PERFORMANCE REVIEW BOARD
of the Single European Sky

Performance Review Board

Monitoring Report

Bulgaria - 2024

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Contents

1 OVERVIEW

1.1 Contextual information

National performance plan adopted following Commission Decision (EU) 2022/778 of 13 April 2022

List of ACCs 1
Sofia ACC

No of airports in the scope of the performance plan:
- **≥80'K** 0
- **<80'K** 0

Exchange rate (1 EUR=)
2017: 1.95543 BGN
2024: 1.95543 BGN

Share of Union-wide:
- **traffic (TSUs) 2024** 3.8%
- **en route costs 2024** 1.8%

Share en route / terminal costs 2024 100% / 0%

En route charging zone(s)
Bulgaria

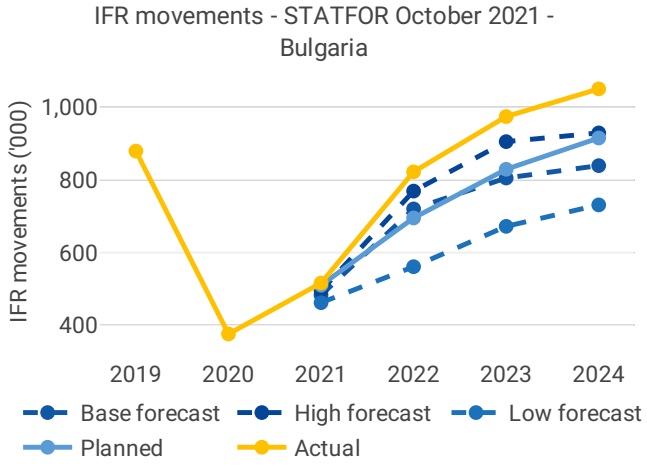
Terminal charging zone(s)
–

Main ANSP
- BULATSA

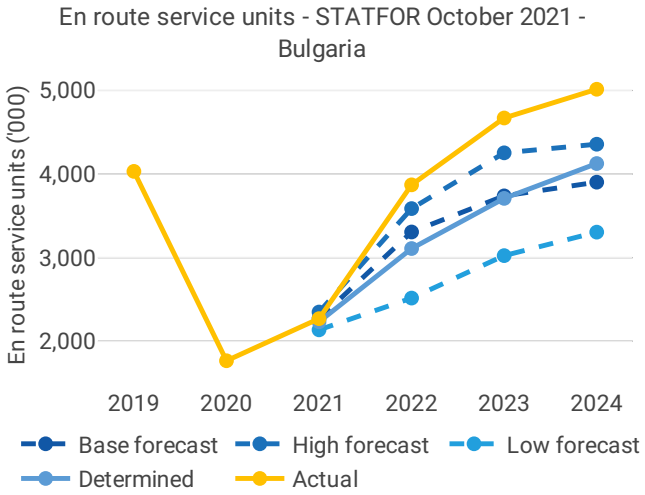
Other ANSPs
–

MET Providers
–

1.2 Traffic (En route traffic zone)

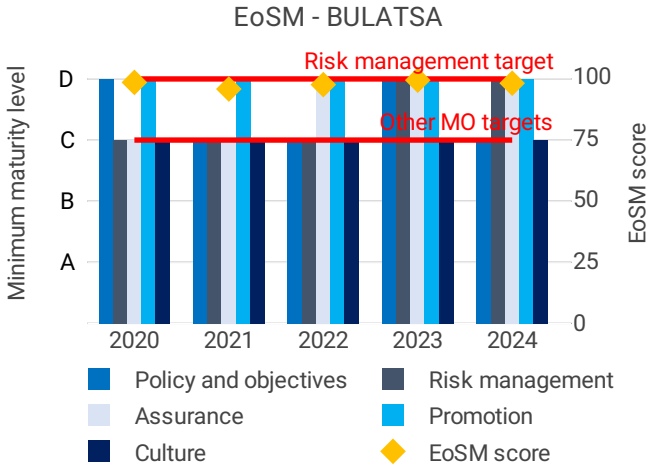


- Bulgaria recorded 1,050K actual IFR movements in 2024, +7.8% compared to 2023 (974K).
- Actual 2024 IFR movements were +14.8% above the plan (915K).
- Actual 2024 IFR movements were +19.5% above the actual 2019 level (879K).



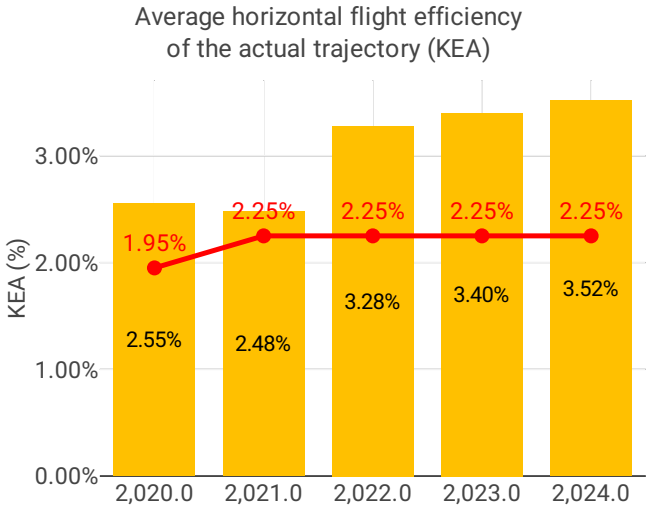
- Bulgaria recorded 5,015K actual service units in 2024, +7.4% compared to 2023 (4,671K).
- Actual 2024 service units were +21.5% above the plan (4,127K).
- Actual 2024 service units are +24.4% above the actual 2019 level (4,032K).

1.3 Safety (Main ANSP)



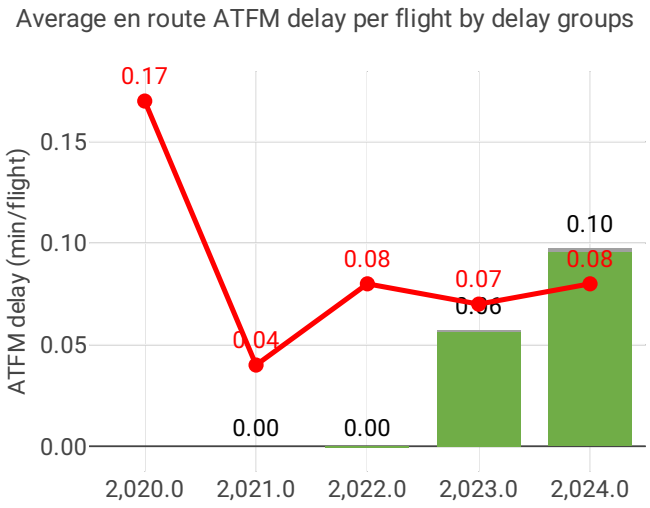
- BULATSA achieved the RP3 targets for the EoSM in 2023 and remained on or above the targets in 2024.
- Bulgaria did not provide monitoring data for runway incursions (RIs) or separation minima infringements (SMIs) in 2023 and 2024.

1.4 Environment (Member State)



- Bulgaria achieved a KEA performance of 3.52% compared to its target of 2.25% and did not contribute positively towards achieving the Union-wide target.
- The NSA states the reasons for not meeting the environmental targets are related to the geopolitical situation and airspace restrictions resulting from Russia's war of aggression against Ukraine, continuous shifts in traffic flows, airspace user preferences, and a lack of sufficient capacity in neighbouring ACCs resulting in additional traffic in Sofia FIR.
- Both KEP and SCR remained stable in comparison to 2023.
- Bulgaria has no airports regulated under the performance and charging scheme.

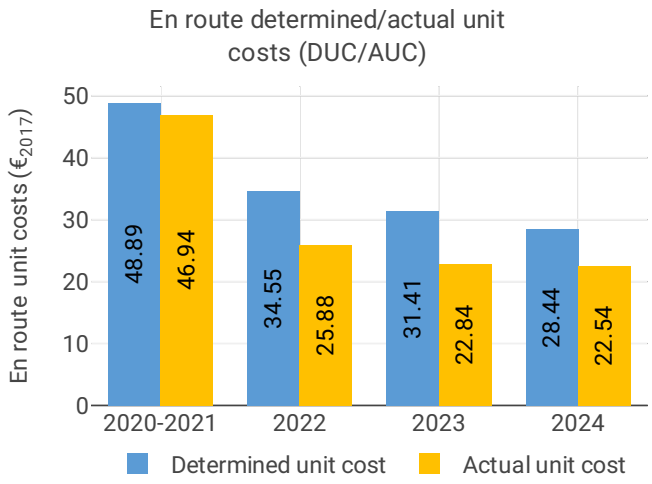
1.5 Capacity (Member State)



- Bulgaria registered 0.18 minutes of average en route ATFM delay per flight during 2024, which has been adjusted to 0.10 during the post-ops adjustment process, thus not achieving the local target value of 0.08. Delays in Bulgaria increased by 0.04 minutes per flight year-on-year.
- Delays were highest between May and July, mostly related to adverse weather conditions.

- The share of delayed flights with delays longer than 15 minutes in Bulgaria increased by 23 percentage points compared to 2023 and was higher than 2019 values.
- The average number of IFR movements was 19% above 2019 levels in Bulgaria in 2024.
- The number of ATCOs in OPS is 154, being below the 2024 plan in Sofia by 4 FTEs.
- The yearly total of sector opening hours in Sofia ACC was 41,844, showing a 5.9% increase compared to 2023. Sector opening hours are 15.7% above 2019 levels.
- Sofia ACC registered 24.44 IFR movements per one sector opening hour in 2024, being 3.5% above 2019 levels.

1.6 Cost-efficiency (En route/Terminal charging zone(s))



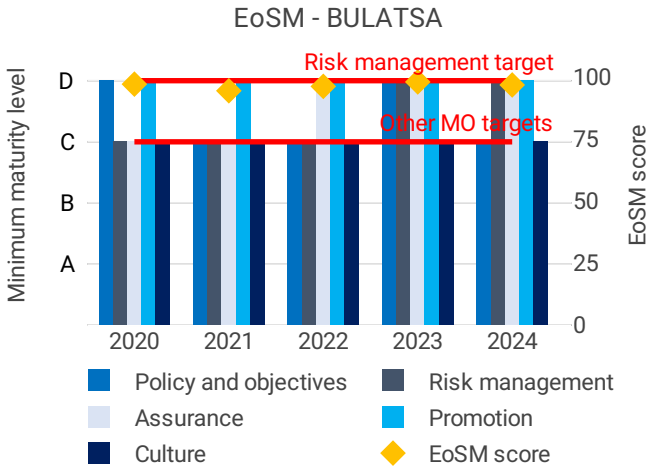
- The en route 2024 actual unit cost of Bulgaria was 22.54€2017, -21% lower than the determined unit cost (28.44€2017). Bulgaria does not have a terminal charging zone.
- The en route 2024 actual service units (5.0M) were +22% higher than the determined service units (4.1M).
- The en route 2024 actual total costs were -4.3M€2017 (-3.7%) lower than determined. This is mainly due to lower other operating costs (-1.6M€2017, or -14%) for BULATSA. However, in nominal terms, actual costs are +14M€ (or +11%) higher than determined. The difference is mainly attributable to the impact of inflation.
- BULATSA costs of investments were 21M€2017 in 2024, -8.7% less than determined (23M€2017). According to the NSA, this reduction is due to revenue from liquidated damages on investment projects, which is being deducted from the depreciation costs, and slight delay of one of the major projects due to unforeseen administrative issues.
- The en route actual unit cost incurred by users in 2024 was 29.45€ (-5.7% below the 2024 DUC).
- The en route regulatory result for BULATSA amounted to +18M€, representing 13% of the 2024 revenue.
- Bulgaria should ensure that any excessive regulatory result, including excess funds received by the ANSP due to the inflation mechanism, is either reinvested to improve the quality of services delivered to airspace users or reimbursed to them.

2 SAFETY - BULGARIA

2.1 PRB monitoring

- BULATSA achieved the RP3 targets for the EoSM in 2023 and remained on or above the targets in 2024.
- Bulgaria did not provide monitoring data for runway incursions (RIs) or separation minima infringements (SMIs) in 2023 and 2024.

2.2 Effectiveness of Safety Management (EoSM) (KPI#1)



Focus on EoSM

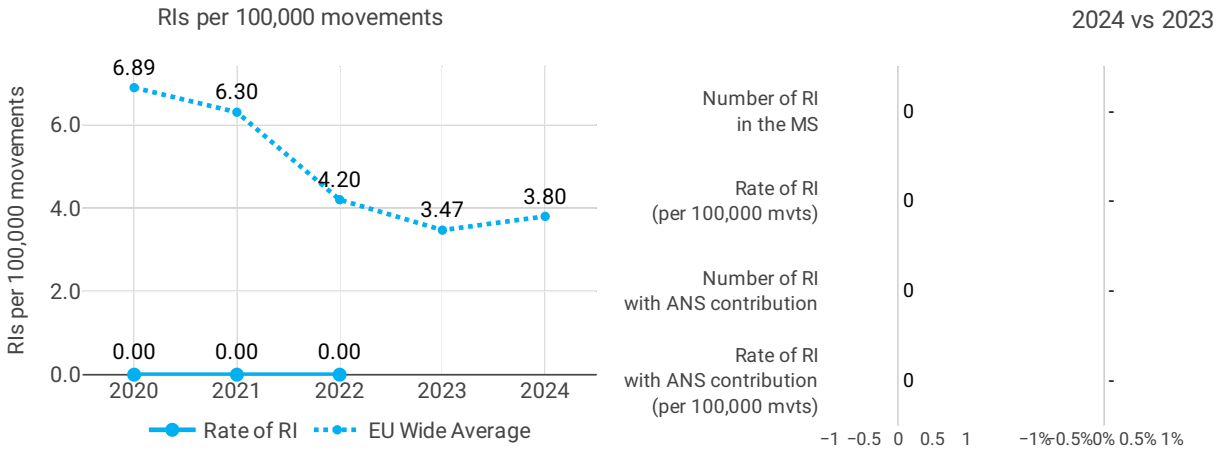
The results of the 2024 Effectiveness of Safety Management (EoSM) benchmark survey confirm that the safety performance targets embedded in the Bulgarian Performance Plan have been achieved. The components Safety Assurance and Safety Promotion were both rated at Level D, exceeding the target level.

BULATSA has achieved the RP3 target in 2023.

In 2024, BULATSA conducted the EoSM benchmark survey which confirmed the achievement of the RP3 targets. The components Safety Assurance and Safety Promotion were both rated at Level D, exceeding the RP3 EoSM target level of C set for 2024. The component Safety Policy and Objective was reduced by one level between 2023 and 2024, while achieving the targeted maturity level.

2.3 Safety occurrences

2.3.1 Rate of runway incursions (RIs) (PI#1)

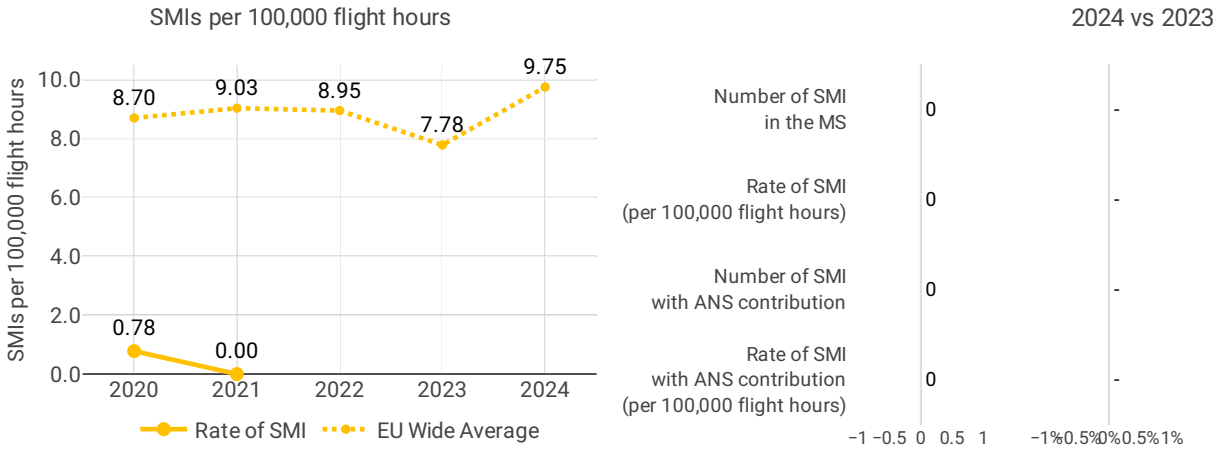


Rate of RIs per 100,000 airport movements - Bulgaria				
#	Airport name	APT movements	Number of RI	Rate RI per 100,000
1	Sofia	0	0	NA

Focus on runway incursions

Bulgaria did not provide monitoring data for runway incursions (RIs) for 2023 and 2024. Between 2020 and 2022 Bulgaria did not experience any RI. This may be based on Bulgaria having no airports in the performance plan.

2.3.2 Rate of separation minima infringements (SMIs) (PI#2)



Rate of SMI with ANS contribution per 100,000 flight hours											
		Flight hours					Number of SMIs				
#	ANSP	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
1	BULATSA	127,863	174,114	290,422	342,298	NA	1	NA	NA	NA	NA

		Rate of SMI per 100,000 flight hours					% variation in rate of SMIs				
#	ANSP	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
1	BULATSA	1	NA	NA	NA	NA					

Focus on separation minima

Bulgaria did not provide monitoring data for separation minima infringements (SMIs) in 2023 and 2024. Between 2020 and 2022, Bulgaria reported one occurrence in 2020 and no SMIs for 2021 and 2022.

2.3.3 Quality of occurences reporting

It is expected that Bulgaria reports SMIs for all years of RP3, even if no SMIs occurred.

2.4 Use of automated safety data recording system (ASDRS) (PI#3)

Use of automated safety data recording system - 2024	
For RIs	For SMIs
✗	✗

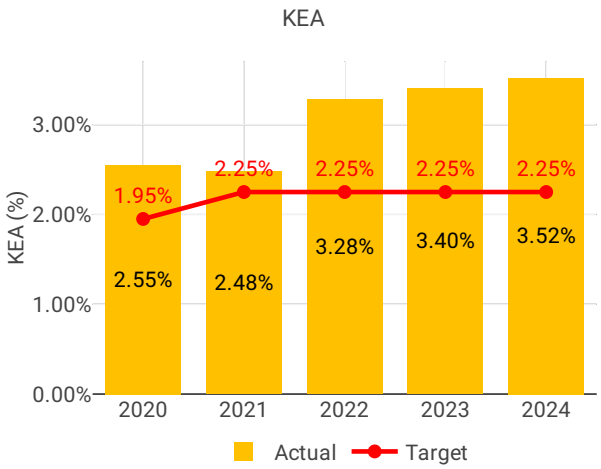
3 ENVIRONMENT - BULGARIA

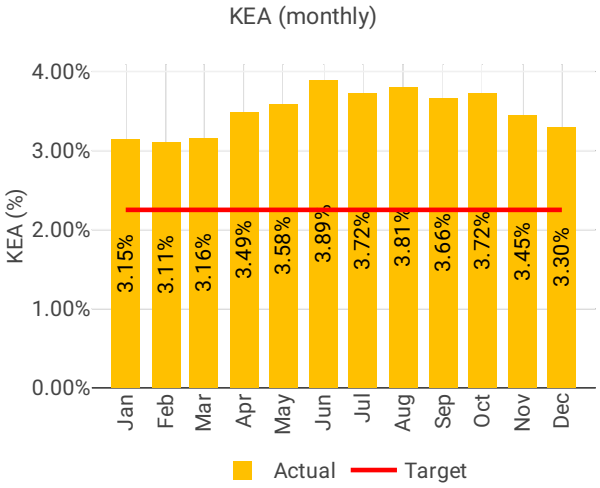
3.1 PRB monitoring

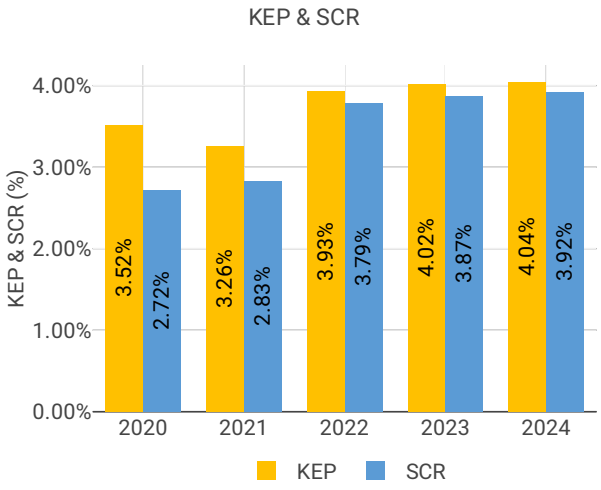
- Bulgaria achieved a KEA performance of 3.52% compared to its target of 2.25% and did not contribute positively towards achieving the Union-wide target.
- The NSA states the reasons for not meeting the environmental targets are related to the geopolitical situation and airspace restrictions resulting from Russia's war of aggression against Ukraine, continuous shifts in traffic flows, airspace user preferences, and a lack of sufficient capacity in neighbouring ACCs resulting in additional traffic in Sofia FIR.
- Both KEP and SCR remained stable in comparison to 2023.
- Bulgaria has no airports regulated under the performance and charging scheme.

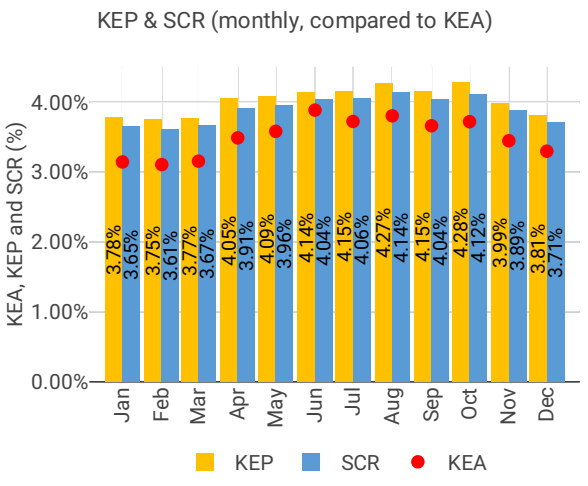
3.2 En route performance

3.2.1 Horizontal flight efficiency of the actual trajectory (KEA) (KPI#1), of the last filed flight plan (KEP) (PI#1) & shortest constrained route (SCR) (PI#2)

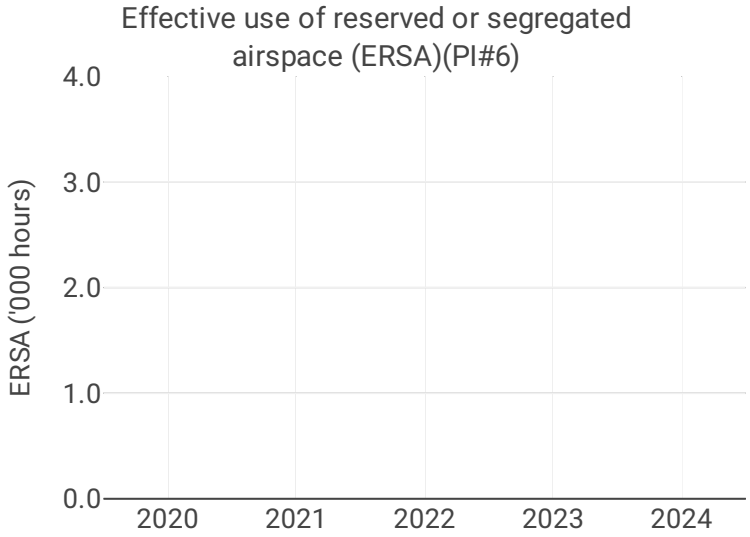


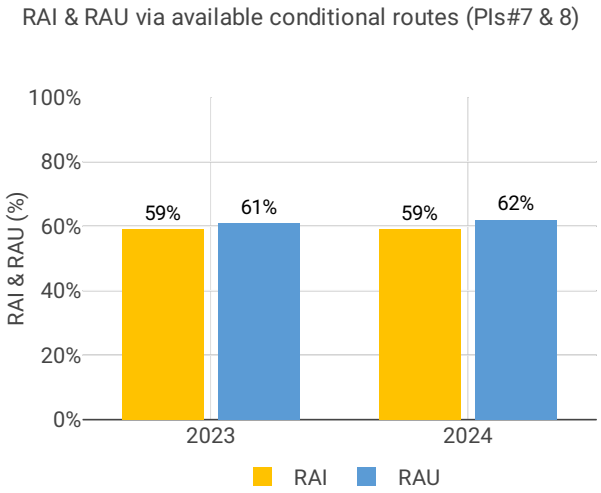


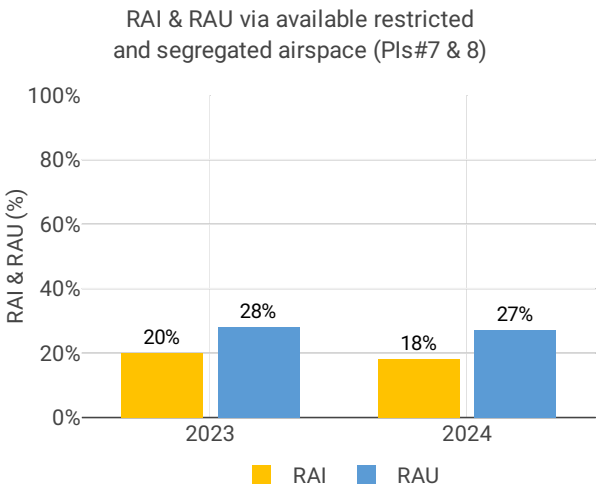




3.3 Civil-Military dimension







Focus on Civil-Military dimension

Update on Military dimension of the plan

National legislation was updated recently to improve coordination and reduce activation/deactivation time of military areas. According FUA some reserved/restricted areas have been replaced by prior coordination area (PCA) procedure to improve capacity and efficiency. Eurocontrol CIMACT and LARA tools were implemented. The vertical and horizontal boundaries of several TRAs are reduced or changed to allow civilian traffic especially from/to the LTFM and other Istanbul airports. A reduction in the applicable separation for interoperable military aircraft is planned to improve capacity while maintaining safety levels. Letters of agreement between civilian ATS units and military controlling units. Agreement for military operations outside segregated airspace. Agreement for information exchange and for usage of CIMACT and LARA tools/systems.

Military - related measures implemented or planned to improve capacity

n/a

Initiatives implemented or planned to improve PI#6

n/a

Initiatives implemented or planned to improve PI#7

n/a

Initiatives implemented or planned to improve PI#8

n/a

4 CAPACITY - BULGARIA

4.1 PRB monitoring

- Bulgaria registered 0.18 minutes of average en route ATFM delay per flight during 2024, which has been adjusted to 0.10 during the post-ops adjustment process, thus not achieving the local target value of 0.08. Delays in Bulgaria increased by 0.04 minutes per flight year-on-year.
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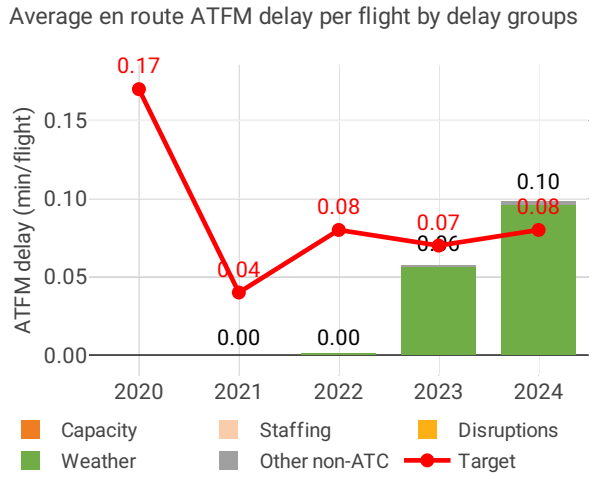
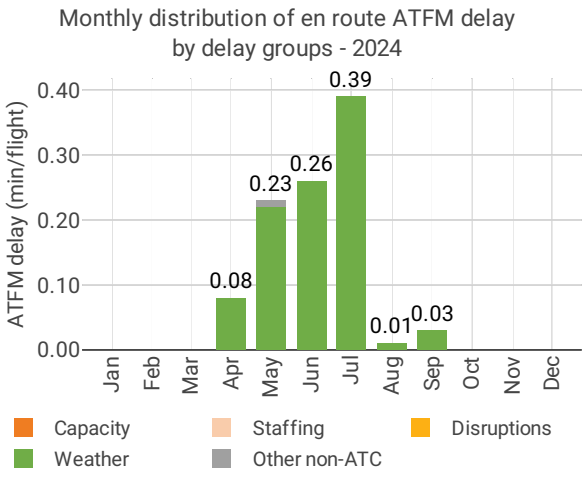
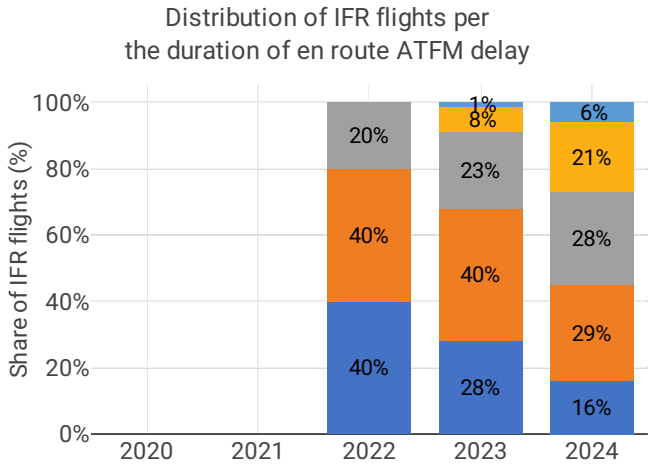
4.2 En route performance

4.2.1 En route ATFM delay (KPI#1)







Focus on en route ATFM delay

Summary of capacity performance

Bulgaria experienced an increase in traffic from 974k flights in 2023 with 55k minutes of en route ATFM delay, to 1 050k flights in 2024 with 102k minutes of en route ATFM delay. There were an additional 88k minutes of ATFM delay, originating in Bulgaria, that were re-attributed to DFS (30k) and HungaroControl (58k) via the NM post operations delay attribution process, according to the NMB agreement for eNM/S24 measures, to ameliorate capacity shortfalls in both Budapest and Karlsruhe ACCs.

NSA's assessment of capacity performance

During 2024 the number of serviced aircraft increased, surpassing for the first time the level of 1 million flights. The reciprocal bans imposed on the use of EU airspace by Russian aircraft and on the use of Russian Federation airspace by European aircraft still stand. These actions lead to a significant extension of the flight time for some destinations (mainly from/to the Far East and the aggregate flow from/to Other ICAO regions in Asia) and to the shift of non-traditional traffic to the Bulgarian airspace. BULATSA carried out the necessary preparations in a timely manner and successfully dealt with the increased air traffic over Bulgaria by developing sector configurations to handle the traffic and providing the necessary number of air traffic controllers. The number of flights in Sofia FIR is1,050 thousand according to EUROCONTROL data, which is an increase of 8% compared to the previous year, where IFR flights account for 974 thousand.

The reported delay figure for Bulgaria in 2024 is 0.10 (0.0963 min/flight) due to weather (101,192 min) and other (war between Russia and Ukraine 1,091 min). The capacity target for 2024 is not met by 0.0163 min/flight but falls within deadband. Reasons for that were the ongoing increase of traffic significantly above planned levels (+15%) combined with increased level of complexity of operations in Sofia FIR due to traffic flows structure and growing volume of operations at all Istanbul airports given the increasing adverse weather impact.

Monitoring process for capacity performance

The monitoring of capacity performance is effected through regular monitoring of the minutes of delay generated, based on the information provided by NM. Monitoring is done on a monthly basis.

Capacity planning

Capacity planning is done on a network level as part of the capacity planning processes established by NM. Additionally, BULATSA has established internal capacity planning which is takes into account traffic forecast produced by STATFOR/NM, but is also based on the internally produced traffic forecasts, which take into account local specifics and updates where necessary.

The capacity planning process includes:

• HR availability and rostering, both in long term (new ATCO hiring and training), but also in the medium (seasonal) and short term (monthly). HR requirements are assessed and measures are taken to re-prioritize available resources during the busy periods.

• Medium and long term planning of capacity availability based on technological improvements, introduction of SESAR innovations, system upgrades.

• Airspace changes, sectorization and development of interfaces with adjacent FIRs.The issues and plans are regularly reviewed and reassessed in relation to current operational environment and forecasts, as well as to meet capacity profiles and sector configurations as per those in the NOP.

A Capacity Management Board is established internally that convenes once a month in order to discuss the latest information and trends. The Capacity Board includes a broad range of experts (technical, operational, financial and legal) in order to ensure that multidisciplinary approach to capacity is undertaken.

Application of Corrective Measures for Capacity (if applicable)

It is evident from the NM data that the difference between the target as per the PP and the actual values of the En-route ATFM delay per flight in 2024 is only due to weather delay (delay code W as per the ATFCM manual). The Bulgarian airspace is among the most complex airspace volumes in Europe.

Since the outbreak of the war netween Ukraine and Russia, significant traffic flows have shifted to the South-West to avoid the closed airspace volumes. Bulgaria also handled an increasing number of traffic to and from the busiest airport in Europe – the New Istanbul Airport.

As a result for the summer period of 2024 when the weather delays have been accumulated the traffic has increased more than 11% vs 2023 and around 20% vs 2019. The combined effect of the adverse weather conditions during the period April - September, the lack of capacity in the neighbouring FIRs and the constant GNSS jamming and spoofing in the region has enormously increased the complexity for the air traffic controllers and the pilots.

Some of the measures in the neighboring FIRs related to weather and capacity have caused diversion of additional traffic to Sofia FIR. This imposed the need for additional measures to ensure the safety of the operations and 0.10 minutes weather delay per flight was generated.

BG CAA noted also that the NM operated a strategic traffic-re-orientation programme (eNM/S24) during summer 2024, Therefore NMB agreed to protect ACCs affected by extra traffic and reassign ATFM delay to ANSPs causing the initial capacity problem.

NM with the approval of the NMB reassigned 87,686 minutes of the BULATSA ATFM weather delay to the originator ANSPs (DFS and Hungarocontrol) as the combined effect of the local adverse weather and the capacity issues of the mentioned airspace volumes have not provided for the safety of the operations.

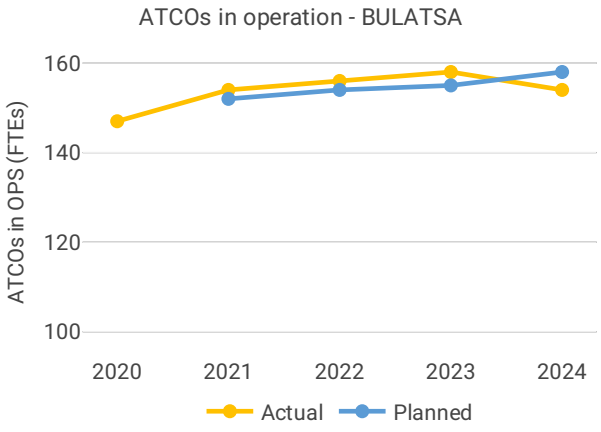
BULATSA delivers its commitments in the NOP. The ANSP deals with the increasing complexity and the high traffic levels using flexible sectorization and sector saturation avoidance procedures, optimized and flexible human resources management in terms of existing ATCOs and recruitment of the new ones, and strict ATFM adverse weather procedure.

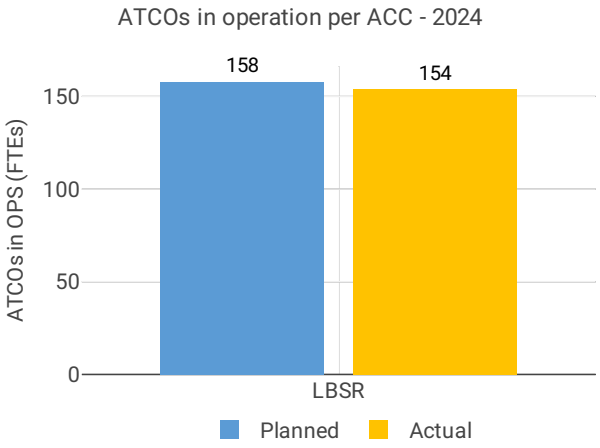
ATC is provided in a safe and efficient manner and with 0 delay due to ATC reasons. BULATSA has delivered what has been committed in the NOP. Adverse weather conditions and lack of capacity in other airspace volumes that affect the traffic flows are out of the ANSP's control.

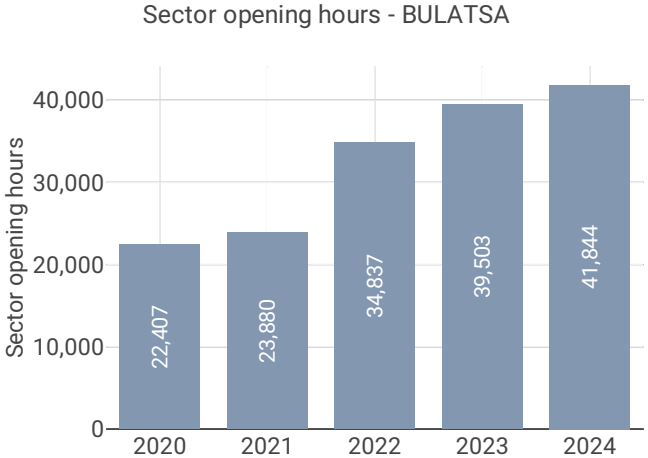
En route Capacity Incentive Scheme

BULATSA: The 2024 actual value for en route capacity (0.1 minutes/ flight) falls within the deadband:- therefore neither bonus nor malus is applicable.

4.2.2 Other indicators







Focus on ATCOs in operations

Part of the outgoing from OPS room ATCO FTEs in 2024 are not related to permanent retirement but rather temporary absence from duty - for example due to maternity leave.

5 COST-EFFICIENCY - BULGARIA

5.1 PRB monitoring

- The en route 2024 actual unit cost of Bulgaria was 22.54€2017, -21% lower than the determined unit cost (28.44€2017). Bulgaria does not have a terminal charging zone.
- The en route 2024 actual service units (5.0M) were +22% higher than the determined service units (4.1M).
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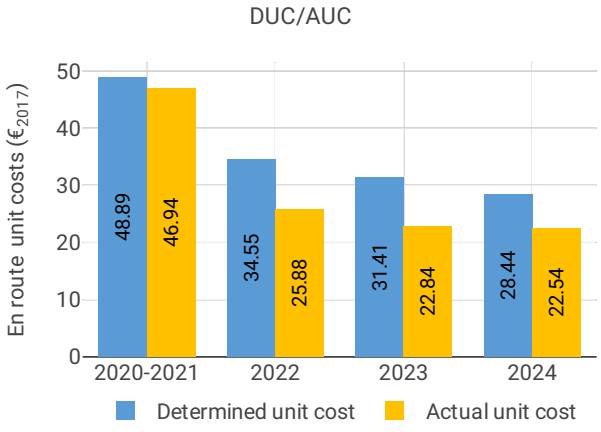
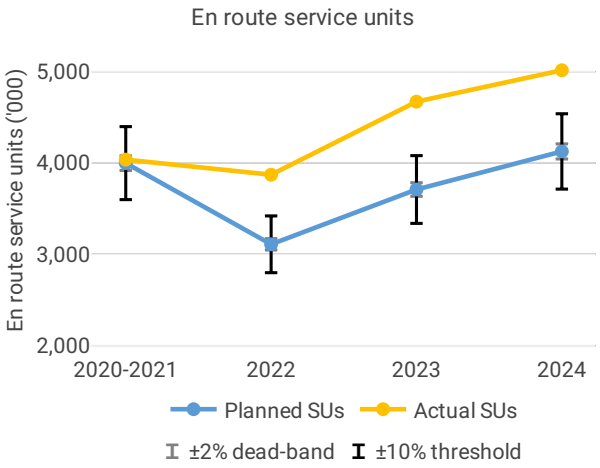
- The en route regulatory result for BULATSA amounted to +18M€, representing 13% of the 2024 revenue.
- Bulgaria should ensure that any excessive regulatory result, including excess funds received by the ANSP due to the inflation mechanism, is either reinvested to improve the quality of services delivered to airspace users or reimbursed to them.

5.2 En route charging zone

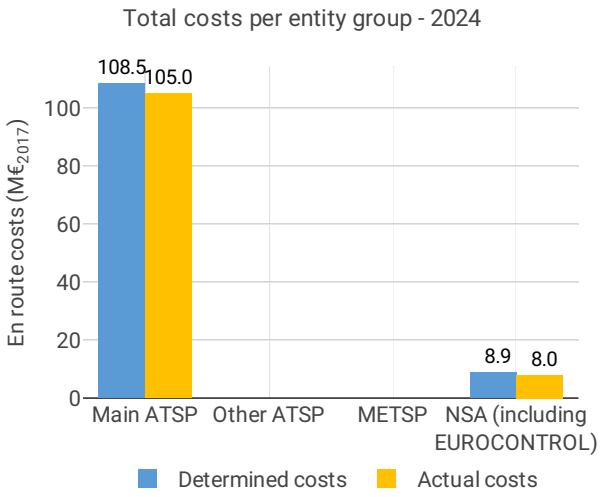
5.2.1 Unit cost (KPI#1)

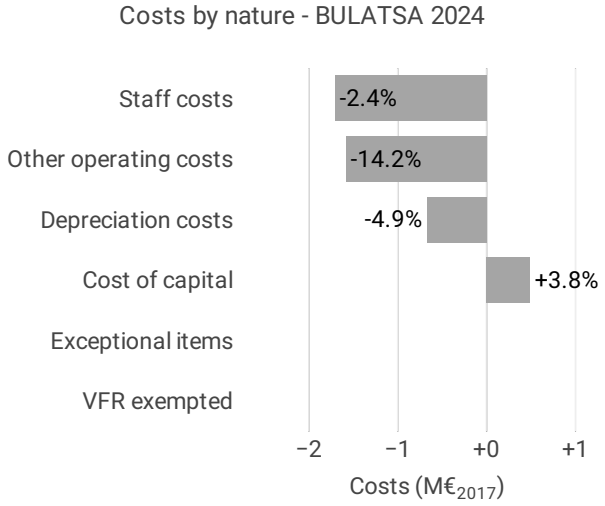




Actual and determined data				
Total costs - nominal (M€)	**2020-2021**	**2022**	**2023**	**2024**
Actual costs	200	116	132	143
Determined costs	205	115	126	129
Difference costs	-5	2	6	14

Inflation assumptions	**2020-2021**	**2022**	**2023**	**2024**
Determined inflation rate	NA	2.0%	2.0%	2.0%
Determined inflation index	NA	109.6	111.8	114
Actual inflation rate	NA	13.0%	8.6%	2.6%
Actual inflation index	NA	123.6	134.3	137.8
Difference inflation index (p.p.)	NA	+14.1	+22.5	+23.7





Focus on unit cost

AUC vs. DUC

In 2024, the en route AUC was -20.8% (or -11.54 BGN2017, -5.9 €2017) lower than the planned DUC. This results from the combination of significantly higher than planned TSUs (+21.5%) and lower than planned en route costs in real terms (-3.7%, or -8.5 MBGN2017, -4.3 M€2017). It should be noted that the actual inflation index in 2024 was +23.7 p.p. higher than planned. This high inflation significantly affects the results of analysis expressed in real terms below.

En route service units

The difference between actual and planned TSUs (+21.5%) falls outside the +10% threshold foreseen in the traffic risk sharing mechanism. The resulting gain of additional en route revenues is therefore shared between the ANSP and the airspace users (see the main ANSP gain in Box 11).

En route costs by entity

The 2024 actual real en route costs for the charging zone are -3.7% (-4.3 M€2017) lower than planned. This is the result of lower costs than planned for the main ANSP, BULATSA (-3.2%, or -3.5 M€2017) and the NSA/EUROCONTROL (-9.6%, or -0.9 M€2017).

En route costs for the main ANSP at charging zone level

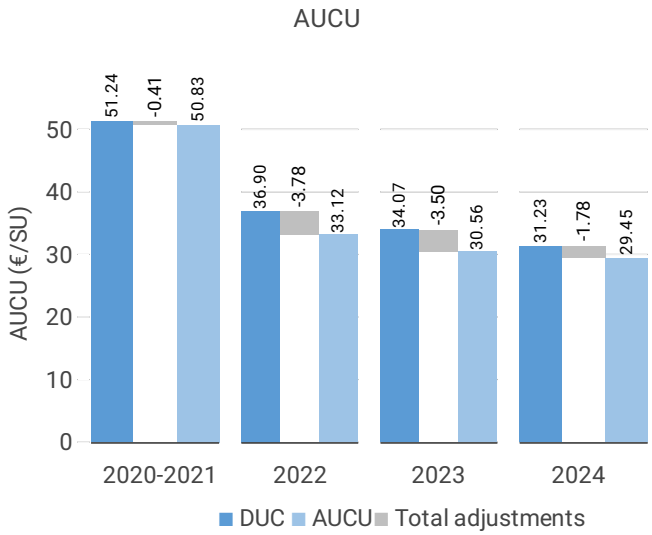
In 2024, BULATSA actual real en route costs are lower than planned (-3.2%, or some -3.5 M€2017), mainly due to a higher than planned inflation index (+23.7 p.p.) and resulting from:

- Lower than planned staff costs in real terms (-2.4%), but higher in nominal terms (+17.9%), mainly due to *"(…) normalising levels of payment in line with traffic levels and (…) inflation over 2022/2023 followed by an additional increase in 2024… (…) higher staff numbers (…) increase in social security costs (…) impacted by the (…) government …"*
- Significantly lower than planned other operating costs in real terms (-14.2%), but higher in nominal terms (+3.7%), mainly due to "(…) *costs for procured general external services due to salaries increases (…), external specialised services (…)",*
- Lower than planned depreciation costs (-4.9%), mainly due to "*revenue from liquidated damages on investment projects (…) slight delay of one major BULATSA projects (…)".*
- Higher than planned cost of capital (+3.8%).

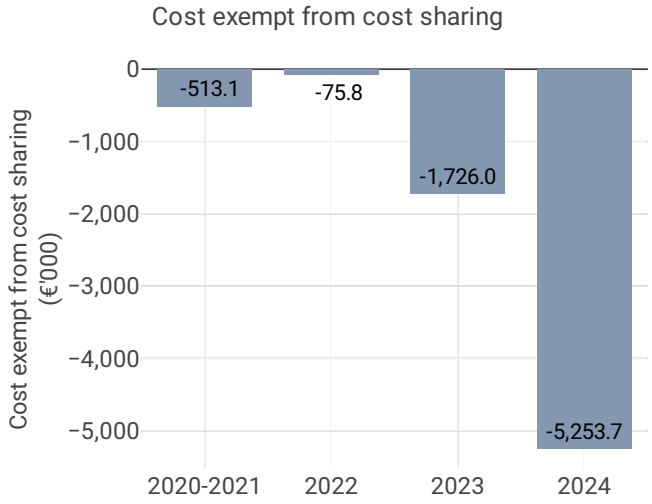
RP3 summary

When considering the whole of RP3 (2020-2024) for Bulgaria en route charging zone, actual TSUs are +17.7% higher than planned, while actual costs in real terms are -5.1% lower than the determined costs (some -53.6 MBGN2017 or -27.4 M€2017). As a result, the weighted average actual unit cost over RP3 (56.62 BGN2017 or 28.95 €2017) is -19.4% lower than planned in the PP (70.24 BGN2017 or 35.92 €2017).

5.2.2 Actual unit cost incurred by the users (AUCU) (PI#1)

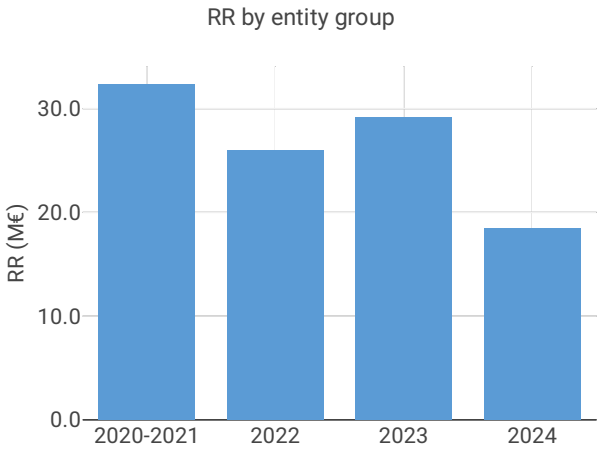


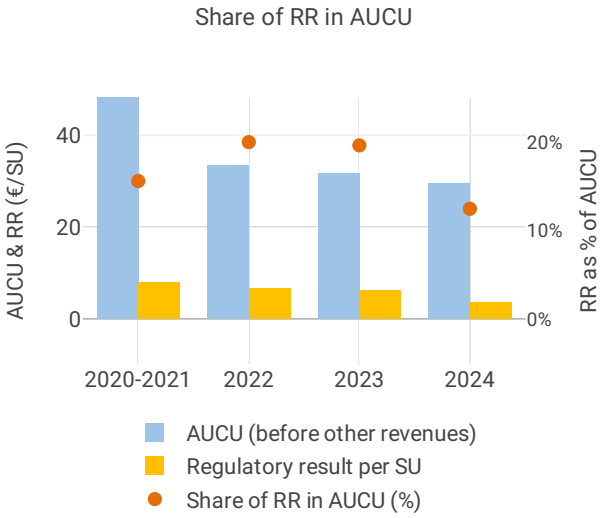
AUCU components (€/SU) – 2024	
Components of the AUCU in 2024	**€/SU**
DUC	**31.23**
Inflation adjustment	3.89
Cost exempt from cost-sharing	-1.05
Traffic risk sharing adjustment	-3.89
Traffic adj. (costs not TRS)	-0.64
Finantial incentives	0.00
Modulation of charges	0.00
Cross-financing	0.00
Other revenues	-0.09
Application of lower unit rate	0.00
Total adjustments	-1.78
AUCU	**29.45**
AUCU vs. DUC	**-5.7%**

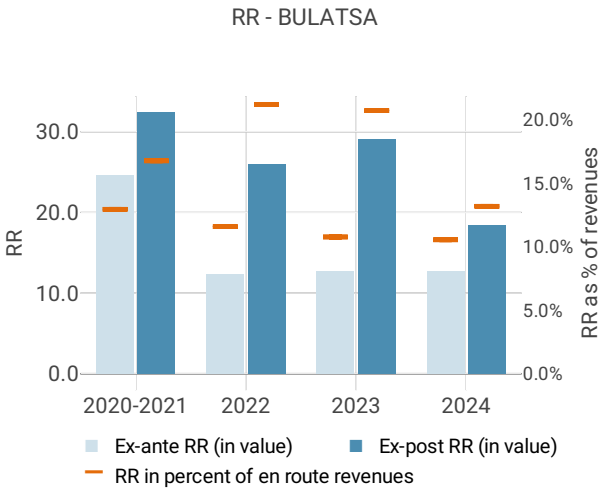


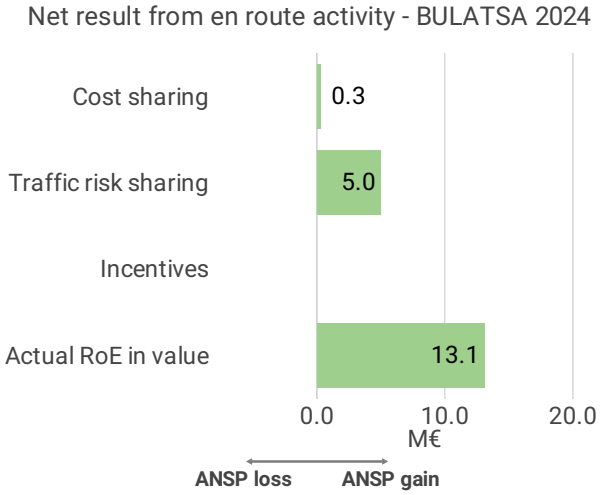
Cost exempt from cost sharing – 2024		
Cost exempt from cost sharing by item - 2024	**€'000**	**€/SU**
New and existing investments	-1,998.5	-0.40
Competent authorities and qualified entities costs	-728.3	-0.15
Eurocontrol costs	-118.9	-0.02
Pension costs	-2,408.0	-0.48
Interest on loans	0.0	0.00
Changes in law	0.0	0.00
Total cost exempt from cost risk sharing	**-5,253.7**	**-1.05**

5.2.3 Regulatory result (RR)









Focus on regulatory result

BULATSA net gain on activity in Bulgaria en route charging zone in the year 2024

BULATSA reported a net gain of +10.4 MBGN, as a combination of a gain of +0.6 MBGN arising from the cost sharing mechanism, with a gain of +9.8 MBGN arising from the traffic risk sharing mechanism.

BULATSA overall regulatory result (RR) for the en route activity

Ex-post, the overall RR taking into account the net gain from the en route activity mentioned above (+10.4 MBGN) and the actual RoE (+25.7 MBGN) amounts to +36.1 MBGN (13.2% of the en route revenues). The resulting ex-post rate of return on equity is 9.8%, which is higher than the 7.0% planned in the PP.

RP3 summary

When considering the whole of RP3 (2020-2024), BULATSA generated a cumulative gain in respect of cost sharing of +52.1 MBGN, as actual total costs for RP3 were lower than planned. The traffic risk sharing mechanism generated gain of +31.5 MBGN. Adding the actual RoE

(+123.6 MBGN over RP3) leads to an overall regulatory result of +207.2 MBGN, which corresponds to an average ex-post return on equity of 11.7% (compared to 7.0% initially planned in the PP).