Consumers and Markets Group

Economic regulation of NATS (En Route) plc: Provisional Decision for the next price control review ("NR23")

CAP 2553

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Contents

Executive summary

Introduction

1. NATS (En Route) plc, known as NERL, is the monopoly provider of en route and certain approach air traffic services (ATS) in the UK. NERL is subject to economic regulation by the CAA under the Transport Act 2000 (TA00) and it holds an ATS licence (the NERL licence) issued by the Secretary of State (SoS) under the TA00.

2. The TA00 gives the CAA a 'primary' duty to exercise its functions so as to maintain a high standard of safety in the provision of ATS and includes a number of 'secondary' duties. Setting price controls and service quality incentives for NERL is one of the CAA's core functions under the TA00. The TA00 also places duties on NERL, including to secure that an efficient and coordinated safe system of authorised ATS in respect of the licensed area is provided, developed and maintained.

3. The UK is party to the Eurocontrol Multilateral Agreement relating to Route Charges. The UK follows the common policy set out in the Eurocontrol Principles for establishing the cost base for en route charges and the calculation of unit rates based on the Determined Costs methodology.[1]

4. This suite of documents sets out our Provisional Decision on the UK en route, London Approach and Oceanic price controls that will apply for the five calendar years from 1 January 2023 to 31 December 2027 (the 'NR23' period).[2] These follow the Reference Period 3 (RP3) price controls, which were set following the review and determination by the Competition and Markets Authority (CMA), and which applied from 1 January 2020 up to 31 December 2022 (the CMA determination).

5. NERL's price controls, which reflect the maximum charges that NERL can recover from its airline customers, are formed from allowances for efficient costs (referred to as 'Determined Costs') and forecasts for traffic volumes (measured as service units) and revenues. The price controls are underpinned by the regulatory asset base (RAB), which allows the recovery of revenue to finance new and efficient investments, enabling the costs of that investment to be spread

[1] Eurocontrol Principles for establishing the cost base for en route charges and the calculation of the unit rates, January 2020

[2] CAP 2553, CAP 2553a, CAP 2553c and CAP 2553d.

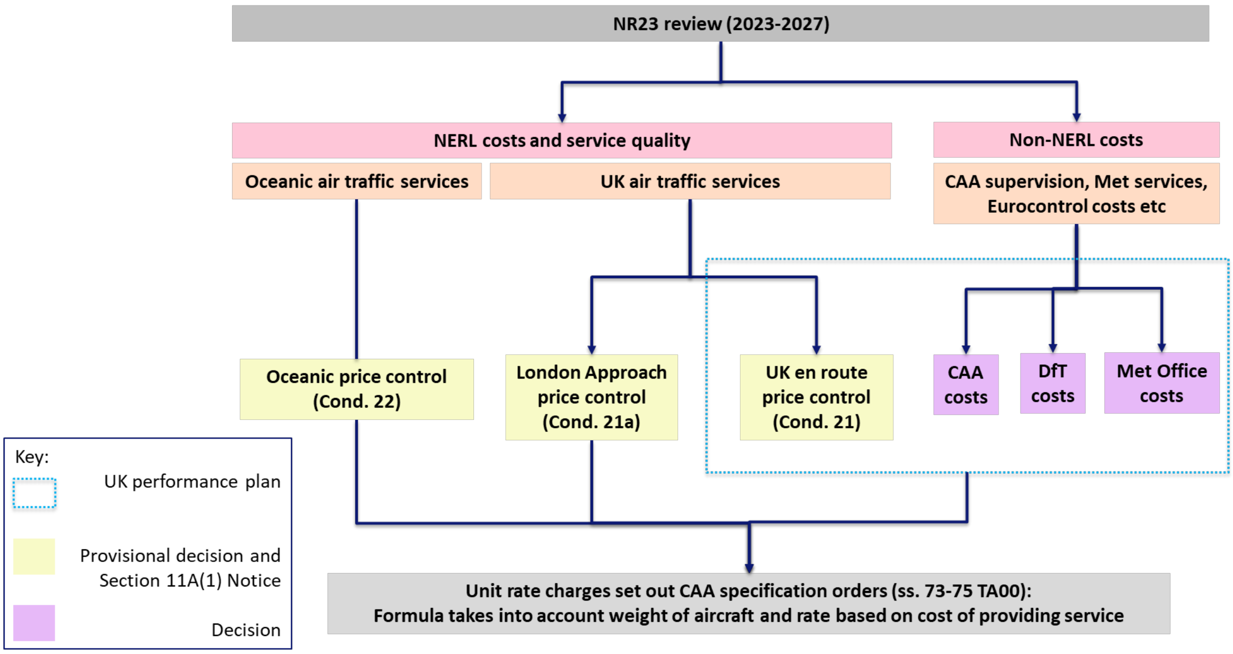
out over multiple price control periods. The price control arrangements for NERL also include:

- mechanisms to incentivise NERL's performance in respect of its quality of service and the environmental impact of air traffic; and
- risk sharing mechanisms to help ensure that it can obtain financing on reasonable terms and that in the longer-term charges to its customers are no higher than necessary.

6. This suite of documents also includes our Decision on cost allowances for the Met Office, the CAA and the Department for Transport (DfT) for certain activities associated with airspace management and oversight (Non-NERL costs).[3] The Decision on Non-NERL costs and our Decision on NERL's UK en route price control (which will be taken following consideration of responses to this consultation), form the UK performance plan under the Eurocontrol Principles.

7. The overall structure of the NR23 review and price controls is summarised below in Figure 1.

Figure 1: NR23 review and price controls



Source: CAA

8. We intend to give effect to our price control decisions through modifications to the NERL licence and, as part of this document, we are consulting on the proposed licence modifications. This consultation constitutes the statutory notice under section 11A(1) of the TA00.

[3] CAP 2553b

9. This Executive Summary has four main parts:

- this introduction;
- an overview of our overall approach to the NR23 price review;
- a summary of the main components of our Provisional Decision; and
- the next steps in our process, including how to respond to the consultation on the proposed licence modifications as well as other parts of this document.

10. Chapter 1 contains further detail on the background, context and approach to the NR23 price review.

Overall approach to the NR23 price review

Incentivising safe and reliable services

11. NERL is responsible for providing a safe and reliable service. NERL, like other ATS providers, must meet the requirements of an extensive safety regulatory framework.[4] Monitoring and oversight of this framework is conducted primarily outside the price control review process. When operational challenges arise, NERL typically reduces the available capacity of the air traffic system (which in turn tends to increase delays to flights and passengers) to ensure safe operations and meet its safety obligations. NERL has confirmed that its NR23 business plan contained the resources required to manage safety appropriately. It also included a number of safety performance metrics to measure progress against these objectives in NR23, which are important but do not form part of the NR23 price control.[5]

12. For NR23, as for past reviews, our overriding priority, in line with our primary duty under the TA00, is making sure that we set price controls that allow NERL to continue to provide a high standard of safety in the provision of ATS in UK and delegated airspace. Our Provisional Decision includes projections of the efficient levels of NERL's costs, which we consider are appropriate for NERL to deliver its plans, taking account of its safety obligations. If NERL considers our Provisional Decision is not sufficient to deliver an appropriate level of service to its

[4] This comprises requirements under UK regulations (the Air Navigation Order 2016) and former EU regulations, now transposed into UK law following EU exit.

[5] In its NR23 business plan, NERL also said that: *"to remain in line with the UK State Safety Programme acceptable level of safety performance, and to continue to provide a safe service, [its] overarching objective is to maintain or improve safety levels by ensuring that the number of serious or risk bearing incidents per flight does not increase, and if possible decreases".*

customers, taking full account of its safety obligations, it will need to respond (and provide evidence) accordingly.

13. We consider the price control should incentivise NERL to provide resilient, efficient, and high-quality services. To achieve this, we have proposed service quality targets and incentives that provide reputational and financial incentives on NERL to improve its performance on delay and the environment. We note that consumer research by NERL indicated that while safety is the main priority for consumers, the delivery of environmental improvements, particularly more efficient flight paths to reduce CO_2 emissions, and reductions in long, disruptive delay are also important priorities for consumers.[6]

14. NERL will need to respond flexibly to changes and remain accountable for continuing to deliver its service to a high standard and for an efficient price, in order to justify the revenue it receives as the monopoly service provider. NERL's customers place a high value on a safe and reliable service, and we will continue to monitor and enforce NERL's licence obligations on this basis and in accordance with our statutory duties. NERL remains responsible and accountable for providing an appropriately high quality of service to customers and consumers. Nonetheless, its focus in delivering outcomes and outputs should always be in the context of maintaining and/or improving safety.

Dealing with change and supporting innovation

15. We expect to see a number of developments and changes across the air traffic and airspace sector in the coming years. In this context, it will be important to continue to modernise UK airspace and reasonably accommodate the changing use of airspace with the emergence of new users, including for drones and space launches. While some of these changes may have a greater effect on the sector after the NR23 period, we need to start to prepare for these changes now.

16. Our Provisional Decision is intended to support this wider change across the sector, by providing funding to allow NERL to continue with its work on airspace modernisation and by taking account of the emerging needs of new airspace users. NERL will need to find innovative ways of dealing with these challenges and in due course reflect the changing environment in its charging arrangements in a way that does not unduly hinder or stifle innovation.

17. We will hold NERL fully accountable for playing a leading role in the delivery of airspace modernisation and providing high quality services, consistent with its licence obligations and TA00 duties.

[6] Blue Marble Research, Passenger research for price control reset, December 2021

The recovery from the impact of covid-19 and the importance of affordability

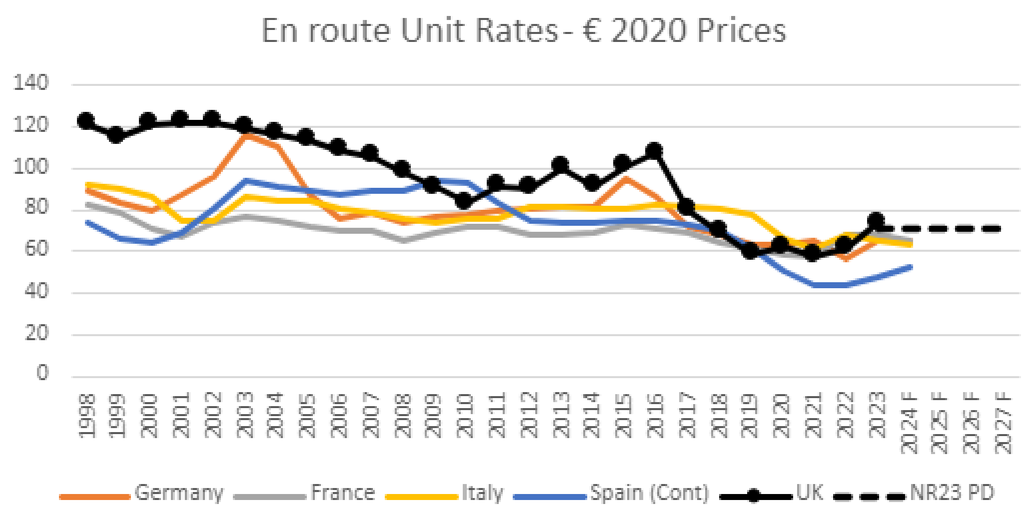
18. During 2020, following the unprecedented impact of the covid-19 pandemic, UK air traffic fell to around 40% of 2019 levels. The current RP3 price control period was shortened to end in 2022 due to the impact of the covid-19 pandemic and the difficulty that this created for setting a five-year price control.

19. We have seen a strong recovery in traffic during 2022 and into 2023. However, there continues to be some uncertainty about the path of the recovery path in traffic levels. Although the underlying levels of NERL's Determined Costs are projected to be relatively stable over NR23, the traffic forecasts for the NR23 period only reach pre-pandemic levels by 2024. Following consideration of the responses to our Initial Proposals, we have retained our approach set out in our Initial Proposals to allow NERL to recover revenues from the pandemic period, consistent with the traffic risk sharing (TRS) arrangements in place prior to covid-19 and the exceptional arrangements put in place for other European air navigation service providers (ANSPs). This recovery of revenue and relatively low levels of traffic place upwards pressure on charges for NERL's customers and consumers, particularly in the first few years of NR23. While the price controls should support NERL in continuing to make essential investments in providing services, we are also seeking to ensure that charges are no higher than necessary.

20. We have considered how best to profile the recovery of TRS revenues from the period of the pandemic in RP3. To inform the approach in our Initial Proposals, we considered a range of factors, including comparisons with the unit rates with other European ANSPs and the historical levels of NERL's charges. We have updated this analysis for our Provisional Decision. The UK's unit rates have been, in recent years, similar to those of some countries with comparable ANSPs as shown in Figure 2 below.

21. Consistent with the recommendations made by the CMA determination for RP3, we have also adjusted TRS revenues on the basis of a backwards-looking reconciliation review where we looked back to take account of NERL's efficient costs in RP3. This takes into account the significant cost savings NERL made during the covid-19 pandemic and seeks to balance affordability for customers and consumers with NERL's financeability. To further reduce the impact on the unit rate in NR23, we propose to spread the recovery of TRS revenues over a ten-year period. Taking these issues together we expect that charges should remain broadly consistent with the levels experienced historically and with other large European ANSPs, although we note this will depend on the profile of charges agreed for other ANSPs from 2025 and NERL's charges may be towards the upper end of this range.

Figure 2: Comparison of en route unit rates – NR23 Provisional Decision



Source: CAA analysis of Eurocontrol unit rate dashboard, CRCO tables and CAA Provisional Decision.

22. We have sought to exercise our relevant functions in a manner we think best calculated to apply our secondary duties, such as to further the interests of those specified in s.2(2)(a) TA00 (sometimes referred to as "customers and consumers") by focusing on setting price controls that provide value for money. We do this by providing incentives on NERL to improve:

- its cost efficiency, including by making sure that NERL's unit rates are reasonable and no higher than necessary; and
- its quality of service, including by setting reasonably challenging targets in relation to reducing delays and achieving better environmental efficiency of airspace given the likely pattern for traffic growth. In response to our Initial Proposals, NERL proposed less challenging targets, but for the reasons set out in chapter 2, we have decided to maintain targets broadly in line with our Initial Proposals.

23. Consistent with our statutory duties under the TA00, we have taken other actions to exercise our functions in the manner we think best calculated to apply the secondary duties, in particular to further the interests of customers and consumers in order to prevent wider consumer harm, to promote economy and efficiency, and to ensure that NERL will not find it unduly difficult to finance its licensed activities. These include:

- proposing appropriate allowances that reflect our best estimate of efficient operating expenditure (opex) and capital expenditure (capex) in NR23, and challenging historical opex and capex incurred by NERL as part of our reconciliation review.[7] We have taken account of more recent inflation forecasts and further evidence from NERL on the impact of inflation on its costs. We are also retaining and strengthening the capex engagement incentive. Together, these should incentivise NERL to engage effectively with stakeholders on investment plans and deliver at efficient costs;
- setting efficient levels of financing and tax costs. The efficient level of these costs reflects the strong protections that NERL has from TRS arrangements and pension costs, while also allowing NERL to finance new investment and its activities in the provision of ATS, to the benefit of customers and consumers. This approach is also consistent with our secondary duty to secure that it is not unduly difficult for the licence holder to finance its activities; and
- preventing any undue increases in NERL's charges at the start of the NR23 period by profiling the recovery of TRS revenues, which includes allowing the recovery of a proportion of this revenue in the next regulatory period, and the profiling of NERL's revenue within NR23 to smooth prices.

Dealing with uncertainty

24. We recognise the difficulties and uncertainty arising from the impact of the covid-19 pandemic across the aviation sector. While we have seen strong traffic recovery in 2022 and into 2023, the speed of this recovery for the medium to long-term remains uncertain. Given this ongoing uncertainty, we acknowledge that stability, credibility and predictability of the regulatory framework is important for NR23 to support NERL's continued investment in new systems, the delivery of resilient services and to allow longer-term planning.

25. Our Provisional Decision retains the core features of the existing regulatory framework including the RAB, TRS and the broad form of the price control. We also note new mechanisms were introduced for RP3 and following the CMA determination, such as incentives for capex governance. During NR23, we want to allow these mechanisms time to become established and demonstrate their value to customers and consumers. Nonetheless, we consider that there are opportunities for us to make certain improvements to these mechanisms as part of this price control review to take advantage of what we have learned from the

[7] In setting price controls for the period 2020 to 2022, the CMA did not take account of the impact of the covid-19 pandemic in its determination, but instead set a shorter control period from 2020 to 2022, and said that the CAA should conduct a reconciliation exercise, with reference to actual flight volumes and costs since 2020, as a relevant consideration for setting the NR23 price control. We refer to this as the reconciliation review for 2020 to 2022, which we have carried out as part of the NR23 price review.

initial operation of these arrangements during RP3. We also want to consider how to further strengthen incentives around delivery and efficiency during the NR23 period, particularly in relation to capital expenditure (capex) as discussed further below.

26. We continue to see volatility and uncertainty around changes in the economic environment and outlook. Since NERL submitted its business plan to us in February 2022, we have seen a strong recovery of air traffic during 2022 and into 2023, relatively high rates of inflation partly mitigated by energy price caps, significant rises in interest rates, and predictions of recession.

27. Our Provisional Decision has been prepared based on information available up to mid-March 2023 for inflation forecasts (following the UK government Spring 2023 budget) and the end of March for traffic forecasts (following the March 2023 update from Eurocontrol STATFOR (the independent network forecasting team of Eurocontrol). This means that we have reflected more recent developments in traffic forecasts and the macroeconomic outlook since our Initial Proposals.

28. In March 2023, the UK government announced changes in corporation tax rules around full expensing of qualifying capital expenditure, which we have reflected in the estimates for tax costs and which reduces the tax allowance in NR23. There is uncertainty whether full expensing will remain for the rest of the NR23 period and beyond and we expect to use existing uncertainty mechanisms to true up tax allowances where appropriate.

29. In recent weeks we have seen core inflation in the UK remain higher than expected and increases in the Bank of England base interest rate. If there were to be significant changes in the macroeconomic environment ahead of us making our Final Decision, we would consider whether to update those aspects of our decision that such changes would affect most directly (such as the cost of capital). Nonetheless, we note that the regulatory framework provides NERL with a strong degree of protection from changes in inflation and so we would only seek to make further adjustments to take account of macroeconomic changes if there were a compelling case to do so and in line with our statutory duties.

30. Since Initial Proposals, NERL has also consulted with airlines on material changes in its capex programmes and particularly its DP En Route and legacy escape capex programmes. We have considered these changes in our Provisional Decisions on the capex allowances and capex engagement incentive. We have also commissioned an external independent report on the impact of the changes in NERL's capex programme. The report will conclude after publication of this Provisional Decision and so we set out in chapter 4 the next steps we plan to take depending on the outcome of this work. If we consider further changes are required to the regulatory framework either for NR28 or during NR23 to take account of these developments, then we would consult on these as appropriate.

Summary of the key elements of our Provisional Decision

31. We have assessed information from a range of sources to make a Provisional Decision that we consider will meet our statutory duties. Where appropriate, we have used our judgement and regulatory discretion. We have weighed up often contradicting views and evidence from NERL and other stakeholders and taken account of future uncertainties.

32. We set out below a summary of our Provisional Decision, which covers the following key aspects of our approach:

- traffic forecasts;
- service quality targets and incentives;
- Determined Costs and the underlying building blocks of price control revenue;
- approach to the recovery of TRS revenues from 2020 to 2022 and the overall revenue and charges;
- benchmarking of NERL's charges and performance, and our assessment of financeability;
- regulatory mechanisms to manage uncertainty and support innovation; and
- London Approach and Oceanic price controls.

Traffic forecasts

33. For UK en route, we have used traffic forecasts from Eurocontrol STATFOR. This has the important benefit of being an independent view on UK traffic forecasts, which was also the source of forecasts used in the CMA determination. The use of STATFOR forecasts has been consistently supported by NERL and airlines throughout customer consultation and in the lead up to this Provisional Decision.

34. At the time of producing our analysis, the most recent full forecast from STATFOR was published at the end of March 2023. We consider that this represents a reasonable forecast for traffic levels. The forecasts show UK en route traffic recovering to above 2019 levels by 2024. This is a stronger forecast recovery than in our Initial Proposals, which forecast a later recovery in traffic levels. We discuss the traffic forecast further in chapter 1.

35. STATFOR does not publish a specific forecast for NERL's Oceanic services. We have reviewed and used a forecast from NERL, which is based on STATFOR assumptions around traffic flows over the North Atlantic. This is discussed further in chapter 8, CAP2553a.

Service quality targets and incentives

36. To incentivise the delivery of high levels of service and the delivery of benefits from its allowances for capital and operating expenditure, we are proposing to set targets that provide strong incentives for NERL to continue to deliver good levels of performance over NR23, to the benefit of customers and consumers.

37. We summarise our Provisional Decision below and provide further details on the targets and incentives in chapter 2.

Environment targets and incentives

38. NERL's business plan aims to reduce carbon emissions from aviation to contribute to UK government targets for net zero and aviation decarbonisation.

39. Our Provisional Decision includes targets for environmental performance (3Di metric) that we consider should further the interests of customers and consumers by reflecting the benefits from NERL's planned capex and opex. We have not seen clear evidence that traffic variations within reasonable bounds will have a direct effect on expected performance, and so we have not accepted NERL's proposals to relax the target to take account of increases in traffic levels. We have set targets in line with our Initial Proposals, which are more challenging than those targets NERL included in its business plan.

40. We also propose to retain financial incentives on these metrics that are similar to RP3, for example we retain deadbands and maximum bonuses and penalties at +/- 0.5% of Determined Costs. We have not accepted NERL's proposals for the modulation of the target or a re-opener for events outside NERL's control, as they do not appear to be robustly estimated, and could dilute incentives to maintain and/or recover service levels.

Delay targets and incentives

41. We have set targets for NERL to broadly maintain its delay performance over NR23 as traffic increases. For example, the targets for NERL attributable delay are around 40% lower by the end of NR23 than the targets proposed in NERL's response to our Initial Proposals. These targets reflect further bottom-up and top-down analysis, updated traffic forecasts and the benefits to current and future customers and consumers from NERL's planned capex and opex.

42. We intend to retain financial incentives that are similar to RP3 on these metrics. In a change to our Initial Proposals, we have considered further evidence and accepted that the target for NERL attributable delay should be modulated with traffic levels given the high degree of forecast uncertainty. We have not accepted other adjustments which NERL proposed to increase exemptions and allow additional re-openers to the price control.

43. In our recommendations following the Palamon investigation,[8] we recognised stakeholder concerns that current practices for coding different causes of delay can lead to inconsistences and difficulties in monitoring ANSPs' performance. In our Initial Proposals, we considered an option for introducing triggers where bonus payments for delay can only be earned in part or in full if NERL demonstrates good performance for the C1 delay metric (where coding of causes of delay is not required). This was not supported by stakeholders. We have instead set out our plans for further monitoring during NR23 to better understand this issue and consider options for more targeted incentives in the future.

Determined Costs and the underlying building blocks

UK en route Determined Costs and Determined Unit Costs

44. NERL Determined Costs are made up of the cost and revenue building blocks, i.e. opex, pension costs, regulatory depreciation, cost of capital (expressed as a return on the RAB) and non-regulatory revenue. The Determined Unit Costs (DUC) are Determined Costs per total service unit (TSU).[9] Unless otherwise stated, the costs discussed below are expressed in 2020 CPI prices.

45. The overall impact of our Provisional Decision is to reduce NERL's en route Determined Costs in NR23 from £3,238 million in NERL's business plan to £3,055 million.[10] This results in average DUC per TSU of £47, compared with £52 in NERL's business plan, contributing to lower unit charges over the period. This is slightly lower than the average DUC per TSU of £48 in our Initial Proposals due to higher traffic forecasts, partly offset by increases in Determined Costs.

46. The main drivers of the lower Determined Costs, compared with NERL's business plan, are lower allowances for weighted average cost of capital (WACC), tax and pension costs, as shown in Figure 3 below.

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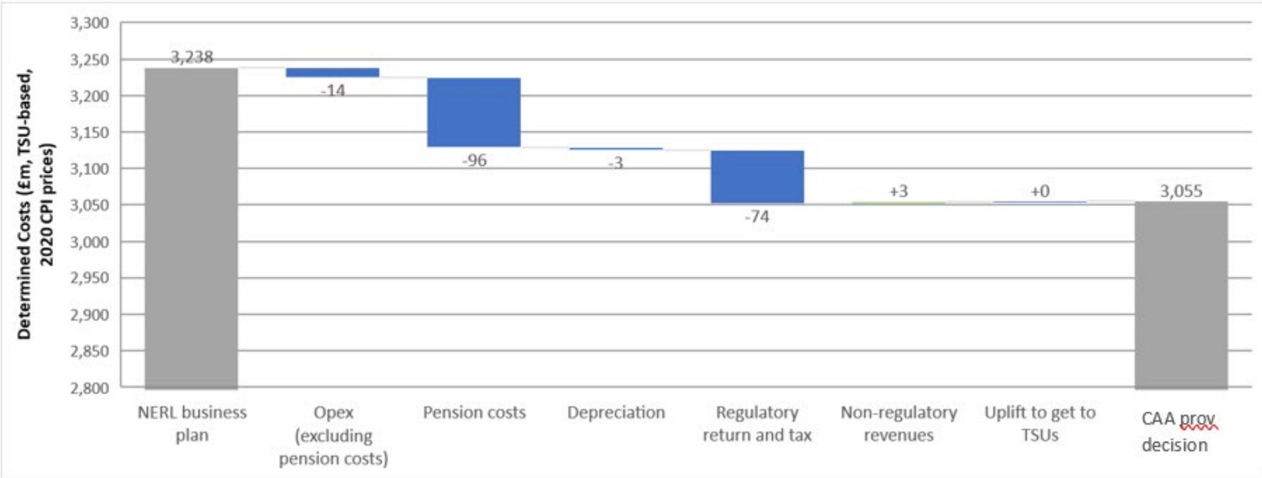
[8] Project Palamon was a CAA investigation initiated following complaints brought by Ryanair plc and Stansted Airport Ltd. The final report of this investigation is available at www.caa.co.uk/cap2100

[9] UK en route service units are the product of the distance factor and the weight factor. From RP3, the distance factor was based on actual route flown (not planned). TSUs include chargeable service units (CSUs) and exempt traffic (for example, from military flights).

[10] This is in Determined Costs in 2020 CPI prices in terms of TSUs, which include CSUs and exempt traffic (for example, from Ministry of Defence). This is consistent throughout this chapter unless otherwise stated.

Figure 3 – CAA Provisional Decision Determined Costs vs NERL's business plan



Source: CAA analysis

47. We add costs from the Met Office, CAA and DfT costs for NR23 to calculate the total UK en route Determined Costs and DUC for NR23 in Tables 1 and 2 below. These show DUC decreasing during NR23 as traffic levels increase and due to reductions in NERL's Determined Costs.

48. Further details on the overall Determined Costs and DUC for NERL are set out in chapter 6. Further details on Determined Costs for the CAA, Met Office and DfT are included in chapter 6 and discussed in the UK performance plan Decision document on Non-NERL costs (CAP 2553b).

Table 1 – UK en route Determined Costs for NR23

2020 prices £ million	2022 Base	2023	2024	2025	2026	2027	NR23 total
NERL	582	640	644	581	596	593	3,055
MET	30	29	33	33	33	32	160
CAA & DFT	68	68	67	68	70	69	342
UK	680	737	744	682	699	695	3,557

Source: CAA analysis

Table 2 – UK en route DUC for NR23

2020 prices £ per TSU	2022 Base	2023	2024	2025	2026	2027	NR23 average
NERL	53.9	53.5	49.8	43.9	44.2	43.3	46.9
MET	2.8	2.5	2.5	2.5	2.4	2.4	2.5
CAA & DFT	6.3	5.6	5.2	5.2	5.2	5.1	5.2
UK	63.1	61.6	57.5	51.5	51.8	50.7	54.6

Source: CAA analysis

49. In the following sub-sections, we set out our Provisional Decision for each of the main components of NERL's UK en route Determined Costs:

- reconciliation review of costs in RP3;
- opex;
- pension costs;
- capex;
- RAB and regulatory depreciation;
- WACC and tax; and
- non-regulatory revenues.

Reconciliation review 2020 to 2022

50. NR23 includes a backwards-looking reconciliation review where we have looked back to take account of NERL's efficient costs in RP3. We use the results of this review to ensure that NERL's recovery of TRS revenue from the period of the pandemic is no higher than is appropriate.

51. We have retained our approach from Initial Proposals, which is to allow NERL to recover its efficient costs from RP3 through its TRS revenues. In response to our Initial Proposals, a number of airlines provided comments that we should adopt a different allocation of the TRS revenues, suggesting that NERL or the UK government should bear a greater proportion of these TRS revenues. However, we consider our approach is consistent with providing regulatory certainty that will further the interests of customers and consumers by continuing to support a low and efficient cost of capital for NERL, which should in turn help finance its capex programme over NR23 and beyond.

52. Recognising that the recovery of TRS revenues increases the charges to airlines, we intend to profile the recovery of these revenues over a long ten-year period to manage the extent of the increase in charges in NR23.

53. The purpose of the reconciliation review was to assess whether any of the costs NERL incurred during 2020 to 2022 were demonstrably inefficient, in the context of the actions it took in response to the impact of the covid-19 pandemic, taking into account the significant uncertainties NERL faced at the time and without the benefit of hindsight. There are a small number of aspects of NERL's actual opex and refinancing costs during 2020 to 2022 that appear to indicate inefficiency and we have not allowed for the recovery of these elements of costs from customers and consumers.

54. Our assessment of efficient costs for NERL for RP3, as well as adopting the CMA allowances for other building blocks lead to total efficient cost baseline in respect of 2020 to 2022 of £707 million to be recovered through the TRS mechanism, compared with £740 million from NERL's business plan. By adopting an even recovery over ten years (NR23 and NR28), our Provisional Decision is to allow a recovery of £354 million (in nominal prices) in NR23, around 36% (or £201 million) lower than in NERL's business plan.

55. For the purposes of the reconciliation review we have adopted NERL's proposals for capex, as NERL reduced its programme significantly in 2020 to 2022 and it is too early to assess whether these costs may have been inefficient. We expect to assess these costs in the round with NR23 capex for NR28.

56. We provide further details on the reconciliation review in chapter 3. As noted below and in chapter 3, we will also review NERL's defined benefit (DB) pension costs during NR23.

Operating expenditure

57. NERL has set out a plan to deliver ongoing resilience in the short term as traffic recovers (such as by increasing staff levels), and resilience into the longer-term by investing in new infrastructure and IT systems and reducing reliance on old systems (referred to as 'legacy escape'). It is essential that NERL continues to provide safe and reliable services as traffic levels recover, and we have reflected this in the opex and capex allowances we have set in our Provisional Decision. We set overall allowances for NERL, rather than specify how any efficiencies should be achieved. It is for NERL to manage its business given these cost allowances.

58. For our Initial Proposals, we identified a number of areas where allowances should be set below NERL's business plan to reflect efficient costs including in relation to staff and non-staff costs. In our Provisional Decision, we have made some changes to allowances for opex to reflect more recent information from NERL on opex, as well as analysis on productivity and price inflation.

59. We have set an allowance for opex (excluding pension costs) of £2,063 million for the NR23 period, around 1% lower than NERL's business plan. We consider that this opex allowance will be sufficient for NERL to provide additional staffing resilience and deliver the service quality targets in our Provisional Decision.

60. We provide further detail on opex in chapter 4.

Pension costs

61. NERL operates a defined benefit (DB) pension scheme, which is closed to new members, and a defined contribution (DC) pension scheme. We have assessed NERL's projections of the costs of these schemes to make sure they are reasonable and efficient, taking account of the strong regulatory protections in place.

62. For our Initial Proposals, we asked our advisors, the Government Actuary's Department (GAD) and Steer, to review NERL's DB and DC pension costs respectively. This analysis concluded that NERL had not taken full account of regulatory protections in place and that costs were not appropriately aligned with relevant market benchmarks. We have considered the responses from NERL and stakeholders, and asked GAD to update its advice. Based on this, we have continued to set pension cost allowances which are significantly below the levels in NERL's business plan. We have allowed a glide path from NERL's actual costs to these lower pension cost allowances based on the date when contributions could be revised following the next pensions valuation, rather than a reduction from the start of NR23. We also have assumed savings from reductions to staff opex.

63. In our Provisional Decision, we set an overall allowance of £447 million for pension costs, around 18% lower than NERL's business plan. This comprises £312 million for DB pension costs and £135 million for DC pension costs and pension cash alternative (PCA) costs. This is slightly higher than the allowance of £436 million in our Initial Proposals.

64. In response to our Initial Proposals, NERL also raised concerns around recovery of reasonable and efficient pension costs through the pension cost pass-through. We confirm that our overall approach has not changed from RP3. We propose to continue to allow NERL to recover reasonable and efficient pension costs and to retain the pass-through mechanism for DB pension costs in line with our regulatory policy statement on pensions.[11] We consider this regulatory policy statement and the pensions pass-through mechanism provides benefits to customers and consumers by supporting a very strong employer covenant for

[11] CAA, Economic regulation of NATS (En Route) plc: Update on approach to the next price control review, CAP 2119, March 2021

future pensions valuations (which in turn should reduce the efficient costs of providing for DB pensions).

65. The assessment of reasonable and efficient pension costs to be carried out during NR23 (to support the operation of the pension cost pass through mechanism) will be based on information available at the time and will be carried out in consultation with NERL and other stakeholders. As noted above and in the reconciliation review chapter 3, we will also need to complete an assessment for 2020-2022 pension costs during NR23 and make adjustments as appropriate. Further details on pension costs are provided in chapter 4.

Capex

66. NERL's plans to upgrade its legacy technology system and for airspace modernisation are important for customers and consumers, as NERL should be able to deliver increased resilience, significant operational efficiencies and productivity improvements. During the height of the covid-19 pandemic, NERL significantly reduced capex. But NERL has proposed to increase capex for the NR23 period.

67. In its response to our Initial Proposals, NERL proposed significant changes to its capex programme, particularly to the delivery of the DP En Route and legacy escape work. NERL has said the costs of the DP En Route work have increased and there will be further delays to the implementation of new systems. It has also proposed reducing the risk and contingency allowance, leaving the overall capex forecast for NR23 broadly unchanged. We were disappointed by how this change to NERL's plans was communicated and evidenced, which occurred late in the NR23 process.

68. We have commissioned Egis to undertake an independent review of the changes to the DP En Route and legacy escape programmes. We have asked Egis to consider whether the new programme should be deliverable, whether NERL has considered all appropriate options and whether NERL has fully considered the impacts on costs and customer benefits from changes to the programme. We expect Egis to complete this review in autumn 2023. Following this, we will consider if additional measures and incentives are needed either in NR23 or from NR28 to hold NERL to account for the delivery of these important programmes and the expected benefits to customers and consumers. We will consult on any changes to the regulatory framework with NERL and stakeholders.

69. It will be important for NERL to deliver the proposed benefits of its capex programme to customers and consumers in a timely way in NR23 and beyond and we have allowed capex in line with NERL's updated capex plan for NR23. We have set a total capex allowance over NR23 of £540 million for UKATS. This is slightly higher than the capex allowance of £532 million in our Initial Proposals.

70. We note that an unduly rigid approach to setting capex allowances is unlikely to be appropriate. The capex allowances are not a ‘cap’ on capex and we would expect NERL to consult on and if appropriate deliver additional capex, where this is efficient and there are clear benefits to customers and consumers from additional spending.

71. Efficient capex will be remunerated through NERL’s RAB. We will conduct an *ex post* review of NERL’s capex during RP3 and NR23. Any expenditure that is found to be demonstrably inefficient and/or wasteful will be removed from NERL’s RAB at the next price control review.

72. Further details on our projections of capex are set out in chapter 4. We summarise our approach to capex incentives below and discuss them further in chapter 7 and appendix G.

Regulatory asset base and regulatory depreciation

73. The stability, credibility and predictability of NERL’s regulatory framework is important for NR23 to support continuing investment. In support of this we retain the core features of the existing regulatory framework, including the RAB, which reflects the amount of revenue that NERL can recover in future and provides remuneration for efficient investment. Regulatory depreciation then reflects the amount of the RAB that is amortised and reflected in NERL’s charges over the NR23 period.

74. Our forecast for NERL’s RAB reflects our allowances for capex and regulatory depreciation. NERL’s RAB also reflects other adjustments during NR23, including the balances from TRS revenues from 2020 to 2022 (discussed further below). The RAB is inflated each year by retail price index (RPI) inflation and is used to calculate allowed returns based on a real (adjusted by the RPI) WACC, consistent with our approach in RP3. Our forecast for the UKATS RAB in RPI 2020 prices is £1,254 million on average over NR23, slightly lower than the forecast RAB in NERL’s business plan.

75. We have published our proposed RAB rules for consultation in CAP 2553e appendix I. These set out the basis for rolling forward the RAB to the end of NR23 and reflects our approach to calculating the RAB, regulatory depreciation and provides for the clear separation of the unamortised balance of 2020 to 2022 TRS revenues.

76. We have calculated depreciation based on the “straight line” method that is broadly consistent with the approach in RP3 and NERL’s business plan. We propose depreciation of £647 million over NR23, slightly lower than NERL’s business plan but around 5% higher than our Initial Proposals. This increase since Initial Proposals reflects the small increase in the capex allowance and updated information on the profile of historical depreciation from NERL in response to our Initial Proposals.

77. The RAB and depreciation are discussed further in chapter 5.

WACC and corporation tax

78. The allowed WACC represents our estimate of the return required by investors on the debt and equity finance that supports the RAB and new investment in the business. While NERL's RAB is relatively small compared to other regulated companies (such as Heathrow Airport Limited (HAL)), the regulatory allowances for WACC and the returns on the RAB remain important in our calculations of the NR23 price control.

79. To estimate the WACC, we have drawn on analysis from regulatory precedent (including the CAA's H7 Final Decision and the CMA determinations for RP3 and RIIO-2), expert advice on asset beta and our own analysis of debt and equity costs. Since our Initial Proposals, we have considered more up-to-date market information, with a cut-off date of mid-March 2023. We have also considered further evidence provided by NERL and airlines, although this has not led us to change our overall approach.

80. We have set an allowed WACC that we consider is reasonable and efficient, taking into account the strong protections in place for TRS and pension costs.[12] This WACC will incentivise new investment, while being no higher than necessary. We propose a range for the RPI-real vanilla post-tax WACC of 2.31% to 4.06%, with a point estimate of 3.19%. This is below the estimate provided by NERL in its response to our Initial Proposals (3.95%) and above the estimate in our Initial Proposals (2.81%). The increase since our Initial Proposals is driven by more recent information on the market-wide risk-free rate, and asset betas and the gearing of relevant listed comparator companies.

81. In a change from RP3, to improve transparency we now present the tax allowance as a separate line in Determined Costs, rather than in simply calculating an equivalent pre-tax WACC. While we have retained a broadly similar approach to estimating tax costs for NR23 as for our Initial Proposals, we have updated our estimates to reflect responses to our Initial Proposals, improvements in the modelling of tax and the updates to tax policy announced in the UK Government Spring 2023 budget. These changes lead to updated estimates of the tax allowance to £83 million for UKATS, lower than the estimate in our Initial Proposals (£101 million).

[12] To illustrate the potential impact of these protections, for example, in our H7 Final Decision we estimated that the TRS for HAL reduced its asset beta, a key component of the cost of equity (see CAA H7 Final Decision, March 2023).

82. Further detail on the WACC and the corporation tax allowance are set out in chapter 5.

Non-regulatory revenues

83. NERL earns non-regulatory revenues from services it provides to, for example, NATS Services Limited (NSL), the Ministry of Defence (MoD) and North Sea Helicopters. These revenues, together with revenues from the London Approach service, are used to offset NERL's costs and so the revenues recovered from UK en route charges are no higher than are necessary.

84. We consider the forecasts in NERL's business plan to be broadly reasonable and have made updates to the allocations of Determined Costs for London Approach and the MoD contracts to reflect changes to Determined Costs compared with NERL's business plan. We propose non-regulatory revenues of £430 million, slightly lower than in NERL's business plan (£433 million) due to the reduction in Determined Costs.

85. Non-regulatory revenues are discussed in chapter 4.

Overall revenues

Recovery of traffic risk sharing revenues from 2020 to 2022

86. For RP3 and previous price control periods, NERL and other European ANSPs had in place a TRS mechanism, which provided a high level of revenue protection to ANSPs from unexpected variations in traffic levels.

87. Consistent with providing predictability and credibility in the regulatory framework, we propose to uphold these commitments but to allow NERL to recover no more than its efficient Determined Costs, so that customers and consumers benefit from the cost savings made by NERL during the covid-19 pandemic. This approach to recovering shortfalls (due to the impact of covid-19) is broadly in line with the special arrangements put in place for other major European ANSPs and should bring benefits for customers and consumers in both shorter and longer terms, as NERL will retain sufficient protection from these arrangements to protect its financeability and will be able to continue to invest on the basis of a relatively low WACC.

88. We have considered responses from NERL and stakeholders on different periods for recovery. We continue to consider that the appropriate period that provides certainty of recovery while managing the impact on customer charges is for recovery over ten years (or two price control periods) starting in 2023. This is longer than the recovery period proposed for other European ANSPs (typically 5 to 7 years) and does not involve the front loading of the recovery as suggested in NERL's business plan. To provide certainty of the recovery of these revenues, we will continue to assume that the unamortised balance of NERL's TRS

revenues are included in its RAB and are financed on the basis of our estimate of NERL's WACC.

89. We estimate this recovery increases NERL's charges by around £6 per TSU in NR23, below the estimated increase of £9 per TSU in NERL's business plan. We provide further details on the recovery of traffic risk sharing revenue in chapter 6.

Overall revenue and unit rate

90. After considering the recovery of TRS shortfall and other revenue adjustments, we forecast that NERL's unit rates over NR23 will be £53 per TSU compared with £54 per TSU in our Initial Proposals and £61 per TSU in NERL's business plan (CPI-real 2020 prices). This represents a 26% increase relative to 2022 in real terms.

91. Unprofiled charges are highest in 2023 and 2024 (reflecting the lower levels of forecast traffic) before reducing for the rest of NR23. We do not consider that this uneven profile of charges would further the interests of customers and consumers as the aviation sector recovers. Charges in 2023 reflect our Initial Proposals and from 2024 we have profiled unit rates to be £53 per TSU for each year of the NR23 period (in real terms), slightly below our Initial Proposals. After taking account of inflation, the unit rate in nominal terms is forecast to increase from £47 per TSU in 2022 to £64 per TSU over NR23 on average.

92. The forecasts for the unit rates after taking account of reprofiling are shown in the table below. Further details on these forecasts are provided in chapter 6. The actual unit rates during NR23 will depend on outturn inflation, traffic levels and adjustments for other incentives.

Table 3 – NERL UK en route forecast unit rates for NR23, after reprofiling

2020 CPI prices (except where stated)	2022 Base	2023	2024	2025	2026	2027
Revenue allowance (£ million)	561	628	688	705	718	729
TSUs ('000)	13,183	11,956	12,930	13,247	13,490	13,700
Unit rate (£ per TSU)	42.52	52.53	53.22	53.22	53.22	53.22
CPI inflation forecast (2020 index)	1.119	1.187	1.198	1.199	1.205	1.224
Unit rate (£ per TSU) – nominal prices	47.56	62.37	63.73	63.81	64.13	65.13

Source: CAA analysis

Benchmarking charges and assessment of financeability

93. While the services provided by NERL are a relatively small proportion of the costs of operating a flight, we understand airline customers and consumers will be sensitive to higher charges as they recover from the impact of the covid-19

pandemic. Our statutory duties mean we should set price controls at efficient levels, while enabling NERL to provide a resilient and high quality level of service. We have sought to calibrate the price controls in the manner we think best calculated to ensure charges are no higher than necessary and to secure that NERL would not find it unduly difficult to finance its regulated activities.

94. The analysis summarised in Figure 2 above and set out in appendix F shows NERL's charges for NR23 below the average levels for the RP2 period and broadly comparable with other European ANSPs. Our view is that while the increase in NERL's charges in NR23 will be difficult for its customers, it is essential that the price control arrangements allow NERL to continue to finance new investment and that the steps we have taken to profile the recovery of TRS revenues means that while charges have increased, the average level remains reasonable and affordable given the benchmarks from the RP2 period and from European comparisons.

95. We have assessed NERL's debt and equity financeability under an efficient (or "notional") financing structure. We consider that NERL should be able to retain an investment grade credit rating over NR23 under our Provisional Decision, including under reasonable downside traffic scenarios. We provide further detail on our benchmarking and financeability assessment in chapter 6.

Regulatory mechanisms to manage uncertainty and support innovation

96. Given the relatively high degree of uncertainty in relation to NR23, we consider it will be in the interests of consumers and customers for NERL to be given a proportionate amount of protection from the risks stemming from this uncertainty so that it will continue to have a relatively low WACC, with the benefits of this passed to consumers through lower charges. We have also established arrangements designed to support innovation from new airspace users in NR23. These are summarised below with further detail in chapter 7.

Airspace modernisation

97. A key strategic driver for NERL in NR23 is to continue to support the implementation of the UK's Airspace Modernisation Strategy (AMS), which is intended to deliver a once in a generation upgrade to modernise critical national infrastructure, UK airspace, and deliver a broad range of benefits in all key performance areas and more widely.[13]

98. We are supporting airspace modernisation activities by allowing for the associated costs and investment that NERL has proposed over NR23. We have also maintained the CAA AMS Support Fund, a ring-fenced fund created in RP3 for stakeholders (except CAA and NERL) to support the implementation of

[13] About the strategy | Civil Aviation Authority (caa.co.uk)

airspace modernisation and have allowed funding for the Airspace Change Organising Group (ACOG).

Traffic risk sharing

99. We retain the broad approach to the TRS mechanism for UK en route services that was applied prior to the impact of covid-19. Nonetheless, we have proposed a change that means that where there are unexpected traffic reductions over 10%, the recovery of revenues is spread over multiple years. This will provide greater certainty while mitigating the impact of these traffic variations on user charges in future if actual traffic falls significantly below assumed traffic levels. The TRS parameters otherwise remain unchanged from RP3.

Pension cost pass-through and other cost sharing mechanisms

100. As set out in the regulatory policy statement,[14] we intend to continue to allow pass-through of unexpected changes in DB pension costs due to unforeseen financial market conditions. We have not accepted NERL's proposal to include transfer costs from DB pension to PCA in these pensions pass-through arrangements, as we do not consider there is a clear customer or consumer benefit from making this change.

101. We have retained other cost pass-throughs in line with the Eurocontrol Principles, including for unexpected changes in costs associated with changes in government requirements, interest costs and tax costs. We would expect this to include adjustments for changes in corporation tax rates as compared with the assumptions underlying our allowances for tax costs.

Inflation risk mechanisms

102. The current regulatory framework passes risks from unexpected changes in inflation to customers and consumers, through indexation of the price control (to CPI) and RAB (to RPI), as well as an adjustment in the RAB rules to true up for unexpected changes in the RPI-CPI wedge. We observe current high inflation and rising interest rates, leading to uncertainty around inflation forecasts in NR23. Our Provisional Decision retains the same mechanisms and risk protections for NERL in NR23, as were applied in RP3.

Reopeners and allowances for asymmetric risk

103. As was the case in RP3, the Eurocontrol Principles and TA00 allow the price control to be reopened in the case of significant changes in circumstances.[15] We

[14] CAA, Economic regulation of NATS (En Route) plc: Update on approach to the next price control review, CAP 2119, March 2021 – Appendix C

[15] Eurocontrol Principles: paragraph 3.2.3 provides for amendments to unit rates due to unexpected major

consider that this provision, together with the strong protections provided by other regulatory mechanisms, provides sufficient flexibility and certainty, and we do not include additional specific re-opener mechanisms in NR23. We also do not consider that there is a sufficient case to make adjustments to NERL's price controls for asymmetric risk.

Capex engagement incentive

104. Following the CMA determination, we introduced a financial incentive linked to the quality of NERL's engagement with its airline customers on its capex plans. For NR23, we have sought to strengthen these arrangements.

105. We have set higher baseline expectations to encourage higher quality engagement on the efficient delivery of capex (ultimately reducing pressure on future prices). We also intend to broaden the scope of the capex engagement incentive, for example to cover more explicitly information on the benefits of investment, and to better incentivise NERL to make the relevant information available to customers and the CAA. We have taken account of comments made by stakeholders and are consulting on updated guidance alongside our Provisional Decision.

New airspace users

106. In NR23, NERL anticipates that there will be new users of UK airspace, such as commercial drones, advanced air mobility, high altitude platforms and space launches. Where NERL incurs costs to manage new users, we consider these costs should, in principle, be borne by these new users. This will require new charging mechanisms to be developed. It is important that these arrangements do not create undue obstacles to innovation.

107. We have included an obligation on NERL to work across industry to develop and consult all relevant stakeholders on a new charging mechanism to allow recovery of efficient and appropriate costs by NERL for new user services.

London Approach and Oceanic price controls

108. The price controls for NERL's London Approach and Oceanic services are regulated under the TA00 but are not part of the UK's performance plan. Further details of the price control for the London Approach service are set out in chapter 8 and further details of the price control for Oceanic services are set out in chapter 9, CAP 2553a.

109. For the Oceanic price control, we have allowed the ongoing costs of the space-based Automatic Dependent Surveillance-Broadcast (ADS-B) service. As set out

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changes of traffic or costs; and paragraph 3.3.1.4 provides for revision of a performance plan in accordance with applicable law during a reference period.

in the RP3 price control, we will review the costs and benefits of this service once traffic has recovered to an appropriate level. We have not adopted NERL's suggestion of introducing TRS arrangements for the Oceanic service as this would create additional complexity without significant benefits for consumers.

Next steps and views invited

Next steps for setting price controls for NR23

110. The UK performance plan, as required under the Eurocontrol Principles, consists of two parts: NERL's UK en route price control and the Non-NERL (CAA, DfT and Met Office) costs, which are recovered through the UK en route charge.

111. Our Provisional Decision on NERL's UK en route price control is set out in this document and includes the proposed modifications to NERL's licence in CAP 2553d appendix H, which are required to implement the price control. CAP 2553b sets out our Decision on the Non-NERL costs part of the UK performance plan.

112. Our Provisional Decision on the London Approach and Oceanic price controls is set out in CAP 2553a and includes the proposed modifications to NERL's licence in CAP 2553d appendix H, which are required to implement the price controls.

113. The TA00 provides that the CAA may modify NERL's licence following appropriate stakeholder consultation.[16] We are consulting on these proposed modifications for a period of 28 days. Our Provisional Decision constitutes the statutory notice and consultation on proposed modifications required by section 11A(1) of the TA00. We would also request any comments on any clear factual errors in our Provisional Decision.

114. We are also consulting for a period of 28 days on the updated draft guidance for capex engagement incentive (appendix G, CAP2553c) and the proposed RAB rules (appendix I, CAP2553e).

115. After considering consultation responses, we plan to publish our decision notice and final NERL licence modifications on our website in autumn 2023. We expect to be able to publish the updated RAB rules and capex engagement incentive guidance at the same time. The UK's unit rates from 2024 onwards will be set on the basis of the final licence modifications.[17]

[16] The processes and requirements for modifying NERL's licence are set out in sections 11 and 11A TA00. The statutory consultation on our proposed modifications to NERL's licence, required by sub-section 11A(1) TA00, will take place in 2023 once the CAA has considered the representations received in this consultation.

[17] Eurocontrol Principles, 3.3.1.4

116. We understand the CMA is expecting to issue its final determination on the H7 Heathrow Airport licence modifications appeals by 17 October 2023 and to issue its provisional determination in advance of this in early September 2023. We recognise that some areas of these appeals may have read-across to NR23, such as the cost of capital. If we make changes to parameters such as the cost of capital following the CMA's H7 provisional determination of the H7 appeals, then this would lead to changes in the values of Determined Costs used in the licence modifications in our decision notice compared with those used in this Provisional Decision. Our expectation is that the charges that apply for 2024 will be based on our Final Decision. We currently intend to consider any read-across from the CMA H7 provisional determination and, if possible, engage further with NERL and stakeholders as appropriate before we publish our decision notice.

117. Following this statutory consultation and the publication of our decision notice and licence modifications in autumn 2023, certain stakeholders will have six weeks in which to apply to the CMA for permission to appeal the CAA decision on modifications to NERL's licence.[18]

Views invited

118. As explained above we are seeking views on the following areas of our Provisional Decision:

- the proposed licence modifications that would implement our Provisional Decision in appendix H. This Provisional Decision constitutes the statutory notice and consultation under section 11A(1) of the TA00;
- any factual errors identified in the review of this Provisional Decision that should be addressed in our modification of NERL's licence;
- proposed capex engagement incentive guidance in appendix G; and
- proposed RAB rules in appendix I.

119. Responses to these consultations should be clearly labelled which area they are responding to and sent to economicregulation@caa.co.uk by noon on 4 August 2023.

120. We expect to publish the submissions we receive on our website as soon as practicable after the consultation period ends. Any material that is regarded as confidential should be clearly marked as such, with an explanation of why the

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[18] Section 19A TA00 provides that an appeal may be brought by the licence holder, an owner/operator of an aircraft whose interests are materially affected by the decision or an owner/manager of a prescribed aerodrome whose interests are materially affected by the decision. See the Transport Act 2000 (Air Traffic Services Licence Modification Appeals) (Prescribed Aerodromes) Regulations 2022 for the description of the prescribed aerodromes.

information is confidential, and included in a separate annex. We have powers and duties with respect to the disclosure of information under Schedule 9 of the TA00 and the Freedom of Information Act 2000 and it may be necessary to disclose information consistent with these requirements.

121. Any questions related to this decision document should be sent to Stewart Carter at stewart.carter@caa.co.uk.

Chapter 1
Introduction

1.1 This chapter sets out background information for our Provisional Decision on the NERL elements of the NR23 price controls and for our Decision on the non-NERL elements. Our Provisional Decision on the NERL UK en route price control and our Decision on the non-NERL elements together form the UK NR23 performance plan under the Eurocontrol Principles.

1.2 Our Provisional Decision on the NERL elements comprises:

- our Provisional Decision on NERL costs, service targets and incentives, and other incentives and requirements for the NR23 price control; and
- the statutory consultation on the modifications to NERL's licence to enable the NR23 price control.

1.3 Our Decision on the non-NERL costs for the UK NR23 performance plan is set out in CAP 2553b.

1.4 This chapter has the following sections

- the context for the NR23 review;
- a summary of the process we have followed;
- the scope of our Provisional Decision;
- a description of the UK regulatory framework;
- ensuring our Provisional Decision is consistent with our primary duty to maintain a high standard of safety (section 2(1) of the TA00); and
- traffic forecasts.

Context for this review

RP3 and CMA determination

1.5 The price controls for the RP3 period of 2020 to 2022 were determined by the CMA and given force through licence modifications made in December 2020.[19] Given ongoing uncertainty at the time of making its determination, the CMA did not take account of the impact of the covid-19 pandemic in setting the price control, but instead set a shorter control period (from 2020 to 2022, rather than to

[19] CAP 2011 - Economic regulation of NATS (En Route) plc: Decision on licence modifications and guidance, December 2020

2024 as originally intended for RP3). The CMA also said that the CAA should conduct a reconciliation exercise, with reference to actual flight volumes and costs since 2020, as a relevant consideration for setting the NR23 price control and calculating TRS revenues. We refer to this as the reconciliation review for 2020 to 2022, which we have carried out as part of the NR23 price review.[20] We have had careful regard to the impacts of the covid-19 pandemic in reaching our Provisional Decision, for example on traffic volumes, costs and the cost of capital.

Recovery from the covid-19 pandemic

1.6 The aviation industry is continuing to recover from the severe effects of the covid-19 pandemic on traffic levels, staffing numbers and other impacts. We have seen strong recovery in traffic levels in 2022 and 2023, with traffic levels expected to reach 2019 levels in 2024 under the most recent forecasts from Eurocontrol. However, there remains ongoing uncertainty around the path of recovery and impact of other issues such as the Russian invasion of Ukraine and risks of economic slowdown or recession in the UK and abroad. These factors make it more difficult to forecast traffic levels, a key driver of the price control, in the short and medium-term.

1.7 NERL was protected from the full impact of the pandemic through regulatory mechanisms such as traffic risk-sharing (TRS). The recovery of TRS revenues from the period of the pandemic in RP3 over the period of the NR23 price control (and beyond) also creates challenges for this price control review in terms of putting upward pressure on NERL’s charges.

Airspace modernisation

1.8 Airspace modernisation is a national strategic objective for the UK and in 2018 we published a UK Airspace Modernisation Strategy (AMS). In support of the AMS, as part of our RP3 price control conditions we created obligations on NERL to establish and maintain the Airspace Change Organising Group (ACOG), which sits within NERL, but operates impartially, and is responsible for the design and delivery of a UK airspace masterplan. We also highlighted the importance of NERL delivering those airspace and technology initiatives for which it is responsible, in line with the AMS.

1.9 At the start of 2022, we consulted on a “refreshed AMS 2022-2040” to replace the AMS 2018, with the intention of extending the strategy to 2040, while maintaining the vision to “deliver quicker, quieter and cleaner journeys and more capacity for the benefit of those who use and are affected by UK airspace”. In

[20] Details of the reconciliation review are set out in Chapter 3.

January 2023, we published the refreshed AMS for 2023-2040 parts 1 and 2,[21] taking into account the views of a wide range of aviation and non-aviation stakeholders. These documents cover strategic objectives, enablers, governance arrangements and delivery elements. Part 3, which will set out progress with deployment and related elements, is expected to be published by spring 2024.

1.10 Our Provisional Decision maintains the links and obligations between the AMS and NERL's role in its delivery, including running the ACOG function and the delivery of related airspace and technology initiatives.

H7 price review

1.11 In March 2023, we published our H7 Final Decision on the price review for regulated charges for HAL.[22] Both HAL and NERL operate under regulated price caps set on the basis of a regulatory asset base (RAB) and projections of costs and revenues. Where appropriate, we have taken a consistent approach across the H7 and NR23 reviews, for example, on market wide parameters in the weighted average cost of capital (WACC). However, we also recognise that NERL and HAL are significantly different businesses. For example, NERL is much less capital intensive, has a higher proportion of opex and has a significantly lower RAB. In addition, when setting NERL's price control, we use a traffic forecast for all commercial flights in UK airspace, and NERL's customers which also include low-cost carriers and the airlines operating overflights.

1.12 Another difference is that for NERL, where a traffic risk sharing mechanism was in place prior to the covid-19 pandemic, these proposals allow the recovery of this shortfall, broadly consistent with the mechanism and expectations prior to the covid-19 pandemic. For HAL, no such mechanism existed during that period.

1.13 As noted in the Executive Summary the CMA is currently considering appeals (from both HAL and airlines) in relation to the CAA's decisions on the H7 price control.

Process to develop our decision

1.14 As explained above, this document sets out the CAA's Provisional Decision on the price controls for NERL UK en route, London Approach and Oceanic services. This includes the service quality targets and incentives on NERL that will form the basis of the UK en route and Oceanic price controls under NERL's

[21] Details on the CAA's Airspace Modernisation Strategy is provided here: https://www.caa.co.uk/commercial-industry/airspace/airspace-modernisation/airspace-modernisation-strategy/about-the-strategy/

[22] https://www.caa.co.uk/commercial-industry/airports/economic-regulation/h7/consultations/final-and-initial-proposals-for-h7-price-control/

licence. This Provisional Decision has been prepared by the UK CAA, consistently with our role and duties in respect of ATS under the TA00.

1.15 The document includes:

- our Provisional Decision on NERL's UK en route price control (CAP 2553);
- our Provisional Decision on the other price controls (London Approach and Oceanic) (CAP 2553a);
- our Decision on DfT, Met Office and CAA en route costs (CAP 2553b);
- appendices documents (CAP 2553c/d/e);
- the proposed modifications to NERL's economic licence to enable our decision for formal statutory consultation (CAP 2553d);
- the updated draft guidance on capex engagement incentives for consultation (CAP 2553c appendix G);
- the updated draft RAB rules for consultation (CAP 2553e appendix I); and
- the price control model and user guide (CAP 2553f/g appendices J and K).

1.16 We developed these documents through the following steps:

- in December 2020 we published a consultation on the approach to the next price control (the December 2020 document);[23]
- in March 2021 we published an update on our approach to the price control review;[24]
- we published business plan guidance for NERL in June 2021,[25] with an update in August 2021;[26]
- NERL led a programme of customer consultation during October and November 2021. At the end of the programme, the Co-Chairs of the Customer Consultation Working Group (CCWG) submitted a report on their conclusions.[27] In line with our NR23 guidance, NERL also carried out consumer research to ensure consumer views form part of its business plan;

[23] CAP 1994

[24] CAP 2119

[25] CAP 2160

[26] Letter to NERL, Further guidance on the approach to the next price control review, 9 August 2021

[27] NERL NR23 Customer Consultation Working Group – Report of the Co-Chairs, 13 December 2021

- NERL submitted an update on its key price control building blocks to us on 10 December 2021. This provided a draft view of the building blocks, costs and revenues that would form part of its NR23 business plan;
- NERL provided to the CAA and published its NR23 business plan on 7 February 2022. As agreed during the customer consultation process, we invited stakeholder views on NERL's business plan to help inform how we developed our Initial Proposals.[28] These responses are published on our website;
- we published our Initial Proposals (including non-NERL costs) on 27 October 2022 for consultation and invited stakeholder views on all aspects of our Initial Proposals;
- NERL, airlines and other stakeholders provided responses to our Initial Proposals in December 2022. These responses are published on our website. In its response, NERL provided updates to its business plan in a number of areas; and
- we raised a number of queries to clarify elements of NERL's response and have engaged with NERL, airlines and stakeholders on their responses and our approach to our Provisional Decision. During this process, NERL provided further information that has informed our Provisional Decision, which is detailed in the relevant chapters of this document.

1.17 We have considered in detail the views and evidence submitted by stakeholders, as well as collecting our own primary evidence. In addition to our own analysis and assessment, we commissioned a number of consultancy studies to provide independent in-depth analysis and advice on certain issues. We published reports from a range of advisors alongside our Initial Proposals and have published the following further reports alongside our Provisional Decision:

- update on the WACC (by Flint Global);
- update on pensions (by the Government Actuary's Department (GAD));
- review of the price control model (by Vercity).

NERL NR23 business plan

1.18 As set out above, on 7 February 2022, NERL published its business plan for NR23. We provided further detail on elements of NERL's business plan in our Initial Proposals and summarise this detail in the relevant chapters of our Provisional Decision.

[28] Letter to stakeholders inviting submission of views on NERL's NR23 business plan

1.19 NERL has stated that its priorities and objectives for NR23 are:[29]

- a safe and efficient air traffic system;
- supporting industry recovery;
- meeting net zero ambitions;
- advancing airspace modernisation;
- operational resilience; and
- appropriate financial resilience.

1.20 In its NR23 business plan, NERL proposed a 35% increase in its en route charge per service unit from £45 in 2019 to £61 in 2023 and over NR23 (2020 prices). The main driver of the increase proposed by NERL in unit charges is the recovery of 75% of the under recovery of TRS revenues from 2020 to 2022 (around £555 million in nominal prices) over NR23.

Stakeholder views on NERL's business plan

1.21 We invited stakeholder views on NERL's business plan in March 2022 to help inform how we developed our Initial Proposals.[30] This reflected feedback from the customer consultation where airline customers said there was not sufficient information to offer a view on many aspects of NERL's plan for NR23.

1.22 In summary, stakeholders raised a number of concerns around NERL's plans, including service quality targets, resourcing plans and the allocation of the revenue shortfall from 2020-2022 through the TRS mechanism to airlines.

1.23 We provided further detail on stakeholder views on NERL's business plan in our Initial Proposals and summarise this detail in the relevant chapters of our Provisional Decision.

Our Initial Proposals for NR23

1.24 On 27 October 2022 we published our Initial Proposals for NERL's UK en route, London Approach and Oceanic price controls for the NR23 period (2023-2027), as well as non-NERL costs. This also included draft licence modifications and RAB rules.

1.25 We set out the timetable for finalising the price review in 2023. We stated that 2023 user charges should be based on the Initial Proposals and that we plan to provide a true-up adjustment from 2024 to reflect any differences between the 2023 charge in our Initial Proposals and our final performance plan decision.

[29] From NERL's Business Plan webpage: https://www.nats.aero/investors/nr23-business-plan/

[30] Letter to stakeholders inviting submission of views on NERL's NR23 business plan

1.26 In our Initial Proposals we allowed increases in real costs and charges, though at levels below NERL's business plan. The differences to NERL's business plan reflected lower assumptions on determined costs for opex, pension costs and the cost of capital, for example, as well as spreading the recovery of 2020-2022 TRS revenues over a longer period of 10 years. In addition, we set more challenging service quality targets than in NERL's business plan.

1.27 We requested responses to the Initial Proposals by 13 December 2022.

Stakeholder views on our Initial Proposals

1.28 In December 2022, we received 14 responses to our Initial Proposals, from NERL, airlines and other stakeholders. These were published on the CAA's website.[31]

1.29 Many responses were positive about parts of our Initial Proposals, but we received comments across a number of the determined cost building blocks, as well detailed comments on the price control model. There was also broad consensus that we should use more up to date information for our decisions. We summarise the stakeholder responses and our views in the relevant chapters of our Provisional Decision.

1.30 In its response to the Initial Proposals, NERL provided updates to its business plan information in a number of areas, including on its capital investment programme, opex, traffic forecasts and proposed service quality targets. Compared with its business plan, these updates included later delivery of some key capital programmes, higher traffic forecasts based on more recent STATFOR forecasts and recalibrated en route delay and flight efficiency targets for lower levels of service delivery. It also consulted with airlines on the revised capex programme for the Service and Investment Plan (SIP) process. As we explain in chapter 4, we have a number of reservations and concerns with respect to NERL's updated capex plan.

1.31 We have sought to engage with NERL and stakeholders on their responses at a working and senior level. With NERL, we have also sought clarifications on a number of its detailed comments, including gathering more up-to-date information on its actual costs and performance in 2021 and 2022. We summarise in the relevant chapters where we have relied on this further information in making our Provisional Decision.

1.32 We received no stakeholder comments on our proposals for non-NERL costs. We set out our Decision on non-NERL costs in CAP2553b.

[31] https://www.caa.co.uk/commercial-industry/airspace/air-traffic-management-and-air-navigational-services/air-navigation-services/nats-en-route-plc-nerl-licence/

Scope of our Provisional Decision

1.33 Our approach to economic regulation includes setting price controls for the following services, where we specify the maximum amounts that NERL can charge its customers for its regulated ATS:

- UK en route,
- London Approach and
- Oceanic en route services.

1.34 These amounts are linked to how NERL performs against its performance targets. The price controls are given effect through modifications by the CAA of conditions in the NERL licence.[32]

1.35 This document covers our Provisional Decision for all three price controls (UK en route, London Approach and Oceanic) that comprise NERL's regulated activities for the period of 2023 to 2027, known as NR23.

1.36 We are consulting on the proposed licence modifications to enable these price controls to be given effect. This document constitutes notice under section 11A(1) of the TA00 of the proposed licence modifications. The proposed licence modifications are set out in CAP 2553d appendix H and the reasons for and effects of the proposed modifications are set out in the relevant chapters. We are requesting responses from stakeholders on these licence modifications, as well as any errors in this Provisional Decision document. The proposed licence modifications and details of how to make representations on them are in the Executive Summary.

1.37 Following this, we plan to publish our decision notice on these three price controls and the enabling licence modifications in autumn 2023. We provided further detail on the next steps in the Executive Summary.

1.38 As well as the licence modifications, we are also consulting on the following two documents:

- the draft guidance for the capex engagement incentives; and
- the draft RAB rules.

1.39 Both of these documents have been updated since the Initial Proposals following our consideration of comments from stakeholders. We plan to publish final versions either with our decision notice on the NR23 price controls or shortly following publication of the decision notice.

[32] NERL's current licence is provided here: https://www.caa.co.uk/media/azlfstks/air-traffic-services-licence-for-nats-en-route-plc-january-2022.pdf

1.40 This document also sets out our final decision on non-NERL costs (from CAA, Met Office and DfT), which are part of the overall UK en route charge in the UK performance plan (see below). This decision does not require modifications to be made to NERL's licence.

UK en route and London Approach

NERL costs

1.41 The UK en route component of the document covers:

- NERL's en route ATS in the Scottish and London Flight Information and Upper Information Regions (FIR/UIR); and
- NERL's combined approach for ATS for certain London airports, known as London Approach. Our Provisional Decision for the London Approach price control is set out in CAP 2553a chapter 8.

TANS

1.42 Terminal Air Navigation Services (TANS) are not economically regulated under the TA00 or the Eurocontrol Principles and are subject to market conditions in the UK. As they are not in scope for NR23, we will not be setting cost or performance targets for TANS providers for NR23. TANS remain subject to safety regulation by the CAA.

Oceanic

1.43 The Oceanic price control covers the ATS NERL provides to aircraft crossing the North Atlantic. This service is regulated under the TA00. The Oceanic and UK en route regulatory periods are aligned and, where appropriate, we have made similar assumptions in setting both price controls.

1.44 Our Provisional Decision for the Oceanic price control is set out in chapter CAP 2553a chapter 9.

Scope of our decision on non-NERL costs

1.45 This document includes our Decision on the 'non-NERL' costs for the NR23 period, which are included in the UK performance plan under the Determined Costs methodology as set out under the Eurocontrol Principles.[33] These costs are:

- the costs of the UK's contribution to Eurocontrol as a Member State, referred to as DfT costs;

[33] Eurocontrol Principles, paragraph 1.3.2

- the costs of the CAA's airspace strategy, policy and regulation activities. From 2023 and to increase transparency and reduce administrative burden, the CAA's costs will also include an amount to recover the costs of our economic regulation of NERL, which was previously charged to NERL under its licence.[34] We consulted on this proposed change as part of our 2022/2023 statutory charges consultation;[35] and
- the costs of aviation services provided by the Met Office.

UK regulatory framework

1.46 Since 1 January 2021, the UK is no longer subject to the European Union's Single European Sky (SES) performance scheme for air navigation services (ANS). Nonetheless, UK ATS continues to be subject to economic regulation under the TA00, and the UK is a member of Eurocontrol (see below).

Transport Act 2000

1.47 The TA00 gives the CAA a primary duty to exercise its functions under Chapter 1 TA00 so as to maintain a high standard of safety in the provision of ATS. Those functions include modifying a licence: section 11 TA00.

1.48 The secondary duties, which are subsidiary to the primary duty, are that the CAA must exercise the relevant functions in a manner it thinks best calculated to:

- further the interests of operators and owners of aircraft, owners and managers of aerodromes, persons travelling in aircraft and persons with rights in property carried in them;
- promote efficiency and economy on the part of licence holders;
- secure that licence holders will not find it unduly difficult to finance activities authorised by their licences;
- take account of any international obligations of the UK notified to the CAA by the Secretary of State (SoS) (whatever the time or purpose of the notification); and
- take account of any guidance on environmental objectives given to the CAA by the SoS.

1.49 In line with our primary duty under the TA00, the overriding priority for this review remains maintaining a high standard of safety in the provision of air traffic

[34] NERL licence, Condition 18

[35] CAP 2282

services in UK and UK managed airspace,[36] including planning for the growth in air traffic movements that is expected over the NR23 period. We have also had regard to our secondary duties, including furthering the interests of those specified in s.2(2)(a) TA00 (sometimes referred to as "customers and consumers"), promoting efficiency and economy on NERL's part, and not making it unduly difficult for NERL to finance its activities. We consider financeability of the notionally financed company, rather than the actual company. If, in a particular case, there is a conflict in the application of the secondary duties (for example between cost and quality or between financeability and the interests of consumers), we have applied them in the manner we think is reasonable, having regard to these duties as a whole (s.2(5) TA00).

Eurocontrol

1.50 The UK continues to be a Member State of Eurocontrol.[37]

1.51 In carrying out the economic regulation of NERL, the CAA has a secondary duty to take account of international obligations notified to the CAA by the SoS. The notified obligations include the Eurocontrol Multilateral Agreement relating to Route Charges.[38] As a signatory to the Multilateral Agreement, the UK has agreed to adopt the Eurocontrol common policy in respect of charging for UK en route services, which is set out in the Eurocontrol Principles.[39] The CAA will continue to take account of the Determined Costs methodology set out in the Eurocontrol Principles.

1.52 While the DfT represents the UK as the 'Contracting State' under the Eurocontrol Principles, in coordination with the DfT and consistent with our role and duties under the TA00, we will prepare and adopt the UK's performance plan on behalf of the UK.

1.53 Under the Eurocontrol Principles, Contracting States following the Determined Costs methodology are obliged to:

- adopt a performance plan for each reference period;
- consult with stakeholders on the charging policy and planned cost bases (including planned investments and traffic forecasts);

[36] As well as other airspace for which the UK is responsible for the provision of ATS, i.e over parts of the North Atlantic.

[37] Eurocontrol is an intragovernmental pan-European, civil-military organisation that supports European aviation in a number of roles and functions. It has 41 Member States, including the UK and other EU and non-EU countries.

[38] https://www.eurocontrol.int/publication/multilateral-agreement-relating-route-charges

[39] Eurocontrol Principles for establishing the cost base for en route charges and the calculation of the unit rates, January 2020

- report to Eurocontrol on planned cost bases; and
- set a unit rate each year.

1.54 We consulted with stakeholders on the timing and duration of the reference period for NR23 to agree that it will run for five years from 2023 to 2027.[40] This is consistent with the requirement under the Eurocontrol Principles to have a reference period of between three and five years.[41]

1.55 The Eurocontrol Principles set broad requirements but the details as to how these requirements are implemented in each Contracting State is subject to applicable law. In the UK this is the TA00. Unlike the SES performance regulation, the Eurocontrol Principles and the TA00 do not define in detail what needs to be included in a performance plan.

1.56 We presented our proposed approach to meeting the UK's continuing Eurocontrol obligations at the 2022 unit rate consultation meeting, in July 2021. As discussed with stakeholders, the UK NR23 performance plan will comprise:

- the final performance plan decision document and appendices; and
- the Eurocontrol cost reporting tables and additional information document, as submitted to the Central Route Charges Office (CRCO).

1.57 We consider that our proposed approach to the UK NR23 performance plan is consistent with the Eurocontrol Principles. The performance plan excludes the Oceanic and London Approach price controls, which are regulated under the TA00.

Ensuring our proposals meet our primary duty to maintain safety

1.58 For this review and Provisional Decision, our overriding priority, in line with our primary duty under TA00, is to ensure that we economically regulate NERL in a way that allows it to continue to provide a high standard of safety in the provision of air traffic services in UK and other airspace where it provides ATS. NERL also has duties under the TA00 to ensure that a safe system for the provision of authorised ATS in respect of a licensed area is provided, developed and maintained (s.8 TA00).

1.59 We are clear that safety must always be maintained and that air traffic will be constrained where necessary to ensure this. NERL's delivery of outcomes and

[40] CAP 1994

[41] Eurocontrol Principles, 1.3.2

outputs should always be in the context of its overriding obligations to maintain safety.

UK safety regulatory framework

1.60 The UK safety regulatory framework requires the CAA as the Competent Authority to regulate and oversee the UK's aviation system.[42]

1.61 NERL, and all other ATS providers in the UK, are subject to an extensive safety regulatory framework that includes requirements under UK regulations and retained EU regulations. This framework is anchored in a safety management approach that covers systems, procedures and personnel.

1.62 Safety oversight by the CAA's Safety and Airspace Regulation Group (SARG) takes place at all levels of NERL, from corporate through to individual procedural changes, ATCO competence assessments and equipment maintenance and modification. This oversight of NERL includes proactive auditing, reactive oversight to incidents or project/programme activity, and independent incident investigation. Where NERL seeks to make changes, for example to key infrastructure or procedures, it must produce relevant safety arguments and documentation, which is assessed and accepted (or not) by SARG. Through this oversight SARG identifies, and categorises according to safety impact, any non-compliance with regulations and observations on NERL's safety performance.

1.63 While the UK is no longer part of the EU performance scheme, we continue to monitor specific NERL safety performance indicators as part of our oversight activities.

Assuring safety in our Provisional Decision

1.64 In our Initial Proposals, we considered that NERL would be able to provide a safe service during NR23 based on the current level of safety in its operations and the safety regulatory requirements to manage changes. NERL must take appropriate steps to ensure safe operations and to meet its safety obligations, including in relation to any actions it takes to meet its service quality targets. In responding to our Initial Proposals, NERL said, *"We agree with the content of CAP2394 regarding provision of a safe service whilst allowing mechanisms to address future uncertainties."*[43]

1.65 We have maintained the same approach in making our Provisional Decision, which provides NERL with appropriate allowances to provide a safe and reliable service, consistent with our primary duty to safety and should allow it to continue

[42] UK Regulation (EU) 2017/373, on common requirements for providers of air traffic management/air navigation services and other air traffic management network functions and their oversight (Retained EU Legislation), sets out the safety framework for air traffic services.

[43] NERL response to CAA NR23 Initial Proposals, CAP 2394 – 13 December 2022, page 33, last paragraph

to operate a safe ATS system, making improvements to its systems and arrangements as appropriate.

1.66 We have considered potential safety implications; for example, including consideration of legacy systems, delays to major projects, and resource and recruitment reviews. We consider that NERL will be able to provide a safe service during NR23 under this Provisional Decision because:

- the operation is currently safe, and appropriate safety governance mechanisms exist to manage changes:
  - NERL's safety is monitored, assessed and formally reported as part of SARG's ongoing oversight. Any change that NERL makes to its operation is subject to safety assessment before it is implemented.
- our efficiency adjustments should not impact negatively on safety:
  - **Costs.** For this Provisional Decision, we have assessed the level of costs we consider efficient for NERL to deliver its plans.
  - We have sought to make appropriate efficiency assumptions while also providing strong support for the delivery of airspace modernisation which includes reducing the complexity of the airspace structures and the introduction of new technologies. We have allowed all the capex NERL has requested in its business plan for its role in airspace modernisation and ringfenced the ACOG operating costs from our efficiency challenge. We have also proposed increases in our own airspace-related costs to ensure we are equipped to fulfil our own airspace modernisation related duties and functions.
  - This approach should allow NERL appropriate allowances and return on investment to provide a safe service, consistent with our primary duty, and a reliable service.
  - In addition and irrespective of the price control allowances for costs NERL has over-riding obligations to prioritise safety.
  - **Service quality.** In determining our approach to capacity and flight efficiency targets, we have taken account of a range of factors such as views put forward by airlines as part of the CCWG process and outcomes, historical performance and stakeholder inputs following our Initial Proposals. We note that NERL must meet the requirements of the safety regulatory framework, and at an operational level this means that where a challenge to the service quality targets presents itself, NERL must take appropriate steps, for example it may reduce capacity (and increase delay) to ensure safe operations and meet its safety obligations.

- **Regulatory mechanisms**. We have developed regulatory mechanisms to help deal with uncertainty:
  - we have sought to ensure (consistent with our statutory duties) that NERL has appropriate flexibility to allow it to help mitigate uncertainty during the reference period; and
  - our Provisional Decision includes a ‘recording mechanism’ to support delivery of services for new users (which interface with NERL’s regulated services). This will support safety by providing mechanisms for NERL to supply new services, consistent with its overall obligations to provide safe and reliable services.

1.67 As noted in the Executive Summary and in our Initial Proposals (paragraph 1.50), if NERL considers this Provisional Decision is not sufficient to deliver an appropriate level of service to its customers, taking full account of its safety obligations, it will need to respond (and provide evidence) accordingly in response to this Provisional Decision.

Traffic assumptions

Introduction

1.68 The prices that NERL can recover from its airline customers for providing ATS are calculated on the basis of allowances for efficient Determined Costs and forecasts for traffic volumes. NERL’s price controls are based on two measures of traffic volumes:

- number of Instrument Flight Rules (IFR) movements, or “flights”: this forecast underpins the assumptions on resourcing and service quality; and
- service units, which are based on the corresponding flight forecast and include assumptions on the distance flown and weight of aircraft: this forecast is used for the calculation of unit costs and prices NERL can charge.

1.69 The impact of the covid-19 pandemic resulted in an unprecedented downturn in traffic in RP3, with 2020 and 2021 total service units 60% and 57% respectively below the levels that were forecast.

1.70 Both NERL’s NR23 business plan and our Initial Proposals were based on traffic forecasts derived from the STATFOR (the independent network forecasting team of Eurocontrol) October 2021 base-case assumptions for UKATS (for UK en route and London Approach) and Oceanic traffic flows. The use of STATFOR forecasts has been consistently supported by airlines and was used by the CMA in its RP3 determination.

Our Initial Proposals

1.71 Table 1.1 below shows the STATFOR October 2021 base-case forecasts that we used for our Initial Proposals. We noted that STATFOR had also released a short-term forecast in June 2022, but we had concerns about the reliability of that interim forecast and chose instead to use the October 2021 as we considered it still to be a reasonable expectation for NR23. STATFOR also produced a further medium-term forecast in October 2022, but this was too late to take into account for our Initial Proposals.

Table 1.1: UKATS traffic forecast for our Initial Proposals

	RP2	RP3			NR23				
	2019	2020	2021	2022	2023	2024	2025	2026	2027
	Actual	Actual	Actual	F'cast	F'cast	F'cast	F'cast	F'cast	F'cast
UK flights (000)	2,580	1,029	1,063	2,294	2,444	2,549	2,584	2,624	2,662
% vs 2019		*40%*	*41%*	*89%*	*95%*	*99%*	*100%*	*102%*	*103%*
TSUs (000)	12,594	5,099	5,531	10,624	11,715	12,228	12,424	12,641	12,850
% vs 2019		*40%*	*44%*	*84%*	*93%*	*97%*	*99%*	*100%*	*102%*

Source: STATFOR October 2021

Summary of stakeholders' views

1.72 Those stakeholders that commented on our traffic forecasts supported our continued use of STATFOR forecasts, with many of them also saying that for our Provisional Decision we should use the most recently available forecast.

1.73 In addition, NERL proposed that we should apply STATFOR's growth rates to its own data on the latest actual flight count, as it could not reconcile STATFOR's UK flights count with its own data. And some airlines, while supporting our use of STATFOR forecasts, said that we should use a forecast higher than STATFOR's base case, for example because the UK has been outperforming EU traffic growth or because it would allow NERL to be more resilient in adverse situations.

1.74 Some airlines also commented on our Oceanic traffic forecasts, highlighting a discrepancy between the low and base case forecasts, expressing concerns about placing undue reliance on a forecast produced by NERL, or advocating more scrutiny for the forecast for Tango routes.

Our views

1.75 Having considered stakeholder responses, we consider that we should continue to use STATFOR forecasts. We also consider in principle that we should generally use the most recent available forecast and note that it was specific concerns about STATFOR's June 2022 forecasts that led us to use the October 2021 forecast instead for our Initial Proposals.

1.76 STATFOR produced a further medium-term forecast in March 2023, and we have used that forecast for our Provisional Decision. We have reviewed these forecasts and are satisfied that they provide an appropriate basis for our Provisional Decision for UK en route and London Approach.

1.77 Rather than adopting NERL's proposal that we apply STATFOR's forecast growth rates to NERL's figures for the latest number of flights and service units, we have continued to use STATFOR's forecasts of flights and service units. We consider this is a transparent and reasonable approach that is consistent with the approach we adopted for the RP2 and RP3 price control reviews, as well as our Initial Proposals.

1.78 For Oceanic traffic we have continued to apply STATFOR's growth rates for transatlantic flows to NERL's actual Oceanic flight counts. This is the same approach that we used for the RP2 and RP3 price control reviews, and is an approach that we have reviewed and validated. STATFOR has also acknowledged and resolved the discrepancy between the low and base case that some stakeholders identified in its October 2021 forecasts.

Our Provisional Decision

1.79 As explained above, for our Provisional Decision we have used STATFOR's March 2023 base case forecasts. The forecasts for UKATS traffic are shown in Table 1.2 below including both total service units (TSUs) and chargeable service units (CSUs),[44] and the traffic forecasts for the London Approach and Oceanic price controls are set out in CAP 2553a chapters 8 and 9.

1.80 Over NR23 as a whole the forecasts for flights and service units are respectively 0.3 per cent and 5.6 per cent higher than the forecasts that we used for our Initial Proposals.[45] Nonetheless, these forecasts are lower than the October 2022 base case forecasts that NERL used to generate its revised proposals for service quality targets (see chapter 2), especially in the later years of NR23.[46]

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44 CSUs exclude military and exempt flights. To generate a forecast of CSUs we have taken the difference between actual TSUs and actual CSUs in 2022 and deducted this from STATFOR's forecast of TSUs for NR23.

45 The difference between the '% vs 2019' figures for flights and service units reflects an increase in the proportion of overflights in total UKATS traffic in STATFOR's March 2023 forecast. Overflights typically generate more service units per flight than the UK average.

46 Considering the number of UKATS flights in 2027, for example, the March 2023 forecast is 5 per cent lower than the October 2022 forecast.

Table 1.2: UKATS traffic forecast for our Provisional Decision

	RP2	RP3			NR23				
	2019	2020	2021	2022	2023	2024	2025	2026	2027
	Actual	Actual	Actual	Actual	F'cast	F'cast	F'cast	F'cast	F'cast
UK flights (000)	2,580	1,029	1,063	2,137	2,422	2,561	2,608	2,644	2,673
% vs 2019		*40%*	*41%*	*83%*	*94%*	*99%*	*101%*	*102%*	*104%*
TSUs (000)	12,594	5,099	5,531	10,782	11,956	12,930	13,247	13,490	13,700
% vs 2019		*40%*	*44%*	*86%*	*95%*	*103%*	*105%*	*107%*	*109%*
CSUs (000)	12,457	4,970	5,395	10,632	11,806	12,780	13,097	13,340	13,550
% vs 2019		*40%*	*43%*	*85%*	*95%*	*103%*	*105%*	*107%*	*109%*

Source: STATFOR March 2023, CAA

Chapter 2

Service quality

Introduction and context

2.1 As part of the UK en route price control, we set targets and incentives on NERL to improve its performance on reducing the environmental impact of ATS and reducing delays to flights. Ensuring appropriate incentives for NERL to provide high levels of service quality is consistent with our TA00 duties to further the interests of customers and consumers and promote efficiency and economy on NERL's part.

2.2 Our focus for environmental performance is on improved flight efficiency that reduces fuel burn by airlines, so reducing both emissions and the costs that are passed onto consumers. NERL can improve flight efficiency both in the short-term, through ATCO decisions providing more direct routeings, and in the long-term through more efficient airspace design and by supporting airspace modernisation.

2.3 NERL's performance is measured and incentivised in terms of the delays incurred by aircraft that are caused by its en route air navigation services. While NERL's stakeholders, and ultimately consumers, prefer experiencing fewer and shorter delays, there is a level of 'efficient delay' beyond which the cost of reducing delays is likely to exceed the value placed on avoiding delay.

2.4 We want to set strong incentives for NERL to provide good service performance, which are priorities for customers and consumers. In our Initial Proposals, we set more challenging service quality targets than NERL had proposed in its business plan. Following this, NERL submitted updated proposed targets for environment and capacity performance to take account of higher traffic forecasts and changes to its capex programme. We have considered a range of evidence and taken account of more recent information on performance and NERL's proposed targets in developing our Provisional Decision.

2.5 This chapter also covers our Provisional Decision on the application of RP3 incentives. We then summarise our Initial Proposals and stakeholders' views. Finally, we set out our views and our Provisional Decision on environment and capacity targets and incentives for NR23. Appendix E provides further information relevant to the issues discussed in this chapter.

RP3 incentives

2.6 In our November 2021 decision on exceptional measures in response to the impact of the covid-19 pandemic we suspended financial incentives for service quality in 2020, as NERL was outperforming service quality targets due to the downturn in traffic, and said we would review our approach to 2021 and 2022 if traffic remained substantially below the baseline.[47]

2.7 In our Initial Proposals we proposed that, as traffic in 2021 was still significantly below the RP3 forecasts, we would suspend the 2021 capacity incentives, with the relevant price condition term set to zero in 2023 charges, consistent with the approach taken to 2020 incentives.[48] The 3Di incentives for 2021 and 2022 were suspended in accordance with the 3Di Protocol as the annual review test was failed in two consecutive years.

2.8 NERL conducted analysis in August 2022 [49] that indicated overall 2022 delay performance for the C3 metric (see below for a definition of these metrics) was likely to fall into penalty territory as a result of volatility of daily traffic levels. We had noted in our Initial Proposals that;[50]

- while traffic forecasts for 2022 were still substantially below (19 per cent) the RP3 forecast, capacity performance was affected by both an increase in traffic and exceptional volatility within the overall network; and
- it may not be sensible to apply the C3 incentive in its current form for 2022 without some adjustment, and that we would consider further evidence from NERL.

2.9 The second half of 2022 showed far lower levels of delay than NERL had expected in its August 2022 submission. However, traffic levels over 2022 as a whole were significantly lower than our forecast, and simply applying the traffic modulation mechanism set out in NERL's licence would lead to an unreasonably low target. Given this situation, the impact on NERL's performance of volatile traffic levels during the early part of 2022, and the improvement achieved more recently, our Provisional Decision is to suspend financial incentives for both 2021 and 2022. This applies to the C2, C3, and C4 metrics, and also the 3Di measure (which had already been suspended as the annual review test was failed in two consecutive years).

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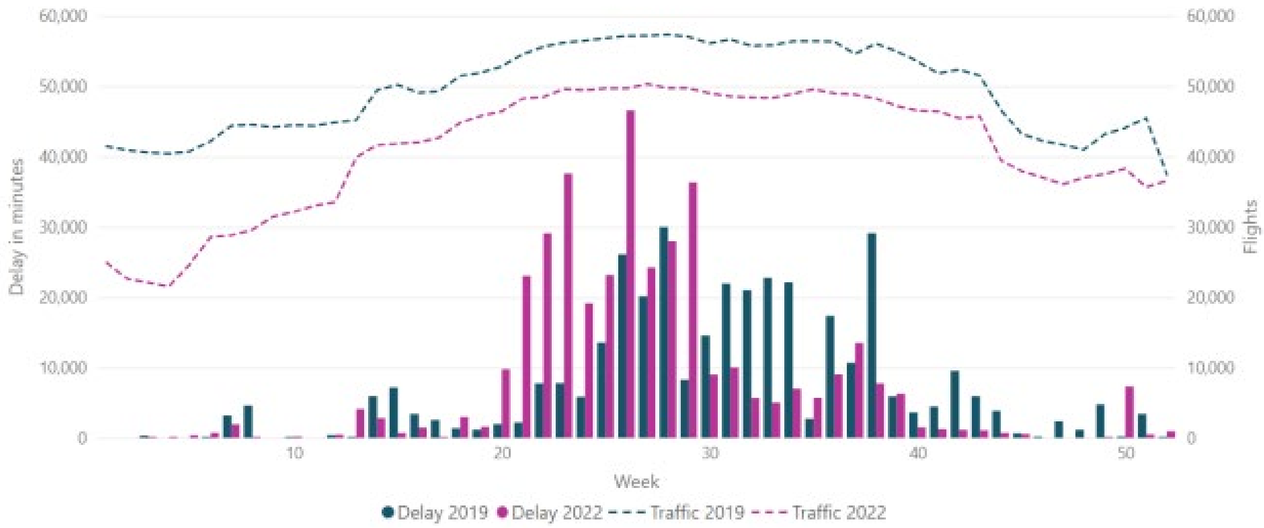
47 CAP 2279

48 CAP 2394

49 NERL letter to CAA dated 19 August 2022

50 CAP 2394

Figure 2.1: NERL-attributable delay (C2) in 2022 (full year) vs 2019



Source: NATS operational report 2022 Q4

Environment

Introduction

2.10 NERL's consumer research indicates that environmental performance is a key priority after safety. Improved environmental performance and flight efficiency were also recognised as priorities for NERL's stakeholders during NERL's customer consultation process.

2.11 NERL has a limited ability to change the way in which it provides services in order to manage environmental externalities, such as carbon emissions and noise. NERL's business plan outlined industry research suggesting that air traffic management can make contributions to aviation decarbonisation of up to six per cent of the overall aviation emissions reduction target required to achieve net zero.

2.12 We measure ANSP environmental performance through improved flight efficiency. Since 2012, NERL's price controls have included a financial incentive on a metric that acts as a proxy measure for aircraft fuel burn and emissions, referred to as 3Di. 3Di stands for 3-Dimensional Inefficiency/Insight and is a metric that calculates the score for the efficiency of a flight based on comparing the actual path flown to an optimal profile. The annual score is a combined score for all flights in UK airspace. Further details of how the 3Di score is calculated are provided in appendix E, CAP2553c.

Our Initial Proposals

Choice of metric

2.13 We considered recent performance of the 3Di metric to check it remains sufficiently robust to use in NR23. We considered that the impact of covid-19 would be temporary and that the 3Di metric should be robust for NR23. On that basis, we proposed to retain the 3Di metric for NR23 and welcomed NERL's commitment to work with stakeholders to improve the metric for NR28.

Treatment of non-revenue flights

2.14 We considered there was a risk of possible inconsistencies or distortions that would reduce the reliability of the 3Di metric and targets if non-revenue flights were removed from source data. Therefore, we proposed to maintain our approach from RP3 of removing the proxy amount of 0.6 from the overall 3Di score to reflect the impact of non-revenue flights, and we noted that the metric will be subject to annual review as set out in the 3Di Protocol.

Targets for 3Di metric and traffic modulation

2.15 We wanted to ensure that the NR23 3Di targets had a reasonable starting point and took account of expected benefits of the capex programme. We set proposed targets based on the starting point of 27.59 provided in NERL's ready reckoner and then applied the capex benefits estimated by NERL. The targets are set out in Table 2.1 below.

2.16 Our Initial Proposals did not support introducing adjustments to targets for changes in traffic levels during NR23.

Table 2.1: CAA proposals for 3Di targets

3Di score	**2023**	**2024**	**2025**	**2026**	**2027**
NERL	28.00	27.90	27.80	27.70	27.60
CAA Initial Proposals	27.59	26.99	26.45	25.91	25.33

Source: NERL BP and CAA Initial Proposals

Financial incentive

2.17 Our Initial Proposals maintained the incentive rate at 0.5 per cent of annual Determined Cost for bonuses and penalties. We also used the same approach to the deadband and maximum thresholds ("cap" and "collar") as for RP3.

2.18 We also said it would be appropriate to review the 3Di metric and strength of incentives during NR23 to consider whether there are areas where these incentives could be strengthened and better targeted at NR28, to reflect the high level of priority consumers assign to environmental improvements.

Re-opener for targets

2.19 We did not agree with NERL's proposal to introduce a specific re-opener for targets. We encouraged NERL to highlight any such one-off events and their impact on the 3Di score as part of its quarterly performance reporting. We also noted that it was likely that we would only consider adjustments for very significant events.

Annual review of 3Di metric

2.20 Our Initial Proposals were to retain the annual review of the 3Di metric. We said that NERL would be required, in NR23, to maintain a consistent method for calculation and the input measurements affecting the value of the 3Di metric. We proposed that any changes NERL wanted to make for NR28 should not be incorporated into regulatory reporting for NR23. Further details of the 3Di model used in the annual review and the annual review protocol are provided in appendix E, CAP2553c.

Other environmental metrics

2.21 As in RP3, we proposed to retain the monitoring of KEA (EU-wide metric covering horizontal flight efficiency) and Continuous Descent Operations (CDO) covering the percentage of flights operating CDO. We did not propose to set or incentivise specific targets for these metrics.

Summary of stakeholders' views

2.22 NERL's response to our Initial Proposals:

- agreed with retaining the 3Di metric, noting that it was now passing the tolerance threshold test as traffic had started to recover;
- provided further analysis to support its view that there is a relationship between 3Di performance and traffic levels. It cited Eurocontrol analysis stating that the main determinants of environmental performance were traffic levels and the ability of ANSPs to manage traffic within the available capacity. NERL said that our analysis does not acknowledge that the driver of the reduction in 3Di score after 2015 was due to the airspace efficiency improvements; and
- said we had set an artificially low starting point for 3Di targets (27.6), as the source was a ready reckoner which was based on a sample that excluded the non-revenue flights, and we had not adjusted for this. It proposed a higher starting point that added our proxy adjustment of 0.6 and also reflected the STATFOR October 2022 traffic forecast (which is higher than the October 2021 forecast that we used for our Initial Proposals) and investment projects implemented up to 2023.

2.23 NERL presented an updated 3Di targets proposal based on a “do nothing” scenario that would result in a 1.9 score deterioration over NR23, and then applied our proposed benefit of 2.3 points attributed to capex investments for NR23. This led to higher targets than in our Initial Proposals, set out in Table 2.2 below.

Table 2.2: NERL updated 3Di targets proposal

3Di score	2023	2024	2025	2026	2027
CAA Initial Proposals	27.59	26.99	26.45	25.91	25.33
NERL revised targets	28.10	28.00	27.90	27.90	27.80

Source: CAA Initial Proposals and NERL response to Initial Proposals

2.24 NERL also requested that we reconsider its proposal to remove the actual non-revenue flights from the data and targets rather than using a proxy. It suggested we should use data and targets that are unadjusted for non-revenue flights to prevent inaccuracies in NERL’s internal data, which could undermine the management of the 3Di model.

2.25 Airlines generally supported 3Di but had concerns about the extent to which it related to actual flight operations. Some airlines also noted that NERL had not provided enough information on its 3Di-traffic modulation proposal.

2.26 British Airways supported the 3Di metric as the best available option, subject to continued annual review. It stated that targets should reflect the benefits generated from NERL’s planned capex and opex alongside airspace modernisation changes. It noted our proposal on non-revenue flights and proposed a full review of 3Di either for our Provisional Decision for this price review or ahead of NR28. It thought we had selected a reasonable starting point, but stated that it was unclear which level we had adopted from the range of 2.0 to 3.3 points capex benefits range. British Airways did not support NERL’s 3Di target modulation proposal, and was not convinced that reopeners are required.

2.27 IATA also supported the continuation of 3Di as the appropriate metric for NR23 subject to an annual review. It supported the Initial Proposals starting point, which better reflected the fact that the traffic level forecast in 2023 is lower than 2019, and the more challenging 3Di targets including benefits derived from the capex programme. It rejected NERL’s proposals on 3Di modulation and re-openers, noting that there was insufficient evidence to support introducing adjustments to targets for changes in traffic levels during the period. IATA requested a review of the non-revenue flights adjustment (-0.6) for NR23.

2.28 easyJet welcomed our proposed targets, which it said should take into account the full expected benefits of NERL’s capex programme and it said a 10 per cent reduction on CO_2 emissions by 2035 should be achievable. easyJet supported NERL’s commitment to work with its stakeholders during NR23 to improve the metric for NR28. easyJet further had concerns about the measure not appropriately capturing flight planning and tactical flight operations priorities.

2.29 Prospect supported the concept and design of 3Di, but noted that more work needed to be done to refine it. It submitted that the targets would be better aligned to the delivery benefits from the capex programme and airspace modernisation, as those will realise tangible benefits to environmental performance. As the original capex programme will not be delivered as envisaged, Prospect suggested that it would be sensible to revisit the 3Di targets. Prospect supported NERL's proposal to remove both non-revenue flights from the model and the 0.6 proxy adjustment from the targets.

Our views

Our approach

2.30 We want to set strong incentives for NERL to provide high levels of service quality, which are priorities for customers and consumers. This includes setting performance targets that are reasonable and stretching for NERL to achieve, providing a "fair bet" for incentives given forecast traffic levels and the cost allowances in our Provisional Decision.

2.31 We have conducted further analysis to assess whether our Initial Proposals are reasonable. This analysis was informed by the latest traffic forecasts, actual 3Di performance levels in the second half of 2022 as the aviation sector has continued to recover from the impact of covid-19, NERL's updated proposals for 3Di targets in its response to our Initial Proposals and NERL's revised capital investment plan benefits for NR23.

Targets for 3Di metric

2.32 Our further analysis suggests that the target 3Di score from our Initial Proposals of 27.6 remains reasonable as the starting point for 2023. This is because:

- NERL achieved a 3Di score of 26.5 (after applying the -0.6 non-revenue flight adjustment) in the second half of 2022. While traffic levels are still recovering following the impact of covid-19, we consider this to be an important indicator of actual performance moving into 2023 and the NR23 price control period. Even if we were to adjust this score to reflect the forecast increase in flight traffic from 2022 to 2023 (although noting below our reservations about the impact of traffic on 3Di scores) and include NERL's 3Di score capex benefit (-0.1), we estimate a 3Di score of 27.5 including all flights, similar to the starting point in our Initial Proposals;

- in its response to our Initial Proposals, NERL proposed a revised starting point and targets that would be significantly higher than our Initial Proposals. However, one of the reasons for this is that it was based on higher STATFOR October 2022 traffic forecasts. In contrast, for 2023 traffic levels, the latest STATFOR March 2023 forecast is actually lower than the October 2021 forecast that informed our Initial Proposals.

2.33 We also consider the trend and target over NR23 from our Initial Proposals to be reasonable as:

- in its response to our Initial Proposals, NERL's proposal included the same overall capex benefit score of 2.3 across the NR23 period. We note that this estimate takes into account NERL's updated capital investment plan as well as planned airspace changes;
- we have modelled a range of scenarios[51] with different options for the starting point and using our estimate of the (weak) relationship between 3Di scores and traffic (rather than NERL's analysis which is based on sample that includes years affected by the impact of covid-19). Our results show performance by the end of NR23 broadly in line with our Initial Proposals across a range of modelled scenarios; and
- we also note that NERL's proposed targets were based on the STATFOR October 2022 forecasts, which show much higher growth rates over the NR23 period than the more recent March 2023 forecasts that underpin this Provisional Decision.

2.34 Based on our analysis and having considered stakeholder feedback, we do not see a compelling case to move away from the targets in our Initial Proposals and consider that these targets remain reasonable.

Traffic modulation

2.35 NERL has stated that we should introduce traffic modulation with a proposed 0.5 score change for a variation of 100,000 flights. However, we do not consider that NERL's analysis is representative of traffic forecasts for NR23, as it includes observations in years where traffic was significantly lower due to the impact of covid-19.

2.36 In contrast, the analysis we included with our Initial Proposals[52] excludes the years affected by the impact of covid-19 and indicates a weaker relationship between 3Di scores and traffic than that proposed by NERL. We also note that

51 CAP2553c Appendix E paras E17-20

52 CAP2394b Appendix D paras D23-D30

traffic levels only seem to explain a small proportion of the variation in 3Di scores.

2.37 For these reasons, we do not consider there to be a sufficiently robust analysis or a sufficiently material impact of traffic on 3Di scores to support introducing modulation.

Treatment of non-revenue flights

2.38 We continue to consider that, to maintain consistency with the source data that was used to estimate the original 3Di model, we should allow for non-revenue flights through a proxy adjustment rather than excluding these flights from both the data and the targets as suggested by NERL. We therefore consider that the existing 0.6 score adjustment for non-revenue flights should be maintained in NR23, which is unchanged from our Initial Proposals.

2.39 Non-revenue flights currently account for around 1.2 to 1.3 of 3Di score points. However, we would expect this to reduce during NR23 as traffic levels increase, so may return to a score of around 0.6 during NR23. Our approach also means we have alignment with the data from RP3 and previous periods used to test the 3Di model that includes non-revenue flights.

2.40 We will monitor 3Di scores during NR23 to inform a wider review of the 3Di model and how environmental performance is measured, for the NR28 price control period, including whether this adjustment for non-revenue flights remains appropriate.

Review of 3Di, incentives and other issues

2.41 We recognise the concerns expressed by easyJet and British Airways around the extent to which 3Di reflects actual flight operations and welcome NERL's commitment to address these concerns during NR23. We consider it is appropriate to review 3Di during NR23 to consider whether it could be improved for future price controls.

2.42 There were no substantive comments regarding our proposals on financial incentives and re-openers for targets and the annual review of the 3Di metric. We therefore retain our Initial Proposals on these issues. Further details on the incentive rate for 3Di are provided in appendix E.

Our Provisional Decision

2.43 Our Provisional Decision is to maintain the use of 3Di as the environmental performance metric and to confirm the targets in the Initial Proposals, as set out in the table below. Our targets are for NERL's 3Di score after applying a -0.6 score adjustment for non-revenue flights. See appendix E for the detail of the 3Di targets with deadband and maximum penalties and bonuses.

Table 2.3: CAA Provisional Decision for 3Di targets

3Di score	2023	2024	2025	2026	2027
NERL response	28.10	28.00	27.90	27.90	27.80
CAA Provisional Decision	27.59	26.99	26.45	25.91	25.33

Source: NERL response to Initial Proposals, CAA

2.44 As set out in our Initial Proposals, we are not introducing traffic modulation for 3Di or an additional re-opener mechanism.

2.45 NERL will be required to carry out an annual review of the 3Di metric in 2023, although we could consider proposals for less frequent reviews in future. NERL can also highlight any specific issues arising through quarterly performance reporting and both NERL and airlines may continue to make representations on a case-by-case basis. The strength of incentives will remain in line with RP3 levels as set out in our Initial Proposals summarised in the table below and in appendix E.

2.46 The two additional environmental indicators of KEA and Continuous Descent Operations (CDO) will continue to be monitored, as in RP3, but we do not propose to set or incentivise specific targets for these metrics.

2.47 A wider review of how environmental performance is measured will be undertaken to help inform the next price control review.

Table 2.4: CAA Provisional Decision for 3Di incentives

3Di thresholds	Maximum Bonus	Maximum Penalty
3Di	0.5%	0.5%

Source: CAA

Next steps and implementation

2.48 The proposed licence modifications set out in CAP 2553d appendix H include the Provisional Decision in relation to environmental targets and incentives for NR23 set out above.

2.49 In preparation for a full review of 3Di during NR23, NERL should continue to provide monitoring of 3Di performance and collate data on the level of non-revenue flights and analysis.

Capacity

Introduction

2.50 NERL's capacity performance is measured by delays incurred by aircraft caused by its en route air navigation services. While NERL's customers and consumers prefer experiencing fewer and shorter delays, there is a level of 'efficient delay' beyond which the cost of reducing delays is likely to exceed the value placed on avoiding delay.

2.51 While NERL can influence delays on a day-to-day basis, through the delivery of air traffic management, it can also improve and mitigate delay through operating expenditure and capital investment to upgrade its technology systems and by supporting the modernisation of airspace to increase capacity and improve traffic flows.

2.52 The capacity metrics used to measure NERL's delay performance are:

- C1 – a measure of all causes of en route air traffic flow management (ATFM) delay;
- C2 – a measure consistent with C1 which excludes causes of delay deemed to be outside of NERL's direct control. The measure is also referred to as NERL-attributable delay;
- C3 – a NERL-specific metric, also referred to as the Impact Score, which weights the score by time of day and duration of delay and is aimed at minimising delay in peak periods; and
- C4 – a NERL-specific metric, also referred to as the Daily Excess Delay Score, which is based on weighted delays exceeding pre-determined thresholds on a daily basis.

2.53 C2, C3 and C4 metrics have a financial incentive attached to them to incentivise NERL to provide high levels of service quality.

2.54 Appendix E has further details of the metrics and the associated financial incentives.

Our Initial Proposals

Targets

2.55 For C1, we proposed a 2023 starting point of 12.29 seconds/flight based on average performance between 2015 and 2019. From 2024 to 2027 we applied the year-on-year growth in NERL's business plan.

Table 2.5: CAA proposals for C1 targets

seconds delay/flight	2023	2024	2025	2026	2027
NERL's business plan	14.70	15.30	15.30	15.30	15.30
CAA Initial Proposals	12.29	12.79	12.79	12.79	12.79

Source: NERL BP and CAA

2.56 The C2 metric has an adjustment to exclude non-NERL-attributable delay. We proposed an adjustment of 3.84 seconds/flight based on actual C1 and C2 performance between 2015 to 2019. Consistent with C1 we proposed a 2023 starting point of 8.45 seconds/flight based on average performance between 2015 and 2019.

Table 2.6: CAA proposals for C2 targets

seconds delay/flight	2023	2024	2025	2026	2027
NERL's business plan	10.20	10.80	10.80	10.80	10.80
CAA Initial Proposals	8.45	8.95	8.95	8.95	8.95

Source: NERL BP and CAA

2.57 We multiplied the C2 metric by a factor of 2 to calculate the penalty threshold for C3, the same approach as for RP3. For NR23 we proposed a single C3 target as the mid-point between the bonus and penalty thresholds.

Table 2.7: CAA proposals for C3 targets

seconds delay/flight	2023	2024	2025	2026	2027
NERL's business plan	20.00	22.00	22.00	22.00	22.00
CAA Initial Proposals	14.08	14.91	14.91	14.91	14.91

Source: NERL BP and CAA

2.58 We proposed to maintain the C4 target at the RP3 level of 1800 and stated our expectation that as NERL's resilience improved with the capex programme, lower target levels would be appropriate for future price control periods.

Table 2.8: CAA proposals for C4 targets

seconds delay/flight	2023	2024	2025	2026	2027
NERL's business plan	1800	1800	1800	1800	1800
CAA Initial Proposals	1800	1800	1800	1800	1800

Source: NERL BP and CAA

Traffic modulation

2.59 We did not consider there to be sufficient evidence to support NERL's proposed change to the existing modulation mechanism for C3 as it is not clear that the relationship between traffic and delay is exponential in nature when using annual targets. Similarly, we did not agree with NERL's proposal to extend a changed C3 modulation metric to C2.

2.60 Our Initial Proposals maintained a similar approach to the modulation mechanism applied to C3 on the basis that traffic volumes will normalise in NR23. Modulation will apply to the target with the bonus and penalty thresholds adjusted according to deadbands. We said it may be appropriate to review the "elasticity factor" used for modulating the C3 metric based on data collected during NR23.

Re-opener mechanism

2.61 Our Initial Proposals did not support the introduction of a specific re-opener mechanism for events outside of NERL's control. We said that NERL should highlight any such one-off events and their impact on delay performance as part of its quarterly performance reporting.

Allowance for exemption days

2.62 We retained the number of exemption days at 100 for NR23, noting that the capex programme for NR23 is smaller than the original RP3 plan. The exemption days will only count against the C3 and C4 incentives when major new systems or airspace changes are being implemented and NERL shall consult with stakeholders on the planned use of exemption days in advance.

Strength of incentives

2.63 Our Initial Proposals did not propose any change to the strength of incentives for NR23 and said we will consider evidence of NR23 performance and whether to strengthen incentives for future price control periods.

Consultation on option to use C1 as trigger for bonuses

2.64 We asked for stakeholder views on an option to use C1 as a trigger for bonuses, to strengthen the link between NERL's eligibility for bonuses and the actual delays experienced by airlines, even though a C1 delay might be out of the direct control of NERL.

Summary of stakeholders' views

2.65 NERL's response to our Initial Proposals:

- said that the Initial Proposals were based on a top-down calibration based on the achieved performance in RP2 period 2015 to 2019. It recommended we take a more detailed bottom-up approach to modelling projected delay performance taking account of the latest traffic forecasts and airspace and technology transitions;
- noted that the STATFOR traffic forecast for October 2022 was materially higher than the October 2021 forecast used for our Initial Proposals. NERL

proposed higher capacity targets to take into account its assessment of the impact of higher traffic forecast on capacity performance and its updated investment programme for NR23, which would have major transitions in four out of five years; and

- accepted our 2023 starting point for both the C1 and C2 targets but proposed significantly higher targets in the final two years of NR23 due to higher traffic forecasts and the updated investment plan leading to deferred transitions and delayed capacity benefits. For C1 weather delay, NERL accepted our use of an average 3.84 seconds/flight but noted that observed weather delay was higher in 2022.

2.66 NERL proposed to revise the C3 targets and deadbands for the NR23 period, based on an observed relationship of 2.4:1 between C3 and C2 delay from 2015 to 2022. NERL's updated targets for C1, C2 and C3 are shown below in Table 2.9.

Table 2.9: NERL updated targets for C1, C2, C3 and C4

seconds delay/flight	2023	2024	2025	2026	2027
C1	12.29	14.74	14.74	16.84	19.14
C2	8.45	10.90	10.90	13.00	15.30
C3	16.90	21.80	21.80	26.00	30.60
C4 (score)	1800	1800	1800	1800	1800

Source: NERL response to Initial Proposals

2.67 NERL's response also:

- accepted our proposed annual target score of 1800 as an appropriately challenging target for C4;
- accepted our proposal to maintain the same approach to traffic modulation for C3 as applied at RP3. However, NERL disagreed with our proposal that we would not extend traffic modulation to C2;
- noted that we were not proposing to introduce a specific re-opener mechanism and it will continue to provide the relevant information as suggested via quarterly performance reporting;
- accepted the limit of 100 exemption days for C3 and C4 metrics; and
- disagreed with the use of C1 as a trigger for payment of financial bonuses under the C2, C3 and C4 metrics, as this would introduce asymmetric risks for performance that was outside of its control.

2.68 NERL also shared information from its NEST modelling, which uses STATFOR traffic forecasts at an airport family pair level to assess impacts of delay on a sector-by-sector basis, to support the assessment of targets. NERL noted that this showed that for some groups and individual sectors in the London region that sector loadings could exceed 2019 levels.

2.69 IATA, British Airways and easyJet welcomed our service quality targets and submitted that these should be based on NERL's performance prior to the impact of covid-19. They also considered targets should be linked to building block allowances.

2.70 Both British Airways and IATA supported targets that are more ambitious than RP3, but thought that basing them on average RP2 performance was too simplistic and called for deeper analysis of NERL performance. British Airways noted that the method used for RP3 considered the UK Network Operations Plans (NOP) and NERL's RP3 airspace and technology transition plan. It supported our proposals on traffic modulation and said exemption delays should be lower than in NERL's business plan and should have a clear link to planned transitions within the capex programme.

2.71 IATA supported reducing exemption days from 150 to 100, noting that the capex programme proposed by NERL for NR23 is substantially smaller than for RP3. IATA supported the rejection of a re-opener mechanism, saying that sufficient flexibility already exists.

2.72 easyJet supported the targets in the Initial Proposals given NERL's performance in higher traffic conditions prior to the impact of covid-19 on traffic levels.

2.73 Ryanair highlighted NERL's updated capex investment programme and said that airlines will have to bear the costs of delays to delivery of investments. It asked for deadlines to be placed on investment and noted that system upgrades should increase resilience and improve operational efficiency and productivity. It did not support the use of financial bonus incentives.

2.74 Virgin Atlantic did not support NERL's proposed increase in exemptions days given the size of the capex programme in NR23 and welcomed our proposal to maintain these at 100 days.

2.75 Prospect called for capacity targets to be re-baselined given the updated NERL capex programme, which it said no longer delivered the benefits envisaged in the NERL business plan. It raised concerns that a focus on delay may detract from developing ATCO skills, and would provide less flexibility to meet additional demand. Prospect said that the delay to DP En Route would further compromise the ability of NERL to improve delay performance. It did not support the proposal to use C1 as a trigger as performance is, in its view, outside of NERL's control.

Our views

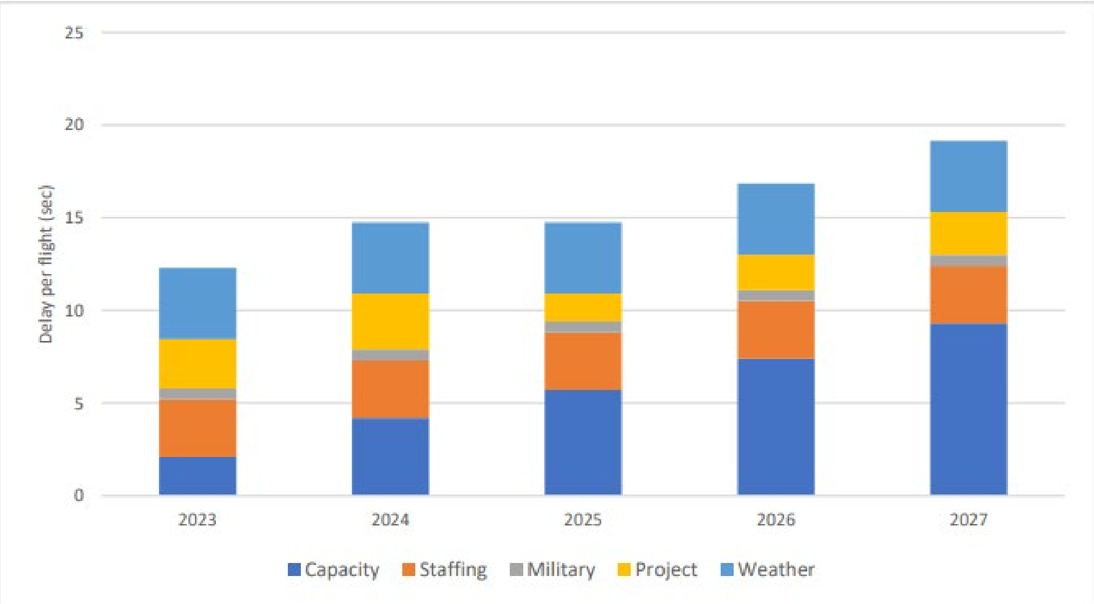
Targets

2.76 We have considered a range of different types of evidence to consider whether our Initial Proposals remain reasonable. This includes the latest traffic forecasts, NERL's planned capex benefits for NR23, the Eurocontrol NOP, as well as actual observed performance in the second half of 2022 as the aviation sector has continued to recover from the impact of covid-19.

2.77 In response to our Initial Proposals, NERL proposed higher revised targets for the delay metrics. We note that NERL has used the 2023 starting points from our Initial Proposals for C1 (12.29 seconds/flight) and C2 (8.45 seconds/flight), so the main area of difference between our Initial Proposals and NERL's revised targets is the significantly higher targets that NERL has proposed for later years in NR23, which it states are mainly driven by forecast traffic growth.

2.78 We have carefully reviewed NERL's analysis as we had concerns around the magnitude of the deterioration in performance suggested by NERL as shown in Figure 2.2 below. For example, in the STATFOR October 2022 forecast, flight traffic in 2027 is forecast to be 13 per cent higher than in 2023 but the capacity component of C2 is forecast to rise from around 2 seconds in 2023 to around 9 seconds in 2027 – a 450 per cent increase.

Figure 2.2: NERL NR23 Capacity delay forecast by delay driver



Source: NERL

2.79 We have conducted our own benchmarking and analysis to assess reasonable targets for NR23. This analysis, which is summarised in appendix E, suggests the targets from our Initial Proposals remain reasonable as:

- the recent traffic forecast from STATFOR March 2023 is 3.7 per cent lower than the STATFOR October 2022 forecast used by NERL to inform the higher capacity targets in its response to our Initial Proposals. It is also 5 per cent lower over 2026 and 2027, the years when the NERL delay forecast is at its highest levels;
- following the changes to its investment programme, NERL stated that the forecast overall capacity increase for NR23 was 6.5 per cent with this to be delivered in 2023 and 2024, that is, ahead of the return of traffic to 2019 levels in 2025 under the STATFOR March 2023 forecasts. In addition, overall ATCO numbers will be 6 per cent higher than 2019 levels by the end of NR23. We note these capacity increases are above the 3.6 per cent increase in traffic forecast between 2019 and 2027;
- we reviewed the impact of traffic on capacity delays, focused on historical C2 delay and the C2 capacity component only. We applied estimated relationships to the STATFOR October 2022 and March 2023 forecasts, as well as taking into account NERL's suggested capacity capex benefits. While these suggest a range of delay outcomes depending on the assumptions adopted, the targets from our Initial Proposals are broadly within this range and are broadly consistent with an approach to estimating the traffic-capacity relationship that we consider to be reasonable;
- we reviewed the NOP forecasts for 2022 to 2026,[53] which use similar (although slightly lower) traffic forecasts to our Initial Proposals and indicate that NERL's delays should be similar to or below our Initial Proposals targets. While NOP forecasts were updated for 2023 to 2027[54] to be closer to NERL's proposed targets, we note this is based on the much higher STATFOR October 2022 traffic forecasts, so we do not place weight on these; and
- we reviewed wider historical comparisons including average C2 delay for the five largest European ANSPs. While there are variations in both NERL and European ANSP delay performance from year to year, and it is difficult to compare levels of performance given the differences between ANSPs, the overall trends do not suggest that it is unreasonable to expect NERL's delay performance to remain broadly flat and not deteriorate significantly during NR23. This has also been the case for NERL's historical performance, which has not seen significant deterioration as traffic levels have increased.

2.80 From this analysis, we consider that the targets from our Initial Proposals remain reasonable, as they sit within the range of bottom-up analysis and top-down benchmarking and appear to be consistent with the traffic forecasts and

53 https://www.eurocontrol.int/publication/european-network-operations-plan-2022-2026

54 https://www.eurocontrol.int/publication/european-network-operations-plan-2023-2027

expected capex benefits in our Provisional Decision. As set out in chapter 4, we have also set cost allowances that we consider will support NERL in the delivery of these service level targets and will allow NERL to continue to provide a resilient service during NR23.

2.81 We do not agree with NERL's proposal to increase the ratio between C3 and C2 targets. This relationship was reviewed ahead of RP3 and we consider that this should not be changed based on NERL's analysis of delay and traffic information that included observations affected by the impact of covid-19.

Traffic modulation

2.82 As part of its proposal to update C3 modulation, NERL submitted that the same modulation mechanism should be extended to the C2 metric.

2.83 We have considered this issue further since Initial Proposals and now propose to introduce modulation for C2. As traffic forecasts remain highly uncertain over NR23, modulation would provide additional appropriate flexibility for delay targets if traffic growth is significantly higher or lower than the STATFOR March 2023 traffic forecast, particularly in the later years of the NR23 period.

Consultation on option to use C1 as trigger for bonuses

2.84 Our findings from the Palamon investigation included a specific recommendation[55] aimed at ensuring the robustness of NERL's coding of causes of delay, by following coding principles proposed by the Eurocontrol Performance Review Commission (PRC).[56] We note that NERL decided not to implement this recommendation until such a time when the new codes may be incorporated into the Network Manager's ATFCM Operations Manual.[57] Therefore, we considered an option to introduce a trigger for C1 for bonuses, as the C1 metric is not affected by coding causes of delay. This would have provided some financial

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55 CAP 2100 para 5.5 – "Recommendation 4 - We recommend that NERL adopts the PRC coding principles unless NERL can demonstrate to the CAA a material operational reason not to adopt the PRC best practice principles".

56 The Eurocontrol Performance Review Commission (PRC) set out that the ATFM delay attribution process should be based on the following coding principles:

- The primary focus for mitigating or resolving capacity constraints should be on identifying any ANSP-internal constraints that prevent the deployment of maximum declared capacity (e.g. ATC staffing, equipment or airspace management);
- Attribution of delays to external causes (e.g. weather or 3rd party strike) should only be used in cases where no ANSP-internal capacity constraints prevent the deployment of maximum capacity;
- Attribution of delays to ATC capacity should not be used for collapsed sectors or when the regulated capacity is less than the maximum declared capacity of the sector.

57 See page 8 of https://www.caa.co.uk/media/fiyo1qgv/palamon-update-3-february-2023.pdf

incentives (albeit limited) for NERL to manage and reduce all causes of ATFM delay, regardless of its coding.

2.85 We did not receive substantial support to introduce a trigger for bonuses based on C1 performance, with NERL and Prospect raising potential concerns that this could have unintended consequences in terms of weaker incentives on NERL to improve delay performance within its control.

2.86 We do not intend to take this proposal further at this stage, but instead consider that NERL should take steps to provide more transparency on whether delays take place in elemental or collapsed sectors. During the summer of 2022, NERL participated in a trial conducted by the PRC to introduce two new delay codes and the PRC has published its findings in a technical note.[58] This technical note shows that a high percentage of delay attributed to capacity would have been attributed to a new “J” code, which captures capacity delays that could have been potentially reduced by splitting the delayed “collapsed” sectors with the use of additional staff. The original capacity “C” code would then be used to capture the delay in “elemental” sectors only, where additional staff would have no impact. Similarly, a high percentage of delay attributed to capacity would have been attributed a new “K” code where adverse weather has further decreased capacity in a “collapsed” sector. The original capacity “W” code would then be used to capture weather delay in “elemental” sectors only. The technical note also shows and discusses the benefits of introducing such additional transparency.

2.87 We consider that NERL should start coding and reporting using the new delay codes proposed by the PRC at the earliest opportunity in NR23. We note that the additional delay codes are subsets of the original “C” and “W” codes, so we do not foresee any operational impact or inconsistency with the requirements of the ATFCM Operations Manual. The PRC trial also showed that such reporting is feasible, informative, and beneficial.

2.88 Furthermore, NERL should then integrate reporting against these two new delay codes in its existing quarterly performance reporting.

2.89 If necessary, we may consider introducing conditions in NERL’s licence to this effect should NERL decide not to provide this additional transparency voluntarily or in a timely way. We will also want to consider whether changes to financial incentives on ATFM delays should be introduced for the next price control review, but we consider that there is merit in establishing more transparent coding arrangements before doing so.

58 See https://ansperformance.eu/publications/studies/2023_01_18_tn_cap/

Our Provisional Decision

Targets

2.90 We will maintain the C1, C2, C3 and C4 targets from our Initial Proposals. The difference between C1 and C2 targets remains 3.84 seconds per flight, and the penalty threshold for C3 remains at twice the C2 target (with the C3 target set at five-thirds of the C2 target). Further details of these targets and associated incentives are provided in appendix E.

Table 2.10: CAA Provisional Decision for C1, C2, C3 and C4 targets

		2023	2024	2025	2026	2027
C1	seconds / flight	12.29	12.79	12.79	12.79	12.79
C2	seconds / flight	8.45	8.95	8.95	8.95	8.95
C3	seconds / flight	14.08	14.91	14.91	14.91	14.91
C4	score	1800	1800	1800	1800	1800

Source: CAA

Traffic modulation

2.91 We will introduce traffic modulation for C2 for the NR23 period, to operate with the same parameters as C3 modulation, so that both the targets and the penalty and bonus thresholds will be adjusted if outturn traffic is more than 4 per cent higher or lower than the STATFOR March 2023 base case forecast that underpins this Provisional Decision. Further details of the modulation mechanism for C2 and C3 are provided in appendix E.

Re-opener mechanism

2.92 We are not including a specific re-opener mechanism and NERL should continue to highlight issues in its quarterly performance reporting.

Allowance for exemption days

2.93 The level of exemption days for NR23 will be set at 100 as detailed in our Initial Proposals. Further details on the use of C3 and C4 exemption days are provided in appendix E.

Strength of incentives

2.94 We will maintain the strength of incentives for NR23 at the level set for the RP3 period as set out in the table below.

Table 2.11: CAA Provisional Decision for the maximum strength of incentives

	Bonus (% of Determined Costs)	Penalty (% of Determined Costs)
C1	0%	0%
C2	0.05%	0.25%
C3	0.25%	0.75%
C4	0%	0.25%

Source: CAA

Consultation on option to use C1 as trigger for bonuses

2.95 We will not take forward the option to use C1 performance targets as a trigger for other financial performance bonuses at this stage.

2.96 Instead, NERL should start coding and reporting using the new delay codes proposed by the PRC (as explained above) at the earliest opportunity in NR23.

Next steps and implementation

2.97 The proposed licence modifications set out in CAP 2553d appendix H include the capacity targets for NR23 and the introduction of traffic modulation for the C2 performance metric which would implement the Provisional Decision set out above.

2.98 NERL should propose a method for including new reporting codes as part of its next Condition 11 Service Standards Statement for consultation with airlines and the CAA.

Chapter 3
The reconciliation review

Background and context

3.1 For RP3, NERL and other European (EU) ANSPs had a relatively high level of protection from unexpected variations in traffic levels under the traffic risk sharing (TRS) mechanisms in place. These TRS mechanisms were set out in the EU performance scheme regulation and the Eurocontrol Principles.

3.2 In the circumstances of significantly lower than expected traffic levels and costs the CMA determination for RP3 confirmed that we should conduct a reconciliation exercise with reference to actual flight volumes and costs for 2020 to 2022. This was intended to support the appropriate functioning of the TRS arrangements in the circumstances of the covid-19 pandemic.

3.3 Given the impact of the covid-19 pandemic on traffic volumes and costs, the European Commission amended the TRS arrangements on the basis of provisions under the EU performance scheme regulation that allows for adjustments in exceptional circumstances. These changes allowed for the recovery of actual efficient costs and the period of recovery for 2020 to 2021 costs was extended. Similar amendments were reflected in the Eurocontrol Principles, with additional flexibility to allow the recovery of actual efficient costs for 2020 to 2022 over a longer period of 5 to 7 years.

3.4 Consistent with our commitment to the TRS mechanism and reflecting the exceptional circumstances from the impact of covid-19, we are allowing NERL to recover only its efficient actual costs for the period 2020 to 2022. We have reviewed NERL’s actual costs (but with the intention of avoiding adjustments based on the benefit of hindsight), to set the efficient baseline for determined costs for 2020 to 2022. This should ensure that NERL only recovers efficient expenditure and that customers and consumers continue to benefit from NERL operating under a stable and predictable regulatory framework.

3.5 This chapter sets out our Provisional Decision on the efficient cost baseline under this reconciliation review. The TRS mechanism that allows for the recovery of this efficient baseline, balance and recovery profile is addressed in chapter 6.

3.6 While the focus in this chapter is the efficient baseline for the UK en route price control, we have also estimated an efficient cost baseline for London Approach in chapter 8, CAP2553a. We have not carried out a similar exercise for Oceanic as there were no TRS arrangements in place for these activities, as explained further in chapter 9, CAP2553a.

Overall approach

3.7 Following consultation with stakeholders, we published a working paper in November 2021 that set out our proposed approach to the reconciliation review for 2020 to 2022. We said that we would not use hindsight in assessing efficiency and that we would take in to account the significant uncertainties NERL faced at the time. Specifically, we said that we would seek to establish whether there is clear evidence of inefficiency by NERL in the costs it incurred over 2020 to 2022. This approach enables us to exclude any inefficient costs from the costs baseline for TRS revenues for recovery by NERL. This is consistent with our duties, including to further the interests of customers and consumers in terms of the cost of ATS and promoting efficiency and economy. Allowing the recovery of efficient costs by NERL should also help ensure it is not unduly difficult for NERL to finance itself and our approach to these matters also take account of notified international obligations (in this case the Eurocontrol Principles).

3.8 We adopted this approach for our Initial Proposals to reach a view on the level of NERL's efficient costs for 2020 to 2022. For our Provisional Decision, we have updated our view based on feedback we received to our Initial Proposals as well as actual costs for 2022 where available, while continuing to apply the same principle to assessing efficiency.

3.9 Our work on the reconciliation review has involved:

- assessing NERL's opex in detail, as this was the focus of NERL's actions to save costs during the RP3 period and is a very material part of the cost baseline. As part of this work, we considered DC pension costs. We have not conducted a detailed review of the DB pension costs as these will be considered under the separate pension pass-through arrangements.
- conducting only a high-level review of NERL's capex. As there were significant reductions and delays in capex projects in RP3, we considered it would be premature to assess the relative efficiency of capex incurred in RP3. We propose to carry out the *ex post* assessment at the next price review.

3.10 We have not considered the efficiency of regulatory depreciation or regulatory return as part of the reconciliation review, as both of these are fixed for the RP3 period and there are existing regulatory mechanisms which provide for differences in forecast and actual efficient capex to be trued up in future periods. We have not reviewed the efficiency of non-regulatory revenue given the low materiality of this item.

3.11 Nonetheless, we have assessed the financial restructuring costs NERL incurred in 2021 against a counterfactual which we consider represents an efficient approach to restructuring. We have updated our counterfactual in light of feedback from NERL and further analysis conducted by our advisors.

3.12 In the rest of this chapter, we set out a summary of our findings for the efficient cost baseline. Our Provisional Decision involves an increased efficient costs baseline for 2020 to 2022, relative to Initial Proposals, with an increase of £42 million, reflecting:

- updates to staff and non-staff opex to reflect actual costs in 2022 and updated inflation forecasts (we have not changed the amount of real opex which we have disallowed relative to Initial Proposals);
- updates to non-NERL revenues and other adjustments to reflect actual amounts in 2021 and 2022;
- updates to depreciation, regulatory return, non-NERL revenues and other adjustments for updated inflation forecasts relative to those which we used in our Initial Proposals;
- other adjustments, including a correction to remove a downwards adjustments to the baseline in respect of the NERL proposed return on the TRS and impact of inflation applied at Initial Proposals;
- an increase in the estimate of the efficient allowance for refinancing costs; and
- a decrease to the condition 21 inflation adjustment.

3.13 We provide further details on each of the building blocks in the efficient costs baseline below. The chapter goes on to set out the calculation of the TRS revenues to be recovered – which are £26 million greater than the Initial Proposals amount.[59]

Staff opex

Our Initial Proposals

3.14 Our Initial Proposals identified two areas where NERL could have taken further steps to reasonably contain UKATS staff costs.

3.15 Firstly, by extending voluntary salary reductions to a broader range of staff, and secondly by maximising the costs saved through the RP3 voluntary redundancy (VR) scheme.

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[59] The difference between the £41 million increase in the efficient cost baseline (as quoted in paragraph 3.12 above) and the £26 million of TRS to be recovered is explained by the increase in the latest traffic forecasts relative to the NERL traffic forecasts used in their business plan. Effectively, higher traffic has meant that NERL has less of a revenue shortfall than anticipated under its Business Plan traffic forecasts.

3.16 On voluntary salary reduction, we proposed a £2 million disallowance from NERL's 2020 staff opex baseline for reasons explained in paragraphs 3.31 – 3.34 of our Initial Proposals. This was on the basis that NERL could have expanded the scheme to all staff, and assuming the same level of take-up as was achieved with the management voluntary salary reduction scheme (i.e., 50%).

3.17 On VR scheme costs, we disallowed £9 million from the costs of NERL's VR scheme for reasons explained in paragraphs 3.35 – 3.39 of our Initial Proposals. This was on the basis that it would have been reasonable for NERL, with the information it had available at the time, to seek to implement either an exceptional VR scheme or a VR scheme with a 12-month payback period from May 2021. We estimated that such action would have saved £9 million of cost over and above the net saving that NERL achieved.

3.18 As part of the Initial Proposals, we did not review in detail the DB pension costs as these are assessed separately under the pension cost pass-through mechanism process. We have maintained this approach for our Provisional Decision. During NR23, we will review the DB pension costs incurred during 2020 to 2022 along with our review of variations in pension costs during NR23 to consider any appropriate adjustments to reflect changes in costs due to unexpected changes in financial market conditions as well as any cost savings, for example due to actions taken in response to the impact of covid-19 on traffic levels.

Summary of stakeholders' views

Voluntary Salary Reduction

3.19 NERL disagreed with the assumption that they could have achieved a 50 per cent take-up if the voluntary salary reduction scheme was extended to non-management staff. NERL said that uptake would likely have been reduced at lower pay grades. NERL also set out their view that the reversal of the pay award originally planned for 2020 approximately amounted to a voluntary salary reduction for remaining (non-management) staff.

3.20 Both NERL and Prospect highlight that paying 100 per cent of salary helped to facilitate speed on the agreement of the use of furlough, and rotation of staff on/off furlough.

3.21 PCS considered that the £2 million downward adjustment is unjust as offering such a voluntary reduction would have unfairly impacted those who agreed to it (rather than being a blanket measure) and staff were already subject to a deferral of their 2020 pay award.

3.22 Prospect stated that staff were already experiencing a 2.3 per cent pay reduction at the start of the pandemic as a result of the pay award being reversed and that there is limited evidence that non-management staff would have accepted a further voluntary reduction.

3.23 British Airways said that the decision to retain non-management staff's wages at 100 per cent appears excessive, with typical pay at airlines capped at government support level or topped up to 80% of standard pay.

Voluntary Redundancy Costs

3.24 NERL was critical of the proposed £9 million cost reductions, suggesting that the disallowance was based on an unfeasible scenario which would have required a new redundancy provision being negotiated and agreed with trade unions in six months. Furthermore, they claimed that a "very significant" number of employees would not have taken voluntary redundancy with reduced terms due to the unfavourable job market during the pandemic.

3.25 NERL's response set out an alternative calculation, in comparison with our Initial Proposals, indicating that a VR scheme with reduced terms could have achieved a net benefit of £4 million in the RP3 period and a net increase of costs in the NR23 period.

3.26 Prospect opposed the use of redundancies as a response to the pandemic as it considered that NATS let too many people go with specific skillsets. Prospect said they would have negotiated a special arrangement for covid-19, with a different focus than the VR scheme implemented. However, it has said that it would have been difficult for NERL to spend less and get the same outcome and negotiating new terms would have been difficult.

Our views

3.27 We consider that, at an overall level, the actions that NERL took to reduce their staff costs over 2020 to 2022 were reasonable, with the exception of the approach to voluntary salary reductions, and the Voluntary Redundancy scheme NERL implemented, for the reasons set out below. Therefore, our Provisional Decision is to retain both adjustments from our Initial Proposals made to the opex baseline during the reconciliation period, which reduces NERL's opex by £11 million.

Voluntary Salary Reduction

3.28 Analysis from our advisors, Steer, shows that voluntary salary reductions were typically requested of both management and operational staff in other UK aviation companies, especially if the individuals concerned were on furlough. These companies also have highly skilled staff and would have also had to facilitate rotating staff on and off furlough. We have not received any evidence or justification from NERL as to why they were unable to offer this to non-management staff, or why furlough rotation would have prohibited this.

3.29 We do not consider that assuming a 50 per cent take-up from non-management staff is an unreasonable assumption, given that this is the level that NERL achieved with management and no further evidence has been provided to suggest that an alternative take-up rate should be used.

3.30 Our Provisional Decision is therefore to retain our disallowance of £2 million to 2020 UKATS staff costs.

Voluntary Redundancy Scheme

3.31 Whilst we recognise that difficult decisions had to be made by management during the pandemic under constrained timelines and the impact of historical trade union negotiations, we have not received evidence from NERL or other stakeholders that has suggested that a new voluntary redundancy scheme could not have been implemented in Q2 2021 with a 12-month pay back. Many other organisations within the same industry, faced with the same timescale pressures as NERL to reduce and restructure costs, were able to enact exceptional redundancy arrangements during the pandemic.

3.32 NERL being unable to negotiate new redundancy terms with unions due to time constraints does not justify the cost of the redundancy programme NERL implemented being borne by customers.

3.33 Our Provisional Decision is therefore to retain our disallowance of £9 million to 2020 UKATS staff costs. Our resulting estimate of efficient staff costs is set out in the table below.

Table 3.1: Total staff opex over 2020 to 2022*

£m, 2020 prices	2020	2021	2022	Total
Staff opex	401	301	334	1,036

* updated relative to Initial Proposals to reflect 2021 and 2022 actuals

Non-staff opex

Our Initial Proposals

3.34 We allowed NERL's forecasts for non-staff costs. However, we did find elements in NERL's capex programme which were expected to deliver additional efficiencies in terms of non-staff costs over the reconciliation period. As a result, we proposed to adjust NERL's non-staff costs for these further efficiencies.

Summary of stakeholders' views

3.35 No stakeholders commented on our adjustment to non-staff costs during the reconciliation period.

Our views

3.36 Our Provisional Decision is to retain our disallowance of £0.10 million of non-staff costs in 2020, £0.34 million in 2021 and £0.34 million in 2022 (total per annum). Our resulting estimate of efficient non-staff costs is set out in the table below.

Table 3.2: Total non-staff opex over 2020 to 2022*

£m, 2020 prices	2020	2021	2022	Total
Non-staff opex	123	118	145	385

* updated relative to Initial Proposals to reflect 2021 and 2022 actuals

Total opex disallowance

3.37 Overall our Provisional Decision is to disallow £12 million of total staff and non-staff opex over 2020 to 2022. This is shown in the table below.

Table 3.3: Summary of opex disallowances

£m, 2020 prices	2020	2021	2022	Totals
Staff disallowances				
- Voluntary salary reductions	2.4	0	0	**2.4**
- Voluntary redundancy scheme costs	8.6	0	0	**8.6**
Non-staff disallowances				
- Non-staff efficiencies from capex programme	0.1	0.34	0.34	**0.8**
TOTAL opex disallowance	**11.1**	**0.34**	**0.34**	**11.8**
TOTAL opex – Provisional Decision	**524**	**419**	**478**	**1,421**
OPEX DISALLOWANCE AS % of TOTAL OPEX				**0.8%**

Source: Steer report, CAA analysis

Capex

Our Initial Proposals

3.38 NERL paused its capital programme for six months in 2020 except for essential services and sustainment. This reduced its total capex (including Oceanic) by £231 million (44 per cent) over the reconciliation period compared with the allowance provided for under the CMA determination. At the time of our Initial Proposals, most of the reduction was forecast to take place in 2020 and 2021, with costs forecast to ramp-up in 2022.

3.39 We note that the actions taken by NERL on opex (e.g. the VR scheme) also had an impact on NERL's capex. In particular, it reduced NERL's capacity to deliver change and implement major system transitions.

3.40 In the report published alongside our Initial Proposals, our advisors Steer & Integra also noted that the strategy followed by NERL in response to the impact of the covid-19 pandemic resulted in a prolonged period during which legacy systems and the new iTEC platform will run in parallel. This required increased investment into sustainment during NR23, and also resulting in higher asset management costs than originally planned.

3.41 While undertaking our reconciliation review over the course of 2022, some of the RP3 capex programmes were still ongoing and some programmes had to be significantly replanned since 2020. This means we were not able to take a view on the efficiency of these costs in our Initial Proposals. In addition, Steer advised that the impact of the capex programmes delivered by NERL should be assessed after traffic recovery, to allow for a reasonable comparison with previous pre-pandemic years.

Summary of stakeholders' views

3.42 In its Initial Proposals response, NERL said that it was concerned by the CAA's proposal to defer a decision on the efficiency of NERL's capex during the reconciliation period until later in NR23. NERL states that, by definition, its actions during the reconciliation period, when the company and the wider economy were facing severe economic implications as a result of the covid-19 pandemic, were highly abnormal and would not have been considered and implemented under normal circumstances. Such actions could be viewed as leading to inefficiencies in programme delivery, if compared using standard metrics and against a benchmark of business-as-usual operations.

3.43 NERL states that the CAA's proposed approach in our Initial Proposals contrasts with the approach set out previously in stakeholder consultations,[60] namely, to review the capex building block for the reconciliation period as part of the main reconciliation review. NERL further stated that it was unnecessary for the CAA to defer its conclusions on this issue, that this compounds regulatory uncertainty about the value of the RAB, and thus the CAA risks failing to meet its secondary statutory duty to secure that licence holders will not find it unduly difficult to finance activities (sometimes referred to as 'financeability').

3.44 British Airways recognised the difficulty in assessing the efficiency of NERL's capex decisions during the reconciliation period, while some of the programmes

[60] NERL is specifically referring to CAP2160 Economic regulation of NATS (En Route) plc: further update on approach to the next price control review ("NR23") and CAP2291 Economic Regulation of NATS (En Route) plc: working paper on the reconciliation review for NR23, including the request for information.

are still being delivered, and said it expects a consultation and thorough review to be conducted ahead of NR28.

3.45 NERL submitted a significantly revised capex plan for NR23 in response to our Initial Proposals (more detail on this is provided in chapter 4). While the total level of expenditure remains the same in real terms (£574 million) in 2020 CPI prices over NR23, there have been a number of changes, including delays to some programme milestones, which it stated are not signs of inefficiency. NERL notes that the significant increases in DP En Route costs in its revised plan have been offset by reductions in Common Platform and Risk and Contingency costs.

Our views

3.46 The revised capex plan for NR23 submitted by NERL in response to our Initial Proposals includes significant changes to programmes in NR23 and will be partly the result of planning decisions taken during the RP3 period. We continue to consider that it is not practicable to robustly assess the efficiency of some of NERL's capex during the reconciliation period where these major programmes have been recently revised and are still ongoing; and these significant changes (partly due to decisions during RP3) reinforce the CAA's view that it is difficult and premature to assess the efficiency of capex in RP3. We therefore continue to consider that the efficiency of this capex should be reviewed during NR23.

3.47 We will undertake an *ex post* review of key RP3 and NR23 programmes as part of our overall review of NR23 capex, or at the earliest opportunity for those programmes that are not complete by the end of the NR23 period. We expect this review to focus on key programmes (including but not limited to DP En Route, Common Platform and airspace), and in particular any programmes where cost of the programmes have exceeded the allowances in the CMA determination. The findings from our review will be subject to consultation and representations from stakeholders.

3.48 We remain fully committed to the principles of the DIWE framework and the reconciliation review guidance we have previously set out (see for example CAP2291). We do not consider that the approach we set out in the Initial Proposals, or in this Provisional Decision, is inconsistent with the approach set out in that guidance. In the guidance, we explained our intention to carry out an *ex post* review of NERL's costs, and we remain committed to doing so, at an appropriate time. We have decided to undertake this review at a later point in time when we are properly able to assess the efficiency of capex that takes into account the significant changes that NERL made to its capex plan since it submitted its NR23 business plan.

3.49 We will assess NERL's actions with reference to its circumstances at the time they were taken, and on the basis of the information available to it at the relevant time. We do not agree with NERL's points that deferring the full review of capex until key capex programmes have concluded implies that the CAA will apply hindsight in its review of these programmes. Having carefully considered NERL's views we do not agree that deferring a decision on the efficiency of NERL's capex during the reconciliation period until later in NR23 causes undue uncertainty that would lead to financeability risks for NERL. As has been the case in previous reviews, we will carry out an *ex post* review of capex and consult with stakeholders on the findings at a suitable time, with any capex assessed as having been incurred inefficiently removed from the RAB. We consider that this approach is consistent with our secondary duties by providing sufficient certainty for NERL while also promoting efficiency and economy on the part of NERL and furthering the interests of customers and consumers.

3.50 We have also commissioned consultants Egis to undertake a broader review of NERL's capex plan, with a focus on the key technology transformation systems. More detail on this review is provided in chapter 4. This review will consider the robustness of NERL's approach to planning its capex programme to inform its February 2022 business plan, as well as the changes that occurred during the summer of 2022. The outputs of this review (expected later in 2023) will be relevant for our *ex post* review of capex efficiency.

Regulatory depreciation

Our Initial Proposals

3.51 In our Initial Proposals, we adopted the profile of regulatory depreciation provided by NERL. Its total regulatory depreciation costs for UKATS fell over the reconciliation period and was £3 million (0.6%) less than the CMA determination.[61] NERL explained that this lower regulatory depreciation was the direct result of lower capital investment over 2020 to 2022 relative to the CMA determination.[62]

Summary of stakeholders' views

3.52 No stakeholders commented on the level of regulatory depreciation over the reconciliation period (2020 to 2022) that we said should be included in the efficient costs baseline.[63] NERL supported our broad approach to allowing for regulatory depreciation.

[61] NERL response to CAP2291, NR23 business plan (7 February 2022)

[62] NERL response to CAP2291, p.11

[63] Responses to our Initial Proposals on our depreciation policy more generally are set out in Chapter 5.

Our views

3.53 Our approach to calculating actual regulatory depreciation is summarised in chapter 5 and further details are provided in the published RAB Rules.

3.54 The RAB rules describe the mechanism (backlog depreciation) that corrects the depreciation cost in future periods to reflect the lower actual capex than forecast for RP3 in the CMA determination. Consistent with our approach at Initial Proposals, our Provisional Decision is to retain the CMA depreciation figures for 2020 to 2022 in the reconciliation review, as the backlog depreciation mechanism will ensure that appropriate adjustments are made as part of the normal price control arrangements.

Table 3.4: Regulatory depreciation over 2020 to 2022*

£m 2020 prices	2020	2021	2022	Total
Regulatory depreciation	194	158	139	491

* updated relative to Initial Proposals to reflect CAA view of inflation (CMA inflation was used in deriving Initial Proposals numbers)

Regulatory return

Our Initial Proposals

3.55 At Initial Proposals, we said that we would adopt NERL's view of regulatory return between 2020 and 2022 in estimating the efficient costs baseline. That was because there are existing mechanisms which adjust the forecast amounts for regulatory depreciation included in the efficient costs baseline to reflect the actual depreciation amounts.

3.56 NERL reported that the regulatory return for UKATS over the reconciliation review period was forecast to be £24 million (21%) higher than the forecasts set out in the CMA determination.[64] This was principally due to the increase in regulatory return from capitalising the TRS revenues to be recovered in the RAB, which more than offset the reduction in RAB and regulatory return from lower capex than expected in the CMA determination.

Summary of stakeholders' views

3.57 Airlines did not comment on the regulatory return amount to be included in the efficient baseline for 2020 to 2022. NERL agreed with the CAA's approach.

[64] We understand that NERL has applied the RP3 allowed cost of capital to calculate the regulatory return.

Our views

3.58 Our approach to calculating actual regulatory return is summarised in chapter 6 and further details are provided in the RAB Rules.

3.59 We consider separately the issue of the allowed regulatory return on the TRS revenue and TRS indexation in chapter 6.

3.60 Consistent with the approach in paragraph 3.48 of our Initial Proposals our Provisional Decision is to use the regulatory return forecasts set out in the CMA determination in our calculation of the efficient cost baseline. We have not re-opened the CMA's determination on the weighted average cost of capital and, similar to allowed regulatory depreciation, there is an existing mechanism in the RAB rules (capitalised financing costs) to correct for differences in the regulatory return to reflect actual efficient capex. The allowed return on the TRS is discussed separately in chapter 6.

Table 3.5: Regulatory return amounts over 2020 to 2022*

£m 2020 prices	2020	2021	2022	Total
Regulatory return	34	38	40	113

* updated relative to Initial Proposals to reflect CAA view of inflation (CMA inflation was used in deriving Initial Proposals numbers)

Non-regulated revenue

Our Initial Proposals

3.61 In Initial Proposals we accepted NERL's view of non-regulatory revenue but we updated this to reflect our view of London Approach costs/revenues, which we estimated using the same cost allocation method as used in RP3.

3.62 Over the reconciliation review period, non-regulatory revenue was £14 million (5%) lower than the CMA determination.[65] NERL attributed this to its lower cost base on contracts that include gainshare clauses or shared costs (mainly, its Future Military Area Radar Service (FMARS) contract), lower levels of inter-company demand and fewer opportunities to generate non-regulatory income because of the impact of covid-19 restrictions. London Approach costs are removed from UKATS Determined Costs to leave UK en route Determined Costs.

[65] NERL response to CAP2291, NR23 business plan (7 February 2022)

Summary of stakeholders' views

3.63 No stakeholders commented on the non-regulatory revenues assumed in 2020 to 2022.[66] However, NERL noted and welcomed our acknowledgement of the direct linkage between the cost reductions enabled by NERL and the corresponding reduction in revenue arising from the non-regulatory revenue contracts, such as the FMARS contract with the Ministry of Defence.

Our views

3.64 Our Provisional Decision is to accept NERL's proposed changes to non-regulatory revenue as part of the reconciliation review, which were lower than the CMA determination. We recognise that these revenues reflect cost reductions made by NERL and any increases in revenues may have limited benefit for customers and consumers after considering the corresponding increase in costs.

3.65 The non-regulatory revenue reported in Table 3.6, includes our estimate of London Approach revenues, based on the same cost allocation method as used in RP3. We have updated the London Approach revenues for 2021 and 2022 to reflect changes in actual costs for UK en route.

Table 3.6: Non-regulatory revenue over 2020 to 2022*

£m 2020 prices	2020	2021	2022	Total
Non-regulatory revenue	(103)	(87)	(85)	(274)

* updated relative to Initial Proposals to reflect 2021 and 2022 actuals

Financial restructuring costs

Our Initial Proposals

3.66 In relation to the financial restructuring undertaken by NERL during the pandemic it had proposed that it should be allowed to recover the bond interest costs incurred prior to its June 2021 refinancing as well as the early redemption fee in respect of the bond it redeemed early (known as 'Spens' costs).

3.67 In our Initial Proposals we proposed to allow NERL to recover £16 million[67] in respect of net incremental financing costs. This is £6 million less than the total £22 million net incremental financing costs that NERL had sought to recover through charges. Our Initial Proposals in respect of these costs were based on a

[66] Responses to our Initial Proposals on our depreciation policy more generally are set out in Chapter 5.

[67] There was an error in our Initial Proposals. In some instances we referred to allowing £16m of costs and net incremental costs claimed by NERL of £20m. The numbers quoted in the text above are those that were used in our Initial Proposals and we quote those here for consistency.

scenario in which NERL retained its previous financial structure[68] (which we refer to hereafter as the counterfactual approach) and issued additional debt within that structure by obtaining waivers and consents as appropriate.[69]

Summary of stakeholders' views

3.68 NERL stated that our approach rested on the false premise that the costs and risks of the counterfactual approach can be assessed after the event and without the benefit of hindsight. NERL also identified two specific errors which it said we had made in reaching our Initial Proposals:

i. that we had significantly understated the amount of debt that would have been required were it to have retained the WBS; and

ii. being too narrow in the scope of the debt that we applied the bond guarantee to.[70]

3.69 NERL provided a calculation showing that, once the CAA's calculations are adjusted to correct the errors it identified, the refinancing delivered a benefit of £7 million for consumers so there is no basis for the disallowance we proposed as part of our Initial Proposals.

Our views

3.70 We do not agree with NERL's view that it is not possible to assess the costs and risks of the counterfactual approach after the event and without the benefit of hindsight. By obtaining expert advice on what would have been a reasonable approach to refinancing we can establish an objective benchmark. The approach we have used only makes use of information which was available to NERL at the time of the refinancing, and consequently does not involve hindsight.

3.71 In light of NERL's arguments we have worked with our advisors, Centrus, to review our counterfactual scenario assumptions in which the present value of refinancing costs would be minimised.

3.72 NERL said that the guarantor fee would be payable in respect of all debt issued over NR23 and NR28. We have reviewed our assumption on these matters and note that it is reasonable to assume an amortising profile for the amount of debt upon which the guarantee fee is payable. This reduces the level of debt on which the guarantee is required over time. This reduces the cost to consumers of the guarantee fee. We also note that debt might only need to be guaranteed up to a

[68] Known as a Whole Business Securitisation ("WBS").

[69] The detailed reasoning for our Initial Proposals was contained within appendix E of our Initial Proposals

[70] Specifically, that rather than apply the 15bps guarantor fee to just the £460 million debt raised in 2021, the guarantor fee would apply to all new debt issued in NR23 and NR28

level of 50 per cent of outstanding debt[71] though we have taken a cautious approach in assuming that all debt is guaranteed.

3.73 Table 3.7 below shows our assessment of the efficient costs of NERL's refinancing. It compares our assessment from Initial Proposals with our updated assessment:

Table 3.7: Refinancing allowance

£m, (present value 2021 prices)	Provisional Decision	Initial Proposals[72]
Interest cost difference	15.7	12.6
Assured Guaranty fee on new bonds	3.7	4.0
Consents for existing bondholders	1.6	1.6
Consents for existing banks and Assured Guaranty	4.8	4.8
Total incremental costs	**25.8**	**23.0**
LESS		
Debt interest costs assumed to be capitalised in the RAB	(6.0)	(6.0)
Debt interest savings over 2020-2022 relative to CMA determination modelling assumptions	(1.0)	(1.0)
Allowance	**18.8**	**16.0**

Source: CAA analysis

3.74 We have also considered NERL's comments on the amount of debt assumed in the counterfactual scenario. The increased allowance in respect of interest costs reflects our updated counterfactual scenario in which NERL pays interest on its old (pre-2021) debt and additionally issues:

i. an amortising bond with the same profile as the £450 million amortising bond actually issued; and

ii. a bond with bullet repayment profile with a step up and call date in 2027.

3.75 The total debt issued is approximately £457 million bringing the total debt under the counterfactual refinancing to £750 million. We continue to allow for consent costs in line with our Initial Proposals. We consider that this counterfactual

[71] This requirement for 50% of the debt to be outstanding is to necessary to retain Assured Guaranty (AG) as the controlling creditor. If AG were not the controlling creditor then NERL would incur additional costs in negotiating with creditors multilaterally whenever seeking a consent or waiver.

[72] As noted previously, in some instances in our Initial Proposals we referred to an allowance of £13m. The figures quoted here are those underlying the Initial Proposals allowance of £16m.

demonstrates a reasonable alternative which would have reduced costs for consumers by £3.2 million relative to NERL's actual net costs of £22 million.

3.76 Our Provisional Decision is therefore to allow costs of £18.8 million.

Other reconciliation adjustments

Our Initial Proposals

3.77 As part of the reconciliation between RP3 and NR23, NERL included a number of adjustments to arrive at the efficient cost baseline to be recovered. These adjustments include those that are designed to reflect items that are compensated through other mechanisms in NERL's price control and so avoid double-counting.

3.78 For example, the Condition 21 inflation adjustment reflects that the TRS will be indexed to outturn inflation. As the difference between outturn and expected inflation is already reflected through the inflation adjustment in Condition 21 in NERL's licence, we need to include an adjustment so that NERL does not receive two adjustments for inflation on Determined Costs in the price control.

3.79 In our Initial Proposals, we included reconciliation adjustments that reduced the efficient cost baseline by a total of £23 million. The largest adjustment items, in absolute terms, were the MoD uplift, an adjustment on the regulatory return on the TRS and inflation and the Condition 21 inflation adjustment.

Summary of stakeholders' views

3.80 We received substantive responses to the Initial Proposals on two main areas:

i. **Adjusted regulatory return + inflation**: In its response, NERL stated that it agreed that an adjustment is required to re-align the regulatory return amount on the TRS to be included in the efficient baseline with the CMA determination. However, NERL said that in the Initial Proposals, we have included a double count. NERL said the source of this double count is CAA applying NERL's proposed reconciliation adjustments to the CMA regulatory return numbers, rather than to NERL business plan regulatory return numbers.

ii. **Tax allowance**: In its response, British Airways was concerned by the possibility of double counting in the tax calculation and asked for visibility of this calculation to ensure that this had not happened.

3.81 We address these two substantive responses under the relevant adjustment headings below.

Our views

MoD uplift

3.82 This adjustment is necessary to ensure the reconciled costs are uplifted for the costs of military and exempt flights included in TSUs. This allows us to derive reconciled Determined Costs used for the purpose of setting unit rates under the Eurocontrol Principles.

3.83 Our calculation of the MoD uplift over 2020 to 2022 is unchanged from our Initial Proposals.

Tax allowance

3.84 The tax allowance for the recovery of the TRS 2020 to 2022 revenue has already been included in the efficient baseline for the TRS (in the pre-tax cost of capital).

3.85 Therefore, in response to the British Airway's concern regarding double counting, we can confirm that no additional tax allowance has been included in RP3 or NR23 in respect of the TRS efficient baseline for 2020 to 2022. We discuss the tax allowance on TRS indexation separately in chapter 5. We are publishing the PCM as part of our Provisional Decision, providing stakeholders with access to the calculation, and appendix D (CAP2553c) sets out our resolutions to PCM queries.

Adjusted regulatory return + inflation

3.86 This adjustment was designed to align the regulatory return in the efficient baseline with the CMA determination. We agree with NERL's views that this adjustment would introduce double-counting as we have used regulatory return from the CMA determination. We have therefore removed this adjustment in our Provisional Decision.

Condition 21 inflation adjustment

3.87 This adjustment is necessary to avoid double counting of inflation since as part of the setting of the 2022 unit rate, and consistent with Condition 21 of NERL's licence, an inflation adjustment for the year 2020 was carried over to the 2022 unit rate. To avoid refunding customers twice for inflation differences between allowed and outturn Determined Costs, through the efficient cost baseline for 2020 to 2022 and through indexation of the price control, our Initial Proposals included an adjustment of -£23 million.

3.88 We have recalculated this adjustment using recent actuals and forecasts for CPI and traffic (TSUs and CSUs). This gives an adjustment between 2020 and 2022 which is c. £9 million lower than Initial Proposals and primarily reflects the difference between the outturn and forecast CPI in 2022.

WACC uplift for CMA difference

3.89 This adjustment is intended to account for the difference between the WACC in the CMA determination and that assumed by the CAA in our RP3 determination. However, as part of our decision to modify NERL's licence in November 2021, we introduced new wording to Condition 21 that accounted for the difference between the revenues for 2020 due to the application of a temporary unit rate based on the CAA's decision for RP3 and the final 2020 unit rate established on the basis of the CMA determination. Consistent with our Initial Proposals, we do not consider it necessary to make a further adjustment for the difference between the CAA's decision for RP3 and the CMA determination on WACC and so for our Provisional Decision we have set this adjustment to zero.

Remove recovery for 2020 in the 2022 charge

3.90 This adjustment is required to ensure that an adjustment which was made in the 2022 unit rate to account for the difference between the CAA's decision for RP3 and the CMA determination is not double counted in the efficient cost baseline.

3.91 Our Provisional Decision is that we will include an adjustment of reconciled efficient Determined Costs which is unchanged from Initial Proposals.

Table 3.8: Efficient baseline adjustments over 2020 to 2022

£m nominal prices	CAA Initial Proposals				CAA Provisional Decisions**				Change
	2020	2021	2022	Total	2020	2021	2022	Total	Total
MOD uplift	8	8	8	25**	8	8	8	25	0
Refinancing*	0	16	0	16	0	19	0	19	3
Actual/ forecast tax vs CMA allowance	(4)	(2)	2	(5)**	(4)	(2)	2	(5)	0
Adjust regulatory return to NERL proposed return on TRS + impact of inflation	(9)	(9)	(13)	(31)	0	0	0	0	31
WACC uplift (CAA vs CMA)	0	0	0	0	0	0	0	0	0
Add back Condition 21 inflation adjustment	7	3	(33)	(23)	8	3	(43)	(32)	(9)
Remove recovery for 2020 in 2022 charge	(5)	0	0	(5)	(5)	0	0	(5)	(0)
TOTAL adjustments	**(3)**	**16**	**(36)**	**(23)**	**7**	**28**	**(33)**	**2**	**25**

* As explained in the refinancing section above, the £16m here is that which was quoted in the Initial Proposals. We have subsequently adjusted this number to £13m but have retained the £16m in this table for consistency with total efficient baseline in the previously published Initial Proposals document.

** In the Initial Proposals total column, for the MOD uplift and the Actual/forecast tax vs CMA allowance, the amounts have been re-stated relative to the Initial Proposals publication to accurately reflect the rounded totals.

Our Provisional Decision on the efficient costs baseline

3.92 Based on our analysis above, our view of the efficient cost baseline before taking account of the restructuring costs and adjustments is £1,832 million in nominal terms for the three years 2020 to 2022. This reflects:

i. estimates for efficient staff and non-staff costs;

ii. CMA determination figures for regulatory depreciation and regulatory return;

iii. estimates for efficient non-regulatory revenues;

iv. estimates for refinancing costs; and

v. updates to adjustments including the correction of an error as set out in the 'adjust regulatory return and inflation' section above; and

vi. updated inflation forecasts (see chapter 5 on financial framework).

Table 3.9: Efficient costs baseline building blocks over 2020 to 2022

£m, nominal prices	Initial Proposals				CAA Provisional Decision				Change
	2020	2021	2022	Total	2020	2021	2022	Total	Total
Staff costs	401	308	364	1,072	401	309	373	1,083	11
Non-staff costs	123	120	156	400	123	121	162	406	6
Regulatory depreciation	194	162	153	509	194	162	155	511	2
Regulatory return	34	39	44	118	34	39	45	118	0
Non regulatory revenue	(103)	(88)	(92)	(283)	(103)	(89)	(95)	(286)	(3)
En route total	650*	540*	625*	1,815	650	541	641	1,832	17

* The 2020, 2021 and 2022 En route total numbers quoted in our Initial Proposals document were inaccurate and did not reflect the actual allowances included within our model. The figures shown in Table 3.9 for Initial Proposals are those that were actually included within our price control model.

3.93 To the CAA efficient baseline, we have applied an allowance for the refinancing costs and our view of the necessary adjustments for example to remove double-counting. These adjustments are summarised in nominal terms in Table 3.10 and deliver an overall reconciled efficient costs baseline over 2020 to 2022 of £1,834 million. This is the efficient cost baseline from which we calculate the value of 2020 to 2022 TRS revenues to be recovered, as discussed in chapter 6. Our view of the reconciled efficient costs baseline is £42 million (2.3%) higher than the Initial Proposals baseline of £1,792 million.

Table 3.10: Efficient costs baseline including adjustments over 2020 to 2022

£m, nominal prices	Initial Proposals				CAA Provisional Decision				
	2020	2021	2022	Total	2020	2021	2022	Total	Change
Determined costs	650	540	625	1,815	650	541	641	1,832	17
Adjustments									
MOD uplift	8	8	8	25	8	8	8	25	0
Refinancing	0	16	0	16	0	19	0	19	3
Actual/ forecast tax vs CMA allowance	(4)	(2)	2	(5)	(4)	(2)	2	(5)	0
Adjust regulatory return to NERL proposed return on TRS + impact of inflation	(9)	(9)	(13)	(31)	0	0	0	0	31
WACC uplift (CAA vs CMA)	0	0	0	0	0	0	0	0	0
Add back Condition 21 inflation adjustment	7	3	(33)	(23)	8	3	(43)	(32)	(9)
Remove recovery for 2020 in 2022 charge	(5)	0	0	(5)	(5)	0	0	(5)	0
TOTAL adjustments	(3)	16	(36)	(23)	7	28	(33)	2	25
Efficient costs baseline	648	556	589	1,792	657	570	607	1,834	42

3.94 Table 3.11 below shows that in our Initial Proposals NERL had expected to recover £1,112 million of its reconciled determined cost baseline of £1,792 million over 2020 to 2022 leaving a shortfall of £681 million. From the above table our Provisional Decision reconciled determined cost baseline is now £1,834 million and NERL now expects to recover £1,126 million due to updated traffic forecasts leaving a balance of £707 million. Table 3.11 below contrasts this £707 million with the Initial Proposal's view of the TRS revenues to be recovered of £681 million. Overall, we consider that TRS revenues to be recovered are £26 million higher than the position in our Initial Proposals over the whole of 2020 to 2022.

3.95 In Table 3.11 below the difference between the £42 million increase in the efficient cost baseline shown above and the £26 million of TRS to be recovered is explained by the slight increase in the latest traffic forecasts relative to the traffic forecasts used by NERL in its business plan.

Table 3.11: TRS revenue to be recovered

£m, nominal prices	Calculation	2020	2021	2022	Total
Initial Proposals Reconciled Determined Cost Baseline	A	648	556	589	1,792
Determined costs recovered/forecast to be recovered by NERL (this is the forecast of revenues that NERL estimated it would receive for 2020 to 2022)	B	274	282	555	1,112
Initial Proposals view of TRS revenue to be recovered (this is the shortfall in revenue calculated at Initial Proposals when the efficient baseline amount is compared with the forecast revenue amount)	A-B=C	374	274	33	681
CAA Provisional Decision Reconciled Efficient Determined Cost baseline	D	657	570	607	1,834
CAA Provisional Determined costs recovered/forecast to be recovered by NERL (this is the forecast of revenues that NERL estimated it would receive for 2020 to 2022 updated for the latest traffic forecast)	E	274	289	563	1,126
CAA Provisional Decision view of TRS revenue to be recovered (this is the shortfall in revenue calculated at Provisional Decision when the efficient baseline amount is compared with the forecast amount)	D-E=F	383	280	44	707

£m, nominal prices	Calculation	2020	2021	2022	Total
Difference between CAA Initial Proposals and CAA Provisional Decision (this is the shortfall in revenues between 2020 and 2022 which we intend to allow NERL to recover in future years)	F-C	9	6	11	26

Next steps and implementation

3.96 This chapter shows our Provisional Decision on the efficient cost baseline for the TRS mechanism. The TRS mechanism that allows for the recovery of this efficient baseline, balance and recovery profile is addressed in chapter 6 and reflected in the relevant sections of the licence modification and RAB rules (CAP 2553d appendix H and CAP2553e appendix I).

3.97 During NR23, we will review the DB pension costs incurred during 2020 to 2022 along with our review of variations in pension costs during NR23 to consider any appropriate adjustments to reflect changes in costs due to unexpected changes in financial market conditions as well as any cost savings, for example due to actions taken in response to the impact of covid-19 on traffic levels.

3.98 We will undertake an *ex post* review of key RP3 capex programmes at an appropriate time when we are properly able to assess the efficiency of capex that takes into account the significant changes that NERL made to its capex plan since it submitted its NR23 business plan.

Chapter 4
NERL's costs

Introduction

4.1 In the Initial Proposals, we set out our view on each of the NR23 cost building blocks, based on our assessment of the information that that NERL provided on its costs as part of the February 2022 business plan. As part of this assessment, we reviewed NERL's staff costs, non-staff costs, pension costs, capex and costs and revenues associated with non-regulated activities.

4.2 This chapter sets out our updated view and Provisional Decision in relation to these cost categories for UKATS, including London Approach (our updated view on costs relating to Oceanic is set out in CAP 2553a chapter 9).

4.3 NERL submitted its NR23 business plan in 2020 CPI prices, and provided a CPI forecast which could be used to convert the figures it submitted into nominal terms. Throughout this chapter, costs are presented in 2020 CPI prices,[73] where CPI inflation is based on the OBR forecasts from March 2023, as discussed in chapter 5.

4.4 In paragraph 4.20 of the Initial Proposals, we asked NERL to provide a detailed explanation of how it expected the higher recent inflation forecasts to affect its cost forecasts over NR23. NERL provided an updated view of both opex and capex in response to the Initial Proposals and has also provided supporting information in relation to the impact of inflation on its cost base (NERL's 2023 revised submission). The updated estimates submitted by NERL also include other revisions to its cost forecasts, which we have considered as part of our assessment. The table below sets out NERL's updated position on opex and capex. Further detail on the revisions proposed by NERL is provided in the rest of this chapter, as part of our assessment of each building block.

[73] We note that in the Initial Proposals, we showed capex costs in 2020 RPI prices in the NERL costs chapter (chapter 4). This was because the RAB is indexed by RPI, so we use capex costs in RPI prices as part of our modelling. However, for ease of comparison with NERL's submission, as well as more generally across building blocks (e.g. opex) we show capex costs in CPI prices.

Table 4.1: NERL's 2023 revised submission of UKATS costs

	February 2022 BP						NERL's 2023 revised Submission					
£m, 2020 CPI prices	**2023**	**2024**	**2025**	**2026**	**2027**	**Total**	**2023**	**2024**	**2025**	**2026**	**2027**	**Total**
Staff costs (excl. pensions)	254.1	262.9	265.7	268.8	273.3	1,324.7	237.4	261.1	273.9	279.0	279.4	1,330.8
Pension costs	109.9	109.3	107.8	108.1	107.3	542.3	108.3	109.4	109.0	109.6	108.5	544.6
Non-staff costs	146.4	150.9	150.8	150.9	147.2	746.3	152.1	158.8	156.6	151.6	146.3	765.3
Total opex	**510.4**	**523.0**	**524.3**	**527.8**	**527.8**	**2,613.4**	**497.8**	**529.3**	**539.4**	**540.1**	**534.2**	**2,640.8**
Capex	**117.0**	**107.0**	**111.0**	**107.0**	**109.0**	**551.0**	**93.0**	**103.9**	**110.0**	**110.1**	**108.0**	**524.9**

Source: NERL submissions on UKATS costs

4.5 This chapter is structured as follows:

- Inflation – this section sets out our views on NERL's 2023 revised submission with respect to the impact of inflation on its cost base and our Provisional Decision.
- Sections on each of staff costs (excluding pensions), pension costs, non-staff opex, capex and non-regulated costs and revenues. Each section includes summaries of NERL's business plan, our Initial Proposals and stakeholder feedback, and then sets out our views and Provisional Decisions.
- A summary of our overall Provisional Decision on UKATS costs.

Inflation

Context and our Initial Proposals

4.6 NERL submitted its NR23 business plan in 2020 CPI prices and provided inflation forecasts which could be used to convert the figures it submitted into nominal prices, including assumptions for average annual inflation over NR23 of 1.92% for the CPI and 3.12% for the RPI.

4.7 For our Initial Proposals, we considered inflation forecasts from various sources and used CPI and RPI forecasts from the Office for Budget Responsibility (OBR) from March 2022. Based on these forecasts, we assumed slightly higher average annual inflation than in NERL's business plan over NR23 (2.29% for CPI and 3.16% for RPI) and significantly higher inflation forecasts for 2023 (4.04% for CPI and 5.51% for RPI).

4.8 Subsequent to March 2022, we noted there were very substantial increases in the UK's short-term inflation forecasts, including some forecasts of annual inflation rates exceeding 10% and a high degree of uncertainty around how long these high inflation forecasts would persist.

4.9 In the Initial Proposals we acknowledged the increases in inflation forecasts would put upward pressure on NERL's costs. However, we considered NERL might be able to mitigate some of the significant and short-term increase in inflation forecasts by making savings on costs in real terms, rather than the full impact of higher inflation being passed through into higher costs in nominal terms (see paragraph 6.104 of our Initial Proposals) in those years. To reflect this, we made an assumption that NERL's nominal cost base in 2022 would only increase by a proportion of the expected increase in inflation in 2022, based on our assessment of average earnings and inflation forecasts. From 2023 we reverted to basing our assessment on NERL's costs in CPI-real terms as the difference between NERL's forecast and the OBR forecast (at the time) narrowed over the course of NR23.

4.10 We also showed for illustration, an alternative high inflation scenario where average annual inflation was higher over NR23 (3.16% for CPI and 4.11% for RPI). In this scenario we assumed NERL would be able to absorb two thirds of the increase in the forecast from our base scenario through management actions to reduce its cost base in real terms.

4.11 Given the significant difference between the inflation forecasts used by NERL in its business plan and the prevailing expectations about inflation at the time of publication of our Initial Proposals, we stated that we would update inflation forecasts for the final performance plan decision to take account of the most recent forecasts, and to take account of actual costs, where available (see paragraph 5.41 of our Initial Proposals). We also asked NERL and stakeholders to provide their views and further evidence on the impact of inflation on NERL's costs for the NR23 period.

Summary of stakeholders' views

4.12 In its response, NERL set out its views around the potential impact of higher inflation forecasts on its NR23 cost base, and also on the adjustment applied by the CAA to 2022 costs, and the high inflation scenario.

4.13 NERL disagreed with the assumption that it is able to absorb the additional step up in inflation from 2023 onwards, when compared to earlier forecasts. NERL also highlighted that the latest OBR forecast (at the time), predicted average inflation for the NR23 period of around 2% (with periods of both very high inflation and deflation during NR23), which it considered was an argument in support of the CAA not departing from the previously established approach to inflation in setting the price control.

4.14 NERL stated that the approach prior to NR23 had been for prices for the forthcoming period to be set on the basis of a business plan submission which is constructed in real terms, with ex post inflation adjustment mechanisms applied over the duration of the relevant price control. This approach ensures there is no windfall loss or gain for NERL over the medium term if inflation changes materially from that forecast when that plan was set. NERL did not consider that there was a justification for the CAA to depart from this approach, or to dilute the operation or effect of the inflation adjustment to regulated charges over NR23.

4.15 In terms of the specific impact of the more recent inflation forecasts, and its ability to mitigate any increase, NERL argued that even where inflation indices are not explicitly incorporated into its contracts, the inflation context will have a direct bearing on future negotiations affecting NERL costs. NERL gave the example of recent negotiations with trade unions on staff costs which were based on 2022 inflation.

4.16 NERL also challenged the assumption that non-staff inflationary costs can be absorbed and said that the rise in producer prices was higher than the increase in CPI. NERL provided data that it said shows that 40% of its contracts are subject to inflation indexation and 40% are subject to market forces and will require strong negotiation by its procurement team.

4.17 In summary, NERL argued that while individual cost components have different links with inflation, the combination of these effects over time does not lead to any material and sustained impact such that NERL's costs rise at a slower rate than general inflation as measured by CPI.

4.18 NERL disagreed with the use of Average Weekly Earnings (AWE) index rather than CPI to calculate an efficient cost base in 2022 as it has not been used as a reference in any previous regulatory periods and is not applicable to non-staff costs. It said that if applied, this adjustment would reduce the cost base by £76 million over NR23 and essentially make its business plan undeliverable.

4.19 NERL challenged the high inflation scenario due to uncertainty around how it would be applied in practice and the impact on its ongoing negotiations around pay. NERL maintained that CPI indexation, as has been applied in previous regulatory periods, is effective and appropriate.

4.20 Aer Lingus supported the use of most recent inflation forecasts in the final performance plan. EasyJet supported the approach in our Initial Proposals as it considered that NERL will be able to mitigate increases in inflation so that the full increase is not passed through in its cost base, for both 2022 and the NR23 period.

4.21 Prospect said that it found the CAA's approach to inflation confusing and not fully justified (for example, in terms of the adjustment to 2022 costs), and strongly objected to the adjustment applied by the CAA to 2022 costs.

4.22 British Airways said that it is in favour of moving towards CPI indexation of the RAB but understand that we will look at this in NR28 whilst maintaining the RPI-CPI wedge mechanism in NR23.

NERL's 2023 revised submission

4.23 Following the submission of its response to the Initial Proposals, NERL submitted a response to a CAA's request for information on inflation sent in December 2022, and provided a revised submission on costs, which included actual costs for 2022, and updated figures for the rest of NR23.

4.24 NERL's response to the request for information provided evidence, at a high-level, that its cost base is largely driven by CPI inflation. A significant reason for this is NERL's approach to pay settlements (CPI-based) and pension arrangements, with around 70% of NERL's cost base being linked to its staff.

4.25 NERL also explained that non-staff costs cover a wide range of different products and services. NERL broke down the different types of costs included in this category, and how they may or may not follow CPI inflation. NERL argued that while there are a variety of inflationary effects across individual items, at the overall level, over the 5-year period of NR23, the total portfolio rises broadly in line with CPI inflation.

4.26 NERL's revised cost submission showed variances for individual cost items relative to the February 2022 NR23 business plan which NERL explained were due to "relative price effects". However, these variances broadly netted out at the level of total opex.

Our views

4.27 In previous price control periods, we have assessed Determined Costs from NERL's business plan in real-terms, with any adjustments to take account of efficiencies or alternative assumptions, and then set an allowance for Determined Costs in nominal terms based on an appropriate forecast for inflation. We have decided that we should continue to use that existing approach to inflation as part of this price control review, including having the in-period adjustment mechanism when actual inflation differs from the assumptions made as part of setting Determined Costs.

4.28 Nonetheless, we need to take account of inflation in setting appropriate cost allowances for the price control, in order to further the interests of customers and consumers, as per our secondary duty to promote efficiency on NERL's part. This has involved the us reviewing all the evidence and taking a view around the extent to which NERL is able to manage inflationary pressures across different cost categories. NERL then has mechanisms that provide protection for variances in inflation forecasts during NR23.

4.29 This approach is broadly consistent with wider regulatory precedent. For example, regulators such as Ofwat and Ofgem consider and apply adjustments for real price effects (RPEs) as part of setting price controls, which seek to adjust cost allowances for input prices increasing or decreasing in real terms relative to general consumer price inflation.[74]

4.30 We have considered the additional evidence from NERL, submitted in response to our information request, that its cost base generally increases with CPI (when looking at a reasonable timeframe). We agree that NERL may be able to smooth short term increases but that it is reasonable to assume that its costs will be linked to CPI inflation when looking over the whole NR23 regulatory period.

4.31 Since our Initial Proposals, we have seen inflation forecasts increase for 2023 but then reduce for the remaining years of the NR23 period, as illustrated in Table 4.2. We have also received evidence from NERL that it has smoothed its forecasts for staff costs during NR23. Bearing this in mind and that there is now less of a difference relative to NERL's business plan in terms of inflation forecasts, we have not sought to implement additional adjustments to reflect real price effects. We explain our approach to inflation for NR23 in more detail in chapter 5.

4.32 There have been recent concerns that inflation will not reduce as sharply as expected. It is likely that actual inflation will differ from forecast inflation, and there are mechanisms built into the price control to ensure NERL and its customers are protected from windfall gains and losses from inflation. For example, by the indexation of NERL's RAB and its charges. These are set out in more detail in chapter 7.

Table 4.2: Annual inflation rates for CPI

Annual CPI Inflation	2020	2021	2022	2023	2024	2025	2026	2027	Average
Actual Inflation	1.7%	4.2%	11.5%						
NERL business plan submission				1.9%	1.8%	1.8%	1.9%	2.0%	1.9%
CAA Initial Proposals				4.0%	1.5%	1.9%	2.0%	2.0%	2.3%
CAA Provisional Decision				6.1%	0.9%	0.1%	0.5%	1.6%	1.8%

Source: NERL submission, OBR published forecasts

4.33 For 2022, we are using actual costs submitted by NERL in its 2023 revised submission, and are therefore not applying any adjustments for forecast inflation similar to the adjustments applied in our Initial Proposals.

4.34 NERL's actual opex in 2022 was £27 million lower than the opex in NERL's business plan, and 2022 actual capex was £3 million lower than its business

[74] See for example: Supplementary-technical-appendix-Europe-Economics-Frontier-Shift-and-Real-Price-Effects.pdf (ofwat.gov.uk)

plan. As the most recent year of actuals reported by NERL, and consistent with the approach taken in previous price control reviews, we will use NERL's 2022 actual costs as a baseline year for setting efficient cost baselines in NR23.

4.35 We considered it is appropriate to apply a top-down approach to inflation and costs over the whole NR23 period rather than considering more detailed year-on-year adjustments that would add complexity without making a material difference to cost allowances and charges in NR23.

Our Provisional Decision

4.36 NERL has submitted its actual costs for 2022, as part of its 2023 revised submission. For the reasons explained above, we have used these as the basis for our assessment of efficient costs for our Provisional Decision in place of the forecasts and adjustments for real price effects we used in our Initial Proposals.

4.37 We have considered a single inflation forecast for our Provisional Decision, based on recent March 2023 forecasts from OBR. This is a reasonable external source of inflation forecasts and is consistent with our approach in the Initial Proposals and the H7 price controls. We are no longer considering the alternative high-inflation scenario.

Staff costs

Context

4.38 NERL's business plan proposed average staff costs of £265 million per year during NR23. NERL's updated submission proposes average staff costs of £266 million. During RP3, staff costs decreased in 2020 due to the impact of the covid-19 pandemic and were forecast to decline again in 2021, before increasing from 2022 onwards to £279 million in 2027.

4.39 NERL's business plan staff costs for NR23 are based on an average headcount of 3,344 FTE per annum of which 1,037 are air traffic controllers (ATCOs). Total FTEs in 2027 are expected to be 378 fewer than in 2019. NERL's business plan assumptions also anticipate retirement of 25% to 35% of the ATCO workforce before 2027. Training for new ATCOs recommenced in 2022 as did the graduate programme with the aim to recruit 47 graduate FTEs per year.

4.40 To support the wage levels in its business plan, NERL provided benchmarking analysis by its advisors NERA, which said that NERL's costs are broadly in line with market benchmarks.

Our Initial Proposals

4.41 We considered that NERL had not fully justified some elements of its staff costs in its February 2022 business plan, including:

- the increases in staff pay over NR23, which already exceeds market rates;
- increases in the ATCO headcount with no productivity improvements assumed for NR23; and
- significant growth in graduate headcount over NR23.

4.42 We proposed a low case of £1,253 million for staff costs over NR23 (5% below NERL's business plan) and a base case of £1,296 million (2% below NERL's business plan). These were based on:

- slower wage growth assumptions. We also assumed a reduction in wage levels to bring them in line with market benchmarks by the end of NR23 for the low case only;
- higher ATCO productivity of 1.5% per year from 2025 onwards, as measured by ATCO-hours per flight; and
- a lower number of graduates (33 fewer graduates than that proposed in NERL's business plan.

4.43 We stated in our Initial Proposals that we were setting an overall cost allowance for the NR23 period and it is for NERL to decide how to operate its business to provide a safe and resilient service. We have used the same approach as part of our Provisional Decision. While in the rest of this section (and chapter), we discuss specific issues and discrete adjustments we have applied to NERL's costs, we note that NERL continues to have managerial discretion and responsibility to incur costs that are consistent with the safe and efficient operation of its service.

4.44 Our Initial Proposals used the base case costs and we also sought stakeholder views on the low case costs.

Summary of stakeholders' views

ATCO Productivity

4.45 NERL did not agree with our approach to assessing productivity over NR23. It considered that our productivity assumptions should be updated to reflect the higher October 2022 STATFOR traffic forecast, which meant that NERL's plan would be projected to deliver a 4% to 6% improvement in productivity.

4.46 NERL also did not agree with our Initial Proposals using the 'ATCO-hour' measure of productivity or basing productivity on historical performance and the expected benefits from the technology programme. Finally, it said that it needs to plan operational resourcing to meet long term customer demand with sufficient resilience, which would lead to lower productivity in periods of traffic reduction or stagnation.

4.47 Prospect stated that updated traffic forecasts will result in higher assumed productivity improvements within NERL's business plan, meaning that the CAA assumed resourcing profile and training capacity for ATCOs will not allow for significant extra resources in the early to middle years of the reference period.

4.48 Airlines UK, IATA and Ryanair set out concerns that higher ATCO productivity assumptions in NR23 require further assessment. British Airways said that our assumptions do not seem unreasonable given historical improvements by NERL and its comparators, however the timing of NERL's capital programme in NR23 and traffic recovery should also be considered.

Graduate headcount

4.49 NERL set out the importance of its graduate scheme in the context of its aging demographic and the significant skills gap it faces. It said that our proposals misunderstood its attrition rate, and how graduates moved into other roles in the business on completion of the graduate programme.

4.50 Prospect said that we had provided no rationale for the proposed adjustments to the graduate scheme.

4.51 Airlines UK and IATA support the reduction of graduate headcount on the basis that retention levels of NERL's graduate scheme assessed by Steer appear to be pessimistic. British Airways said that the Institute of Student Employers identify an average graduate retention rate of 72%, higher than the 50% assessed by Steer.

Pay level

4.52 NERL commissioned NERA to conduct a further study on staff costs in response to Initial Proposals (as an update to the work by NERA that informed NERL's business plan submission). NERA challenged the lower staff costs in our Initial Proposals due to the specialised ATCO labour market and the need to retain skilled employees, as well as the difficulty in determining a benchmark of efficiency due to limited market comparisons.

4.53 NERA also provided benchmarking analysis that, in contrast to analysis by Steer for the CAA, suggested that pay levels are in line with other ANSPs. NERA highlighted the following issues with Steer's analysis:

- the use of a less recent comparison period (2003 to 2019) compared with NERA (2015 to 2019);
- benchmarks were based on the average weekly earnings (AWE) index in the Transport and Storage sector, which are less relevant than NERA's benchmarks, which were based on ATCOs in other countries;

- benchmarks were based on mean wages compared to NERA's benchmarks, which were based on sophisticated wage equations that took account of other relevant information; and
- benchmarks used annual rather than hourly pay, so would reflect number of hours worked as well as pay levels.

4.54 NERL also provided evidence on the importance of employee/industrial relations and the potential for disruption to airlines if pay awards are set below expectations.

4.55 Prospect and PCS rejected Steer's benchmarking analysis on the basis of the time period used and productivity gains had not been properly considered in understanding historical pay awards. Prospect's response was based on the October 2022 traffic forecasts and the resulting productivity increase. PCS also criticised the use of benchmarks due to the importance of retaining critical staff roles and the knowledge and experience that are built up in these roles over a considerable period of time. Prospect considered we should not have used AWE for comparison and highlighted the sensitivities of this data to sector, type of pay and time period when used for benchmarking purposes.

4.56 Airlines who responded to the consultation overall supported the CAA's view that NERL staff cost allowances should be set in line with benchmarks, and British Airways suggested that we should set allowances which would be required by an entity operating in a competitive environment.

Pay growth

4.57 NERL said that its historical and projected real-term pay awards are less variable than economy-wide pay growth. NERL stated that it has adopted CPI-linked pay settlements over the past decade to smooth the impact of economy wide changes in real-term pay as a result of its specific circumstances, as its staffing is not sensitive to economic cycles and is highly unionised.

4.58 In its paper for NERL, NERA provided analysis to show NERL's pay awards have been lower than economy wide pay growth in five out of the past six years. NERA stated that there is a risk that if NERL were to change its approach to setting pay it would face industrial action or a deterioration in labour relations. It said that the cost savings in our Initial Proposals do not justify the downside risks associated with trying to change the structure of pay awards. It also said that NERL has historically smoothed the variability of real term pay growth in the economy, so adjusting pay to expected real wages in the economy during NR23 would consequently disregard this mechanism.

4.59 Airlines UK, BA, easyjet and Ryanair all supported the CAA's proposals to encourage efficient opex by setting allowances on the basis of wage levels that reflect market rates, and that this means slower wage growth than NERL had assumed in its business plan.

4.60 Prospect and PCS supported smoothing the impact of inflation over the reference period to account for recent spikes. They also highlighted the reputational impact of the pandemic on the aviation industry and suggested that reward packages will become even more critical to attracting and maintaining staff. Prospect and PCS said that lower pay growth will worsen this problem and risk NERL underperforming against customer expectations.

NERL's 2023 revised submission

4.61 Following its response to Initial Proposals, NERL provided further information to CAA on its pay awards for 2023 to 2025 and the impact of the high inflationary environment on its projected staff costs.

Table 4.3: NERL revised staff costs (excl. pensions)

£m, 2020 CPI prices	2023	2024	2025	2026	2027	NR23 total
NR23 BP (February 2022)	254.1	262.9	265.7	268.8	273.3	1,324.7
March 2023 update	237.4	261.1	273.9	279.0	279.4	1,330.8

Source: NERL submissions

4.62 NERL's 2023 revised submission stated that 2023 pay awards would be based on 2022 inflation outturn. It also also set out an approach that would smooth inflationary impacts over the 2023-2025 period, while accounting for the updated OBR forecast.

4.63 NERL's business plan and its response to our Initial Proposals both assumed [---✄---].

Our views

Staff productivity

4.64 We disagree with NERL that ATCO-hour is an inappropriate measure of productivity to use in the context of setting assumptions for the price control. While the measure is affected by traffic volumes, we consider alternative measures of productivity would also be affected by traffic volumes. Given that NERL did not put forward a measure that it considers to be more appropriate, we have continued to use the ATCO-hour measure of productivity in our Provisional Decision as the best available measure.

4.65 We agree with NERL and other stakeholders that productivity analysis should be updated to reflect the latest available traffic forecasts. Using the March 2023 STATFOR traffic forecast, we estimate that cumulative productivity over NR23 would increase by 0.36% if we also assumed the number of ATCOs in operation by 2027 in line with NERL's business plan.

4.66 This estimated productivity improvement is significantly lower than estimated in NERL's response to Initial Proposals and is closer to NERL's business plan, which assumed no productivity improvements.

4.67 We consider that our Provisional Decision should balance an appropriate level of wage growth with staff productivity improvements to enable the efficient delivery of the service quality levels set out in chapter 2. An updated productivity assumption should therefore be applied to reflect the reduced productivity implied by the updated traffic forecasts and our Provisional Decision on staff costs.

4.68 In our Initial Proposals (at paragraphs 4.40 to 4.44) we set out our reasoning why we consider it is appropriate that NERL should be able to make productivity improvements when traffic recovers. This included analysis of NERL's historical productivity improvements resulting from growth in traffic and improved processes and systems. Over the period of 2015-2019, NERL achieved ATCO-hour productivity improvements of 3% per annum. This evidence continues to be relevant in assessing the level of productivity improvement NERL can reasonably make as traffic recovers.

4.69 Although there is evidence that points to NERL being able to achieve 3% productivity improvements from 2024 onwards, as traffic recovery and NERL's technology transformation continue, there is also uncertainty around this and the extent of future productivity growth. Aligned to our Initial Proposals, we consider that an appropriate assumption for the level of productivity improvement would be 1.5% per year from 2024 onwards[75] for operational staff.

4.70 Given that non-operational staff also benefit from wage growth, we consider a productivity improvement assumption is also appropriate when setting efficient staff costs for non-operational staff. However, we note that the productivity gains may not be the same as for operational staff given the different sources of productivity increases which apply to these two groups (with productivity of operational staff being directly affected by traffic levels). We have considered analysis by Steer around total factor productivity assumptions applied by other regulators in price controls, which are overall in the region of 1%.[76] We have assumed that non-operational staff could achieve relatively modest productivity gains, so we have assumed productivity of 0.5% for non-operational staff from 2024 onwards.

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[75] 2024 is when traffic is forecast to recover to 2019 levels. In the Initial Proposals, the 1.5% productivity adjustment was applied from 2025 onwards, on the basis of an earlier traffic forecast and delivery of NERL's capex programme.

[76] NR23 price control review: support on cost assessment for NR23 period and reconciliation review (2020-2022), Steer, October 2022. Available here: NR23 price control review: support on cost assessment for NR23 period and reconciliation review (2020-2022) (caa.co.uk)

4.71 We make assumptions around productivity in order to determine an efficient allowance for staff costs over NR23 but it is for NERL to manage staffing levels to maintain safety and an appropriate level of operational resilience.

Graduate headcount

4.72 We recognise the importance of the graduate scheme in NERL's strategy to retain the skills that it needs, especially in the context of an aging workforce demographic.

4.73 The opex allowance in our Initial Proposals was based on an assumption of a lower graduate headcount than in NERL's business plan, supported by analysis from Steer. We asked NERL to clarify the assumptions from its business plan on the attrition rate for existing operational staff and the retention rates for graduates, which we could compare to the Steer analysis. We remain unclear on the assumptions made by NERL. However, we note that our adjustment for the Initial Proposals was also based on a series of assumptions, which are difficult to verify on the basis of the additional information provided by NERL. We are therefore not making any specific assumptions relating to graduate headcount in our Provisional Decision, but we expect NERL to take into consideration the number of graduates needed in light of their overall allowance for staff costs.

Pay level

4.74 We consider there is some evidence that NERL's wage levels are towards the top end of market benchmarks in certain staff categories. However, we recognise the points that NERL and NERA have raised in their response to the Initial Proposals, which highlight some of the difficulties in benchmarking pay levels across sectors, including choosing appropriate comparator sectors, time periods and staff cost measures. It is important that NERL's staff has the appropriate level of capability to maintain operational resilience during traffic recovery without causing disruption to customers, which is difficult to benchmark based on the available data we have reviewed.

4.75 Given this, we are not adopting specific assumptions regarding different pay levels based on these benchmarks. Instead, we focus on setting appropriate assumptions around growth in staff costs and productivity. We consider this will provide a reasonable approach to setting cost allowances that will support the delivery of service level targets and continued resilience during NR23.

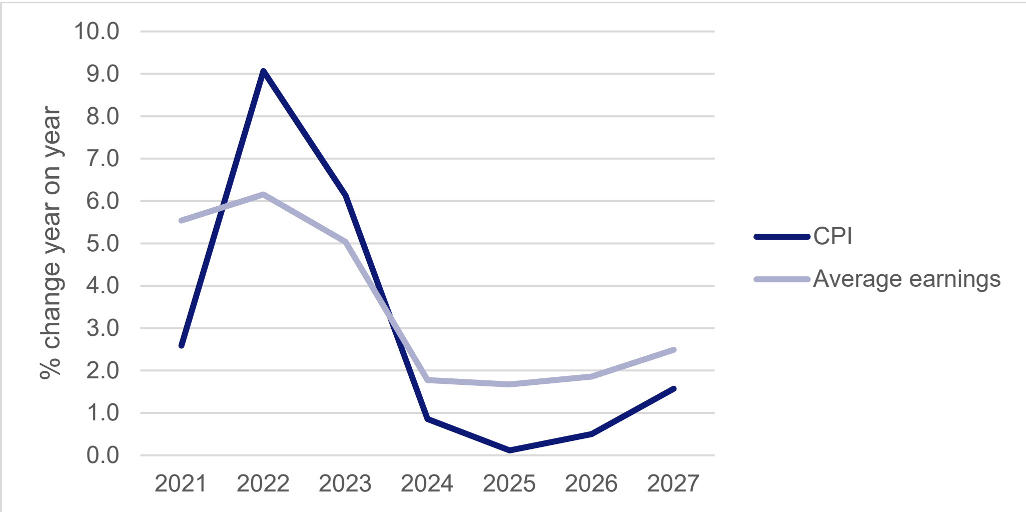
Pay growth

4.76 To set appropriate assumptions around pay growth, we have considered NERL's business plan and the further evidence provided by NERL in its 2023 revised submission, including details of the pay award settlements for 2023 to 2025, as well as evidence on pay negotiations from elsewhere in the UK economy.

4.77 This evidence suggests that recent pay increases have been below the current levels of inflation. For example, the UK civil service has been set guidance to make pay awards up to 4.5% in the 2023-24 financial year,[77] and the Office of National Statistics shows recent average regular pay growth was 6.9% for the private sector and 5.3% for the public sector.[78] In 2022, outturn CPI inflation was much higher at 9.1%, and is forecast to remain high at 6.1% in 2023.[79]

4.78 However, forecasts for CPI and average earnings during the NR23 period indicate that average earnings growth will be higher than CPI inflation from 2024, in a period of very low forecast inflation. This is shown in Figure 4.1 below.

Figure 4.1: Average Earnings and CPI growth forecasts



Source: OBR Economic and fiscal outlook – March 2023

4.79 NERL's 2023 revised submission includes a relatively smooth profile of wage growth in the first three years of NR23. This seems broadly consistent with the forecasts from OBR, which show that average earnings are expected to be less

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[77] https://www.gov.uk/government/publications/civil-service-pay-remit-guidance-2023-to-2024/civil-service-pay-remit-guidance-2023-to-2024#fn:1 https://www.gov.uk/government/publications/civil-service-pay-remit-guidance-2023-to-2024/civil-service-pay-remit-guidance-2023-to-2024#fn:1

[78] For December to February 2023. See: https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/averageweeklyearningsingreatbritain/april2023#:~:text=Image%20.csv%20.xls-,Growth%20in%20employees'%20average%20total%20pay%20(including%20bonuses)%20was,COVID%2D19)%20pandemic%20period. For December to February 2023. See: https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/averageweeklyearningsingreatbritain/april2023#:~:text=Image%20.csv%20.xls-,Growth%20in%20employees'%20average%20total%20pay%20(including%20bonuses)%20was,COVID%2D19)%20pandemic%20period.

[79] Economic and fiscal outlook - March 2023 - Office for Budget Responsibility (obr.uk)

volatile than the inflation forecasts and some real wage growth is to be expected during NR23.

4.80 Previous analysis showed that pensionable pay awards have generally accompanied improvements in operational productivity.[80] We have noted above that under the March 2023 traffic forecasts, productivity growth is relatively low under NERL's business plan. We have considered appropriate assumptions for productivity improvements and real pay growth over NR23.

4.81 We have considered NERL's updated submission and evidence from the wider economy, as well as productivity assumptions and service quality targets. This supports pay growth levels of around CPI+0.25% per year on average for all staff over NR23. The assumption of growth above CPI inflation over NR23 as a whole takes account of the evidence put forward as part of NERL's revised submission on staff costs and our assumptions that NERL should make reasonable productivity gains and service quality improvements over NR23. It also takes account of the relative volatility in the inflation forecasts over the period and the evidence that average earnings are expected to be less volatile with some real wage growth expected over NR23.

Our Provisional Decision

4.82 Our Provisional Decision is to apply the following adjustments to set the allowance for efficient staff costs:

- a 1.5% productivity improvement per year for operational staff and 0.5% productivity improvement per year for non-operational staff, from 2024 onwards; and
- CPI+0.25% pay increases on average for all staff over NR23.

4.83 The staff costs allowance is shown in the Table 4.4. Some of the increase in staff costs between Initial Proposals and our Provisional Decision result from a reduction in staff costs forecast to be capitalised due to an update to the accounting pension accrual rate (reflecting recent market conditions). This is discussed in more detail in the capex section of this chapter.

4.84 It is for NERL to manage its overall staff costs. We are not dictating how NERL should manage its pay, resourcing levels or graduate programme.

[80] Steer (2022), NR23 price control review: support on cost assessment for NR23 period and reconciliation review (2020-2022)

Table 4.4 – UKATS staff costs building block

£m, 2020 CPI prices	2023	2024	2025	2026	2027	NR23 Total
NERL BP	254.1	262.9	265.7	268.8	273.3	1,324.7
CAA Initial Proposals	252.8	259.2	260.0	260.8	263.3	1,296.2
CAA Provisional Decision	**264.5**	**269.1**	**263.3**	**261.7**	**263.7**	**1,322.2**
CAA Provisional Decision vs NERL BP	*10.4*	*6.3*	*-2.4*	*-7.1*	*-9.6*	*-2.5*

Source: CAA Calculations, NERL submissions.

Pension costs

Context

4.85 Pension costs represent a significant portion of NERL's total opex (20% in NR23). NERL has forecast that its UKATS pension costs will increase over NR23 and will be 17% higher in real terms 2027 than in 2019.

4.86 NERL's pension costs relate to two pension schemes: the Defined Benefit (DB) scheme,[81] comprising future service and deficit repair costs, and the Defined Contribution (DC) scheme. NERL also incurs costs in relation to the Pension Cost Alternative (PCA), for members who opted out of the DB scheme.

4.87 In NERL's 2023 revised submission, NERL said that real cash pension costs have broadly stayed the same as its business plan for DB and PCA costs, but DC pension costs are expected to increase by £3 million over NR23. This increase is due to an observed increase in employee contribution rates (NERL currently pays employer contributions at a level of twice the amount the employee decides to pay in, up to a maximum employer cost of 18%).

4.88 Table 4.5 below shows a breakdown of UKATS cash pension costs. NR23 figures are based on NERL's 2023 revised submission.

[81] NERL contributes towards the NATS Section of the CAAPS. The CAAPS is a fully funded DB scheme providing benefits based on final pensionable salaries. At 31 March 2001, the business of NATS was separated from the CAA. As a consequence, NATS became a 'non associated employer' which requires the assets relating to the liabilities of NATS active employees at 31 March 2001 to be separately identified within the CAAPS. CAAPS was divided into two sections to accommodate this, namely the CAA section and the NATS section.

Table 4.5: NERL actual/forecast for UKATS cash pension costs

£ million, 2020 CPI prices	2019 (A)	2020 (A)	2021 (A)	2022 (A)	2023 (F)	2024 (F)	2025 (F)	2026 (F)	2027 (F)	Total NR23
Defined benefit: future service	37.9	47.3	45.9	43.9	64.3	63.5	61.5	60.9	59.2	309.4
Defined benefit: deficit repair	28.0	18.7	18.7	18.3	19.1	19.2	19.3	19.5	19.7	96.8
Defined contribution	10.0	11.8	11.3	11.5	14.2	16.5	18.7	20.3	21.5	91.1
Pension cash alternative	16.0	15.7	12.5	11.6	10.7	10.1	9.5	8.9	8.1	47.3
Total	**91.9**	**93.4**	**88.4**	**86.6**	**108.3**	**109.4**	**109.0**	**109.6**	**108.5**	**544.7**

Source: NERL submission

Our Initial Proposals

4.89 We commissioned the Government Actuary's Department (GAD) to review NERL's forecasts for DB costs and provide its view on the reasonable and efficient range for these costs.[82] We commissioned Steer to consider the DC pension costs and how this compared with other major UK pension schemes.

4.90 Based on our own analysis and advice from GAD and Steer, we proposed the following adjustments to the allowance for NR23 pension costs:

- we set DB ongoing contribution and deficit repair costs to be in line with the mid-point in the range of reasonable and efficient costs from GAD. The GAD range was based on valuation assumptions that would be broadly between the 70th and 95th percentile of comparator DB pension schemes;
- we adjusted DC costs to reflect an assumed 12% average contribution rate for new joiners from 2024 onwards (when the Memorandum of Understanding, which was put in place at the closure of the DB scheme, is no longer enforceable), consistent with Steer's analysis; and
- we adjusted DB and DC pension costs in proportion with the adjustments we made to the efficient range proposed for staff costs.

4.91 We did not make any adjustments to PCA costs. Our advisors, GAD, found that the current PCA rate is set at a level that was sufficiently attractive to achieve a high initial level of take up and it is uncertain whether lower rates would have led to similar take up and therefore further overall cost savings. The PCA rate and

[82] GAD provides expert actuarial analysis and solutions, including on pension costs. GAD considered information from NERL before coming to its own views on NERL's pension costs, which we considered in our assessment.

costs are fixed for those that have already switched and limited additional switching is expected, so opportunities for significant further cost savings may be limited.

Summary of stakeholders' views

Defined Benefit scheme

4.92 NERL and CAAPS Pension Trustees strongly disagreed with our proposals for the DB scheme. NERL said that, as its costs are within the GAD "reasonable and efficient" range, we should not be making any adjustments to its DB pension costs and that to do so would undermine the 2021 Pensions regulatory policy statement (RPS).[83]

4.93 NERL, and its advisors Mercer, do not consider GAD's benchmark data to be representative of DB schemes of a comparable size. They consider that NERL's DB costs should be benchmarked relative to the costs of schemes of a similar size (rather than the benchmarking undertaken by GAD), which would support the pension costs in NERL's business plan. In addition, they considered that GAD had not taken account of the change in discount rate structure in the 2020 valuation in reaching its views on discount rate assumptions.

4.94 Both NERL and the CAAPS Pension Trustees said that our Initial Proposals low case scenario (which assumed lower pension costs from 2023) would not be feasible for NERL to implement, given the next 2023 valuation would only be reflected in pension contribution costs from 2025.

4.95 Aer Lingus, Airlines UK and IATA supported our proposals in the context of NERL's pension costs having significantly increased over time.

Defined Contribution scheme

4.96 NERL noted that the contribution rate for the DC scheme is significantly lower than for the equivalent DB scheme that it replaced.

4.97 NERL also said that we had not looked at its DC costs in the context of other adjustments we proposed to make to staff costs. NERL is concerned that the combination of reductions in DC contribution rates on top of efficiency adjustments to staff costs reduces NERL's capacity to provide an attractive reward package to meet the staffing challenges it faces in NR23 and into NR28.

4.98 Prospect and PCS both said they did not support proposed changes to the DC scheme, on grounds of staff retention (and challenges faced by NERL) and

[83] See CAP2119 Economic regulation of NATS (En Route) plc: Update on approach to the next price control review, Appendix C.

because a different contribution rate for new joiners to the DC scheme would create a "two-tier" work force.

4.99 Airlines who responded to our consultation supported our proposals and said that NERL should introduce a new DC contribution rate in line with market benchmarks. British Airways said that the contribution rate for new starters should be set at 11% (GAD benchmark for FTSE100 companies), rather than the 12% we proposed, based on Steer's analysis.

Pension cash alternative

4.100 NERL agreed with our proposals in relation to PCA costs.

4.101 British Airways did not support our approach in relation to the PCA, saying that we had not considered sufficiently whether the PCA rate offered to new entrants (29%) to the scheme in NR23 is efficient.

Our views

Defined Benefit scheme costs

4.102 Following stakeholder feedback, we commissioned GAD to review the issues raised by NERL and CAAPS Pension Trustees and to provide an update to its analysis. GAD updated its benchmarking analysis to reflect the latest industry-wide data published by the Pensions Regulator, covering schemes with effective valuation dates between 22 September 2019 and 21 September 2020.[84]

4.103 GAD found that the NATS Section's discount rate for the 2020 actuarial valuation was at the 70th percentile of DB schemes in the 2019/20 tranche, slightly below its previous analysis where it was at the 75th percentile in the 2018/19 tranche. GAD's assessment was that a reasonable and efficient range for NERL would be between the 70th and 95th percentiles of the sample schemes, which would place NERL at the high cost end of this range.

4.104 GAD considered the feedback from NERL and Mercer around the choice of benchmark schemes in its analysis. It noted that the size of the scheme relative to the size of the sponsor is typically an important consideration in scheme funding. The principal reason why scheme size impacts scheme funding considerations is the strength of the covenant, which the CAAPS Pension Trustee's advisors assessed as strong at the 2020 valuation. GAD's view remains that the overriding risk factors are the strength of the covenant and maturity impacting on current and future investment strategy.

4.105 We also asked GAD to consider the impact that significant recent changes in market conditions might have on NERL's pension costs, ahead of the next

[84] See Analysis of pension costs for NATS (En Route) plc, GAD, June 2022. Available at: analysis-of-pensions-costs-for-nats-en-route-plc-government-actuary-s-department-june-2022.pdf (caa.co.uk)

valuation. The additional analysis, while showing a significant level of volatility, indicates that more recent market conditions could reduce pension costs overall due to significant reductions in future service contributions, though partly offset by additional deficit repair contributions.

4.106 Given the updated GAD benchmarking analysis and the potential for more recent market information to reduce future contributions at the next valuation, we consider it is reasonable to continue to set the pension cost allowance for NR23 based on the mid-point of the GAD range, as in our Initial Proposals. We have suggested these lower costs based on the mid-point from GAD's range could start from 2025, as we consider NERL has made persuasive arguments around the reasons for not triggering an early valuation ahead of 2023. This is consistent with Principle 1 of the RPS, which states that "[w]e expect NERL, in working with the Trustee, to provide evidence to demonstrate that they have done all they reasonably can to mitigate the burden on airspace users arising from its pension obligations and that they have taken steps to ensure that the level of NERL's pension costs remain efficient and reasonable."

4.107 In response to concerns raised by NERL and the Pensions Trustee, we confirm that we are continuing to work in line with the Pensions RPS and the pensions pass-through mechanism, which we consider provides benefits to customers and consumers by supporting a very strong employer covenant for future pension valuations. Similar to our approach prior to RP3 and during the CMA determination for RP3, should NERL's pension costs be higher or lower than the allowed costs during NR23 following the next valuation, then efficiently incurred costs will be eligible for pass-through subject to:

- these changes in pension costs were unforeseen (for setting the Determined Cost allowances) and represent significant changes;
- these changes result from unforeseeable changes in national pensions law, pensions accounting law or unforeseeable changes in financial market conditions;
- the changes in the pension costs are outside NERL's control; and
- NERL has taken reasonable measures to manage the increase in pension costs.

4.108 As was the case prior to RP3, the pass-through calculations would be considered on a case-by-case basis and depend on the circumstances at the relevant time. They should also take account of any offsetting cost savings that NERL has made, such as from increases in PCA take-up or lower than expected pensionable pay.

Defined Contribution scheme costs

4.109 We consider that it remains appropriate to set the cost allowance on the assumption that DC scheme costs for new starters can be set closer to (but still above) market benchmarks while still maintaining a competitive overall benefits package to attract and retain staff. Having carefully considered the responses to our Initial proposals from NERL and other stakeholders, our views remains that this assumption is reasonable. Our Initial Proposals took full account of the arrangements put in place at the closure of the DB scheme (i.e. the Memorandum of Understanding), by making adjustments to NERL's DC costs only once that MoU is no longer in force (i.e. from 2024 onwards).

4.110 This does not have a significant impact on DC pension scheme costs for NR23 (around £1 million over NR23), but would be expected to lead to more significant savings in future periods.

4.111 We are making assumptions to set an overall opex allowance for staff costs, including DC pension costs, and we note that the decisions on the overall benefits package and the DC contribution rates are for NERL to manage.

Pension cash alternative

4.112 On the points made by British Airways, we note that the contribution rate offered under the PCA (29%) is significantly lower compared with the employer contribution rate under the DB scheme (66.2%), which leads to lower pension costs overall. We also note that the PCA is difficult to benchmark relative to external comparators as it will depend on the circumstances at the time for the particular scheme.

4.113 Finally, we note that as the membership of the DB scheme continues to decline over the NR23 period (as members retire and given no new members have joined since 2009), so the expected transfers to the PCA and therefore the scope for future cost savings is likely to be relatively low over NR23.

4.114 Given the expected difference during NR23 between the PCA contribution rate and the DB scheme rate, and noting transfers to the PCA are likely to be lower during NR23, we do not consider that an adjustment is required for this period.

Our Provisional Decision

4.115 We have maintained the approach from our Initial Proposals to set allowances for pension costs that we consider to be reasonable and efficient based on recent information and available benchmarks. This includes:

- reduction to DB scheme costs in line with the mid-point in the range from GAD;
- reduction to DC pension costs from 2024, consistent with analysis by Steer;

- reductions to DB and DC scheme costs in proportion with adjustments we have made to overall staff costs.

4.116 While we have not made changes to PCA costs for NR23, we will consider PCA costs again at NR28, particularly in terms of the costs to NERL of the PCA scheme relative to the DB scheme.

4.117 There continues to be a high level of uncertainty around future pension costs, particularly DB pension costs given the volatility in valuation assumptions. We are continuing to work in line with the Pensions RPS and the pass-through mechanism as summarised above.

4.118 Table 4.6 below summarises NERL's forecasts of pension costs and the allowances we have made to support this Provisional Decision.

Table 4.6: UKATS NR23 pension costs

£m, 2020 CPI prices	2023	2024	2025	2026	2027	NR23 Total
Defined Benefit- Ongoing Contributions						
NERL BP	64.3	63.5	61.5	60.9	59.2	309.4
CAA Initial Proposals	64.0	62.6	48.0	46.2	45.8	266.5
CAA Provisional Decision	71.7	65.5	47.1	44.6	44.8	273.8
CAA Provisional Decision vs NERL BP	7.4	2.0	-14.4	-16.3	-14.3	-35.7
Defined Benefit- Deficit Repair						
NERL BP	19.1	19.2	19.3	19.5	19.7	96.8
CAA Initial Proposals	19.1	19.2	-	-	-	38.3
CAA Provisional Decision	19.1	19.2	-	-	-	38.3
CAA Provisional Decision vs NERL BP	-	-	-19.3	-19.5	-19.7	-58.5
Defined Contribution						
NERL BP	14.9	16.3	17.8	19.3	20.7	89.0
CAA Initial Proposals	14.7	15.8	17.0	17.9	18.8	84.2
CAA Provisional Decision	15.5	16.6	17.4	18.4	19.4	87.3
CAA Provisional Decision vs NERL BP	0.6	0.3	-0.4	-0.9	-1.3	-1.7
PCA						
NERL BP	11.6	10.2	9.1	8.4	7.8	47.1
CAA Initial Proposals	11.6	10.2	9.1	8.4	7.8	47.1
CAA Provisional Decision	10.6	10.2	9.1	8.4	7.8	47.1
CAA Provisional Decision vs NERL BP	N/A	N/A	N/A	N/A	N/A	N/A

Source: CAA analysis

Non-staff opex

Context

4.119 Non-staff costs represent around 30% of total opex and in NERL's 2023 revised submission, NERL forecasted that non-staff opex would total £765 million over NR23.

Our Initial Proposals

4.120 Based on our own assessment, and informed by Steer's analysis, we made the following adjustments to NERL's forecasts of non-staff opex:

i. the removal of the NERL licence fee, which covers the cost of economic regulation (reflecting a change in approach to recovery rather than an efficiency);

ii. the disallowance of real increases in defined benefit (DB) pension management costs;

iii. the introduction of greater capex-related efficiencies;

iv. the removal of UTM development costs (on the basis that NERL would develop new charging arrangements to cover these costs during the NR23 period); and

v. a reduction in non-staff costs relating to interactions with staff opex adjustments.

4.121 We also sought views on Steer's suggestion that capex across NR23 could be reconfigured to accelerate the realisation of planned legacy escape, and thereby a reduction in legacy systems asset management costs. However, due to NERL's capex programme being behind schedule relative to NR23 business plan forecasts, we decided not assume this legacy escape profile as part of our Initial Proposals.

Summary of stakeholders' views

CAA fees

4.122 NERL agreed with the removal of the economic regulation licence fee. NERL also stated that other statutory charges, as set out in CAP2282, will increase above inflation in 2022/23.[85]

[85] The costs associated with safety regulation and oversight of NERL – and other ANSPs – are charged separately through the CAA's scheme of charges and are consulted on annually.

Defined Benefit (DB) pension management costs

4.123 NERL did not agree with our proposed disallowance of the real increases in DB pension management costs above 2022 levels. NERL stated the new approach it had proposed for these costs was efficient and would reduce overall DB pension costs paid by customers. NERL also said that the CAA's assessment of the step up in DB pension management costs from 2022 to 2023 was based on a misunderstanding, as the costs submitted by NERL for 2022 only covered nine months.

Cost savings from RP3 capex programme

4.124 NERL set out further information on RP3 capex savings which had been included as efficiencies in NERL's NR23 business plan costs. This included details of RP3 CNS projects and BI projects, totalling £13.9 million of savings over NR23.

UTM development fees

4.125 NERL's response was broadly supportive of our proposed approach to the development of a new charging scheme for new users. However, it said we should reverse the opex reduction applied in the Initial Proposals in relation to trials for development relating to new user integration.

Asset management costs

4.126 NERL stated that Steer's assessment that the capex plan for NR23 could be reconfigured to accelerate the realisation of planned legacy escape, and therefore reduce legacy system asset management costs, was not feasible.

4.127 British Airways expressed concern about the significant increase in asset management costs in NR23 which result from dual running of legacy and new systems. IATA said Steer's suggestion of an accelerated legacy programme should be explored further.

NERL's 2023 revised submission

4.128 NERL set out in its 2023 revised submission that its costs are, in aggregate, forecast to move in line with CPI over NR23. Specifically, it noted the following:

- IS support costs have largely followed CPI inflation in previous periods with the premium for adopting new technologies being largely offset by the reducing prices of commodity scale IT costs;
- asset management costs have seen increases relating to the maintenance of legacy systems. This is broadly offset by cheaper pricing for new systems more widely in use in the market;
- costs relating to rectifying and decommissioning software are projected to rise in-line with CPI inflation overall, and NERL is proposing to recategorise some costs from capex to opex;

- facility management costs are projected to see a small growth in prices above CPI inflation over NR23 mainly due to energy prices and supplier staff costs; and
- CAA safety regulation fees will increase at CPI-H –1% per annum.

Table 4.7: Non-staff costs 2023 revised submission

£m, 2020 CPI prices	2023	2024	2025	2026	2027	NR23 Total
NR23 BP	146.4	150.9	150.8	150.9	147.2	746.3
NERL's updated view	152.1	158.8	156.6	151.6	146.3	765.3

Source: NERL submissions

Our views

CAA fees

4.129 We have updated NERL's allowance for safety regulation oversight costs in line with the latest available information on CAA Scheme of Charges for FY23/24.

DB pension management costs

4.130 We have considered the points made by NERL in responding to our Initial Proposals. In terms of the mechanism for the recovery of DB pension management costs, we consider that this is a matter for NERL to reach a view on. In any case, as the approach proposed by NERL has not yet been approved by HMRC, we cannot take a view on this matter.

4.131 Regarding the level of costs, in light of the GAD analysis in its report which accompanied our Initial Proposals, we consider that NERL's administrative costs are high relative to benchmarks, and therefore it is appropriate to set the allowance for these costs in line with the approach in our Initial Proposals, subject to correcting 2022 costs to reflect full-year actuals.

Cost savings from RP3 capex programme

4.132 Although NERL provided more evidence of efficiency projects from RP3 that have been included in its plan, there remain projects from RP3 where efficiencies have not been shown to be included within NERL's plan, for example the Preswick Centre Accommodation project. Therefore, it is appropriate to assume that these efficiencies should be applied to NERL's non-staff cost allowance.

UTM development fees

4.133 It is important that the approach to economic regulation of NERL does not create undue obstacles to innovation and the development of new sectors and we support NERL in its desire to develop a charging approach for new users. However, allowing new user development and integration costs to be met by conventional users in the medium term may not be consistent with our duty to further consumer interests and would in effect be a cross subsidy. Therefore, we have continued to exclude these costs from our baseline allowance and have assumed that NERL will develop new charging arrangements in NR23 to recover these costs. We discuss new user costs and charges further in chapter 7.

Asset Management Costs

4.134 NERL has made significant changes to the timing of its capex programme since its business plan submission. The accelerated approach to legacy escape is no longer viable. We discuss our approach to regulating NERL's capex programme further in the capex section of this chapter.

Updated submission from NERL

4.135 We acknowledge that NERL's costs have moved since submission of their business plan. We consider that its costs have moved broadly in line with CPI. NERL has also demonstrated that some cost items vary from its business plan for other reasons for example accounting treatment changes and other macro-economic factors such as foreign currency exchange rates.

4.136 Therefore, it is appropriate to allow for increases in costs that are aligned with increases in CPI. For variances other than changes in CPI, we have allowed for these on a case by case basis where NERL has provided sufficient evidence that these movements are justified. For example, we have updated costs related to CAA regulation and safety fees. We also explain below, in the section on capex, why we have disallowed the change from capex to opex related to rectifying and decommissioning software.

Our Provisional Decision

4.137 Our Provisional Decision allows for UKATS non-staff opex in NR23 of £741 million (3% below NERL's updated non-staff opex forecast).

4.138 Table 4.8 shows the non-staff opex allowances we have used for our Provisional Decision, compared with NERL's business plan and our Initial Proposals.

Table 4.8: NR23 non-staff costs

£m, 2020 CPI prices	2023	2024	2025	2026	2027	NR23 Total
NERL BP	146.4	150.9	150.8	150.9	147.2	746.3
CAA Initial Proposals	145.3	149.3	149.4	148.2	144.4	736.6
CAA Provisional Decision	145.8	150.1	150.3	149.5	145.6	741.2
CAA Provisional Decision vs NERL BP	-1	-1	-1	-1	-2	-5

Source: CAA calculations, NERL submissions

Capex

Context

4.139 NERL submitted a capex programme as part of its NR23 business plan which was substantially smaller than its RP3 plan,[86] as a result of the actions taken during 2020 to 2021 in response to covid-19 (including reduced delivery capacity due to implementation of the VR programme and the release of contractors) and the re-planning of the RP3 baseline investment plan.

4.140 Its business plan set out three main objectives for its investment portfolio for NR23:

i. sustainment (which includes sustaining existing services; ensuring resilient air traffic management services);

ii. airspace (which includes the following programmes: Delivering Increased Network Capacity, Enhanced Safety, Improved Environmental Performance & Reduced Fuel Burn for Customers); and

iii. deploying Single European Sky ATM Research (SESAR) (replacing ageing infrastructure; and consolidating to a single platform, with improved tools and standardising operations).

4.141 In the NR23 business plan, NERL proposed capex totalling £551 million for UKATS. This was split into a number of capex programmes, as set out in the Table 4.9.

Table 4.9: NR23 business plan capex proposal

£m, 2020 CPI prices	2023	2024	2025	2026	2027	NR23 Total
DP En Route & Voice	26	10	1	0	0	**37**
Common platform	18	17	29	23	34	**121**
Sustainment and surveilance	36	45	43	43	40	**207**
Airspace & operational service enhancements	21	22	18	14	8	**83**
Business resilience (information solutions)	9	8	7	5	7	**36**
Business resilience (property and facilities management)	7	3	2	2	2	**16**
ATC training	0	2	2	2	0	**6**
Risk and contingency	0	0	9	18	18	**45**
Total	**117**	**107**	**111**	**107**	**109**	**551**

Source: NERL submission

[86] As per NERL's Business Plan, the original investment plan for NERL's RP3 portfolio was £769 million (2020 prices), broadly £150 to 160 million per year over five years. By comparison, the NR23 investment plan, as included in the February 2022 Business Plan, averaged £115 million per year.

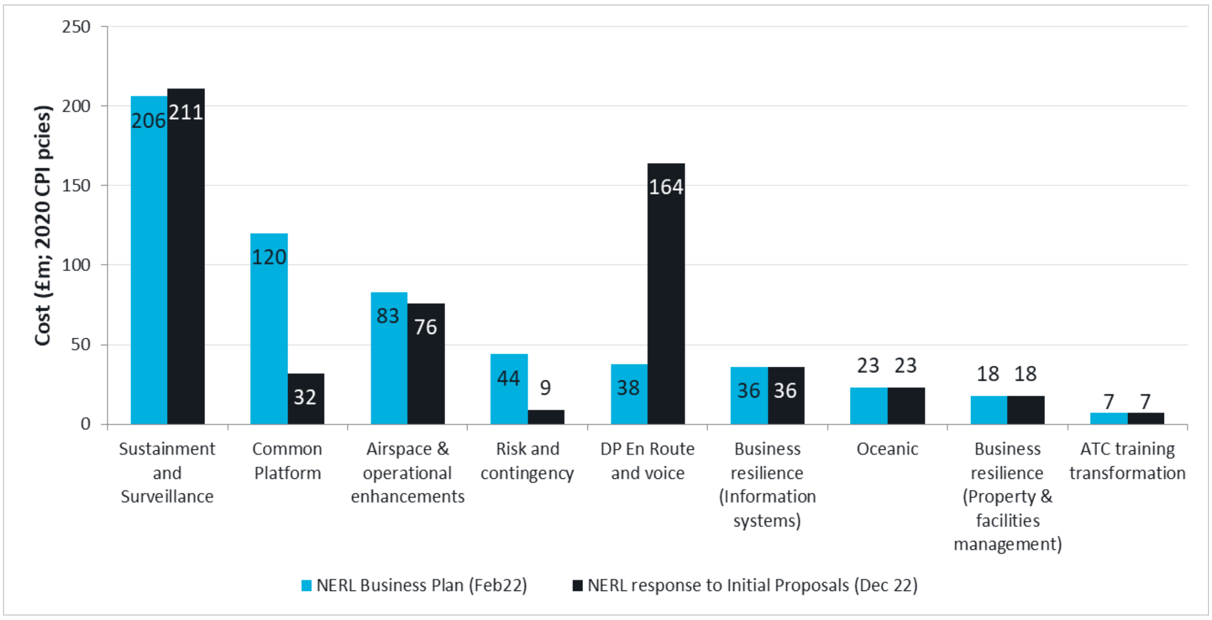
4.142 This was the plan that we, and our consultants Steer, reviewed as part of the assessment which informed our Initial Proposals.

4.143 During June to July 2022, as part of the Service and Investment Plan (SIP) consultation process, NERL held a series of meetings to update stakeholders on the DP En Route and Voice programme (a key part of the upgrade of its technology systems) and presented some options to progress the programme. On 4 July 2022, at the iSIP22 customer consultation session, NERL presented a revised proposal for DP En Route.

4.144 The updated plan delays full delivery of DP En Route to 2027, two years later than originally envisaged in its NR23 business plan. On 29 July 2022, NERL submitted the final version of iSIP22, where it explained that costs for the emerging revised plans for DP En Route had increased relative to the previous baseline and were expected to be approximately £335 million over the RP3 and NR23 periods (2020 to 2027), relative to a range of between £260 million to £290 million for the equivalent period in the draft iSIP22.

4.145 Figure 4.2 below shows the differences between NERL's NR23 business plan capex programme, and the programme submitted as part of NERL's 2023 revised submission. These figures relate to the NR23 (2023 to 2027) period only.

Figure 4.2: comparison of NERL NR23 Business Plan and 2023 revised submission



Our Initial Proposals

4.146 We reviewed NERL's capex proposals as set out in its NR23 business plan. We also commissioned our advisors Steer to review NERL's proposals.

4.147 Overall, we were supportive of the objectives NERL had set out for its capex programme, and in particular the goal of upgrading its technology systems and progressing airspace modernisation.

4.148 Steer's assessment of NERL's capex plan focussed on the upgrade of technology systems (to achieve what is known as "legacy escape" by turning off older systems). Steer proposed two alternative scenarios for legacy escape, and recommended adoption of its "stepwise" scenario which brought forward expenditure from NR28 into NR23, with associated reductions in sustainment spend (due to legacy systems being turned off). Steer's scenario was based on a series of assumptions around how legacy escape could be delivered.

4.149 In light of the further delays to DP En Route (as well as other programmes), in the Initial Proposals, we did not adopt the Steer "stepwise" scenario, as this did not appear to be deliverable by NERL.

4.150 Informed by Steer's analysis of risk and contingency allowances in NERL's business plan, in our base case we proposed to adjust the allowance for NR23 to be in line with the RP2 and RP3 benchmarks. This amounted to a downward adjustment of £17 million over NR23.

4.151 In light of the significant changes NERL was proposing to its plan, we highlighted our concerns about the increase in costs reported in the final iSIP22 document, and the continued delay to the DP En Route programme, and associated impact on consumers.

4.152 We emphasised the need for NERL to provide better information around its NR23 capital plan as part of its response to our proposals, including in terms of the impact of the delay to the DP En Route programme on other costs (capex and opex) as well as on benefits to consumers (in NR23 and in the longer-term).

Summary of stakeholders' views

4.153 NERL submitted a revised capex plan in response to our Initial Proposals, and stated that delays to the programmes in this revised plan were not signs of inefficiency.

4.154 While the total level of expenditure remained the same in 2020 CPI prices over NR23 (£574 million at a total NERL level; £551 million for UKATS), there were several changes to the forecasts for individual programmes, and their milestones. NERL said that it has resourced increases in DP En Route costs through reductions in Common Platform and Risk and Contingency budgets. More specifically, in NERL's revised capex plan:

- DP En Route costs had increased significantly (by £126 million, an increase of 331%) over NR23. NERL said it had "replanned" the programme, reflecting delayed implementation. This represents a significant cost uplift. [87]

[87] DP En Route is a continuation of the first element of the DSESAR programme, started in RP2, aimed at

- There was a reduction in expenditure on Common Platform (by £88 million or 70%), which was delayed to NR28, as DP En Route needs to be completed first.[88]
- There was a significant reduction in risk and contingency (by £35 million or 80%), which now accounted for only 1.5% of the plan compared to the CAA's IP proposal of 5%, based on RP2 and RP3 benchmarking.
- There were small changes in airspace (uncertainty about timing of FASI consultation) and sustainment and surveillance budgets.

4.155 In its response to Initial Proposals, NERL said it did not agree with our approach of reducing the allowance for risk and contingency in NR23, but we note that its revised capex plan, submitted alongside its response to Initial Proposals, reduced the allowance more than we had proposed, to approximately 1.5% of the total programme (vs 5% in our Initial Proposals and 7.5% in NERL's business plan).

4.156 NERL argued that it has less capacity to deliver capital expenditure than prior to its covid-19 pandemic restructuring, and said the plan is broadly 25% less, on an equivalent cost per year basis than the RP3 capex plan.

4.157 British Airways, easyJet and IATA all emphasised the importance of NERL delivering on the airspace modernisation programme.

4.158 British Airways recognised reduced capability of NERL to deliver capital programmes and had concerns about the balance between sustainment and modernisation. It is concerned about the need to replan DP En Route and does not consider the options NERL presented provided sufficient information to allow for informed choices to be made.

4.159 Airlines were also concerned about the cost increases and DP En Route delay reported in SIP23.

4.160 In submissions in early 2023, NERL acknowledged that the total level of capex it was forecasting was lower than £574 million for the NR23 period, due to the reclassification of some capex items as opex. NERL's most recent submission to the CAA (3 May 2023) included a total capex plan of £547 million (with a total of

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updating NERL's core ATM infrastructure, replacing legacy systems and deploying a modern and capable new system to support new operational concepts and modern airspace designs.

[88] As per NERL's business plan, the Common Platform means the deployment of a target collaboration common version of the current iTEC across its upper and lower airspace on one architecture. This incorporates activity previously planned as 'DP Lower' in the RP3 business plan and has continued in RP3 under the iTEC collaboration programme. NERL inteds for this programme to leverage the modernised architecture and technologies already delivered, and planned for, by the DP En Route programme.

£525 million for UKATS). These reductions are distributed across most of the capex programmes in its portfolio. NERL explained that the reason for the difference to its 2023 revised submission was:

- the reclassification of £29 million of capitalised staff costs as opex, due to updates to P&L pension accrual rates to reflect the latest discount rates, which reduces capitalised labour costs. Following queries, NERL clarified that this does not affect cash pension costs; and
- the reclassification of some costs relating to an IT project from capex (in the NR23 business plan) to opex, as the IT system would not be capitalised and instead procured as 'software as a service'. NERL stated that the capex cost of the project has remained the same as its business splan (£10 million), but it now expected an additional £15 million cost in opex reflecting an overall increase in the estimated costs of the project as its plans have matured.

Our views

4.161 NERL's updated NR23 capex plan, set out in its response to Initial Proposals, the SIP23 document, and further submissions since, creates significant challenges for setting capex allowances for the NR23 period. This is because:

i. NERL's updated plan (December 2022) has broadly similar costs to its February 2022 plan, however with significant changes to the allocation of spend to different programmes or projects. A more recent update, as part of NERL's 2023 revised submission, shows a reduction of £28 million in the NR23 capex plan resulting from a reduction in capitalised costs;

ii. NERL says that for DP En Route, "in terms of outcomes and benefits, the overall scope of the plan is unchanged from our proposed business plan". We consider this is not accurate given the significant revisions to the capex programme in the business plan. NERL's response does not discuss the impact of reprofiling the Common Platform programme;

iii. continued delays and changes to the DP En Route programme, and a significant reduction in the forecast NR23 spend in relation to the implementation of the Common Platform are concerning to stakeholders and the CAA, particularly in terms of potential impacts on consumers;

iv. there are significant increases in the NR23 costs associated with the DP En Route programme, but with NERL stating the benefits are unchanged. With many of the benefits are being delivered later (including in NR28), NERL has proposed new service quality targets that deteriorate during NR23; and

v. stakeholders have expressed concerns with NERL's ability to deliver change, including in terms of delivering the capex plan set out in its SIP consultation.

4.162 We asked NERL to provide evidence around the need to re-classify capex as opex in its most recent submission for the purchase of an IT system. However, the evidence NERL provided was not specifically related to the IT project, but rather a more general consideration of when costs of this nature might need to be classified as opex. For this reason, we are not persuaded that there is a justification for NERL increasing its opex costs.

External review of NERL's NR23 revised capex plan

4.163 After we received responses to Initial Proposals, we wrote to NERL setting out our concerns around the changes it had made to its capex plan since submitting the NR23 business plan, and stating that we would commission an external review of NERL's NR23 capex plan. We have appointed Egis to carry out this review.

4.164 The scope of this review, which is currently ongoing, is to consider the key capex programme included by NERL in its NR23 plan, namely the DP En Route capex programme, and associated capex programmes, in particular the Common Platform, with the aim of assessing the robustness of the approach taken by NERL to revising these programmes during 2022, and the extent to which the revised plan is efficient, deliverable, and is expected to deliver benefits that further the interests of customers and consumers.

4.165 The outputs of this review will inform potential further guidance and monitoring of NERL's capex delivery during the NR23 period and aspects of an *ex post* efficiency assessment of capex associated with the DP En Route programme, once the programme is complete. We have set out in the section below the overall approach, including timescales, for the work to develop a strengthened capex monitoring and incentive framework.

Our Provisional Decision

4.166 The significant changes NERL has made to its capex plan (including in terms of reclassification of capex as opex), have meant we have reconsidered the approach to setting capex allowances for our Provisional Decision, relative to our Initial Proposals.

4.167 In light of the reductions made by NERL to the risk and contingency allowance for NR23, we are not applying any further adjustments to NERL's risk and contingency allowance.

4.168 Having considered the rationale put forward by NERL for some of the other movements in its capex plan, we have reached the following Provisional Decisions:

- On the proposed reclassification of capitalised labour from capex to opex, having queried NERL and assured ourselves this will not result in any double counting between the opex and capex building blocks, we are allowing the capex reduction proposed by NERL in relation to capitalised staff costs (with a corresponding increase in staff opex).

- On the proposed reclassification of £15 million of costs of an IT system as opex, we consider we have insufficient information and therefore we have re-allocated these costs to capex (leading to an increase in capex of £15 million).

4.169 As explained in chapter 3, we will undertake an *ex post* review of key RP3 and NR23 programmes as part of our overall review of NR23 capex, or at the earliest opportunity for those programmes that are not complete by the end of the NR23 period. We expect this review to focus on key programmes (including but not limited to DP En Route, Common Platform and airspace), and in particular any programmes where cost during RP3 exceeded the allowances in the CMA determination.

4.170 Table 4.10 sets out the overall capex allowance we proposed in our Initial Proposals, and the capex allowance we are setting as part of this Provisional Decision.

Table 4.10: NR23 UKATS capex

£m, 2020 CPI prices	2023	2024	2025	2026	2027	NR23 Total
NERL BP	117.0	107.0	111.0	107.0	109.0	551.0
CAA Initial Proposals	117.0	113.6	108.6	95.6	97.6	532.5
CAA Provisional Decision	97.0	110.9	114.0	110.1	108.0	539.9
CAA Provisional Decision vs NERL BP	-20.0	3.9	3.0	3.1	-1.0	-11.1

Source: CAA calculations, NERL submissions

4.171 As set out in the table above, our Provisional Decision provides NERL with a capex allowance for NR23 which is higher than the envelope it included in its most recent capex submission (£535 million for UKATS), due to the classification of costs from an IT system as capex, but below NERL's business plan. Given the strategic importance of key parts of NERL's capex programme and the high degree of uncertainty, we consider this approach is consistent with our primary duty on safety and our secondary duties, including to further the interests of customers and consumers.

4.172 Given our overall concerns around NERL's revised NR23 capex plan described above, we have provisionally decided to set out a plan for developing a strengthened capex monitoring framework for NR23 and explore appropriate incentives around capex efficiency and delivery. This includes considering the scope for introducing ex ante incentives at NR28 (or before if appropriate, subject to licence modifications). This is described in the next section.

Monitoring and incentivising capex delivery in NR23 and beyond

Context

4.173 As explained above, NERL's revision of costs and timings for the NR23 capex plan, between the February 2022 business plan and NERL's response to Initial Proposals (and its subsequent 2023 revised submission) has raised concerns for both the CAA and stakeholders. This is due to the rephasing and significant increase in costs associated with certain projects, notably DP En Route, the Common Platform and airspace modernisation. Many outputs have been delayed until NR28 and key milestones for DP En Route continue to be adjusted between SIP submissions.

4.174 We were disappointed to see this scale of change to NERL's plan, particularly given the lack of analysis we have seen to date to support these changes, such as showing the impact of these changes on costs and benefits across both opex and capex in NR23 (despite requesting this from NERL). While we note that plans will need to change and be updated over time for better information, the changes were made by NERL only a few months following submission of the NR23 business plan, which raised concerns around the robustness of NERL's submission.

4.175 Given the recent changes to the capex programms and previous changes to plans for the delivery of technology transformation programmes, we are also looking for additional assurance that NERL's revised capex programme is deliverable.

4.176 We commissioned the external review by Egis and are considering implementing greater monitoring or strengthened incentives linked to capex delivery, to incentivise the timely delivery of benefits to customers and consumers. This would be alongside the capex engagement incentive already in place as part of NERL's licence. We set out further details on this capex engagement incentive in chapter 7.

4.177 We note that while NERL has sought to explain how these changes came about (either as part of the SIP process or as part of NERL's engagement with the Egis review) and the level of governance around them, we are concerned that NERL has not yet provided sufficient evidence to show its assessment of the knock-on impacts of changes on NERL's other capex programmes, operations and opex, and the benefits to its customers and consumers. The Egis report, which we expect will be published later in summer 2023, will set out more analysis around the process and evidence base that NERL used to inform these changes.

4.178 We are not, as part of this Provisional Decision, setting out a revised monitoring and incentive framework. We are however committing to undertake further work during NR23 to consider and, where appropriate, put in place a stronger monitoring framework. We will also start work to consider options for introducing incentives for the delivery of key strategic capex programmes. We will work with NERL, airlines and other stakeholders, including through formal consultation, to understand their views on these options. We will also consider the findings of the Egis capex review, which will be a key input into our work on the scope of monitoring and incentives.

4.179 We set out below our current thinking in terms of the timing and scope of this work, though we expect this to evolve in light of stakeholder views and Egis' findings.

Timing

4.180 For NR23, NERL is implementing a "2+5" planning approach for its capex programme. This approach should result in more certainty in the short term around NERL's capex plan and budget, whilst providing flexibility for future years of the price control. In light of this approach, our view is that we should implement any changes to the monitoring and incentive framework after the first two years of NR23, which would also allow us to take into consideration the findings of the Egis review and to fully consult with stakeholders over options for possible changes to provide more a effective monitoring and incentive framework.

4.181 Ahead of implementing any changes, we will consider in more detail, the requirements that we should put on NERL for additional reporting around its capex delivery, and the need for any specific delivery incentives attached to the NERL capex programme. We will consider interactions with the existing enhanced capex engagement incentive and reporting (such as for SIP), to ensure the capex framework (including the "2+5" planning approach introduced by NERL) works effectively as a whole and NERL is not providing duplicate or disproportionate reporting information.

4.182 In order to provide all stakeholders with certainty and transparency around our current thinking, we have set out below indicative timescales for undertaking this work. We welcome any requests from stakeholders to discuss our approach over the coming months.

4.183 On the monitoring framework, we would expect to implement any improvements during NR23, subject to any necessary licence modifications being put in place.

4.184 However, we expect a longer time will be required to develop robust and effective delivery incentives. We will consult on the options during NR23, including on the timing of implementation. While we do not rule out implementing improvements to incentives during NR23, we will consider whether it is appropriate to implement any improvements from NR28 as part of the wider review of the regulatory framework for NR28.

4.185 Our indicative timescales for developing a strengthened capex monitoring and incentive framework are:

- by August 2023: Egis capex review concludes and is published;
- Autumn 2023: stakeholder engagement on Egis capex review and early CAA thinking;
- Q1 2024: CAA consultation on principles and approach for a strengthened monitoring and incentive framework;
- Summer 2024: CAA consultation on guidance for a strengthened monitoring framework and principles/design of capex incentives; and
- January 2025: strengthened monitoring framework comes intro force; potential further policy development in relation to capex incentives.

4.186 Over the period that we are proposing to undertake this work, NERL will continue to deliver and develop its NR23 (and beyond) capex programme, and will also continue to engage with stakeholders through the SIP process.

Scope

4.187 In line with the approaches seen in other regulatory frameworks, at this early stage we envisage that the scope of capex monitoring requirements could involve increased reporting standards (e.g. adding a broader range of metrics to the quarterly capex dashboards NERL already produces for all its capex programmes) for a subset of NERL's capex programmes, which may be linked to new or enhanced incentives in due course.

4.188 Traceability of changes to capex programmes, and key metrics associated with project delivery have not always been consistently provided by NERL or on a timely basis, and therefore not easy to monitor by the CAA and stakeholders, as identified by the Independent Reviewer reports.[89]

4.189 Increased monitoring of capex programmes may be required if milestones are delayed during the regulatory period with the requirement to provide a more detailed progress report on a recurring basis. These reports would be subject to publication with commentary by the CAA to ensure greater transparency to stakeholders.

4.190 We will consider the current concerns about NERL's capabiltiy to deliver capex, material changes to capex milestones, and its latest plan (which underpins the

89 See for example NATS (EN ROUTE) PLC SIP: INDEPENDENT REVIEWER REPORT, Review of SIP21, 25 March 2023 (several instances). Independent Reviewer Report (caa.co.uk)

capex envelope set out in our Provisional Decision) as part of our work to further develop the monitoring and incentive framework.

4.191 We will consider whether a specific trigger in the event of missed milestones is required for example. This type of trigger mechanism is built into other aviation regulatory frameworks, notably that at Dublin airport. It also follows a similar staged approach to investigation of Network Rail capex delivery issues, as implemented by the ORR.

4.192 As explained above, we expect the findings of the Egis capex review, as well as further engagement with stakeholders, to inform the development of a strengthened monitoring and incentive framework, so we are not able to say at this stage what that framework will look like. However, we do anticipate that in developing the framework, we will need to consider some or all of the following:

- reviewing the existing scope of reporting by NERL to the CAA and stakeholder around its capex programme, and identify any gaps;
- identifying metrics to address gaps – we note that these may not only be metrics relating to delivery, but may cover other aspects, such as the process followed by NERL;
- identifying the threshold for reporting (in terms of size or nature of the programme / project) or other criteria for selecting the specific programmes where enhanced reporting will need to be put in place;
- considering the frequency of reporting and whether this is to the CAA / stakeholders only, or more publicly transparent; and
- identifying potential CAA intervention in relation to poor performance – this will be the starting point of thinking about any kind of reputational or other delivery incentives. We will check that there is no duplication of new incentives with the enhanced capex engagement incentive.

4.193 We will develop early thinking and options around these issues to support engagement with stakeholders later this year.

Non-regulated costs and revenues

Context

4.194 Under the single till calculations that are used to set the price control, our forecast of the revenue that NERL earns from its non-regulated activities (activities other than UK en route, London Approach and Oceanic services) is deducted from regulated revenue requirements in calculating its price control revenue and Determined Costs. This non-regulated revenue consists of:

- Ministry of Defence (MoD) revenue, mainly through the FMARS contract;

- services provided to North Sea helicopters, servicing the offshore oil platforms in the North Sea;
- services provided to NATS Services Ltd (NSL). This revenue does not encompass the airport terminal air navigation services (TANS), which NSL receives directly from its contracts with airports; and
- other revenue from trading directly with external customers. Historically it also included income from SESAR research and development activities, which no longer forms part of Determined Costs and is instead passed to customers via a price adjustment in line with Eurocontrol charging principles.

4.195 Throughout this chapter, the UKATS costs we have presented include London Approach-related costs. This is because we assess en route and London Approach related costs at a total level (UKATS), and then allocate relevant costs and revenues derived from this to London Approach, which are therefore not part of the UK en route price control. In this section, non-regulatory revenues associated with London Approach services are not included in the figures presented.

4.196 According to NERL's February 2022 business plan, non-regulatory revenues for UKATS fall from around £95 million in 2019, to around £73 million per year over the course of NR23. NERL explained that approximately £12 million of that reduction had already been anticipated in the RP3 plan. In its NR23 business plan, NERL states that the remaining reduction (approximately £10 million per annum) is mainly due to its overall cost base being lower than the RP3 plan, reflecting cost savings which have been built in following the response to the impact of covid-19.

4.197 NERL stated that the approach to allocating costs to each of the service lines is materially the same as that in its RP3 plan. This approach was reviewed in depth by our consultant CEPA at the RP3 review and found to be overall fit for purpose.

Our Initial Proposals

4.198 On the basis that NERL used the same approach to allocating the costs of non-regulatory revenues as at RP3 and having undertaken a high-level review of the forecast revenues and associated costs, we did not consider that any specific adjustments were required to non-regulatory revenues.

4.199 However, to reflect the adjustments we proposed to NERL's opex compared, with its business plan, we proposed a relatively small reduction of approximately £0.05 million in NERLs' forecast non-regulatory revenues over the course of NR23, in the base case. In the low case, the reduction was around £0.6 million due to the lower opex costs in the low case. These reductions relate to FMARS MoD income only.

Summary of stakeholders' views

4.200 NERL said that the FMARS contract has a gainshare arrangement whereby a proportion of the efficiencies made by NERL are passed on to the customer through reduced charges to MoD. The exact size of this gainshare amount is determined by how much lower costs are than the baseline level in the contract. NERL said that in applying the adjustment to reflect proposed opex efficiencies, we had overlooked a detail in the operation of the gainshare later in the NR23 period which would have resulted in a further reduction in FMARS income of £0.4 million in 2027 only.

4.201 NERL also said that Managed Service Agreements (MSAs), which share the cost of central support functions such as Finance, HR, and Facilities Management between NERL and NSL, and inter-company contractual agreements (ICAs) for traded services from NERL to NSL are based on labour and service costs to deliver those services. The costs and revenues of these would be affected by our proposed reductions relative to NERL's forecasts in its NR23 business plan. Our proposed reductions to staff costs and cash pension costs (excluding deficit repair) would therefore result in a reduction in inter-company revenues by a corresponding £2.6 million across NR23.

4.202 No other stakeholders commented on our proposals for non-regulated costs and revenue.

Our views

4.203 As explained earlier in this chapter, since submitting its response to our Initial Proposals, NERL has submitted updated opex estimates, including updates to its estimates of non-regulated revenues. NERL set out an increase in non-regulated revenues, relative to its NR23 business plan, or around £1.1 million over the NR23 period.

4.204 We note that at a high-level, NERL's opex forecast for the NR23 period has not changed significantly since its business plan submission. The key change in relation to staff opex relates to a reallocation of costs which were previously capitalised as opex. Therefore, we consider that the best starting point for assessing NERL's non-regulated revenues continues to be its February 2022 business plan.

4.205 In relation to the points raised by NERL in response to our Initial Proposals, our view is as follows:

i. For the Initial Proposals, we calculated the adjustment to FMARS revenues resulting from efficiencies applied to NERL's cost base using the FMARS ready reckoner provided by NERL, consistent with the approach taken at RP3. NERL's response suggests that this calculation is a simplification (as it does not capture all the possible adjustments contained in NERL's contract with the MoD). Our adjustment is applied at an overall cost category level (i.e. staff costs, non-staff costs), and we do not consider it is appropriate to seek to reflect all possible consequences of these reductions as part of NERL's allowance for non-regulated revenues, and change our approach from the one applied at RP3. We also note that as the adjustments we are applying to NERL's staff opex are overall lower, relative to the NR23 business plan, than those applied at Initial Proposals, there is a lower likelihood that the additional adjustment NERL calculated would triggered during NR23.

ii. In relation to the second adjustment proposed by NERL, again we note that as per our RP3 approach, the only adjustment we made to reflect other reductions in NERL's cost base were to MoD (FMARS) incomes. Therefore, we do not propose to adjust the non-regulated revenue allowance in relation to MSAs.

Our Provisional Decision

4.206 We have re-run our analysis of FMARS revenues to reflect the updated position in relation to NERL's cost base as per this Provisional Decision. This results in a smaller reduction in MoD related non-regulated revenues than previously proposed in our Initial Proposals. In addition, we have also updated the pre-tax WACC figure used in the FMARS ready reckoner, and this value is higher than the one used for Initial Proposals, which means that the "profit" element NERL can recover is higher. Overall, this leads to a small reduction (around £0.018 million) in our forecast of NERL's non-regulated revenues relating to UKATS during NR23. Due to the magnitude of this reduction, this is not visible in the summary figures presented in Table 4.11.

Table 4.11: NR23 UKATS non-regulatory revenues

£m, 2020 CPI prices	2023	2024	2025	2026	2027	NR23 Total
NERL BP	73.1	72.5	72.7	72.5	72.2	363.1
CAA Initial Proposals	73.1	72.5	72.7	72.5	72.2	363.1
CAA Provisional Decision	73.1	72.5	72.7	72.5	72.2	363.1
CAA Provisional Decision vs NERL BP	N/A	N/A	N/A	N/A	N/A	N/A

Source: CAA calculations, NERL submissions

Next steps and implementation

4.207 This chapter sets out our Provisional Decision on the efficient cost allowances for UKATS in NR23, which are summarised in Table 4.12. These Determined Costs are reflected in the proposed modifications to NERL's licence in CAP 2553d appendix H.

Table 4.12: UKATS costs

£m, 2020 CPI prices	NR23 BP	CAA Initial Proposals	NERL updated	CAA Provisional Decision	CAA PD vs. NR23 BP
Staff costs	1,324.7	1,296.2	1,330.8	1,322.2	-2.5
Pensions:					
Defined benefit	406.2	304.8	406.2	312.1	-94.2
Defined contribution	89.0	84.2	91.1	87.3	-1.7
PCA	47.1	47.1	47.3	47.3	0.2
Non-staff opex	746.3	736.6	765.3	741.2	-5.1
Total opex	**2,613.4**	**2,468.9**	**2,640.8**	**2,510.1**	**-103.2**
Capex	**551.0**	**532.5**	**524.9**	**539.9**	**-11.1**

Source: CAA calculations, NERL submissions

4.208 In this Provisional Decision, we have also set out our plans to develop a strengthened capex monitoring and incentive framework for NR23 and beyond. We intend to commence this work from Autumn 2023, following the publication of the Egis review of NERL's capex plans.

4.209 The Egis review is considering key capex programmes included by NERL in its NR23 plan, such as DP En Route, to assess NERL's approach to planning and whether the revised plan appears to be efficient, deliverable, and is expected to deliver benefits that further the interests of customers and consumers. The outputs of this review will inform the potential capex monitoring and incentive framework, as well as the *ex post* efficiency assessment of capex associated with the DP En Route programme, once the programme is complete.

Chapter 5

Financial framework

Introduction and context

5.1 In setting the price controls, we assume that investment is funded by additions to NERL's Regulatory Asset Base (RAB), with price control revenues then reflecting our projections of regulatory depreciation on the RAB and a regulated return (based on our estimate of NERL's real WACC i.e. weighted average cost of capital) on the RAB. We also make an allowance for corporation tax and update the RAB and price controls for general price inflation. This framework allows NERL to recover the efficient financing costs of its capex programmes over the longer-term. It also means that the costs of investment do not need to be recovered in the year that the investment is incurred and we can smooth the prices that NERL can charge its customers over time.

5.2 Our approach to implementing this framework is consistent with our secondary statutory duties under the TA00, including ensuring that NERL will not find it unduly difficult to finance its licensed activities (which we refer to as a 'financeability duty' or 'financing duty') as it supports NERL in making the investment necessary to ensure that its ATC activities are safe, resilient and efficient. It also furthers customer and consumer interests as we allow only for the efficient costs of financing and so charges are no higher than necessary.

5.3 This chapter sets out our Provisional Decisions in relation to each of the core elements of the financial framework that are together relevant to our consideration of financeability and ensuring that costs are efficient. These elements are:

- the RAB;
- regulatory depreciation;
- inflation;
- corporation tax; and
- the WACC (of which further detail is provided in appendix C).

5.4 For each of the above areas, this chapter summarises our Initial Proposals and the responses which we received on these areas to our Initial Proposals. It then describes our view on the matters raised by respondents and sets out our Provisional Decision.

5.5 Our assessment of financeability and benchmarking of charges is included in chapter 6.

RAB

Our Initial Proposals

5.6 In paragraph 5.10 of our Initial Proposals, we said that we intended to retain a RAB-based price control given that this is central to the funding of efficient investment. The RAB is a measure of the amount invested by NERL to provide services to users that is yet to be recovered from users through allowances for regulatory depreciation. The use of a RAB furthers the interests of customers and consumers by:

i. allowing for a smooth profile of charges over time; and

ii. securing that NERL can finance its activities by facilitating return on, and depreciation of, new efficient investment necessary to deliver services to customers and consumers. We note that during the pandemic and the sharp fall in its revenues NERL was able to retain a strong investment grade credit rating and finance necessary investment in its regulated activities.

5.7 Our projections of NERL's RAB for NR23 were higher on average than NERL's business plan forecasts, primarily reflecting our assumption of a longer recovery period for the RP3 TRS revenue than NERL proposed (which means that the carrying value of the unamortised TRS allowance in the RAB is higher for longer), partly offset by our lower allowances for capex. The RAB included:

I. additions for capex and reductions for allowed regulatory depreciation (that is, on fixed assets);

II. movements in working capital. This includes the allowance for TRS revenues to be recovered from 2023;

III. pass-through of additional pension costs from past control periods, including capitalised finance costs; and

IV. other adjustments such as RPI-CPI wedge reconciliation, spectrum costs variance and tax clawback.

5.8 We said that we intended to retain RPI indexation of the RAB for NR23, consistent with our approach for the H7 price control and with NERL's proposals. However, we said we would consider moving to CPI indexation for NERL's RAB at NR28.

5.9 To facilitate greater transparency we said that we would publish draft RAB rules which we would finalise when publishing our Provisional Decision for NR23.

Summary of stakeholders' views

NERL response to the Initial Proposals:

5.10 In its response, NERL:

i. agreed with our view that the use of the RAB for the recovery of TRS revenues is a pragmatic way of ensuring that NERL can continue to finance its licenced activities efficiently and provides a mechanism to help avoid an undue spike in NERL's charges that could raise affordability concerns for NERL's customers;

ii. argued that the approach of including the TRS revenues arising from 2020 to 2022 volume shortfalls due to the impact of the Covid-19 pandemic within the working capital balance creates complexity and a lack of transparency;

iii. said that having a specific line item for these TRS revenues would address its concern that the value of the RAB in NERL's regulatory accounts would not be consistent with the proposed treatment of the RAB at the end of NR23. NERL stated that our draft RAB rules required working capital to reflect International Financial Reporting Standards (IFRS), which would create a tension with our wider approach to calculating the RAB;

iv. asked for clarity in our Provisional Decision regarding the proposed approach for working capital as set out in the RAB rules. They said that the approach set out in the Initial Proposals[90] could be interpreted as meaning that working capital movements in the RAB will be fixed at NR23 model forecast levels for the entire NR23 period rather than being updated for actual results;

v. objected to the change in the calculation of the average RAB in the Initial Proposals and claimed that discounting the closing RAB by the WACC is flawed as it assumes that NERL's revenue is earned on 1 January rather than throughout the year and understates the fair allowed return over NR23; and

vi. also raised some specific modelling queries regarding the Price Control Model (PCM), including in relation to the RAB (these are addressed in Appendix D: Summary of PCM Responses).

5.11 British Airways supported the RAB policy that NERL is compensated for efficient financing and efficient investment of capex. British Airways also reiterated its response to the NERL business plan that CPI indexation of the RAB should be introduced for NR23.

90 CAP2394 paragraph 5.15

5.12 Virgin Atlantic supported the approach to the RAB as set out in the Initial Proposals.

5.13 Airlines (including easyJet, Ryanair and Loganair) said that they did not support the inclusion of all or some of the TRS revenues in the RAB.

Our views

5.14 We have considered the views from stakeholders on the RAB. For our Provisional Decision, our overall policy regarding the RAB is broadly unchanged from our Initial Proposals, but we have made some changes to reflect comments raised by stakeholders, as set out below.

Treatment of TRS in the RAB

5.15 In response to comments from NERL, we have changed how the TRS amount from 2020 to 2022 is presented in the RAB to provide greater transparency as to how the TRS amount is calculated and recovered. In particular, we have separated the TRS amount from other changes in working capital, to be presented as a separate line item in the UKATS RAB. We have made corresponding changes in the updated RAB rules and clarified that the TRS line item will not need to reflect IFRS accounting rules.

RAB indexation

5.16 As set out in our Initial Proposals, we will retain RPI indexation of the RAB for NR23, which is consistent with our approach for the H7 price control and with NERL's business plan. We will consider moving to CPI indexation for NERL's RAB at NR28.

5.17 We also propose to retain the RPI-CPI wedge true-up mechanism in the RAB rules, which provides protections for NERL from unexpected changes in inflation given charges are indexed to CPI but the RAB is indexed to RPI.

Working capital treatment

5.18 To provide clarity in response to NERL's comment, regarding the process for updating working capital movements in the RAB we have confirmed in the RAB rules that the RAB will be updated for actual movements in working capital from NERL's regulatory accounts. The PCM modelling queries raised by NERL regarding the calculation of working capital have been addressed in CAP2553c appendix D (Summary of PCM responses)

Average RAB calculation

5.19 We disagree with NERL's suggestion that we have incorrectly calculated the average RAB in the PCM used to calculate the return for reasons set out in CAP2553c appendix D. We have retained the method of calculating the average RAB by discounting the closing RAB by the WACC as set out in our Initial Proposals. We consider that this approach provides a more accurate calculation of the return on the average RAB and is consistent with the approach adopted for the H7 price control.

PCM modelling queries

5.20 Our views on the PCM modelling queries raised by NERL are addressed in CAP2553c appendix D.

TRS Recovery in the RAB

5.21 Our reasons for permitting the recovery of TRS revenues via an adjustment to the RAB are addressed in chapter 6 (Charges and financeability).

Provisional Decision

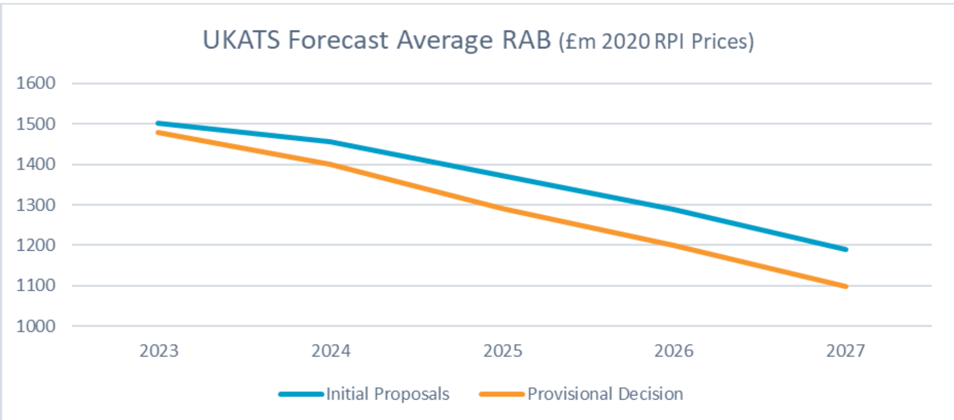
5.22 The table and figures below set out our forecast of NERL's RAB for NR23. The average RAB is approximately £121million lower than set out in our Initial Proposals. The main drivers of this reduction in the average RAB for NR23 are the updated modelling of working capital from revised operating costs, updated capitalised financing cost from the alignment of the PCM with the RAB rules, and updates to the forecasts of depreciation. Further details of these changes are set out in CAP2553c appendix D.

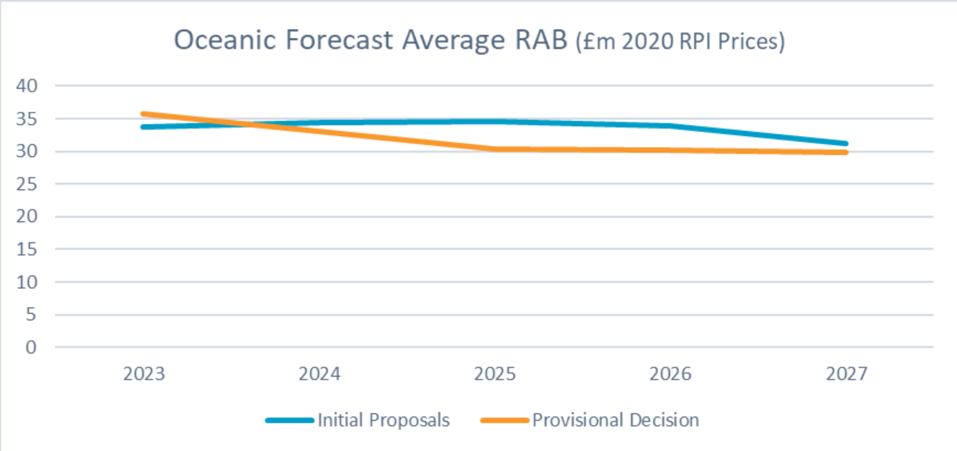
Table 5.1: Forecast average RAB for NR23 – UKATS and Oceanic

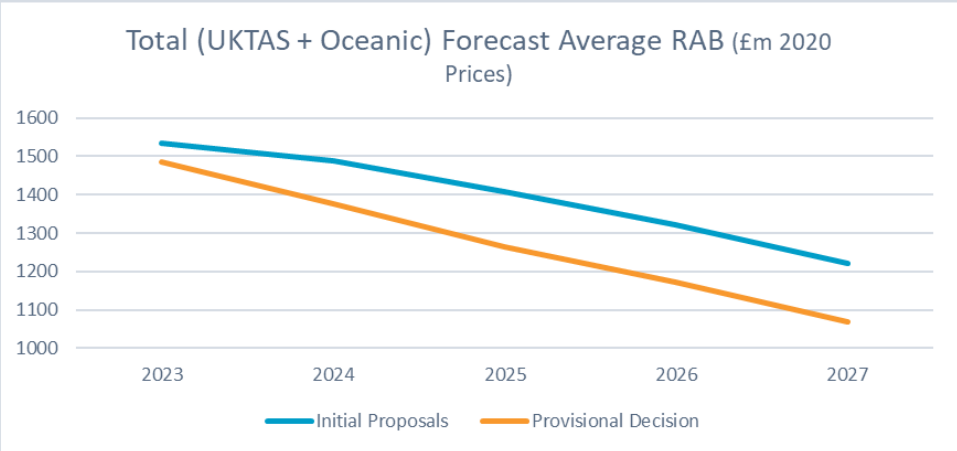
£m 2020 RPI Prices	Forecast Average RAB for NR23					
Forecast average RAB	**2023**	**2024**	**2025**	**2026**	**2027**	**Average RAB**
Initial Proposal	1,535	1,489	1,407	1,322	1,220	1,395
Provisional Decision	1,486	1,378	1,265	1,172	1,070	1,274

Source: CAA calculations

Figure 5.1 Forecast average RAB for UKTAS, Oceanic and combined







Source: CAA calculations

Regulatory depreciation

Our Initial Proposals

5.23 We made projections of regulatory depreciation to allow for the recovery of an appropriate proportion of the RAB from users over the price control period.

5.24 As set out in our Initial Proposals, there are advantages in terms of credibility and stability in retaining a broadly consistent and stable approach to regulatory depreciation over time. This should facilitate the smooth recovery of the RAB over time, which will generally be in the interests of customers and consumers. It will also allow for a relatively low cost of debt and equity financing, as stability in the regulatory framework supports investor confidence.

5.25 Therefore, we explained how the RP3 approach to estimating regulatory depreciation would be retained in our Initial Proposals. This involved:

i. 15-year straight line depreciation for new assets added to the RAB through capex;

ii. a true-up for depreciation for any differences between the actual and forecast RPI-CPI wedge;

iii. to allow only efficiently incurred capex to be recovered through the depreciation allowance; and

iv. an adjustment to depreciation in NR23 to remove costs associated with NERL's pension cost pass-through which are recovered through revenue adjustments instead.

5.26 In our Initial Proposals, we also explained how we are taking steps to profile the recovery of the RP3 TRS revenues to promote the overall affordability of NERL's charges. Our approach in this area did not involve any deferral of depreciation into NR28 and beyond, as was originally suggested by NERL in its business plan.[91] We also set out how we would be updating the depreciation profile to reflect other changes such as changes to capex.

Summary of stakeholders' views

5.27 Stakeholders raised the following points in response to our Initial Proposals:

i. depreciation inputs: NERL stated that it agreed with the mechanism for the calculation of regulatory depreciation in the CAA's PCM, although it also had questions in relation to modelling inputs that drive the forecasts of regulatory depreciation during NR23; and

ii. deferral of depreciation: easyJet stated that they supported the depreciation deferral of £108 million as initially suggested by NERL, as this would help to lower prices for users in critical recovery years.

Our views

5.28 We remain of the view that there are advantages in having a broadly stable approach to regulatory depreciation and have made only minor changes to the approach set out in Initial Proposals:

i. we have updated to the latest depreciation profile for existing assets provided by NERL. We also discussed these inputs with NERL given their comment, noted above, regarding the inputs which were used at Initial Proposals. In addition we conducted our own analytical review of the inputs to understand the key drivers of differences and assess their reasonableness; and

ii. we have updated our depreciation calculations to use the allowed capex.

5.29 We have chosen not to defer depreciation as we have not seen evidence that doing so is necessary for NR23 to smooth charges, as we are already spreading the recovery of TRS revenues from 2020 to 2022 over 10 years and profiling the

[91] NERL business plan, page 44

charges within NR23. We note that further deferring depreciation could reduce charges in NR23 but increase charges in NR28.

Provisional Decision

5.30 The table below summarises our latest forecasts of regulatory depreciation over NR23.

Table 5.2: UKATS allowed regulatory depreciation

£k, CPI-2020	2023	2024	2025	2026	2027	Total
Initial proposals						
Backlog depreciation[92]	1,367	1,377	(8,829)	(8,891)	(8,953)	(23,929)
Depreciation of new and existing capex	115,567	124,544	134,523	133,446	130,234	638,314
Total	**116,934**	**125,921**	**125,694**	**124,555**	**121,281**	**614,385**
Provisional Decision						
Backlog depreciation	1,384	1,395	(8,960)	(9,070)	(9,179)	(24,430)
Depreciation of new and existing capex	127,920	136,155	136,483	137,036	135,480	673,073
Total	**129,304**	**137,549**	**127,523**	**127,966**	**126,301**	**648,643**
Change						
Backlog depreciation	18	17	(131)	(179)	(226)	(501)
Depreciation of new and existing capex	12,352	11,611	1,960	3,590	5,246	34,759
Total	**12,370**	**11,628**	**1,829**	**3,411**	**5,020**	**34,258**

Source: CAA analysis

Inflation

Our Initial Proposals

5.31 Our approach to setting the price control allows for inflation by indexing NERL's RAB (by RPI) and NERL’s charges (by CPI).

5.32 In our Initial Proposals, we used forecasts for RPI and CPI from the Office for Budget Responsibility (OBR) from March 2022. These were the latest OBR forecasts available when we prepared our Initial Proposals.

5.33 We recognised that inflation forecasts had been subject to significant changes in the months leading up to the Initial Proposals, including significant increases in short-term inflation. We said that we would update our inflation forecasts in the Provisional Decision to take into account more recent inflation forecasts (paragraph 5.41 of our Initial Proposals).

[92] “Backlog depreciation” is the term we use to describe an adjustment for depreciation to remove costs associated with NERL’s pension cost pass-through which was recovered through revenue adjustments instead

Summary of stakeholders' views

5.34 NERL highlighted that the PCM draws on quarterly inflation, while the RAB rules specify the use of monthly inflation data.[93] According to NERL, this resulted in an inflationary uplift in our Initial Proposals that was £12m lower than the amount calculated on the correct basis.

5.35 British Airways suggested using up-to-date inflation forecasts from the CEPA report. easyJet recommended using a notional level of inflation at 2% for NR23, which is the monetary policy target of the Bank of England. In easyJet's view this would minimise the risk of under or over remuneration for NERL when inflation returns to the 2% target and would avoid the need for updates of the inflation forecast.

Our views

Source of inflation forecasts

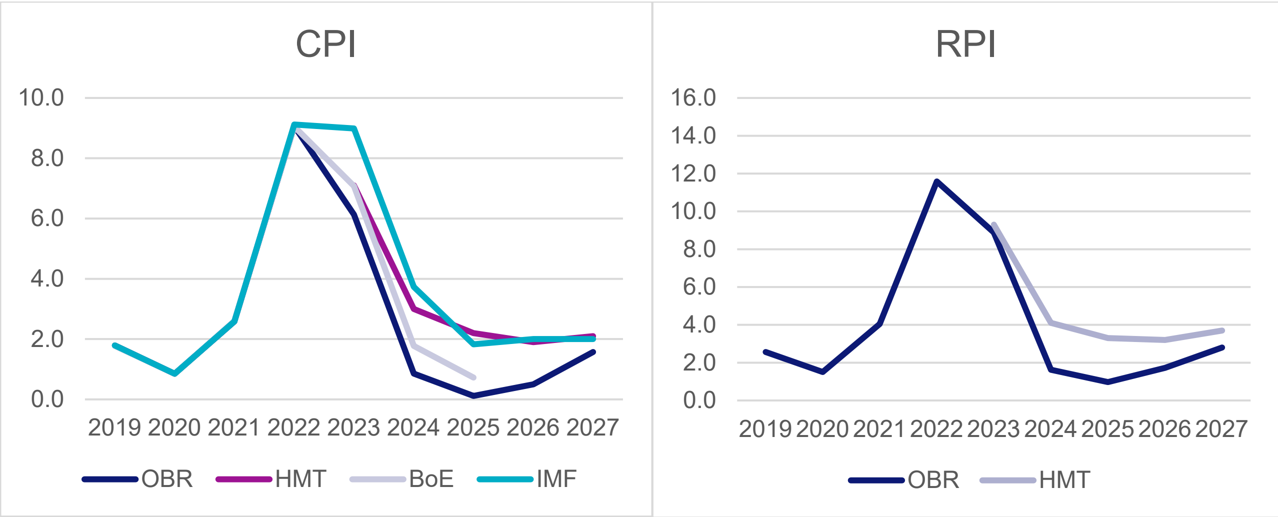
5.36 In this Provisional Decision, we use OBR March 2023 forecasts for both CPI and RPI. This is a reliable and recent source of inflation forecasts and is consistent with our approach in the Initial Proposals and the H7 price controls.

5.37 We have considered other independent forecasts from HM Treasury, Bank of England and International Monetary Fund (IMF). While there are some differences between these different sources of forecasts, as shown in Figure 5.2, the OBR forecasts follow a similar trend over the NR23 period of reducing inflation rates after 2022, so appear to be reasonable.

5.38 We do not propose to use the Bank of England's long term CPI inflation target of 2%. We consider it is appropriate to use the most up-to-date forecasts available given the material variations in the short-term forecasts for NR23 and the potential impact of changes in inflation on NERL's financeability.

[93] Summary of Responses spreadsheet, Financial Framework C10.

Figure 5.2: Inflation forecasts - annual average inflation rate (%)



Sources: OBR - Mar 2023, HMT medium-term - Feb 2023, BoE Monetary Policy Report - Feb 23, IMF - Oct 2022

Estimating within-year and annual average inflation

5.39 We note NERL's comments that the inflation in the RAB rules is defined using monthly inflation and have sought to improve the clarity and accuracy of the calculations. We have used monthly actual figures from the Office for National Statistics (ONS) up to January 2023 and used the quarterly forecasts from OBR to estimate monthly inflation forecasts to derive both the "within-year"[94] and "annual average"[95] inflation rates, using simple linear interpolation.

Provisional Decision

5.40 Tables 5.3 and 5.4 below shows our Provisional Decision on the RPI and CPI annual inflation assumptions for the NR23 period. These reflect the higher inflation seen so far in 2023 than assumed in our Initial Proposals. After 2023, we assume lower inflation for NR23 compared with our Initial Proposals consistent with the updated OBR forecasts.

5.41 The lower inflation forecasts used in these Provisional Decisions relative to those used in our Initial Proposals will result in slightly lower nominal costs and charges than those which we had calculated in our Initial Proposals.

[94] The RPI for the last month of calendar year t, divided by the average of the monthly RPI figures for calendar year t (i.e. January RPI + February RPI + . . . + December RPI, divided by 12)

[95] The average of the monthly RPI figures for calendar year t (i.e. January RPI + February RPI + . . . + December RPI, divided by 12), divided by the average of the monthly RPI figures for calendar year t-1

Table 5.3 Forecast annual inflation rates for CPI and RPI

Annual Inflation	2020	2021	2022	2023	2024	2025	2026	2027	Average
Actual Inflation RPI	1.50%	4.00%	11.60%						
Actual Inflation CPI	1.70%	4.20%	11.50%						
NERL RPI				3.20%	3.00%	3.10%	3.20%	3.20%	3.10%
CAA IPs RPI				5.50%	2.30%	2.50%	2.70%	2.70%	3.20%
CAA Provisional Decision RPI				8.90%	1.60%	1.00%	1.70%	2.80%	3.20%
NERL CPI				2.10%	1.90%	1.80%	1.90%	1.90%	1.90%
CAA IPs CPI				4.00%	1.50%	1.90%	2.00%	2.00%	2.30%
CAA Provisional Decision CPI				6.10%	0.90%	0.10%	0.50%	1.60%	1.80%

Table 5.4. Forecast within year inflation growth

Year	2019	2020	2021	2022	2023	2024	2025	2026	2027
RPI - within year growth	1.07%	0.77%	4.16%	5.90%	1.88%	1.39%	1.46%	2.15%	2.32%
CPI - within year growth	0.65%	0.41%	3.17%	4.56%	1.16%	0.94%	0.64%	1.34%	1.63%

Source: NERL Business Plan, CAA IP forecasts, updated CAA forecasts based on OBR March 2023 forecasts.

Corporation tax

Our Initial Proposals

5.42 In addition to incurring operating and capital costs and providing a return on investment, NERL will need to fund payments of corporation tax. Therefore, as part of NERL's revenue allowance, we include an allowance for these tax payments.

5.43 In our Initial Proposals, we said that we proposed to adapt our approach for NR23 to increase transparency and to make it easier for stakeholders to compare NERL's actual tax expense against the tax allowance included in NERL's revenue allowance. We set out an explicit tax allowance or revenue building block in our calculations of NERL's price control revenue, rather than applying an uplift to the cost of equity to take account of these costs. This revised approach is similar to the approach adopted by other regulators such as Ofwat and Ofgem.

5.44 In substance this approach is similar to the approach we adopted in RP3. This is because the same steps are involved in setting the tax allowance for NR23 as were used at RP3, but we do not need to convert the tax allowance into a tax uplift to the WACC.

5.45 In our Initial Proposals we said that we had specifically estimated NERL's tax allowance using the following steps:

i. we estimated the notional company's taxable revenue using the building blocks (depreciation, opex and return on RAB) excluding tax;

ii. we deducted the notional company's allowable tax expenses (capital allowances, tax credits, interest and allowable opex) to estimate the notional company's taxable profits;

iii. we estimated the required uplift to ensure the notional company would earn its WACC on a post-tax basis; and

iv. we have added the tax uplift to the notional company's revenue allowance as a separate revenue building block.

Summary of stakeholders' views

5.46 Stakeholders responded to our Initial Proposals on tax as summarised below:

- **Indexation of the TRS debtor**: NERL highlighted that in our Initial Proposals we had not provided a tax allowance in respect of the indexation of the TRS revenues for 2020-2022. NERL said this had the effect of understating the modelled tax allowance in the price control model by approximately £22m.
- **NERL raised three tax queries in relation to the PCM:**
    - Both the live and macro-pasted tax values were being used in the model but these two sets of values were different to one another. This resulted in there being an unintended difference between the tax allowance and tax costs; and
    - NERL noted from paragraph 1.10 of the Grant Thornton tax report[96] that there were two calculations of tax in the PCM (one for regulatory allowances and one for financial statements) and they should produce broadly similar results but did not.
    - NERL identified an error in the corporation tax computation with the calculation of net interest expense
- **Tax on 2020-2022 TRS:** BA stated that there should be no tax allowance for the 2020-2022 TRS recoveries in NR23 (or in NR28) as this would have already been included in RP3.

Our views

5.47 We have retained our broad approach to corporation tax as set out in Initial Proposals. The comments of respondents on the detail of our approach are

96 The Grant Thornton report is available here: https://www.caa.co.uk/media/t1ujsiv2/tax-review-for-nr23-ips-grant-thornton-october-2022.pdf

discussed below alongside changes arising from recent developments in tax legislation.

5.48 We have made specific changes and clarifications to the way the tax allowance is calculated in our Provisional Decision in response to stakeholder comments as set out below.

- **Indexation of the TRS revenues for 2020 to 2022:** we have included an allowance for indexation of the TRS revenues. This increases the tax allowance by £22 million.
- **PCM tax queries:** we have simplified the treatment of tax in PCM, which now uses a uniform approach to the calculation of corporation tax costs and addresses the issues raised by NERL.
- **Tax on 2020-2022 TRS:** we confirm that an allowance for tax was provided within the efficient cost baseline for 2020 to 2022, which is used in the calculation of TRS revenues to be recovered. Consequently there is no need for further tax allowance in respect of the TRS (other than indexation as noted above).[97]

5.49 Further, in March 2023 the government announced that qualifying capital expenditure would be eligible for full offsetting against profits in the year in which the expenditure occurred, a treatment known as 'full expensing'. This regime is legislated to last until 31 March 2026. It is unclear whether full expensing will remain beyond this date (as the government have stated is their 'ambition'). We have taken account of this full expensing in our tax calculations, which significantly reduces the tax allowance for NR23 and have assumed that full expensing ceases after 31 March 2026. To the extent that the government extends the full expensing regime or takes a different approach, we expect to use existing uncertainty mechanisms to true up tax allowances in the NR28 price control by making an adjustment to the RAB such that consumers are in an NPV equivalent position to that which they would have been in if the NR23 tax allowance had correctly matched the tax legislation for the final year of NR23. We discuss uncertainty mechanisms further in chapter 7.

Our Provisional Decision

5.50 Our Provisional Decision on the tax allowance for UKATS is set out in the table below, using the approach set out above.

[97] While the original allowances for the RP3 period included allowance for tax, if we were to simply allow recovery of those amounts at a later date without giving an uplift for inflation then the real value of the tax allowances would be diminished.

Table 5.5: UKATS tax allowance

£000, CPI-2020	2023	2024	2025	2026	2027	Total
Initial proposals[98]	24.6	27.6	18.1	16.7	14.4	101.4
Provisional Decision	14.1	8.9	4.1	26.6	29.5	83.1
Change	(10.5)	(18.7)	(14.1)	9.9	15.1	(18.3)

Source: CAA analysis

WACC

Introduction

5.51 The real weighted average cost of capital (WACC) is used to calculate the return that NERL needs to provide to its investors to attract the required capital during the NR23 price control.

5.52 There are two key components of the WACC: the cost of equity and the cost of debt. Gearing provides the relative weight to place on the cost of equity and cost of debt in calculating the WACC. When discussing gearing, we focus on the gearing of the notional company (known as "notional gearing") and not the actual company, as discussed further below and in chapter 6 (Charges and financeability).

5.53 In addition to the material set out below CAP2553c appendix C provides more information on our approach to the asset beta and the total market return (TMR).

Our Initial Proposals

Cost of equity

5.54 We used the Capital Asset Pricing Model (CAPM) to determine the cost of equity. The CAPM is an established method with well-understood theoretical foundations. It is used by all UK regulators when calculating the WACC, and was the framework used by NERL in its NR23 business plan.

5.55 CAPM estimates the cost of equity on the basis of three parameters:

i. the equity beta;

ii. the risk free rate (RFR); and

iii. the TMR.

5.56 A company's equity beta is a function of its asset beta, its debt beta and notional gearing. To estimate the equity beta, we used common practice of estimating the

[98] The numbers quoted in our Initial Proposals document were inaccurate and did not reflect the actual allowances included within our model. The figures shown in table 5.5 for Initial Proposals are those that were actually included within our model.

asset beta of comparator companies. This is then converted into an estimate of NERL's equity beta by 're-levering' the comparator companies' asset betas using our notional gearing assumption for NERL.

5.57 The debt beta represents the proportion of a company's systematic risk exposure that is attributable to debt.

5.58 Our estimate of NERL's asset beta was informed by the findings from a report from Flint,[99] which specifically relied on the estimation of:

- non-covid affected asset beta for NERL; and
- the impact of covid on NERL's asset beta.

5.59 This analysis led to an estimation of 0.54 to 0.64 for NERL's asset beta at Initial Proposals.

5.60 We proposed to maintain a debt beta of 0.05 for NR23, aligned to NERL's previous RP3 price control.

5.61 The RFR is the return required on a risk free or "zero beta" asset within the CAPM. At Initial Proposals, we estimated the RFR as the simple average of the following values:

- the 1-month trailing average yields on 10-year index-linked gilts (ILGs) to 31st March 2022 which was -2.78%; and
- the 1-month trailing average yields on 10-year ILGs to [31st March 2022] uplifted using a convenience yield of [37bps], which equals [-2.41%].

5.62 This implied a RFR range of -2.78% to -2.41%, RPI- deflated.

5.63 The TMR reflects the return that an investor expects to receive by investing in the market portfolio (typically assumed to be a market index). We used the CMA's estimate in its decisions on the PR19 price controls of 5.2% to 6.5% RPI-deflated for the TMR.

Cost of debt

5.64 The cost of debt allowance is calculated by estimating NERL's cost of embedded debt, cost of new debt to be issued in NR23 and issuance and liquidity costs. Given that NERL was not planning to issue new debt in NR23, at Initial Proposals we applied a zero weighting to the cost of new debt.

5.65 For the cost of embedded debt, we benchmarked each of NERL's bonds based on corporate bond indices of similar credit rating and duration. We also assumed that NERL would issue new debt in 2022 and estimated the cost of this bond based on the yield on the iBoxx £-denominated A-rated 10 to 15 year index. This

[99] Flint (2023), Support to the Civil Aviation Authority: NR23 Updated Beta Assessment.

was reasonable given that we assume that for the purposes of setting the WACC the notional company has a similar financial structure to NERL.

5.66 We assumed the notional entity would only have issued fixed-rate debt and, as such, we considered the appropriate deflator for NERL's cost of embedded debt cost was the forecast level of RPI over the period. This implied an RPI- real cost of embedded debt of -1.02%.

5.67 We reviewed NERL's estimate and were satisfied with NERL's proposed issuance and liquidity cost allowance of 13bps.

WACC

5.68 Using the above estimates, we derived a range for NERL's vanilla real WACC range of 2.04% to 3.59%, with a midpoint of 2.81%. In comparison, NERL estimated a vanilla WACC of 3.54% in its business plan.

Summary of stakeholders' responses

5.69 NERL stated that the WACC in the Initial Proposals was too low. To support this, NERL submitted an updated report commissioned by Oxera Consulting LLP (Oxera), setting out an updated view of the appropriate cost of capital for NERL. Within this report, Oxera estimate a range for the RPI-real, vanilla WACC of 3.41 to 4.48%.

5.70 A number of airlines submitted responses that the WACC in the Initial Proposals was too high. To support this, British Airways submitted a report from CEPA consulting, setting out specific issues with the CAA's approach to estimating the WACC.

5.71 We summarise the main issues raised by stakeholders below.

Gearing

5.72 NERL disagreed with our approach of using a notional gearing assumption in the WACC that is different from the gearing assumption used within the financeability assessment.

5.73 Airlines did not raise any objections to our approach to setting NERL's notional gearing.

Risk Free Rate (RFR)

5.74 Oxera set out an updated range of 0.94% to 1.31% for the RFR. NERL disagreed with our application of the convenience yield within the estimation of the RFR and stated that our approach only allows for half the convenience yield within the midpoint estimate of the cost of capital. NERL said that a larger convenience yield is appropriate in our estimate of the RFR, and we should include the convenience yield in both the top and bottom ends of our range.

5.75 NERL also said that we should use a forward rate adjustment but noted this point is less significant.

5.76 It also requested that we update our analysis for more recent data. British Airways made similar observations.

5.77 CEPA said that the convenience yield is not a required feature of our calculation of the RFR, as the CMA included it within their PR19 redetermination but excluded it from its GD&T2 appeal decision.

Asset Beta

5.78 Stakeholders provided detailed feedback on the method adopted by our advisors (Flint) to estimate asset beta. In particular:

- NERL disagreed with the assumptions made around the end date of the impact of covid-19 and said that we have understated the tail risk by excluding outliers. In contrast CEPA stated that the method overestimates the impact of covid-19 on the asset beta;
- NERL and the airlines disagreed (in different ways) with the comparator set relied upon by Flint to estimate asset beta; and
- NERL disagreed with the point estimate chosen by the CAA within Flint's range.

Equity Beta

5.79 CEPA said that volatility in the market rate of debt also means that the timing risk of debt renewal is heightened. They suggested that setting a bespoke cost of debt allowance for NERL insulates it from timing risk. CEPA suggested that we should adjust the equity beta downwards to reflect these considerations.

Total Market Return (TMR)

5.80 Oxera conducted analysis of historical ex post estimates of TMR using the CPIH back-cast data and said that greater reliance should be placed on this approach.

5.81 NERL also said that the increase in interest rates means that there is no longer any downward skew to the TMR.

5.82 Easyjet suggested that we should use a Damodarran estimate of the equity risk premium (ERP).

5.83 British Airways argued that the range we presented for the TMR appears unnecessarily wide and is upwardly biased. This view is aligned to CEPA's view of the TMR.

Cost of debt

5.84 Stakeholders did not respond with detailed comments on our approach to the cost of new debt.

5.85 NERL disagreed with our change of method from using NERL's actual cost of embedded debt in RP3 to estimating the cost of embedded debt for NR23 with reference to market indices.

5.86 Airlines did not respond with any detailed comments on the cost of embedded debt.

5.87 CEPA said that we should use break-even inflation to deflate the nominal cost of debt. It also noted that using an unweighted mean assumption for inflation over NR23 could lead to a biased estimate of the real cost of new nominal debt.

Our views

Overall approach

5.88 We consider that the broad approach in our Initial Proposals remains appropriate. We have considered below and in appendix C the detailed points raised by stakeholders and we have updated the WACC to reflect more recent market information up to 15 March 2023.

5.89 We estimate a range of estimates for NERL's RPI-real vanilla WACC. We then consider where in this range we should select a point estimate for our Provisional Decision.

Gearing

5.90 We disagree with NERL's submission that it is inappropriate to use a notional gearing assumption for NERL when estimating the WACC. This is a well-established approach used by other UK economic regulators to estimate an efficient WACC, including the CMA determination on notional gearing from RP3. We have continued to base the notional gearing for the WACC on the gearing of the comparators used to set the beta for NR23.

5.91 We also do not consider that it is necessary to adopt the same notional gearing for the WACC and for the financial modelling (which is used to test financeability and to estimate tax costs). We do not consider that this presents a material inconsistency and we are following the precedent established by the CMA in its RP3 determination and assuming that the WACC of the notional entity should not be different at a higher level of notional gearing.

5.92 Our approach for this Provisional Decision is to use a notional gearing of 34% for NR23 in setting the WACC, based on the observed gearing for the listed companies that are most comparable with NERL. To ensure consistency with the estimation of the cost of equity, these companies should be the same as those used to estimate the asset beta. For NR23, we have selected AENA, Fraport and ADP as comparators for NERL, and have used ENAV as a cross-check (given that it is the only listed ANSP).

5.93 The assumption of 34% gearing has been derived in a way consistent with our estimate of asset beta, by comparing the pre-pandemic and post-pandemic gearing for comparator airports. We then re-weight these gearing figures using the same approach used by Flint in their report on beta (assuming a pandemic will occur once every 20 to 50 years with a duration of between 17 to 39 months).

5.94 As noted above this approach is different to that used in our price control model, where the level of gearing changes over time according to the notional company's cash requirements and our assumptions on its financing strategy and dividend policy.

Risk Free Rate (RFR)

5.95 As per our decision for the H7 price control, we remain of the view that ILGs may exhibit a "convenience yield" or other specific factors that mean that the yields on ILGs may underestimate the "true" risk free rate. Stakeholders' submissions to date have not included new evidence that has altered this view. We therefore consider it remains appropriate to give some weight to an alternative benchmark for the risk free rate that does not exhibit a convenience yield.

5.96 We consider it is reasonable to include the convenience yield only at the top end of the range to estimate the RFR. The convenience yield is a novel component within the calculation of the RFR, so it is appropriate to be cautious and not assume it should also be included in the bottom end of the range. Our approach is also aligned to that of the CMA at PR19.[100]

5.97 We continue to consider that a forward adjustment is inappropriate, which is also consistent with the CMA's PR19 determination[101], who do not consider forward rates to provide a superior estimate of future spot rates.

5.98 We have therefore adopted the same approach to estimating the RFR as our Initial Proposals: focusing on 10-year ILG yields; using a 1-month trailing average; and including a convenience yield calculation at the top end of the range. As at the 15 March 2023, this approach implies a convenience yield of 49bps.

[100] CMA (2021), "Anglian Water Services Limited, Bristol Water plc, Northumbrian Water Limited and Yorkshire Water Services Limited price determinations: Final report", March, paragraphs 9.236.

[101] CMA (2021), "Anglian Water Services Limited, Bristol Water plc, Northumbrian Water Limited and Yorkshire Water Services Limited price determinations: Final report", March, paragraphs 9.228-9.234.

5.99 Recent changes in financial markets and interest rates have driven significant changes in of estimates of the RFR. Nonetheless, we remain of the view that using recent market information to provide an estimate for the RFR remains the most appropriate approach as it properly takes account of new information and is consistent with our approach to using updated forecasts of inflation. Based on information available up to 15th March 2023, our Provisional Decision for the RFR is based on a range of 0.32% to 0.82% with a midpoint of 0.57%, in RPI-real terms.

Equity, Debt and Asset Beta

5.100 We commissioned an updated report from Flint Global (Flint) to advise on the appropriate range for NERL's asset beta taking account of the points made by stakeholders and new data and information available since initial proposals. Flint's updated report is published alongside our Provisional Decision[102].

5.101 In line with our approach at Initial Proposals, Flint estimates the NR23 asset beta based on two components:

- the baseline beta without the impact of covid-19; and
- the increment for the probability-weighted impact of a future pandemic similar in nature to the impact of covid-19.

Table 5: Historical dataset of daily data used to construct re-weighted betas

	Flint's previous report (2022)	Flints updated report (2023)
Full data set		
Start date	12th February 2015 (airports) 27th July 2016 (ENAV)	
End date	31st March 2022	15th March 2023
Assumed COVID-19 affected data		
Start date	1st February 2020	
End date	31st March 2022	31st December 2022

Source: Flint

5.102 In estimating the baseline beta, Flint has concluded data from the end of December 2021 should inform the assessment of the baseline beta for NERL at NR23, based on evidence that betas for comparator airports have reverted towards pre covid-19 levels, from the heightened level observed during the pandemic. The table above summarises how Flint has partitioned the data set between covid and non-covid periods.

[102] Flint (2023), Support to the Civil Aviation Authority: NR23 Updated Beta Assessment.

5.103 Flint also made small changes to the set of comparators[103], and reconsidered the updated evidence from ENAV as a comparator as the only publicly listed ANSP. Other elements of our approach remain aligned with the Flint's May 2022 report.

5.104 At Initial Proposals we did not consider that the top half of Flint's range was commensurate with NERL's risk profile due to NERL's regulatory protections. We therefore proposed an asset beta range of 0.54 to 0.64.

5.105 Given that the updated evidence from ENAV points to a beta slightly above the mid-point of Flint's range, we now take Flint's full recommended asset beta range into account for our Provisional Decision.

5.106 Based on Flint's updated results and range, we propose an asset beta range of 0.52 to 0.70.

5.107 We have not changed our estimation of the debt beta from Initial Proposals and did not receive detailed comments from stakeholders on these matters. We maintain the RP3 debt beta of 0.05 for NR23.

5.108 Using a notional gearing assumption of 34%, we re-lever the betas to arrive at an equity beta range of 0.76 to 1.03.

5.109 We disagree with CEPA's argument that NERL's equity beta should be adjusted as a result of the CAA's approach to setting what CEPA describes as a 'bespoke' cost of debt allowance. While we have used elements of NERL's actual financial structure to estimate its cost of debt allowance for NR23 this aspect of our policy may change at future price control reviews. For instance, if NERL were seen to be issuing debt inefficiently, we would use an alternative assumption in calculating NERL's debt allowance. Bearing this in mind there is no fundamental reduction in NERL's risk profile and so there is also no compelling case to reduce our estimate of NERL's beta.

Total Market Return

5.110 We have not seen any compelling evidence from stakeholders that means we should change our method to estimating the TMR from that set out in Initial Proposals.

5.111 We address specific stakeholder comments within CAP2553c appendix C.

5.112 Our Provisional Decision assumes an RPI-real TMR range of 5.20% to 6.50%.

[103] Sydney has been delisted and Vienna's beta data has been found to be unreliable. Furthermore, Zurich remains a less appropriate comparator and its inclusion does not influence results.

Cost of Debt

5.113 We have considered NERL's representations in respect of our approach to the cost of debt. We acknowledge that we did not signal our approach ahead of the 2021 refinancing, but it is not realistic to expect that we would have developed our approach so early in the NR23 process. In our experience, regulators generally do not provide early signalling of their cost of debt policy ahead of refinancing activities.

5.114 We have never stated that NERL's debt issuance is inefficient, but rather consider that the use of benchmarks avoids creating a situation where NERL is able to influence its own cost of debt allowance, resulting in consumers underwriting NERL's actual cost of debt. Regardless of whether NERL's debt has been efficiently issued to date, such a situation would weaken incentives to issue debt efficiently in the future.

5.115 In the light of the above, in a similar manner to Initial Proposals, we have benchmarked NERL's bonds against the appropriate market benchmark based on credit rating and maturity and taken account of the amortising balance.

5.116 We note that NERL issued new debt in March 2023. We have taken account of this new issuance in the cost of embedded debt, given the details of the actual issuance were available prior to this Provisional Decision being published. We benchmark this issuance in the same way as we have benchmarked NERL's other bonds. We benchmark each instrument as follows:

- for the £450 million 10-year amortising bond maturing in March 2031, we estimate a cost of 1.34% using a weighted average of the yield on the iBoxx £-denominated A-rated 5 to 7 year index and the corresponding 7 to 10 year index as at April 2021.[104] The weights assigned are based on the average number of years to maturity for each index at each point in time, and are designed to produce an average duration corresponding to NERL's bond of 6.825 years;[105]
- for the £300 million 12.5-year bullet bond maturity in September 2033, we estimate a cost of 1.88% based on the yield on the iBoxx £-denominated A-rated 10 to 15 year index as at April 2021; and
- for the £145 million tapping issuance maturity September 2033, we estimate a cost of 4.84% based on the yield of the iBoxx £-denominated A-rated 10 to 15 year index as at March 2023.

[104] This date was chosen to roughly correspond to the date of NERL's debt refinancing.

[105] We note that Oxera's analysis slightly overestimates the outperformance of NERL's bond compared with the notional benchmark, since it has used an index with average duration than NERL's bond.

5.117 As NERL are not planning to issue any further debt during NR23, we give full weighting in the cost of debt to the cost of embedded debt and assign a zero weight to the cost of new debt.

5.118 Similar to Initial Proposals, we consider NERL's proposal to include an allowance of 0.13% on the cost of debt to cover its issuance and liquidity costs to be reasonable, so we include this in the cost of debt.

5.119 We have calculated the cost of debt allowance by firstly weighting each benchmark by the amount of outstanding debt for each type of bond. The nominal cost of debt is then deflated by forecast inflation in each year[106] and then weighted by the annual amount of total outstanding debt.

5.120 This implies an RPI-real cost of debt of -1.05%.

Choosing a point estimate

5.121 There is a degree of uncertainty associated with estimating each of the parameters used to assess NR23's WACC and so we have estimated a range of plausible estimates for each parameter. To determine a single point estimate for the WACC for the NR23 price control, we need to determine the appropriate balance between the risk of setting the WACC too high, leading consumers to paying too much; and setting the WACC too low, and potentially undermining long-term financeability and/or incentives for investment.

5.122 As set out in our Initial Proposals[107], we do not currently see a compelling case for departing from the midpoint of our WACC range for NR23.

Recent data

5.123 We have chosen 15 March 2023 as the cut-off date for calculating the WACC as it allows the inclusion of reasonably recent information and aligns with the date of the latest OBR publication.

5.124 We have carried out a sense check on our WACC calculation using more recent data and can confirm that the mid-point estimate of the WACC has not materially changed.

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[106] Our Provisional Decision on our approach to inflation for NR23 is set out in paragraphs 5.149 to 5.161. In line with previous statements, we consider that breakeven inflation is likely to systematically overstate future outturn inflation, since it includes an inflation risk premium. We therefore do not agree with CEPA's proposed use of breakeven inflation for the purposes of deflating nominal debt costs.

[107] CAA (2022), Economic regulation of NATS (En Route) plc: Appendices to Initial Proposals for the next price control review ("NR23"), paragraphs C187 to C189.

Our Provisional Decision

5.125 For our provisional decision, we have estimated a vanilla WACC range of 2.31% - 4.06%, with a mid-point estimate of 3.19%.

Table 5.6: Proposed range for WACC parameters

Component	Ref	CAA Low	CAA High	Point Estimate
Gearing	A	34%	34%	34%
Risk free rate	B	0.32%	0.82%	0.57%
TMR	C	5.20%	6.50%	5.85%
Asset beta	D	0.52	0.70	0.61
Debt beta	E	0.05	0.05	0.05
Equity beta	F = (D-E*A)/(1-A)	0.76	1.03	0.90
Post-tax cost of equity	**G = B + F*(C-B)**	**4.04%**	**6.70%**	**5.31%**
RPI Cost of debt	**H**	**(1.05%)**	**(1.05%)**	**(1.05%)**
Vanilla WACC	**I = H*A + G*(1-A)**	**2.31%**	**4.06%**	**3.19%**

Next steps and implementation

5.126 The proposed licence modifications set out in CAP 2553d appendix H include the inflation forecasts which would implement the Provisional Decision set out above. The Determined Costs in the proposed licence modifications reflect our Provisional Decisions in this chapter on the RAB, depreciation, WACC and tax costs.

5.127 We have published our proposed RAB rules for consultation in CAP 2553e appendix I for a period of 28 days. After considering consultation responses, we plan to publish the updated RAB rules alongside our decision notice and final NERL licence modifications in autumn 2023.

Chapter 6

Charges and financeability

Introduction and context

6.1 This chapter starts by summarising our provisional decision on the overall level of NERL's Determined Costs and Determined Unit Cost (DUC) for NR23. We then set out forecasts for the average UK en route charges that airlines will pay to NERL during NR23, which reflect forecasts of a number of adjustment factors, including in inflation, traffic levels and costs subject to pass-through (which can be recovered on an n+2 basis or recovered over a longer time period). The actual charges that airlines will pay during NR23 will then be based on the Determined Unit Cost (DUC) and the actual revenue adjustments that will crystallise during the NR23 period.

6.2 In chapter 3, we explain that in addition to NERL's Determined Costs, there are TRS revenues from RP3 following our reconciliation review that NERL will be allowed to recover. This chapter explains our approach to profiling the recovery of this revenue over multiple price control periods and profiling of revenues within the NR23 period to ensure NERL's charges are no higher than necessary. We also benchmark NERL against other European ANSPs to check that NERL's charges provide reasonable value for money. These steps are consistent with our statutory duty to further the interests of customers and consumers.

6.3 This chapter also summarises our decision on the costs of the other entities that contribute to the provision of en route ANS. These other elements of the total UK Determined Costs include:

- Met Office meteorological service costs that relate to UK aviation (Met Office costs);
- the UK's share of Eurocontrol costs (DfT costs); and
- relevant ATS and airspace costs of the CAA (CAA costs).

6.4 The costs and charges for the London Approach and Oceanic services are covered in CAP2553a chapter 8 and chapter 9.

6.5 Consistent with our secondary statutory duty to secure that that the licence holder does not find it unduly difficult to finance its authorised activities, we consider that it is important that NERL is able to retain access to financial markets on reasonable terms. This allows NERL to fund necessary investments efficiently (so that customers pay no more than is necessary), and deliver an appropriate level of service to the users of its services in discharging its own duties under the TA00. In this chapter, we set out our assessment of the financeability of our Provisional Decision on the NR23 price controls for UK en route, London Approach and Oceanic services.

Determined Costs

NERL's UK en route Determined Costs

6.6 The building blocks we use for our Provisional Decision for NERL's UK en route Determined Costs are set out in chapters 4 and 5 and summarised in Table 6.1 below. This shows NERL's Determined Cost allowance for UK en route is around £184 million (or around 6 per cent) lower than NERL's business plan.

Table 6.1 – Provisional Decision for en route Determined Costs (£ million, 2020 CPI prices)

£ million, 2020 CPI prices	2023	2024	2025	2026	2027	NR23 total	NERL BP total	Difference
Opex (excl. pension costs)	410	419	414	411	409	2,063	2,077	(14)
Pension costs	117	111	74	72	72	447	542	(96)
Depreciation	129	138	127	127	125	647	650	(3)
Regulatory return	48	45	42	39	36	210	367[108]	(74)
Tax	14	9	4	27	30	83		
Non-regulatory revenues	(86)	(85)	(86)	(86)	(86)	(430)	(433)	3
Total Determined Costs (CSU-based)	**632**	**637**	**575**	**590**	**587**	**3,020**	**3,203**	**(184)**
Uplift to get to TSUs	8	7	7	7	6	35	35	0
Total Determined Costs (TSU-based)	**640**	**644**	**581**	**596**	**593**	**3,055**	**3,238**	**(183)**
CPI inflation index	1.187	1.198	1.199	1.205	1.224	-	-	-
Total Determined Costs (TSU-based) – nominal terms	**760**	**771**	**697**	**719**	**726**	**3,673**	**-**	**-**

Source: CAA analysis and NERL business plan Appendix I

Note: Difference refers to NR23 total minus NERL BP total.

[108] The NERL business plan did not distinguish between regulatory return and tax.

Met Office Determined Costs

6.7 The Met Office consulted stakeholders throughout 2020 and 2021 on its services and priorities for the NR23 period. This was overseen by the Met Authority function within the CAA. Its costs comprise aviation's share of the National Capability and International Subscriptions, and Service Delivery and Development costs.

6.8 The annual average level of Met Office costs over NR23 is 5 per cent higher in real terms than the base level in 2022. Met Office costs are discussed further in CAP2553b and are set out in Table 6.2.

Table 6.2 – Met Office Determined Costs (£ million, 2020 CPI and nominal prices)

£ million, TSU-based	2022 Base	2023	2024	2025	2026	2027	NR23 total
Met Office Determined Costs (nominal)	34.0	35.0	39.2	39.3	39.2	39.7	192.4
Met Office Determined Costs (2020 CPI prices)	30.4	29.5	32.7	32.8	32.5	32.5	160.0

Source: Met Office

DfT Determined Costs

6.9 The DfT component of the UK en route costs represents the UK's share of Eurocontrol's costs, which are discussed further in CAP2553b and are set out in Table 6.3.

Table 6.3 – DfT Determined Costs (£ million, 2020 CPI and nominal prices)

£ million, TSU-based	2022 Base	2023	2024	2025	2026	2027	NR23 total
DfT Determined Costs (nominal)	52.7	52.1	52.2	54.0	55.6	56.5	270.4
DfT Determined Costs (2020 CPI prices)	47.1	43.9	43.6	45.0	46.2	46.2	224.8

Source: Eurocontrol forecast cost base 2023 to 2027 and CAA calculations.

CAA's Determined Costs

6.10 The CAA's airspace activities include a wide range of functions including airspace regulation, policy, strategy, oversight and obligations to meet the costs of NATS' pensioners prior to its separation from the CAA. For NR23, the CAA's costs also include the recovery of the costs of economic regulation of NERL, which were previously met through a licence fee on NERL. CAA costs are discussed further in CAP2553b and are set out in Table 6.4 below.

Table 6.4 – CAA Determined Costs (£ million, 2020 CPI and nominal prices)

£ million, TSU-based	2022 Base	2023	2024	2025	2026	2027	NR23 total
CAA Determined Costs (nominal)	23.1	28.1	27.9	27.8	28.6	28.5	140.9
CAA Determined Costs (2020 CPI prices)	20.7	23.7	23.3	23.2	23.7	23.3	117.2
CAA AMS Support Fund (2020 CPI prices)	2.1	2.1	2.1	2.1	2.1	2.1	10.5
CAA excl. ASF (2020 CPI prices)	18.6	21.6	21.2	21.1	21.6	21.2	106.7

Source: CAA analysis

Summary of overall UK en route total and unit cost

6.11 The Eurocontrol Principles require DUC to be expressed using TSUs, to take account of both civil and military flights. As military and exempt flights are funded separately, NERL's DUCs are expressed relative to CSUs for civil flights only. To express NERL's DUC in a way consistent with Eurocontrol Principles, NERL's Determined Costs have been grossed up for military and exempt flight service units (the difference between CSUs and TSUs) in a way that means the DUC calculated using TSUs is the same as calculated using CSUs.

6.12 The Determined Costs and DUC are set out in Tables 6.5, 6.6 and 6.7.

Table 6.5 – Provisional Decision for overall UK Determined Costs for NR23

2020 CPI prices, £ million	2022 Base	2023	2024	2025	2026	2027	NR23 total
NERL	582	640	644	581	596	593	3,055
MET	30	29	33	33	33	32	160
CAA & DFT	68	68	67	68	70	69	342
UK	680	737	744	682	699	695	3,557

Source: CAA analysis

Table 6.6 – Provisional Decision for UK Determined Unit Costs for NR23

2020 CPI prices, £ per TSU	2022 Base	2023	2024	2025	2026	2027	NR23 total
NERL	53.9	53.5	49.8	43.9	44.2	43.3	46.9
MET	2.8	2.5	2.5	2.5	2.4	2.4	2.5
NSA & DFT	6.3	5.6	5.2	5.2	5.2	5.1	5.2
UK	63.1	61.6	57.5	51.5	51.8	50.7	54.6

Source: CAA analysis

Table 6.7 – Provisional Decision for UK Performance Plan summary

2020 CPI prices	2022 Base	2023	2024	2025	2026	2027	NR23 total
DC nominal (£000)	760.6	874.9	890.8	818.0	842.1	850.7	4,276.4
Inflation index	111.9	118.7	119.8	119.9	120.5	122.4	-
DC real (£000)	679.9	736.9	743.8	682.3	698.9	695.1	3,556.9
Total Service Units (000)	10,782	11,956	12,930	13,247	13,490	13,700	65,323
DUC real (£)	63.06	61.63	57.53	51.51	51.81	50.73	54.64

Source: CAA analysis

TRS recovery and benchmarking the NERL unit rate

Context

6.13 In chapter 3 we discuss the reconcilitation review and the considerable TRS revenues to be recovered from the RP3 period (2020 to 2022), as a result of the impact of covid-19 on traffic levels.

6.14 In this section we set out our provisional decision on the recovery of TRS revenues, including the allowed return on the TRS revenues, inflation indexation of TRS revenues and the appropriate length of the recovery period. Our provisional decision has taken into account the policy principles which we set out in November 2021,[109] but with some changes to how the TRS revenue is shown in the RAB to improve transparency. The principles are:

[109] In CAP 2279, CAA, Economic regulation of NATS (En Route) Plc: decision on licence modifications to implement exceptional measures.

- to the extent it is reasonable, we will look to allow NERL to recover the TRS revenues shortfall throughout NR23 with outstanding amounts recovered in NR28, subject to assessments of affordability and financeability. In 2021, we said that we would also consider the views from stakeholders around profiling of TRS revenues;
- the TRS revenue shortfall will continue to be accounted for in NERL's RAB through a debtor in the movements in working capital with the amount unwinding as revenue is recovered;
- it is appropriate to provide an allowance for financing costs or time value of money for the TRS recovery;
- we did not rule out the possibility that NERL's shareholders might need to provide additional support to the regulated business if there was undue pressure on affordability of charges or financeability. We would seek first to use conventional regulatory levers and mechanisms to manage affordability, take account of wider price control package, and consider our statutory duties, including to protect the interests of consumers and to have regard to NERL's financeability; and
- it is not our role to decide whether further government support should be provided as an alternative to regulatory intervention.

Our Initial Proposals

6.15 Our Initial Proposals were based on the policy principles from November 2021 (set out above). In our Initial Proposals, we said that:

- consistent with our commitment to the TRS mechanism, we would allow NERL to recover its efficient actual costs from 2020 to 2022, with the TRS revenue reflecting the difference between this efficient cost baseline and the revenue that NERL recovered over this period;
- we would allow NERL to recover the TRS revenue over the 10-year period of NR23 and NR28, with 50 per cent recovery in each of NR23 and NR28;
- the TRS revenue will continue to be accounted for in NERL's RAB through the change in working capital; and
- it is appropriate to provide an allowance for financing costs or time value of money given the relatively long 10-year recovery period and we propose to apply our estimate of NERL's WACC for this purpose.

6.16 We assessed different approaches to profiling the unit rate within NR23 to reduce the increase in unit charges in 2023 and smooth the unit rate over NR23. We proposed to adopt a flat profile of charges in NR23 in real terms. We considered this to be a reasonable approach, as it still allowed NERL to recover its costs at the start of NR23 and we assessed that the price control would be financeable, even under a downside traffic scenario.

6.17 After taking into account recovery of TRS revenue and other revenue adjustments, we forecast that NERL's unit rates over NR23 would be £54 per TSU compared with £61 in NERL's business plan (CPI-real 2020 prices).

Summary of stakeholders' views

Recovery of TRS revenues from 2020 to 2022

TRS Recovery

6.18 Most of the responses we received from airlines and airlines' representatives (including those from easyJet, Ryanair, Virgin Atlantic, Loganair and IATA) reiterated their responses to the NERL business plan, in which they had objected to the full recovery of the TRS revenues through NERL's charges. They suggested that some combination of government and/or shareholders should bear all or part of these costs.

6.19 British Airways supported the recovery of NERL's TRS revenue based on actual traffic levels and efficient costs. However, it said that that the estimate of efficient costs should be further adjusted to reflect NERL's share of risk under the normal operation of the TRS mechanism prior to the impact of covid-19. This would result in NERL bearing 4.4 per cent of the risk overall (as NERL bears 100 per cent of the risk within 2 per cent traffic variation and 30 per cent of the risk for traffic variations between 2 per cent and 10 per cent).

Allowed return on TRS

6.20 easyJet and IATA did not support an allowance for the WACC on the unamortised balance of TRS revenues in the RAB. They suggested that NERL should follow other ANSPs (such as DSNA in France and DFS in Germany) and waive the regulatory return related to TRS.

6.21 British Airways reiterated its suggestion in its response to the NERL business plan that the separate treatment of the TRS revenue in the RAB raises the question of whether a different cost of capital should be applied to the TRS revenue.

The indexation used for the recovery of TRS

6.22 NERL noted that as the TRS revenue to be recovered is based on forecast inflation and sits outside of Determined Costs, there is currently no mechanism in place to adjust for differences between forecast and actual inflation. NERL argued that this should be changed in the Provisional Decision.

6.23 Ryanair argued that no inflation should be applied for the recovery of the TRS; stating that as UK inflation is extremely high, applying inflation to the TRS revenue could lead to increased costs.

The appropriate length and profile of the recovery period

6.24 NERL argued that a focus on affordability to set the recovery period for the TRS fails to take appropriate account of the material and negative impact of this approach on NERL's cash flow in NR23. Its proposal for the earlier recovery of TRS revenues[110] would have only a marginal impact on prices and demand.

6.25 IATA recognised that our Initial Proposals have taken considerable steps to minimise the impact by spreading the recovery over a 10-year period, which could be seen as a significant assistance to airlines. However, it noted that this time period could also lead to significant inflationary adjustments in the coming years, which could drive up the cost further. easyJet and British Airways offered broad support for the 10-year recovery period, although easyJet said we could also consider a longer recovery period.

6.26 Prospect did not object to the recovery being spread over a 10-year period, but wanted to be assured that this would not result in excessive financial gearing of NERL or potential questions about the financeability of the business.

Allowed revenue and the forecast en route unit rate in NR23

6.27 Loganair argued that the 27 per cent increase in unit rate is untenable and the UK will become the third most expensive state in Europe. Loganair's view was that the maximum increase which could be considered in that of the current published CPI.

6.28 easyJet noted that double-digit increases in prices for an essential facility is neither proportionate nor justified by a proportional increase in service performance. Further improvements are needed to ensure the right balance between affordability of charges and financeability of the ANSP.

6.29 Airlines UK considered the headline 27 per cent price control increase to be too high and argued that it risks disadvantaging the UK at a time when the industry is looking to recover its status as the third larget aviation market in the world. It noted that domestic routes where there are no viable transport alternatives, will be disproportionately impacted by the proposed unit rate increase.

Our views and Provisional Decision

Recovery of TRS revenues from 2020 to 2022

TRS recovery

6.30 We have considered British Airways' alternative approach of applying the previous TRS risk sharing mechanism (with NERL bearing 4.4% of risk) to the TRS efficient costs, but have not made these additional adjustments. We consider that our proposed approach is reasonable and proportionate as it provides protection for

[110] NERL proposed 75% recovery of its TRS entitlement in NR23, with the remaining 25% to be recovered in NR28.

customers and consumers (as the costs to be recovered are restricted to NERL's actual efficient costs during RP3 and as noted in chapter X we have taken our broad approach to the TRS adjustments into account in rejecting NERL's suggestions that it should receive an extra allowance for asymmetric risk), while also being consistent with maintaining a predictable regulatory framework and with the approach taken in the Eurocontrol Principles. We then use profiling to make sure NERL's charges are no higher than necessary and that these charges are affordable. Overall, we consider that our approach is consistent with our statutory duties.

6.31 We also carefully considered other responses from stakeholders but do not consider that they justifed a change in our approach. Our provisional decision on the TRS is to allow NERL to recover its efficient costs from 2020 to 2022 and to include the balance in the RAB, on the basis that:

- this should maintain the credibility and stability of the regulatory framework;
- allowing for the recovery of efficient costs will support NERL to continue to finance the investment necessary to support the safe and reliable operation of air traffic services and should help keep its cost of capital low (which will in turn avoid further upward pressure on its charges and so benefit its customers and consumers);
- we are allowing for the recovery of efficient costs only (with any inefficient spend being disallowed), preventing NERL from making any windfall gains and limiting the increases in charges to no more than necessary;
- it is not the CAA's role to set out or assume a level of support from government;
- we are able to profile the recovery of revenues over multiple price control periods to appropriately manage the impact on charges; and
- our approach means we have acted consistently with the TRS mechanism under the Eurocontrol Principles, as required under our secondary duties.

6.32 The TRS revenue shortfall will be accounted for in NERL's RAB but we now show this separately from other working capital adjustments, taking account of views from stakeholders, as we consider this provides greater transparency over the unamortised TRS revenue balance.

6.33 In its November 2022 rating agency report[111], Moody's view was that the approach in our Initial Proposals was credit positive. This indicates that our approach should

[111] See Moody's affirms A2 ratings of NATS (En Route) PLC; changes outlook to stable from negative: https://www.moodys.com/research/Moodys-affirms-A2-ratings-of-NATS-En-Route-PLC-changes-Rating-Action--PR_471464

be consistent with providing efficient financing costs and that the licence holder should not find it unduly difficult to finance its activities.

Allowed return on the TRS

6.34 Following views from stakeholders, we have revisited the available evidence on the approach taken by other major European ANSPs. We have not found clear evidence that a less than full WACC had been applied to the TRS for 2020 to 2022 in other European states.

6.35 Even if other ANSPs had applied no allowed return or a reduced allowed return, we would be concerned about its relevance to the UK as a comparator in circumstances where those ANSPs have different ownership structures and levels of government support in response to the impact of the covid-19 pandemic.

6.36 We also remain of the view that:

- there is a financing cost associated with covering the costs that have been efficiently incurred and are then being recovered over a long period of time (ten years) compared to the previous TRS mechanism (two years); and
- our estimate of NERL's WACC takes account of the implicit and explicit costs associated with raising finance, which would include any revenue shortfall. The WACC takes into account the observable cost of debt as well as the cost of equity, which has been assessed holistically and reflects the fact that all future revenues, including TRS revenues, are at risk;
- the unrecovered element of TRS revenues are not ring-fenced from NERL's other future revenues, which means we should not use a split cost of capital to remunerate financing costs.

6.37 Therefore, our Provisional Decision is to continue with our policy of applying our estimate of NERL's WACC to the TRS revenue to be recovered. We will use the RP3 WACC for the RP3 period (2020 to 2022) and the NR23 WACC for the NR23 period (2023 to 2027).

The indexation used for the recovery of TRS

6.38 We have indexed the TRS balance in line with RPI inflation, consistent with our approach to NERL's RAB and our use of a real WACC. We have proposed to amend Condition 21 of the NERL Licence so that the TRS revenues will be indexed to actual rather than forecast inflation (see Appendix [I]). We consider this is appropriate given the relatively long recovery period for the TRS revenue, which we discuss further below.

The appropriate length of the recovery period

6.39 Our Provisional Decision is to maintain the policy of recovering the TRS revenue shortfall over the 10-year period of NR23 and NR28 (that is, 50 per cent recovery in each 5-year period). In reaching this provisional decision, we have taken into account the views of airlines that a longer recovery period would be preferable. We also consider that our approach provides an appropriate and reasonable balance between, on the one hand, ensuring that the impact on charges in NR23 is no higher than necessary and, on the other hand, providing appropriate certainty around recovery of the TRS revenues to support continued investment and a low cost of capital. We assess financeability later in this chapter.

Summary – TRS revenue to be recovered by NERL

6.40 Our Provisional Decision on the TRS revenue to be recovered is summarised in Table 6.8 below. We estimate that the TRS revenue increases NERL's charges by around £6 per TSU in NR23, compared to the increase of £9 per TSU in NERL's business plan.

6.41 The TRS revenue to be recovered (NR23 and NR28) has increased by £26 million (in nominal prices) since our Initial Proposals. This is due to:

- an increase in the efficient cost baseline for 2020 to 2022, from the removal of the adjustment to regulatory return and the increase in the allowed restructuring costs, as discussed in chapter 3; and
- increases since Initial Proposals to inflation in 2022 when using actual inflation in place of previous forecasts.

Table 6.8 – TRS revenue to be recovered by NERL (nominal prices)

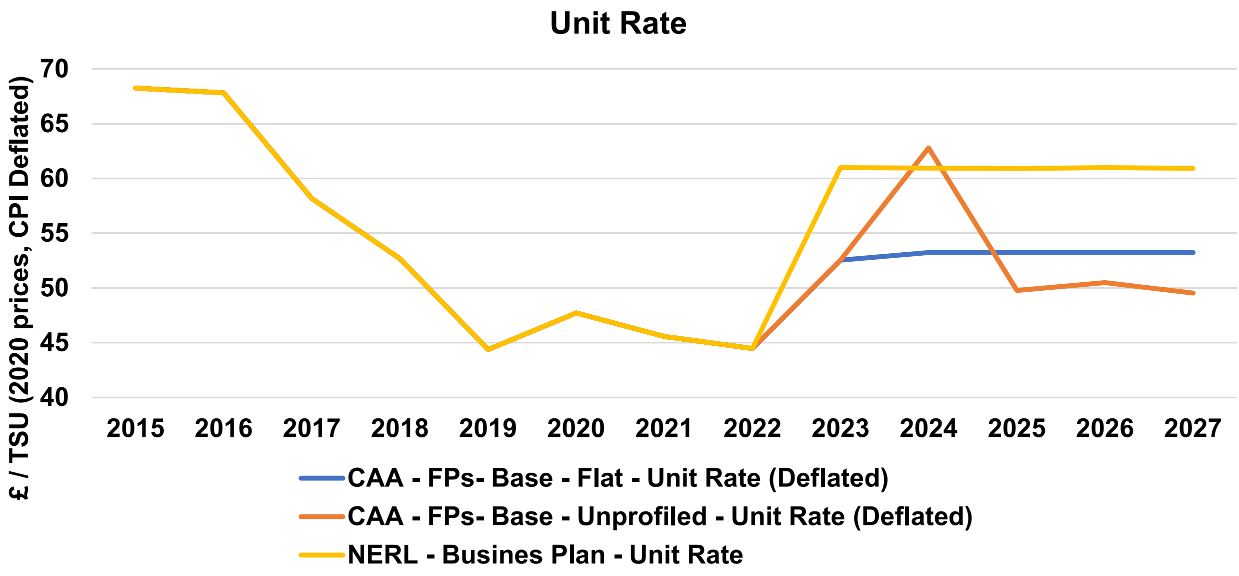
£ million, nominal prices	**TRS revenue to be recovered (NR23)**	**TRS revenue to be recovered (NR23 and NR28)**
NERL business plan	555 (75 per cent of total balance)	740
CAA Provisional Decision	354 (50 per cent of total balance)	707

Source: CAA analysis
Note: These figures exclude the adjustments for inflation and allowed return

Profiling the UK en route unit rate in NR23

6.42 In its business plan, NERL proposed a flat unit rate in real terms over NR23. We also adopted a flat unit rate in our Initial Proposals, which was supported by a number of other stakeholders. The 2023 unit rate has been set in line with our Initial Proposals. Our Provisional Decision is to retain this 2023 unit rate and then set a flat real unit rate over the remaining four years of the NR23 price control. This re-profiling supports lower charges in 2023 and 2024 as traffic levels are recovering to pre-pandemic levels and provides more stable prices for customers and consumers during NR23.

Figure 6.1 – Provisional Decision for the NERL en route unit rate, profiled and unprofiled



Source: CAA analysis

Allowed revenue and the forecast en route unit rate in NR23

6.43 After taking into account the TRS revenue from RP3 and other revenue adjustments, we forecast that NERL's unit rate over NR23 will be £53 per TSU compared with £61 in NERL's business plan (CPI-real 2020 prices), as set out in Table 6.9 below.

6.44 We note that this is the forecast unit rate for NR23. The actual unit rate may change depending on the actual traffic levels, inflation and incentives during NR23 that may lead to increases or reductions to actual allowed revenues.

Table 6.9 – Provisional Decison forecasts for the NERL NR23 unit rate, after re-profiling (2020 CPI prices)

£ million and £ per TSU, 2020 CPI Prices	2023	2024	2025	2026	2027
Determined Cost Revenue (£m)	640	644	581	596	593
Inflation (INF) (£m)	(3)	36	-	-	-
TRS and re-profiling adjustments (£m)	20	13	126	118	132
Cost sharing mechanism (CSM) (£m)	8	7	4	4	4
INEA and other revenues (£m)	(5)	(3)	(6)	-	-
Traffic variance (TVAR) (£m)	(32)	(9)	-	-	-
Total Revenue Allowance (£m)	**628**	**688**	**705**	**718**	**729**
Forecast TSU ('000)	11,956	12,930	13,247	13,490	13,700
Unit Rate (profiled) (£ per TSU)	**52.53**	**53.22**	**53.22**	**53.22**	**53.22**
Unit rate in NERL's business plan (£ per TSU)	*60.99*	*60.96*	*60.89*	*60.99*	*60.91*

Source: CAA Calculations

Benchmarking NERL's charges

6.45 The TA00 requires us to carry out our relevant functions in the manner we think best calculated to achieve the secondary duties, subject always to our primary duty, maintaining a high standard of safety in the provision of ATS, which takes priority. We therefore seek to set price controls which enable NERL to provide a resilient and high-quality level of service, but also represent efficient costs, which are no higher than necessary and provide value for money.

6.46 The analysis set out in CAP2553c appendix E and summarised below shows NERL's charges for NR23 are below the average levels for the RP2 period and are broadly comparable with those of other European ANSPs. While some ANSPs (notably Spain) currently have lower unit rates than NERL, there is uncertainty about the future level of these charges for these comparators and we note that NERL's charges in NR23 are expected to be around the level of comparator ANSP charges prior to 2019.

6.47 While the services provided by NERL are a relatively small proportion of the costs of operating a flight and air fares paid by passengers,[112] nevertheless we understand that airline customers and consumers will be affected by higher charges

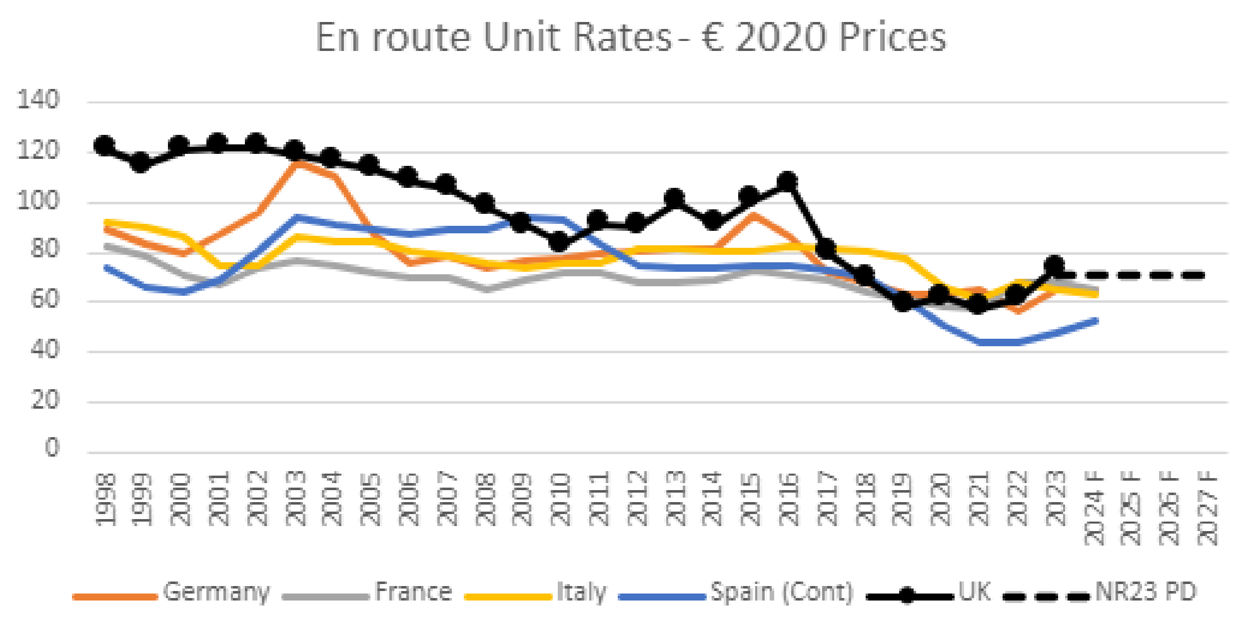
[112] We estimate that this provisional decision lead to a unit rate of around £2.08 per passenger per flight (in CPI 2020 prices). Our analysis of UK airline financial data for 2019 shows that navigation charges from all ANSPs globally represent between 3% to 9% of airline revenues.

and by any significant increases in charges in a single year, particularly as the traffic levels recover from the impact of the covid-19 pandemic. While there is an increase in NERL's charges in NR23, particularly due to the recovery of TRS revenue from RP3, the steps we have taken to extend recovery of TRS revenues over 10 years and to smooth revenues should reduce and smooth the average charge over NR23. We consider that, consistently with our statutory duties, this approach results in price control arrangements that further the interests of customers and consumers while also allowing NERL to continue to finance new investment and its activities.

6.48 In terms of quality of service our provisional decision includes a target for NERL's ATFM delays of approximately 0.21 minutes per flight, similar to 2022's performance from Spain (ENAIRE) and Italy (ENAV) and significantly better than Germany (DFS) and France (DSNA)'s past and forecast performance, as shown in Figure 6.3.

6.49 Overall, we consider our approach leads to forecast charges that are reasonable and provide good value for money given the benchmarks from the RP2 period and from European comparisons, while allowing NERL to deliver a safe and resilient service.

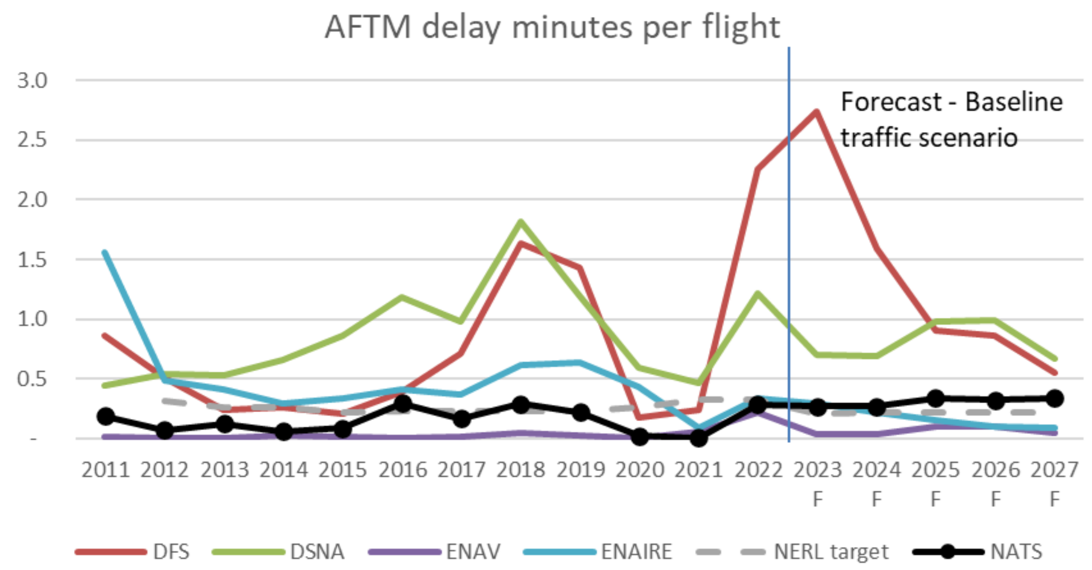
Figure 6.2 – Unit rates for NERL and European ANSPs (Euros per TSU, 2020 prices)



Source: CAA analysis of Eurocontrol unit rate dashboard, November 2022 CRCO tables and CAA provisional decision with profiling.

Note: Comparator unit rates for 2022-2024 are based on States' submissions produced in a different context and for a different timeframe to our Initial Proposals and Provisional Decision for NR23. EU states revised their numbers in mid-2021, at a time of greater uncertainty and still very much focused on cost-containment for their RP3 period (up to 2024), so it is possible that these numbers will change somewhat over the NR23 period.

Figure 6.3 – Forecast AFTM delay minutes per flight for NERL and Euopean ANSPs



Source: CAA analysis of En-route ATFM delay data in **ansperformance.eu/data/ansperformance.eu/data/** and draft European Network Operations Plan 2023-2027.

Financeability

Context

6.1 In this section, we set out our approach to furthering the interests of customers and consumers and discharging our financeability duty[113]. We do so by setting a price control that facilitates an 'efficient notionally financed company' having ongoing access to sufficient capital to carry out its activities. This should support NERL's access to financial markets on reasonable terms (which is important so that it can continue to finance capex) and also ensures that charges to customers and consumers are no higher than necessary, in accordance with our secondary duty to further the interests of customers and consumers.

6.50 NERL's RAB is financed through a mixture of debt and equity finance. The proportion of the RAB financed by debt is known as the gearing. We assume a notionally efficient gearing ratio, which may be different from NERL's actual level of gearing. This approach ensures that we set the price control on the basis of a reasonably efficient capital structure and allows NERL to finance further investment in its regulated business. It should also insulate consumers from any adverse impacts of the decisions NERL might take on its actual capital structure, which is for

[113] We use this as a shorthand for our duty to exercise our relevant functions in a manner we consider best calculated to (among other things) secure that NERL will not find it unduly difficult to finance its authorised activities (s.2(2)(c) TA00). This is one of our 'secondary' duties over which the primary duty in respect of safety has priority (s.2(1) TA00).

its management and shareholders to decide on and manage (including managing any risks that flow from its decisions).

6.51 We also test NERL's financeability in plausible downside scenarios. This is so that we can ensure the price control is robust to a reasonable range of circumstances. Nonetheless, this does not constitute an attempt to guarantee that the notional company will be financeable in all possible situations, which is not practicable or desirable (in that it would represent too conservative approach to setting the price control, would reduce the incentives on NERL to manage risk and would not be in the interests of NERL's customers or consumers).

Our Initial Proposals

Our approach

6.52 In our Initial Proposals we described our approach to assessing financeability using our price control model (PCM), which models the notional company.

6.53 We assumed that the notional company had a gearing at the beginning of RP3 in line with its historical gearing prior to the pandemic (which was 40%). We then assumed that the notional company funds itself firstly through retained cash flow and secondly through debt issuance. We assumed that the notional company paid no dividends in 2021 or 2022 and that its gearing increased significantly to just over 60% in 2022. This was due to the notional company having to meet funding requirements during the pandemic in the face of lower revenues recovered from its customers.

6.54 We assumed dividend forbearance in 2023 and 2024. This reflected elevated gearing in these years under our modelling assumptions, and the consequent need to alleviate pressure on the notional company's balance sheet.

6.55 From 2025 onwards, we assumed dividends are paid in all scenarios. The profile has been developed by scaling down NERL's proposed dividend profile to reflect:

- our lower cost of equity assumption; and
- a lower payout ratio[114] of 50% (compared with NERL's effective payout ratio of 55%), in line with assumptions adopted by other regulators.[115]

Debt financeability

6.56 Our assessment of debt financeability in our Initial Proposals considered whether the notional company could retain access to cost effective investment grade debt financing, including under reasonable downside scenarios.

[114] The payout ratio is calculated as dividends paid divided by profit after tax.

[115] Ofwat's approach in PR19, for example, produced a payout ratio of 48%. See p92 of PR19 final determinations: Aligning risk and return technical appendix

6.57 We noted that the A- credit rating assumption we made as part of our WACC analysis was consistent with the assumptions underpinning our financeability assessment. We described how the quantitative part of our assessment of debt financeability used the same credit metrics as the credit rating agencies use in their assessments. We also highlighted that in determining the appropriate threshold against which to assess the credit metrics we needed to exercise a degree of judgement since the rating agencies do not rate the notional company.

6.58 In our Initial Proposals we set out our view that the notional company ought to be able to access cost-effective debt finance with a notional, stand-alone credit rating of BBB+/Baa1, since this is a comfortable investment grade credit rating that provides two notches of headroom above the minimum investment grade credit rating of BBB-/Baa3.

6.59 The conclusion that the notional company would achieve metrics consistent with an A- rating, combined with the conclusion that a BBB+ rating would be adequate to be financeable led us to the view that the notional company would be financeable under our Initial Proposals.

6.60 We also described the analytical framework that we were using for the quantitative part of our assessment of credit rating. We highlighted the specific credit metrics upon which we based the quantitative part of our assessment:

- Ratio of funds from operations (“FFO”) to net debt;
- Ratio of net debt to RAB; and
- The adjusted interested cover ratio (“AICR”).[116]

6.61 We also described metrics that we considered were not relevant to our assessment and gave our reasons for reaching that conclusion. Finally, we presented the credit metric thresholds that we would use in our financeability assessment:

(a) FFO to net debt ratio of greater than 18% over a two year rolling period would be consistent with a rating of BBB+;
(b) an adjusted net debt to RAB ratio of less than 70% would be consistent with a credit rating of at least[117] Baa1 (which is equivalent to BBB+); and
(c) an AICR of above 1.4x over a three year rolling period would be consistent with a Baa1 rating and above 1.2x would be consistent with a Baa2 rating.

116 Specifically as defined by Moody’s.

117 We are basing our assessment here on statements from Moody’s that if this metric were to exceed 70% it could cause a downgrade in the current A2 credit rating. This is a rather conservative approach though it is somewhat moot because NERL’s licence requires it to maintain a gearing of no more than 65%.

6.62 We presented the results of our credit metric assessment and concluded that, under our Initial Proposals, the notional company should be able to maintain a comfortable investment grade credit rating and pay our assumed dividend profile to shareholders from 2025

6.63 We also examined a downside scenario in which traffic volumes were 10% below our base case assumption. We concluded that in this scenario the TRS mechanism provides significant protection and the notional company would remain able to access cost effective, investment-grade debt finance in a timely manner.

Equity financeability

6.64 In our Initial Proposals we described our approach to assessing equity financeability. This places primary reliance on the internal rate of return ("IRR") and also considers qualitatively the profile of dividends. We noted that the allowed cost of equity would be the benchmark against we would compare IRR.

6.65 We presented the results of our IRR analysis which showed that the IRR, of 10.2%, closely matched the allowed cost of equity, of 10.1% (both figures in nominal terms). Finally, we considered the dividend profile and noted that a degree of shareholder forbearance in respect of dividends was appropriate in the early years of the price control as the TRS debtor from RP3 is released. We concluded that our Initial Proposals provided for reasonable equity returns.

Summary of stakeholders' views

Our approach

6.66 NERL stated that:

- the CAA had mis-directed itself with regards to the financeability duty. NERL argued that the TA00 refers to licencees rather than to notional companies and argued that the CMA, in their 2020 final report, considered NERL's actual financing arrangements. NERL further stated that the difference between its preferred approach and the notional company approach "is perhaps not a critical distinction at NR23".
- our assumptions on the dividend profile for NR23 was inconsistent with our approach to the cost of equity, with investor expectations and with our approach to the H7 price control. NERL suggested that we should allow dividends to resume sooner and be larger than we proposed in our Initial Proposals.

6.67 British Airways supported the view that NERL should retain access to financial markets on reasonable terms.

Debt financeability

6.68 NERL agreed with our conclusions in respect of debt financeability though noted there were aspects of our analysis that should be corrected. NERL said the CAA should:

(a) focus more on Moody's statements in relation to NERL rather than statements in respect of energy companies;
(b) engage more with rating agencies to refine its approach to debt financeability (and NERL referred to a specific example of the definition of the net debt to RAB ratio);
(c) consider the likelihood and severity of traffic downsides more severe than a 10% reduction from base assumptions; and
(d) consider whether BBB+ is an appropriate target credit rating (NERL suggested A- would be more appropriate).

Equity financeability

6.69 NERL said that our equity financeability assessment did not provide a fair chance for NERL to earn the allowed return on equity over NR23. NERL referred to our treatment of pension costs and indexation of operating costs in support of this argument.

6.70 CAAPS Pension Trustees was concerned that our Initial Proposals did not provide NERL with sufficient financial flexibility. CAAPS Pension Trustees noted that if gearing were to remain fixed in the traffic downside scenario this would absorb most of the dividend which threatens NERL's ability to raise equity in future.

Our views and Provisional Decision

Our approach

6.71 Section 2(2)(c) TA00 provides that we must exercise the relevant functions in the manner we think best calculated to (among other things) "*secure that licence holders will not find it unduly difficult to finance activities authorised by their licence*". It is therefore clear that we must exercise our judgement as to how best to discharge what is sometimes referred to as the 'financeability' duty. We disagree with NERL's argument that the reference to "*licence holders"* precludes our approach to assessing financeability.

6.72 We remain of the view that assessing financeability in respect of the notional company is the manner best calculated to secure that NERL will not find it "*unduly difficult"* to finance its activities and to discharge our other statutory duties. As explained above this approach avoids the distortion of incentives that would arise were we to simply guarantee the financeability of NERL and it incentivises licensees to manage company debt prudently and efficiently, in the consumer interest.

6.73 Our approach is also consistent with that of other regulators. For example, Ofwat sets determinations on the basis of a notional capital structure and notional financing costs. The CMA has also endorsed the notional company approach: in rejecting an appeal against the Gas and Electricity Market Authority (GEMA) in the RIIO-2 price control, the CMA noted that GEMA was not required "*to secure the actual financeability of particular licence-holders*" and observed that "*the notional company approach has been used in a variety of regulatory contexts.*" [118]

6.74 We have retained the dividend profile we set out in Initial Proposals. We agree that the assessment of dividend profile that we are making in NR23 differs to the assessment that we made in the H7 price control. This reflects the fact that we are assessing different notional entities. The dividend profile we specified in our NR23 Initial Proposals reflects the wider financeability assessment and credit metrics that the notional company is projected to achieve. We consider that this is a far more relevant basis for assessment than simply replicating the profile we used in a different price control in different circumstances.

Debt financeability

6.75 We note NERL's comments about engaging with credit rating agencies and using appropriate metrics. We have continued to engage with credit rating agencies inin making our provisional decision. We have sought to use the Moody's definition of adjusted net debt to RAB in our assessment of financeability below.

6.76 Our assessment of debt financeability considers whether the notional company can retain access to cost effective investment debt financing, including under reasonable downside scenarios.

Credit rating

6.77 In respect of financeability our assessment focuses on whether the notional company will be able to access the finance it requires in a cost effective and timely way. The term 'cost effective' should not be misunderstood to mean the debt which is the cheapest to service. NERL's suggestion that we should target an A- credit rating notes that such debt would be cheaper than BBB+ debt but does not acknowledge the costs associated with maintaining an A- credit rating in the first instance. Consequently NERL does not provide any analysis of the *net* cost of an A-credit rating relative to that of a BBB+ rating.

6.78 For the purpose of our financeability assessment we consider debt is cost effective if it facilitates the timely issuance of debt without undue incremental cost. The

[118] CMA Final Determination, Energy Modification Licence Appeals (28 October 2021), vol 3, paragraphs 14.70, 14.82.

notional company has relatively modest financing requirements for a BBB+ issuer and in fact is not projected to issue any debt in the NR23 period. We have reviewed typical issuance volumes for issuers of different credit ratings and, based on that review, conclude that a BBB+ rating would be sufficient to allow the notional entity to retain cost effective, timely access to debt finance if it is required.

Credit rating metrics and threshold considered

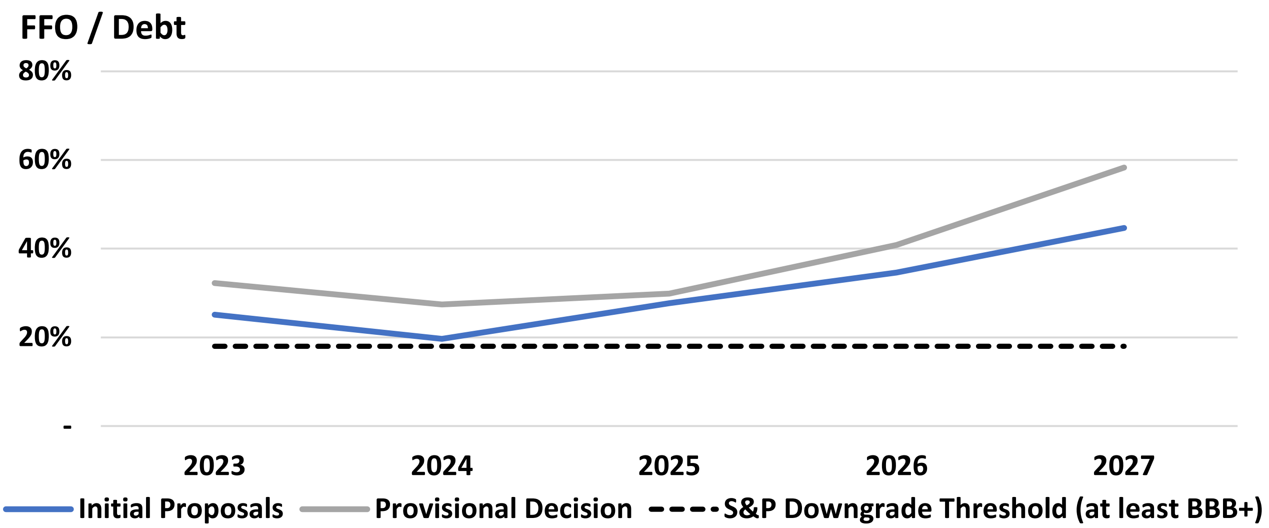
6.79 Noting the above conclusion that a BBB+ credit rating would be sufficient for the notional company's financing needs in NR23, we have decided to retain the credit metric thresholds set out in Initial Proposals for our provisional decision:

(a) FFO to net debt ratio of greater than 18% over a two year rolling period would be consistent with a rating of at least BBB+;
(b) an adjusted net debt to RAB ratio of less than 65% would be compliant with the licence restriction on gearing[119]; and
(c) an AICR of above 1.4x over a three year rolling period would be consistent with a Baa1 rating and above 1.2x would be consistent with a Baa2 rating.

Analysis of credit metric projections

6.80 We have used the PCM to assess the credit metrics the notional company is projected to achieve in the NR23 period in a scenario where outturns match our allowances in respect of all elements of the price control. The results of this analysis are presented in Figures 6.4 to 6.6 below.

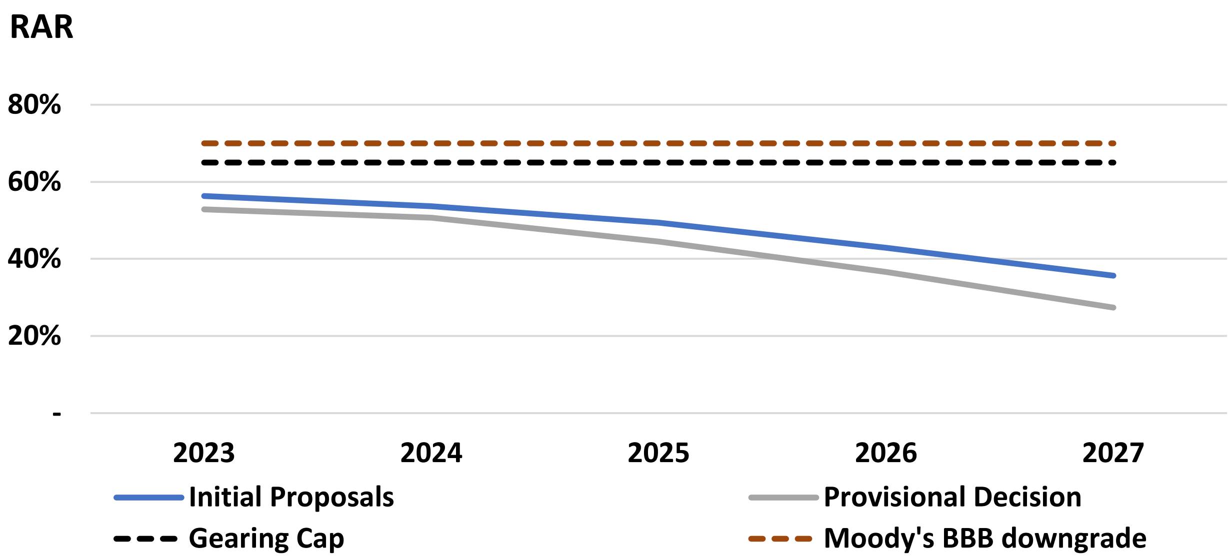
Figure 6.4: FFO to net debt



Source: CAA analysis

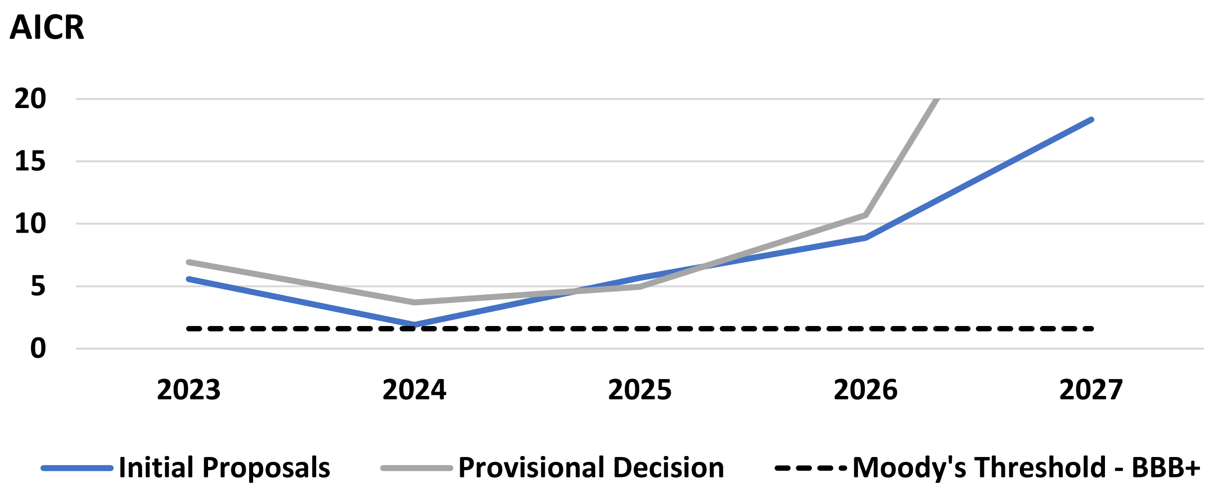
[119] A threshold of 70% would be consistent with maintaining the current credit rating of A2 (which is equivalent to A) which itself is two notches above the BBB+ level that we are basing our assessment on. The licence restriction is therefore more limiting which is why we use this level in our assessment.

Figure 6.5: Adjusted net debt to RAB



Source: CAA analysis

Figure 6.6: Adjusted interest cover ratio



Source: CAA analysis

6.81 As Figures 6.4 to 6.6 show, our Provisional Decision produces credit metrics that are comfortably above the thresholds required to maintain a BBB+ credit rating. In the majority of cases the metrics are also stronger than they were in our Initial Proposals reflecting a higher FFO figure. The higher FFO figure relative to on Initial Proposals is the result of:

- a reduction in tax costs calculated within the PCM[120];
- increases in regulatory depreciation allowance as a result of fixing an input error; and

[120] In our Initial Proposals there was a discrepancy between the allowed and actual tax costs. We have removed this discrepancy. Correcting this error produces a net benefit to the measure of FFO.

- increased allowance for regulatory return.

6.82 As Figure 6.6 shows, the AICR metric increases sharply from 2026 and achieves levels substantially in excess of the threshold. This is because, in our modelling, the notional company pays back some of its debt each year and consequently has very little debt in 2026 and 2027. We have truncated the scale so that the reader can more closely see the levels of AICR in the early years, albeit that the 2027 figure for AICR is not visible.

6.83 In light of the above analysis we are confident that our provisional decision produces credit metrics consistent with at least a BBB+ credit rating. As we have noted above, a BBB+ credit rating would allow the notional company to raise cost effective debt finance and this supports our overall assessment of financeability.

Downside scenarios

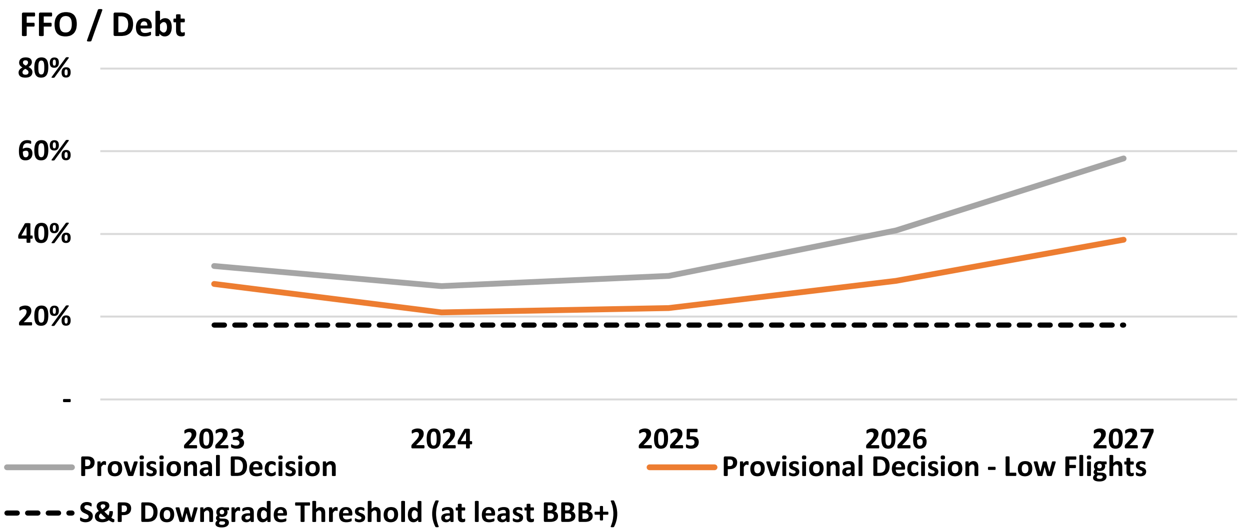
6.84 As in our Initial Proposals we have examined the impact of a scenario in which traffic volumes are 10% below the base case assumption. We have also assumed that operating costs would reduce by 2.5 per cent lower based on a high-level assumption of the variability of costs with traffic levels.

6.85 We note the comments made by NERL and the suggestion that we should examine a more severe downside scenario for traffic levels. Prior to the covid-19 pandemic no event had produced a reduction in traffic of 10% or more over even a single year. Individual events such as adverse weather and industrial action did affect traffic by more than 10% over shorter periods of time but a 10% reduction in traffic over all five years of the price control is, by historical standards, still an extremely testing scenario. We also note that the difference between the base and low traffic forecasts from STATFOR for March 2023 are below 10% over NR23.

6.86 We do not consider that it would be appropriate to calibrate the price control on the assumption of another global pandemic. While we cannot rule out the possibility of such a pandemic, global pandemics of the scale of the covid-19 pandemic are infrequent and other regional pandemics such as SARS and MERS had a much smaller impact on air travel in the UK. We would also have the option to re-open the price control in the circumstances of a very significant and sustained reduction in traffic levels.

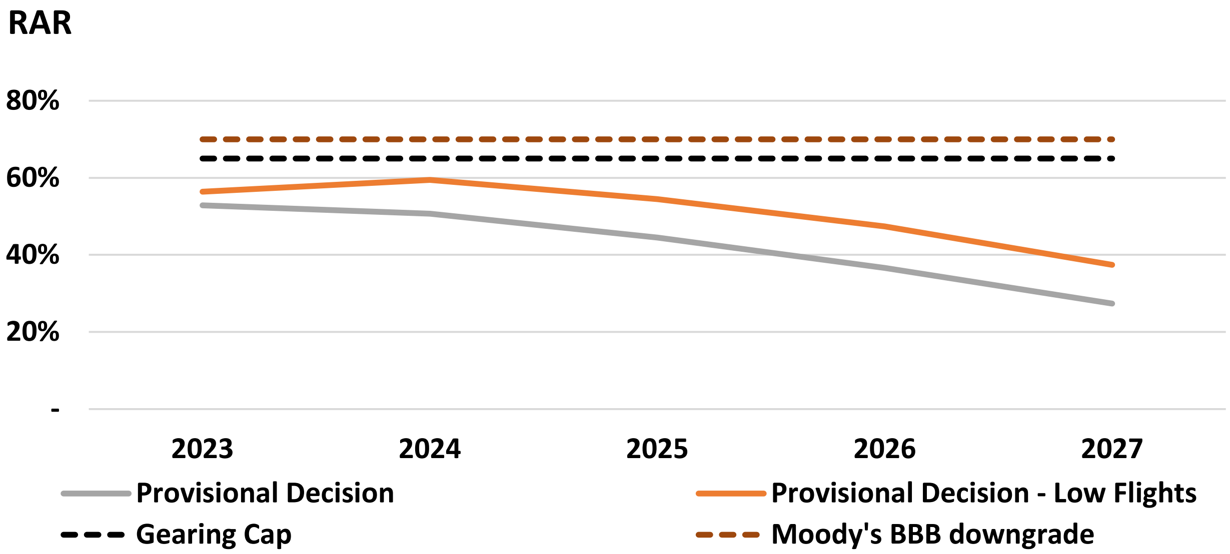
6.87 The impact of the downside scenario on credit metrics are shown in Figures 6.7 to 6.9 below.

Figure 6.7: FFO to net debt



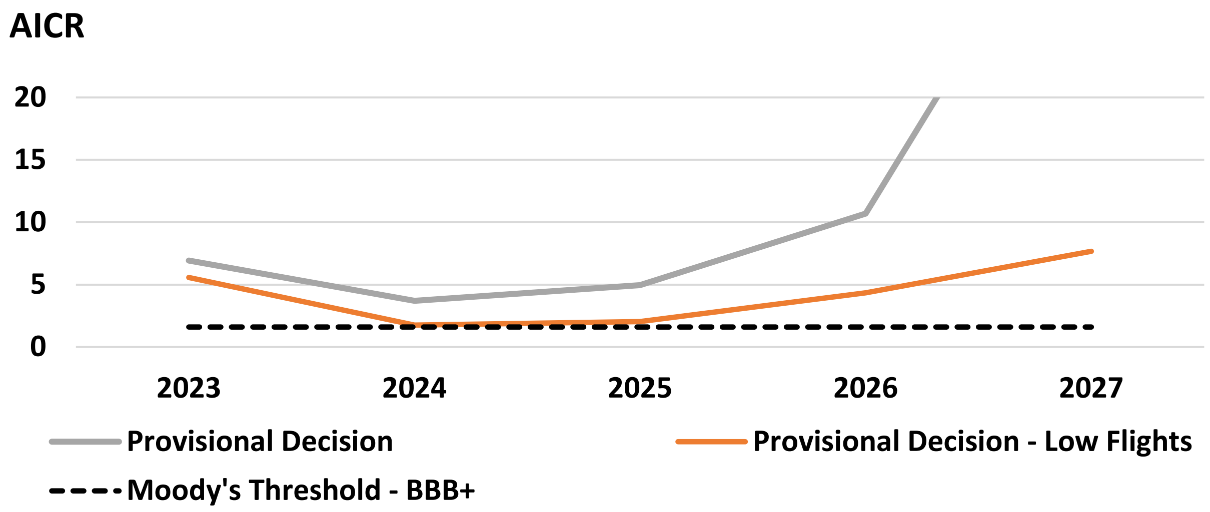
Source: CAA analysis

Figure 6.8: Adjusted net debt to RAB



Source: CAA analysis

Figure 6.9: Adjusted interest cover ratio



Source: CAA analysis

6.88 We observe from Figures 6.7 to 6.9 that the low flights scenario causes a deterioration in all of the credit metrics. For each metric we observe a largely parallel shift in the level of the metric in the low traffic scenario. This reflects the reduced cash flow in such a scenario.

6.89 As the results of the downside scenario analysis demonstrate, even if traffic volumes were 10% below our base case assumption we still anticipate that the notional company would be able to maintain credit metrics consistent with a BBB+ credit rating. This strongly supports our overall view that, from a debt perspective, our provisional decision is financeable.

Equity financeability

6.90 No stakeholders commented on the appropriateness of the measures we proposed to use for our assessment of equity financeability. For the reasons stated in our Initial Proposals we will assess equity financeability primarily with reference to IRR while also placing some reliance on a qualitative assessment of the dividend profile.

6.91 We have used the PCM to calculate the real IRR of cash flows to and from shareholders in the notional company. To perform these calculations, we assume a notional buy-in at the start of the price control period and a terminal value at the end of the period. In both cases the value of the cash flow to/from equity is calculated as RAB less the net debt. This analysis produces a post-tax, real IRR which is somewhat below the post-tax, real allowed cost of equity of 5.3%.[121]

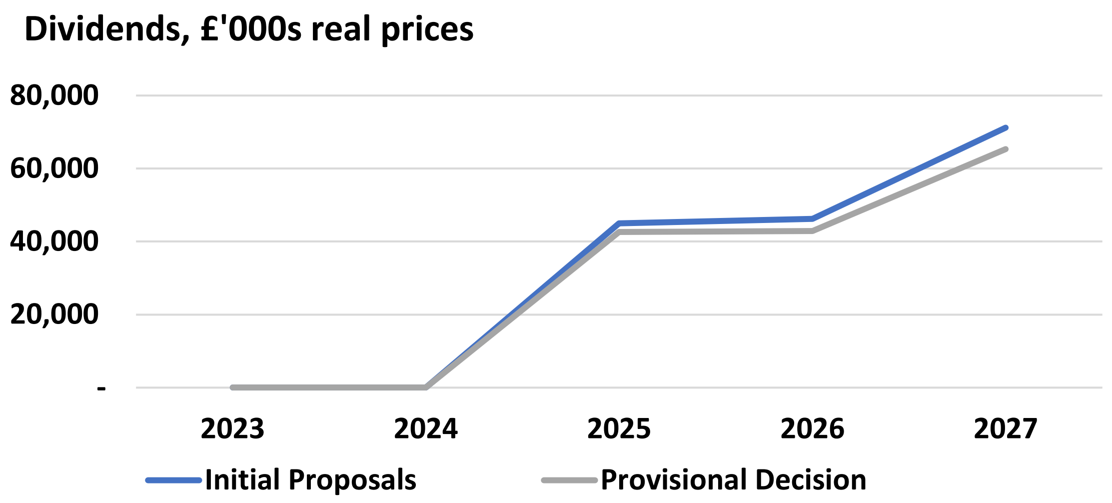
[121] Depending on the specific modelling assumptions made the level of the IRR can vary. Our base case modelling suggests that the IRR is approximately 90 basis points below the allowed cost of equity (both in real, post-tax terms).

6.92 We note that while the IRR in our base case is somewhat below the allowed cost of equity this IRR reflects a dividend profile which retains a substantial amount of cash within the notional company. In a modified case in which dividends of £150 million are paid out in each of 2025, 2026 and 2027 the real, post-tax equity IRR is 5.3% which demonstrates that the cash flows in the price control provide sufficient scope for adequate returns to shareholders.

6.93 As described in chapter 5, we have conducted a detailed exercise in determining the cost of equity to ensure it provides a return commensurate with the risk profile of the investment. Consequently, we consider that the IRR is robust evidence that our provisional decisions are financeable from an equity perspective.

6.94 Figure 6.10 below shows the profile of dividends that we project the notional company will be able to achieve in the NR23 period:

Figure 6.10: Assumed dividend profile



Source: CAA analysis

6.95 As Figure 6.10 shows, the dividend profile for our Provisional Decision is substantially the same as the profile we used in our Initial Proposals. The small difference is the result of updated inflation assumptions. Our assessment of the reasonableness of the dividend profile is unchanged since our Initial Proposals. As noted above, we do not accept NERL’s suggestion that in order to be consistent with the approach used in the H7 price control we would necessarily need to assume the same profile of dividends.

6.96 We also note NERL’s comments that pension cost allowances and indexation of operating costs threaten equity financeability. We are of the view that we have made reasonable allowances for both operating costs and pension costs, which have been allowed for in our financeability assessment.

6.97 We also note CAAPS Pension Trustees' comments about our equity financeability assessment and specifically the comment that the downside scenario would eliminate most of the projected dividends. We consider that a period of dividend forbearance is acceptable in a downside scenario, particularly as shareholders will benefit from TRS revenues in later years and the business should continue to have access to investment grade debt finance.

Summary

6.98 Our debt financeability assessment indicates that the notional company would be able to maintain strong credit metrics even in the event of the traffic downside scenario. These credit metrics would allow the notional company to maintain at least a BBB+ credit rating which would be more than sufficient for its needs in NR23 given it is not projected to need to issue any debt in NR23.

6.99 Our equity financeability analysis shows that the notional company is able to earn returns broadly in line with our allowed cost of equity in the base case scenario. In a downside scenario shareholders’ returns within the NR23 period would be reduced, though as described above, we consider that this is reasonable as shareholders expect to bear these sorts of risks.

6.100 Taking our debt and equity financeability assessments together, we are confident that our provisional decisions for the NR23 period are financeable.

Next steps and implementation

6.101 The proposed licence modifications set out in CAP 2553d appendix H specify the level of charges which would implement the Provisional Decision set out above. The proposed licence modifications reflect our Provisional Decisions in this chapter in respect of the profiling of charges.

Chapter 7

Regulatory incentives and mechanisms

Introduction

7.1 We have developed a range of regulatory mechanisms to help ensure risks are shared between NERL and its customers in an appropriate way, to support change and innovation (including in respect of services to new airspace users for NR23), and to provide NERL with incentives to operate efficiently (including in relation to how NERL engages with users on its capital expenditure programme). Some of these mechanisms continue arrangements that have been in place for previous NERL price controls, and some are new for this NR23 period. They are designed to further the interests of customers and consumers by supporting NERL in being able to secure efficient financing for investment, promoting efficiency and economy, and allowing customers to benefit from innovation.

7.2 This chapter has the following four sections:

- uncertainty mechanisms;
- airspace modernisation;
- new users; and
- capex engagement incentive.

7.3 In each section we summarise our Initial Proposals and the key points raised in stakeholder responses. We then set out our views on the issues raised and explain our Provisional Decision.

Uncertainty mechanisms

Introduction and context

7.4 Uncertainty mechanisms allow for risk to be shared between NERL and its customers, with a view to providing appropriate levels of protection for NERL from risks outside its control. This should support a relatively low WACC for NERL and hence lower charges to customers and consumers. The appropriate allocation of risk is informed by a range of factors, such as whether NERL or airlines are best placed to bear and manage a particular risk. In the present circumstances, with uncertainty about both traffic and macroeconomic factors (which can affect financing costs), this allocation of risk is particularly important.

7.5 Our Initial Proposals included mechanisms to address traffic risks, cost risks, inflation risks and capex risks, and we also considered asymmetric risks (as

NERL had requested an asymmetric risk allowance). These are discussed below, except for capex delivery incentives which are addressed in chapter 4.

Our Initial Proposals

Traffic risk

7.6 For the en route and London approach price controls, we proposed to retain a traffic risk sharing ("TRS") mechanism with the same parameters as in recent control periods (and also the default mechanism under EU charging rules for RP3):

- for traffic variations up to 2 per cent, NERL would bear full traffic risk;
- for traffic variations between 2 per cent and 10 per cent, NERL would bear 30 per cent of traffic risk; and
- for traffic variations greater than 10 per cent, NERL would bear no traffic risk.

7.7 In order to mitigate the burden of revenue recovery on airlines we proposed that, if traffic was below our forecast, then adjustments for traffic variations up to 10 per cent would be made in year n+2, and adjustments for traffic variations over 10 per cent would be spread evenly over years n+3 and n+4. But if traffic was higher than forecast then the entire adjustment would be made in year n+2.

7.8 We also proposed to retain the flexibility to consider re-opening the price controls for traffic variations greater than 10 per cent but did not propose a specific threshold for such a review. We explained that sections 11 to 11A of the TA00 already allow us to review the best course of action following such events on a case-by-case basis, in light of our statutory duties.

7.9 For the Oceanic price control, we said that we did not propose to apply traffic risk sharing as this would introduce unnecessary complexity to the price control, with limited benefits for customers. We also noted that a substantial portion of the Oceanic service is already protected from traffic risk under contractual arrangements with Aireon.

Cost risks

7.10 We proposed that, while NERL would continue to bear the risk for most opex changes within the price control period, we would continue to apply the Eurocontrol Principles which allow for cost pass-through in cases of:

- unforeseen changes in costs of new and existing investments;
- unforeseen and significant changes in pension costs (limited to differences resulting from unforeseeable changes in market conditions or pensions/accounting law);

- unforeseen and significant changes in costs resulting from unforeseeable changes in interest rates on loans to finance services; and
- unforeseen and significant changes in costs resulting from unforeseeable changes in national taxation law or other new cost items required by law.[122]

7.11 We confirmed that we expected these cost pass-through mechanisms to continue to apply in the case of unforeseen changes in DB pension costs as a result of unforeseeable changes in financial market conditions. We reiterated that, consistent with our recent regulatory policy statement,[123] costs eligible for pass-through must be reasonable and efficient.

7.12 However, we did not propose to extend this pension cost pass-through to costs arising from the transfer of employees from the DB pension scheme to the PCA scheme, as proposed by NERL. We noted that these costs are at least partly within NERL's control and did not meet the criteria set out in the Eurocontrol Principles. We said that, consistent with previous years, we would continue to consider any cost savings, including PCA cost savings, when assessing any claim for recovery of additional pension costs.

Inflation risk

7.13 We proposed to retain the same approach to the treatment of inflation risks as for RP3. This broadly isolates NERL from unexpected changes in inflation and is consistent with a low WACC and with the Eurocontrol Principles. In practice this means that:

- the unit rate is indexed to CPI. Determined Costs are expressed in NERL's licence in nominal terms, based on an inflation forecast, and there is an adjustment to revenues (the 'INF' term in the licence) to correct for the difference between forecast and actual CPI inflation with a two-year lag; and
- the RAB is indexed to RPI. We retain the adjustment introduced in RP3 to correct for differences between the forecast and actual wedge between RPI and CPI inflation.

7.14 We also said that we would consider whether NERL would be able to manage some of the recent significant increases in inflation in its cost base in line with other businesses. This approach to assessing the impact of inflation on the cost allowance is discussed in chapter 4.

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122 Eurocontrol Principles, paragraph 3.3.4.2.

123 See Appendix C to CAP2119.

Asymmetric risks

7.15 We disagreed with NERL's proposal for an asymmetric risk allowance similar to our approach for HAL in the H7 review. We noted that:

- there are differences between the traffic risks faced by NERL and by HAL, for example because NERL's traffic is UK-wide and includes overflights;
- in NERL's case, on average over RP1 and RP2 the difference between actual and forecast TSUs was positive, suggesting that our forecasts were relatively conservative; and
- NERL should have a higher degree of revenue protection than HAL, for example because it has a smaller proportion of revenue that is not protected by the TRS mechanism, and because of our approach to the reconciliation review of 2020 to 2022 and related revenue recovery.

Summary of stakeholders' views

Traffic risk

7.16 NERL agreed with our proposals for TRS for the UK en route and London Approach price controls. However, it disagreed with our proposal not to apply TRS to the Oceanic price control, stating (among other things) that:

- complexity should not be a concern as the TRS mechanism is well established and well understood;
- both UK en route and Oceanic traffic exhibit a high degree of volatility compared with regulatory forecasts; and
- applying TRS to the Oceanic price control would introduce more regulatory certainty and consistency between the different price controls.

7.17 IATA, British Airways, Virgin Atlantic and Aer Lingus supported our proposal not to apply TRS to the Oceanic price control. British Airways also commented on our proposals for the UK en route and London approach price controls, suggesting an alternative mechanism that would see airlines' maximum exposure in any one year normally capped at 5.6 per cent of NERL's revenues, with recoveries spread out over up to 10 years to accommodate this approach.

Cost risks

7.18 NERL challenged our proposal not to include costs arising from the transfer of employees from the DB pension scheme to the PCA scheme in the pension cost pass-through mechanism. It stated that:

- the addition to PCA costs is not within NERL's control as it is triggered by the decisions of individual members, made in the light of personal circumstances that NERL cannot monitor or influence;

- leaving asymmetric cost risk with NERL does not provide any effective incentive to the efficiency of the PCA scheme; and
- with respect to the Eurocontrol Principles, unforeseeable changes in financial market conditions cause individual members to opt into the PCA scheme, and the resulting cost changes are outside NERL's control.

Inflation risk

7.19 NERL expressed concerns about our proposed approach to reflecting inflation forecasts in our opex allowance. This is discussed in chapter 4.

Asymmetric risks

7.20 NERL continued to propose an allowance for asymmetric risk. It said that evidence over a longer time horizon shows that, on average, actual traffic levels were below our forecasts, and that its traffic is subject to negative shocks.

7.21 British Airways supported our assessment that there is no requirement for an asymmetric rick adjustment

Our views

Traffic risk

7.22 We have considered British Airways' suggested alternative TRS mechanism for the UK en route and London approach price controls. However, we have concerns that it would be complex to implement, and unnecessarily so in cases where the amount to be recovered is only a little above British Airways' suggested annual cap of 5.6 per cent of revenues (which is equivalent to a cost of between 10 and 15 pence per passenger). In addition, it would give NERL little certainty about when it could expect to recover any shortfall in its revenues, as this would depend (among other things) on future traffic outturns.

7.23 We have therefore decided to retain the approach set out in our Initial Proposals, which is simpler to implement and provides greater certainty for NERL. We will retain the ability to carry out an in-period review in the case of a large shock, taking account of the specific circumstances of the case both when deciding whether to carry out such a review and when considering possible solutions.

7.24 Regarding the Oceanic price control, we are not persuaded by NERL's arguments for the inclusion of a TRS mechanism. This would introduce additional complexity and would have only a small impact on NERL's overall financial situation. NERL's business as a whole already receives a relatively high degree of protection from traffic risk, and there is no obvious reason why the Oceanic business needs its additional specific protection.

Cost risks

7.25 We continue to consider that costs relating to the transfer of employees to NERL's PCA pension scheme should not be automatically included in the pension cost pass-though mechanism. At least some of these costs are likely to be within NERL's control, and unforeseeable changes in financial markets are unlikely to be the only factor that affects individual members' decisions whether or not to switch to the PCA scheme. We therefore consider that to include such costs in the pass-through mechanism would not be consistent with the Eurocontrol Principles.

Asymmetric risks

7.26 There are important differences between the risks faced by HAL and NERL, and the factors that justify specific allowances for asymmetric risk in HAL's case are much less relevant to NERL. In particular, we note that:

- HAL's potential upside is severely limited by capacity constraints at Heathrow airport. A similar argument does not apply to NERL, as its traffic is UK wide and also includes overflights; and
- NERL's TRS mechanism provides a stronger degree of protection than the mechanism we have introduced for HAL. This reflects (among other things) the parameters of the different mechanisms and the larger proportion of HAL's revenues that are not covered by its TRS mechanism but which are still likely to be affected by traffic changes.

Our Provisional Decision

Traffic risk

7.27 For the UK en route and London Approach price controls, we will retain a TRS mechanism from 2023 onwards with the following parameters (which are the same as in recent control periods and also the default mechanism under EU charging rules for RP3):

- for traffic variations up to 2 per cent, NERL will bear full traffic risk;
- for traffic variations between 2 per cent and 10 per cent, NERL will bear 30 per cent of traffic risk; and
- for traffic variations greater than 10 per cent, NERL will bear no traffic risk.

7.28 Where traffic is below our forecast, the adjustments for traffic variations up to 10 per cent will be made in year n+2, and adjustments for traffic variations over 10 per cent will be spread evenly over years n+3 and n+4. Where traffic is higher than our forecast then the entire adjustment will be made in year n+2.

7.29 We will retain the flexibility to consider re-opening the price controls for traffic variations greater than 10 per cent. There is no specific threshold for such a review. Sections 11 to 11A of the TA00 allow us to review the best course of action following such events on a case-by-case basis, in light of our statutory duties.

7.30 The Oceanic price control will not include a TRS mechanism.

Cost risks

7.31 We will continue to apply the Eurocontrol Principles which allow for cost pass-through in cases of:

- unforeseen changes in costs of new and existing investments;
- unforeseen and significant changes in pension costs (limited to differences resulting from unforeseeable changes in market conditions or pensions/accounting law);
- unforeseen and significant changes in costs resulting from unforeseeable changes in interest rates on loans to finance services; and
- unforeseen and significant changes in costs resulting from unforeseeable changes in national taxation law or other new cost items required by law.[124]

7.32 These cost pass-through mechanisms will continue to apply in the case of unforeseen changes in DB pension costs as a result of unforeseeable changes in financial market conditions. Consistent with our recent regulatory policy statement,[125] costs eligible for pass-through must be reasonable and efficient. The pass-through mechanism will not cover the cost of transfers to NERL's PCA pension scheme, but we will continue to consider any cost savings, including PCA cost savings, when assessing any claim for recovery of additional pension costs.

7.33 In chapter 5 we describe our approach to setting an allowance for tax costs in NR23. This is based on a number of assumptions around corporation tax rates and capital allowance rules during NR23. Should the actual tax rules be different during NR23 and if this difference has a material impact on actual tax costs, we will consider whether these should be eligible for pass-through as an unforeseen and significant change in cost resulting from unforeseeable changes in national taxation law.

Inflation risk

7.34 NERL will continue to be protected from unexpected changes in inflation through:

- CPI indexation of the unit rate – determined costs are expressed in NERL's licence in nominal terms, based on an inflation forecast, and there is an

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124 Eurocontrol Principles, paragraph 3.3.4.2.

125 See Appendix C to CAP2119.

adjustment to revenues (the 'INF' term in the licence) to correct for the difference between forecast and actual CPI inflation with a two-year lag; and

- RPI indexation of the RAB.

7.35 We are also retaining the adjustment introduced in RP3 to correct for differences between the forecast and actual wedge between RPI and CPI inflation.

7.36 Our inflation forecasts are discussed in chapter 5 and our approach to reflecting inflation forecasts in NERL's opex allowance is discussed in chapter 4.

Asymmetric risks

7.37 We are not convinced that there is a case for an additional adjustment for asymmetric risk in the case of NERL's NR23 price control and so have not included such an adjustment as part of our Provisional Decision.

Conclusion

7.38 We consider that the mechanisms set out above will further the interests of customers and consumers users by supporting the efficient financing of NERL's activities and promoting efficiency and economy on NERL's part. They will achieve this by providing an appropriate and sustainable allocation of risk between NERL and its customers, by promoting a stable and consistent regulatory framework, and by providing incentives for efficiency.

Next steps and implementation

7.39 The proposed licence modifications set out in CAP2553d appendix H include provisions to implement the spreading out of TRS adjustments for traffic shortfalls greater than 10 per cent. Other aspects of the TRS mechanism and the CPI adjustment to the unit rate are unchanged in the licence. The RPI indexation of the RAB is described in the RAB rules in CAP2553e appendix I.

7.40 Other adjustments may be implemented through sections 11 to 11A of the TA00.

7.41 Notwithstanding the mechanisms described above, we will expect NERL to manage uncertainty appropriately during NR23, responding efficiently to the challenges it faces and mitigating risks in a way that is in the best interests of customers and consumers.

Airspace modernisation

Introduction and context

7.42 Airspace modernisation is a national strategic objective for the UK. Consistent with SoS's Directions, the CAA published an Airspace Modernisation Strategy (AMS) in 2018, and in our RP3 price control decisions in 2019 we created related obligations on NERL to:

- establish and maintain the ACOG to develop and maintain a UK airspace masterplan;
- deliver airspace and technology initiatives in line with the AMS; and
- establish an opex flexibility fund (OFF).

7.43 In January 2023, the CAA published a refreshed AMS, which extends the coverage of the AMS out to 2040, while maintaining the vision to "deliver quicker, quieter and cleaner journeys and more capacity for the benefit of those who use and are affected by UK airspace".[126] It is structured around four strategic objectives:

- safety;
- integration of diverse users – including the accommodation of existing users (for example, commercial air transport, general aviation, military, taking into account interests of national security) and new users (for example, remotely piloted aircraft systems, advanced air mobility (aerial taxis) and spacecraft);
- simplification – reduce complexity and improve efficiency. Consistent with the safe operation of aircraft, airspace modernisation should secure the most efficient use of airspace, accommodate new demand and improve system resilience; and
- environmental sustainability.

7.44 The AMS, and airspace modernisation more generally, remain important for the NR23 period, and our review has considered:

- adequate resources for the ACOG;
- delivery of NERL airspace and technology initiatives; and
- the impact of new types of airspace user on NERL's licensed activities.

7.45 This section focuses on the arrangements for the ACOG. A separate section below considers the funding of services to new users to support innovation in an uncertain emerging environment. Delivery of airspace and technology initiatives are covered by our assessment of NERL's efficient opex and capex in chapter 4.

Our Initial Proposals

7.46 The ACOG function is a key part in delivery of the AMS. Ensuring its transparency and good governance is an important part of our oversight and reinforces its impartiality. In our Initial Proposals we said that we intended

126 CAP1711: Airspace Modernisation Strategy 2023-2040

broadly to maintain the arrangements established for RP3, while formalising and clarifying the reporting requirements. In particular:

- to maintain the ACOG function and funding as part of NERL's operating costs, in line with NERL's business plan at about £3.3 million per annum (2020, CPI prices); and
- to formalise delivery and expenditure reporting arrangements to introduce new reporting requirements associated with programme management and delivery, including progress tracking, identification of risks and opportunities, stakeholder engagement, benefits delivery and cost reporting.

7.47 We also said that:

- NERL should consider how best its Regulatory Accounting Guidelines could be updated to reflect the new reporting requirements and make proposals accordingly; and
- consistent with our duties towards customers and consumers, any significant underspend of the ACOG funding would be returned to customers in the NR28 price control.

7.48 We did not consider it appropriate that the ACOG should be able to make funding applications to the CAA AMS Support Fund.

Summary of stakeholders' views

7.49 NERL did not comment on the level of the ACOG function allowance included in our Initial Proposals. In relation to proposed reporting requirements, it said:

- it had consulted with the ACOG and had concerns that the reporting proposals represented an unnecessary bureaucratic burden, citing the small ACOG budget of circa £3 million per year and said that quarterly reporting on such budget does not align with the strategic, long term nature of the AMS programme which adheres to the CAA's CAP 1616 process; and
- that the level of extra detail and meaningful information provided between the quarters and an annual report would provide minimal additional benefit to the CAA and other stakeholders. But it would represent additional reporting and management burden for the ACOG, its steering committee, the NATS Board and the CAA oversight team itself.

7.50 NERL also reported that the ACOG's view was that: "*There are several forums in place as part of the governance process: masterplan reporting group; Cosponsors Board; ministerial strategy board; the DMO team itself that is in regular dialogue with ACOG. All of these provide regular opportunities for oversight and reporting on both tactical and operational to strategic in-year issues at the requisite level of visibility.*"

7.51 NERL echoed ACOG's views and suggested that the additional reporting requirements proposed in the draft licence modifications in the Initial Proposals should be removed.

7.52 No other stakeholders commented on the proposed funding allowance or reporting requirements for the ACOG function.

Our views

7.53 The airspace masterplanning and associated requirements of the ACOG function remain an important element in the delivery of airspace modernisation and it is therefore important to provide appropriate funding for the function. Absent any further feedback on the level of funding for the ACOG function, we consider it is appropriate to maintain the allowance consistent with NERL's business plan and our Initial Proposals at an average of £3.3 million per year (2020, CPI prices).

7.54 NERL's (and the ACOG's) concerns with the proposed additional reporting requirements relate to the potential additional administrative burdens (and associated costs) such requirements would generate. However, the licence already requires NERL to, "*… provide a report to the CAA and the DfT on progress against the masterplan and related activities on 1 November each year and at any time it is requested to do so by the CAA."*

7.55 As noted by the ACOG, there already exist "… regular opportunities for oversight and reporting [to the AMS Oversight function] on both tactical and operational to strategic in-year issues at the requisite level of visibility."

7.56 Our Initial Proposals were developed in coordination with the CAA AMS Oversight team to provide formal underpinning to existing informal arrangements and to provide more granular information in respect of the ACOG's expenditure and deliverables on a quarterly basis or, as agreed with us, an alternative period. On the basis that the proposals sought to formalise existing arrangements, we do not consider that they create a new burden. We also note that the proposals include the possibility for NERL to agree with us a different reporting frequency, which provides flexibility.

Our Provisional Decision

7.57 We will maintain the ACOG function funding allowance of £3.3 million per year (CPI, 2020 prices) as part of our NERL opex allowance.

7.58 We will also maintain the ACOG reporting requirements set out in our Initial Proposals associated with programme management and delivery, including progress tracking, identification of risks and opportunities, stakeholder engagement, benefits delivery, and cost reporting. Given the importance of ACOG to the AMS, we consider that it is appropriate to formalise the existing reporting arrangements. In doing so we will further customers' and consumers' interests by being clear what the ACOG is planning to do in service of airspace modernisation, and by promoting efficiency and economy on the part of NERL through ensuring transparency and scrutiny of the ACOG's expenditure.

7.59 At the end of NR23, we will review NERL's overall ACOG expenditure. Any significant underspend will be returned to airlines through an appropriate adjustment to as part of our NR28 review.

7.60 As an impartial unit within NERL, which is funded through NERL's Determined Costs, we maintain the position that the ACOG should not make applications to the AMS Support Fund.

7.61 This Provisional Decision is consistent with our primary duty to maintain a high standard of safety in the provision of ATS, and our duties to further the interests of consumers, airspace users and airports, as they will allow the continuation of the ACOG function and its delivery of a coordinated UK airspace masterplan.

Next steps and implementation

7.62 The proposed licence modifications set out in CAP2553d appendix H include provisions to maintain the funding the ACOG function as part of NERL's Determined Costs, as well as creating formal delivery and cost reporting obligations.

7.63 In the meantime, to reflect the ACOG reporting requirements, NERL should propose updates to its Regulatory Accounting Guidelines for our consideration.

7.64 NERL and the ACOG should engage with the CAA AMS Oversight team to agree the format of the information required under Condition 10a, along with the frequency of reporting.

New users

Introduction and context

7.65 There is uncertainty about the services and infrastructure that new users, which include drones, advance air mobility platforms, spacecraft and high-altitude platforms, will need in the coming years. It is reasonable to assume that there will be additional issues for NERL to deal with, particularly where new users need to interface or interact with conventional airspace users and NERL's current licensed activities. These uncertainties include:

- what services NERL will need to provide to new users;
- when during the NR23 period those services will be required;
- what levels of investment and staffing will be needed to provide those services; and

- the user base for such services.

7.66 It is important that the approach to economic regulation of NERL does not create undue obstacles to innovation and the development of new sectors. In preparing for NR23, we said that, in addition to core requirements for safety and efficiency, NERL should:

- consider technology and operating models, and incremental costs and benefits, where there is uncertainty as to whether a technology should be adopted as part of its licensed monopoly business;
- identify those activities it considers should be part of its monopoly business and those activities that are not, and set out its rationale;
- set out the potential charging models for safety related services that are outside the scope of the existing licence and should not be charged to existing users; and
- address innovative ways of operating that do not constrain the ability of the development of new technologies to deliver positive consumer outcomes.

7.67 In its NR23 business plan, NERL identified around £34 million of investment and opex to support the safe integration and operation of new users in the ATM network during NR23 but did not include these costs in its Determined Costs, given airlines' view that the user pays principle should apply (i.e. that new rather than existing users should pay for these costs).

Our Initial Proposals

7.68 Our Initial Proposals did not include any cost allowance for new user services for the NR23 period and instead set out a short- and medium-term approach to the development of a new charging mechanism and cost recovery.

7.69 In the short term, we proposed that NERL should provide services to new users where it is consistent with its licence obligations and the TA00, and bear the associated costs. To ensure it only incurs those costs that are necessary and efficient, from the start of NR23, NERL should put in a place a new user recording mechanism and make information available to:

- create an evidence base that is transparent and proportionate;
- demonstrate the efficiency of the costs it incurs; and
- show it has engaged properly with stakeholders in the design and cost of the services it develops.

7.70 Further, our Initial Proposals were that NERL should also review the 'baseline' for costs and services to new users provided in its business plan, in light of latest available information and maintain a rolling 12-month forward look of expected activities and costs.

7.71 Further, consistent with our duties to further the interests of customers and consumers and to promote efficiency and economy on the part of NERL, we proposed that we may conduct an *ex post* assessment of recorded costs, either specifically in relation to this activity or as part of a wider assessment of NERL efficiency; and that NERL should consider and make proposals for how best its Regulatory Accounting Guidelines can be updated to reflect the new user cost recording requirement.

7.72 In the medium term, we said that NERL should make a proposal for a 'new user charging mechanism' that will enable both the recovery of appropriately incurred costs and set out clearly the costs to future users. We considered that:

- NERL would be best placed to gather and understand the necessary data, service requirements and cost drivers for new services; and
- a new charging mechanism should reflect the full costs and other factors that may need to be taken into account in a new user charge. For example, whether new users should pay a share of common costs and if so, on what basis.

7.73 We proposed that by no later than the end of June 2025, NERL should submit a new user charging mechanism proposal to us. Before submitting to us, NERL should have engaged broadly on the new proposal, including:

- ensuring there is a well-developed, transparent and robust evidence base; and
- demonstrating that it has consulted on its proposals with all relevant stakeholders and responded to their feedback.

7.74 We also said that NERL will be unable to recover the efficient costs it has incurred in relation to new users until we have has considered, consulted on and implemented any new charging mechanism. However, where NERL could set out a compelling case, we would consider supporting the use of commercial bilateral arrangements between NERL and new users on an interim basis.

Summary of stakeholders' views

7.75 Commenting on safety and service delivery relating to drones, NERL said it anticipated that growth in new user activity will place additional demands on the services it provides, and it will need to design new procedures to manage airspace to integrate new airspace users safely into current systems. It also said that new users will have an adverse impact on service performance, and proposed that service targets should be revisited in NR23, when the implications are clearer. It said that there are many uncertainties about how the new market will evolve but it has the potential to compound current risks, such as infringements to controlled airspace, and that its business plan only contains the funding required to ensure the continued safety of conventional crewed aircraft as new users such as drones increase.

7.76 Responding to our proposals on new user charging, NERL said it was broadly supportive of our approach on the development of a new charging scheme. It said that the definition of new services and establishment of the new charging scheme are core elements of the future service framework for the industry, and that sustainable operations for new users will depend on clarity on the roles and responsibilities for all parties, including NERL. It proposed, where possible, an industry-wide approach to the development of the new charging scheme. NERL said that to deliver new services and put in place a charging mechanism, we should:

- reconsider and include the additional £3.3 million opex in its business plan relating to trials etc for development relating to new user integration;
- provide greater clarity on the likely nature of any ex post assessment of recorded costs, in terms of the tests that might be applied, and by setting out some high-level principles that will promote investment. It said that the absence of such guidance could create undue delay and caution, at a time when this emerging industry needs providers of infrastructure to react quickly and in an agile fashion; and
- review and revise the deadline for introduction of new charging arrangements (and associated work), with a view to bringing the deadline forward.

7.77 British Airways said that Condition 24 of NERL's licence should be modified to make sure that any charges on new users would include a share of all applicable costs associated with services provided to new users, and not just a share of newly incurred incremental costs.

Our views

7.78 The development and implementation of services that support the operation and growth of new user industries remains a key objective for the UK. NERL is a key stakeholder in the aviation system and is expected to have an important role, at the very least where new users interface with conventional users and where NERL has existing obligations to provide services. The safety regulatory framework, as described in chapter 1, establishes requirements for any changes to systems and procedures to support the safe introduction of new services, and ultimately provides for a reduction in service if needed to maintain safety. In determining our approach to new users, we have considered our statutory duties under the TA00 and the following principles:

- the need to be flexible and proportionate, recognising there remain many uncertainties as to how new user requirements will evolve;
- that NERL should have confidence that it will be able to recover appropriate costs, where it considers it needs to devote resources, develop and provide services to new users; and
- the costs of providing services should be met by those that benefit from them and therefore follow the user pays principle, consistent with our statutory duty to further the interests of customers and consumers.

7.79 We recognise the uncertainty around the evolution of new user requirements. However, it is difficult at this stage to reach a meaningful view of the potential impacts new users might have on service performance, and no evidence enabling us to reach a meaningful view has been provided by stakeholders in response to our Initial Proposals. If NERL were to present compelling evidence during NR23 that the provision of services to new users was having a material adverse impact on its ability to maintain service performance, sections 11 to 11A of the TA00 allow us to review the best course of action, and modify NERL's licence if appropriate, on a case-by-case basis, in light of our statutory duties. Nonetheless, NERL should seek to manage and mitigate any adverse impacts and any change would require detailed evidence and assessment that the impact is fully outside NERL's control. Safety and service quality are discussed further in chapters 1 and 2, respectively.

7.80 We welcome NERL's support for our proposed approach to the development of charging mechanisms for new users. However, NERL has not in response to Initial Proposals provided new information on the types, level, costs and impacts of services that it will need to provide to new users, nor has it explained why costs to support trials etc for development relating to new user integration should be met by conventional users. We consider that allowing new user development and integration costs to be met by conventional users would not be consistent with our secondary duty to further the interests of (existing) customers and consumers and is not consistent with the 'user pays' principle. We therefore have not allowed the £3.3 million of costs relating to trials and new user systems development in this Provisional Decision.

7.81 Further we consider that requiring NERL to bear new user costs until new charging arrangements are implemented and it can recover appropriate efficient costs, and requiring the recording of information to support any *ex post* efficiency reviews, is consistent with our duty to promote efficiency and economy on the part of NERL. It creates an incentive on NERL to carefully consider the costs it incurs, and provides for transparency and scrutiny. Any *ex post* efficiency review of capex relating to new user costs would be carried out in line with our principles and approach to assessing demonstrably inefficient and/or wasteful expenditure

(DIWE),[127] and where it relates to opex we would assess whether costs are reasonable and efficient.

7.82 Given the relatively modest level of costs identified by NERL for new user services in NR23, and the potential for commercial bilateral arrangements between NERL and new users on an interim basis, we consider the approach to first record, and then later recover, incurred costs will not make it unduly difficult for NERL to finance its authorised activities and is consistent with our statutory duties.

7.83 NERL is best placed to understand and set out the key drivers for new user costs, the services it needs to provide and the stakeholders it should consult, and is therefore best placed to consult on and propose a new user charging mechanism.

7.84 The development of a new charging mechanism should reflect the full costs and other factors that may need to be taken into account in a new user charge. Where the interests of conventional users of en route services could be deemed to be consistent with the smooth introduction of new user services, it might be appropriate that any approach to allocation/attribution of relevant costs reflects such considerations. We expect NERL to be clear how and on what basis common costs should be shared between conventional and new users, and we will review this when considering whether to include any such costs in future allowances for Determined Costs.

7.85 It is important that a credible new user charging framework is established in a timely manner, and we note that the deadline for proposals for new charging arrangements does not prevent NERL from submitting properly developed and consulted proposals before the end of June 2025.

7.86 We note that new user-related costs associated with safe separation from, and services to, conventional users have been included in NERL's en route Determined Costs. This approach is consistent with our primary duty to maintain a high standard of safety in the provision of ATS as it will allow NERL to develop systems and procedures for the safe integration of new types of user with existing airspace users in line with its licensed activities.

Our Provisional Decision

7.87 NERL should provide services to new users where to do so is consistent with its licence obligations and the TA00. NERL will bear the cost of providing these

[127] Appendix D of CAP 2011 (Economic regulation of NATS (En Route) plc: Decision on licence modifications and guidance) contains a regulatory policy statement on *ex post* efficiency assessment of NERL's capital expenditure, and sets out our principles and approach to assessing DIWE.

services in the short term, so it will be important that it only incurs those costs that are necessary and efficient.

New user costs recording

7.88 From the start of NR23, NERL should put in place a new users cost recording mechanism and make information available to us that:

- creates an evidence base that is transparent and proportionate;
- demonstrates the efficiency of the costs it incurs; and
- shows it has engaged properly with stakeholders in the design and cost of the services it develops.

7.89 NERL should also review the 'baseline' provided in its business plan in light of latest available information and maintain a rolling 12-month forward look of expected activities and costs, and make this available as appropriate.

7.90 Consistent with our duties to further the interests of consumers and promote efficiency on the part of NERL, we may conduct an *ex post* assessment of recorded costs, either specifically in relation to this activity or as part of a wider assessment of NERL efficiency.

7.91 NERL should make proposals for how best its Regulatory Accounting Guidelines can be updated to reflect the new user cost recording requirement.

New user charging mechanism

7.92 By no later than the end of June 2025, NERL should submit a new user charging mechanism proposal to us. Before submitting to us, NERL should have engaged broadly on the new proposal, including:

- ensuring there is a well-developed, transparent and robust evidence base; and
- demonstrating that it has consulted on its proposals with all relevant stakeholders and responded to their feedback.

7.93 NERL will not be able to recover the efficient costs it has incurred in relation to new users until we have considered, consulted on and implemented any new charging mechanism. Nevertheless, where NERL can set out a compelling case, we will consider supporting the use of commercial bilateral arrangements between NERL and new users on an interim basis.

7.94 This Provisional Decision is consistent with our primary duty to maintain a high standard of safety in the provision of ATS, will further the interests of customers and consumers while promoting efficiency and economy on the part of NERL, and will not make it unduly difficult for NERL to finance its activities.

Next steps and implementation

7.95 The proposed licence modifications set out in CAP2553d appendix H include provisions to establish the new requirements and deadlines for new user cost recording and development of a new user charging mechanism.

7.96 In the meantime, to reflect the new recording and reporting requirements, NERL should propose updates to its Regulatory Accounting Guidelines for our consideration.

Capex engagement incentive

Introduction and context

7.97 NERL's capex programme is essential to its operation, in terms of both sustaining its current systems to deliver its day-to-day services and preparing for the future. Stakeholders want to make sure that NERL's capital investments are managed properly and deliver the benefits intended. To underpin the importance of these we established a suite of new capex incentives and governance requirements as part of the RP3 price control arrangements.

7.98 This included a new incentive focused specifically on NERL's capex engagement. High-quality engagement between NERL and its customers is key to ensuring that NERL's capex furthers the interests of users and consumers. Engagement also promotes efficiency and economy through the review and challenge that stakeholders provide to NERL's plans.

7.99 The capex engagement incentive we introduced for RP3 was a "penalty only" incentive and informed by reviews of NERL's engagement that were carried out by an Independent Reviewer appointed by us. The Independent Reviewer awarded NERL scores on a range from 1 ("Weak") to 5 ("Excellent") across six different assessment criteria and for a set of projects and programmes covering 93 per cent of NERL's capex. We provided guidance on the requirements for each of the assessment criteria and, for RP3, we said that NERL would avoid incurring a penalty if its score, averaged across the different assessment criteria and projects and programmes, was at least 3 ("Average"). NERL's final score in RP3 fell between 3 ("Average") and 4 ("Good") and, as a result, we did not propose to impose any penalty on NERL for its capex engagement in RP3.

7.100 The sections below summarise our Initial Proposals for the capex engagement incentive for NR23, the stakeholder responses we received and our Provisional Decision on the incentive itself. We are also consulting on proposed revisions to our guidance on how the Independent Reviewer should assess NERL's performance. Matters relating to this guidance are addressed in CAP2553c appendix G.

Our Initial Proposals

7.101 Although the capex engagement incentive is still relatively new, our Initial Proposals included several changes to the incentive for the NR23 period. These reflected the increased importance of high quality engagement as NERL moves to a “2+5” approach to capex planning, which will likely see its plans change more over time than in previous price control periods, and also the recommendations of a review of the incentive that we commissioned from Egis (the RP3 Independent Reviewer) to identify potential improvements and consider issues previously raised by stakeholders.[128]

7.102 An important element of our Initial Proposals was an increase in the score that NERL should be expected to achieve in order to avoid a penalty. We proposed that this should be increased from 3 (“Average”) to a new score labelled “Baseline expectations” but equivalent to the current score of 4 (“Good”).

7.103 Other aspects of our Initial Proposals included:

- the removal of the lowest score from the scoring guidance and renaming of the middle scores to reflect the revised target. The possible scores in RP3 were 1 (“Weak”), 2 (“Poor”), 3 (“Average”), 4 (“Good”) and 5 (“Excellent”). For NR23 we proposed possible scores of 1 (“Poor”), 2 (“Below expectations”), 3 (“Baseline expectations”) and 4 (“Excellent”);
- a reduction in the number of assessment criteria from six to four. “Timeliness”, “User-focus” and “Proportionality” would be combined into a single new criterion, to operate alongside the other criteria of “Optioneering”, “Responsiveness” and “Mitigating/corrective actions”. This was to achieve a better balance between criteria that address the quality of engagement and criteria that consider NERL’s response to issues raised; and
- we said we should keep under review the need for further consultation with stakeholders on the weighting of projects, and that stakeholders should have an opportunity to express their views on the quality of NERL’s engagement to the Independent Reviewer.

7.104 We also proposed some clarifications to the scoring criteria. These are discussed in CAP2553c appendix G.

Summary of stakeholders’ views

7.105 NERL challenged the proposed increase in the score it would need to achieve to avoid a penalty, describing the cumulative impact of our Initial Proposals as a “step change” from the RP3 incentive. In summary, it stated that:

[128] For a summary of Egis’ recommendations, see Appendix G of our Initial Proposals.

- CAA's and Egis' views on NERL's capex engagement performance do not justify such a radical change in the penalty threshold. NERL said that the proposed change is disproportionate as the improvements identified by Egis would not bridge the gap between "Average" and "Good";
- Egis had already described NERL's iSIP22 as a "strong document", and NERL's annual airline customer survey suggested that it is meeting expectations with supplementary feedback labelling NERL as the "gold standard";
- there are diminishing returns from the potential improvements that could be achieved, and it would not be in customers' interests to incentivise NERL to increase the quality of its engagement above and beyond what is considered to be normal and expected;
- to achieve an average score of "Good", NERL would need to aim to achieve "Excellent". This would require significant resources to be diverted from project management to support engagement, and would risk driving future consultation to chase a score while losing sight of overall customer needs; and
- the impact of combining assessment criteria would make the target harder to achieve. If applied to NERL's current scores this change would have reduced its overall score by 0.25 (from 3.47 to 3.22).

7.106 NERL proposed instead that the penalty threshold should be increased from 3 to 3.2 (the average of its three RP3 scores). It also proposed that scoring should be carried out just once a year so as to reduce the regulatory burden, with the final score for NR23 calculated as the simple average of its annual weighted average scores, and that a scoring range from 1 to 5 should be maintained so as to retain balance and alignment with what is considered normal and expected performance. In addition, NERL suggested some specific changes to the detailed scoring criteria (see appendix G).

7.107 NERL said that, if its counter proposals were accepted, it would agree that the incentive should remain "penalty only" (though if our Initial Proposals were implemented then it considered that a more symmetric incentive arrangement would be needed). It agreed with our proposals to reduce the number of assessment criteria and to provide stakeholders with an opportunity to engage with the Independent Reviewer.

7.108 Among airlines respondents:

- IATA welcomed the proposed changes to the incentive. While acknowledging that there had been improvements over RP3, it said that there is still room for further improvement;

- British Airways supported our proposed changes, also stating that the core area for improvement in NERL's capex engagement is the quality of information to enable customers to assess the costs and benefits of options and their wider implications for other elements of the capex plan and for opex;
- Aer Lingus supported our proposals to strengthen and clarify the incentive, especially regarding the quality of information supplied; and
- Ryanair also supported our proposed changes, stating that increasing the baseline expectation to "Good" will be beneficial and motivate NERL to be more efficient and drive a continuous improvement.

Our views

7.109 Notwithstanding NERL's comments, we continue to consider it is important that NERL improves its performance in relation to capex engagement and that this incentive is strengthened for NR23. In addition to airline responses to our Initial Proposals and previous comments by the Independent Reviewer, and the heightened importance of high-quality engagement as NERL adopts a "2+5" process for capital planning, customer feedback on NERL's latest SIP provides further support for our view that improvement is required. Concerns raised by airlines included:

- the compressed timescales for consultation adopted by NERL, especially as it was proposing significant changes from its NR23 business plan;
- the level of justification provided for the proposed changes;
- the level of information provided and the comprehensiveness of the consultation; and
- the movement of spending between projects.

7.110 We do not agree with NERL's description of our Initial Proposals as a "step change" from the RP3 incentive. One important practical consideration is that, except for any projects or programmes that are completed during NR23, the score that will determine whether or not NERL incurs a penalty will be its score in the final assessment carried out during the NR23 period.[129] NERL will therefore have a considerable period of time in which to improve its performance, and it will also benefit from feedback from the Independent Reviewer on earlier consultations during NR23 which should highlight the key improvements required.

129 For any projects or programmes that are completed during NR23, the relevant score will be that from the last consultation carried out.

7.111 We are proposing changes to the guidance for the Independent Reviewer (see appendix G) to clarify that, while we expect NERL's engagement to continue to be reviewed twice yearly, the relevant score for considering any possible penalty will be the final score awarded for each project or programme during the NR23 period. We do not agree with NERL's proposal that scoring should be carried out only once a year. In our view, twice yearly assessments will provide useful information for both NERL and its customers.

7.112 We remain of the view that NERL should be required to achieve a score equivalent to the current "Good" in order to avoid a penalty. In NR23 this score will be labelled "Baseline expectations". We consider that NERL should be able to achieve this score, given the time available and the feedback it will receive on its engagement throughout the NR23 period.

7.113 In addition, in appendix G we are consulting on changes to the scoring guidance that include:

- revisions to the detailed scoring criteria, which should make it clearer what NERL will need to achieve in order to avoid a penalty;
- confirmation that the relevant assessment should consider only the final engagement on each project or programme (rather than, for example, a look back over the whole of NR23); and
- allowing the Independent Reviewer to award half marks.

7.114 In view of these changes and the time which it has available, we do not agree with NERL's comment that it would need to aim to achieve "Excellent" in order to avoid a penalty, or that this would not be in customers' interests.

7.115 We also disagree with NERL's proposal that we should retain a scoring range from 1 to 5. Since NERL scored at least 2 ("Poor") for all assessment criteria and all projects and programmes during RP3, and since it is the detailed scoring criteria (rather than any consideration of balance or what is "normal") that will determine NERL's scores, we continue to consider that the lowest score should be removed and that there should only be four scores (plus half marks) available in NR23.

Our Provisional Decision

7.116 We will retain a capex engagement incentive with many of the same properties as the incentive we applied in RP3. It will continue to be a "penalty only" incentive, based on the quality of NERL's capex engagement (rather than delivery) and informed by scores awarded by an Independent Reviewer appointed by us. We will continue to engage with stakeholders to determine the projects and programmes that will be covered by the incentive, including any changes that may be appropriate during the course of NR23 for example if there are changes to NERL's capex programme. Any penalty will continue to be applied on a "sliding scale" basis, with the maximum penalty (equivalent to NERL's return on equity applied to its actual capex in NR23) payable if NERL's score is 1.5 points or more below the score it needs to achieve in order to avoid any penalty.

7.117 However, there are also some important differences between the incentives applied in RP3 and those which will apply in NR23. In particular, in NR23:

- scores will be awarded on a scale of 1 to 4. The lowest category ("Weak") from RP2 has been dropped and the middle two categories have been renamed. The scale for NR23 therefore comprises 1 ("Poor"), 2 ("Below expectations"), 3 ("Baseline expectations") and 4 ("Excellent");
- the score that NERL will need to achieve in order to avoid a penalty will now be 3 ("Baseline expectations");[130] and
- the number of assessment criteria will be reduced from six to four, as we will be combining the previous "Timeliness", "User-focus" and "Proportionality" criteria.

7.118 In addition, we are consulting on some proposed changes to the guidance for the Independent Reviewer. As described in appendix G, these include:

- revisions to the detailed scoring criteria, which should make it clearer what NERL will need to achieve in order to avoid a penalty, and also allowing the Independent Reviewer to award half marks;
- confirmation that NERL will continue to be scored twice yearly, but for assessing any possible penalty the relevant score will be the final score for each project or programme awarded during NR23. This score will be based on the last engagement assessed (rather than, for example, a look back over the whole of NR23); and
- other revisions to the drafting of the guidance, including a new statement of the overall aim of the incentive and confirmation that stakeholders will have an opportunity to express their views on the quality of NERL's engagement to the Independent Reviewer.

7.119 Overall, we consider that this revised incentive will encourage improvements in the quality of NERL's engagement with customers on its capex programme. This will help to ensure that the programme is better aligned with the interests of customers and consumers, and will promote efficiency and economy through the process of review and challenge that stakeholders provide to NERL's plans.

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[130] This is equivalent to a score of 4 ("Good") in RP3.

Next steps and implementation

7.120 We have decided to implement the capex engagement incentive for NR23 as described above and will now take steps to appoint an Independent Reviewer.

7.121 As noted above, we are consulting on revisions to the draft guidance, which are set out and explained in appendix G. We would welcome views on the proposed changes to the detailed scoring criteria and other revisions to the drafting of the guidance. However, we are not consulting on the changes to the incentive itself (including changes to the number of scores, the number of assessment criteria and the score that NERL will need to achieve in order to avoid a penalty) as we have now reached our Provisional Decision on these matters.

7.122 The draft guidance also confirms that only the final scores for each project or programme during NR23 will be used to assess whether any penalty is payable, and describes the way that any penalty will be calculated. Any penalty will be implemented by either a RAB adjustment or a revenue adjustment at the next price control review.