APPLICATION TO REOPEN THE EUROCONTROL CHARGE CONTROL

February 2002
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1 Introduction

1.1 On the 20 December 2001 NATS’ Chief Executive wrote to the Chairman of the Civil Aviation Authority ("CAA") informing him that NATS intended to submit a request for a review and relaxation of charge control provisions within the licence granted under the Transport Act 2000 (the "Act") to NATS (En Route) Limited ("NERL")

1.2 This submission is NERL’s formal request for a review and modification of the Eurocontrol charge control cap in that Licence. The basis of this submission is that such modification is necessary to respond to the dramatic decline in traffic following the September 11 attacks. This decline in traffic is estimated to result in an exceptional fall in NERL’s Eurocontrol income of about £230m during the current charge control period. The only practical way in which NERL believes this shortfall can be corrected is through an amendment to the X factor applied to the Eurocontrol charge. NERL believes that adjustment should be to levels of -4, -3 and -2 in respect of 2003, 2004 and 2005.

1.3 The adjustment which NERL seeks has been carefully considered. NERL believes that it could legitimately have requested a more significant modification to its charges. However, NERL believes that, in the interests of all concerned, it is important that any modification is simple, transparent and agreed quickly. NERL has therefore taken all steps open to it to minimise the size of the modification which it is requesting.

1.4 NERL believes that the impact of the decline in traffic on its business threatens to damage the interests of its customers and other interested parties and its ability to invest in its licensed activities. For these reasons, in NERL’s opinion, the CAA’s duties under the Transport Act require it to undertake the review requested in this submission and to implement a modification substantially in the form proposed.

2 Current Charge Control

2.1 By virtue of the unique position of its en route and associated services, NERL is subject to economic regulation under Chapter 1 of the Act. That regulation is implemented through the Licence. The Licence sets out the charge controls that apply to NERL’s businesses. Although other areas of NERL’s business are subject to varying forms of charge control, for the reasons explained in Appendix 2, this submission addresses only the Eurocontrol charge.

2.2 Charge control applying to the UK en-route air traffic control service is through an initial unit rate and an “RPI minus X” mechanism which is set for the years 2001-2005 ("CP1"). The current values of X included in the Licence are 3 for 2002, 4 for 2003, and 5 for each of 2004 and 2005. It is expected that a formal regulatory review will be undertaken at the end of CP1 to establish appropriate levels of X for subsequent years.

2.3 The current values for X were determined by the Secretary of State in December 2000. That determination was made following advice from CAA and consultation with NATS and other interested parties. As part of this process, CAA and the Secretary of State considered the traffic forecasts then available. At the time the determination was made, there was broad consensus between NATS, CAA and other elements of the aviation industry on traffic forecasts. For example, NATS latest base demand forecast at that time (made in September 2000) was within 0.5% of the central forecast in the CAA’s Advice.
3 Change in Demand Since the Current Charge Control was Set

3.1 Since the charge control was set, actual and forecast demand has changed significantly and this has had a substantial impact on NERL's revenues.

Demand levels

3.2 Passenger levels, already depressed due to the world economic slow down, were dramatically hit by the terrorist attacks on the USA. Over a three month period since September 11, the Association of European Airlines has recorded a 13% drop in European passenger demand and a 33% drop in North Atlantic passengers.

3.3 Airlines have responded by cutting capacity. Typically schedules are being reduced by 20% on the North Atlantic and 10% on European routes. Between September 11 and the end of 2001, monthly civil oceanic traffic has shown a year on year decline of about 13%.

3.4 Whilst it is envisaged that passenger confidence will gradually return, the general economic climate means that most airlines will be reluctant to reverse capacity cuts quickly. As a result, this scale of decline is forecast to continue through to the winter schedules of 2002/03 when the first signs of growth should begin to emerge. NERL believes that it is unlikely that traffic growth rates will fully recover from the shock of September 11 until Summer 2003 at the earliest and, even then, traffic will be at a lower trend level than originally forecast.

NERL's Revenues

3.5 NERL's Eurocontrol income is simply the product of multiplying the unit rate by the number of Chargeable Service Units (CSUs) flown. Therefore reductions in airline capacity and schedules have a direct and immediate impact on NERL's revenues. Chargeable Service Units reflect a combination of distance flown and weight of aircraft. For this reason, the impact of reductions in longer flights and those by larger aircraft is more significant than that of variations in shorter/smaller flights.

3.6 This charging mechanism has significant implications for NERL. Because of the UK's strategic position, North Atlantic routes account for a significant proportion of NERL's CSUs. Those flights involve large aircraft and long distances flown over the UK. As a result, North Atlantic flights typically account for 14% of total UK flights but 44% of CSUs. This means that the scale and duration of the capacity cuts on North Atlantic routes has had a particularly severe impact on NERL. By contrast, although low cost airlines are showing growth, their existing scale and the nature of their flights means that their impact on NERL's revenues, though positive, is relatively small.

3.7 The changes to actual and forecast demand are outside the reasonable expectation at the time the current cap was determined. By way of illustration, in September 2000, given the past history of sustained strong growth, NATS low case forecast for 2001/02 was for CSU growth of +5.2%. In stark contrast, the current base case CSU growth forecast for 2001/02 is −3.8%. Indeed, CSU year on year growth in December was −22% compared to NERL's 2001 budget.

3.8 A detailed analysis of the changes in demand and their impact on NERL's revenues is set out in Appendix 1. However, in summary, NERL's best current calculation is that the direct impact of the dramatic reduction in demand will be a reduction in its Eurocontrol revenue during CP1 of about £230m against the CAA's original demand forecast. Furthermore, as detailed in Appendix 3, NERL also faces substantially higher demand risk during the
remaining four years of CP1 than the level implied by CAA's original advice to DETR and the Government's subsequent determination.

4 Factors Relevant to Consideration of Submission

4.1 NERL considers that as a consequence of the significant change in expected revenues an immediate review of the current Eurocontrol charge cap is essential. In addition, such a review would be consistent with the legal duties of the CAA taking account of the factors set out in this section.

CAA’s Duties

4.2 CAA performs a number of economic regulatory functions under Chapter 1 of the Act. These would include consideration of proposed modifications to charge control. Section 2 of the Act requires CAA to exercise these functions in the 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 ("Interested Parties"). The "interests" which CAA is required to consider are those regarding range, availability, continuity, cost and quality of air traffic services
- To promote efficiency and economy on the part of Licence holders
- To secure that licence holders will not find it unduly difficult to finance activities authorised by their licences
- To take account of the international obligations of the UK notified to the CAA by the Secretary of State
- To take account of any guidance on environmental objectives given to the CAA by the Secretary of State

Factors relevant to the CAA's duties

4.3 The CAA's duties mean that, in deciding whether to modify a licence, CAA must base its decision on consideration of the factors described above. In the current context the first three factors are the clearly most relevant. Examining these in turn:

- In considering the interests of Interested Parties, whilst CAA should be mindful of the need to avoid imposing unnecessarily high charges on NERL’s customers it should give equal, if not greater, weight to the range, availability, continuity, and quality of air traffic services. Therefore, if important services can only be protected through a reasonable increase in charges, it would be incumbent on CAA to permit that increase. In the longer term, moreover, the interests of Interested Parties are best served through a framework that provides incentives for NERL to undertake appropriate investment and to improve both efficiency and service quality
- In promoting efficiency and economy on the part of NERL, CAA should consider whether pressure to increase charges results from a failure by NERL to take reasonable steps to operate efficiently. The primacy of safety means that CAA cannot expect NERL to make cost reductions if there is any risk that making those reductions could endanger safety. CAA must also aim to enable NERL to have available income which is adequate (in terms both of value and consistency) to enable it to invest to increase future efficiency and capacity
In securing that NERL does not find it unduly difficult to finance the activities authorised by its licence, CAA must have direct regard for the interests, and legitimate expectations, of NERL. NERL has been awarded a licence and has a legitimate expectation that economic regulation will not be used to prevent it fulfilling the terms of that licence. More particularly, NERL should not be prevented from raising charges if this is necessary to enable it to meet the minimum level of service necessary to discharge its statutory and licence obligations.

NERL’s obligations

In assessing how the CAA’s duties apply in this context, it is important to understand the constraints on NERL’s business.

Section 8(1) of the Act imposes specific statutory duties on NERL to:

- Secure that a safe system for the provision of specified air traffic services is provided, developed and maintained
- Take all reasonable steps to secure that the system is also efficient and co-ordinated
- Take all reasonable steps to secure that demand for specified air traffic services is met, and
- Have regard, in providing, developing and maintaining the system, to the demands which are likely to be placed on it in the future

The Licence sets out the service obligations in more detail. Under Condition 2 (1), NERL has an obligation to “make available … the Core Services (which include the en route services) so as to be capable of meeting on a continuing basis any reasonable level of overall demand for such services”.

Under Condition 2 (2) of the Licence, NERL is also required to “at all times develop and maintain its assets, personnel, systems and other parts of its business … so as to be able to comply with its obligations”. NERL would be in breach of its duties under the Act and the Licence if it did not invest in its systems to ensure that expected future demand is met.

NERL therefore has extensive legal obligations regarding both current service and investment for the future and remains committed to satisfying these.

Additional issues

Although this submission focuses on economic regulatory issues, it is also important to bear in mind that with regard to safety and airspace policy regulations that:

- Financial impoverishment of NERL may inhibit achievement of airspace policy objectives by preventing NERL from making the necessary and timely investment to extend or enhance air traffic services in a way which facilitates appropriate use of airspace
- NERL will always give priority to safety. If its resources were squeezed, it would reduce capacity to ensure that it does not endanger safety
5 Need for Interim Review

5.1 NERL recognises that under normal circumstances it would not be appropriate to seek to reopen the charge control provisions in the Licence before their expiry at the end of CP1. However, NERL believes that the current decline in actual and forecast traffic (which could not have been anticipated) is outside management's control and the normal business environment and its impact on NERL's financial position is so substantial as to make an interim review essential. For the reasons set out below, NERL also considers that such a review would reflect a proper application of the CAA's duties. When assessed against the relevant factors set out in paragraph 4, NERL considers that there is an overwhelming case for review and modification of the Eurocontrol charge cap.

5.2 The main reasons for this are as follows:

- If the charge control is not modified, then there is a substantial risk that NERL will be forced to reduce costs in a way which, in order to maintain safety, would result in a reduction in services and airspace capacity. This would have direct, adverse effects on Interested Parties

- Without the necessary revenue correction, NERL would be unable to pursue investments that are necessary to enhance capacity and improve quality in the near and medium term, and which users clearly want. Again, this would have direct, adverse effects on Interested Parties

- Reductions of this nature would directly indicate that NERL is unable to finance those activities which are authorised, or indeed those which are required, by its Licence. If the reduction in revenues is not addressed there is a significant risk that cashflows in the business would be insufficient to service the capital required to fund investment. This would appear to be inconsistent with the CAA's statutory duty to have regard to the need for NERL to finance its activities. In addition, there would be a significant risk of NERL ultimately being in breach of its duties under the Act and Licence

- In addition there are longer term financial considerations. There may be an increase in NERL's future cost of capital because of the increased risk profile which NERL will have, or may be perceived to have, by providers of capital. Ultimately there is a risk that NERL could not meet its liabilities. Either of these consequences would quite clearly be adverse to the interests not only of NERL but also Interested Parties

5.3 NERL believes that the benefits to Interested Parties of ensuring NERL’s continued ability to finance its activities and continued capacity to provide appropriate services and undertake investment outweigh the disadvantages of higher charges for the next three years, even for those who pay NERL’s charges.

5.4 As Eurocontrol revenue is directly linked to Chargeable Service Units, the demand shock has had an immediate impact on NERL's financial position. The weakening of NERL's operational cashflow has constrained NERL's ability to respond to this shock through using either current or new financial facilities. In addition, there is a risk that NERL's existing borrowings could be affected if there is a prolonged period during which the revenue shortfall is not addressed, thus exacerbating the issues outlined above.

5.5 The need for a correction of the revenue shortfall is therefore immediate. The duties in Chapter 1 of the Act impose a clear responsibility on the CAA. If the CAA considers that without a licence modification to the charge control provisions:
There is a risk that either the current provision or future enhancement of services will be damaged in a way which adversely affects Interested Parties.

NERL will be unable to undertake investment necessary to enhance efficiency and economy.

NERL will not have a reasonable opportunity to finance its air traffic services activities adequately.

The CAA would be required by the Act to review and modify the charge control provisions without imposing an excessive cost burden on NERL's customers.

5.6 NERL considers that this situation has arisen for the reasons explained in this submission and that the CAA is therefore under a clear duty to undertake such review and modification.

6 NERL's Proposal on Charge Control for CP1

6.1 Appendix 3 sets out in detail NERL's evaluation of the overall revenue correction required during CP1. That Appendix also sets out the assumptions on which that evaluation is based. This section summarises the main elements of that calculation.

6.2 For the reasons set out below, NERL believes it would be entitled to seek a larger overall modification for the remainder of CP1 with a larger proportion of that change taking effect earlier in that period. However, having regard to the impact of September 11 on Interested Parties, NERL has, to the extent possible, minimised the size of the overall request and created a profile which spreads the impact across the remainder of CP1.

6.3 NERL's proposal is that the Charge Control provisions as they apply to the Eurocontrol charge should be implemented by adjusting the X Factors for the remaining 3 years of CP1 to the values set out in the following table after taking into account reductions in volume related costs:

<table>
<thead>
<tr>
<th>Calendar Year</th>
<th>Revised X</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>- 4 (ie RPI + 4)</td>
</tr>
<tr>
<td>2004</td>
<td>- 3 (ie RPI + 3)</td>
</tr>
<tr>
<td>2005</td>
<td>- 2 (ie RPI + 2)</td>
</tr>
</tbody>
</table>

6.4 NERL has used as the basis of its proposal a calculation of the net present value of the aggregate correction to its revenue during CP1 required in light of the impact of the September 11 attacks.

6.5 The net present value (NPV) of NERL's revenues from the Eurocontrol charge for CP1, based on the current charge control and the CAA base case demand forecast is £1,870m in 2001 prices. To restore the NPV of NERL’s Eurocontrol income for CP1 to £1,870m, when demand is as in NATS’ base case, would require Xs of about -4, -5 and -5 (or an alternative profile having an equivalent NPV effect). As described above, the nominal correction required to NERL’s revenue for the remainder of CP1 is about £230m.

6.6 NERL has moderated its proposal to take account of a notional cost elasticity of demand of 0.25 which is that assumed by CAA in its financial model of NATS. In fact, NERL believes that in the short and medium terms any such correlation is almost non-existent because:

- The scale of resources which NERL needs to deploy is that needed to meet airspace capacity requirements which reflect potential current and future levels of demand (as
reflected in its licence obligations), developments in sectorisation, airspace policy requirements and the interaction of commercial aviation with military aircraft and general aviation. For these reasons and the need to ensure that services reflect the needs of long term safety cases, capacity (and the associated resources and costs) is determined on a long term basis and cannot simply be flexed to reflect short term fluctuations in demand

- The resources, both in terms of people and infrastructure, which NERL deploys to meet capacity requirements are highly specialised. There is no ready market in such resources. NERL is required to plan its resource usage and commitments in light of this. For example, investment in specialist infrastructure and the training of ATCO's requires long term commitment. If NERL were to reduce its headcount to respond to short term changes, it would be unable to replace lost capacity quickly. In relation to infrastructure, as there are no ready buyers of ATC equipment, NERL could not realise significant value from sales

- The overriding requirements of safety mean that any changes must be made cautiously and only after appropriate evaluation

6.7 As NERL does not believe that there will be any demand related cost-savings, it could quite properly have sought a modification to Xs of -4, -5 and -5. However, with a view to resolving this issue as quickly and non-contentiously as possible, NERL has formulated its proposal on the basis of CAA's assumptions rather than NERL's evaluation of the position. As will be seen from NERL's proposal, the inclusion of this cost elasticity in the analysis makes a considerable difference to the total amount of the revenue correction (£26m) and therefore the Xs required to restore NERL's revenue.

6.8 The profiling of the changes to X has been developed in an effort to balance the interests of users (and other Interested Parties) and NERL's requirements. In light of the impact of September 11 on NERL and the perception of its business among the providers of its finance, NERL believes a strong case could be made out for the entire demand correction to take effect in 2003. However, NERL recognises that September 11 has had a direct impact on the industry as a whole and has therefore proposed a profile which mitigates that impact over CP1 as a whole. Ultimately, whatever profile is applied, the overall effect should be to enable NERL to generate sufficient revenue in NPV terms to correct the shortfall in CP1 that has arisen as a result of the demand shock.

6.9 NERL does not believe that its proposal is excessive: it represents the minimum which NERL believes is required to address the impact of September 11 on its business. In addition to the demand elasticity adjustment, NERL has considered whether any additional modification is required specifically to address the impact of the revenue downturn on its financial position and/or the increased "risk premium" now attached to its business. NERL has decided against this and will seek instead to address those issues through its revised business plan described briefly in Appendix 2 and through the added confidence which should result from greater clarity in the regulatory regime through the Regulatory Statement. Therefore, although the modification as proposed by NERL is inevitably an important element in NERL's overall financial position, the proposal is not intended specifically to address that issue.

6.10 NERL believes that its proposal, taken as a whole, represents a return towards the regulatory balance envisaged by the original charge control provisions and does not imply
an excessive adjustment in the UK unit rate. By way of comparison, the average percentage rate of increase of Eurocontrol members from 1 April 2002 is 12%.

7 Process for Review and Modification

7.1 Condition 25 of NERL’s Licence allows NERL to apply for a suspension of the charge control in “exceptional circumstances”, which have a defined meaning in the Licence. Under the terms of Condition 25, NERL believes that it would be entitled to apply for suspension of the charge control.

7.2 Instead of using Condition 25 in the Licence, NERL has decided to apply to the CAA to modify the charge control using Section 11 of the Act. This is because NERL believes that a modification to the charge control makes more sense than total suspension of the control.

7.3 NERL reserves the right to apply under Condition 25 of the Licence in the event that NERL and the CAA is unable to agree on a suitable modification of the charge control in a reasonable time scale.

8 Longer Term Issues and the Regulatory Statement

8.1 NERL understands that the CAA plans to produce a Regulatory Statement that will set out its future approach to regulation for NERL. NERL believes that the production of this statement for consultation is urgent. The CAA’s intention was to produce this statement, with full public consultation, in the first half of 2002. However, because of this application to reopen the charge control, NERL understands that the work on the Regulatory Statement is likely to be postponed.

8.2 The Regulatory Statement has always been seen by both NATS and the CAA as a way of addressing some of the potential regulatory risks and therefore as an important element in NERL’s business and financial planning process. In the context of the demand shock its importance has increased significantly particularly in the context of its potential to address the perceived increase in NERL’s risk profile on the part of the providers of finance.

8.3 An important aspect of this will be to commit to a set of appropriate general regulatory principles. One principle that NERL believes should be included is a commitment to ensure that the charge proposals at future reviews would allow a well-managed NERL to achieve a single A credit rating. This should allow NERL to access a wide range of capital market providers on competitive terms, as it plans its long term investment proposals.

8.4 Other aspects of the Regulatory Statement that NERL believes are important include:

- The determination of the initial Regulatory Asset Base (RAB)
- Confirmation of the methodology for rolling forward the RAB set out in the Regulatory Accounting Guidelines
- Compensation in the event of new onerous obligations being placed on NERL
- Consistency in cost allocations between regulated and unregulated businesses
- Principles for service standards, and
- The establishment of a rolling incentive mechanism for operating expenditure
8.5 We will shortly be preparing a full submission to the CAA on these issues for consideration in the context of the CAA’s Regulatory Statement.

9 Timing

9.1 For the reasons set out in paragraph 6, an immediate review is essential. Ideally, NERL would like the modification to take effect immediately. However, NERL recognises that the Eurocontrol rules place practical constraints on the timing of amendments to charges and that the earliest we are likely to be able to amend charges is on 1st January 2003. However, in order to give NERL, Interested Parties and existing and future providers of finance to NERL confidence and certainty as to the way forward the matter needs to be dealt with quickly. NERL would seek a decision by the end of April.
APPENDIX 1: EVALUATION OF DEMAND SHOCK

The Relevant Forecasts

A1.1 The evaluation of the demand shock and its impact on revenues and NERL's finances draws upon comparisons between various forecasts:

(i) forecasts used by the CAA in its Advice to the Government in August 2000;
(ii) NATS' own current forecasts; and
(iii) the forecasts produced by National Economic Research Associates (NERA) on behalf of NERL's external funders. The NERA forecasts were based on a detailed review of NATS' modelling and of other available forecasts and evidence.

Change in Demand Forecasts Since the Charge Control was Set

A1.2 The following graph and table compare the demand forecast (in terms of CSUs) used by the CAA in its Advice to the Government in August 2000 with the current NATS' forecasts. In addition to the central forecast included in the CAA's published advice, the low and high forecasts the CAA used in its financial model are also shown in the diagram.

Forecasts in CAA’s Advice Compared to Current NATS Forecasts (1000s CSUs)
Forecasts in CAA’s Advice Compared to Current NATS Forecasts
(1000s CSUs and percentage growth rate)

<table>
<thead>
<tr>
<th>Year</th>
<th>CAA High Case</th>
<th>CAA Base Case</th>
<th>CAA Low Case</th>
<th>NATS High Case</th>
<th>NATS Base Case</th>
<th>NATS Low Case</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>8,818</td>
<td>8,785</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>9,580 9,388</td>
<td></td>
<td>9,237 8,322</td>
<td>8,727 8,674</td>
<td>8,785</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>10,270 9,666</td>
<td>9,739 5%</td>
<td>9,237 8,322</td>
<td>8,465 -3%</td>
<td>8,727 8,674</td>
<td>8,785</td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>10,866 6% 10,535 6%</td>
<td>10,221 5% 10,050 13%</td>
<td>9,536 13% 8,473 3%</td>
<td>10,113 6% 9,015 6%</td>
<td>10,050 7% 8,473 3%</td>
<td>10,050 7% 8,473 3%</td>
<td>440</td>
</tr>
<tr>
<td>2004</td>
<td>11,418 5% 11,061 5%</td>
<td>10,694 5% 10,784 7%</td>
<td>10,113 6% 9,015 6%</td>
<td>10,050 7% 8,473 3%</td>
<td>10,050 7% 8,473 3%</td>
<td>10,050 7% 8,473 3%</td>
<td>440</td>
</tr>
<tr>
<td>2005</td>
<td>11,940 5% 11,538 4%</td>
<td>11,115 4% 11,337 5%</td>
<td>10,500 4% 9,559 6%</td>
<td>10,050 7% 8,473 3%</td>
<td>10,050 7% 8,473 3%</td>
<td>10,050 7% 8,473 3%</td>
<td>440</td>
</tr>
</tbody>
</table>

A1.3 When the CAA submitted its Advice to Government, the CAA’s forecasts were above NATS’ latest available forecasts at that time, which had been prepared in July 1999. However, NATS produced new forecasts in September 2000, which recognised that growth had been higher than expected since July 1999. NATS’ September 2000 forecasts were very similar to the CAA’s forecasts (eg, base cases agreed within 0.5%).

NATS’ Current Base Case

A1.4 NATS’ current base case forecast was released in November 2001. It was generated bottom up, starting with assumptions about economic growth and passenger demand, then modelling passengers and hence flights at an airport level, and finally aggregating up to the UK as a whole. NATS’ forecasts were developed after discussion with airports and airlines. Work on these forecasts was started prior to the 11th September 2001, but the assumptions were subsequently modified to incorporate the likely impact of the terrorist attacks.

A1.5 In normal circumstances economic growth is the key driver of passenger growth, but the events of 11th September have had a huge impact on passenger confidence and in the short term this swamps any economic considerations on international markets. In line with initial indications, it has been assumed that during the winter 2001/02 season there will be a 40% reduction in passengers flying to North Atlantic destinations and a 20% reduction in other international passengers compared with the previous winter. It is further assumed that there will be a phased bounce back over an eighteen month period so that by the financial year 2003/04 business and leisure passengers are 10% and 5% respectively below the levels which would have been forecast if the events of 11th September had not taken place. Growth rates for subsequent years are underpinned by forecasts of economic growth as usual. Domestic passengers are assumed to be unaffected, as low cost carrier growth keeps this market buoyant.

A1.6 Each percentage point reduction in passenger growth is assumed to result in about ½ a percentage point reduction in flights, as airlines downsize aircraft wherever possible and accept some reduction in load factors. Consequently, all other factors remaining equal, the 40% passenger growth reduction on the North Atlantic routes will lead to a 20% decrease in flights as airlines cut routes and reduce frequencies on their remaining network. North Atlantic and other overflight forecasts are consistent with the assumptions for North Atlantic and other arriving and departing traffic. Cargo ATMS have also been reduced in line with the economic downturn. The remaining assumptions behind the base forecasts were assumed to be unaffected by the terrorist action.

A1.7 NERL’s CSU forecasts are derived by using the forecast of flights and additional assumptions relating to aircraft weight and distance flown in UK airspace. Over the next five years, there is some decrease in aircraft weight on most international markets resulting
from BA’s downsizing policy and airlines’ response to reduced passenger demand. Distance flown is assumed to remain at similar levels for overflights and North Atlantic arrivals and departures, but to increase by 1% per annum on average for other international arrivals and departures and for domestic flights as the regional networks expand.

2001 Actual CSUs

A1.8 Since the base case forecast was made in November 2001, actual 2001 CSU data is now available. This shows the 2001 CSU outturn slightly above NATS’ base case forecast. The main reason for this was because the forecasts assumed greater capacity cuts in October 2001 than actually happened. Most capacity cuts came in with the winter schedules which did not start until the end of October. This difference in October was spread over the three months October to December in the forecast, hence the actuals for October to December came out slightly higher than the forecast. NATS believes that its base case forecast for 2002 – 2005 is still valid.

NATS’ Current Low Case

A1.9 In NATS’ current low case, similar assumptions to the base case are made about underlying passenger confidence in the first 12 months following September 11. However, after that it is assumed that there will be a very gradual bounce back to near assumed previous low growth levels such that by the financial year 2005/06 business and leisure passengers are 15% and 10% respectively below the levels which would have been forecast if the events of 11th September had not taken place.

NATS’ Current High Case

A1.10 NATS’ high case flight forecast is prepared primarily for capacity planning purposes. However, a CSU high case forecast is also prepared based on the high case flight forecast. Similar to the base case, the high case forecast assumes an 18 month recovery period following September 11th but with a much steeper recovery profile. The high case also assumes a complete bounce back in 2003/04 to traffic levels that would have been forecast (under a high trend growth) if the events of 11th September had not taken place. Growth rates for subsequent years are underpinned by forecasts of economic growth but substituting typical upper quartile values for the economic parameters concerned.

NERA Forecasts

A1.11 NERA was asked by NERL’s external funders to carry out an independent assessment of the most recent traffic forecasts prepared by NATS, in the light of the information available on the development of aviation markets in the short-to-medium term (to 2002/3), and in the longer term (up to 2010). NERA was also asked, on the basis of this assessment, to make recommendations for different traffic scenarios.

A1.12 The two comparable scenarios NERA developed were:

- NERA Central Case, featuring:
  - a slightly more pronounced year-on-year decline between 2001 and 2002 than in NATS’ new base case
  - a slightly less marked recovery (bounce back) through 2003 and 2004 than in NATS’ new base case, and
  - a marginally slower long term rate of traffic growth than in NATS’ new base case
NERA Low Case, incorporating NERA’s most pessimistic assumptions regarding the current downturn, its duration and the extent of the subsequent recovery

A1.13 In developing these forecasts, NERA drew on a wide range of sources. The most important of these were:

- a detailed, disaggregate analysis of the assumptions underlying NATS’ Base Case, based on information supplied by NATS
- Eurocontrol’s 2002 forecasts of air traffic in UK airspace
- an assessment of some recent developments in the airline industry
- a consideration of the scope for further liberalisation of the aviation market, and
- a discussion of third-party forecasts

A1.14 The following graph and table compare NERA’s forecasts with NATS’ base and low case forecasts.

NERA Forecasts Compared to NATS Forecasts (1000s CSUs)

NATS Base and Low Cases Compared to NERA Central and Low Cases
(1000s CSUs and percentage growth rate)

<table>
<thead>
<tr>
<th>Year</th>
<th>NATS Base Case</th>
<th>NERA Central Case</th>
<th>NATS Low Case</th>
<th>NERA Low Case</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>8,818</td>
<td>8,818</td>
<td>8,818</td>
<td>8,818</td>
</tr>
<tr>
<td>2001</td>
<td>8,727 -1%</td>
<td>8,727 -1%</td>
<td>8,674 -2%</td>
<td>8,727 -1%</td>
</tr>
<tr>
<td>2002</td>
<td>8,465 -3%</td>
<td>8,243 -6%</td>
<td>8,253 -5%</td>
<td>7,882 -10%</td>
</tr>
<tr>
<td>2003</td>
<td>9,536 13%</td>
<td>9,080 10%</td>
<td>8,473 3%</td>
<td>8,332 6%</td>
</tr>
<tr>
<td>2004</td>
<td>10,113 6%</td>
<td>9,661 6%</td>
<td>9,015 6%</td>
<td>8,990 8%</td>
</tr>
<tr>
<td>2005</td>
<td>10,500 4%</td>
<td>9,988 3%</td>
<td>9,559 6%</td>
<td>9,312 4%</td>
</tr>
</tbody>
</table>
It can be seen that NERA’s forecasts are more pessimistic than NATS’, with the NERA central case being about 5% lower than the NATS base case by 2005.

**Impact on Revenue**

The following table compares the projections of NERL total revenue from Eurocontrol charges based on the current charge control provisions when applied to the CSU forecasts referred to above.

<table>
<thead>
<tr>
<th>Change Compared to Demand in CAA’s Advice</th>
<th>Percentage Fall in Revenue from Eurocontrol Charges</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAA Base Case</td>
<td>-</td>
</tr>
<tr>
<td>CAA Low Case</td>
<td>-£66m</td>
</tr>
<tr>
<td>NATS High Case</td>
<td>-£120m</td>
</tr>
<tr>
<td>NATS Base Case</td>
<td>-£228m</td>
</tr>
<tr>
<td>NATS Low Case</td>
<td>-£373m</td>
</tr>
<tr>
<td>NERA Central Case</td>
<td>-£300m</td>
</tr>
<tr>
<td>NERA Low Case</td>
<td>-£408m</td>
</tr>
</tbody>
</table>

It can be seen that NATS new base case results in revenues that are about £230m lower than with the CAA base case demand, with the current charge control. The NERA central case results in a drop in revenue of £300m. The NATS low case and NERA low case result in falls in revenue of about £370m and £410m respectively. In calculating the fall in revenue for the NATS and NERA forecasts in this table, the actual 2001 CSU figure has been used.

**Demand Risk**

Both the current NATS forecasts and the NERA forecasts reflect a range of downside demand risk during the remaining four years of CP1. This is considerably greater than was envisaged at the time of the governments original determination of the Eurocontrol as reflected in the CAA’s forecasts contained in its Advice to Government. With ERG’s original forecasts, the difference in the NPVs based on base and low demand was about £50m. Now, the NPV gap between the base and low forecasts is over £100m. The downside demand risk has therefore more than doubled.

This increase in demand risk is illustrated in the following diagram which shows the NPV spread of the revenues implied by the CAA’s high - base - low demand forecasts compared to the NPV spread implied by NATS’ current high - base - low forecasts.

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1 The CAA’s Advice to Government only contained the CAA’s central forecast. The CAA’s financial model of NATS at the time of the Advice contains high and low forecasts.
This is a potentially serious issue for NERL because it means that whilst a simple charge cap modification to reflect the new NATS base case will address the simple calculation of revenue shortfall computed on base case movements, NERL will be bearing a significantly greater business risk than was contemplated by the original regulatory settlement. As well as being a direct issue for NERL’s business, the perception of this increase in risk inevitably raises potential issues for the costs associated with the financing of that business. Appendix 3 explains how NERL believes this issue might be addressed.
APPENDIX 2: OTHER ISSUES

A2.1 This Appendix sets out brief detail on two other issues which are worthy of note in the context of this submission. In summary these are:

- NERL is restricting its request for regulatory modification to the Eurocontrol charge and believes that it would be either impractical or inappropriate to seek any other changes to its revenue sources.
- NERL is instigating a process of accelerating efficiency based cost savings. These would not be directly reflected in this Interim Review but are a key element of minimising NERL's modification proposal.

A2.2 This Appendix sets out NERL's evaluation of these two factors and the reasons why, having considered them, NERL does not believe they are directly relevant to the current issues.

Other Possible Sources of Revenue for NERL

A2.3 NERL has investigated other sources of potential revenue. These have been ruled out:

- Income from MoD. This is subject to contract and to be renegotiated for 2006. It is already under pressure.
- North Sea Helicopter income. This has already been increased to meet expected demand.
- Income in respect of London Approach is subject to negotiation as part of the Aerodrome Navigation Service Charges agreed with the BAA under contract. Whilst these can be revisited in 2003, the complexity of the issues surrounding London Approach mean that it is impractical to expect that any material changes will be able to be made within the timescales which this review needs to address.
- Charges for air traffic control services in the Shanwick Oceanic Control Area. These are subject to charge control conditions similar to those for NERL's Eurocontrol charges. NERL has considered carefully the option of seeking a modification to the Oceanic charges cap. However, the economics of the Oceanic business as reflected in the initial charge cap are substantially different from those of the Eurocontrol business with the result that it would be substantially less appropriate to change the Oceanic charge cap than to modify the Eurocontrol cap. In any event the relative values of the two charges are such that no reasonable modification of the Oceanic cap could be expected to make a substantive difference to the revenue impact of the September 11 demand shock. In light of this NERL does not believe there would be real value to itself or Interested Parties to reopen the Oceanic cap simply to make a marginal difference to the overall position.

Efficiency Savings

A2.4 NERL's plans, which were considered in the context of the original charge control decisions, envisaged significant efficiency savings over the terms of the Licence. Prior to September 11, NERL was already undertaking an aggressive programme of accelerated cost reductions to meet targets set as a result of the Airline Group’s Business Plan. In further reviews since September 11, NERL have identified potential, additional, accelerated savings up to March 2006. These are reflect in the new draft Business Plan which has been
approved by the Airline Group and NERL’s Board, and has been circulated to users for consultation. Key cost reduction highlights include:

- Minimising ATCO increases through productivity improvements and accelerating support staff savings
- Pensions holiday for 30 months to June 2004 and lower contributions thereafter
- Additional reductions in non-staff items including the cost of contractors and general procurement and business efficiencies

A2.5 The NERL Board has considered carefully additional cost reductions over those outlined above, against the background of NERL’s legal obligations. The Board concluded that further material reductions were not possible if the obligations under the Licence were to be met.

A2.6 Overall, the planned levels of cost reduction now exceed the original targets in the Airline Group’s plan and those previously proposed by CAA. However, there are significant risks in delivering the proposed cost savings which include:

- Failure to realise the anticipated manpower savings
- Inability to deliver ATCO productivity leading to greater increases in numbers
- Higher than expected redundancy costs
- Inability to hold staff costs to proposed levels
- Failure to deliver non-staff cost reductions identified
- Scope changes could result in cost overruns in the capital programme (the high technology nature of the programme increases uncertainty)
- NERL could suffer unforeseen additional costs due to business risks materialising and requiring additional expenditure to resolve

A2.7 Notwithstanding these challenges, NERL’s declared objective is to deliver the planned efficiency gains in full. It would be inconsistent with the fundamental principles of efficiency based regulation for CAA to deny NERL the benefit of these efficiency savings. Under normal circumstances (ie if the September 11 attacks had not occurred), NERL would expect to benefit from the cost reductions both during the remainder of CP1 and, assuming the use of a rolling incentive mechanism, into the early years of CP2 as well. The assumptions that NERL will be able to enjoy the benefit of these savings in CP1 and that part of that benefit will be rolled forward into CP2 have played an important role in the assessment of NERL’s financial position and helped to minimise NERL’s need for an immediate increase in charges.
APPENDIX 3: EXPLANATION OF NERL’S PROPOSAL

A3.1 NERL’s proposal for the charge control modification is based on the Xs required to restore NERL’s revenue to the position it was in before the demand shock. In addition, the increased uncertainty over future demand needs to be considered.

Direct Revenue Correction

A3.2 The first step in the calculation is to consider what NERL’s revenue would have been under the original assumptions. The following table does this. It calculates the net present value (NPV) of NERL’s revenues from the Eurocontrol charge control for the five years from 2001 to 2005, based on the current charge control and CAA base case demand forecast. The resulting NPV is £1,870m, in 2001 prices.

<table>
<thead>
<tr>
<th>Calendar year</th>
<th>Jan-Mar 2001</th>
<th>Apr-Dec 2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAA demand forecast (August 2000) (1000s CSUs)</td>
<td>2,030&lt;sup&gt;3&lt;/sup&gt;</td>
<td>7,358</td>
<td>9,966</td>
<td>10,535</td>
<td>11,061</td>
<td>11,538</td>
</tr>
<tr>
<td>RPI for charge control&lt;sup&gt;4&lt;/sup&gt;</td>
<td>2.1</td>
<td>1.7</td>
<td>3.1</td>
<td>2.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current X factors</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current charge control £/CSU</td>
<td>49.25&lt;sup&gt;5&lt;/sup&gt;</td>
<td>46.24</td>
<td>45.82</td>
<td>44.77</td>
<td>43.92</td>
<td>42.82</td>
</tr>
<tr>
<td>Inflation index (to 2001 prices)&lt;sup&gt;4&lt;/sup&gt;</td>
<td>0.991</td>
<td>1.003</td>
<td>1.016</td>
<td>1.045</td>
<td>1.073</td>
<td>1.098</td>
</tr>
<tr>
<td>Real revenue £m (nominal)</td>
<td>100</td>
<td>340</td>
<td>457</td>
<td>472</td>
<td>486</td>
<td>494</td>
</tr>
<tr>
<td>CAA’s in-year discount factor</td>
<td>1.013</td>
<td>1.051</td>
<td>1.118</td>
<td>1.204</td>
<td>1.298</td>
<td>1.398</td>
</tr>
<tr>
<td>Present value of revenue £m (real)</td>
<td>101</td>
<td>339</td>
<td>449</td>
<td>451</td>
<td>453</td>
<td>450</td>
</tr>
<tr>
<td>Total present value of revenue in CP1 £m (real)</td>
<td>1,870</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A3.3 The demand forecast and discount rate used in the calculation are those in the CAA’s Advice to Government.<sup>6</sup> The discount rate is 7.75%, and the discount factors shown are the in-year discount rates, taken from the CAA’s financial model of NATS.

A3.4 To restore the NPV of NERL’s Eurocontrol income for CP1 to £1,870m, when demand is as in NATS base case, would require Xs of about -4, -5 and -5.

Volume related cost savings

A3.5 As described in Section 6, it might be argued that the revenue allowed should be reduced to allow for a volume related reduction in costs but NERL believes that the extent to which it is able to vary its costs in response to demand over a short to medium term timescale is almost non-existent. Notwithstanding this, and the fact that NERL considers that it could make out a strong case on this point, in order to minimise its request NERL has calculated its proposal on the basis of the cost elasticity of demand of 0.25 assumed in CAA’s Advice to Government.

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<sup>2</sup> The numbers in the tables in this section may not sum due to rounding.

<sup>3</sup> The CAA forecast was only published on an annual basis. It was allocated between January-March 2001 and April-December 2001 on the basis of the proportions in NATS’ September 2000 forecast, in which the annual figure was very close to the CAA forecast.

<sup>4</sup> The inflation rate used to calculate the charges (“RPI for charge control”) is a forecast based on the definition in the Licence, i.e. the annual inflation rate to August of the preceding year. The inflation index used to deflate the revenues (“Inflation index”) is a forecast for the calendar year in question. The two forecasts are therefore of somewhat different series and the resulting figures differ slightly.

<sup>5</sup> In 2001, the unit rate was changed on 1<sup>st</sup> April.

<sup>6</sup> In determining the charge control, the Government did not give any details of its calculations. NERL therefore believes that the cost of capital and demand forecasts in the CAA’s Advice represent the most appropriate basis for the level of demand assumed in setting the charge control.
A3.6 It is the number of flights which affects NATS workload rather than the number of CSUs. In its financial model of NATS, the CAA applied the cost elasticity to CSUs. This was not unreasonable at the time because the ratio of CSU/flight was constant. However, recently this ratio has changed significantly (because of increases in short flights in the South East of the UK through low cost carriers and a decrease in overflights). Given this disconnect between CSUs and flights, we have applied the cost elasticity to flights rather than CSUs in our calculations. The CAA did not publish a forecast of flights, but given that its CSU forecast was almost the same as NATS’ September 2000 CSU forecast, we have used NATS’ September 2000 forecast of flights as a proxy for a CAA flight forecast in comparing current expectations with those at the time of the original charge control determination.

A3.7 The reduction in costs that would result from applying an elasticity of 0.25 to flights, based on the CAA’s assumption of NATS’ UK ATS costs is £26m. The calculation is shown in the table below.

### Fall in Costs Based with Assumed Cost Elasticity of 0.25

<table>
<thead>
<tr>
<th>Calendar year</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>NATS September 2000 Flights Forecast (1000s flights)</td>
<td>2,147</td>
<td>2,268</td>
<td>2,369</td>
<td>2,453</td>
<td>2,529</td>
</tr>
<tr>
<td>NATS Base Case Flights Forecasts (1000s flights)</td>
<td>2,023</td>
<td>1,991</td>
<td>2,210</td>
<td>2,332</td>
<td>2,421</td>
</tr>
<tr>
<td>Cost elasticity of demand assumption</td>
<td>0.25</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAA assumption of UK ATS opex (£m (real))</td>
<td>374</td>
<td>355</td>
<td>353</td>
<td>358</td>
<td>355</td>
</tr>
<tr>
<td>Fall in operating expenditure (£m (real))</td>
<td>-5</td>
<td>-11</td>
<td>-6</td>
<td>-4</td>
<td>-4</td>
</tr>
<tr>
<td>CAA’s in-year discount factor</td>
<td>1.037</td>
<td>1.118</td>
<td>1.204</td>
<td>1.298</td>
<td>1.398</td>
</tr>
<tr>
<td>PV of fall in operating expenditure (£m (real))</td>
<td>-5</td>
<td>-10</td>
<td>-5</td>
<td>-3</td>
<td>-3</td>
</tr>
<tr>
<td>Total present value of fall in opex in CP1 (£m (real))</td>
<td>-26</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A3.8 The additional revenue that needs to be recovered for the Eurocontrol business would therefore be £1,844m (= £1,870m - £26m).

A3.9 As the following table shows, Xs of -4, -3, -2 restore the NPV of the Eurocontrol CP1 revenues to £1,844m. NERL therefore proposes Xs of -4, -3, -2, or any other combination that gives the same NPV.

### Xs To Repair Revenue Shortfall After Assumed Cost Reductions for Cost Elasticity of Demand

<table>
<thead>
<tr>
<th>Calendar year</th>
<th>Jan-Mar 2001</th>
<th>Apr-Dec 2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>NATS Base Case Demand, Nov 2001 (1000 CSUs)</td>
<td>1,990</td>
<td>6,795</td>
<td>8,465</td>
<td>9,536</td>
<td>10,113</td>
<td>10,500</td>
</tr>
<tr>
<td>RPI for charge control</td>
<td>2.1</td>
<td>1.7</td>
<td>3.1</td>
<td>2.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proposed X factors</td>
<td>3</td>
<td>-4</td>
<td>-3</td>
<td>-2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current charge control (£/CSU)</td>
<td>49.25</td>
<td>46.24</td>
<td>45.82</td>
<td>48.43</td>
<td>51.38</td>
<td>53.69</td>
</tr>
<tr>
<td>Revenue (£m (nominal))</td>
<td>98</td>
<td>314</td>
<td>388</td>
<td>462</td>
<td>520</td>
<td>564</td>
</tr>
<tr>
<td>Inflation index (to 2001 prices)</td>
<td>0.991</td>
<td>1.003</td>
<td>1.016</td>
<td>1.045</td>
<td>1.073</td>
<td>1.098</td>
</tr>
<tr>
<td>Real revenue (£m (real))</td>
<td>99</td>
<td>313</td>
<td>382</td>
<td>442</td>
<td>484</td>
<td>513</td>
</tr>
<tr>
<td>CAA’s in-year discount factor</td>
<td>1.013</td>
<td>1.051</td>
<td>1.118</td>
<td>1.204</td>
<td>1.298</td>
<td>1.398</td>
</tr>
<tr>
<td>Present value of revenue (£m (real))</td>
<td>98</td>
<td>298</td>
<td>342</td>
<td>367</td>
<td>373</td>
<td>367</td>
</tr>
<tr>
<td>Total present value of revenue in CP1 (£m (real))</td>
<td>1,844</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Increased Uncertainty Over Future Demand

A3.10 NERL believes there are two possible approaches to address the increase in downside demand risk. One approach would be to attach a value to the associated risk premium and...

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7 The actual 2001 flights outturn is used in this table. It is slightly higher than NATS base case forecast.
8 As with the 2001 flights, this is the actual 2001 CSUs. It is slightly higher than NATS base case forecast. The difference is discussed further in Appendix 1.
to seek an increased charge control modification specifically to take account of that risk premium. In light of the financial pressures on the aviation industry NERL is keen, if at all possible, to avoid this approach and to minimise the increase in charges. NERL has not therefore included any "demand risk premium" in its proposal (although the increase in demand risk reiterates why it is essential to address the direct demand downturn in full). NERL is therefore content to proceed without a specific "risk premium adjustment" on the assumption that if the downside risk were to materialise, CAA would be minded to address it through a further modification. Alternatively, NERL would be happy to discuss with CAA any mechanism which it may feel to be appropriate to give NERL protection against the increased demand risk. These issues will also be an important consideration in the Regulatory Statement and at subsequent regulatory reviews.