resulted in an increased robustness of our approach"*.[163]

(2) An adjusted R^2 test. The R^2 is a statistical measure of model fit which indicates how much variation of a dependent variable (totex in this case) is explained by the independent variable(s) (totex CSV in this case) in a regression model. A higher R^2 score (i.e. one close to the maximum score of 1) indicates that more of the observed variation is explained by and captured in the independent variables in the model. GEMA stated in December 2020 that *"Model fit of our model (OLS1) is good, as the adjusted R2 is 0.918 (higher compared to the Draft Determinations model, which showed an adjusted R2 of 0.865)."*[164] In the revised

[162] §1.26, [**TSUB4/07]**

[163] §1.72, [**TSUB4/07]**

[164] §1.55, [**TSUB4/07]**

version of FDs published in February 2021 following error correction, GEMA further noted an improvement in the adjusted R^2 stating that, "*a higher R-square indicates that our regression line explains a higher proportion of the variation (up to 92.7%)*".[165]

(3) Statistical tests (including: normality; heteroskedasticity; pooling; and RESET). Each of these is explained in further detail at MW5 §67-68.[166]

(4) Alternative specification testing (explained in further detail at MW5 §68).[167]

(5) Sensitivity tests, including removing individual years or GDNs. GEMA noted that, "*The removal of any year from the sample size resulted in substantially unchanged regression estimates in terms of both magnitude of the estimated coefficients (between 0.782 and 0.792) and model fit*".[168]

(6) Ensuring that the final totex model was robust to different estimation techniques, namely a Random Effects estimator and a Stochastic Frontier Analysis (explained in further detail at MW5 §69[169]).

C. RESPONSE TO GROUNDS OF APPEAL

284. The appellants contend principally that:

(1) In determining whether or not to raise the efficiency benchmark, GEMA should have had regard solely or principally to the robustness of the model (SGN NoA, Section 7.4.1; NGN NoA, §§474-479). GEMA erred in placing reliance on other

[165] §3.31, **[TSUB4/02]**

[166] §§1.57-1.59, [**TSUB4/07]**

[167] §§1.60-1.61, [**TSUB4/07]**

[168] §1.62, [**TSUB4/07]**

[169] §§1.64-1.66, [**TSUB4/07]**

factors such as the GDNs' past outperformance in GD1 (SGN NoA, Sections 7.4.5-7.4.6).

(2) GEMA's model was not sufficiently robust to support raising the efficiency benchmark from the upper quartile to the 85th percentile with a three-year glide path.

285. Each of these principal contentions is addressed in turn below.

(i) <u>GEMA took into account a range of factors in determining the efficiency benchmark and was entitled to do so</u>

286. The reasons why GEMA determined to set the efficiency benchmark at the 85th percentile with a three-year glide path are summarised above at §§264-271. In addition to considering that the model was sufficiently robust to support a higher efficiency benchmark, GEMA relied on: (i) the improved quality of the data it had collected over GD1; (ii) the fact that GDNs had outperformed at GD1; (iii) the express intentions of all GDNs to operate at the efficiency level of the frontier network company; (iv) the fact that there was no academic or regulatory consensus that the upper quartile represented a "hard ceiling"; and (v) the need to ensure that regulated network companies had the same incentives to improve efficiency as would exist in a competitive sector. As explained at §273 above, GEMA was also conscious that the overall level of the efficiency benchmark in absolute terms was not significantly higher than that which would be implied by a benchmark at the upper quartile and GD1.

287. At §§549-557 of its NoA, SGN refers to a range of regulatory precedents from which it seeks to derive the principle that *"the efficiency benchmark should recognise limitations in model robustness"* (see further NGN NoA, §§469-473). GEMA does not dispute the broad principle that the robustness of the model is one of the factors which should be considered in determining the efficiency benchmark: differences in costs between GDNs may be driven by statistical noise (i.e. unexplained variability in the data) which does not relate to relative efficiency. GEMA properly had regard to this factor and, for the reasons given below, correctly considered that the model was sufficiently robust to support its decision. However, the choice of the efficiency benchmark amounted to an exercise of regulatory judgment which followed consideration of a wide range of factors

beyond solely the robustness of the model. GEMA was lawfully entitled to take that wide range of factors into account. Of particular relevance was the fact all GDNs had materially outperformed during GD1. GEMA was therefore concerned in the interests of consumers to set a challenging efficiency target in GD2 which would not be easily outperformed.

288. None of the regulatory precedents to which SGN and NGN refer suggests that it was illegitimate for GEMA to have taken into account these further factors, or that the upper quartile was the only option lawfully open to GEMA. For the reasons given above at §273, when the distribution of efficiency scores is considered, GEMA's efficiency benchmark was well within the range of regulatory precedents and the challenge implied by one of the models used at GD1.

289. Further and in any event, as to the CMA's Provisional Findings in PR19:

(1) The CMA listed various factors which might be relevant to the setting of the efficiency benchmark at §4.295 (e.g. the fact that the absolute level of the efficiency challenge had fallen during PR19).

(2) Although the CMA decided to place *"little or no weight"* on these factors and instead to focus on *"whether there had been substantial improvements in the econometric modelling"* (§§4.294-4.295), it ultimately decided (emphasis added): "*Taking these factors into account, we provisionally decide that the upper quartile is the appropriate level of the efficiency benchmark, as this balances our objective of setting a challenging benchmark while acknowledging the limitations of the econometric modelling (and the consequent risk that the company will have insufficient allowed revenue to ensure a base level of service).*"

(3) It is therefore clear that the CMA took into account the need to set a challenging benchmark in addition to the limitations of its modelling.

(4) Although the CMA stated that the *"evidence of past performance"* did not *"itself justify a tougher efficiency challenge"*, this was in the context of *"relatively modest underspend"* of 1.4% the causes of which were not clear. The CMA's observations cannot be readily transferred to a different price control using a

different model in a different sector, in which previous outperformance had been at much higher levels. For the reasons given above at §266: (i) the forecast outperformance of the GDNs against GD1 allowances is 10.3%, far in excess of the "*modest underspend*" of 1.4%; and (ii) although some of this outperformance can be attributed to factors (such as the RPE allowances) which have been corrected for GDN, this does not account for all outperformance, and it is reasonable to assume that further efficiency improvements will be possible at GD2 (see further MW5 §47-55).

290. At §§582-586 of its NoA, SGN contends that GDNs' past outperformance during the GD1 price control period does not justify adopting the 85th percentile benchmark. NGN makes a similar argument at §479 of its NoA. This contention is misplaced:

(1) SGN refers again to the CMA's comment in its PR19 Provisional Findings that *"We found that it was more appropriate to set the efficiency challenge based on our assessment of the quality of the econometric modelling, rather than to seek specific outcomes"* (§4.295).[170] The quote is taken out of context, however. The CMA was not saying that it was illegitimate to have regard to previous outperformance; rather, it was referring to the fact that Ofwat had during PR19 sought to increase the efficiency benchmark because it had fallen throughout the various stages of PR19. The CMA considered that modelling robustness was a more important consideration than targeting a specific cost reduction. Ofwat's position at PR19 was different to GEMA's objective of raising the challenge compared to a previous price control. The CMA's reasoning on this point in its PR19 Final Report is very similar (§4.493).

(2) SGN contends that there were a number of drivers of outperformance at GD1 which have been removed for GD2, including RPEs allowances, innovation during GD1, and the IQI interpolation mechanism, and that it is wrong for GEMA to assume that GDNs will be able to outperform again (NoA, §§585-586). However, as explained above at §267, the fact that GEMA has taken steps to mitigate previous outperformance does not mean that efficiency

[170] SGN NoA, §584

improvements – including improvements enabling network companies to catch up to the benchmark – will be impossible in the future. Furthermore, as explained at MW5 §50: (i) certain GDNs themselves had asserted efficiency gains played a part in achieving the outperformance at GD1; and (ii) at the midpoint of GD1, GEMA projected that RPEs would account for only 4% of an outperformance forecast to be 12%.

291. At §587, SGN seeks to challenge GEMA's reliance on the GDNs' stated ambitions, the CMA's provisional decision in PR19, academic literature and regulatory principles, principally on the basis that GEMA's modelling was not sufficiently robust. GEMA's assessment of its modelling is addressed below at §§292-308. Further, GEMA was entitled to have regard to the fact that the GDNs themselves had indicated a desire to improve efficiency and operate at the level of the frontier. This consideration did not *"fall away"* in circumstances where there might be doubts about which GDN represented the frontier.

(ii) <u>The robustness of GEMA's model</u>

292. The appellants raise a series of criticisms of GEMA's modelling process and the confidence which can reasonably be placed in its results. In particular:

(1) There are inherent limitations in GEMA's modelling in that the sample size is limited to 8 GDNs (SGN NoA, Section 7.4.2; NGN NoA, Section 4.2.2);

(2) Statistical testing does not provide evidence of an improvement in model robustness capable of supporting a move to the 85th percentile (SGN NoA, Section 7.4.3; NGN NoA, §§476-478); and

(3) There are data input/model calculation errors, procedural shortcomings and data quality issues affecting GEMA's modelling which undermine the confidence that can be placed in its results (SGN NoA, Section 7.4.4; NGN NoA. §475).

293. Each of these contentions is without merit for the reasons given below.

Alleged limitations arising from the sample size

294. At §§559-563 of its NoA, SGN raises a series of arguments concerning alleged inherent limitations in GEMA's modelling process.

295. First, SGN contends that cross-sectional variation is limited insofar as there are only 8 GDNs in GEMA's sample (NoA, §560(i)). Although it is correct that GEMA's cross-sectional sample of 8 GDNs has not increased from GD1 to GD2 and that this in principle places a limitation on the model, SGN is wrong to contend that there has not been an increase in GEMA's overall sample size. Whereas, at GD1, GEMA was able to base its modelling on only six years of data, at GD2, GEMA was able to rely on 13 years of data (seven years of historical data and six years of forecast data). On any view, this represented an increase in length of time series data to input into the model, which enabled it to better capture the relationship between costs and cost drivers over time and which GEMA was therefore entitled to consider made some contribution to its robustness. GEMA's confidence was further justifiably increased by the improved data which it collected through the business plan and supplementary questions procedures (as explained above at §276).

296. Second, SGN contends that (i) there is a limit on the amount of additional variation which additional years of data can add, (ii) the combination of historical and forecast data in a single model raises further issues of model robustness and (iii) there is inherent uncertainty and risks surrounding cost forecasting (NoA, §560(ii)). As to these arguments:

(1) GEMA accepts that the cross-sectional sample of 8 GDNs places a limitation on its model which further years of data cannot entirely overcome. It is nevertheless correct to say that further years of data should increase the accuracy of the modelled results and are apt to improve confidence.

(2) GEMA denies that using a mix of historical and forecasting data "*raises further issues of model robustness*".[171] Although SGN has not explained this argument in proper detail, GEMA understands it to contend that combining real world

[171] SGN NoA, §560(ii)(b); Frontier Catch-Up Efficiency Report, §4.3.25

outcomes in the form of historical data with forecast data can create issues in the form of (i) the inherent uncertainty surrounding historical data and (ii) the possibility of network companies adopting different approaches to forecasting which may raise concerns as to the comparability of the data. As to these arguments:

a. As to (i), although it is correct to say that there is inevitable uncertainty surrounding forecast data, it does not follow that no reliance can be placed on it. The Frontier Catch-Up Efficiency Report accepts that *"Forecast data can potentially enhance the regression by providing helpful information about expected changes in future costs"* (§4.3.23). SGN itself further agreed in its response to DDs with the use of forecast data as follows: *"We broadly agree with Ofgem's regression approach in terms of selected aggregation level, estimation technique and time period. Ofgem should utilise the data it has available from across the RIIO-GD1 period to provide a sense-check on the viability of forecast data"*[172]. GEMA also placed reliance on forecast data at RIIO-ED1.

b. GEMA's use of six years of forecast data was further counter-balanced by its use of 7 years of historic data.

c. GEMA presented and discussed the estimation results using alternative time periods with GDNs in the Cost Assessment Working Groups.

d. Before FDs, GEMA tested how the model would perform with only historical data (2013-2019) and only forecast data (2020-2026). In both cases, it performed acceptably well and similarly to the model when using both historical and forecast data, with a high R-squared score and similar CSV coefficients[173].

297. Third, SGN contends that the 85th percentile efficiency score is "*overwhelmingly driven*" by the efficiency score of the second ranked network company, which exacerbates the

[172] [**TSUB4/08]**
[173] The FD step-by-step guide presents the modelling outcomes when GEMA considered different time periods. §1.56, [**TSUB4/07]**

problem that small fluctuations in one network company's efficiency score can significantly impact allowances for the whole sector (NoA, §561). SGN is correct that the 85th percentile efficiency score is driven by the performance of the second-ranked network company. However, given that the cross-sectional sample is limited to 8 GDNs, the efficiency benchmark would be strongly influenced by the closest-ranked network company wherever it was set. Accordingly, this cannot itself amount to a reason why selecting the 85th percentile was inappropriate. Further and in any event, GEMA mitigated this issue by implementing a glide path from the upper quartile in the first year of GD2 to the 85th percentile in the last two years of GD2.

298. Fourth, SGN contends that the small sample size places a limit on the number of explanatory variables that can be included in the model and that GEMA's solution – a single CSV – is unlikely to capture all of the wider reasons for differences in costs across the GDNs (NoA, §561). For the reasons explained above, the use of a CSV was a practical solution which allowed GEMA to use a rich set of information (i.e. the same costs drivers that were tested for the bottom-up models in GD1) notwithstanding the limited cross-sectional sample. The model included several scale and workload variables and captured the relevant drivers of the different cost activities. It does not follow from GEMA's use of a CSV that relevant costs drivers were omitted. SGN's argument amounts to little more than an argument that GEMA's model would be better if it had a materially larger cross-sectional sample, which allowed it to include more variables.

299. At §§476-478 of its NoA, NGN makes the similar point that at PR19, the CMA used multiple models, each of which had a high R-squared value, and nevertheless selected an upper quartile target. For the reasons explained, however, the robustness of the model is not the sole or principal factor to which GEMA was required to have regard in selecting the efficiency benchmark. Further and in any event, GEMA's model showed a strong statistical performance, and overall results were cross-checked with targeted bottom-up testing before FDs. The approach taken by the CMA in the different circumstances of PR19 cannot be translated straightforwardly to GD2.

Statistical testing

300. At §§564-569 of its NoA, SGN contends that GEMA has inappropriately relied on the improved performance of its model between DDs and FDs and that the appropriate comparison was between the performance of the model at GD2 compared to GD1. SGN further contends that the relevant comparison reveals that the range of efficiency scores at GD2 is wider than at GD1, suggesting that "*there should be less confidence in increasing the efficiency challenge*" (§565). GEMA rejects this suggestion for the following reasons.

301. First, SGN is wrong to contend that a comparison between the performance of the model at FDs and DDs is not relevant. The improved performance of the model at FDs compared with DDs indicated that GEMA had refined the quality of the model and data on which it was relying. This factor, along with its revised proposal to use a glide path, gave GEMA comfort that its efficiency benchmark was appropriately challenging but realistic.

302. Second, as to the contention that the GD2 model is less robust than that used at GD1 (NoA, §566), GEMA rejects the premise that it would only be permissible to raise the efficiency benchmark in circumstances where it was confident that the model had materially improved since GD1. First, for the reasons given above, GEMA's confidence in the model was only one of a range of factors to which it correctly had regard in selecting the efficiency benchmark. Second, the efficiency benchmark was not significantly more challenging than that used at GD1 and was well within the range of regulatory precedents. Third, GEMA legitimately had much greater confidence in the quality and detail of the data which it had gathered in the GD2 process, which improved its confidence in the model for the reasons given above. Fourth, and in any event, GEMA denies that the GD2 model was less robust than that used at GD1. When the confidence intervals of cost predictions of RIIO-GD1 models against those of the RIIO-GD2 model are compared, the RIIO-GD2 model looks on average more accurate. (see MW5 §93).

303. Third, SGN refers to comments made in June 2019 by GEMA's consultant, CEPA, in its RIIO 2 Cost Assessment Report and by GEMA itself in its Cost Assessment Consultation and contends that the move to the 85th percentile is "*contrary to the criteria set by GEMA itself*" (NoA, §569). This contention is without merit. The extracts from the Cost Assessment Consultation to which SGN refers state, "*our choice of benchmark will be driven by our level of confidence in the data and the variability in the modelling results*". For the

reasons given above at §§274-283, GEMA had confidence in the data and in the variability in the modelling results.

Alleged data input / model calculation errors, procedural shortcomings and data quality issues

304. At §§570-584, SGN raises a series of arguments in relation to the confidence which can be placed in GEMA's model, contending in particular: (i) there were spreadsheet, data input and calculation errors following DDs and further errors following FDs (§§571-575); (ii) there were *"a number of procedural shortcomings suggesting insufficient internal quality assurance in the preparation of GEMA's modelling suite"* (§576); and (iii) data quality issues have arisen which case doubt on GEMA's assertion that this has improved (§§579-580). NGN similarly argues at NoA, §475, that there were errors with the totex model which undermine the amount of confidence which can be placed in it.

305. As to the alleged errors, GEMA denies that these are capable of undermining the confidence which can properly be attached to the model. The fact that errors were detected and subsequently corrected following DDs (which, as explained at MW5 §95 is a normal part of any price control) on the contrary demonstrates the efficacy of the quality assurance process which GEMA undertook and so justifies further confidence in the model. Although GEMA cannot rule out the possibility that further errors remain in such a complex modelling suite, it considers that the effectiveness of the error correction process hitherto should enhance its confidence rather than undermine it. SGN further contends that *"allowances have been misallocated between expenditure pots"*. The relative allocation of expenditure pots did change post-FDs to accurately reflect Network Asset Risk Metric (NARM) outputs, and these changes will be picked up in standard housekeeping licence modifications – a standard practice in all price controls. In any event this does not affect the licensees' overall totex and so does not undermine confidence in the model for present purposes.

306. As to the alleged procedural shortcomings:

(1) GEMA denies that there was any material procedural deficiency in relation to its modelling suite. The GDNs were given ample opportunity to scrutinise the model and did so.

(2) SGN's complaints at NoA, §577, principally concern the identification of errors. For the reasons given above, the fact that such errors were identified indicates that GDNs had sufficient opportunity to interrogate the model and bring errors to GEMA's intention.

(3) Further and in any event, any procedural shortcomings of the kind described by SGN would themselves be insufficient to impugn GEMA's confidence in the model.

307. As to the alleged data quality issues, for the reasons given at §276 above, GEMA was entitled to consider that the data it had gathered during the GD2 process was materially better than that which was available to it at the start of RIIO GD1. SGN refers to two discrete alleged data issues at NoA, §§579(i)-(ii). As noted by SGN, GEMA corrected the issue identified in NoA at §§579(i). As to §§579(ii), GEMA's approach to regional factors best endeavours to capture regional differences in labour costs. More details to GEMA's approach to regional factors can be found in the Seventh Witness Statement of Dr Michael Wagner.

The glide path

308. Finally under Ground 4A, SGN seeks to dismiss the relevance of GEMA's glide path, contending that the "*average efficiency benchmark remains well above the upper quartile*" and that the 85th percentile will be used for the last two years of the price control (§588). Nevertheless, the effective efficiency benchmark which GEMA selected is materially lower than the 85th percentile – the glide path in fact reduces the average efficiency benchmark to 81% on average. For all the reasons given above, GEMA was lawfully entitled to set the efficiency benchmark at that level in the exercise of its regulatory discretion.

(iii) Application of the efficiency benchmark to pre-modelling adjustments

309. By its Ground 4B, SGN contends that GEMA has wrongly applied the efficiency benchmark to pre-modelling adjustments for regional factors. SGN so contends on the basis that GEMA has acknowledged that such factors are outside a network company's

control, and it is therefore "*erroneous in principle*" and "*internally inconsistent*" to apply any cut to such costs[174].

310. This ground is without merit: As further explained at MW5 §§97-106:

(1) Although some aspects of the environment in which a network company operates are not fully within its control (such as geography), GEMA is still entitled to expect the network company to make efforts to mitigate any additional costs due to the operating environment.

(2) There is nothing erroneous in principle in this approach, nor is it internally inconsistent. Regional adjustments represent a proportional uplift on network companies' costs related to operating in a higher cost region (due to labour costs, sparsity or urbanity); they do not reflect a cost which is entirely outside a network company's control and which is incapable of any mitigation. For example, a network company facing higher labour costs as a result of operating in London may nevertheless be able to achieve efficiencies by doing work using less labour, or by improving its total expenditure by adopting working practices that counteract the effect of working in an urban operating environment.

(3) On the contrary, it would be inappropriate in principle to apply a narrower efficiency challenge. GEMA considers that GDNs should take steps to mitigate costs even where they are not fully within their control.

(4) The purpose of regional factor adjustments is to adjust modelled industry average costs by an estimate of the additional costs that the averagely efficient network company would face when operating under particular conditions. It is therefore right and consistent that GEMA applies the same catch up efficiency challenge to the adjusted modelled cost – in line with our approach to other elements of modelled costs.

[174] NGN, §§590-591

(iv) Alleged limitation of the benefits for the frontier network company under the BPI Stage 4

311. Finally, NGN raises the argument that GEMA's efficiency benchmark is overly stretching and therefore limits the benefits for the frontier network company through its interaction with the BPI Stage 4 incentive (NoA, §§480-482).

312. This argument is without merit:

(1) NGN's argument amounts to no more than a disagreement with the rewards it received through the BPI. NGN merely observes that "*setting an overly challenging efficiency cost benchmark therefore reduces the benefit for the frontier company*" and "*there is limited benefit from the frontier position in the sector*" (NGN NoA, §§481-482). It does not identify any error in GEMA's approach.

(2) Further and in any event, NGN's argument is premised on the incorrect contention that the purpose of the BPI was to reward the frontier company. GEMA acknowledge that the choice of the efficiency benchmark had an impact on NGN's BPI Stage 4 reward. However, the purpose of the BPI was to incentivise ambitious and high-quality business plan submission rather than rewarding the frontier network company for its performance during the price control period.

D. MATERIALITY

313. Further or in the alternative to the submissions set out above, the CMA is invited to dismiss NGN's and SGN's grounds in relation to the efficient cost benchmark on the basis of low materiality:

(1) On SGN's case, the impact of GEMA's decision in relation to the efficient cost benchmark (i.e. the decision not to use the upper quartile) is only £2.8m: Notice of Appeal, §525. This is 0.08% of its FD totex allowance.

(2) On NGN's case, the impact of GEMA's decision in relation to the efficient cost benchmark is only £1.47m: Notice of Appeal, §396(ii). This is 0.12% of its FD totex allowance.

(3) The impact of not using the upper quartile as the efficient cost benchmark across all GDNs is estimated to be c. £7.5m. This is only around 0.08% of all totex allowances.

(4) In relation to its Ground 4B, SGN alleges an impact of £4.3m: Notice of Appeal, §525. This is only 0.16% of its FD totex allowance.

(5) Neither appellant has identified any clear and obvious factual error which should be corrected notwithstanding the very low materiality. On the contrary, the selection of the efficient costs benchmark amounted to the exercise of regulatory judgmentand discretion. GEMA cannot be said to have materially erred by choosing one from a range of reasonable regulatory options.

E. CONCLUSION

314. For all the reasons given above, GEMA denies that there has been any error or illegality in its approach to the efficient costs benchmark, or that its decision was inadequately evidenced. Further or in the alternative, the errors alleged are not sufficiently material to warrant the CMA's intervention. The CMA is invited to dismiss SGN's Ground 4 and NGN's Ground 4B.

V. LTS RECHARGEABLE DIVERSION COSTS

NB: references in the form (MW6 x) *in this section are to the sixth witness statement of Dr Michael Wagner. GEMA relies on the contents of this statement in full in addition to the submissions below.*

A. INTRODUCTION

315. The Local Transmission System (**"LTS"**) is the high-pressure tier of the gas distribution network. One component of GDNs' overall totex allowances is for **"LTS Diversions"**, i.e. where existing pipelines are decommissioned and replaced with a new LTS pipeline in a different location. LTS Diversions costs are either recovered from third parties requesting the diversions works (**"rechargeable"** costs) or from all consumers through network charges (**"non-rechargeable"** costs).

316. In outline, Cadent challenges GEMA's decision to perform the efficiency benchmarking analysis of regressed LTS Diversions costs on a *gross* basis (i.e. all costs incurred by the GDN), rather than a *net* basis (i.e. deducting from the costs incurred by the GDN those costs recovered from third parties). The effect of GEMA's decision is that both rechargeable and non-rechargeable costs are included in the econometric model in order to assess the overall efficiency of the GDN in question. Cadent argues that the cost driver used in the regression (scale variable "modern equivalent asset value" ("MEAV")) does not adequately explain LTS *rechargeable* diversions costs and so those costs should be excluded from the regression. Cadent also claims that, because it will incur unusually high rechargeable costs as a result of factors outside its control over the price control, GEMA's approach unfairly penalises and discriminates against it and distorts the efficiency benchmarking analysis. Cadent therefore contends that GEMA should have omitted rechargeable costs from the model entirely.

317. GEMA considers for the reasons set out below that the Cadent's challenge is flawed and that using gross costs for the efficiency analysis was reasonable and appropriate. The use of MEAV does not undermine that analysis and there is no discrimination against Cadent.

316. As explained further below, in the course of reviewing the price control assessment in the light of Cadent's appeal, GEMA has identified a specific issue requiring

modification in its approach to rechargeable costs, which it considers is sufficiently connected to the subject matter of Ground 1A that it can appropriately be corrected through this appeal process.[175] In short, GEMA considers that, when excluding identifiable atypical capex projects from the regression analysis, GEMA should have applied a £5m materiality threshold on a gross basis, rather than a net basis. Applying the threshold on a gross basis will lead to the exclusion of various large projects from the regression, thereby ensuring consistency with the purpose of the materiality threshold and best ensuring that regressed LTS diversions costs are comparable across GDNs. Subject to, and in part *because of*, this modification, it is respectfully submitted that Cadent's ground of appeal should not be allowed.

317. On Ground 1A, Cadent simply disagrees with GEMA's exercise of its expert regulatory judgment in determining an appropriate way to carry out efficiency assessments and how it treats rechargeable LTS Diversions costs in its modelling. Cadent fails to demonstrate that GEMA was *wrong* in its approach. In any event, the criticisms that Cadent makes of the approach adopted by GEMA are without merit:

(1) It was appropriate for GEMA to have included *gross* costs in the regression analysis rather than *net* costs: (i) GDNs' overall efficiency is best assessed on the basis of all costs incurred by networks, regardless of how these costs are funded; (ii) GEMA's approach ensured the effective operation of the top-down model, in particular by ensuring that opex-capex "trade-offs" were captured; (iii) regressing net costs risks distorting the relationship between the costs and cost drivers in the model; (iv) GEMA acted fairly and consistently in regressing all costs on a gross basis; (v) any volatility caused by variable LTS Diversions costs was addressed through a combination of: use of a long timeframe, a 7-year rolling average, and exclusion from the regression of large historical capex projects and identified atypical projects which were "*uncommon across the networks, lack historical comparators, or are highly unique*" and of a value above £5m;[176] and (vi) GEMA's decision is supported by regulatory precedent. Indeed, Cadent and NERA

[175] See section IX below.

[176] Assuming the CMA directs GEMA to make the modification identified at §319 above, this threshold will be applied on a *gross* basis and lead to the exclusion of £154m of Cadent's forecast LTS rechargeable diversions costs for from the regression.

(Cadent's economic consultants) appear to accept that regression of gross costs was not *per se* an error, and that the real complaint under Ground 1A is use of MEAV to explain LTS Diversions costs.

(2) Having carried out an extensive consultation on MEAV and other cost drivers, GEMA was entitled to conclude that (i) MEAV was the most appropriate driver available to it; and, (ii) regressing gross LTS Diversions costs with reference to MEAV was preferable to omitting rechargeable LTS Diversions costs from the regression analysis altogether. Cadent has not proposed any alternative cost driver to MEAV. This is reflected in Cadent's proposed remedy, which tacitly accepts use of MEAV to explain non-rechargeable LTS Diversions costs (of which it has forecast £16.5m for RIIO-GD2). Cadent assumes an unrealistically high standard for cost drivers which ignores the practical reality of top-down costs assessment. To ensure the effectiveness of the single econometric model, GEMA was right to regress costs where possible. Distortions caused by the *"lumpy"* nature of LTS Diversions costs have been adequately addressed through the means specified at point (v) in the above sub-paragraph.

(3) GEMA's approach does not penalise or unfairly discriminate against Cadent: (i) rechargeable LTS Diversion costs are not unique to Cadent; (ii) other GDNs have incurred or forecast significant rechargeable capex costs in other areas; and (iii) the risks posed by large atypical projects, variable costs and short-term inconsistencies have been addressed as summarised above, and will be reduce further if the modification set out at §316 above is made.

B. BACKGROUND AND GEMA'S DECISION

(i) Selection of a single, 'top-down' totex model

318. As set out in Dr Wagner's Sixth Witness Statement, GEMA consulted on the specific costs assessment approach for the GD sector in its Sector Specific Methodology Consultation (**"SSMC").** In response to the SSMC, Cadent identified advantages of assessing costs at both a top-down and bottom-up level (MW6, §28). However, it proposed placing greater weight on top-down regression:

> *"The Bottom-Up approach provides greater clarity of cost drivers and regional factors, but it suffers from data recording, structural, solution choice, accounting and potential cherry-picking issues, which means that greater weight should be placed on the Top Down approach".*

319. In June 2019, GEMA consulted on the "*tools for cost assessment*" it intended to use for GD2, and discussed the merits of top-down and bottom-up approaches. Cadent commented on the benefits of both approaches, but again suggested that greater weight should be placed on top-down, aggregated regression modelling. In referring to trade-offs[177] between capex and opex as a justification for use of a top-down model, Cadent used the example of the trade-off between opex and LTS pipeline capex (MW6, §36).

320. During GD2 Cost Assessment Working Groups ("**CAWG**s"), between June 2018 and September 2020 (after publication of DDs), the costs assessment processes were discussed on various occasions. During these meetings, stakeholders emphasised the importance of accounting for opex-capex trade-offs in the model (MW6, §52).

321. At DDs, GEMA proposed to use a single totex regression model, with some activities excluded for separate assessment. During DDs consultation, Cadent opposed use of a single top-down model. One of the main concerns it expressed was that excluding a number of capex costs from the regression analysis undermined the ability of the model to overcome trade-offs (MW6, §84).

322. GEMA decided at FDs to use a single top-down model. Having considered feedback provided at DDs stage by stakeholders, including Cadent, GEMA added a number of costs items into the regression so that it could better account for opex-capex trade-offs (MW6, §89).

323. GEMA's reasons for adopting a single-model are summarised in (MW6, in particular §§57-61 and 83-88) and the First Witness Statement of Dr Michael Wagner (§§45-47). In outline, a single model (a) best accounted for trade-offs, cost complementarities,[178] and

[177] See (MW6, §22): "*trade-offs occur when GDNs face a choice between an opex or capex solution to a problem*". For specific examples of trade-offs in relation to LTS Diversions, see (MW6, §71)

[178] There are "*cost activities that can be explained by a consistent set of drivers are considered complementary, and therefore suitable to be benchmarked together*" (MW6, fn.44).

potential reporting inconsistencies across GDNs; and (b) carried a higher level of confidence in its statistical robustness.

(ii) Decision to include LTS Diversions costs in the model

324. At DDs stage, GEMA considered GDNs' business plans to assist in identifying those areas which should be subject to regression benchmarking and those which should be subject to separate assessment (either non-regression analysis or technical assessment). Various GD2 business plans highlighted a number of opex/capex trade-offs associated with LTS Diversions (MW6, §71). To ensure that these trade-offs were accounted for in the model, and because including LTS Diversions costs in the model where possible would ensure a higher proportion of costs are included in the comparative benchmark and therefore allow for a more integrated totex assessment, GEMA proposed at DDs stage to include within the regression analysis as many costs as possible (MW6, §62).

325. At DDs consultation stage, GEMA did not receive any responses, including from Cadent, that LTS rechargeable Diversions costs, or the LTS Diversions category as a whole, should be separately assessed (MW6, §94).

326. As expected, GDNs' business plans contained some variability in capex costs from year-to-year, due to the small numbers of projects of a larger value than in other cost categories.). At DDs stage, for LTS activities, GEMA sought to offset volatility caused by such costs and retain as many costs in the regression as possible through use of a long time period (GD1 and GD2 combined – amounting to 13 years) and a smoothing 7-year trailing average benchmark of capex costs (i.e. to minimise the impact of peaks or troughs in any given year) (MW6, §63). However, GEMA considered that large, atypical capex projects forected by GDNs which were *"uncommon across the networks, lack historical comparators, or are highly unique"* (**"Atypical Projects"**) were better suited to technical assessment and should therefore be excluded from the regression (MW6, §§67-69).

327. At DDs stage, each of the Atypical Projects GEMA proposed to exclude from the regression for technical assessment was valued at £0.75m or more (GEMA did not *per se* apply a financial materiality threshold to Atypical Projects at this stage) (MW6, §§67-

68). To ensure consistency, GEMA proposed to apply a £0.75m materiality threshold to historical capex projects as part of its "normalisation" process (MW6, §69).

328. During the DDs consultation, Cadent (as well as a Distribution Network Operator ("DNO")) argued in favour of a higher threshold for excluding large projects from the regression. Cadent submitted that the exclusion of various projects costing over £0.75m "*takes no account of Maintenance opex / capex trade-offs which are an important part of ensuring that an appropriate comparison is being made of relative total costs to deliver the same outputs*" (MW6, §95). Cadent also argued that excluding these projects gave rise to a risk of bias in the regression against GDNs with a lower proportion of costs excluded for technical assessment (MW6, §96).

329. At FDs, GEMA maintained its DDs position of including capex costs (including LTS Diversions costs) in the totex regression where possible, but technically assessing Atypical Projects and omitting large historical capex projects. Having considered the DDs consultation responses set out in the paragraph above, GEMA adopted a financial materiality threshold of £5m to (a) better account for opex-capex trade-offs and (b) ensure a more even proportion of technical assessment across GDNs. However, the qualitative criterion that projects should be "*uncommon across the networks, lack historical comparators, or are highly unique*" was retained (MW6, §§97-99).

(iii) Use of gross, rather than net, costs in the totex model

330. Before DDs stage, GEMA considered whether to benchmark all totex costs on a *net* basis (i.e. to discount any rechargeable costs) or on a *gross* basis (i.e. including rechargeable costs in the regression). GEMA decided at DDs stage to model costs on a gross basis and consequently apply a post-modelling "*netting off*" adjustment to prevent double recovery by GDNs of rechargeable costs (MW6, §§77-81). Though this approach was different to that adopted at GD1, it was consistent with both RIIO-ED1 and Ofwat's PR19.

331. During DDs consultation, Cadent was the only GDN which objected to the regression of gross costs. It used "LTS, Storage & Entry" as an example of why it considered net costs should be regressed instead (MW6, §100). GEMA considered Cadent's arguments

but decided that it was appropriate to assess overall costs incurred regardless of how such costs were funded (MW6, §101).

332. In summary, GEMA concluded that the regression analysis should be applied to gross costs because (MW6, see in particular §§77-81 and 101-102):

(1) Regressing gross costs, and therefore including as many costs in the modelling as possible, would allow the actual costs of operating a network, regardless of how they are funded, to be regressed against the cost drivers to establish GDN efficiency. GEMA sought to include capex costs in the regression analysis where possible and did not identify any clear dividing line between the drivers affecting rechargeable and non-rechargeable LTS Diversions costs.

(2) Regressing net costs might distort the relationship between costs and the cost drivers. Including only LTS non-rechargeable diversions costs in the model would reflect the ability of GDNs to recover LTS Diversions costs, rather than whether LTS Diversions costs are efficiently incurred. Whether or not LTS Diversions costs are recoverable is largely the result of factors outside GDNs' control: for example, as a result of existing legal arrangements (e.g. *"lift-and-shift"* clauses[179]), or legacy arrangements which are dependent on *when* the existing pipelines were built.

(3) Including gross costs in the model would better ensure that cost complementarities and trade-offs were accounted for.

(4) There was no principled reason to regress *net* LTS Diversions costs whilst regressing *gross* costs associated with various other activities where GDNs have recorded high levels of third-party contributions in their business plans.

(5) Any variability of LTS rechargeable Diversions costs across GDNs could be addressed by (i) basing the assessment on the longest time period available (RIIO-GD1 and RIIO-GD2 combined – amounting to 13 years), (ii) smoothing

[179] *"A lift-and-shift clause is a legal instrument that requires an asset owner to relocate a particular asset, usually at their own cost, upon request"* (MW6, §80).

capex included in the regression costs using a 7-year trailing average, and (iii) excluding Atypical Projects and large historical capex projects from the regression.

(iv) Selection of MEAV as a driver

333. At GD1, GEMA decided to represent several opex and capex activities, including LTS Diversions, through MEAV. MEAV corresponds to the current replacement value of an asset. The sum of a GDN's MEAVs provides a proxy for the scale and complexity of its network.[180]

334. As set out above, for GD2, GEMA consulted on the specific costs assessment approach for the GD sector in its SSMC. Part of this process included consultation on potential cost drivers for GD2 (MW6, §§29-30). GEMA received support from GDNs for its proposed principles for identifying a *"good"* cost driver. GEMA did not receive any specific proposals for alternative cost drivers to account for LTS costs, nor any explanation from Cadent or other GDNs as to why MEAV was inappropriate for such costs. Cadent agreed with GEMA that MEAV was generally a good cost driver

335. Cadent continued to voice general support for the use of MEAV as a scale driver during the *"tools for cost assessment"* consultation (MW6, §40).

336. During CAWGs, stakeholders broadly indicated their support for use of MEAV as a cost driver for GD2 (MW6, §53). Over this period, GEMA tested other "scale" drivers (e.g. network length, customer numbers and throughput), and concluded that MEAV was the most appropriate scale driver because it best reflected the complexity of GDNs' networks (MW6, §65). GEMA considered use of "workload" (i.e. "activity-level") drivers for any capex activities previously represented by MEAV in GD1 (including LTS activities), but did not identify any suitable options (MW6, §66). (MW6, §118) explains how GEMA's inability to identify an appropriate workload driver is primarily due to *"the bespoke nature of individual LTS diversion projects and the limited data we have available at a disaggregated level"*.

[180] See First Witness Statement of Dr Michael Wagner, §53.

337. At DDs, GEMA proposed to retain use of MEAV in the totex composite scale variable ("CSV") driver to represent several cost activities, including most capex activities (including "LTS, Storage & Entry" activities).[181] In summary, this was because MEAV met GEMA's principles of a good cost driver and better reflected network complexity than any alternative scale driver (MW6, §§65-66).

338. Cadent did not itself expressly oppose the use of MEAV to account for LTS activity costs or suggest any alternative drivers in its DDs consultation response (MW6, §91). A report it had commissioned from NERA suggested that GEMA had failed to demonstrate the appropriateness of MEAV for some capex activities, including "LTS, Storage & Entry" costs. Though this report did not propose an alternative driver to explain such costs. No other DDs responses criticised the use of MEAV to explain various capex costs.

339. GEMA proceeded to adopt the use of MEAV for LTS activities at FDs, primarily for the reasons set out at §§339-340 above (see also MW6, §92).

(v) Business plan submissions and technical assessment of Atypical Projects

340. To inform GEMA's costs assessment process, GDNs were required by the RIIO-GD2 Business Plan Data Template instructions and guidance to detail individual LTS Diversions projects with a gross expenditure of over £0.5m over the life of the project (MW6, §44). Where project expenditure was under £0.5m, GDNs were asked to provide aggregate data.

341. For "*investments that are financially material and/or require significant engineering and/or economic scrutiny by Ofgem because of the risks associated with the investment*", GDNs were asked to provide an Investment Decision Pack ("IDP") (MW6, §45-46). An IDP consists of an Engineering Justification Paper ("EJP") and a cost benefit analysis. GDNs were not required to submit cost benefit analyses for rechargeable projects, but were asked

[181] "*The CSV is a weighted average of multiple variables that capture variations in scale, network complexity and composition, and workloads between GDNs, which in turn drive differences in efficient GDN totex*": see First Witness Statement of Dr Michael Wagner, §50.

to consider submitting an EJP, in particular where such projects were "*of significant materiality*" (MW6, §47).

342. At FDs, GEMA subjected 12 discrete capex projects to technical assessment, including two LTS non-rechargeable Diversions projects (MW6, §68). Except for Cadent, other GDNs did not forecast LTS *rechargeable* Diversions costs in their business plans for GD2; although each did record historical rechargeable LTS Diversions costs from GD1 (MW6, §50 and Table 1).

(vi) Correction of application of the financial materiality threshold

343. Following the filing of Cadent's NoA and in reviewing the relevant calculations, GEMA identified that the £5m aspect of the materiality threshold for Atypical Projects and large historical capex projects had been applied on a *net* basis, GEMA considered that it would be "*more consistent to treat atypical rechargeable capex projects with gross costs of over £5m in the same way that we have treated atypical non-rechargeable capex projects*" – i.e. removing them from the regression (MW6, §§108-113). Adopting this approach would ensure greater comparability across GDNs and ensure that the materiality threshold's purpose has its desired effect – in particular to ensure that trade-offs are accounted for in the model but to eliminate the risks of unfairness caused by large atypical projects.

344. As set out in further detail below (see section IX below), GEMA proposes that the CMA direct GEMA to exclude certain projects from the regression analysis. In these circumstances, the matters raised by Cadent in Ground 1A fall to be considered on the basis that the financial materiality threshold for Atypical Projects and large historical capex projects is properly applied on a *gross* basis, and that particularly large gross costs are excluded from the regression analysis accordingly. As set out above, this modification further supports GEMA's response to this ground because it will better ensure that large atypical projects do not distort the modelling.

C. RESPONSE TO THE GROUND OF APPEAL

345. As set out at §317 above, Cadent's Ground 1A amounts to little more than disagreement with the approach which GEMA considered to be appropriate in its

regulatory discretion. The labels of statutory grounds of appeal, at Cadent NoA §3.144, do not appear to reflect the substance of the complaint under Ground 1A.

346. Without prejudice to the foregoing, even if Cadent's general objections under Ground 1A were found to be properly linked to a statutory ground of appeal (which is denied), those objections are without foundation. Indeed, even if the CMA were to conclude that it would have adopted a different approach if it were the decision-maker, that provides no basis for interfering with GEMA's expert decision as to how to treat LTS Diversions costs in the model. In particular, in support of the approach that GEMA decided to adopt, it relies upon the following:

(i) GEMA was entitled to assess *gross* costs

347. It was appropriate for GEMA to have included *gross* costs in the benchmarking analysis. GEMA acted firmly within its expert margin of discretion when doing so.

(1) The purpose of the benchmarking analysis is to establish *efficiency*. GEMA considered that a GDN's overall efficiency is best assessed on the overall costs it incurs, regardless of how those costs are funded. There is no discernible connection between whether LTS Diversions costs are paid for by third parties or GDNs/consumers, and whether such costs are efficient. The nature of the underlying work is fundamentally the same (MW6, §119).

(2) Excluding all LTS rechargeable diversions costs from the regression would have undermined the integrity of the top-down model. Having decided to employ a single econometric model, GEMA considered that including costs in it where possible was necessary to maximise the benefit of top-down assessment, in particular to ensure that opex-capex trade-offs were captured. Cadent expressed agreement with the importance of including as many costs in the regression as possible at SSMC, the "*tools for cost assessment*" consultation, and DDs consultation; and specifically referred to the example of trade-offs between LTS pipeline opex and capex in support of aggregated modelling during the "*tools for cost assessment*" consultation. At DDs stage Cadent also argued that fewer projects should be excluded from the regression to ensure that ensure trade-offs were best captured.

(3) For the reasons set out at §332(2) above, the distinction between rechargeable and non-rechargeable LTS Diversions costs is arbitrary and usually outside GDNs' control. As a result, omitting LTS rechargeable Diversions costs from the model might distort the relationship between costs and the cost drivers; as the model would be accounting for a GDN's ability to recover costs from third parties, rather than its operational efficiency. Furthermore, as set out in (MW6, §124(e)), including net LTS Diversions costs in the regression would also cause distortions because Cadent's net figures are negative for two of its GDNs.[182] Including net negative figures in the benchmarking analysis would make Cadent appear to be more efficient than it actually is (MW6, §124(e)).

(4) GEMA acted fairly and consistently in regressing *all* costs on a gross basis. LTS Diversions costs are not the only cost category containing significant *rechargeable* costs which GEMA has assessed on a gross basis (and subsequently "*netted off*" after conducting the efficiency modelling). There are various other activities where significant costs are recoverable from third parties – e.g. connections, specific reinforcement, diversions of other assets such as governors, and embedded gas entry points (MW6, §77). By way of example, GDNs have forecasted £218m of third party contributions over GD2 for connections, of which only £47m have been forecasted by Cadent (MW6, §102(b)). GEMA adopted a uniform approach across all cost categories to avoid treating any GDN unfairly. GEMA considers that omitting only LTS rechargeable Diversion Costs from the model would have constituted cherry-picking. This would have been hard to justify to other GDNs and may have prompted one or more appeals on the need for consistency across all areas which involve substantial rechargeable costs.

(5) As with all capex costs, any volatility caused by year-on-year variability across GDNs was addressed through a combination of (i) basing the assessment on the longest time period available (GD1 and GD2 combined – amounting to 13 years), (ii) smoothing capex costs included in the regression using a 7-year trailing

[182] Over RIIO-GD1 and RIIO-GD2, Cadent reported net LTS diversions costs of -£4m and -£7m for London and West Midlands respectively: see (MW6, Table 1).

average, and (iii) excluding Atypical Projects and large historical capex projects from the regression on the basis of qualitative and quantitative criteria.

(6) The decision to regress gross costs was supported by regulatory precedent: namely RIIO-ED1 and Ofwat's PR19.

348. The NERA Report, which is relied upon by Cadent, goes so far as to accept (at §160) that GEMA was in principle entitled to regress gross costs:[183]

> *"GEMA's choice to carry out its regression modelling on a gross basis is not, per se, an error. However, this approach requires GEMA to select drivers within its CSV which explain all categories of costs included within its regression, or find other means of controlling for differences between companies …"*

349. In a similar vein, Cadent NoA §3.35 suggests that Cadent's real complaint under Ground 1A is not the decision to assess gross costs, but the driver (MEAV) used to account for such costs. For the reasons set out in the section below, it was appropriate to explain LTS Diversions costs using MEAV. It is important to stress that NERA's approach as quoted risks appearing to counsel perfection. In carrying out regression modelling, assumptions and imperfections in driver selection are inevitable.

(ii) GEMA was entitled to use MEAV as a driver to explain LTS Diversions (and other capex) costs

350. GEMA was fully aware of the fact that the single, top-down model necessarily requires some approximation. It cannot fully account for all ways in which GDNs' costs might vary. However, GEMA was entitled to conclude, first, that MEAV was the most appropriate driver available to it; and, second, that regressing gross LTS Diversions costs (as well as various other capex costs)[184] with reference to MEAV was preferable to omitting LTS rechargeable Diversions costs from the regression analysis altogether.

[183] Cadent Exhibit RD1 NERA Report
[184] See (MW6, Table 2) for a summary of these costs.

351. In reaching these conclusions, GEMA exercised its expert regulatory judgment on the basis of a range of factors:

(1) Having accepted that GEMA's regression of gross costs is not *itself* an error, Cadent has not proposed a more appropriate cost driver than MEAV for assessing "LTS, Storage & Entry" costs.[185] Indeed, Cadent's proposed remedy tacitly accepts use of MEAV to explain regressed *net* LTS Diversions costs (of which it has forecast £16.5m for GD2).[186]

(2) GEMA did not *"assume"* that MEAV could explain LTS Diversions costs, contrary to the assertion in Cadent's Notice of Appeal §3.30. Instead, GEMA carried out early and extensive consultation on potential drivers and, in light of general support for use of MEAV, concluded that it was the most appropriate driver to explain LTS Diversions costs. As set out above, GEMA did not receive any criticism from Cadent (or any other GDN) as to why MEAV was inappropriate for LTS Diversions costs during the SSMC, *"tools for cost assessment"* consultation or multiple CAWG meetings. It was only at DDs stage that NERA (though not Cadent itself) expressed misgivings similar to those raised on this appeal.

(3) For the reasons given above (see §337), GEMA had a robust justification for including cost activities in the regression analysis where it was possible to do so. Having concluded that MEAV was the best available driver to explain LTS Diversions costs, GEMA was entitled to conclude that the benefits of including such costs in the model outweighed any imperfections arising from the use of MEAV.

(4) GEMA's decision needs to be considered in light of its regression of other significant capex cost categories (namely "Governors", "Other Capex" and "Transport & Plant") and opex cost categories (namely "Work Management", "Business Support", "Other Direct Activities (ODA)" and "Training & Apprentices") using MEAV. Regressing LTS rechargeable diversions using

[185] In particular, see Cadent Exhibit RD1 NERA Report, §185.

[186] See Cadent Exhibit RD1 NERA Report, section 5.6.

MEAV as a cost driver was consistent with the approach for these other activities.

(5) Overall, GEMA was confident in the cost drivers used in the model. The estimated coefficient of the totex CSV (overall cost driver, of which MEAV was a significant component – 37%) was statistically significant at the 1% level. And the model fit had a high adjusted R^2 value of 92.7% (MW6, §93).

352. As with many other capex activities, GEMA accepted that there is year-on-year variability of LTS Diversions costs across GDNs, and that this variability was not best suited to explanation through the use of MEAV. As with other capex costs, GEMA has sought to overcome any risks of MEAV failing to account for LTS rechargeable Diversions costs in two ways.

353. **First**, where GDNs had provided sufficient information in business plans about Atypical Projects – namely projects which were (i) "*uncommon across the networks, lack historical comparators, or are highly unique*", and (ii) of a value above £5m (to be assessed on a *gross* basis following the modification identified at §§343-344 above) – these were subject to technical assessment.[187] GEMA also excluded large historical capex projects from the regression analysis where their value exceeded £5m.

354. As set out above, GEMA initially proposed to subject various forecast projects costing over £0.75m to technical assessment; and apply a £0.75m materiality threshold to large historical capex projects as part of its "normalisation" process. However, it increased this threshold to £5m following representations from Cadent (and a DNO) at DDs consultation that too many costs had been excluded from the regression.

355. **Second**, GEMA based its assessment on the longest time period available (GD1 and GD2 combined) and smoothed capex costs using a 7-year trailing average. In this regard, NERA accepts that "*carrying out its regression analysis over a long period of time*

[187] As set out below (section IX), GEMA asks that the CMA directs that the financial element of the materiality threshold for Atypical Projects is applied on a gross, rather than net, basis. This will ensure that that "*lumpy*" gross costs are excluded from the model.

and smoothing capex from year-to-year reduces the effect of lumpy LTS Diversions costs on its regression model".[188]

356. Adopting these two sets of measures ensures that costs are significantly more comparable across GDNs.

(iii) GEMA's approach did not unfairly penalise or discriminate against Cadent

357. Cadent argues that GEMA's approach penalised and unfairly discriminated against Cadent because it had forecast around £240m of LTS rechargeable Diversions costs for GD2, whilst all other GDNs had specified zero for LTS rechargeable Diversions costs. GEMA rejects this suggestion for three main reasons.

358. **First**, LTS rechargeable Diversions costs are not unique to Cadent. Only Cadent has *forecasted* LTS rechargeable Diversions costs for GD2. However, other GDNs submitted *historical* rechargeable costs from GD1, some of which surpassed Cadent's costs over that price control. For example, during GD1, Southern incurred gross/net costs of £49.3m/£22.5m for its Scotland GDN and £26.4m/£1.1m for its Southern GDN (MW6, Table 1). As Dr Wagner notes *"we included LTS diversions costs in the regression … to allow for comparative benchmarking, because … it is a common activity across all GDNs over time"* (MW6, §70).

359. **Second**, one of the key justifications for GEMA's approach to LTS Diversions costs is to treat all GDNs fairly and equally. For the reasons set out at §347(4) above, omitting LTS rechargeable Diversions costs from the regression analysis would unfairly penalise and discriminate against other GDNs who have incurred or forecasted rechargeable costs in other capex cost categories (e.g. for "connections", where non-Cadent GDNs have forecast £171m of third party contributions over GD2).

360. Unfairness to other GDNs would have been compounded by the wider effects of omitting rechargeable LTS Diversions costs from the model. On Cadent's own case, had GEMA adopted Cadent's proposed approach of assessing *net* costs, this would

[188] Cadent Exhibit RD1 NERA Report, §176.

have significantly altered the efficiency rankings and *reduced* industry allowances by £144m (Cadent NoA, §3.42).

361. **Third**, *"lumpy"* costs and short-term inconsistencies have been addressed through the three mechanisms set out above, which apply in respect of all capex costs:

(1) Basing the assessment on the longest time period available: GD1 and GD2 combined;

(2) Smoothing capex costs included in the regression using a 7-year trailing average benchmark; and

(3) Excluding Atypical Projects and large historical capex projects from the regression. As summarised at §§34-344 above, and considered in more detail at section IX below, GEMA's proposed modification of applying the £5m financial materiality threshold on a gross basis will further ensure that costs are comparable across GDNs. In Cadent's case, this proposed modification would result in £154m of its forecast LTS rechargeable diversions costs for RIIO-GD2 from the regression.

D. CONCLUSION

362. For all the above reasons, Cadent has failed to identify, in its Ground 1A, any relevant error in GEMA's approach to LTS Diversions costs.

363. Furthermore, for the reasons outlined below (at section IX), in the light of the correction proposed by GEMA in relation to Atypical Projects and large historical capex projects, no further modification would be appropriate.

VI. LONDON REGIONAL FACTORS

NB: references in the form (MW7 x) *in this section are to the seventh witness statement of Dr Michael Wagner. GEMA relies on the contents of this statement in full in addition to the submissions below.*

A. INTRODUCTION

364. By Ground 1B, Cadent argues that the GEMA's approach to regional factors did not sufficiently control for the increased cost of operating in London.

365. To ensure that GEMA's efficiency benchmarking analysis is accurate, it applies "pre-modelling adjustments" (or "data normalisations"). These adjustments ensure that the input into the benchmarking model (i.e. submitted costs and, where relevant, costs drivers) are comparable between GDNs. In essence, GEMA's aim with pre-modelling adjustments is to account for factors outside a GDN's control (exogenous factors); but not to account for factors within GDNs' control (endogenous factors), which are relevant when assessing cost efficiency. The process ensures that GDNs are being compared on a like-for-like basis.

366. A significant number of pre-modelling adjustments are for regional factors, in particular the increased costs of operating in London. An overview of GEMA's pre-modelling methodology is set out at §§30-34 of the First Witness Statement of Michael Wagner. In summary, GEMA applied four main adjustments at the pre-modelling stage:

(1) A "regional labour cost" **("RLC")** adjustment, which sought to account for higher wages in London and the South-East of England than in the rest of Great Britain.

(2) A "sparsity" adjustment, to reflect reduced productivity as a result of operating in a sparse environment.

(3) Two "urbanity" adjustments: one to reflect lower productivity when operating in densely populated areas (an "urbanity productivity adjustment"), the other to reflect higher reinstatement costs (an "urbanity reinstatement adjustment").

(4) Company-specific adjustments for factors not already caught by the above adjustments, which are outside GDNs' control and only affect one or a small number of GDNs.

367. Cadent's contends that the "efficiency gap" in GEMA's benchmarking analysis between its London GDN and its other GDNs can be wholly explained by London regional factors which are outside of its control. It says that GEMA failed to account for these factors in its costs assessment process. Cadent raises two arguments in support of this ground.

(1) Ground 1B(1) is *"GEMA's understatement or rejection of legitimate adjustments for known and quantifiable regional factors"*.[189] Though GEMA accepted more than 70% of the total value of Cadent's company-specific claims, it is argued that the remainder were incorrectly disallowed because they were identified, quantified and supported by evidence.

(2) Ground 1B(2) is *"GEMA's exclusive reliance on discrete pre-modelling adjustments to control for regional factors in circumstances where evidence shows that approach to be insufficient"*.[190] Cadent argues here that, even if GEMA had allowed all of its submitted specific claims, a considerable efficiency gap still remains. It says this differential reveals that GEMA's reliance on discrete pre-modelling adjustments was by itself insufficient to account for the increased costs of operating in London. Cadent's proposed remedy for Ground 1B(2) is to benchmark its London GDN's efficiency at the same level as Cadent's next least efficient network (West Midlands).

368. Even if Cadent's general objections under Ground 1B were found to be properly linked to a statutory ground of appeal (which is denied), its criticisms are without merit. Applying the legal principles set out at section I(D)(iii) above, Cadent fails to demonstrate that GEMA was *wrong* in its approach. GEMA's way of accounting for regional factors was entirely justified:

[189] Cadent's NoA, §§3.58-3.84

[190] Cadent's NoA, §§3.85-3.99

(1) **Ground 1B(1)**: GEMA acted at all times within its expert margin of discretion when carefully exercising its judgment as to whether claims put forward by Cadent were robustly evidenced and whether they related to exogenous factors (rather than the London GDN's inefficiency). GEMA also applied its materiality threshold fairly and transparently. Overall, GEMA accepted more than 70% of the total value of Cadent's specific claims. Overall, GEMA's approach was similar to the one adopted at RIIO-GD1, in respect of which the London GDN was ranked last in the efficiency benchmarking and comfortably outperformed its allowances.

(2) **Ground 1B(2)**: GEMA rejects the suggestion that the efficiency gap is unrelated to the London GDN's relative inefficiency. Cadent proposes a drastic and arbitrary remedy which is entirely contrary to the efficiency benchmarking framework, contradictory in of itself (in that it continues to accept the outcome of the benchmarking analysis for all other GDNs), significantly reduces the incentive on Cadent London to deliver future efficiency improvements beyond that of Cadent's non-London GDNs, and incentivises it to allocate inefficient costs to its London GDN. Moreover, the arguments and evidence raised in support of its proposed remedy are seriously flawed: (a) the witness evidence of Messrs Moon and Forster fails to establish that all Cadent GDNs are of equal efficiency across various costs activities, and fails to recognise that the factors identified as causing the efficiency gap are already accounted for through GEMA's two urbanity adjustments and company-specific factor adjustments for emergency job times and plant hire; (b) GEMA acted firmly within its margin of discretion when basing the RLC adjustment on five-years of wage data, rather than two; and (c) as accepted by Cadent (and its economic consultants, NERA), there are acute limitations with the "density driver" analysis Cadent relies on. In these circumstances, GEMA's careful and rigorous exercise of expert regulatory judgmentwas not *wrong*.

B. BACKGROUND AND GEMA'S APPROACH TO REGIONAL FACTORS

(i) Decision to account for regional factors through pre-modelling adjustments

369. As set out above, GEMA applies pre-modelling adjustments to account for factors outside a GDN's control and to ensure comparability before the benchmarking analysis is undertaken.

370. With regards to GDN-wide regional factors, GEMA applied the GDN pre-modelling adjustments set out above. GEMA developed the RLC, urbanity and sparsity adjustments in a careful and transparent manner following analysis of lessons learnt from the RIIO-GD1 price control (which ran from April 2013 to March 2021), thorough consultation with stakeholders, and consideration of information submitted in GDNs' business plans (MW7, §§12-13). GEMA retained an open mind at all times and was prepared to modify adjustments where a convincing rationale was provided in support of a proposed adjustment. For example, at GD2 FDs, GEMA updated the way in which the RLC and sparsity indices were calculated and expanded the scope of the labour and urbanity adjustments. Overall, GEMA sought to ensure that the RLC, urbanity and sparsity adjustments were as robust as possible.

371. GEMA's approach to company-specific factors is considered in more detail below.

372. GEMA recognised that a process of pre-modelling adjustments is not the only way of accounting for regional factors in an econometric modelling process. Dr Wagner (MW7, §§46-50) identifies two alternatives which GEMA might have adopted: (a) accounting for regional factors within the model itself; or (b) making *post*-modelling adjustments. The pros and cons of the three possible approaches are set out at (MW7, Table 1).

373. GEMA considered that, in addition to accounting for regional factors in the model itself, further adjustments were required to ensure comparability across GDNs. As to the two available options:

(1) A *post*-modelling adjustments approach adjusts the model's results to account for any regional or company-specific factors that are considered to not have been sufficiently captured by the model. Had GEMA adopted this approach (as Ofwat did at PR19) GDNs would have been required to demonstrate not only the existence of such factors but also that these had not already been

accounted for in the model (i.e. an "additionality" requirement). Dr Wagner (MW7, §49) considers that this arguably would have set a higher evidential bar for GDNs to overcome, which may have led to fewer regional and company-specific factor adjustments being made.

(2) By contrast, GEMA's decision to make pre-modelling adjustments *prima facie* accepts the need for regional factor adjustments. On this approach, GDNs are not specifically required to quantify to what extent any regional or company-specific factors are not already accounted for in the modelling.

It was clearly open to GEMA to adopt the pre-modelling adjustment approach.

(ii) Regional factors are accounted for in GEMA's regression analysis

374. GEMA's totex econometric model captures a large amount of information to explain differences in costs between GDNs, and accounts for interactions and trade-offs between different activities.[191] The richness of the information contained in the model is demonstrated by a very high overall model predictive power of 92.7% (adjusted R^2). Within the model, the use of "modern equivalent asset value" ("MEAV") as a cost driver aims to capture the scale, composition and complexity of a GDN's network.

375. GEMA decided to include "*risers*" (i.e. vertical pipes in a building) in MEAV at the GD2 FDs to better reflect the scale of operations for GDNs who have to provide services to a higher proportion of multiple occupancy buildings (**"MOBs"**) (i.e. blocks of flats). Dr Wagner's (MW7, §111) sets out how the London GDN's MEAV is proportionally higher than other GDNs, and considers that this is reflective of its urban operating environment. Dr Wagner concludes that "*the totex model therefore controls for Cadent London being an 'outlier' relative to the other GDNs in terms of network density even before applying any pre-modelling adjustments for other regional and company specific factors*".

376. In this regard, it is also important to note that GEMA decided to set the efficiency benchmark on a glide path to the 85th percentile – i.e. somewhat below the level of the most efficient GDN. This decision recognises that GEMA's model, while

[191] See First Witness Statement of Michael Wagner, §46.

comprehensively accounting for regional and company-specific factors, is unlikely to capture perfectly all the drivers of the GDNs' costs.

(iii) GEMA's approach to specific claims for regional adjustments

Evidential matters

377. GEMA's framework for assessing GDNs' company-specific adjustment claims was subject to a detailed and transparent consultation process with GDNs, which stretched from the Sector Specific Methodology Consultation ("SSMC") (December 2018) through to DDs (July 2020). During this process, GDNs generally agreed that a high evidential bar should be set for company-specific claims (MW7, §§31 and 35). In deciding on the final approach to be taken to company-specific claims, GEMA had detailed regard to advantages and disadvantages of the approach taken at GD1 (MW7, §§29 and 44).

378. To assess company-specific factors, GEMA considered the information provided by GDNs to support their claims against the following five criteria (MW7, §82):

- *Is the claim material?*
- *Is the claim unique? (i.e. applying to only one/small number of GDNs)?*
- *Is the claim outside of the GDN's control?*
- *Is the claim excluded from cost drivers int eh econometric modelling?*
- *Is the claim excluded from other adjustments (ie regional factors)?*

379. GEMA set a high evidential bar accepting company-specific claims. This was done for the following main reasons:

(1) To ensure that adjustments reflected exogenous factors which are beyond the control of a GDN, and not endogenous ones which can explained by a GDN's efficiency/inefficiency.

(2) To ensure consistency with, and protect the integrity of, the top-down totex model. The rationale for use of a single model is that it captures interactions and trade-offs between different activities and costs, and overcomes information asymmetry issues that reduce the effectiveness of a more detailed, "bottom-up" approach. Adopting a high bar ensured that any departure from the top-down approach was limited to where a strong technical and economic justification was provided.

(3) To reduce the risk of double counting (a) adjustments made via the RLC, urbanity productivity and urbanity reinstatement adjustments, which capture most London regional factors by making adjustments for the most obvious causes of higher London costs; and (b) the way in which MEAV accounts for London regional factors in the model itself.

(4) There was a risk that a lower bar could incentivise GDNs to allocate costs to GDNs that operate in London in the expectation that those costs will be removed before the efficiency benchmarking exercise.

380. During the GD2 "Tools for Cost Assessment" consultation, Cadent expressed agreement that GEMA should apply a high evidential bar for accepting cost adjustment claims (MW7, §35).

381. GEMA also adopted a materiality threshold for GDN-specific claims at 0.5% of gross unnormalized totex. The justification for the materiality threshold is set out in (MW7, in particular §§51-60). In summary:

(1) Adopting a materiality threshold is a proportionate way of ensuring that GEMA can focus resources on company-specific claims which will have a meaningful impact on overall totex allowances. As GEMA indicated at the SSMC and "Tools for Cost Assessment" consultation stages: it would "*not expect to consider claims that are not materially significant enough to account for the complexity they create*".

(2) Whilst the model may fail to account for some company-specific factors which have both positive and negative effects on GDNs' costs, because of information

asymmetry between GEMA and GDNs, GDNs are in practice likely only to request adjustments that increase their allowances. Adopting an effective materiality threshold ensures that consumers are protected from this "one-way" process.

382. In its Provisional Report on PR19, the CMA has recently recognised that the above points justified the use by Ofwat of an effective materiality threshold. At §4.580, the CMA concluded:

> *"The application of materiality thresholds here is sensible and pragmatic, given the need to prioritise resources and that companies are only likely to raise complaints about cost allowances and not report where they benefit from cost allowances.."*

383. GEMA decided to adopt the 0.5% threshold which it had used at both GD1 and RIIO-ED1, and which Ofwat used at PR14. In keeping with regulatory precedent, GEMA could have adopted a *more stringent* materiality threshold: Ofwat's threshold for special cost adjustment claims at PR19 ranged from 1% to 6% of totex (depending on the price control).

384. At DDs stage, Cadent proposed setting the materiality threshold at 0.1%. For the reasons set out in (MW7, §§112-115), which essentially reflect the points above, GEMA rejected this proposal.

GEMA's treatment of Cadent's company-specific claims

385. Despite adopting a high bar for evidential requirements and materiality, GEMA allowed more than 70% of the total value of Cadent's specific pre-modelling claims from DDs to FDs. In some cases, GEMA partially allowed Cadent's claims (see the response to Ground 1B(1)(D) below).

386. GEMA's decision to accept larger proportion of company-specific claims (combined with the increase of regional factor adjustments applied to the London GDN) contributed to improving the London GDN's efficiency score from DDs to FDs: from

1.17 to 1.09 (MW7, §159).[192] The efficiency gap correspondingly reduced from 21% to 16.6%.

(iv) Consideration of the London 'Efficiency Gap'

387. Cadent argued at DDs stage that GEMA's pre-modelling adjustments did not satisfactorily account for the increased costs of operating in London (MW7, §§148-151). In support of this contention, Cadent relied on a NERA report which sought to account for London regional factors through application of a *"density driver"*. On NERA's analysis, application of the density driver increased the London GDN's efficiency rankings from last place to first. Cadent argued at DDs that the results of this analysis suggested that GEMA should itself apply a density driver or use NERA's findings as evidence to inform a larger pre-modelling adjustment.

388. GEMA subsequently tested a density driver in the totex model but concluded that this approach was flawed in various respects (MW7, §§152-158). In particular, GEMA considered that the density driver led to "over-fitting" of the model (i.e. capturing differences between London GDN and other GDNs which are *unrelated* to density and which could be explained by efficiency/inefficiency).

(v) Regional factor cost adjustments at GD1 and Cadent's performance

389. GEMA's approach to pre-modelling adjustments at GD2 was largely the same as that employed at GD1, with relatively minor updates to the way indices were calculated and with an extension of the application of the adjustments to more cost categories (MW7, §190).

390. At GD1, GEMA disallowed roughly the same proportion of the London GDN's requested allowances and ranked it last in both modelling approaches (top-down and bottom-up). Yet the London GDN went on to comfortably outperform its allowances (MW7, §§182 and 190).

[192] As set out in MW7, §§160, the London GDN's efficiency score reduces to 1.07 once the technical adjustment to the assessment of LTS costs is made (see section IX below for further details).

C. GEMA'S RESPONSE TO THE GROUND OF APPEAL

Ground 1B(1) – *"GEMA's understatement or rejection of legitimate adjustments for known and quantifiable regional factors"*

391. The question for the CMA on Ground 1B(1) is whether GEMA exceeded the bounds of its expert regulatory discretion in rejecting or partially allowing certain adjustments put forward by Cadent.[193] As per the legal principles set out at section I(D)(iii) above, the CMA is not asked to consider whether it would have adopted a different approach were it the decision-maker.

392. GEMA considered all of the specific proposals put forward by Cadent and carefully exercised its expert judgment as to whether those proposals were sufficiently evidenced. Where GDNs provided robust evidence in support of pre-modelling adjustments, and this evidence demonstrated that cost differences were caused by *exogenous* factors, GEMA was willing to update its approach. In accepting, partially accepting, or rejecting proposed adjustments, GEMA acted at all times within its margin of discretion.

393. Cadent's complaints under Ground 1B(1) need to be considered in light of the two overarching points highlighted above:

(1) GEMA's approach was similar to the one it adopted at GD1, where it disallowed a similar proportion of the London GDN's allowances and ranked the London GDN last in the efficiency benchmarking. Over GD1, the London GDN comfortably outperformed its allowances.

(2) Following careful assessment of additional information provided by Cadent, GEMA accepted more than 70% of the total value of Cadent's specific claims. The effect of this was to reduce Cadent London's efficiency score from 1.17 to 1.09.

[193] In addition, see Ground 1B(1)(E) below, which challenges GEMA's application of a materiality threshold.

394. GEMA does not understand Cadent to challenge the exercise of its regulatory discretion in setting the evidential criteria for evaluating company-specific claims (i.e. adopting a high evidential bar). However, for the avoidance of doubt: for the reasons summarised at §379 above, it was clearly appropriate for GEMA to require specific claims to be robustly evidenced. Adopting a less demanding approach would have undermined the integrity of the econometric model, run a risk of double counting other regional factor adjustments, and incentivised allocation of (inefficient) costs to the London GDN. Furthermore, the framework for adjusting costs for regional and company-specific factors followed careful consideration of the approach taken at GD1.

(A) Unrepresentative notional labour shares reduce the labour adjustment

395. Cadent argues that, when applying the RLC adjustment, GEMA incorrectly "*assumed that all efficient GDNs have the same "notional" share of labour for each relevant cost category*" and that this assumption was "*unrepresentative of (and understated) the labour costs incurred by the London GDN.*"[194]

396. Cadent has misunderstood GEMA's RLC adjustment process. In accounting for the higher labour costs of operating in London, GEMA *deliberately* removed London regional pay and productivity differences in order to calculate the labour shares of a notionally efficient GDN operating "Elsewhere" (i.e. its labour shares if it operated entirely outside of London).

397. The setting of "notional" labour shares was done to obtain a like-for-like comparison between GDNs and avoid rewarding potentially inefficient network company decisions which would result in higher labour shares. This ensured that the next step in the calculation of the RLC adjustment – application of relevant regional labour indices – took place from a uniform starting point. NERA accepts that GEMA's adoption of a "notional" share of labour costs, rather than accepting the labour cost shares submitted by GDNs, was justified.[195] In its DDs response, Cadent also agreed

[194] Cadent's NoA, §§3.60-3.63.

[195] Cadent Exhibit RD1 NERA Report, §280

that the starting point of any RLC adjustment calculation should be a "notional" network company (MW7, §116).

398. The basis for Cadent's proposal to uplift the "notional" labour shares, when seen in isolation, leads to the same outcome as GEMA's application of the relevant regional cost indices to the "notional" labour shares. However, the clear error with Cadent's approach is that it asks the CMA to uplift the "notional" labour share *and then* apply the cost index to that uplifted labour share. This results in double counting the increased labour costs of operating in London (see MW7, §163).

(B) Failure to control or adjust for London's high emergency workload

399. Cadent challenges the use by GEMA of the *"Emergency Composite Scale Variable (CSV)"* as a driver to explain emergency costs related to Public Reported Escapes (**"PREs"**) (i.e. responses to gas leaks or other emergencies reported by the public).[196] Cadent argues that the Emergency CSV ignores the higher number of *"Internal"* PREs per capita recorded by Cadent's London GDN and SGN's Scotland GDN during the GD1 price control. Cadent maintains that GEMA should have adopted one of two alternative solutions it had proposed at DDs. These were:

(1) Use of a driver based on PREs; or

(2) Use of the Emergency CSV driver, subject to a pre-modelling adjustment to uplift the number of customers for the London and Scotland GDNs to reflect the higher proportion of Internal PREs per customer recorded by each network relative to the average.

400. GEMA had significant concerns about Cadent's proposed solutions:

(1) Most importantly, Cadent was unable to demonstrate that the higher number of internal PREs for London and Scotland was due to exogenous factors and not factors which Cadent could address – e.g. network condition or reporting

[196] Cadent's NoA, §§3.64-3.69.

inconsistencies. Applying Cadent's proposed solutions in these circumstances would result in a risk of over-recovery.

(2) Cadent's proposed approaches carried a significant risk of double counting. Two of the three explanations for higher PRE costs in London put forward by Cadent in its NoA – namely *"higher number of flats and increased levels of rented/tenanted accommodation"*[197] – are indirectly accounted for in the model through use of MEAV. This is because the inclusion of "risers" within this driver accounts for GDNs having to provide services to a higher proportion of MOBs (MW7, §133).

(3) As higher number of PREs have also been recorded in Scotland, it is doubtful that any increased costs can be explained by the challenges of operating in London, which Ground 1B is generally concerned with.

401. By contrast, GEMA derived significant confidence in its use of the Emergency CSV driver from the following:

(1) As summarised by Dr Wagner (MW7, §63), the justification for adopting the Emergency CSV at GD1 was that "*emergency costs are largely fixed, and GDNs must maintain an emergency service irrespective of the number of reports they receive*". This is reflected in the weighting of the driver: 80% on customer numbers (to account for fixed costs) and 20% on total external condition reports (to account for variable costs). In employing the Emergency CSV at GD2, GEMA was satisfied that this rationale continued to apply.

(2) Use of the Emergency CSV at GD2 was decided on following a transparent consultation with GDNs. And, as GEMA recorded in its FDs: "*[a]ll other GDNs supported the use of the Emergency CSV"* (MW7, §131).

(3) GEMA undertook sensitivity testing of the Emergency CSV alongside a driver based on PRE-based driver at two stages: in advance of DDs and in advance of

[197] Cadent's NoA, §3.65

FDs (MW7, §§64 and 135). Neither set of results indicated that there were any substantial differences between the two approaches.

402. GEMA was therefore entitled to opt for the Emergency CSV Driver over Cadent's two proposals, and acted within its margin of discretion when doing so.

(C) Unevidenced and insufficient Urbanity Reinstatement[198] Adjustment

403. Cadent argues that *"GEMA's Urbanity Reinstatement Adjustment does not adequately reflect the higher reinstatement costs associated with urbanity"*. GEMA set the reinstatement adjustment at 18%. Cadent argues that GEMA should have accepted its suggestion to increase the adjustment to 21% on the basis of a comparison of tender costs per metre of reinstatement between Cadent's London and East of England GDNs.[199]

404. GEMA was right to dismiss Cadent's proposed 3% reinstatement adjustment because its supporting evidence was insufficiently robust. This was for three main reasons.

405. **First**, Cadent's comparison between its London and East of England GDNs was unsound. East of England is Cadent's sparsest GDN and one of the most rural of all GDNs (MW7, §144). It is therefore not representative of a typical "Elsewhere" GDN, which would hypothetically serve a combination of rural and (non-London) urban areas, and as a result incur higher reinstatement costs than East of England.

406. **Second**, Cadent's comparison was based on data derived from a single tenderer (Cadent did not provide information from any of its other networks). Because of information asymmetry between GEMA and Cadent, GEMA was unable to consider comparative tenderers and therefore verify whether the costs in question were efficient and whether the comparison had been cherry-picked. Furthermore, as part of GEMA's Business Plan Incentive, submitted costs based on single contractor quotes were

[198] Ground 1B(1)(C) of Cadent's Notice of Appeal is headed *"Unevidenced and insufficient Urbanity Productivity Adjustment"* (emphasis added) and contains a footnote to Section 6.2.3 of the Cadent Exhibit RD1 NERA Report, which addresses both the urbanity productivity and reinstatement adjustments. However, Cadent's NoA §§3.70-3.72 in substance only address the size of the urbanity *reinstatement* adjustment. These submissions therefore focus on the size of the *reinstatement* adjustment.

[199] Cadent's NoA, §§3.70-3.72.

deemed to be "*lower-confidence*" (MW7, §141). GEMA therefore concluded that this data was insufficiently robust and that there was a significant risk that the comparison overstated the cost differential.

407. In this regard, it is noted that, in its *Firmus Energy* FDs, the CMA adopted similar reasons for dismissing a price differential argument based on data obtained from a single contractor. At §4.47 the CMA said:

> *"In our view, a competitive tender does not in and of itself imply an efficient cost estimate; whatever the experience and the nature of the contractor, the UR is entitled to challenge efficiency claims. Furthermore, in our view, evidence of the fact that one contractor [%] for FE and PNGL is not sufficient to establish the existence of an impact of sparsity on maintenance costs."*

408. **Third**, Cadent's comparison did not seek to address whether the higher costs per metre for London tenderers might partially be explained by productivity and pay differentials the supplier in question would face when working in London. These factors are already accounted for through the RLC and productivity adjustments. Accepting Cadent's proposed adjustment would therefore carry a significant risk of double counting.

409. In considering whether GEMA exceeded the limits of expert discretion, GEMA notes that the difference between the two approaches is small – amounting to only 3%. Furthermore, even according to NERA, adopting Cadent's proposed approach would only increase its allowances by £2.55m over the GD2 price control.[200]

(D) Partially accepted claims understate efficient costs

410. Cadent argues that GEMA was wrong partially to accept three separate claims, rather than allow them in full. These claims concerned: (i) longer duration of emergency interventions, (ii) high plant hire costs associated with the repex programme, and (iii) high reinstatement costs in relation to repex and repair activities.[201]

[200] Cadent Exhibit RD1 NERA Report, §253.

[201] Cadent's NoA, §§3.73-3.77.

(i) Longer duration of emergency interventions

411. Cadent submitted evidence which indicted that its London GDN takes, on average, 41% longer than the average time of Cadent's other GDNs to perform external jobs, and 26% longer for internal jobs. GEMA extended the 15% urbanity productivity adjustment to emergency costs at FD stage.[202] Cadent argues that this adjustment was inadequate and that GEMA did not properly consider the evidence it had put forward. Cadent also criticises the fact that the urbanity productivity adjustment "*was developed in RIIO-GD1 for a different activity that was based on a selective reading of evidence presented by one GDN over 8 years ago*".

412. GEMA accepted that the urbanity productivity adjustment was not developed for emergency costs. However, GEMA decided that this adjustment was appropriate for emergency job times. As explained by Dr Wagner (MW7, §170): "*the constraints caused by operating in an urban environment are likely to be no higher for emergency jobs than they are for reinforcement, connection and repex. It is not clear to GEMA why emergency jobs would be significantly more affected by urbanity than other work similarly constrained by the operational environment.*" Cadent accepted the appropriateness of the urbanity productivity adjustment to explain increased London reinforcement, connection and repex costs in its DDs consultation response and business plan. It has failed to demonstrate why emergency costs should be treated any differently.

413. In partially allowing Cadent's claim, GEMA recognised that longer durations of emergency interventions were higher for reasons outside the London GDN's control (e.g. as a result of longer travel times). However, GEMA did not accept Cadent's assumption that the costs recorded by Cadent were *wholly* exogenous and unrelated to its efficiency.

414. GEMA's concerns were particularly pronounced given the *magnitude* of the recorded cost differential. GEMA had serious concerns about applying an adjustment (as high as 41%, for external jobs) which significantly exceeded the levels of other London

[202] Where Cadent's NoA refers to an 11% adjustment, this reflects the fact that a *pro-rata* adjustment is made, as only 77% of Cadent's London GDN's customers reside within the M25 (MW7, §79).

regional factor adjustments – namely the RLC and urbanity *reinstatement* adjustments (18.3%). In essence, GEMA was not prepared to accept that the same London constraints (i.e. dense population and utilities infrastructure) affect emergency costs around *twice* as much as they do comparable activities.

415. GEMA also had concerns about how Cadent had calculated the size of the adjustment. GEMA stated at FDs that "*before doing [the] calculation, we consider that labour costs should have been deflated using London's labour index to avoid double counting with the labour adjustment*" (MW7, §130). GEMA also had concerns that Cadent's proposed approach risked double counting.

416. Overall, GEMA was entitled to make an adjustment which recognised the challenges and increased cost of emergency interventions in London; whilst concluding that the very large adjustment proposed by Cadent overstated those effects and was partially explained through the London GDN's inefficiency. GEMA acted well-within its expert margin of discretion in reaching this conclusion.

(ii) High plant hire costs

417. Cadent submitted evidence based on tender prices to GEMA showing that its London GDN incurs 19.7% higher plant hire costs than its East of England GDN. In response to this evidence, GEMA applied the urbanity productivity adjustment (15%) to plant hire costs, but not the full 19.7% proposed by Cadent. Cadent criticises GEMA for this decision on two bases. First, for rejecting its evidence as too uncertain. Second, for partially justifying its approach on the basis that plant hire costs were already partially captured by the RLC adjustment.

418. As to the first criticism, GEMA decided against applying the entirety of the adjustment proposed by Cadent for largely the same reasons it rejected tender-based data produced by Cadent in support of its claim to increase the urbanity reinstatement adjustment (see §§408-410 above). In summary, these reasons were:

    (1) Serious flaws in the comparison between the London GDN and the East of England GDN; and

(2) That reliance on a single tenderer's data was insufficiently robust.

419. As to the second criticism, GEMA now accepts that plant hire costs were classified separately from labour costs in Cadent's business plan, and that plant hire costs were not already partially captured by the RLC adjustment. However, the overall decision under challenge is GEMA's application of the *productivity* adjustment (and not the RLC adjustment). GEMA's main justification for this approach was that higher plant hire costs primarily derive from lower productivity in London, which results in longer hire times. In reaching this conclusion, GEMA placed weight on the fact that Cadent had supported the application of the urbanity productivity adjustment to similar cost activities affected by lower productivity, such as repex, reinforcement and connections.

420. GEMA was accordingly entitled, within its expert margin of discretion, to conclude that the urbanity productivity adjustment was a more accurate way of accounting for increased plant hire costs.

(iii) High reinstatement costs for repex and repair activities

421. Cadent argues that GEMA should have applied a 21% adjustment to repex and repair activities, rather than the urbanity reinstatement adjustment (18%). This argument is in addition to Ground 1B(1)(C), by which Cadent contends more generally that GEMA's reinstatement adjustment does not adequately reflect the higher reinstatement costs associated with urbanity.

422. Whilst Cadent presented this claim as company-specific, as the costs in question were for reinstatement, GEMA considered that it was appropriate to apply the urbanity reinstatement adjustment, which GEMA had already applied to Cadent's other reinstatement costs. For the reasons provided at §§403-409 above, GEMA was entitled to dismiss Cadent's proposed 3% reinstatement adjustment because its supporting evidence was insufficiently robust, and acted firmly within its expert margin of discretion when doing so.

(E) Claims rejected due to arbitrary application of materiality threshold

423. Cadent argues that GEMA rejected specific costs claims (concerning Traffic Management Hire, London Depot Rental Costs, 24h Shift Patterns, London Congestion Charge, London Local Authority Tunnels and Locksmiths) on the basis of an "*arbitrary*" materiality threshold of 0.5% of gross unnormalized totex. Cadent raises four specific criticisms of GEMA's approach.[203]

424. The **first** is that each of these costs were **"***all linked to the ultra-dense characteristics of the London region"* and should therefore have been considered in sum. The logic of this argument is that all costs linked to London regional factors should have been aggregated. This would have had the effect of rendering the materiality threshold useless and would have permitted GDNs to submit a large number of small claims. GEMA was fully entitled to adopt an effective materiality threshold for GD2 for the reasons set out at §381 above. Cadent has not challenged its ability to do.

425. Having established an effective materiality threshold, GEMA was required, as a matter of fairness and transparency, to apply it equally to all GDNs (some of which may not have submitted claims falling below the materiality threshold). GEMA was therefore right to treat individual claims separately where (a) each was based on a distinct methodology and (b) GEMA was required exercise a standalone judgment on whether the claim should be allowed.

426. In any event, Cadent accepts in its NoA that, if the threshold is applied to "gross" unnormalized costs (which is correct for the reasons given below at §431), then these costs *in aggregate* still fall *"marginally short"* of the threshold.[204]

427. The **second** criticism is that "*GEMA provides little or no evidence or analysis to support its assertions of why Cadent's claims regarding the high costs of operating in London may be*

[203] Cadent's NoA, §§3.78-3.84.

[204] Cadent's NoA, §3.79.

covered by other adjustments". This is based on a misreading of GEMA's FDs decision. The paragraph relied on by GEMA stated:[205]

> *"We recognise the fact that these claims relate to operating in the London area, however we do not agree that they can all be considered together as one single factor as they relate to different aspects of operations and affect different cost activities. For example, the challenges of operating in London include higher wages and lower productivity which are being recognised and adjusted for separately and we do not see merit in considering these jointly as one single factor. While we accept that some of these claims have merit in principle, we do not believe that they are material enough to warrant an adjustment."*

The point made by GEMA was that increased costs of operating in London were caused by a disparate number of factors, rather than the nebulous concept of a single "London factor"; that this was evidenced through the different purposes served by the RLC and productivity adjustments; and that it was therefore inappropriate to consider increased costs related to London regional factors in aggregate.

428. The **third** criticism is that GEMA adopted a more stringent approach to materiality than at ED1, "*where it accepted a large number of claims made by UKPN as part of an overall London regional adjustment*". For the reasons given by Dr Wagner (MW7, §180), GEMA denies that it acted inconsistently with ED1: the ED1 adjustment referred to by Cadent was for "*similar costs*", whilst the costs categories here had "*no obvious link to each other*".

429. GEMA's approach for GD2 was clearly within its margin of discretion. This can be seen by comparing the materiality threshold with previous price controls. GEMA's 0.5% threshold was consistent with the threshold it applied at ED1 and GD1, and which Ofwat applied at PR14. And it was more generous than Ofwat's materiality threshold for PR19, which ranged from 1% to 6%.

430. **Fourth**, Cadent argues that GEMA's materiality threshold "*was in any event arbitrary and prevented Cadent from recovering its efficient costs*", and was therefore "*inconsistent*

[205] See GEMA, FD Cadent Annex, para 3.113 **[TSUB6/01]**; cited at fn.98 of Cadent's NoA; emphasis added.

with the intended effect of the regulatory regime, which is to remunerate all efficient costs". This criticism is misplaced:

(1) Insofar as Cadent challenges the setting of a materiality threshold: it was appropriate to do so, consistent with regulatory precedent, and manifestly within GEMA's margin of discretion.

(2) Insofar as Cadent challenges the level of the threshold: all materiality thresholds are to an extent *"arbitrary"*. The alternative, of reserving a broad discretion to exclude immaterial costs, would be opaque and unfair. As set out in the paragraph above, the level of the threshold was consistent with regulatory precedent.

431. Cadent also contends that GEMA was wrong to apply the materiality threshold in respect of "gross" totex rather than "net" totex, and that this approach *"disadvantaged (and discriminated against) companies like Cadent that undertake a large volume of third-party funded projects"* (NoA, §3.84). GEMA considered that a threshold based on gross totex was more consistent with the broader costs assessment framework (MW7, §179). Furthermore, the suggestion that this approach discriminated against Cadent has no basis in fact. Subject to a small claim submitted by SGN for the costs of working on the Isle of Wight, only Cadent submitted company-specific claims (MW7, fn.52).

Ground 1B(2) – "GEMA's exclusive and insufficient reliance on discrete pre-modelling adjustments to control for regional factors"

432. As set out above, the essence of the dispute on Ground 1B(2) is how the London efficiency gap should be accounted for. Cadent argues that the gap arises entirely as a result of exogenous London-specific factors and cannot be addressed *at all* via efficiency improvements. Cadent claims that many of the London costs disadvantages it faces are *impossible* to identify or quantify without a firm basis for this assertion.

433. Cadent's proposed remedy of treating the London GDN as equivalently efficient to the West Midlands GDN is premised on the basis that *"While allowing Cadent's claims in full would go some way towards resolving GEMA's failure to control for regional factors and company-specific costs, evidence shows that relying solely on discrete adjustments is*

insufficient to ensure that the London GDN is not disadvantaged".[206] That proposed remedy is a drastic and arbitrary solution to a problem that does not exist. GEMA has carefully and rigorously exercised its expert regulatory judgmentand concluded that London regional factors have been accounted for through various pre-modelling adjustments and in the model itself.

The efficiency gap is best explained by Cadent's inefficiency rather than factors outside of Cadent's control

434. GEMA considers that the efficiency gap is explained by the inefficiency of Cadent's London GDN compared to its West Midlands GDN and can be closed through the kinds of improvements Cadent made during the RIIO-GD1 price control period (see §442 below for examples of those improvements).

435. GEMA is confident that exogenous London regional factors have been appropriately accounted for through:

(1) Application of the RLC adjustment, to account for higher labour costs;

(2) Application of the urbanity productivity adjustment, to account for lower productivity;

(3) Application of the urbanity reinstatement adjustment, to account for higher reinstatement costs;

(4) Accepted or partially accepted company-specific claims submitted by Cadent (as set out above, GEMA accepted more than 70% of the value of these claims); and

(5) Use of MEAV as a cost driver (with the inclusion of "risers"), which accounts for network scale and complexity and explains higher costs where GDNs provide services to a higher proportion of MOBs.

[206] Cadent's NoA, §3.85

436. In accounting for increased London costs in this way, GEMA has recognised that operating in highly dense urban areas poses particular challenges. It has sought to capture those challenges in a robust and quantifiable manner. Its approach is clearly preferable to that suggested by Cadent, which assumes that there is no way of accounting for the effects of a significant proportion of London regional factors.

Cadent's proposed remedy

437. Cadent asks the CMA to conclude that the London GDN's efficiency is assessed as the same as Cadent's next least efficient network, West Midlands.

438. GEMA accepts that a top-down modelling process of this size and complexity can never be perfect. However, the clear shortcomings in Cadent's proposed remedy highlight that there *was* no obvious alternative to GEMA's carefully considered approach, let alone that GEMA's approach was *wrong*. Those shortcomings are as follows.

439. **First**, Cadent's proposed remedy is entirely inconsistent with use of the top-down model and the benchmarking framework. As explained in Dr Wagner's First Statement (§59), "*[t]he logic of benchmarking is to assess each GDN's relative efficiency by comparing its performance with that of other GDNs*". Cadent proposes a remedy which disregards the results of the benchmarking analysis for the London GDN. This prevents GEMA from considering the results of that analysis for the London GDN and from applying an appropriate catch-up efficiency challenge for GD2. Cadent's proposed remedy also more generally undermines the integrity of analysis which is deliberately *comparative* in nature.

440. **Second**, Cadent's proposed remedy is contradictory in of itself. As Dr Wagner considers (MW7, §188; emphasis in original) considers: "*Cadent's proposal to consider the results of a benchmarking outcome that includes London, without accepting the outcome for London itself, is not a coherent position*".

441. *Third*, Cadent's proposed remedy is premised on the assumption that the London GDN has made *all possible* efficiency improvements relative to the West Midlands GDN in previous price controls (i.e. London-specific efficiency improvements). This is highly

doubtful in circumstances where the London GDN comfortably outperformed its GD1 allowances, despite being ranked last for efficiency in both top-down and bottom-up modelling.

442. Whilst operating in London poses particular challenges, the flipside is that this leaves greater scope to increase efficiency. Howard Forster's witness statement (§16) sets out some of the considerable efficiency improvements the London GDN made over GD1; namely (a) *"innovation to dramatically reduce the number and duration of interruptions to supply in multiple occupancy buildings"* and (b) acting *"at the forefront of using robotics and other technical innovation to reduce disruption associated with streetworks in the capital"*. If Cadent were successful on Ground 1B(2), it would significantly reduce the incentive on Cadent to make similar improvements for the GD2 price control period. This, in turn, will result in higher prices for consumers in the medium-to-long term.

443. **Fourth**, if the CMA grants the relief sought by Cadent, this could incentivise Cadent to allocate costs, especially inefficient costs, to its London GDN in the expectation that those costs would be recoverable in subsequent price controls. There is also a risk that directing Cadent's proposed remedy sets a precedent which inefficient GDNs could rely on in future.

Weaknesses in Cadent's supporting arguments

444. Cadent's case that the London efficiency gap is unrelated to efficiency is supported by three main arguments. GEMA addresses the limitations of these points in turn.

(i) Cadent's inability to identify and quantify all of the cost disadvantages they face as a consequence of regional factors

445. Cadent argues that *"[i]t is simply not possible to capture, itemise and quantify the totality"* of London-specific features *"into discrete claims for pre-modelling adjustments"*.[207] Cadent seeks to support the purported weaknesses of GEMA's reliance on pre-modelling adjustments through the witness evidence of David Moon and Howard Forster. In the words of Mr Moon (§89): *"we do not recognise such a differential in performance across our*

[207] Cadent's NoA, §3.87

networks, as my colleague Howard Forster also attests in his witness statement, particularly since we operate under the same management team with the same ethos and performance culture across our teams."

446. This factual evidence is impressionistic and unsupported by any meaningful statistical analysis. It is entirely possible that either (a) Cadent's *"ethos and culture"* in fact works differently in the different GDNs – something that would be extremely difficult to assess; or (b) that it works better in solving issues outside London than in London – again an exercise in management quality analysis that would not be feasible.

447. In any event, the evidence fails to establish both of the key assertions which underpin Cadent's arguments. First**,** Cadent has not robustly evidenced the assertion that there is no "*differential in performance across our networks*".

448. Second**,** Mr Forster's statement suggests that the principal challenges of working in London are "*essentially rooted in issues related to the density of population and infrastructure in London"* (§19). GEMA has already accounted for these challenges: the two urbanity adjustments and additional company-specific factor adjustments for emergency job times and plant hire (see §§412-421 above) ensure that density is controlled for in the model.

449. It is also clear that use of MEAV in the model accounts for a number of the additional factors referred to by Messrs Moon and Forster. By way of illustration, the first example raised in Mr Forster's statement of a London factor which GEMA's approach is alleged to have overlooked is the costs of serving a higher number of MOBs (see §20A). As explained at §375 above, use of risers within MEAV explains higher costs where GDNs provide services to areas with a higher proportion of MOBs.

450. Where factors referred to Cadent have not been accounted for through pre-modelling adjustments or in the model itself, it is doubtful that they are material. This can be seen from the six specific costs claims which are the subject of Cadent's Ground 1B(1)(E): Traffic Management Hire, London Depot Rental Costs, 24h Shift Patterns, London Congestion Charge, London Local Authority Tunnels and Locksmiths. As set out above, GEMA was entitled to reject these specific claims on the basis of materiality. The magnitude of each of these claims, and therefore their effect of Cadent's efficiency

rankings, was so small that, had they been aggregated, the overall sum would still have fallen short of GEMA's materiality threshold of 0.5% of gross unnormalized totex.

451. GEMA further disagrees with the contention that difficulties of identifying and quantifying London-specific costs are *"compounded by GEMA's approach to such costs, which set unduly stringent criteria for Specific Claims; and disincentivised the submission of "lower confidence costs" through the Business Plan Incentive Mechanism"*.[208] For the reasons given at §§379 and 381 above, GEMA required specific claims to be robustly evidenced and material. This approach was entirely justified and open to GEMA as a matter of regulatory discretion. GEMA also repeats the point above that it could have adopted the arguably more demanding approach of adopting post-modelling adjustments and requiring GDNs to justify the *"additionality"* of any cost factor adjustment not captured in the model (as Ofwat did at PR19).

(ii) Level of the RLC Adjustment

452. Cadent argues that *"GEMA's reliance on pre-modelling adjustments also introduced a significant element of subjectivity into the cost assessment process, as can be seen from the design of the Regional Labour Cost Adjustment."*[209] It claims that GEMA should have used wage data for only 2017/18 and 2018/19, rather than 2014/15 to 2018/19.

453. This argument amounts to nothing more than a disagreement regarding GEMA's exercise of expert regulatory discretion (and is therefore no different to any of the arguments raised under Ground 1B(1)). It is without merit and certainly does not point towards any broader issues with GEMA's approach to London regional factors.

454. As to the specific criticism regarding the level of the RLC adjustment, it was appropriate and well-within GEMA's margin of discretion to adopt a longer timeframe. Cadent appears to accept that GEMA was not *wrong* in its approach: in the NoA it describes its proposals as *"more reasonable"* than GEMA's.[210]

[208] Cadent's NoA, §3.88.

[209] Cadent's NoA, §3.89

[210] Cadent's NoA, §3.93; emphasis added.

455. GEMA considered a range of options and tested the impact of using 1, 2, 3, 4, 5 and 6 years' worth of data on the index calculation (MW7, §§68-71). It was entitled to adopt the approach it did for the following reasons:

(1) There was no upwards trend over the 5-year average which would indicate that the higher index for 2017/18 and 2018/19 was expected for 2019/20 onwards. In fact, the trend from 2017/18 and 2018/19 was a downward one.

(2) A 2-year average might be more affected by temporary fluctuations in the underlying data.

(3) A 5-year average provided a larger sample size and more robust estimate than a short-term estimate.

(4) It is noted that, on Cadent's case, the difference of the two figures amounts to just £7m over the price control – a very small part of the claimed adjustment.

456. Cadent's broader argument ignores the reality of GEMA's functions as an expert regulator. To the extent that GEMA is required to exercise regulatory judgmentand discretion on a number of issues as part of the overall costs assessment process and carefully consider the merits of alternative approaches when doing so, then it is correct that this process involves an unavoidable degree of "*subjectivity*". Cadent's argument proceeds on the misplaced assumption that decisions such as this one contain an objectively correct answer.

457. In various instances, GEMA made various "*subjective*" decisions affecting all GNDs which *improved* Cadent's allowances – e.g. the decision at DDs to include risers in MEAV. Insofar as Cadent suggest that GEMA should have fettered its regulatory discretion and consistently exercised its judgment with a view to maximising allowances for the London GDN, this is clearly wrong.

(iii) Econometric analysis 'supports' Cadent's claim

458. Cadent contends that GEMA was wrong to reject its proposal at DDs of (a) including a density driver to account for London regional factors, or (b) using a density driver to inform a larger pre-modelling adjustment for the London GDN.

459. Based on the conclusions of the NERA Report,[211] Cadent itself recognises that use of a density driver would be inappropriate, and does not ask the CMA to apply one as part of its proposed remedy.[212] The limitations identified by NERA are consistent with the outcome of GEMA's own testing of a density driver.[213] In particular, NERA and GEMA have identified that use of a density driver leads to "*over-fitting*" of the model (i.e. that it "*will tend to capture any differences between London and other GDNs, whether these are actually related to density or not*"), which may result in variations due to inefficiency being overlooked (MW7, §153).

460. Further limitations of the density driver are set out at (MW7, §§152-155). In summary, they are:

(1) That it appears the density variable does not actually account for urbanity/sparsity: the Southern GDN "*has only a marginally higher density than the sample median, despite having parts of the geographical region in a similar operating environment as London.*"

(2) The density driver is applied to all totex, but it is problematic to assume that urbanity affects *all* cost categories (c.f. specific costs categories in respect of which GEMA has applied regional adjustments).

(3) Density may already be accounted for through the application of the RLC adjustment and inclusion of MEAV in the model.

461. Cadent does not explain *how* the density driver analysis could be used to "*inform larger pre-modelling adjustment for the London GDN*". Having considered the effects of the density driver on the modelling, and recorded significant flaws with it, GEMA was

[211] Cadent Exhibit RD1 NERA Report, §331(b).

[212] Cadent's NoA, §3.102.

[213] Cadent Exhibit RD1 NERA Report, §48.

fully entitled within its margin of discretion to disregard those results and persist with its rigorous approach to identifying and applying pre-modelling adjustments where they were well-justified. For the reasons set out above, the challenges posed by the London environment were already accounted for through the RLC, productivity, reinstatement and company-specific adjustments, as well as use of MEAV in the model itself.

D. CONCLUSION

462. For all the reasons given above, GEMA denies that there has been any error or illegality in its approach to the London regional factors. The CMA is invited to dismiss Ground 1B in its entirety.

VII. REPEX

NB: references in the form (MW3 x) *in this section are to the third witness statement of Dr Michael Wagner. GEMA relies on the contents of that witness statement in full in addition to the submissions below.*

A. INTRODUCTION AND SUMMARY

463. "Repex" refers to expenditure on programmes of replacing existing metal pipes with new polyethylene pipes for transporting gas. Allowances for the Gas Distribution Networks' ("GDNs'") price control for April 2021–March 2026 ("RIIO-GD2") were determined at the totex level, i.e. 'top down': the allowances for opex, capex and repex are calculated backwards from that overall figure, and are then further disaggregated to activity-level allowances (e.g. the repex allowance for 'Tier 1' pipes).[214]

464. For RIIO-GD2, after a multi-factorial modelling process based on data provided by all eight GDNs, the Gas and Electricity Markets Authority ("GEMA") has provided WWU with a totex allowance of £1,157m in the RIIO-GD2 Final Determinations in December 2020 ("FDs"):[215] a reduction of just 3.9% on WWU's requested totex of £1,203m (the lowest overall reduction of any of the eight GDN regions). (MW3 §§108, 133) Applying that 'top down' approach, GEMA calculated WWU's repex allowance at £420m (FDs, WWU Annex, Table 18): that is, just 5% lower than the £442m repex costs which WWU submitted to GEMA in its Business Plan in October 2020. (MW3 §103, Table 6)[216]

465. WWU now seeks an increase of [redacted] to its repex allowance.[217] The result would be a repex allowance which [redacted] that requested by WWU, both in its original Business Plan in December 2019 and in its resubmitted Business Plan in October 2020.

466. As is apparent from its Notice of Appeal,[218] the basis of WWU's appeal is its assertion that GEMA has not provided it with what it regards to be *"sufficient remuneration"*.[219]

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[214] A summary description of totex, and GEMA's methodology for setting it, is set out in paragraphs 12 to 21 of the First Witness Statement of Dr Michael Wagner.
[215] Please refer to exhibit marked "A5.5" included in WWU's Notice of Appeal Bundle, par 3.5, table 8
[216] These costs and allowances refer to the totals for all categories of repex work.
[217] WWU Notice of Appeal, §§3.2(c), C1.4-C1.5
[218] WWU Notice of Appeal, §C9
[219] WWU Notice of Appeal, §C9.1

WWU alleges, reasoning backwards from that conclusion, that GEMA must have therefore failed to have regard to relevant considerations and/or the decision is otherwise wrong in law[220] and that therefore "*the allowance itself must be increased*".[221] By way of relief, WWU asks the Competition and Markets Authority ("CMA") to substitute a new blended unit rate for WWU's repex work of [redacted] per metre.[222] This figure does not reflect data shared with GEMA at any point during the process of modelling costs; it rather reflects WWU's latest (and adjusted) view at the time of filing its appeal of the costs it may incur on the latest (and adjusted) approach it proposes to take to its own repex activities.

467. The appeal is without merit.

(1) At FDs, GEMA set totex allowances for each GDN relative to its assessment of what a notionally efficient company that shared the characteristics of each network company would require. The repex allowances were then derived as a subset of the overall totex allowance. WWU expressly does not appeal GEMA's decision to use a top-down approach in its modelling,[223] yet its objections undermine the process of setting overall, efficient totex for a notionally efficient company with the characteristics of WWU.

(2) The modelling took into account the relevant factors identified by WWU: GEMA applied adjustments on the basis of sparsity, urbanity and regional labour costs within the model. Likewise, the key factors that WWU highlights as influencing costs are related to the physical characteristics of the mains population to be repaired – a greater proportion of work on ductile iron mains, using the 'open cut' technique, smaller and less efficient projects at the extremities of its network – and these too have been taken into account in the GDNs' Business Plans and thus GEMA's modelling.

(3) WWU also relies on increased labour costs. It cites a report from Oxera,[224] but the data has severe limitations. In any event, the cost assessment approach used data from both the GDNs' price control for April 2013-March 2021 ("RIIO-GD1") and from RIIO-

[220] WWU Notice of Appeal, §C9.38-46
[221] WWU Notice of Appeal, §C9.47
[222] WWU Notice of Appeal, §C10.2
[223] WWU Notice of Appeal, §C9.4
[224] Please refer to exhibit marked "J1" included in WWU's Notice of Appeal Bundle

GD2 from all the GDNs, such that the costs pressures are reflected in the outcome of totex allowances. Labour costs are also indexed in RIIO-GD2, such that any material in-period pressures on labour costs will be accounted for through Retail Price Effects ("RPE") indexation.

(4) A focal point of WWU's challenge[225] is evidence of tender costs that it provided to GEMA very late in the process, in September and October 2020. This evidence is said by WWU to be evidence of the costs it will incur, which GEMA is said to have "*failed to have proper regard to or give sufficient weight to*".[226] However:

a. GEMA had sufficient regard to this evidence. It did so notwithstanding that WWU did not consider it appropriate, when resubmitting its figures in October 2020, to take into account these allegedly higher costs.

b. GEMA ultimately decided it was not appropriate to replace WWU's costs with "*the costs [WWU] had been quoted*".[227] That was both because of concerns about the quality of the data, and because to do so would undermine GEMA's modelling process.

c. GEMA's caution in this regard has already, on WWU's own case, been proven to be well-founded. WWU itself accepts that, had GEMA accepted this tender evidence, WWU would have been funded [redacted] per metre[228] more than it already recognises it can deliver the work for.

468. GEMA's approach to setting WWU's repex allowance was therefore lawful and justified. The suggestion that WWU's repex allowances will leave it *"unable to meet its legal obligations to ensure the safety and reliability of its network"*[229] is without basis. The appeal amounts to no more than a disagreement with GEMA's exercise of its regulatory judgment to derive a model that sets efficient allowances, after a careful and robust costs assessment process in which network companies were closely involved, and based on historical and forecast costs data which network companies (including WWU) provided.

[225] WWU Notice of Appeal, §§C8.1-12, §§C9.6-9, §§C9.24-25
[226] WWU Notice of Appeal, §C1.10
[227] WWU Notice of Appeal, §C1.10
[228] WWU Notice of Appeal, §C1.11, §C9.10
[229] WWU Notice of Appeal, §C1.5

B. THE REPEX INPUTS FOR THE TOTEX REGRESSION

469. In order to reach its position in FDs, GEMA engaged in a detailed process of consultation with the GDNs, which began with an Open Letter in July 2017 and continued for the next 3.5 years. The process is described in further detail at (MW3 §23-103).

470. As explained above, the position adopted in FDs was to set each GDN a totex allowance for RIIO-GD2, based on modelling a notionally efficient company with its mix of scale, workloads and outputs. Broad expenditure group allowances, such as repex, and specific activity-level allowances are all derived from the headline totex allowance. (MW3 §12)

471. The vast majority of WWU's submitted repex costs [redacted] were assessed through regression. (The remainder of the costs, which covered WWU's multiple-occupancy buildings, were assessed through non-regression; they are not a focus of the appeal.) (MW3 §14)

472. The totex regression defines a relationship between costs and a cost driver to establish a view of efficient costs. The model compares submitted historical (first seven years of RIIO-GD1) and forecast (final year of RIIO-GD1 and RIIO-GD2) costs (following relevant exclusions, reclassifications and normalisations) against a composite scale variable ("CSV") cost driver for each year of the modelled dataset and for each network.[230] Prior to running the regression, GEMA also made adjustments for regional factors (which include sparsity and differences in labour costs) and network company-specific factors, to account for GDN-specific differences in costs which are driven by characteristics specific to a particular network. (MW3 §17)

473. As described in (MW3 §§19-20), the repex component of the totex CSV is "synthetic costs", which is a workload driver. Synthetic costs are calculated by multiplying

[230] Further detail on the CSV is included in the First Witness Statement of Dr Michael Wagner paragraphs §§47 to 53.

workloads by synthetic unit costs for each workload activity (i.e. for individual pipe diameter bands for each workload category) and summing them together.

474. There are three particular points of significance from the approach adopted by GEMA:

(1) **GEMA assesses overall efficient totex, not compartmentalised allowances**. Repex allowances are derived in a 'top down' manner from the overall totex allowance. WWU does not challenge this approach.[231] GEMA defines specific outputs that WWU must deliver (among them repex workload volumes), but WWU has discretion over how it apportions its totex to deliver these outputs. (MW3 §146) It is therefore incorrect to view repex allowances in isolation, as WWU invites the CMA to do.

(2) **GEMA's model is dependent upon the data submitted by GDNs in their Business Plan Data Templates.** The input data for both the cost and cost driver parts of the regression comes from the companies' submitted data in their Business Plans and BPDTs. (MW3 §22, 135) Where WWU decided not to submit data in its BPDT, there is and can be no relevant error in that information not ultimately being used in the regression model.

(3) **GEMA sets efficient allowances for the notional licensee**. It does not fund WWU's specific business models or strategies. WWU's Notice of Appeal effectively invites the CMA to find that GEMA was required to fund a particular business model for its delivery of repex allowances.[232] GEMA has decided not to adopt such an approach, principally because if GEMA were to provide funding for specific activities based on WWU's own, network company-specific models of delivery for repex, such an approach would fail to incentivise network companies to find more efficient methods of delivering outputs. This is fundamentally inconsistent with setting allowances for a *notionally* efficient company. (MW3 §132)

C. TREATMENT OF WWU'S TENDER COSTS EVIDENCE[233]

[231] WWU Notice of Appeal, §C9.4
[232] WWU Notice of Appeal, §C8.10
[233] The chronology in paragraphs 477-493 is set out in (MW3 §§43-103)

475. Given the central importance that WWU accords in its Notice of Appeal[234] to the treatment of its tender costs evidence and how such treatment is alleged to demonstrate the flaw in GEMA's approach, it is instructive to consider first the merits of WWU's reliance on tender cost evidence.

476. In summary, WWU contends that GEMA ought to have used data it provided of tender costs in late 2020 as a "*cross-check on the resulting allowances in order to ensure that they are actually sufficient for WWU*"[235]; it further contends that GEMA was "*wrong to ignore that more up to date evidence in its Final Determination in preference for that submitted with the Business Plan*".[236]

477. In December 2019, GDNs including WWU submitted their final Business Plans to GEMA, providing their costs data and evidence on costs drivers, including as to repex, for the RIIO-GD2 price control.

478. In its December 2019 Business Plan, WWU provided the following key information to GEMA:

(1) It forecast totex of £1,182m.

(2) Of that, it forecast total repex costs for RIIO-GD2 of £442m.

(3) It forecast an increase in average unit costs for Tier 1 repex of [redacted] from RIIO-GD1 to RIIO-GD2, i.e. from [redacted]/metre to [redacted]**/metre.** (MW3 §44, Table 2).

(4) It forecast an average unit cost of [redacted]**/metre** "across all tiers and diameters"[237].

479. Based on WWU's own December 2019 Business Plan, therefore, both WWU's forecast Tier 1 repex unit costs and its average unit cost are significantly lower than the blended [redacted]/metre it is now seeking from the CMA.[238]

480. In response to GEMA's Draft Determinations ("DDs"), GEMA arranged bilateral meetings with WWU in September 2020. At a meeting on 25 September 2020, WWU

[234] WWU Notice of Appeal §§C8.1-12, §§C9.6-9, §§C9.24-25.
[235] WWU Notice of Appeal, §C9.7
[236] WWU Notice of Appeal, §C9.24
[237] WWU Notice of Appeal, §C4.16
[238] WWU Notice of Appeal, §C10.2(b)

explained that it believed that evidence from an ongoing tender process influenced its repex in a way which was not accounted for in DDs. GEMA requested that WWU provide the underlying data concerning its ongoing tender process, which was received on 4 October 2020. (MW3 §83)

481. In September 2020, GEMA asked that GDNs provide a partial re-submission of their BPDTs, *inter alia* to reflect revised information that they had submitted as part of their responses to DDs. This included a request that network companies comply with GEMA's Data Assurance Guidance in re-submitted BPDTs. (MW3 §87).

482. WWU provided a *re*-submitted Busines Plan Data Template ("BPDT") in October 2020, in which WWU provided the following key information to GEMA:

(1) It revised its opex and capex forecasts for RIIO-GD2 upwards from its December 2019 Business Plan submission.

(2) It forecast totex of £1,203m.

(3) It still forecast <u>total</u> repex costs for RIIO-GD2 of £442m, i.e. unchanged from its December 2019 position.

(4) It forecast an average unit cost of [redacted]/metre, i.e. unchanged from its December 2019 position.

483. WWU was provided with an opportunity to re-submit appropriately quality-assured repex forecasts when it re-submitted its BPDT in October 2020. It chose not to revise its repex forecasts in that BPDT.

484. Nevertheless, GEMA carefully considered the provisional evidence from the tendering exercise that was provided by WWU in October 2020 and decided, for rational and cogent reasons, not to adjust WWU's allowances as a result. The reasons for that (MW3 §§91-95) were based both on the quality of the evidence and the fact that each of the potential options for incorporating this data would undermine our overall cost modelling methodology.

485. In relation to quality of the data, GEMA's concerns were:

(1) WWU had failed to provide BPDT reforecasts of its RIIO-GD2 costs to take account of its tender evidence. Consequently, GEMA had no means of assessing how this would interact with its Business Plans or of quantifying the overall impact on its totex. In addition, it meant the evidence had not been subject to the same level of assurance as the costs submitted by all GDNs in their BPDTs.

(2) In its "GD2 Outsourcing Tender Report"[239], sent to GEMA on 4 October 2020, WWU stated that the deadline for final submission of tenders was not until 7 December 2020. The bids in the tender evidence could therefore not be treated as final (i.e. being on a Best and Final Offer (BAFO) basis), meaning that the data remained uncertain and potentially subject to change. (After the publication of FDs, WWU finalised 'best and final offers' from its tender exercise[240]. WWU cannot reasonably suggest that this information, which it obtained *after* FDs, demonstrates that GEMA's decision as to its overall totex or repex allowance failed to take into account information that was not provided to it.)

(3) WWU noted the option of taking work in-house, rather than tendering with third parties, but did not submit a fully costed proposal for this option.

(4) Tender information does not necessarily represent efficient costs and GEMA, having due regard to regulatory precedent, was concerned that it should not be accepted at face value, especially in the context of the points above. (Indeed, WWU has since proven that this initial information was inefficient by [redacted] per metre, which reflect the revised costs it has identified for bringing the work in-house: Notice of Appeal, §C.11)

486. The CMA has previously expressed this view that tender information does not necessarily represent efficient costs, in its decision on the Firmus Energy appeal in 2017 in which it stated that whatever the experience and nature of the contractor the regulator was entitled to challenge efficiency claims.[241]

487. As to concerns about using the data:

[239] [TSUB7/01]
[240] WWU Notice of Appeal, §C8.1
[241] Please refer to exhibit marked "M23" included in WWU's Notice of Appeal Bundle

(1) There was no clear methodology for how GEMA could consistently take account of this evidence in its cost model. Any revisions to input data would have the potential to affect outcomes for all GDNs, and the lateness of the evidence, despite prior opportunity to provide it, meant it would not be feasible properly to validate the results under a due regulatory process.

(2) GEMA considered that it had no means of accurately calculating an ex-post adjustment, and doing so would undermine some of the key principles of the approach to cost assessment, specifically that:

a. Its ability to carry out comparative analysis is essential to assessing the efficient level of the repex costs in question.

b. The GDNs should expect to be treated on an equal basis, and to have their evidence assessed to the same standards and in the same way.

c. GEMA's chosen method of cost assessment was that of totex modelling i.e. a top-down approach which means that a single element cannot be amended in isolation – any change would necessitate a review of all inputs.

488. WWU's criticism that GEMA "*has failed to have proper regard to or give sufficient weight to this market evidence*" is therefore without merit[242] and its repeated reliance on the outcome of its tender exercise is misplaced. WWU's position undermines each of the three principles of GEMA's top-down approach highlighted above, and this evidence does not demonstrate that GEMA's reliance on its modelling outputs was 'wrong'.

D. TREATMENT OF SPARSITY

489. Sparsity is a discrete regional adjustment factor contributing to GEMA's costs modelling, which occurs prior to running the regression model and seeks to normalise costs to take account of non-controllable regional differences. (MW3 §104)

490. As alleged sparsity costs are regionally specific, they are typically highly reliant on the data provided by the GDN making the claim. Further, GEMA must apply significant

[242] WWU Notice of Appeal, §C1.10

scrutiny to such claims, given the potential which regional factors have to influence the outcome of benchmark modelling. (MW3 §21)

491. WWU contended during the process, and contends now, that a sparsity adjustment is required for repex. None of the other networks argued in favour of extending the scope of sparsity adjustment to include repex (despite other GDNs also contending with sparse areas in their networks, in particular SGN in relation to its Scotland network). (MW3 §107)

492. Following its detailed assessment of the evidence, (as described in MW3 §§104-109) and in the exercise of its regulatory discretion, GEMA assessed that a sparsity adjustment for repex was not required. The evidence that WWU provided in support of the claim did not clearly demonstrate that its costs were affected to a greater degree than other regions, and did not demonstrate a clear link between sparsity and repex costs in the way that it did for emergency and repair costs (which did qualify for a sparsity adjustment).

493. To the extent that WWU claims that sparsity specifically affects its costs of delivery for repex, then such costs should be captured in any event within its BPDT forecasts for costs in RIIO-GD2. Sparsity reflects geography and topography, and it is therefore a known consideration. As noted above, WWU received close to the totex allowance it asked for through its BPDTs at FDs – there was only a 3.9% reduction relative to its October 2020 submission. This suggests that it has not been unduly penalised or uniquely negatively impacted by GEMA's assessment of sparsity with respect to repex. WWU is, in effect, requesting additional totex above the level identified in its BPDT within the RIIO-GD2 appeal process, rather than as a result of GEMA's decision (or any error) as to how the sparsity adjustment was applied at FDs. (MW3 §§108-109) GEMA's assessment was plainly within the bounds of reasonable expert regulatory judgment, and WWU identifies no reason to justify the CMA's intervention with this assessment.

E. WWU'S SITUATION RELATIVE TO OTHER NETWORKS

494. WWU cites four factors for RIIO-GD2 which, allegedly, differentiate it from other gas distribution network companies:[243]

(1) Rising labour costs, and its alleged inability to reproduce the significant underspend it achieved in RIIO-GD1 as against the repex allowances set for that price control as a result of a 'pain/gain' contract.

(2) A higher proportion of work on ductile iron mains, larger diameter mains and using the 'open cut' technique in its overall repex workload,

(3) The changing nature of projects relative to GD1, to smaller, less efficient projects, and

(4) Work at the extremities of WWU's network. This complaint is closely linked to WWU's arguments about sparsity, which are without foundation for the reasons explained above.

495. In sum, these various factors do not justify any increase in WWU's totex set at FDs:

(1) As WWU's Notice of Appeal makes clear,[244] WWU took into account these factors that it now relies upon in its December 2019 Business Plan;

(2) WWU anticipated just a [redacted]% increase in average unit costs for Tier 1 repex from GD1 to GD2 (from [redacted]/metre to [redacted]/metre), [redacted] (Table 2, MW3 §44).

(3) The logical conclusion to be drawn from this was that in WWU's judgment the combined impact of these factors on its RIIO-GD2 repex costs was relatively modest and/or could be substantially counteracted by other factors that would help WWU reduce its costs. (MW3 §115-117)

496. GEMA's modelling of the Business Plan data was based on the reasonable expectation that the forecast data reflected the GDNs' assessment of the impact of any relevant cost pressures (MW3 §123) – and the ultimate allowance to WWU was only slightly below WWU's own assessment. The fact that WWU now wishes to reconsider the evidence it

[243] WWU Notice of Appeal, §§C9.13, C3.1-C3.5
[244] WWU Notice of Appeal, §C4.3

submitted to GEMA in its Business Plan does not demonstrate that GEMA was wrong or failed to have regard to the relevant statutory considerations.

497. The nature of repex work which WWU expects to undertake in RIIO-GD2 has not changed between its original Business Plan in December 2019, and its Notice of Appeal in March 2021. As WWU acknowledges in its Notice of Appeal:[245] "*it is the same pipes in the same parts of WWU's network that need to be replaced*". Despite this, WWU's assessment of repex costs has changed dramatically between its re-submitted BPDT in October 2020 and its Notice of Appeal in 2021:

(1) In its October 2020 re-submitted BPDT, WWU forecast total repex costs for RIIO-GD2 of £442m.

(2) In FDs, GEMA determined WWU's repex allowance (disaggregated from its overall totex) to be £420m: that is, just 5% less than WWU had requested.

(3) In its Notice of Appeal, WWU now seeks an additional [redacted]: or [redacted] by way of repex allowance. That is a [redacted]% increase on its re-submitted BPDT.

(4) The factors WWU relies upon are, further, largely the result of long-term trends (an ageing population creating rising labour costs, for instance) which WWU must have known about prior to the submission of its Business Plans in December 2019 and/or its BPDT in October 2020. Critically, WWU had ample opportunity to reflect these factors in its forecasts for costs and volumes in RIIO-GD2. (MW3 §124, 139)

498. In any event, GEMA properly considered relevant costs drivers as part of its expert, multi-factorial assessment to determine efficient allowances, as explained in MW3 Appendix 1 (Technical Guide to Repex Cost Assessment). GEMA applied adjustments on the basis of sparsity, urbanity and regional labour costs within the model. (MW3 §106) The key factors that WWU highlights as influencing costs are related to the physical characteristics of the mains population, such as ductile iron mains:[246] these too

[245] WWU Notice of Appeal, §C1.12

[246] MW3 §118 explains that "'*open cut' and ductile iron … [are] only two of the various factors which can drive repex costs and which are captured in the averages that inform the cost drivers.*"

were taken into account in the GDNs' Business Plans and thus implicitly incorporated into GEMA's modelling. (MW3 §121)

(i) Rising labour costs

499. WWU cites labour costs as a key costs driver, "*from which WWU has been shielded during GD1 through the pain/gain mechanism in the Alliance contract now due to end in June 2021*"[247].

500. All GDNs said that they expected labour costs to increase in RIIO-GD2, and WWU's forecast for these in the BPDTs were in line with the industry average. (MW3 §§45, 52)

501. Labour costs are indexed in RIIO-GD2, such that any material in-period pressures on labour costs will be accounted for through RPE indexation. The key purpose of RPE indexation is to capture industry-wide trends over time (MW3 §127).

502. This point was reinforced by the CMA in its consideration of RIIO-ED1, where it held that it was appropriate for RPEs – particularly those relating to labour costs – to reflect the cost inflation of other industries; rather than needing to exactly match the Appellants cost pressures.[248]

503. WWU cites two reports by Oxera as to labour costs:[249]

(1) A report submitted with its Business Plan in 2019, the "Regional Factors Report" (in which Oxera cites a study by Energy & Utility Skills in respect of labour shortages in Wales and the South West).[250]

(2) The 2021 Oxera Report[251] which, according to WWU, provides an updated "*analysis of the effect of labour shortages on WWU's repex costs*".

[247] WWU Notice of Appeal, §C9.13
[248] Please refer to exhibit marked "M32" and titled "*Northern Powergrid (Northeast) Limited and Northern Powergrid (Yorkshire) plc v the Gas and Electricity Markets Authority (FD)*" included in WWU's Notice of Appeal Bundle, §§5.23-5.59
[249] WWU Notice of Appeal, §C4.3(d)
[250] Please refer to exhibit marked "B3.3" included in WWU's Notice of Appeal Bundle
[251] Please refer to exhibit marked "J1" included in WWU's Notice of Appeal Bundle

504. GEMA has significant concerns about the ability to draw wider conclusions from this evidence as WWU invites (MW3 §§125-129):

(1) Figure 3.1 of the Oxera report reveals that WWU as a whole (i.e. its two regions) is, in fact, [redacted]

(2) Oxera suggests that Wales has experienced energy sector [redacted]

(3) Oxera's analysis of the performance of three, underlying indices that are used to set labour RPE is flawed. Its analysis is strongly based on performance in a single year (2020), which was significantly disrupted by the extraordinary circumstances of the Covid-19 pandemic and cannot be relied on as representative of longer-term trends.

505. In sum, WWU has not demonstrated how near-term changes to labour costs in its regions have directly impacted its required cost allowances for repex over RIIO-GD2; nor has WWU clearly explained how these relate to the cost forecasts which it submitted in its Business Plans. (MW3 §129)

(ii) Alleged inability to reproduce RIIO-GD1 underspend[252]

506. WWU further relies on its underspending in the previous price control RIIO-GD1 to suggest that its allowances for RIIO-GD2 should be significantly increased.

507. In RIIO-GD1, WWU spent significantly less on repex compared to its *ex ante* allowance: it spent £214.8m less than its RIIO-GD1 repex allowance.[253] WWU claims that the "*main reason*" for its underspend in GD-1 was a "*very favourable eight-year Alliance contract*"; i.e. a 'pain/gain' arrangement by which any overspend or underspend on the programme was shared between WWU and its repex contractors. Thus, WWU claims, it was "*shielded*" from rising labour costs by the Alliance contract in GD1, and this ought to be accounted for in RIIO-GD2.[254]

[252] As to this section, see generally: "WWU's performance in RIIO-GD1 relative to its RIIO-GD2 allowances" MW3 §§130-134
[253] WWU Notice of Appeal, §C3.1
[254] WWU Notice of Appeal, §§C3.9, C9.13(1).

508. GEMA notes that Cadent also had a 'pain/gain' agreement in place with its own contractors, so this factor is not unique to WWU. It would be wrong, in any event, for WWU's specific historical contract to be given the separate weight which WWU demands in setting its efficient allowance for RIIO-GD2, for four key reasons:

(1) Taking account of the specific contractual terms previously adopted by WWU conflicts with GEMA's approach of setting allowances for the notionally efficient company. GEMA is agnostic as to how GDNs choose to deliver their outputs.

(2) Acting in the benefit of consumers, GEMA's role is to incentivise network companies to explore different and more efficient delivery options: WWU has already managed to achieve significant savings by bringing work 'in house', Notice of Appeal, §C.11.

(3) WWU performed comparatively strongly in the totex benchmarking, receiving the lowest overall reduction to totex of any GDN. (MW3 §133)

(4) In any event:

a. The Alliance contract had a material impact only on the costs reported for two historical years in WWU's Business Plan, and does not have any impact on forecast costs for RIIO-GD2. The totex regression considers both historical and forecast costs. (MW3 §17, §132)

b. GEMA's position is that the pain/gain contract should not properly be included but in any event, when the impacts of WWU's pain/gain contract <u>are</u> accounted for in the regression analysis, it has almost no material impact on WWU's allowance in RIIO-GD2. (MW3 §134).

<u>(iii) Changing nature of RIIO-GD2 projects: ductile iron mains, 'open cut' technique and smaller projects</u>

509. WWU cites three other factors which allegedly particularly affect its operations: a rising proportion of replacement work involving ductile iron mains and delivered

through the 'open cut' technique[255] and smaller more diversified projects, compared to RIIO-GD1.

510. Each GDN's submitted data is used as part of the regression. Various factors, including 'open cut' and ductile iron, are captured in the averages that inform the cost drivers. These factors were implicitly incorporated, along with other drivers of costs, in the Authority's top down benchmarking approach, which WWU has clearly stated it was not wrong to use. (MW3 §§118-121) These cost drivers were also clearly known to WWU when it developed its Business Plan, as WWU itself explains in its Notice of Appeal ("*Factors leading to cost increases in GD2*" are said to have been outlined in WWU's Business Plan: §§C4.3, pp.86-92). The impacts of these factors were, therefore, included in WWU's forecast expenditure and thus factored into GEMA's costs assessment.

511. WWU is wrong to suggest that these factors are unique to its operations and the Authority's assessment is that WWU did not face a materially different cost environment in comparison to the other GDNS. WWU's proportions of ductile iron and open cut work were not significantly out of line with several other GDNs. (MW3 §113, Table 7, "*RIIO-GD2 Tier 1 workloads share of open cut, ductile iron and diameter band >125mm per network*"). Cadent and NGN both had had work in specific locations leading to increased costs. (MW3 §114) Each GDN's submitted repex cost and workload data is used directly and indirectly in the regression. Therefore WWU is wrong to say the Authority did not take these factors into account in its Final Determinations. (MW3 §110-118).

512. WWU criticises GEMA's approach to synthetic unit costs as failing to "*take a more granular approach by setting separate unit costs in relation to different technique and materials*"[256]. However (MW3 §§98-99):

[255] The 'open cut' technique involves cutting a trench along the entire length of the main being decommissioned and then replacing it with a new main. It is more expensive than the 'insertion' technique, where an access hole is dug and then the new main is inserted inside the existing main, avoiding the need to expose the whole length of the existing main in order to replace it.
[256] WWU Notice of Appeal, §§C6.3(b), C6.14

(1) GEMA gave specific consideration to accounting for the changing nature of the projects, but determined it could not do so in a methodologically robust way.

(2) GEMA considered that, given the relatively small volumes for ductile iron replacement across the industry and lack of reliable data on this, it was not feasible to separate this factor out in the synthetic unit costs. (MW3 §98).

(3) Nor was GEMA satisfied that it could obtain methodologically robust results by using 'technique' of the project as a synthetic unit cost category. This was because of the lack of comparable data.

513. In sum, GEMA considered taking a more 'granular' approach as now suggested by WWU, but decided its approach was more suitable and robust. These were each expert decisions which are well within the bounds of reasonable, expert regulatory judgment.

514. Moreover, WWU in its appeal appears to have 'cherry picked' factors exerting an upward pressure on its costs, while neglecting to consider factors specific to WWU likely to result in lower than industry average cost pressures. For example, WWU's average service density for Tier 1 workloads is expected to fall significantly by [redacted] (MW3 §115-116). This is likely to improve its efficiency through higher mains replacement run rates. This serves to underline the importance of viewing WWU's totex allowance 'in the round'.

E. CONCLUSION

515. For all the reasons set out above, GEMA denies that there has been any error in its approach to WWU's totex allowance. The CMA is invited to dismiss this ground of appeal.

516. The CMA's attention is respectfully drawn to the potential for interlinkages between the specific points about which WWU complains and other issues arising in its appeal. In the event the CMA were minded to grant any remedy on this ground of appeal (which is of course opposed for the reasons set out above), GEMA respectfully requests that it have an opportunity to make submissions in concrete terms as to the appropriateness of remedy.

VIII. THE BUSINESS PLAN INCENTIVE

NB: references in the form (MW4 x) *in this section are to the fourth witness statement of Dr Michael Wagner. GEMA relies on the contents of that witness statement in full in addition to the submissions below.*

A. BUSINESS PLAN INCENTIVE, STAGE 4

517. NGN's Ground 4 challenges Stage 4 of the Business Plan Incentive ("**BPI**") mechanism. NGN's Ground 4 is in three parts:

(1) Ground **4A(I)** challenges GEMA's decision, in the exercise of its broad regulatory judgment, as to "*the absolute level of the reward*" provided at BPI Stage 4[257].

(2) Ground **4A(II**) challenges GEMA's application of its Final Determinations ("**FDs**") methodology in the calculation of the BPI Stage 4 reward, specifically treating technically and non-technically assessed costs as part of a single calculation.

(3) Ground **4B** alleges that GEMA has set an "*excessively challenging efficient cost benchmark at the 85th percentile*" and "*has failed adequately to take account of the adverse impact of the decision on the frontier company under the BPI Stage 4 calculation*"[258].

518. As to NGN's Ground 4A(II), having reviewed the licence modifications and the Price Control Financial Model **("PCFM")**, it is accepted that there was an inadvertent inconsistency between the intentions of GEMA's FDs[259] and the calculations which were used to derive the BPI Stage 4 rewards in the PCFM. [260] This is described in further detail in the witness statement of Dr Wagner. (MW4 §§ 57-59) GEMA therefore does not defend Ground 4A(II), but instead invites the CMA to direct the required correction for NGN's incentive at Stage 4, using calculations that separately consider modelled and technically assessed costs in line with the policy intention. This would change the

[257] NGN Notice of Appeal, §417
[258] NGN Notice of Appeal, §46
[259] RIIO-2 Final Determinations – Core document, Chapter 10 **[**TSUB8/01**]**
[260] It is noted, for completeness, that the permission decision for NGN states at paragraph §9 that GEMA had submitted that permission ought to be refused for "Ground 4A". GEMA's submissions on permission were in fact only in relation to Ground 4A(I).

BPI Stage 4 reward for NGN from £5.1m to £8.5m[261] and should dispose of this sub-ground of appeal. The CMA is also invited to make a minor correction to NGN's Stage 3 penalty, for the reasons explained in (MW4 §§57-59). In short, GEMA has become aware of a spreadsheet error relating to a small amount of NGN's costs, which (when corrected) slightly *decreases* NGN's Stage 3 penalty from £3.0m to £2.8m.

519. In contrast, Ground 4A(I) and Ground 4B of NGN's appeal are without merit.

(1) NGN **Ground 4A(I)** challenges GEMA's decision in relation to the **BPI** Stage 4 on the basis that "*GEMA's BPI Stage 4 is flawed in principle given it results in a reward that is too small to adequately incentivise the frontier company*"[262]. This amounts to nothing more than disagreement with GEMA's exercise of regulatory judgment, and a contention that it believes it should receive a higher financial incentive to reward it for its business plan than GEMA considered to be appropriate. NGN fails to identify any error in law or approach on GEMA's part.

(2) NGN's Ground 4B, on efficiency benchmarking, raises substantively the same issue as the other appeals on the 85th percentile issue, and is flawed for the same reasons as they are: this is addressed separately in the submissions on "85th percentile / efficiency benchmark". The subject matter of Ground 4B is in any event immaterial; the CC has made reference to "0.1%" as a size of error which was clearly not material, which has been referred to in subsequent cases.[263] On NGN's own case as to the materiality of the ground of appeal (with which GEMA is in agreement), the impact of GEMA's decision in relation to the efficient cost benchmark is only £1.47m[264]. This is 0.12% of FD totex allowance. This is a further reason why the appeal on Ground 4B ought not to be allowed.

B. GEMA'S APPROACH TO THE BPI STAGE 4

[261] GEMA notes however that, in directing the required correction, the CMA may choose to take into consideration interlinkages (including Ground 4B of NGN's appeal) which could impact the final level of any BPI Stage 4 reward.
[262] NGN Notice of Appeal, §425
[263] *Firmus Energy (Distribution) Limited v NIAUR* [2017], §§3.24 **[**TSUB8/02**]**
[264] NGN Notice of Appeal, §396(ii)

520. The purpose of the BPI was "*to encourage network companies to submit ambitious Busines Plans that contain the information Ofgem required to undertake a robust assessment of the Business Plans*"[265]. This reflects GEMA's position that high-quality Business Plans were essential to enable it to have sufficient high quality information to set the price control that delivers for consumers at a reasonable cost[266].

521. The BPI Stage 4 applies in respect of costs where GEMA had a high level of confidence that it could independently set a cost allowance. At Stage 4, GEMA provided an upfront reward to network companies which submitted forecasts lower than the efficient benchmark that GEMA would otherwise have used in setting the allowance. Where the company forecast of high-confidence costs was lower than the efficient cost benchmark for that category, the difference between the two was eligible for an award under BPI Stage 4, determined by applying the company-specific sharing factors to the amount eligible[267].

522. NGN was entitled to a reward under BPI Stage 4, to reflect the high-confidence cost forecasts in its business plan. At FDs, that reward was identified to be £5.1m; it is now accepted that this reward should be £8.5m. NGN and Cadent - East of England were the only network companies to be given a reward under Stage 4.

C. NGN'S GROUND 4A(I)

523. NGN seeks to appeal the level of its reward under BPI Stage 4, on the basis that:

(1) "*Incentives for the frontier company are significantly reduced at RIIO-GD2 compared to RIIO-GD1*"[268]; and

(2) "*GEMA has not adequately considered the impact of this significant reduction in the incentives for the frontier company*"[269].

[265] RIIO-2 Final Determinations – Core Document, §10.15 **[**TSUB8/01**]**
[266] RIIO-2 Final Determinations – Core Document, §10.33 **[**TSUB8/01**]**
[267] RIIO-2 Final Determinations – Core Document, §§10.100-10.103 **[**TSUB8/01**]**
[268] NGN Notice of Appeal, §§426-430
[269] RIIO-2 Final Determinations – Core Document, §§431-435

Both grounds are flawed.

524. First, there is no legal requirement that incentives remain constant between price controls. Indeed, the BPI mechanism was introduced for the first time at RIIO2. It replaced an entirely different mechanism – the Information Quality Incentive ("**IQI**") – at RIIO-1, because of concerns about the efficacy of that mechanism. See the analysis in the witness statement of Dr Michael Wagner (MW4 §§27-36): in particular, all but one network company received a reward under the IQI, which were all between 0.7 and 1.5% totex. Any comparison between the IQI at RIIO-GD1 and the BPI at RIIO-GD2 is, at best, uninformative and, at worst, positively misleading.

525. Second, and without prejudice to the concerns expressed above, GEMA had due regard to its principal objective and statutory duties in the formulation of the BPI. As explained in FDs[270], the balance of penalties and rewards within the BPI was subject to careful consideration by GEMA, and developed over the course of setting the price control, including in light of representations from network companies and stakeholders at each stage of consultation. GEMA was required, in an exercise of its regulatory judgment, to ensure that the BPI as a whole was a fairly balanced mechanism which neither under nor over-rewarded network companies.

526. Throughout its submissions, NGN appears to misunderstand the purpose of the BPI in its submissions. The BPI was specifically developed to encourage network companies to submit high quality, ambitious Business Plans that contain the information GEMA requires to undertake a robust assessment of the Business Plans. GEMA considers that the BPI mechanism it devised in RIIO2 enabled it to do so.

527. It follows that it is wrong to consider the incentive of the BPI in isolation when seeking to determine the overall efficiency incentives on network companies. In addition to the opportunity for an upfront reward for high quality, ambitious business plan which is provided by the BPI, NGN is also incentivised by within-price control incentives. One such incentive is the Totex Incentive Mechanism[271] ("**TIM**") – under this mechanism NGN is entitled to a share (49%) from any savings made against its allowances (i.e.

[270] RIIO-2 Final Determinations – Core Document, §§10.45 and 10.98-10.103 **[**TSUB8/01**]**
[271] RIIO-2 Final Determinations – Core Document, para§10.2 **[**TSUB8/01**]**

what NGN refers to as "the sharing rule" at §426(ii) of its Notice of Appeal)[272]. Other relevant mechanisms include Output Delivery Incentives[273] (ODIs). Further, a catch-up efficiency challenge has been placed upon other network companies (i.e. behind NGN as the frontier company, and to which NGN is therefore not exposed), incentivising them to reach the same level of efficiency over the price control as our assessed efficient benchmark.

528. In terms of attempting to identify an error on one of the prescribed statutory grounds, at §483(i) and (ii) of its Notice of Appeal, NGN asserts that GEMA erred in failing "*properly to* have *regard to and/or give appropriate weight to its principal objective and its statutory duties to ensure that licensees are granted appropriate incentives to increase efficiencies and that gas networks are secure, reliable and efficient*" and in failing "*to adequately assess the impact of the significant reduction in incentives offered to the frontier company at RIIO-GD2 compared to RIIO-GD1, GEMA has not properly had regard to the principles of best regulatory practice under which regulatory activities should be transparent, accountable and consistent*"[274]. These allegations of error are without substance. In formulating the BPI methodology, GEMA carefully considered and consulted on the appropriate strength of incentives for network companies in respect of their business plans, and reached the parameters of the BPI in exercise of its regulatory judgment.

529. There is no substance to the bare allegation that GEMA failed to consider the impact of its approach. And the fact that NGN considers the incentives to be weak or insufficient amounts to nothing more than disagreement with the exercise of that judgment. GEMA enjoys a wide margin of discretion in determining the strength of incentives for companies under the price control; it is, as the CMA has often recognised, not the role of the CMA to substitute its judgment for that of GEMA simply on the basis that it would have taken a different view of the matter were it the energy regulator.[275]

530. In light of the above, GEMA has not considered it necessary to respond to the detail of the various supporting documents on which NGN relies for this ground of appeal,

[272] NGN Notice of Appeal, §§426(ii)
[273] RIIO-2 Final Determinations - Core Document, para§4.20 **[**TSUB8/01**]**
[274] NGN Notice of Appeal, §§483(i) and (ii)
[275] *Firmus Energy (Distribution) Limited v NIAUR* [2017], §§3.18-3.19. **[**TSUB8/03**]**

including the "Incentives Report"[276] and the discussion in the factual evidence. GEMA is not thereby to be considered to accept anything contained therein.

D. CONCLUSION

531. For these reasons, there is no appealable error in GEMA's exercise of regulatory judgment in the formulation of BPI Stage 4.

[276] NGN Exhibit IA1 1, Incentives Report

IX. MODIFICATION OF THE MATERIALITY THRESHOLD FOR TECHNICAL ASSESSMENT

NB: references in the form (MW6 x) *in this section are to the sixth witness statement of Dr Michael Wagner. GEMA relies on the contents of this statement in full (see, in particular, §§108-113) in addition to the submissions below.*

532. Following the filing of Cadent's NoA, GEMA identified that the £5m aspect of the materiality threshold for Atypical Projects and large historical capex projects had been applied on a *net* basis, As set out in (MW6, §107), GEMA considered that it would be "*more consistent to treat atypical rechargeable capex projects with gross costs of over £5m in the same way that we have treated atypical non-rechargeable capex projects*" – i.e. by removing them from the regression. Adopting this approach would ensure greater comparability across GDNs and ensure that the materiality threshold's purpose has its desired effect - and ensure that the materiality threshold's purpose has its desired effect – in particular to ensure that trade-offs are accounted for in the model but to eliminate the risks of unfairness caused by large atypical projects.

533. As explained by (MW6, §111), Cadent only included two named schemes in its business plan: HS2 and Lower Thames Crossing. Cadent's remaining costs associated with LTS diversions were labelled as "*Diversions other*" in their business plan, despite GEMA's BPDT guidance making clear that all projects exceeding £0.5m should be identified separately. Beyond this single entry in its business plan, Cadent did not provide any supporting information for those costs (including project-level engineering justification papers ("EJPs"). As a result, GEMA was not able to consider whether the following projects identified in Mr Moon's witness statement should be omitted from the regression (approximate values in brackets):[277]

[redacted]

[277] Cadent - First Witness Statement of David Moon, §65.

[redacted]

[redacted]

534. On 8 April 2021, GEMA wrote to Cadent to explain its view that certain projects should be excluded from the regression. These projects were as follows:

GDN	**Category**	**Project name**	**RIIO-1 or 2**
EOE	LTS Pipelines	HS2	RIIO-2
LON	LTS Pipelines	HS2	RIIO-1
LON	LTS Pipelines	Lower Thames Crossing	RIIO-2
NW	LTS Pipelines	HS2	RIIO-2
WM	LTS Pipelines	HS2	Both
SC	LTS Pipelines	LDSC0011 - M8 DIVERSION NEW SHAWHEAD TRS	RIIO-1
SC	LTS Pipelines	LDSC0013 - ABERDEEN WEST PERIPH ROUTE RD SCH HP	RIIO-1
SO	LTS Pipelines	HS2 CALVERT DIVERSION	RIIO-1
WWU	LTS Pipelines	[redacted]	RIIO-1

LON	PRS	DSC Fulham Holder site PRS Relocation	RIIO-1

535. At the time of filing this Response, Cadent has not substantively responded to GEMA's letter.

536. GEMA respectfully requests that the CMA directs the modification proposed by GEMA in its letter to Cadent (i.e. for GEMA to exclude from its analysis the above-identified projects in the regression analysis) when directing any amendments to allowances at the end of the appeals process.

537. Because there are potential interactions with other aspects of Cadent's allowances, GEMA considers it appropriate to address the CMA further on the precise form/nature of remedy following the CMA's determination on all issues of liability.

X. CONCLUSION

538. The CMA is invited to dismiss the appeal grounds addressed in this Response.

539. As set out at paragraph 6 above, GEMA proposes that submissions on remedies should be made following Provisional Determinations (should such submissions be needed).