

Consultation on
2019 Actual Costs and Intended 2021 Unit Rates of
Air Navigation Services in Ireland
under the Performance and Charging Scheme of the Single European Sky

Commission Paper 6/2020

6 July 2020

Commission for Aviation Regulation

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1. About this Consultation

- 1.1 The Commission for Aviation Regulation is Ireland’s independent economic aviation regulator and was established in 2001.
- 1.2 From 1 January 2020, we have been designated as a National Supervisory Authority (NSA) in Ireland for economic regulation under the performance and charging schemes of the Single European Sky.
- 1.3 In this document, we are consulting with airspace users on three aspects required under Implementing Regulation (EU) 317/2019 (“the Regulation”) laying down the current performance and charging scheme. The three aspects that we are consulting airspace users on are:
- the actual costs incurred in 2019 associated with the provision of en route and terminal air navigation services in Ireland;
 - the intended unit rates for 2021 of en route and terminal services;
 - the costs exempt from the cost risk sharing mechanism for reference period 2 (RP2) for 2015-2019 that will be returned to users in 2021.
- 1.4 The consultation consists of two steps. First, we are inviting airspace users, or their representatives, to attend a video conference meeting on **20 July 2020** from **10:00 – 12:30**. At this meeting, we will summarise the contents of Sections 2 to 4 of this document, and the following parties will give a presentation of their 2019 actual costs and intended 2021 unit rates:
- The Irish Aviation Authority - Air Navigation Service Provider (IAA ANSP),
 - The Irish Aviation Authority - Safety Regulation Division (IAA SRD)¹, and
 - The Irish Meteorological Service (Met Éireann - Aviation Services).
- 1.5 Second, we are seeking written feedback from airspace users in relation to the 2019 actual costs, intended 2021 unit rates and/or RP2 costs exempt by **31 July 2020**.² Written feedback should be sent to info@aviationreg.ie. We may correspond with airspace users who make submissions, seeking clarification or explanation of their submissions.
- 1.6 Respondents should be aware that we are subject to the provisions of the Freedom of Information legislation. Ordinarily we place all submissions received on our website.³ If a submission contains confidential material, it should be clearly marked as

¹ The Safety Regulation Division of the Irish Aviation Authority (IAA SRD) was the NSA for economic regulation up to 2019 and remains as the NSA for all other non-economic regulatory and oversight tasks under the performance scheme. Therefore, the IAA SRD costs are the relevant NSA costs for this annual consultation.

² The Regulation requires we consult airspace users on the intended 2021 unit rates before 1 August 2020 and on the RP2 costs exempt before 1 September 2020 with information circulated to airspace users at least three weeks beforehand.

³ While we endeavour to ensure that information on our website is up to date and accurate, we accept no responsibility in relation to the accuracy or completeness of our website and expressly exclude any warranty or representations as to its accuracy or completeness.

confidential and a redacted version suitable for publication should also be provided.

- 1.7 We do not ordinarily edit submissions. Any party making a submission has sole responsibility for its contents and indemnifies us in relation to any loss or damage of whatever nature and howsoever arising suffered by us as a result of publishing or disseminating the information contained within the submission.
- 1.8 We will use the feedback received from airspace users to:
- inform our thinking on advice to the European Commission about the outcome of the consultation.
 - finalise the report on the costs exempt for RP2 before 1 September 2020 and,
 - update, if needed, the 2021 unit rates before 1 November 2020.
- 1.9 We must finalise the unit rates by 20 December 2020, after the rates have been verified by the European Commission.
- 1.10 The European Commission is in the process of addressing the impact of the COVID-19 crisis on air navigation service provision, including revisions to the performance and charging scheme implementation in RP3. Once clarity is available on any revisions to RP3 we will engage with airspace users on the next steps.
- 1.11 In preparing this consultation, we:
- obtained from all relevant parties the actual 2019 detail cost data necessary for ensuring the proper implementation and oversight of this Regulation.
 - assessed whether the 2019 actual costs were below the determined costs in the reference period 2 (RP2) plan.
 - verified the correct calculation of the intended 2021 unit rates for all parties based on the determined costs in the draft RP3 plan and the adjustments carried over from 2019.
 - verified the correct application of the cost risk sharing mechanism during RP2.
 - submitted, on behalf of Ireland, the 2019 actual costs, intended 2021 unit rates and RP2 costs exempt from the risk sharing mechanism to the European Commission before the deadline of 1 June 2020 as per the Regulation, including the information in Annex VII and Annex IX that is consulted in this paper.
- 1.12 This document is organised as follows. We consult on 2019 actual costs in Section 2, on intended 2021 unit rates in Section 3 and on the draft report on the cost risk sharing mechanism in Section 4. Appendices 1, 2 and 3 present the consultation documents of the IAA ANSP, IAA SRD and Met Éireann. Appendix 4 shows the relevant tables as per the Annexes VII and IX of the Regulation.
- 1.13 Along with this document, we are sending airspace users the presentation slides that will be used at the video conference meeting to be held on 20 July 2020.

2. Summary of Actual Costs Incurred in 2019

- 2.1 In this section we consult on the actual costs of air navigation services incurred in 2019 and the difference between the actual and the determined costs contained in the RP2 performance plan.⁴ This is required under Article 24 (3) of the Regulation.
- 2.2 We have verified the eligibility of the cost categories included for en route and terminal services. En route services cover air navigation in the Shannon Flight Information and Upper Information Regions (FIR/UIR) and exclude the Shanwick Oceanic airspace. Terminal services cover air navigation during approach, landing, take-off and departure provided at Dublin, Cork and Shannon airports. We verified the costs wholly allocated to en route and terminal services as well as the percentages used by the IAA ANSP and SRD to allocate joint costs. We also verified the cost allocation used by Met Éireann.
- 2.3 In real terms (2009 prices), the total actual costs in 2019 were 7.5% lower for en route services and 5.5% lower for terminal services than the determined costs in the RP2 plan.⁵ Actual unit costs were below the determined unit costs by 15% for en route and 21% for terminal. Below, we show the en route and terminal costs by entity.

En route Costs

- 2.4 In real terms, total en route costs in 2019 were €109.9m, which is €8.8m below the RP2 determined costs of €118.8m. The actual ANSP costs (€91.5m) represent 83% of the total actual costs and were 9.7% lower than determined costs. Met Éireann actual costs (€6.4m) represent 6% of total actual costs and were 5% lower than determined costs. The actual NSA costs (€12.1m) represent 11% of the total actual costs and were 12% (€1.3m) higher than determined costs due to higher staff and operating costs. As per the cost risk sharing mechanism discussed in Section 4, Member States shall cover the difference if actual NSA costs are above determined costs over the whole period. Chart 2.1 shows the total actual and determined real en route costs for each party in 2019.
- 2.5 Actual 2019 unit costs, in real terms, were €23.69, which is €4.18 lower than determined unit costs of €27.87. Unit costs fell partly because actual service units (4.6m) were 8.9% higher than the forecast service units in the RP2 plan (4.3m). Chart 2.2 shows the real actual and determined en route unit costs for each party in 2019.

⁴ Article 2 of the Regulation defines actual cost as “a cost actually incurred in a calendar year for the provision of air navigation services which are subject to certified accounts or, in the absence of such certified accounts, subject to a final audit”. Determined costs are the cost base for en route and terminal charges established according to the Regulation prior to the start of each reference period, as part of the performance plans.

⁵ The European Commission uses 2009 prices for comparison purposes between the RP1 and RP2 costs.

Chart 2.1: 2019 Actual and Determined En route Total Costs

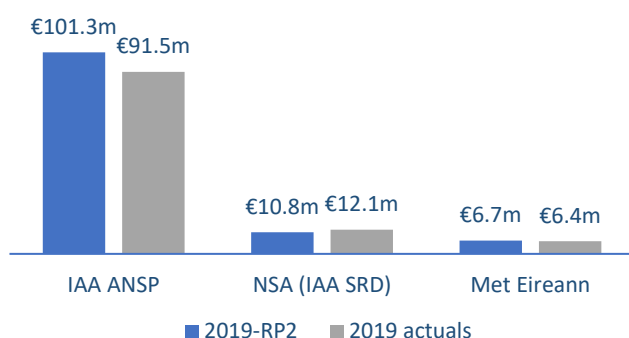
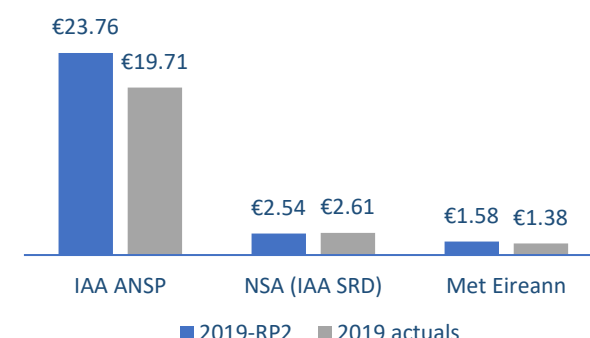


Chart 2.2: 2019 Actual and Determined En route Unit Costs



Source: Reported costs in real terms (2009 prices) based on audited financial data from ANSP, IAA SRD and Met Éireann.

Terminal Costs

2.6 In real terms, total terminal costs in 2019 were €25m which is €3m lower than the RP2 determined costs of €28m. The actual ANSP costs (€22.6m) represent 90% of the total actual costs and were 11% lower than the determined costs. The actual costs of Met Éireann (€1.7m) represent 7% of total actual costs and were 10% lower than determined costs. The actual NSA costs (€0.8m) represent 3% of the terminal costs and were €0.1m higher than the determined costs due to higher staff and operating costs. Member States shall cover the difference if actual NSA costs are above determined costs over the whole period. Chart 2.3 shows the real actual and determined terminal total costs for each party in 2019.

2.7 Actual 2019 unit costs, in real terms, (€128.08) were 21% lower than the RP2 plan (€162.16). The reduction in actual terminal unit costs is partly due to the 19.6% increase in actual terminal service units compared to the forecast. Chart 2.4 shows the real actual and determined terminal unit costs for each party in 2019.

Chart 2.3: 2019 actual and determined terminal total costs

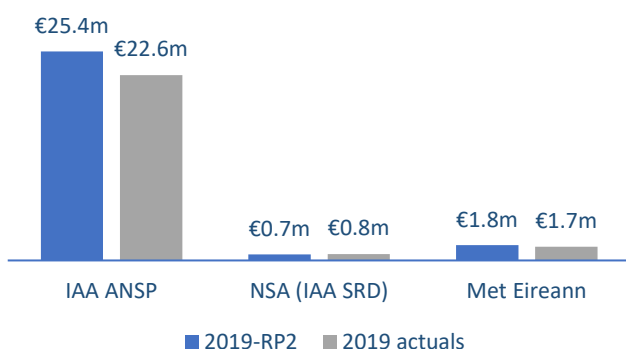
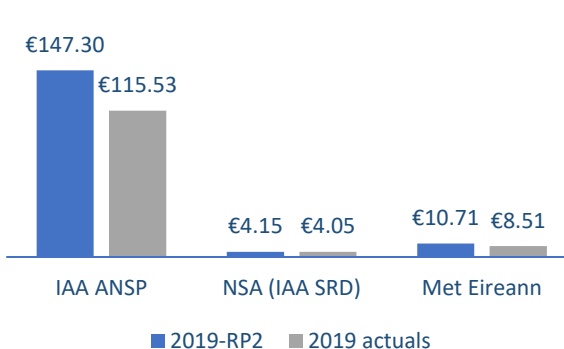


Chart 2.4: 2019 actual and determined terminal unit costs



Source: Reported costs in real terms (2009 prices) based on audited financial data from ANSP, IAA SRD and Met Éireann

2.8 For details on the cost categories of en route and terminal services of each party (such as staff costs, other operating costs, depreciation, cost of capital and cost of supervision) see the consultation documents and tables in the Appendices of this document.

3. Summary of the Calculation of Intended 2021 Unit Rates

3.1 In this section we consult on the intended 2021 unit rates. This is required under Article 30 of the Regulation.

En route

3.2 **The intended 2021 unit rate for en route services is €27.58.** This rate is €3.38 lower per unit than the draft RP3 plan, due to the application of the rate adjustments set out in the Regulation which reduce the nominal determined costs by €16.2m. Below we explain the calculation of the unit rate.

3.3 Row 8 of Table 3.1 shows that the total costs applicable for the en route unit rate calculation are €132.1m after adjustments. They are 11% lower than the determined costs in the RP3 plan as shown in Row 1 (€148.3m). Rows 2 to 7 show the applicable adjustments. The first three adjustments in Rows 2-4 explain 96.5% of the reduction in the intended en route rate. We explain the calculation of all the adjustments below.

Table 3.1: Applicable En route Unit Rate for 2021

| | Total | ANSP | NSA (SRD) | MET |
|--|----------------|----------------|---------------|--------------|
| 1 Determined costs in nominal terms – Visual Flight Rules (VFR) flights excluded (Art. 25(2)(a)) | €148.3m | €125.m | €17.m | €6.3m |
| 2 Inflation adjustment: amount carried over to 2021 (Art. 25(2)(b)) | -€7.2m | -€6.1m | -€0.7m | -€0.4m |
| 3 Traffic risk sharing adjustment: amounts carried over to 2021 (Art. 25(2)(c)) | -€5.4m | -€5.4m | | |
| 4 Differences in costs as per Art. 28(4) to (6): amounts carried over to 2021 (Art. 25(2)(d)) | -€3.1m | | -€3.1m | |
| 5 Financial incentives: amounts carried over to 2021 (Art. 25(2)(e)) | €1.1m | €1.1m | | |
| 6 Traffic adjustments: amounts carried over to 2021 (Art. 25(2)(g) and (h)) | -€0.8m | €0.7m | -€0.9m | -€0.6m |
| 7 Other revenues (Art. 25(2)(i)) | -€0.8m | -€0.8m | | |
| 8 Total for the calculation of 2021 unit rate | €132.1m | €114.4m | €12.3m | €5.3m |
| 9 Forecast total service units for 2021 (performance plan) | €4.8m | | | |
| 10 Applicable unit rate for 2021 | €27.58 | €23.89 | €2.58 | €1.11 |
| 11 Unit rate before adjustments | €30.96 | €26.09 | €3.55 | €1.31 |

Source: Reported en route tables based on costs as per audited financial data from ANSP, IAA SRD and Met Éireann.

The inflation adjustment carried over from 2019 (Row 2).

- 2019 Actual inflation (0.9%) is lower than forecast inflation (1.7%) in the RP2 plan. The inflation adjustment applies to the 2019 total en route determined costs in nominal terms for all parties which are €130.9m. Those costs are shown in Row 1.6 of Table 8.1 in Appendix 4. The adjustment is calculated using the price index used in the RP2 plans as $€130.9m \times (104 / 110.1 - 1)$.⁶

The traffic risk sharing adjustment (Row 3).

- The actual en route traffic growth in 2019 was 8.9% higher than the forecast. In this case, the ANSP returns to users €5.4m which is equivalent to 70% of the

⁶ Eurostat Harmonised index of consumer prices, base 100 in 2009.

share of its nominal determined costs in 2019 (€111.6m) proportional to the actual traffic growth above 2% and below 10% (or 70% x 6.9% x €111.6m). The 2019 nominal determined costs of the ANSP are shown in Appendix 4, Table 8.1 Row 1.6.

Differences in Eurocontrol membership costs of the NSA during RP2 (Row 4).

- The €3.1m difference between determined and actual costs of the Eurocontrol membership from 2015-2019 will be returned to airspace users in 2021, as detailed in Table 3.2 below.

Table 3.2: Differences in Eurocontrol costs during RP2 to be returned in 2021

| | 2015 | 2016 | 2017 | 2018 | 2019 | Total difference to be returned in 2021 |
|------------|--------|--------|-------|--------|--------|---|
| RP2 Plan | €6.8m | €7.1m | €7.4m | €7.7m | €7.9m | |
| Actual | €6.6m | €6.6m | €6.4m | €6.9m | €7.4m | |
| Difference | -€0.2m | -€0.5m | -€1m | -€0.8m | -€0.5m | -€3.1m |

Source: RP2 Plan, Eurocontrol.

3.4 We report the Eurocontrol membership costs as required under Article 28 (3) of the Regulation laying down the cost risk sharing mechanism. These are the only costs exempt from the mechanism. We consult on the draft report on the cost risk sharing mechanism in the next section.

3.5 The remaining three adjustments are:

Financial Incentive (Row 5)

- The ANSP earned a capacity bonus of 1% of its payable income in 2019 (€1.1m) due to its achievement of zero en route Air Traffic Flow Management (ATFM) delay per flight in the same year. This incentive was defined in the RP2 Plan.

Traffic Adjustment (Row 6)

- The traffic adjustment is the multiplication of actual traffic growth above forecast (8.9%) times the sum of applicable costs for each party, as shown in Table 3.3. The traffic adjustment is positive for the ANSP (€0.7m) and negative for the NSA and Met Éireann (-€0.9m and -€0.6m). Overall, €0.8m will be returned to users in 2021.

Table 3.3: Costs For En Route Traffic Adjustment by Entity

| | ANSP | NSA (SRD) | MET |
|--|--------|-----------|-------|
| Determined costs in 2019 after applicable adjustments carried over to 2019 | n/a | €10.6m | €6.3m |
| Inflation adjustment carried over to 2019 | -€4.0m | n/a | n/a |
| Traffic adjustment carried over to 2019 | €0.2m | n/a | n/a |
| Traffic risk adjustment carried to 2019 | -€4.8m | n/a | n/a |
| Performance bonus in 2019 | €1.1m | n/a | n/a |

Source: Reported en route tables based on costs as per audited financial data from ANSP, IAA SRD and Met Éireann.

Other Revenues (Row 7)

- Other revenues in 2021 consist of ANSP revenues of €0.2m from Union assistance programmes and €0.6m from commercial activities, which reduce the unit rate.

Terminal

- 3.6 **The intended 2021 unit rate for terminal services is €162.45.** This rate is €27.66 lower per unit than the draft RP3 plan, due to the application of the adjustments set out in the Regulation which reduce the nominal determined costs by €5.1m. Below we explain the calculation of the unit rate.
- 3.7 Row F in Table 3.4 shows that the total costs applicable for the terminal unit rate calculation are €31.8m, after adjustments. They are 14.5% lower than the determined costs in the RP3 plan (€37.2m) shown in Row A. The adjustments are shown in Rows B-E and explained below. The largest adjustment is the traffic risk sharing of ANSP revenues.

Table 3.4: Applicable Terminal Unit Rate for 2021

| | Total | ANSP | NSA (SRD) | MET |
|--|----------------|----------------|--------------|--------------|
| A Determined costs in nominal terms - Visual Flight Rules (VFR) flights excluded (Art. 25(2)(a)) | €37.2m | €34.5m | €1.1m | €1.6m |
| B Inflation adjustment: amount carried over to 2021 (Art. 25(2)(b)) | -€1.5m | -€1.4m | -€39.4k | -€0.1m |
| C Traffic risk sharing adjustment: amounts carried over to 2021 (Art. 25(2)(c)) | -€3.9m | -€3.9m | | |
| D Traffic adjustments: amounts carried over to 2021 (Art. 25(2)(g) and (h)) | €0.3m | €0.7m | -€0.1m | -€0.3m |
| E Other revenues (Art. 25(2)(i)) | -€0.3m | -€0.3m | | |
| F Total for the calculation of 2021 unit rate | €31.8m | €29.6m | €1.1m | €1.2m |
| G Forecast total service units for 2021 (performance plan) | 195.6k | | | |
| H Applicable unit rate for 2021 | €162.45 | €151.40 | €4.98 | €6.07 |
| I Unit rate before adjustments | €190.11 | €176.28 | €5.78 | €8.06 |

Source: Reported terminal tables based on costs as per audited financial data from ANSP, IAA SRD and Met Éireann.

Inflation adjustment (Row B)

- 3.8 The inflation adjustment results from actual 2019 inflation (0.9%) being lower than forecast inflation (1.7%) in the RP2 plan. The inflation adjustment applies to the 2019 total terminal determined costs in nominal terms for all parties which are €28m. Those costs are shown in Row 1.6 of Table 8.2 in Appendix 4. It is calculated using the price index used in the RP2 plans as $€28m \times (104 / 110.1 - 1)$.

Traffic risk sharing adjustment (Row C)

- 3.9 The actual terminal traffic growth in 2019 was 19.6% higher than forecast. In this case, the ANSP returns to users €3.9m which is equivalent to 70% of the share of its nominal determined costs in 2019 proportional to the actual traffic growth above 2% but below 10% plus 100% of the share of determined costs proportional to the growth above 10%. That is $(70\% \times 8\% \times €25.4m) + (9.6\% \times €25.4m)$. The 2019 nominal determined costs of the ANSP are shown in Appendix 4, Table 8.2, Row 1.6.

Traffic adjustment (Row D)

- 3.10 The traffic adjustment is the multiplication of actual traffic growth above forecast (19.6%) times the sum of applicable costs for each party, as shown in Table 3.5. It is positive for the ANSP (€0.7m) and negative for the NSA (-€0.1m) and Met Éireann (-€0.3m). Overall, €0.3m is added to Row F.

Table 3.5: Costs for Traffic Adjustment of Terminal Costs by Entity

| | ANSP | NSA (SRD) | MET |
|--|-------------|------------------|------------|
| Determined costs in 2019 after adjustments | n/a | €0.6m | €1.4m |
| Inflation adjustment carried over to 2019 | -€0.9m | n/a | n/a |
| Traffic adjustment carried over to 2019 | €0.2m | n/a | n/a |
| Traffic risk adjustment carried to 2019 | -€2.7m | n/a | n/a |

Source: Reported terminal tables based on costs as per audited financial data from ANSP, IAA SRD and Met Éireann.

Other Revenues (Row B)

- 3.11 Other revenues in 2021 consist of ANSP revenues of €66,000 from national public funding and €0.2m from commercial activities, which reduce the unit rate.
- 3.12 For details on the intended 2021 unit rates of each party see the Appendices in this document.

4. Draft Report on the Cost Risk Sharing Mechanism

- 4.1 In this section, we are consulting airspace users on our draft report on the cost risk sharing mechanism. Under Article 28 (7) of the Regulation, we shall draw up a report by 1 September 2020 on the changes in costs exempt from this mechanism during RP2 (2015-2019). In the previous section, we showed that the change in these costs reduce the 2021 unit rate.
- 4.2 In this draft report we verify the correct application of the provisions of Article 28 by:
- Identifying and categorising the determined costs in the RP2 plan relating to the costs that are exempt from the cost risk sharing mechanism.
 - Identifying and explaining the differences between determined and actual costs exempt from the mechanism during RP2 which affect the 2021 unit rate.

The Cost Risk Sharing Mechanism

- 4.3 Under the cost risk sharing mechanism, differences between determined costs included in the performance plan and actual costs shall be shared between air navigation service providers and airspace users as follows:
- where, over the whole reference period, actual costs fall below the determined costs, the air navigation service provider or the Member State concerned shall retain in full the resulting difference.
 - where, over the whole reference period, actual costs exceed the determined costs, the air navigation service provider or Member State concerned shall cover in full the resulting difference.

Costs Exempt from the Cost Risk Sharing Mechanism

- 4.4 The cost risk sharing mechanism does not apply if the differences between determined and actual costs result from at least one of the following unforeseen changes in costs defined in the Regulation:
- costs of new and existing investments (this will apply starting from 2020 actual costs).
 - costs incurred by National Supervisory Authorities or stemming from the Eurocontrol International Convention relating to cooperation for the safety of air navigation, as per Article 22(1).
 - pension costs established in accordance with Article 22(4).
 - interest rates on loans that finance the provision of air navigation services, which are out of the control of the ANSP.
 - costs required by law, for example taxation law.
- 4.5 We confirm that the only determined costs identified and categorised in the RP2 plan relating to the costs exempt from the cost risk sharing mechanism are the Eurocontrol membership costs as defined in Article 22 (1) of the Regulation.

Differences between Determined and Actual Costs Exempt

- 4.6 The determined costs approved in the RP2 plan for 2015-2019 were based on the budget estimated by Eurocontrol. Actual costs were then calculated by Eurocontrol based on the international agreement in place. The variance between determined and actual costs is due to changes in the Eurocontrol budget.
- 4.7 There is a €3.1m difference between determined and actual costs of the Eurocontrol membership from 2015-2019, as detailed in Table 4.1 below.

Table 4.1: Differences in Eurocontrol costs during RP2 to be returned in 2021

| Eurocontrol costs | 2015 | 2016 | 2017 | 2018 | 2019 | Total difference to be returned in 2021 |
|--------------------------|-------------|-------------|-------------|-------------|-------------|--|
| RP2 Plan | €6.8m | €7.1m | €7.4m | €7.7m | €7.9m | |
| Actual | €6.6m | €6.6m | €6.4m | €6.9m | €7.4m | |
| Difference | -€0.2m | -€0.5m | -€1m | -€0.8m | -€0.5m | -€3.1m |

Source: RP2 Plan, Eurocontrol.

- 4.8 This amount will be returned to airspace users as a reduced 2021 en route unit rate. The cost difference in RP2 is returned to airspace users in RP3 as required under Article 14(2)(d) of Regulation 391/2013 laying down the RP2 performance and charging scheme. During RP3, the differences in the costs exempt will be returned to users two years later (n+2) rather than in RP4, as per Article 28 (4) of Regulation 317/2019.

5. Appendix 1: IAA ANSP Consultation Document



Consultation Document on En Route and Terminal Unit Rates in 2019 and 2021

22nd June 2020

Published by the Air Navigation Service Provider of the Irish Aviation Authority

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1. Introduction

This consultation document has been prepared in line with Articles 24(3) and 30(1) of European Commission Implementing Regulation 317/2019 ('the Regulation'). With respect to the costs of the Irish Aviation Authority's Air Navigation Service Provider ('ANSP'), it sets out the relevant actual en route and terminal costs in 2019 compared to what was planned in the second reference period 2015-2019 (RP2). This document also specifies the respective technical adjustments that impact the planned ANSP component of the Unit Rate in 2021, in line with the Regulation.

2. En Route Traffic in 2019 – Total Service Units (TSU)

In 2019, traffic increased by 2.0%. The RP2 Plan envisaged traffic growth by 1.8%, albeit from a lower base. Traffic was 8.8% higher than planned in 2019. The RP2 Plan envisaged 8.7% growth (i.e. 4,262 in 2019 compared to 3,922 in 2014). Actual traffic increased by 18.3% over the period 2014-2019. The original RP3 forecasts (Feb 2019) maintained a relatively consistent rate of growth to 2021.

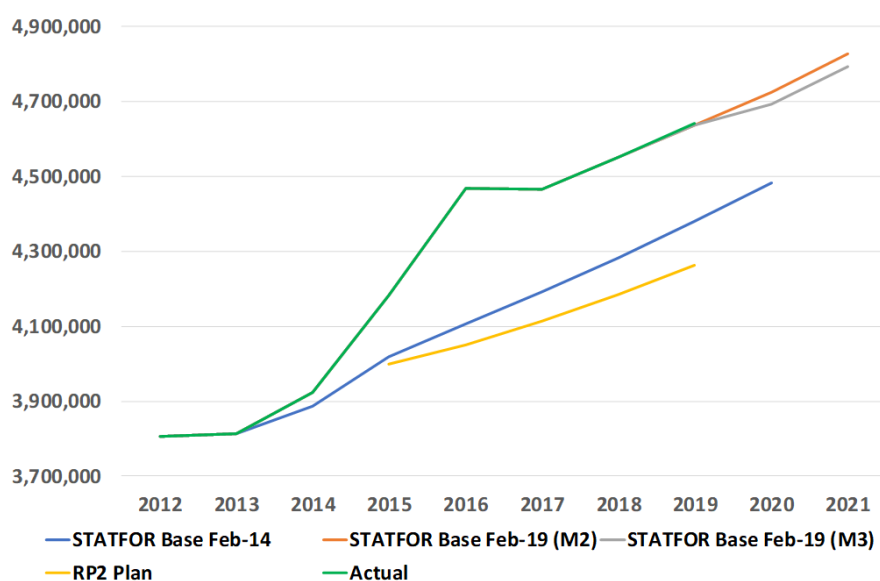


Figure 1 Planned v Actual Traffic 2014-2019

3. Key Milestones in 2019

The ANSP safely handled record traffic levels in 2019. A safe and efficient air navigation service for strong growth in traffic was possible due to appropriate investment in people and infrastructure.

The ANSP continues to be one of the top performers in Europe with almost zero ANSP attributable En Route and Terminal Air Traffic Flow Management (ATFM) delays in 2019. In

In addition, the ANSP also met its safety, capacity, environment and cost efficiency SES targets for 2019.

Significant procedural changes in Irish airspace were initiated in 2019 to facilitate reduced fuel burn and emissions for aircraft in Shanwick airspace. Cross border arrival management (XMAN) to London Gatwick was expanded by extending the streaming of aircraft in Irish airspace, thereby reducing holding times and cutting fuel burn and emissions for aircraft arrivals to that airport.



Figure 2 2019 Customer Survey Headlines

4. En Route Unit Rate 2019

Ireland’s En Route Unit Rate in 2019 was €28.12 (seventh lowest in the EUROCONTROL area) compared to €27.69 in 2018, representing an increase of 1.6%. The ANSP component of the En Route Unit Rate was €24.12, representing 85.8% of the overall rate.

EUROCONTROL En Route unit rates €2019

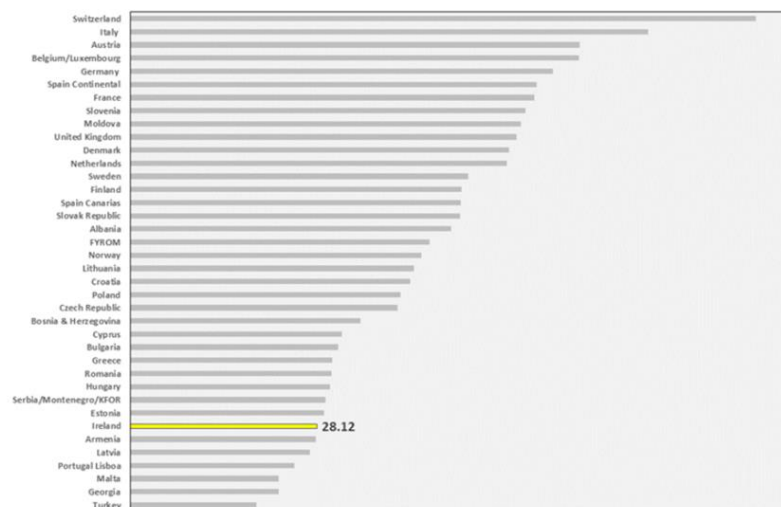


Figure 3 EUROCONTROL En Route Unit Rates 2019

In real terms (2009 prices), the planned En Route unit cost for 2019 was €27.87 while the actual En Route unit cost in real terms (2009 prices) was €23.69. In real terms (2009 prices), the actual ANSP component of the En Route unit cost for 2019 was €19.71.

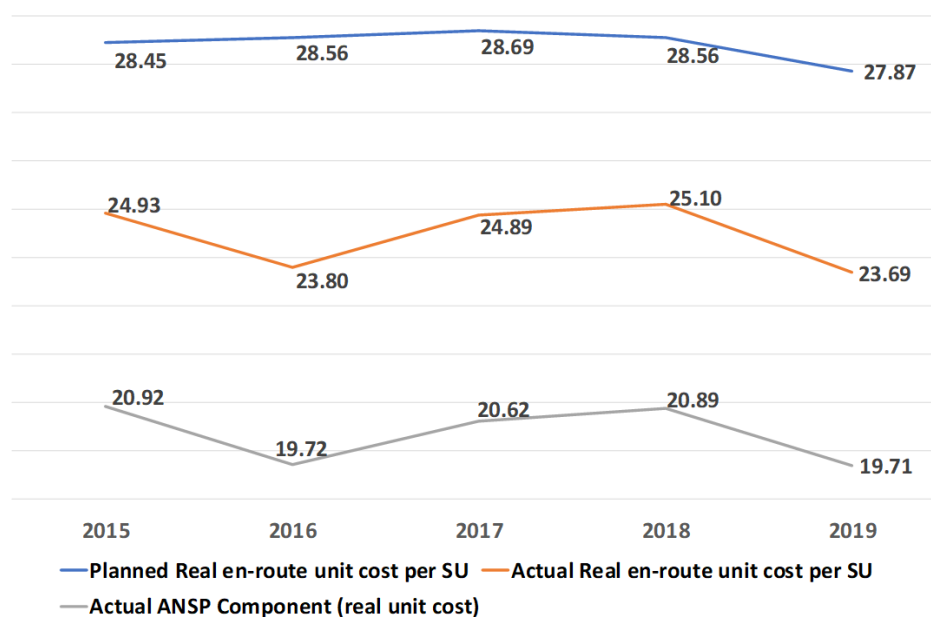


Figure 4 En Route Unit Costs 2015-2019

5. En Route Costs in 2019

Actual En Route ANSP Costs amounted to €95.3m in 2019 compared to determined costs of €111.6m. Staff costs were €7.3m lower than what was determined for 2019. Other operating costs were €2.8m lower than what was determined for 2019. Depreciation and the cost of capital were €4.7m and €1.5m lower than what was determined for 2019 respectively.

6. Impact on En Route Unit Rate in 2021

Total ANSP Costs amount to almost €125m in 2021, up 6.6% on 2020. Following the relevant adjustments, the unit rate is calculated based on a total of €114.4m. The planned En Route unit cost for the ANSP in 2021 is €23.89 (nominal). This reflects €5.4m returned to airspace users as a result of traffic risk sharing in 2019. It also reflects €6.1m returned to airspace users as a result of the inflation adjustment. The 2021 unit rate is adjusted to reflect a financial incentive of €1.1m realised in 2019. A further adjustment, €0.8m returned, is made to reflect Union assistance and commercial revenue.

7. Terminal Traffic in 2019 – Total Service Units (TSU)

In 2019, actual terminal traffic was 187,709 TSU, which was 19.6% higher than planned.

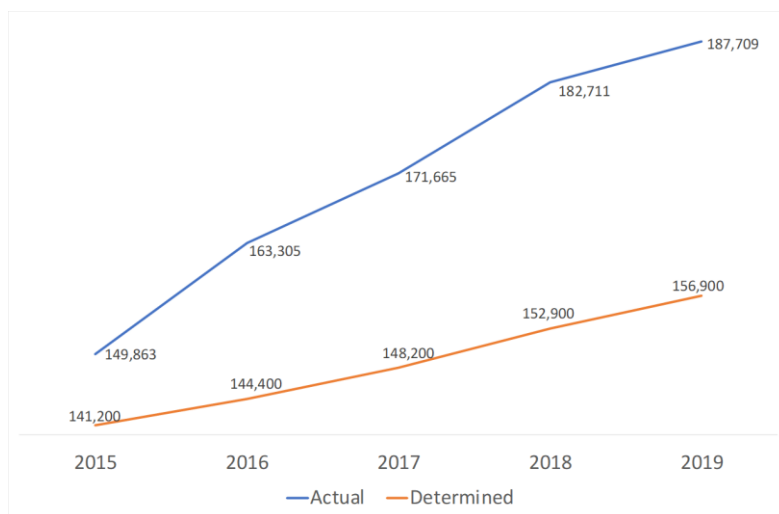


Figure 5 Terminal Determined v Actual Traffic in 2019 (Service Units)

8. Terminal Costs in 2019

Actual Terminal ANSP Costs amounted to €22.56m in 2019 compared to determined costs of €25.44m. This represents an 11% reduction on actual versus determined. Staff costs were €2.35m lower than what was determined in 2019. This represents a 19% reduction on actual compared to determined. Other operating costs were €2.57m higher than what was determined in 2019 which equates to a 49% increase on determined costs. Depreciation and the cost of capital were €2.41m and €0.68m lower than what was determined in the Plan for 2019 respectively.

9. Impact on Terminal Unit Rate in 2021

ANSP Costs amount to €34.48m in 2021, up 14.5% on 2020. Following the relevant adjustments, the unit rate is calculated based on a total of €29.61m. The planned Terminal unit cost for the ANSP in 2021 is €151.40 (nominal). This reflects €3.9m returned to airspace users as a result of traffic risk sharing in 2019 (€19.82 rate reduction). This also reflects €1.4m returned to airspace users as a result of the inflation adjustment (€7.15 rate reduction). A further adjustment, €0.3m returned (€1.40 rate reduction), is made to reflect Union assistance and commercial revenue.

6. Appendix 2: IAA SRD Consultation Document

Consultation Slides on State/NSA En Route Unit Rate in 2019 and 2021



This presentation provides an overview of the State/NSA component of both the en route unit rate in place in 2019 and summarises the relevant technical adjustments for the planned unit rates in 2021.

The State/NSA component of the ENR unit rate includes NSA costs, Other State costs and EUROCONTROL costs (*Slides 2-4*)

The following technical adjustments are detailed as follows in the context of the RP2 Plan:

- ❖ Inflation Adjustment (*Slide 5*)
- ❖ Traffic Adjustment (*Slide 6*)
- ❖ Costs Exempt (*Slide 7*)

Other relevant components of the unit rates are detailed including the EUROCONTROL costs (*Slide 7*)

An overview of the NSA component of the en route unit rate in 2021 is provided (*Slide 8*)

Consultation Slides on State/NSA Unit Rate in 2019 and 2021

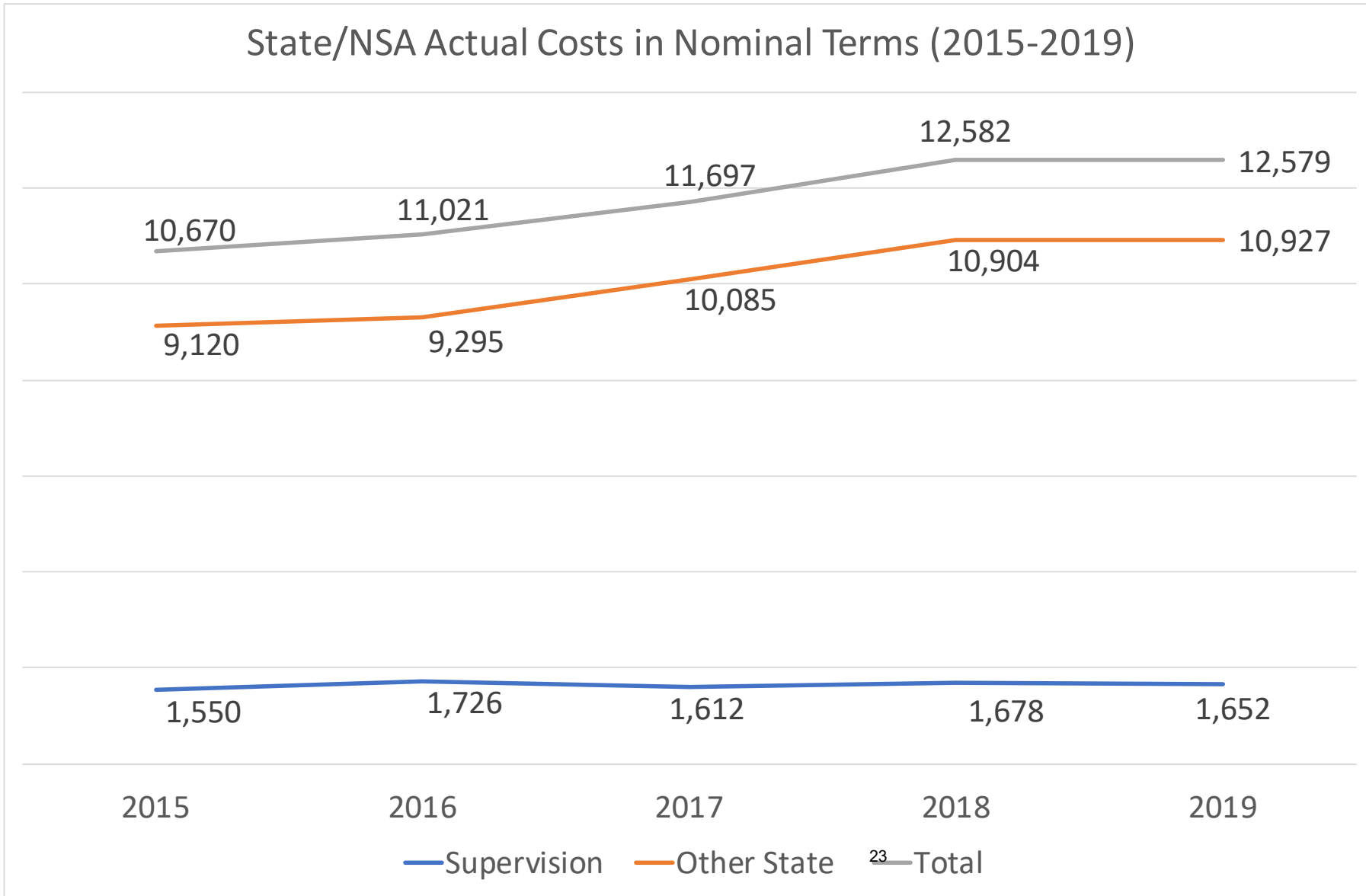


- Total State/NSA Costs (€12.58m nominal) remained largely unchanged in 2019 compared to 2018 as an increase in staff costs was offset by a reduction in other operating costs.
- In real terms, total costs reduced by 0.9% year-on-year to €12.09m in 2019.
- In nominal terms, staff costs increased by 7.3%, from €1.62m to €1.74m in 2019.
- In nominal terms, other operating costs reduced by 1.1% from €10.87m to €10.75m in 2019.
- Supervisory costs accounted for 13% of total costs in 2019 and reduced on 2018 by 1.5% to €1.65m
- Other State costs accounted for 86.9% of total costs in 2019 and increased on 2018 by 0.2% to €10.93m

Consultation Slides on State/NSA Unit Rate in 2019 and 2021



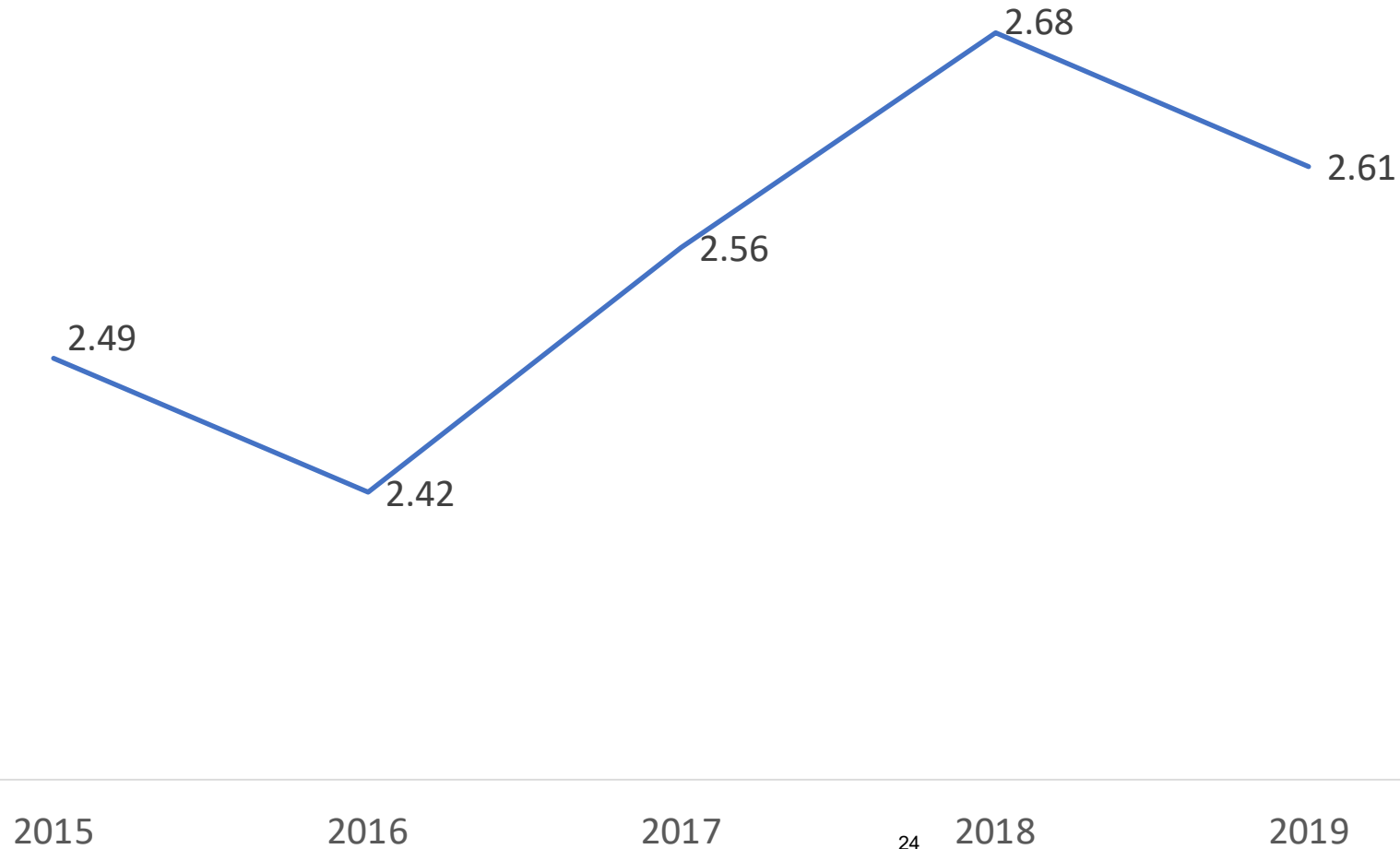
State/NSA Actual Costs in Nominal Terms (2015-2019)



Consultation Slides on State/NSA Unit Rate in 2019 and 2021



State/NSA Unit Cost (real)



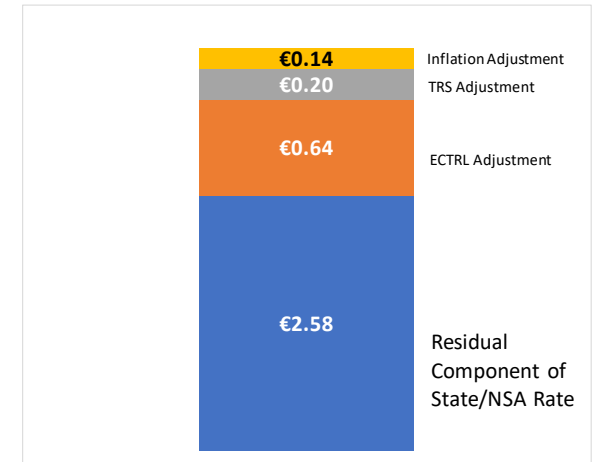
Consultation Slides on State/NSA Unit Rate in 2019 and 2021



State/NSA inflation adjustment to en route unit rate in 2021

RP2 Forecast Inflation versus Actual Inflation

| | 2015 | 2016 | 2017 | 2018 | 2019 |
|---------------------|-------|-------|-------|-------|-------|
| Actual Inflation | 0.0% | -0.2% | 0.3% | 0.7% | 0.9% |
| RP2 Price Index (F) | 103.7 | 105.0 | 106.4 | 108.2 | 110.1 |
| RP2 Price Index (A) | 102.3 | 102.1 | 102.4 | 103.1 | 104.0 |



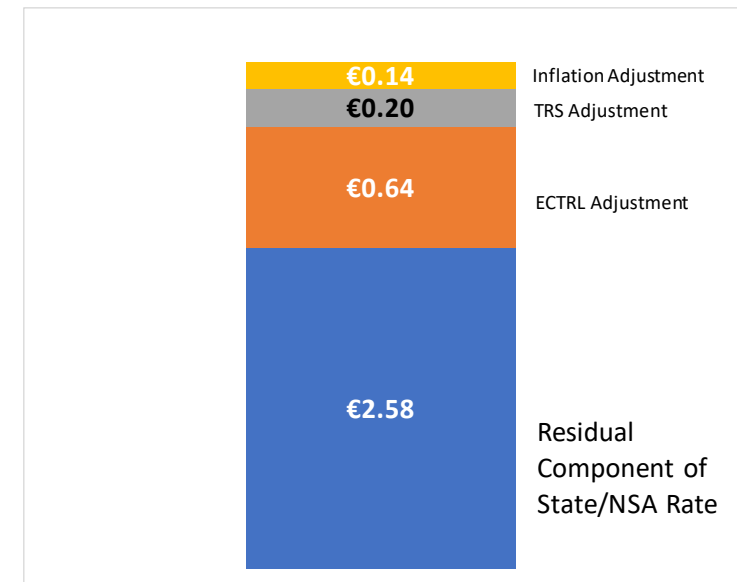
- Cumulative inflation in 2019 was below what had been forecast in the RP2 Plan
- This will result in an adjustment of €0.65m in 2021
- The State/NSA inflation adjustment in 2021 (based on 2019 outturn) will result in a €0.14 reduction in the 2021 unit rate (nominal terms)

Consultation Slides on State/NSA Unit Rate in 2019 and 2021



State/NSA traffic sharing adjustment to en route unit rate in 2019

- ❖ Traffic in 2019 (total service units) was 8.9% higher than planned
- ❖ Specific to the State/NSA component of the en route unit rate, there was an over recovery of €0.94m in 2019 as a result of traffic being higher than planned
- ❖ This will be returned to airspace users in 2021 and will result in a €0.20 reduction in the 2021 en route unit rate (nominal terms)



Consultation Slides on State/NSA Unit Rate in 2019 and 2021

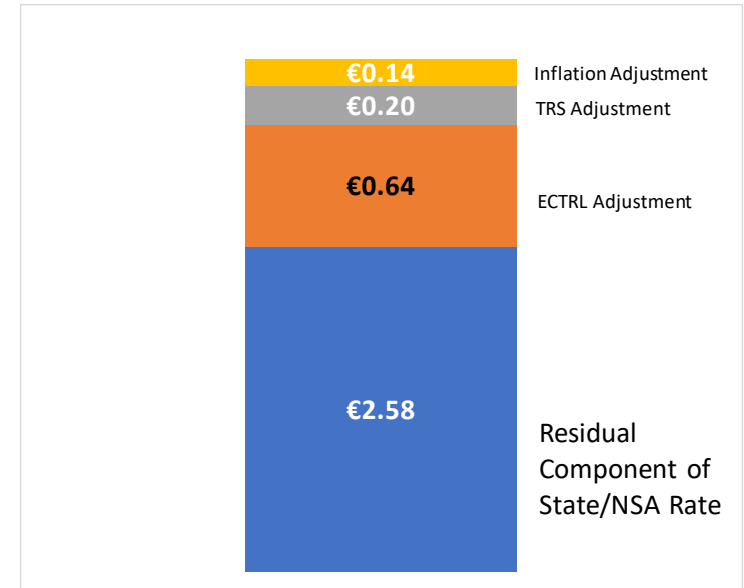


Costs exempted from the cost sharing arrangements

- ❖ Other operating costs in 2019: €0.468m
- ❖ This corresponds to the variation in EUROCONTROL costs
- ❖ 2015-2019 to be returned to airspace users in 2021 (€3.1m in total)

EUROCONTROL Costs

| | 2015 | 2016 | 2017 | 2018 | 2019 |
|--------------------------------|-------|-------|-------|-------|-------|
| EUROCONTROL Determined (€'000) | 6,836 | 7,148 | 7,411 | 7,653 | 7,900 |
| EUROCONTROL Actual (€'000) | 6,583 | 6,569 | 6,425 | 6,875 | 7,432 |
| Difference | -253 | -579 | -986 | -778 | -468 |



- ❖ EUROCONTROL accounted for 67%/ €1.74 of the €2.61 State/NSA component of the en route unit rate in 2019

Consultation Slides on State/NSA Unit Rate in 2019 and 2021



State/NSA component of En Route Unit Rate in 2021

- Total Costs in Real Terms: €17.0m (Staff €2.77m / Other Operating Costs €14.24m)
- Traffic (service units) for 2021 based on STATFOR Feb 2019: 4,790,288
- State/NSA component of En Route Unit Rate in 2021: €2.58 (down 22% on 2020)
- Cost increases in RP3 period reflect increased headcount to take account of current and anticipated Regulatory oversight requirements
- Reduction in State/NSA component of En Route Unit Rate in 2021 driven by EUROCONTROL adjustment (€3.1m returned to airspace users covering the period 2015-2019)

Consultation Slides on State/NSA En Route Unit Rate in 2019 and 2021



- ❖ **Questions for IAA NSA on Actual 2019 costs versus Planned 2019 costs?**
- ❖ **Questions for IAA NSA on technical adjustments feeding through to planned unit rate in 2021?**

Consultation Slides on State/NSA Terminal Unit Rate in 2019 and 2021



This presentation provides an overview of the State/NSA component of terminal unit rate in place in 2019 and summarises the relevant technical adjustments for the planned unit rates in 2021.

The State/NSA component of the Terminal unit rate includes NSA costs and Other State costs (*Slide 11*)

The following technical adjustments are detailed as follows in the context of the RP2 Plan:

- ❖ Inflation Adjustment (*Slide 12*)
- ❖ Traffic Adjustment (*Slide 13*)

An overview of the NSA component of the terminal unit rate in 2021 is provided (*Slide 14*)

Consultation Slides on State/NSA Unit Rate in 2019 and 2021



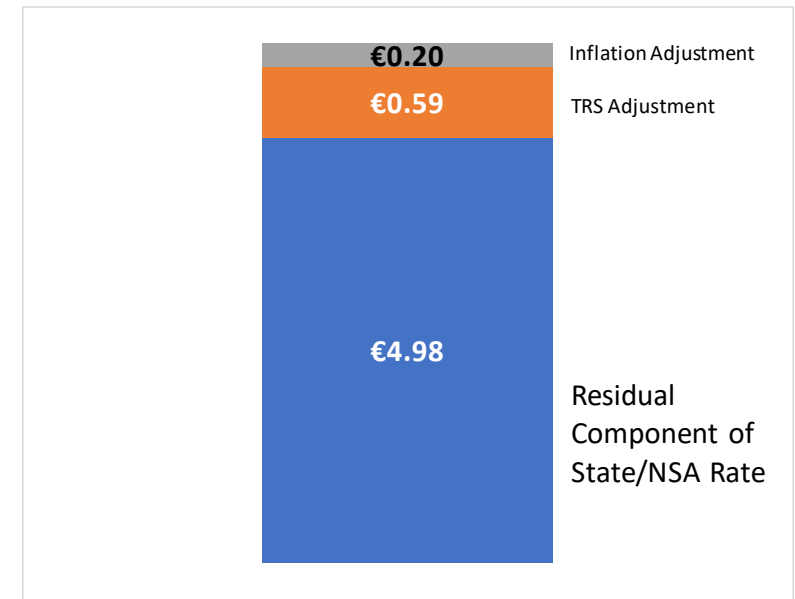
- Total State/NSA Costs were €0.79m in 2019 down 6.3% on 2018
- This decline was driven by other operating costs falling by almost 14% from €0.53m to €0.46m.
- Staff costs increased by 7.1%, from €0.29m to €0.31m in 2019.
- Supervisory costs accounted for 42% of total costs in 2019 and reduced on 2018 by 1.5% to €0.33m
- Other State costs accounted for 86.9% of total costs in 2019 and reduced on 2018 by 9.4% to €0.46m

Consultation Slides on State/NSA Unit Rate in 2019 and 2021



State/NSA inflation adjustment to terminal unit rate in 2021

- Cumulative inflation in 2019 was below what had been forecast in the RP2 Plan
- This will result in an adjustment of €0.04m in 2021
- The State/NSA inflation adjustment in 2021 (based on 2019 outturn) will result in a €0.20 reduction in the 2021 unit rate (nominal terms)

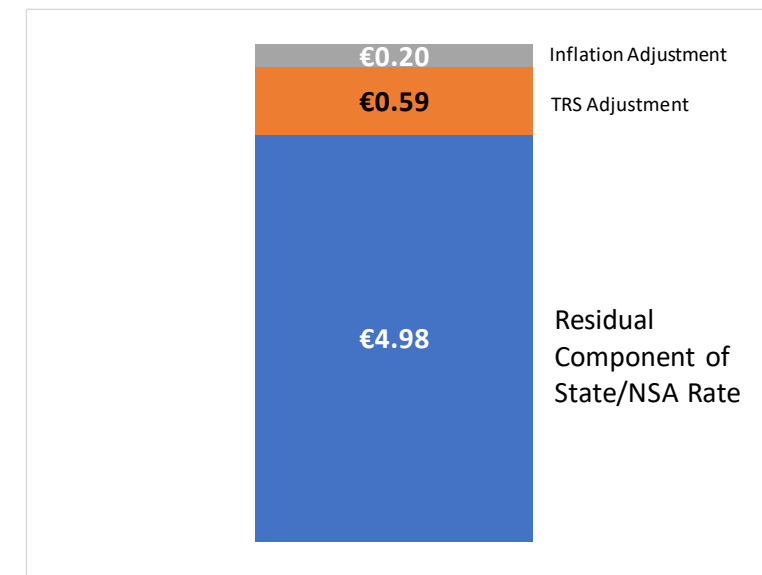


Consultation Slides on State/NSA Unit Rate in 2019 and 2021



State/NSA traffic sharing adjustment to terminal unit rate in 2019

- ❖ Traffic in 2019 was almost 20% higher than forecast in the Plan for RP2
- ❖ Specific to the State/NSA component of the terminal unit rate, there was an over recovery of €0.12m in 2019 as a result of traffic being higher than planned
- ❖ This will be returned to airspace users in 2021 and will result in a €0.59 reduction in the 2021 en route unit rate (nominal terms)



Consultation Slides on State/NSA Unit Rate in 2019 and 2021



State/NSA component of Terminal Unit Rate in 2021

- Total Costs: €1.13m split by 44% and 56% for staff and other operating costs respectively
- Traffic for 2021 based on STATFOR Feb 2019: 195,600 (i.e. 4.2% higher than 2019)
- State/NSA component of Terminal Unit Rate in 2021: €4.98 (down 1% on 2020)

Consultation Slides on State/NSA Terminal Unit Rate in 2019 and 2021



- ❖ **Questions for IAA NSA on Actual 2019 costs versus Planned 2019 costs?**
- ❖ **Questions for IAA NSA on technical adjustments feeding through to planned unit rate in 2021?**

7. Appendix 3: Met Éireann Consultation Document



Aviation Services Division

SES Annual Report 2019/M.11

Document purpose:

The purpose of this document is to report the Aviation Service Division's activities during 2019, required under COMMISSION IMPLEMENTING REGULATION (EU) No 2017/373 of 1st March 2017 laying down common requirements for providers of air traffic management/air navigation services and other air traffic management network functions and their oversight, repealing Regulation (EC) No 482/2008, Implementing Regulations (EU) No 1034/2011, (EU) No 1035/2011 and (EU) 2016/1377 and amending Regulation (EU) No 677/2011.

This report also comprehends the requirements detailed in Annex VII and ANNEX IX of COMMISSION IMPLEMENTING REGULATION (EU) 2019/317 of 11 February 2019 laying down a performance and charging scheme in the single European sky and repealing Implementing Regulations (EU) No 390/2013 and (EU) No 391/2013

Report approved by: *Tony Tighe, Head Aviation Services*

SINGLE EUROPEAN SKY

ANNUAL REPORT 2019

AVIATION SERVICES DIVISION

MET ÉIREANN

Business Name Aviation Services Division,
Met Éireann
Shannon Airport
Co Clare
IRELAND

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| 3. Explanation for variation between actual and determined cost targets | 11 |
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Acronyms and Abbreviations

| | |
|--------|--|
| ASD | Aviation Services Division, Met Éireann |
| ATC | Air Traffic Control |
| ATS | Air Traffic Services |
| CAeM | Commission for Aeronautical Meteorology (WMO) |
| CAR | Commission for Aviation Regulation |
| HIRLAM | High Resolution Limited Area Model (Numerical) |
| HR | Human Resources |
| IATA | International Air Transport Association |
| ICAO | International Civil Aviation Organisation |
| ISO | International Standards Organisation |
| KPI | Key Performance Indicator |
| ManCom | Management Committee of Met Éireann |
| MG-ASD | Management Group – Aviation Services Division |
| NSA | (SES) National Supervisory Authority |
| PMDS | Performance Management and Development System |
| QMS | Quality Management System |
| RPF | Role Profile Form |
| SES | Single European Sky |
| SLA | Service Level Agreement |
| SMS | Safety Management System |
| SyMS | Security Management System |
| WMO | World Meteorological Organisation |

1. Introduction

- 1.1 This annual performance report is prepared in compliance COMMISSION IMPLEMENTING REGULATION (EU) No 2017/373 of 1st March 2017 laying down common requirements for providers of air traffic management/air navigation services and other air traffic management network functions and their oversight, repealing Regulation (EC) No 482/2008, Implementing Regulations (EU) No 1034/2011, (EU) No 1035/2011 and (EU) 2016/1377 and amending Regulation (EU) No 677/2011. This report also comprehends the requirements detailed in Annex VII and ANNEX IX of COMMISSION IMPLEMENTING REGULATION (EU) 2019/317 of 11 February 2019 laying down a performance and charging scheme in the single European sky and repealing Implementing Regulations (EU) No 390/2013 and (EU) No 391/2013. The report describes the Division's activities in 2019 and how it performed against its annual target under the Performance Plan for RP2 2015-2019. It is noted that only the cost efficiency target is applicable to meteorological air navigation service providers.
- 1.2 MET determined costs for 2019 under RP2 are allocated 80% to enroute activities and 20% to terminal activities by the IAA in line with recommendations of the Commission for Aviation Regulation.
- 1.3 In arriving at the determined costs applicable to Met Éireann, the direct costs of providing meteorological services to civil aviation were established. These comprise the costs incurred in the immediate provision and delivery of these services. Met Éireann's Internal Accounts System (IAS) recognises 10 categories of such costs: METAR reports, Reports for ATS, Flight folders, Briefing & Consultation, TAFs, SIGMET, TREND, Aerodrome Warnings & Enquiries, Significant Weather Charts & Tabular Winds and General expenses.
- 1.4 All direct services to end users, including services to aviation, also depend on the use of Core products and services. Core costs include the costs of Surface Synoptic observations, Upper-Air observations, Radar, Satellite, Numerical Weather Prediction (NWP), Climatology, and ICT. A proportion of Core costs is allocated to aviation charges in line with ICAO recommendations, World Meteorological Organisation guidelines and EUROCONTROL charging principles. The proportion allocated depends on the use made of Core products for aviation purposes as compared with their use for other purposes. The methodology used in estimating core costs for the purposes of RP2 is described in the Report of the Working Group on Met Éireann Aviation-Related Costs (2002).
- 1.5 Agreement was reached in 2014 with the NSA on the Cost Efficiency targets for RP2 for the UK/Ireland FAB Performance Plan. The plan considered the impact of the AMAP project to modernise and automate Met Éireann's aviation observations. This project was to be the key enabler for Met Éireann to meet EC technical and performance targets through RP2.
- 1.6 The report outlines ASD's non-financial performance targets, which are aligned with the Divisional QMS. These include accuracy and timeliness of operational outputs along with

outcomes of external audit processes such as the NSAI surveillance audits against the ISO 9001:2015 standard.

- 1.7 The Annual Plan for 2019 was prepared and issued in Q4 of 2018 as part of Met Éireann's internal business planning process and the wider Departmental Guidelines of the Department of Housing Planning and Local Government.
- 1.8 The report includes a look ahead to the determined costs for 2021 as previously submitted for approval and inclusion in the RP3 Performance Plan.

2 An assessment of the level of performance of air navigation services provided

2.1 Cost efficiency performance

With respect to the 4 Key Performance Areas of Safety, Capacity, Environment and Cost Efficiency comprehended by the SES Performance Scheme for RP2, only the Cost Efficiency KPA is applicable to Meteorological Air Navigation Service Providers. Met Éireann has agreed its determined costs with the NSA and the 2019 determined costs submitted were those agreed under the RP2 plan.

The total MET Cost (enroute + terminal) invoiced over 2019 was less than the determined costs detailed in the RP2 Performance Plan. Summarised as follows:

| | |
|--|---------------------|
| RP2 Determined MET Costs 2019 | = €9,247,000 |
| Total Invoiced MET Cost 2019 | = €8,306,000 |
| RP2 Determined MET Unit Rate cost | =12.29 |
| Actual MET contribution to 2019 Unit Rate | = €9.89 |

The tables on the following 2 pages provide further detail

SES Annual Report 2019

Table 1 - Total Costs and Unit Costs ENROUTE

| Ireland | | | | | | | | | | |
|--|---|---------|---------|---------|---------|--------------------|---------|---------|---------|---------|
| Currency: Euro | | | | | | | | | | |
| MET | | | | | | | | | | |
| | Determined costs - Performance Plan RP2 | | | | | Actual costs - RP2 | | | | |
| Cost details | 2015 | 2016 | 2017 | 2018 | 2019 | 2015 | 2016 | 2017 | 2018 | 2019 |
| 1. Detail by nature (in nominal terms) | | | | | | | | | | |
| 1.1 Staff | 4,551 | 4,783 | 5,004 | 4,383 | 3,993 | 4,338 | 4,499 | 4,638 | 3,999 | 3,586 |
| 1.2 Other operating costs (1) | 2,259 | 2,795 | 2,902 | 2,973 | 2,882 | 2,154 | 3,099 | 3,158 | 3,182 | 3,059 |
| 1.3 Depreciation | 0 | 499 | 507 | 515 | 523 | 0 | 0 | 0 | 0 | |
| 1.4 Cost of capital | | | | | | | | | | |
| 1.5 Exceptional items | | | | | | | | | | |
| 1.6 Total costs | 6,810 | 8,077 | 8,413 | 7,871 | 7,398 | 6,492 | 7,598 | 7,796 | 7,181 | 6,645 |
| Total % n/n-1 | 0.1% | 18.6% | 4.2% | -6.4% | -6.0% | 0.2% | 17.0% | 2.6% | -7.9% | -7.5% |
| Staff % n/n-1 | 2.8% | 5.1% | 4.6% | -12.4% | -8.9% | -0.9% | 3.7% | 3.1% | -13.8% | -10.3% |
| Other op. % n/n-1 | -4.8% | 23.7% | 3.8% | 2.4% | -3.1% | 2.6% | 43.9% | 1.9% | 0.8% | -3.9% |
| 2. Detail by service (in nominal terms) | | | | | | | | | | |
| 2.1 Air Traffic Management | | | | | | | | | | |
| 2.2 Communication (2) | | | | | | | | | | |
| 2.3 Navigation (2) | | | | | | | | | | |
| 2.4 Surveillance (2) | | | | | | | | | | |
| 2.5 Search and rescue | | | | | | | | | | |
| 2.6 Aeronautical Information (2) | | | | | | | | | | |
| 2.7 Meteorological services (2) | 6,810 | 8,077 | 8,413 | 7,871 | 7,398 | 6,492 | 7,598 | 7,796 | 7,181 | 6,645 |
| 2.8 Supervision costs | | | | | | | | | | |
| 2.9 Other State costs (1) | | | | | | | | | | |
| 2.10 Total costs | 6,810 | 8,077 | 8,413 | 7,871 | 7,398 | 6,492 | 7,598 | 7,796 | 7,181 | 6,645 |
| Total % n/n-1 | | 18.6% | 4.2% | -6.4% | -6.0% | 0.2% | 17.0% | 2.6% | -7.9% | -7.5% |
| ATM % n/n-1 | | | | | | | | | | |
| CNS % n/n-1 | | | | | | | | | | |
| 3. Complementary information (in nominal terms) | | | | | | | | | | |
| Average asset base | | | | | | | | | | |
| 3.1 Net book val. fixed assets | | | | | | | | | | |
| 3.2 Adjustments total assets | | | | | | | | | | |
| 3.3 Net current assets | | | | | | | | | | |
| 3.4 Total asset base | | | | | | | | | | |
| Cost of capital % | | | | | | | | | | |
| 3.5 Cost of capital pre tax rate | | | | | | | | | | |
| 3.6 Return on equity | | | | | | | | | | |
| 3.7 Average interest on debts | | | | | | | | | | |
| Cost of common projects | | | | | | | | | | |
| 3.8 Total costs of common projects | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Costs exempted from cost sharing (Article 14(2)(b)) | | | | | | | | | | |
| 3.9 Total costs exempted from cost | | | | | | 0 | 0 | 0 | 0 | 0 |
| 4. Total costs after deduction of costs for services to exempted flights (in nominal terms) | | | | | | | | | | |
| 4.1 Costs for exempted VFR flights | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4.2 Total determined/actual costs | 6,810 | 8,077 | 8,413 | 7,871 | 7,398 | 6,492 | 7,598 | 7,796 | 7,181 | 6,645 |
| 5. Cost-efficiency KPI - Determined/Actual Unit Cost (in real terms) | | | | | | | | | | |
| 5.1 Inflation % (3) | 1.10% | 1.20% | 1.40% | 1.70% | 1.70% | 0.00% | -0.20% | 0.30% | 0.70% | 0.90% |
| 5.2 Price index (base 100 in 2009) (4) | 103.7 | 105.0 | 106.4 | 108.2 | 110.1 | 102.3 | 102.1 | 102.4 | 103.1 | 104.0 |
| 5.3 Total costs real terms (5) | 6,566 | 7,695 | 7,904 | 7,272 | 6,720 | 6,347 | 7,443 | 7,614 | 6,965 | 6,387 |
| Total % n/n-1 | | 17.2% | 2.7% | -8.0% | -7.6% | 0.2% | 17.3% | 2.3% | -8.5% | -8.3% |
| 5.4 Total Service Units | 4,000.0 | 4,049.6 | 4,113.3 | 4,184.9 | 4,262.1 | 4,182.5 | 4,467.6 | 4,465.3 | 4,549.9 | 4,640.9 |
| Total % n/n-1 | | -0.1% | 1.2% | 1.6% | 1.7% | 1.8% | 6.6% | 6.8% | -0.1% | 1.9% |
| 5.5 Unit cost at 2009 prices | 1.64 | 1.90 | 1.92 | 1.74 | 1.58 | 1.52 | 1.67 | 1.71 | 1.53 | 1.38 |
| Total % n/n-1 | | 15.8% | 1.1% | -9.6% | -9.3% | -6.0% | 9.8% | 2.4% | -10.2% | -10.1% |

SES Annual Report 2019

Table 1 - Total Costs and Unit Costs- TERMINAL

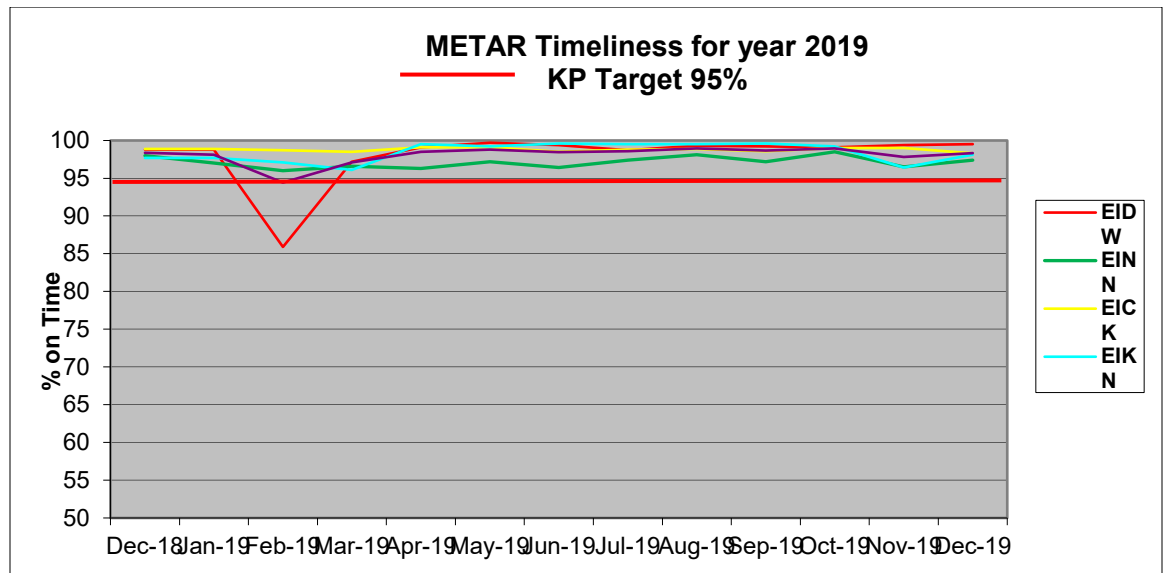
| Ireland | | | | | | | | | | |
|--|-------|-------|-------|--------|--------|--------------------|--------|-------|--------|--------|
| Euro | | | | | | | | | | |
| MET | | | | | | | | | | |
| Determined costs - Performance Plan RP2 | | | | | | Actual costs - RP2 | | | | |
| Cost details | 2015 | 2016 | 2017 | 2018 | 2019 | 2015 | 2016 | 2017 | 2018 | 2019 |
| 1. Detail by nature (in nominal terms) | | | | | | | | | | |
| 1.1 Staff | 1,138 | 1,196 | 1,251 | 1,096 | 998 | 1,084 | 1,125 | 1,159 | 1,000 | 896 |
| 1.2 Other operating costs | 565 | 699 | 725 | 743 | 720 | 539 | 774 | 790 | 795 | 765 |
| 1.3 Depreciation | 0 | 125 | 127 | 129 | 131 | 0 | 0 | 0 | 0 | |
| 1.4 Cost of capital | | | | | | | | | | |
| 1.5 Exceptional items | | | | | | | | | | |
| 1.6 Total costs | 1,702 | 2,019 | 2,103 | 1,968 | 1,849 | 1,623 | 1,899 | 1,949 | 1,795 | 1,661 |
| Total % n/n-1 | | 18.6% | 4.2% | -6.4% | -6.0% | | 17.0% | 2.6% | -7.9% | -7.5% |
| Staff % n/n-1 | | 5.1% | 4.6% | -12.4% | -8.9% | | 3.8% | 3.0% | -13.7% | -10.4% |
| Other op. % n/n-1 | | 23.7% | 3.8% | 2.5% | -3.1% | | 43.6% | 2.1% | 0.6% | -3.8% |
| 2. Detail by service (in nominal terms) | | | | | | | | | | |
| 2.1 Air Traffic Management | | | | | | | | | | |
| 2.2 Communication (1) | | | | | | | | | | |
| 2.3 Navigation (1) | | | | | | | | | | |
| 2.4 Surveillance (1) | | | | | | | | | | |
| 2.5 Search and rescue | | | | | | | | | | |
| 2.6 Aeronautical Information (1) | | | | | | | | | | |
| 2.7 Meteorological services (1) | 1,702 | 2,019 | 2,103 | 1,968 | 1,849 | 1,623 | 1,899 | 1,949 | 1,795 | 1,661 |
| 2.8 Supervision costs | | | | | | | | | | |
| 2.9 Other State costs | | | | | | | | | | |
| 2.10 Total costs | 1,702 | 2,019 | 2,103 | 1,968 | 1,849 | 1,623 | 1,899 | 1,949 | 1,795 | 1,661 |
| Total % n/n-1 | | 18.6% | 4.2% | -6.4% | -6.0% | | 17.0% | 2.6% | -7.9% | -7.5% |
| ATM % n/n-1 | | | | | | | | | | |
| CNS % n/n-1 | | | | | | | | | | |
| 3. Complementary information (in nominal terms) | | | | | | | | | | |
| Average asset base | | | | | | | | | | |
| 3.1 Net book val. fixed assets | | | | | | | | | | |
| 3.2 Adjustments total assets | | | | | | | | | | |
| 3.3 Net current assets | | | | | | | | | | |
| 3.4 Total asset base | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cost of capital % | | | | | | | | | | |
| 3.5 Cost of capital pre tax rate | | | | | | | | | | |
| 3.6 Return on equity | | | | | | | | | | |
| 3.7 Average interest on debts | | | | | | | | | | |
| Cost of common projects | | | | | | | | | | |
| 3.8 Total costs of common projects | | | | | | 0 | 0 | 0 | 0 | 0 |
| Costs exempted from cost sharing (Article 14(2)(b)) | | | | | | | | | | |
| 3.9 Total costs ex. from cost sharing | | | | | | 0 | 0 | 0 | 0 | 0 |
| 4. Total costs after deduction of costs for services to exempted flights (in nominal terms) | | | | | | | | | | |
| 4.1 Costs for exempted VFR flights | | | | | | | | | | |
| 4.2 Total determined/actual costs | 1,702 | 2,019 | 2,103 | 1,968 | 1,849 | 1,623 | 1,899 | 1,949 | 1,795 | 1,661 |
| 5. Cost-efficiency KPI - Determined /Actual Unit Cost (in real terms) | | | | | | | | | | |
| 5.1 Inflation % (2) | 1.10% | 1.20% | 1.40% | 1.70% | 1.70% | 0.00% | -0.20% | 0.30% | 0.70% | 0.90% |
| 5.2 Price index (base 100 in 2009) (3) | 103.7 | 105.0 | 106.4 | 108.2 | 110.1 | 102.3 | 102.1 | 102.4 | 103.1 | 104.0 |
| 5.3 Total costs real terms (4) | 1,641 | 1,924 | 1,976 | 1,818 | 1,680 | 1,587 | 1,860 | 1,904 | 1,741 | 1,597 |
| Total % n/n-1 | | 17.2% | 2.7% | -8.0% | -7.6% | | 17.2% | 2.3% | -8.5% | -8.3% |
| 5.4 Total Service Units | 141.2 | 144.4 | 148.2 | 152.9 | 156.9 | 149.9 | 163.3 | 171.7 | 182.7 | 187.7 |
| Total % n/n-1 | | 2.3% | 2.6% | 3.2% | 2.6% | | 9.0% | 5.1% | 6.4% | 2.7% |
| 5.5 Unit cost at 2009 prices | 11.62 | 13.32 | 13.33 | 11.89 | 10.71 | 10.59 | 11.39 | 11.09 | 9.53 | 8.51 |
| Total % n/n-1 | | 14.6% | 0.1% | -10.8% | -10.0% | | 7.6% | -2.7% | -14.1% | -10.7% |

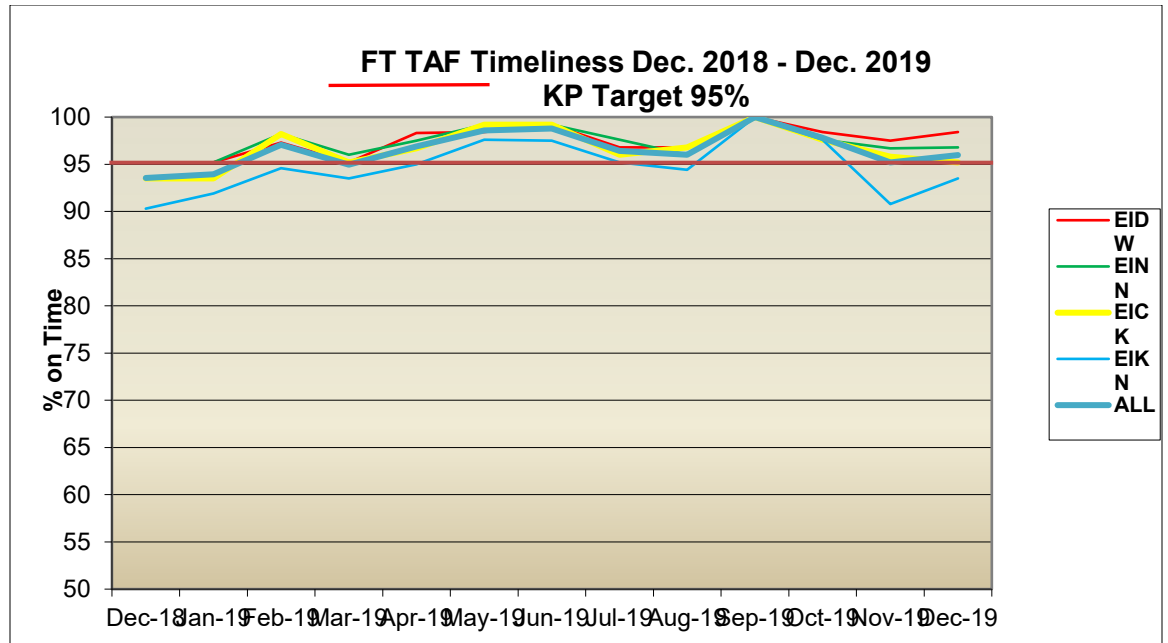
2.2 Non-financial performance

In addition to the cost efficiency targets mentioned above, Met Éireann's Aviation Services Division set internal performance metrics. These relate to both the timeliness and accuracy of operational outputs, targets for calibration and maintenance of instruments and technical equipment and organisational KPIs for personal performance management and business planning. Additional product verification processes are used to verify warnings accuracy and graphical forecast product verification. Examples of some performance metrics in these areas are provided here:

a) Timeliness Trends

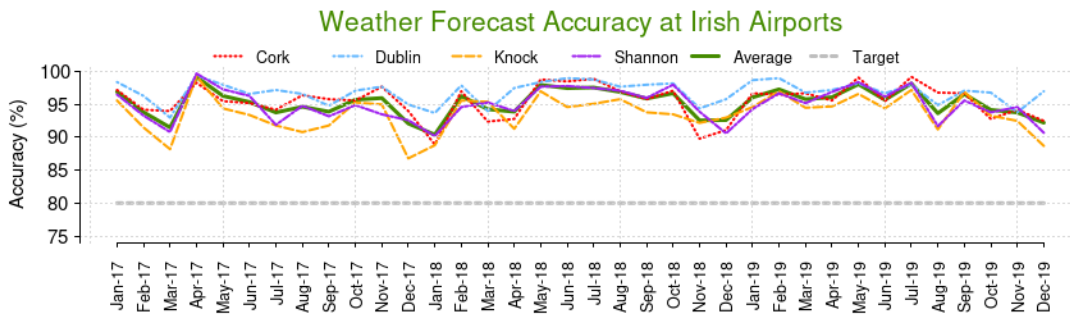
The KPI's for service timeliness is set by the divisional QMS and the following graphic represents the most recent rolling 12 month trends





b) Forecast accuracy

Met Éireann participates in the Met Alliance TAF verification project and routinely receives detailed data relating to accuracy of TAF produced and disseminated by ASD for Irish State airports. TAFs produced by Met Éireann compare very well in terms of accuracy compared with those produced by other members of the Met Alliance project¹. The following graphics present the general trend in forecast accuracy over the past 3 years. The targets set are aligned with ICAO Annex 3 Attachment B - Desirable Levels of Forecast Accuracy.



¹ Met Alliance members include KNMI (Netherlands), DWD (Germany), MétéoFrance, BelgoControl, AustroControl, MétéoLux, Met Éireann, MétéoSwiss.

The above graphs represent trends for each individual airport allowing comparisons to be made for TAF performance at each site. ASD has the capability to further break out the verification data into specific parameters which are analysed separately and guide forecast procedure developments and also, focus R&D activities on forecast domains where notable weaknesses might become evident.

An aviation forecast performance workgroup holds the remit to focus on and improve identified weaknesses in aviation forecast quality. The group comprises members of the operational forecaster cohort, research and applications meteorologists and climatologists. The work of this group is supported by the Numerical Weather Prediction (NWP) Users forum which meets on a monthly basis to identify progress areas of forecast weakness through information/expertise sharing and the identification of priority areas on which to focus research and applications.

In addition to the above it is noted that the ASD provided full uninterrupted service provision of observations, forecasts and warnings for all aerodromes and also maintained a full uninterrupted ICAO Meteorological Watch Office (MWO) function for the Shannon FIR throughout 2019.

c) Commitment to quality outputs and processes:

ASD is accredited to the ISO 9001:2015 Quality Standard. The accrediting body, the National Standards Authority of Ireland (NSAI), conducted a 3 day audit during 2019 which concluded without any level 1 nor level 2 findings against the divisional QMS. The ASD is currently deemed by NSAI to be fully compliant against all requirements of ISO 9001:2015.

3 Explanation for variation between actual and determined cost targets

3.1 The Invoiced MET costs are below the RP2 Performance Plan determined costs for 2019

4 Developments in operations and infrastructure and human resource policy

4.1 Aviation Modernisation and Automation Project (AMAP)

The AMAP project to modernise and automate the aviation observations entered its implementation phase during 2018 and was progressed significantly during 2019. IAA are, in parallel to AMAP, implementing a project which will enable it to upgrade its weather display (Meteorological Data Processing) and D-ATIS systems.

The modernisation phase of AMAP was expected to conclude in mid-2019 with the airfield infrastructure and supporting ICT, networking and servers expected to be in place. However, delays relating to airfields acquiring necessary approvals by the NSA has delayed the project. It is now expected that the modernisation phase will not be

concluded until Q3 2020. Implementation of highly automated weather observations will be progressed once rigorous testing of the new systems is complete and the appropriate safety cases are presented to and accepted by NSA. This phase will begin in 2021.

4.2 Changes and enhancements to operations and forecast products

- Uninterrupted provision of verifiably high quality regulated ICAO Annex 3 services continued throughout 2019 with additional value added services being provided in order to provide additional MET support as required to the aviation user.
- Scheduled conference calls between the aviation forecaster and the Dublin airport stakeholders is proving to be of great value in terms of planning local airport operations and managing airfield infrastructural works
- Development work on a web-based MET delivery service called TOPMET (Terminal Operations and Planning–MET) was concluded with the service rolled out to all State airports during 2018. The service was extended to include the Regional Airports (Sligo, Farranfore, Donegal and Waterford) in Q3 2019. Additional development work, based on consultation with users, served to enhance the range of data now available on TOPMET.
- Training events (x2) were delivered by ASD meteorologist staff to DAA and IAA operational staff to develop ability to better interpret and understand the meteorological services they use on a daily basis. Similar training events will be provided at 6 monthly intervals going forward.
- Forecast production was migrated to state of the art production systems which has resulted in more effective quality control and, also, higher quality forecast products.

4.3 Research and Development activities

A significant investment was made in R&D with a clear focus on developing and improving aviation weather forecast and weather warning quality. Research activities included:

- Focused boundary layer research to improve visibility and cloud ceiling
- Verification of Harmonie/ECMWF NWP output – enable identification of forecast strengths and weaknesses
- Recent research with single column MUSC model (NWP) to improve fog parameterisation
- Research on ensemble systems (IREPS) contributing to quantification of forecast uncertainties
- Aviation-Research working group focussing exclusively on addressing aviation forecast enhancements

4.4 Human Resource Policy

Met Éireann values its staff and its goal is that staff are educated and trained to the appropriate standard in line with ICAO and World Meteorological Organisation Standards to ensure safe and efficient service.

Met Éireann has training and development initiatives in place to assist in the personal development of staff and to ensure that staff possess the requisite skillset to perform their tasks competently.

Staff performance and development is organised and managed under the Performance Management and Development System (PMDS) through which training and performance targets are set annually and formally monitored at intervals throughout the year.

In addition to the organisational PMDS process Aviation Meteorological Personnel are subject to a scheduled competence assessment process. The metrics used to determine competence are based on the Commission for Aeronautical Meteorology of the World Meteorological Organisation (WMO-CAeM) competency framework. Implementation of this process helps identify any skills gaps and, also, appropriate training to fill those gaps

5. Information about the consultation process with external stakeholders and service users

5.1 Financial user consultations are within the domain of the NSA and are regulated under the Performance Regulation. ASD engaged fully with the IAA SRD to develop the SES Business Plan for the RP3 period (2020-24) with significant detail relating to determined cost for the period. These costs related to ongoing operational costs Direct and Core cost requirements and also a breakdown of the expected capital requirements necessary to ensure the ongoing provision of regulatory compliant meteorological services.

The Business Plan submission was built into the draft State Performance Plan which was subsequently presented at an open consultation for all interested parties at which ASD also participated.

5.2 Operational consultation: The ASD has ongoing close contact with airlines, airport authorities and ATC at scheduled meetings of the airport operational groups. The ASD also consults with other users through the use of surveys and other outreach activities such as presentations to General Aviation, Search and Rescue Services, Air Corps etc.

5.3 ASD and other Met Éireann representatives held general meetings with the Department of the Tourism, Transport and Sport to ensure that they advised on relevant matters pertaining to general issues of interest.

5.4 At international level Divisional staff held regular meetings with the UK Met Office to progress FAB issues and to increase collaboration, co-ordination and harmonisation of activities across the FIR boundaries. ASD also continued its active the regulatory bodies of ICAO and WMO and their workgroups and also in the EUMETNET Aviation Advisory Committee and its workgroups.

6. RP3 2021 Projections and Comment

6.1 MET determined costs for 2021 are detailed in the Aviation Services Division submission to the RP3 Performance Plan. The costs are made up of Staff costs, operating costs and costs associated with investments in infrastructure required to ensure fully compliant services are maintained. Investment costs also relate to projects which form part of the Core activities of Met Éireann and which are essential to ensure that high quality services can be provided. Examples include RADAR network upgrade, High Performance Computing and Numerical Weather Prediction upgrades, enhanced satellite data, enhanced observational infrastructure.

6.2 The 2021 Determined MET costs are split between ENR and TCZ according to the 80:20 ratio and adjusted as follows:

| Charging Zone (Thousand €) | RP3 Plan- 2021 costs | Inflation adjustment carried over from 2019 | Traffic adjustment carried over from 2019 | Adjusted 2021 unit rates |
|-------------------------------|-------------------------|--|--|-----------------------------|
| Enroute | 6,296 | -407 | -568 | 5,321 |
| Terminal | 1,575 | -102 | -286 | 1,187 |
| Total | 7,871 | -509 | -854 | 6,508 |

The 2021 MET portion of the adjusted unit rates, split into ENR and TCZ are as follows:

| Charging Zone | 2021 Unit Rate |
|---------------|----------------|
| Enroute | €1.11 |
| Terminal | €6.07 |
| Total | €7.18 |

A negative inflation adjustment is carried over from 2019 because actual inflation (0.9%) was lower than the forecast inflation (1.7%) used for establishing the 2019 determined costs in RP2.

A negative traffic adjustment is carried over from 2019 because actual traffic was higher than the forecast used for establishing the 2019 determined costs of en route services (+8.9%) and terminal services (+19.6%).

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MET ENROUTE Total Costs and Unit Costs

| Cost details | | Actual costs 2012-2019 | | | | | | | Determined costs - Performance Plan - RP3 | | | | | |
|--|---------|------------------------|----------------|----------------|----------------|----------------|----------------|----------------|---|----------------|----------------|----------------|----------------|----------------|
| | | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
| Ireland | | | | | | | | | | | | | | |
| Currency: Euro | | | | | | | | | | | | | | |
| MET | | | | | | | | | | | | | | |
| 1. Detail by nature (in nominal terms) | | | | | | | | | | | | | | |
| 1.1 Staff | | 4,421 | 4,317 | 4,379 | 4,338 | 4,499 | 4,638 | 3,999 | 3,993 | 2,871 | 2,871 | 2,871 | 2,668 | 2,668 |
| of which, pension costs | | | | | | | | | | 0 | 0 | 0 | 0 | 0 |
| 1.2 Other operating costs | | 2,120 | 2,224 | 2,099 | 2,154 | 3,099 | 3,158 | 3,182 | 2,882 | 3,074 | 2,950 | 2,908 | 3,005 | 3,106 |
| 1.3 Depreciation | | | | | | | | 523 | 475 | 475 | 525 | 1,137 | 1,137 | |
| 1.4 Cost of capital | | | | | | | | | | | | | | |
| 1.5 Exceptional items | | | | | | | | | | | | | | |
| 1.6 Total costs | | 6,541 | 6,541 | 6,478 | 6,492 | 7,598 | 7,796 | 7,181 | 7,398 | 6,420 | 6,296 | 6,304 | 6,810 | 6,911 |
| Total | % n/n-1 | | 0.0% | -1.0% | 0.2% | 17.0% | 2.6% | -7.9% | 3.0% | -13.2% | -1.9% | 0.1% | 8.0% | 1.5% |
| 2. Detail by service (in nominal terms) | | | | | | | | | | | | | | |
| 2.7 Meteorological services | | 6,541 | 6,541 | 6,478 | 6,492 | 7,598 | 7,796 | 7,181 | 7,398 | 6,420 | 6,296 | 6,304 | 6,810 | 6,911 |
| 2.10 Total costs | | 6,541 | 6,541 | 6,478 | 6,492 | 7,598 | 7,796 | 7,181 | 7,398 | 6,420 | 6,296 | 6,304 | 6,810 | 6,911 |
| Total | % n/n-1 | | 0.0% | -1.0% | 0.2% | 17.0% | 2.6% | -7.9% | 3.0% | -13.2% | -1.9% | 0.1% | 8.0% | 1.5% |
| Costs of new and existing investments | | | | | | | | | | | | | | |
| 3.10 Depreciation | | | | | | | | | | 475.0 | 475.0 | 525.0 | 1,137.0 | 1,137.0 |
| 3.11 Cost of capital | | | | | | | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4. Total costs after deduction of costs for services to exempted flights (in nominal terms) | | | | | | | | | | | | | | |
| 4.1 Costs for exempted VFR flights | | | | | | | | | | | | | | |
| 4.2 Total determined/actual costs | | 6,541 | 6,541 | 6,478 | 6,492 | 7,598 | 7,796 | 7,181 | 7,398 | 6,420 | 6,296 | 6,304 | 6,810 | 6,911 |
| 5. Cost-efficiency KPI - Determined/Actual Unit Cost (in real terms) | | | | | | | | | | | | | | |
| 5.1 Inflation % | | 1.90% | 0.50% | 0.30% | 0.00% | -0.20% | 0.30% | 0.70% | 1.20% | 1.50% | 1.70% | 1.90% | 2.00% | 2.00% |
| 5.2 Inflation index (1) | | 99.1 | 99.6 | 99.9 | 99.9 | 99.7 | 100.0 | 100.7 | 101.9 | 103.4 | 105.2 | 107.2 | 109.3 | 111.5 |
| 5.3 Total costs real terms (2) | | 6,600 | 6,567 | 6,485 | 6,498 | 7,621 | 7,796 | 7,131 | 7,269 | 6,222 | 6,009 | 5,916 | 6,325 | 6,314 |
| Total | % n/n-1 | | -0.5% | -1.3% | 0.2% | 17.3% | 2.3% | -8.5% | 1.9% | -14.4% | -3.4% | -1.5% | 6.9% | -0.2% |
| 5.4 Total Service Units | | 3,806.0 | 3,812.9 | 3,922.5 | 4,182.5 | 4,467.6 | 4,465.3 | 4,549.9 | 4,636.0 | 4,689.0 | 4,790.3 | 4,889.5 | 4,971.9 | 5,054.3 |
| Total | % n/n-1 | | 0.2% | 2.9% | 6.6% | 6.8% | -0.1% | 1.9% | 1.9% | 1.1% | 2.2% | 2.1% | 1.7% | 1.7% |
| 5.5 Unit cost in real terms prices (3) | | 1.73 | 1.72 | 1.65 | 1.55 | 1.71 | 1.75 | 1.57 | 1.57 | 1.33 | 1.25 | 1.21 | 1.27 | 1.25 |
| Total | % n/n-1 | | -0.7% | -4.0% | -6.0% | 9.8% | 2.4% | -10.2% | 0.0% | -15.4% | -5.5% | -3.5% | 5.1% | -1.8% |

Adjustments for Enroute rates

| Table 2 B - Calculation of the unit rate for year n (1) | | 2021 |
|--|--|----------------|
| 13.1 | Determined costs in nominal terms - VFR excl. (Art. 25(2)(a)) | 6,296.00 |
| 13.2 | Inflation adjustment : amount carried over to year n (Art. 25(2)(b)) | - 406.70 |
| 13.3 | Traffic risk sharing adjustment : amounts carried over to year n (Art. 25(2)(c)) | - |
| 13.4 | Differences in costs as per Art. 28(4) to (6) : amounts carried over to year n (Art. 25(2)(d)) | - |
| 13.5 | Financial incentives : amounts carried over to year n (Art. 25(2)(e)) | - |
| 13.6 | Modulation of charges : amounts carried over to year n (Art. 25(2)(f)) | - |
| 13.7 | Traffic adjustments : amounts carried over to year n (Art. 25(2)(g) and (h)) | - 568.11 |
| 13.8 | Other revenues (Art. 25(2)(i)) | - |
| 13.9 | Cross-financing between charging zones (Art. 25(2)(j)) | - |
| 13.10 | Difference in revenue from temporary application of unit rate (Art. 25(2)(k)) | - |
| 13.11 | Grand total for the calculation of year n unit rate | 5,321.2 |
| 13.12 | Forecast total service units for year n (performance plan) | 4,790.3 |
| 13.13 | Unit rate for year n as per Art. 25(2) (in national currency) | 1.11 |
| 13.14 | Reduction as per Art. 29(6), where applicable (in national currency) | |
| 14 | Applicable unit rate for year n | 1.11 |

Costs, revenues and other amounts in '000 - Service units in '000

(1) Including adjustments relating to previous reference periods (Art. 25(2)(l))

MET TNC Total Costs and Unit Costs

| Ireland - TCZ Currency: Euro MET | | | | | | | | | | | |
|--|---------|------------------------|--------------|--------------|--------------|--------------|---|--------------|--------------|--------------|--------------|
| Cost details | | Actual costs 2015-2019 | | | | | Determined costs - Performance Plan - RP3 | | | | |
| | | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
| 1. Detail by nature (in nominal terms) | | | | | | | | | | | |
| 1.1 Staff | | 1,084 | 1,125 | 1,159 | 1,000 | 998 | 718 | 718 | 718 | 667 | 667 |
| of which, pension costs | | | | | | | | | | | |
| 1.2 Other operating costs | | 539 | 774 | 790 | 795 | 721 | 769 | 738 | 727 | 751 | 776 |
| 1.3 Depreciation | | | | | 0 | 131 | 119 | 119 | 131 | 284 | 284 |
| 1.4 Cost of capital | | | | | | | | | | | |
| 1.5 Exceptional items | | | | | | | | | | | |
| 1.6 Total costs | | 1,623 | 1,899 | 1,949 | 1,795 | 1,850 | 1,606 | 1,575 | 1,576 | 1,702 | 1,727 |
| Total | % n/n-1 | | 17.0% | 2.6% | -7.9% | 3.1% | -13.2% | -1.9% | 0.1% | 8.0% | 1.5% |
| 2. Detail by service (in nominal terms) | | | | | | | | | | | |
| 2.7 Meteorological services | | 1,623 | 1,899 | 1,949 | 1,795 | 1,850 | 1,606 | 1,575 | 1,576 | 1,702 | 1,727 |
| 2.10 Total costs | | 1,623 | 1,899 | 1,949 | 1,795 | 1,850 | 1,606 | 1,575 | 1,576 | 1,702 | 1,727 |
| Total | % n/n-1 | | 17.0% | 2.6% | -7.9% | 3.1% | -13.2% | -1.9% | 0.1% | 8.0% | 1.5% |
| Costs of new and existing investments | | | | | | | | | | | |
| 3.10 Depreciation | | | | | | | 119 | 119 | 131 | 284 | 284 |
| 3.11 Cost of capital | | | | | | | 0 | 0 | 0 | 0 | 0 |
| 4. Total costs after deduction of costs for services to exempted flights (in nominal terms) | | | | | | | | | | | |
| 4.1 Costs for exempted VFR flights | | | | | | | | | | | |
| 4.2 Total determined/actual costs | | 1,623 | 1,899 | 1,949 | 1,795 | 1,850 | 1,606 | 1,575 | 1,576 | 1,702 | 1,727 |
| 5. Cost-efficiency KPI - Determined/Actual Unit Cost (in real terms) | | | | | | | | | | | |
| 5.1 Inflation % | | 0.00% | -0.20% | 0.30% | 0.70% | 1.20% | 1.50% | 1.70% | 1.90% | 2.00% | 2.00% |
| 5.2 Inflation index (1) | | 99.9 | 99.7 | 100.0 | 100.7 | 101.9 | 103.4 | 105.2 | 107.2 | 109.3 | 111.5 |
| 5.3 Total costs real terms (2) | | 1,625 | 1,905 | 1,949 | 1,783 | 1,818 | 1,557 | 1,503 | 1,479 | 1,581 | 1,578 |
| Total | % n/n-1 | | 17.2% | 2.3% | -8.5% | 2.0% | -14.4% | -3.4% | -1.6% | 6.9% | -0.2% |
| 5.4 Total Service Units | | 149.9 | 163.3 | 171.7 | 182.7 | 187.7 | 189.6 | 195.6 | 198.8 | 202.9 | 206.7 |
| Total | % n/n-1 | | 9.0% | 5.1% | 6.4% | 2.7% | 1.0% | 3.2% | 1.6% | 2.1% | 1.9% |
| 5.5 Unit cost in real terms prices (3) | | 10.84 | 11.66 | 11.35 | 9.76 | 9.68 | 8.21 | 7.68 | 7.44 | 7.79 | 7.63 |
| Total | % n/n-1 | | 7.6% | -2.7% | -14.1% | -0.7% | -15.2% | -6.4% | -3.2% | 4.7% | -2.0% |

Adjustments for Terminal rates

| Table 2 B - Calculation of the unit rate for year n (1) | | 2021 |
|--|--|----------------|
| 13.1 | Determined costs in nominal terms - VFR excl. (Art. 25(2)(a)) | 1,575.0 |
| 13.2 | Inflation adjustment : amount carried over to year n (Art. 25(2)(b)) | - 101.7 |
| 13.3 | Traffic risk sharing adjustment : amounts carried over to year n (Art. 25(2)(c)) | - |
| 13.4 | Differences in costs as per Art. 28(4) to (6) : amounts carried over to year n (Art. 25(2)(d)) | - |
| 13.5 | Financial incentives : amounts carried over to year n (Art. 25(2)(e)) | - |
| 13.6 | Modulation of charges : amounts carried over to year n (Art. 25(2)(f)) | - |
| 13.7 | Traffic adjustments : amounts carried over to year n (Art. 25(2)(g) and (h)) | - 286.0 |
| 13.8 | Other revenues (Art. 25(2)(i)) | - |
| 13.9 | Cross-financing between charging zones (Art. 25(2)(j)) | - |
| 13.10 | Difference in revenue from temporary application of unit rate (Art. 25(2)(k)) | - |
| 13.11 | Grand total for the calculation of year n unit rate | 1,187.3 |
| 13.12 | Forecast total service units for year n (performance plan) | 195.6 |
| 13.13 | Unit rate for year n as per Art. 25(2) (in national currency) | 6.07 |
| 13.14 | Reduction as per Art. 29(6), where applicable (in national currency) | |
| 14 | Applicable unit rate for year n | 6.07 |

Costs, revenues and other amounts in '000 - Service units in '000

(1) Including adjustments relating to previous reference periods (Art. 25(2)(l))



8. Appendix 4: Tables of 2019 actual costs and 2021 unit rates

Table 8.1: En route 2019 determined costs in RP2, 2019 actual costs and their difference

| En route 2019 Cost details | Total | | ANSP | | | NSA (IAA SRD) | | | MET | | |
|--|---------------|---------------|---------------|--------------|-----------------|---------------|--------------|---------------|-------------|-------------|----------------|
| | RP2 | Actuals | RP2 | Actuals | Difference | RP2 | Actuals | Difference | RP2 | Actuals | Difference |
| 1. Detail by nature (in nominal terms) | | | | | | | | | | | |
| 1.1 Staff | 71.7m | 64.1m | 66.1m | 58.7m | ↓ -7.3m | 1.6m | 1.7m | ↑ 0.1m | 4.4m | 3.6m | ↓ -0.4m |
| 1.2 Other operating costs (1) | 40.4m | 38.3m | 27.3m | 24.5m | ↓ -2.8m | 10.3m | 10.8m | ↑ 0.5m | 2.9m | 3.1m | ↑ 0.2m |
| 1.3 Depreciation | 12.9m | 7.7m | 12.4m | 7.6m | ↓ -4.7m | 0.0m | 0.1m | ↑ 0.1m | 0.5m | | ↓ -0.5m |
| 1.4 Cost of capital | 5.9m | 4.4m | 5.9m | 4.4m | ↓ -1.5m | 0.0m | 0.0m | ↑ 0.0m | | | ↑ 0.0m |
| 1.5 Exceptional items | | | | | | | | | | | |
| 1.6 Total costs | 130.9m | 114.5m | 111.6m | 95.3m | ↓ -16.3m | 11.9m | 12.6m | ↑ 0.7m | 7.4m | 6.6m | ↓ -0.8m |
| 2. Detail by service (in nominal terms) | | | | | | | | | | | |
| 2.1 Air Traffic Management | 99.3m | 84.6m | 99.3m | 84.6m | ↓ -14.6m | | | | | | |
| 2.2 Communication | 3.4m | 2.8m | 3.4m | 2.8m | ↓ -0.5m | | | | | | |
| 2.3 Navigation | 2.8m | 2.4m | 2.8m | 2.4m | ↓ -0.4m | | | | | | |
| 2.4 Surveillance | 4.6m | 3.8m | 4.6m | 3.8m | ↓ -0.8m | | | | | | |
| 2.5 Search and rescue | | | | | | | | | | | |
| 2.6 Aeronautical Information | 1.6m | 1.6m | 1.6m | 1.6m | | | | | | | |
| 2.7 Meteorological services | 7.4m | 6.6m | 0.0m | 0.0m | | | | | 7.4m | 6.6m | ↓ -0.8m |
| 2.8 Supervision costs | 1.6m | 1.7m | 0.0m | 0.0m | | 1.6m | 1.7m | ↑ 0.1m | | | |
| 2.9 Other State costs (1) | 10.3m | 10.9m | 0.0m | 0.0m | | 10.3m | 10.9m | ↑ 0.6m | | | |
| 2.10 Total costs | 130.9m | 114.5m | 111.6m | 95.3m | ↓ -16.3m | 11.9m | 12.6m | ↑ 0.7m | 7.4m | 6.6m | ↓ -0.8m |
| 3. Complementary information (in nominal terms) | | | | | | | | | | | |
| Average asset base | | | | | | | | | | | |
| 3.1 Net book val. fixed assets | 76.7m | 38.5m | 76.7m | 38.5m | ↓ -38.2m | | | | | | |
| 3.2 Adjustments total assets | 0.0 | 0.0 | 0.0 | 0.0 | | | | | | | |
| 3.3 Net current assets | 0.0 | 0.0 | 0.0 | 0.0 | | | | | | | |
| 3.4 Total asset base | 76.7m | 38.5m | 76.7m | 38.5m | ↓ -38.2m | | | | | | |
| Cost of capital % | | | | | | | | | | | |
| 3.5 Cost of capital pre tax rate | 7.7% | 11.4% | 7.7% | 11.4% | | | | | | | |
| 3.6 Return on equity | 11.4% | 11.4% | 11.4% | 11.4% | | | | | | | |
| 3.7 Average interest on debts | 4.1% | 0.0% | 4.1% | 0.0% | | | | | | | |
| Cost of common projects | | | | | | | | | | | |
| 3.8 Total costs of common projects | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Costs exempted from cost sharing (Article 14(2)(b)) | | | | | | | | | | | |
| 3.9 Total costs exempted from cost sharing | | -0.5m | | | | | -0.5m | | | | |
| 4. Total costs after deduction of costs for services to exempted flights (in nominal terms) | | | | | | | | | | | |
| 4.1 Costs for exempted VFR flights | 0.1m | 0.1m | 0.1m | 0.1m | | 0.0m | 0.0m | | 0.0m | 0.0m | |
| 4.2 Total determined/actual costs | 130.8m | 114.4m | 111.5m | 95.1m | ↓ -16.3m | 11.9m | 12.6m | ↑ 0.7m | 7.4m | 6.6m | ↓ -0.8m |
| 5. Cost-efficiency KPI - Determined/Actual Unit Cost (in real terms) | | | | | | | | | | | |
| 5.1 Inflation % (3) | 1.7% | 0.9% | | | | | | | | | |
| 5.2 Price index (base 100 in 2009) (4) | 110.1 | 104.0 | | | | | | | | | |
| 5.3 Total costs real terms (5) | 118.8m | 109.9m | 101.3m | 91.5m | ↓ -9.8m | 10.8m | 12.1m | ↑ 1.3m | 6.7m | 6.4m | ↓ -0.3m |
| 5.4 Total Service Units | 4.3m | 4.6m | 4.3m | 4.6m | ↑ 0.4m | | | | | | |
| 5.5 Unit cost at 2009 prices | 27.87 | 23.69 | 23.76 | 19.71 | ↓ -4.05 | 2.54 | 2.61 | ↑ 0.07 | 1.58 | 1.38 | ↓ -0.20 |

(1) Including EUROCONTROL costs.

(3) Actual/forecast inflation used for establishing the determined costs in nominal terms – actual/revised forecast inflation

(4) 2014 inflation rate used in the RP2 performance plan:

(5) Determined costs (performance plan) and actual costs in real terms at 2009 prices

For RP2: determined costs after deduction of the costs for exempted VFR flights

Table 8.2: Terminal 2019 determined costs in RP2, 2019 actual costs and their difference

| Terminal 2019 Cost details | Total | | ANSP | | | NSA (IAA SRD) | | | MET | | |
|---|---------------|---------------|---------------|---------------|-----------------|---------------|-------------|----------------|--------------|-------------|----------------|
| | RP2 | Actuals | RP2 | Actuals | Difference | RP2 | Actuals | Difference | RP2 | Actuals | Difference |
| 1. Detail by nature (in nominal terms) | | | | | | | | | | | |
| 1.1 Staff | 13.5m | 11.1m | 12.2m | 9.9m | ↓ -2.4m | 0.3m | 0.3m | ↑ 19.9k | 1.0m | 0.9m | ↓ -0.1m |
| 1.2 Other operating costs | 6.4m | 9.1m | 5.3m | 7.8m | ↑ 2.6m | 0.4m | 0.5m | ↑ 36.7k | 0.7m | 0.8m | ↑ 44.8k |
| 1.3 Depreciation | 5.5m | 3.0m | 5.4m | 3.0m | ↓ -2.4m | | | | 0.1m | | ↓ -0.1m |
| 1.4 Cost of capital | 2.6m | 1.9m | 2.6m | 1.9m | ↓ -0.7m | | | | | | |
| 1.5 Exceptional items | | | | | | | | | | | |
| 1.6 Total costs | 28.0m | 25.0m | 25.4m | 22.6m | ↓ -2.9m | 0.7m | 0.8m | ↑ 72.6k | 1.8m | 1.7m | ↓ -0.2m |
| 2. Detail by service (in nominal terms) | | | | | | | | | | | |
| 2.1 Air Traffic Management | 23.m | 20.4m | 23.m | 20.4m | ↓ -2.6m | | | | | | |
| 2.2 Communication | 0.8m | 0.7m | 0.8m | 0.7m | ↓ -0.1m | | | | | | |
| 2.3 Navigation | 0.6m | 0.6m | 0.6m | 0.6m | ↓ -0.1m | | | | | | |
| 2.4 Surveillance | 1.1m | 0.9m | 1.1m | 0.9m | ↓ -0.1m | | | | | | |
| 2.5 Search and rescue | 0.0 | 0.0 | | | | | | | | | |
| 2.6 Aeronautical Information | 0.m | 0.m | | | | | | | | | |
| 2.7 Meteorological services | 1.8m | 1.7m | | | | | | | 1.8m | 1.7m | ↓ -0.2m |
| 2.8 Supervision costs | 0.3m | 0.3m | | | | 0.3m | 0.3m | ↑ 16.9k | | | |
| 2.9 Other State costs | 0.4m | 0.5m | | | | 0.4m | 0.5m | ↑ 55.7k | | | |
| 2.10 Total costs | 28.m | 25.m | 25.4m | 22.6m | ↓ -2.9m | 0.7m | 0.8m | ↑ 72.6k | 1.8m | 1.7m | ↓ -0.2m |
| 3. Complementary information (in nominal terms) | | | | | | | | | | | |
| Average asset base | | | | | | | | | | | |
| 3.1 Net book val. fixed assets | 33.3m | 16.5m | 33.3m | 16.5m | ↓ -16.7m | | | | | | |
| 3.2 Adjustments total assets | 0.0 | 0.0 | | | | | | | | | |
| 3.3 Net current assets | 0.0 | 0.0 | | | | | | | | | |
| 3.4 Total asset base | 33.3m | 16.5m | 33.3m | 16.5m | ↓ -16.7m | | | | | | |
| Cost of capital % | | | | | | | | | | | |
| 3.5 Cost of capital pre tax rate | 7.7% | 11.4% | 7.7% | 11.4% | | | | | | | |
| 3.6 Return on equity | 11.4% | 11.4% | 11.4% | 11.4% | | | | | | | |
| 3.7 Average interest on debts | 4.1% | 0.0% | 4.1% | 0.0% | | | | | | | |
| Cost of common projects | | | | | | | | | | | |
| 3.8 Total costs of common projects | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| 4. Total costs after deduction of costs for services to exempted flights (in nominal terms) | | | | | | | | | | | |
| 4.1 Costs for exempted VFR flights | | | | | | | | | | | |
| 4.2 Total determined/actual costs | 28.0m | 25.0m | 25.4m | 22.6m | ↓ -2.9m | 0.7m | 0.8m | ↑ 0.1m | 1.8m | 1.7m | ↓ -0.2m |
| 5. Cost-efficiency KPI - Determined/Actual Unit Cost (in real terms) | | | | | | | | | | | |
| 5.1 Inflation % (3) | 1.7% | 0.9% | | | | | | | | | |
| 5.2 Price index (base 100 in 2009) (4) | 110.1 | 104.0 | | | | | | | | | |
| 5.3 Total costs real terms | 25.4m | 24.0m | 23.1m | 21.7m | ↓ -1.4m | 0.7m | 0.8m | ↑ 0.1m | 1.7m | 1.6m | ↓ -0.1m |
| Total % n/n-1 | 0.42% | 2.24% | 1.07% | 3.48% | | 0.00% | -7.12% | | -7.60% | -8.29% | |
| 5.4 Total Service Units | 156.9k | 187.7k | 156.9k | 187.7k | ↑ 30.8k | | | | | | |
| Total % n/n-1 | 2.62% | 2.74% | | | | | | | | | |
| 5.5 Unit cost at 2009 prices | 162.16 | 128.08 | 147.30 | 115.53 | ↓ -31.77 | 4.15 | 4.05 | ↓ -0.11 | 10.71 | 8.51 | ↓ -2.20 |

(2) Actual/forecast inflation used for establishing the determined costs in nominal terms – actual/ revised forecast inflation

(3) Forecast price indexes - Base 100 in 2009

2013 actual inflation index in the RP2 performance plan:

101.98

2014 inflation rate used in the RP2 performance plan:

0.6%

2014 actual inflation rate:

0.3%

(4) Determined costs (performance plan) in real terms – actual/ revised forecast costs at 2009 prices

Table 8.3: En route intended 2021 unit rates

| Table 2 B - Calculation of the unit rate for year n (1) | | 2021 | 2021 | 2021 | 2021 |
|--|---|---------------|---------------|--------------|-------------|
| 13.1 | Determined costs in nominal terms - VFR excl. (Art. 25(2)(a)) | 148.3m | 125.m | 17.m | 6.3m |
| 13.2 | Inflation adjustment : amount carried over to year n (Art. 25(2)(b)) | -7.2m | -6.1m | -0.7m | -0.4m |
| 13.3 | Traffic risk sharing adjustment : amounts carried over to year n (Art. 25(2)(c)) | -5.4m | -5.4m | | |
| 13.4 | Differences in costs as per Art. 28(4) to (6) : amounts carried over to year n (Art. 25(2)) | -3.1m | | -3.1m | |
| 13.5 | Financial incentives : amounts carried over to year n (Art. 25(2)(e)) | 1.1m | 1.1m | | |
| 13.7 | Traffic adjustments : amounts carried over to year n (Art. 25(2)(g) and (h)) | -0.8m | 0.7m | -0.9m | -0.6m |
| 13.8 | Other revenues (Art. 25(2)(i)) | -0.8m | -0.8m | | |
| 13.11 | Grand total for the calculation of year n unit rate | 132.1m | 114.4m | 12.3m | 5.3m |
| 13.12 | Forecast total service units for year n (performance plan) | 4.8m | | | |
| 14 | Applicable unit rate for year n | 27.58 | 23.89 | 2.58 | 1.11 |

Table 8.4: Terminal intended 2021 unit rates

| Terminal | Total | ANSP | NSA (IAA SRD) | MET | |
|--|--|---------------|----------------------|-------------|-------------|
| Table 2 B - Calculation of the unit rate for year n (1) | | 2021 | 2021 | 2021 | |
| 13.1 | Determined costs in nominal terms - VFR excl. (Art. 25(2)(a)) | 37.2m | 34.5m | 1.1m | 1.6m |
| 13.2 | Inflation adjustment : amount carried over to year n (Art. 25(2)(b)) | -1.5m | -1.4m | -39.4k | -0.1m |
| 13.3 | Traffic risk sharing adjustment : amounts carried over to year n (Art. 25(2)(c)) | -3.9m | -3.9m | | |
| 13.7 | Traffic adjustments : amounts carried over to year n (Art. 25(2)(g) and (h)) | 0.3m | 0.7m | -0.1m | -0.3m |
| 13.8 | Other revenues (Art. 25(2)(i)) | -0.3m | -0.3m | | |
| 13.9 | Cross-financing between charging zones (Art. 25(2)(j)) | | | | |
| 13.10 | Difference in revenue from temporary application of unit rate (Art. 25(2)(k)) | | | | |
| 13.11 | Grand total for the calculation of year n unit rate | 31.8m | 29.6m | 1.m | 1.2m |
| 13.12 | Forecast total service units for year n (performance plan) | 195.6k | 195.6k | | |
| 14 | Applicable unit rate for year n | 162.45 | 151.40 | 4.98 | 6.07 |