

# NATIONAL REPORT

ON MOTORWAYS IN THE REPUBLIC OF CROATIA

2023



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In 2023, there were no new openings of motorway stretches in Croatia but on the A7 Motorway Rupa – Rijeka – Žuta Lokva a new interchange Trinajstići was opened to traffic to provide access to business zone and 679m of noise barriers were built in the area of the interchange.



## Current State of the Network

As on 31<sup>st</sup> December 2023, the total length of the motorway network in Croatia is 1,341.10 km. In 2023 motorways were operated by 3 companies:

- Hrvatske autoceste d.o.o. (operates motorways A1, A3, A4, A5, A6, A7, A10, A11). As of 31.12.2023. the Bridge Krk was handed over for operation to Hrvatske ceste (HC). The bridge has been toll-free since 15.06.2020.,
- Bina-Istra d.d. (operates the so-called Istrian Y: A8 and A9 motorways),
- Autocesta Zagreb – Macelj d.o.o. (operates motorway A2).

| Company         | Total network 2022 | Openings 2023 | Total network 2023 | Plan openings 2024     | Total network plan 2024 |
|-----------------|--------------------|---------------|--------------------|------------------------|-------------------------|
| HAC d.o.o.      | 1,140.10           | 0             | 1,140.10           | 10,90                  | 1,151.00                |
| BINA-ISTRA d.d. | 141.00             | 0             | 141.00             | 5,31*                  | 141.00                  |
| AZM d.o.o.      | 60.00              | 0             | 60.00              | 0                      | 60.00                   |
| <b>TOTAL</b>    | <b>1,341.10</b>    | <b>0</b>      | <b>1,341.10</b>    | <b>10,90<br/>5,31*</b> | <b>1,352.00</b>         |

\* Widening of the existing section to full motorway profile

### Opening of new stretches in 2023

In 2023, there were no new openings of motorway stretches in Croatia but on the A7 Motorway Rupa – Rijeka – Žuta Lokva a new interchange Trinajstići was opened to traffic to provide access to business zone and 679m of noise barriers were built in the area of the interchange.

### Tunnels and bridges on the network

| Company      | Km of tunnels | Km of bridges | Total tunnels and bridges |
|--------------|---------------|---------------|---------------------------|
| HAC*         | 83.04         | 53.49         | 136.53                    |
| BINA-ISTRA   | 5.31          | 9.36          | 14.67                     |
| AZM*         | 4.70          | 1.67          | 6.37                      |
| <b>TOTAL</b> | <b>93.05</b>  | <b>65.95</b>  | <b>157.57</b>             |

\*Length of tunnels and bridges was revised



# Works in Progress

## Works in progress on 31<sup>st</sup> December 2023

As of 31<sup>st</sup> December 2023 the works were in progress as follows:

- 15.90 km of motorway
- 7.00 km of first phase of full motorway by-pass
- 7.02 km of widening to full motorway profile

| Motorway                          | Section  | Km    | Description   |
|-----------------------------------|--|-------|---|
| A1 ZAGREB-SPLIT-DUBROVNIK         | Podi (Šibenik) Interchange   | 0.0   | Access to Podi business zone<br>Opening planned in 2024.  |
|                                   | Dugopolje Interchange - reconstruction   | 0.00  | Widening of the Dugopolje Interchange to ensure better traffic flow.  |
| A5 BELI MANASTIR - OSIJEK- SVILAJ | Hungarian border to Beli Manastir  | 5.00  | Completion of the Vc corridore in full motorway profile and connection with Hungary.  |
| A7 RUPA - RIJEKA - ŽUTA LOKVA     | First Phase of Novi Vinodolski by-pass   | 7.00  | Construction of a section of future motorway section Križišće - Žuta Lokva.   |
|                                   | Orehovica Interchange  | 0.0   | Reconstruction and widening of the existing interchange   |
|                                   | Učka (Matulji) Interchange   | 0.0   | Interchange shall improve traffic flow and later ensure the connection to the motorway to Učka tunnel.                        |
| A8 KANFANAR - MATULJI             | 2 <sup>nd</sup> tube of the tunnel Učka including the Subsection Vranja - Učka Tunnel, the Bridge Mirna, the Viaduct Limska Draga and the Subsection Učka Tunnel - Matulji | 7.02  | Construction of 2 <sup>nd</sup> tunnel tube and widening to full motorway profile of the existing subsections and structures. |
| A11 ZAGREB - SISAK                | Lekenik - Sisak Interchange  | 10.90 | Completion of motorway from Zagreb to Sisak in order to connect Sisak to the motorway network. Opening is planned for 2024.   |

## Openings to traffic in 2024

In 2024, road works will be completed on the total of:

- 10.90 km of motorways
- 5.31 km of widening to full motorway profile of the existing sections

| Motorway                      | Section   | Km    | Description   |
|-------------------------------|---|-------|---|
| A1 ZAGREB - SPLIT - DUBROVNIK | Podi (Šibenik) Interchange  | 0.0   | Access to Podi business zone. It was opened to traffic on the 22 <sup>nd</sup> April 2024.                    |
| A8 KANFANAR-MATULJI           | 2 <sup>nd</sup> tube of the tunnel Učka including the subsection Vranja - Učka Tunnel | 5.31  | Widening of the existing section and the tunnel to full motorway profile. Opening is planned in 2024.         |
| A11 ZAGREB-SISAK              | Lekenik - Sisak Interchange   | 10.90 | Completion of Zagreb- Sisak motorway to connect Sisak with the motorway network. Opening is planned for 2024. |



Start of new works in 2024

In addition to the continuation of works from the previous year, the following new works will start in 2024:

- 38.00 km of new motorways
- 4.38 km of widening to full motorway profile
- 1.00 km of junction road

| Motorway                            | Section   | Km    | Description   |
|-------------------------------------|---|-------|---|
| A1 ZAGREB-SPLIT-DUBROVNIK           | Rudine - Slano  | 9.00  | Connecting southern Dalmatia. Connection to the Pelješac bridge and its access roads. The connection road from the Slano junction to the local road (1.5 km) is an integral part of the Rudine - Slano section project. |
|                                     | Slano - Mravinjac Service Area  | 11.50 | Connecting southern Dalmatia. Connection to the Pelješac bridge and its access roads.   |
|                                     | Rašćane Interchange   | 1 pcs | Better connection between the A1 motorway and local roads network in the neighbouring areas.  |
| A3 BREGANA - LIPOVAC                | Požega (Staro Petrovo Selo) Interchange   | 1 pcs | Connection between the A3 motorway with fast road Požega-Staro Petrovo Selo, the joint construction of which constitutes an important link and precondition for the social and economic development of the area.        |
| A5 BELI MANASTIR - OSIJEK - SVILAJ  | Andrijevcı Interchange  | 1 pcs | Improvement of connection between the A5 motorway with the municipalities in the area.  |
| A6 BOSILJEVO - RIJEKA               | Orehovica Interchange   | 0.00  | Reconstruction and upgrade of the existing Interchange.   |
| A7 RUPA-RIJEKA-ŽUTA LOKVA           | Križišće - Jadranovo  | 5.20  | Construction of the section of A7 motorway.   |
|                                     | Jadranovo - Selce   | 12.30 | Construction of the section of A7 motorway.   |
| A8 KANFANAR - JUNCTION UČKA         | Učka (Matulji) Interchange - Opatija  | 0.5   | Upgrade and reconstruction of the existing intersection to ensure connection of the A7 and A8 motorways with the state road DC8.  |
| A8 KANFANAR-MATULJI<br>A9 UMAG-PULA | Widening to full motorway profile of the motorway structures: the Bridge Mirna and the viaduct Limska Draga including the Subsection Učka tunnel -Matulji Interchange | 3.88  | Widening of the existing sections to full motorway profile.   |
| A11 ZAGREB - SISAK                  | Jakuševac Interchange - Sarajevska street   | 1.00  | Connection of the completed Jakuševac Interchange to the road network of the city of Zagreb (additional southern entrance to the city of Zagreb) - junction road.   |












Opening of new stretches in 2024

In 2024, 10.90 km of new motorways shall be opened to traffic and 5.31 km of existing sections shall be upgraded to full motorway profile.

# Motorways in the Republic of Croatia

## Network and companies

| Company  | Motorways   | Status of construction   | Km in service |
|--|---|--|---------------|
|  HRVATSKE AUTOCESTE d.o.o.      |  |  IN SERVICE         | 1.140.10      |
|  BINA-ISTRA d.d.                |  |  UNDER CONSTRUCTION | 141.00        |
|  AUTOCESTA ZAGREB-MACELJ d.o.o. |  |  IN PROJECT         | 60.00         |
| TOTAL in service as per 31/12/2023   |   |  | 1.341,10      |



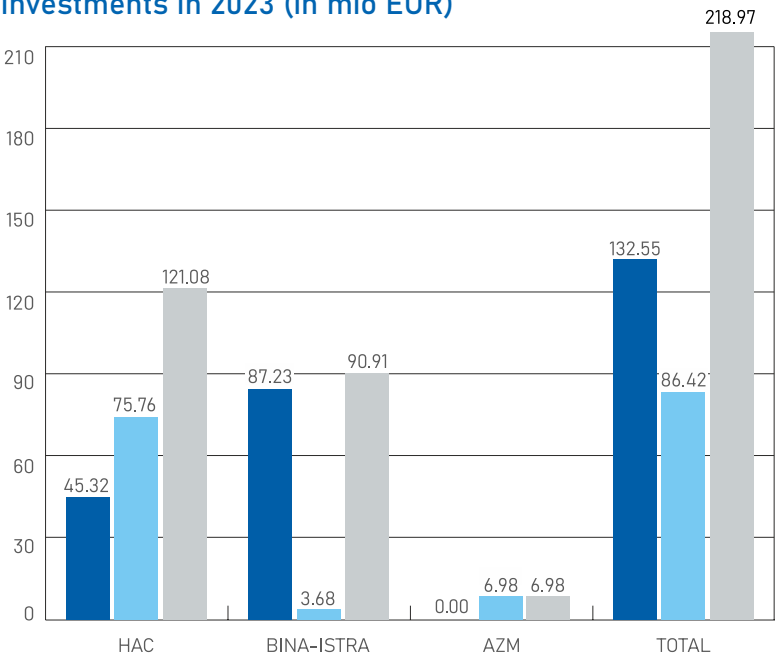
# Cost of Investment and Financing

The total of € 132.55 million was invested in the construction of new motorways in 2023, while € 86.42 million was invested into sections under traffic.

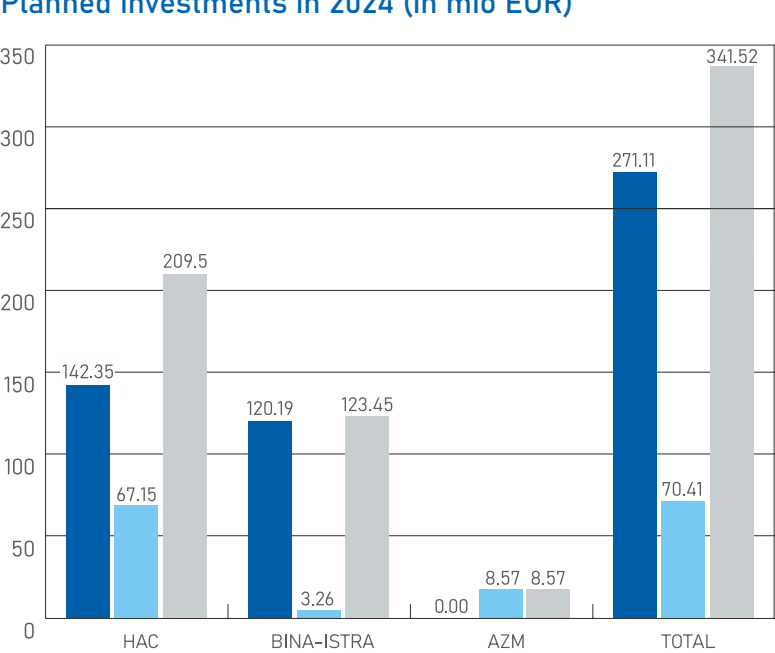
- in mio EUR

| Company           | Investments in 2023 |                        | Plan for 2024     |                        |
|-------------------|---------------------|------------------------|-------------------|------------------------|
|                   | Into new sections   | Into existing sections | Into new sections | Into existing sections |
| HAC               | 45.32               | 75.76                  | 142.35            | 67.15                  |
| BINA-ISTRA        | 87.23               | 3.68                   | 120.19            | 3.26                   |
| AZM               | 0                   | 6.98                   | 8.57              | 0                      |
| TOTAL             | 132,55              | 86.42                  | 271,11            | 70.41                  |
| TOTAL INVESTMENTS | 218,97              |                        | 341,52            |                        |

Investments in 2023 (in mio EUR)



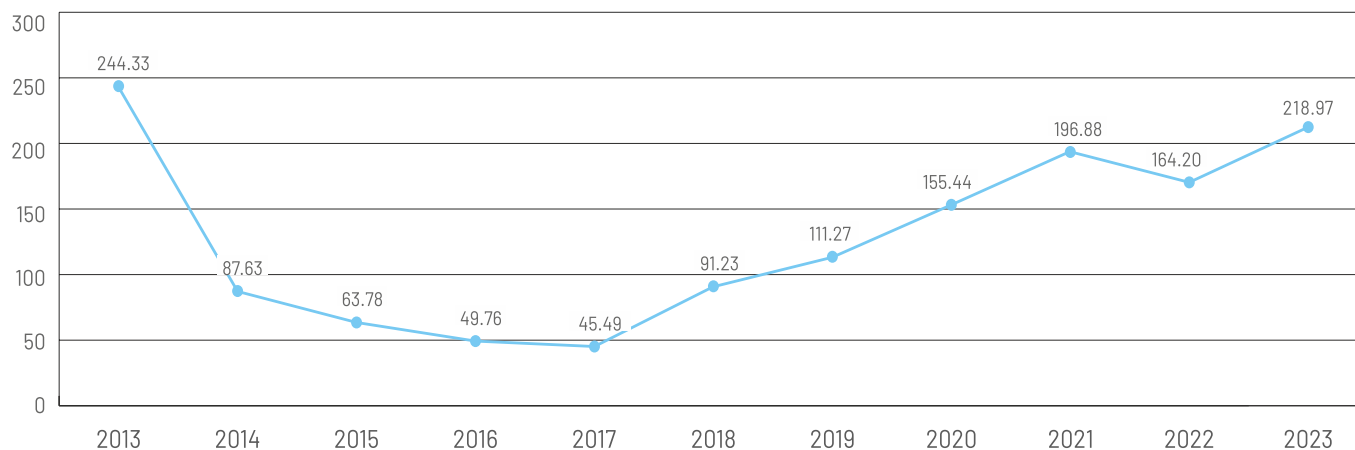
Planned investments in 2024 (in mio EUR)



- INTO NEW SECTION
- INTO EXISTING SECTION
- TOTAL INVESTMENTS



## Total investments 2013 – 2023 (in mio EUR)



| Source of investments financing in 2023 (%)     | HAC   | BINA ISTR | AZM |
|---|-------|-----------|-----|
| Loans   | 12.20 |           |     |
| Proper resources                                | 45.02 |           |     |
| Revenues from tolls and other revenues          |       | 58.00     | 100 |
| Revenues from fuel (EUR 0.026/l)                | 15.98 |           |     |
| Reimbursable and non-reimbursable state funding |       | 42.00     |     |
| EU funds  | 26.80 |           |     |
| TOTAL   | 100   | 100       | 100 |





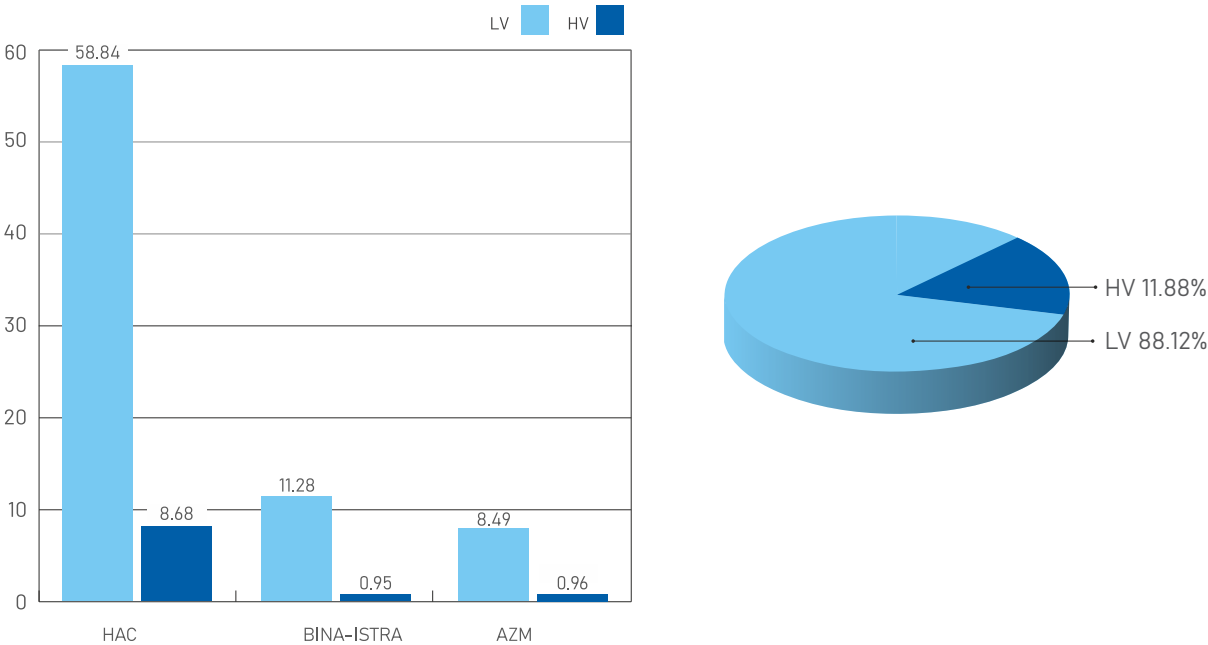
# Traffic

In 2023 all motorway companies reported increase in total traffic for all vehicle categories. The increase for the entire country's motorway network makes a total of 11.30% compared to the previous year.

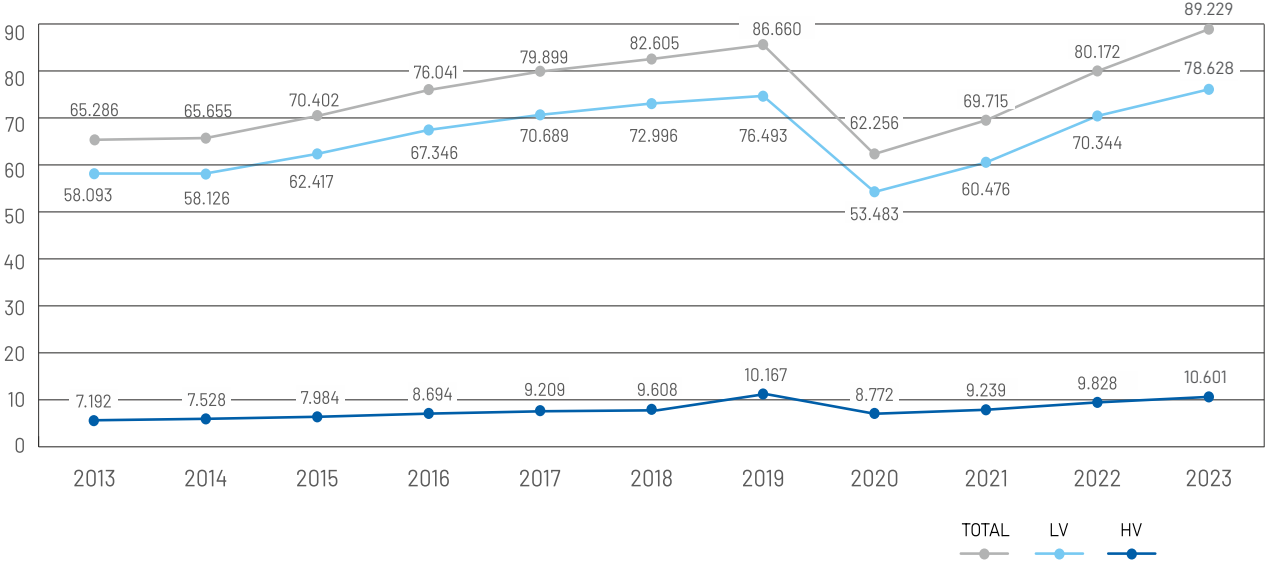
- number of vehicles in toll collection zones

| Company       | 2022                     |                         | 2023                     |              |                         |              | Total % (23/22) |
|---------------|--------------------------|-------------------------|--------------------------|--------------|-------------------------|--------------|-----------------|
|               | Light vehicles (IA+I+II) | Heavy vehicles (III+IV) | Light vehicles (IA+I+II) | LV % (23/22) | Heavy vehicles (III+IV) | HV % (23/22) |                 |
| HAC           | 52.714.527               | 8.039.743               | 58.844.648               | 11.63        | 8.687.579               | 8.06         | 11.16           |
| BINA-ISTRA    | 10.226.291               | 880.659                 | 11.286.152               | 10.36        | 950.154                 | 7.89         | 10.17           |
| AZM           | 7.403.766                | 907.276                 | 8.497.072                | 14.77        | 963.725                 | 6.22         | 13.83           |
| TOTAL         | 70.344.584               | 9.827.678               | 78.627.872               | 11.78        | 10.601.458              | 7.87         | 11.30           |
| TOTAL TRAFFIC | 80.172.262               |                         | 89.229.330               |              |                         |              | 11.30           |

Number of vehicles in toll collection zones 2023 (in mio vehicles)



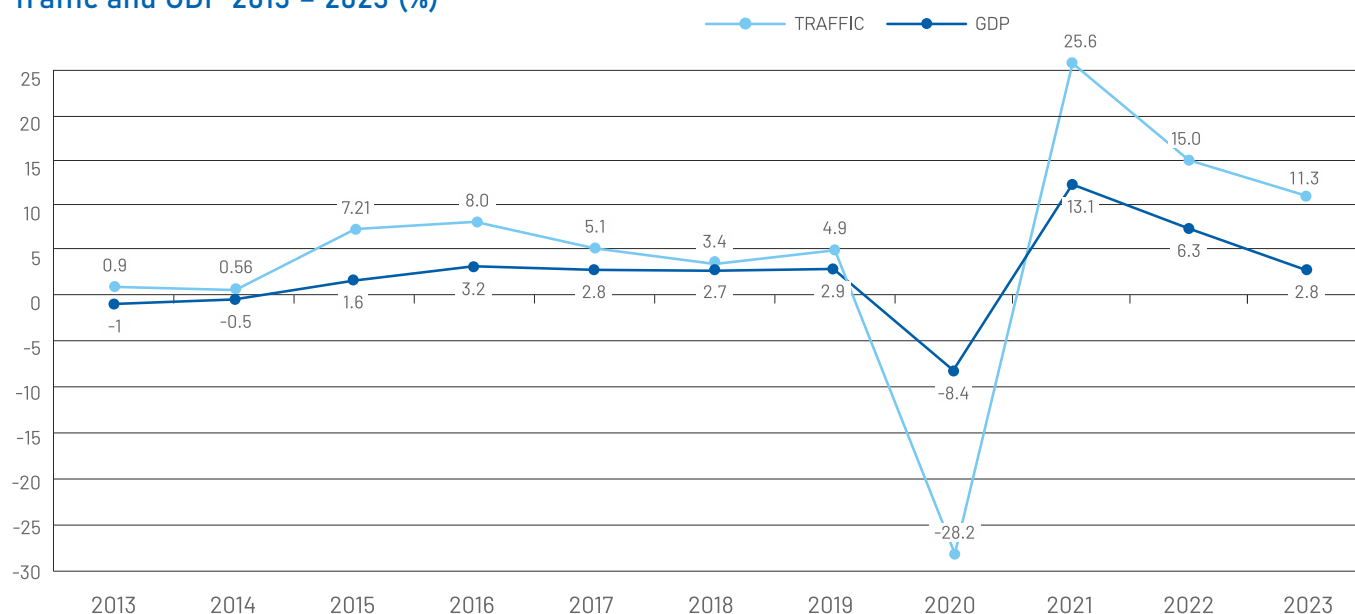
Total number of vehicles in toll collection zones 2013 – 2023 (in mio vehicles)



| GDP<br>2022/2021 (%) | Traffic<br>2022/2021 (%) | CPI<br>2022/2021 (%) | GDP<br>2023/2022 (%) | Traffic<br>2023/2022 (%) | CPI<br>2023/2022 (%) |
|----------------------|--------------------------|----------------------|----------------------|--------------------------|----------------------|
| 6.3                  | 15.0                     | 10.8                 | 2.8                  | 11.3                     | 8.0                  |

Source: Central Bureau of Statistics, 2023

## Traffic and GDP 2013 – 2023 (%)



## Tolling

The closed toll collection system, with several entry and exit points, is predominantly operated in the Republic of Croatia. Motorway usage is charged per mileage and vehicle category. At the entrance to the motorway, the user takes an entry ticket (or the entry is recorded on their ETC device) and the payment is made on exit toll plaza according to distance travelled.

The open toll collection system is used on motorways A3 Bregana – Zagreb and A7 Rupa – Rijeka.

### Average toll rate per km (with VAT)

| Existing systems                              | Light vehicles (Category I) |
|---|-----------------------------|
|   | €/km                        |
| Closed system                                 | 0.08                        |
| Open system                                   | 0.06                        |
| Ratio categories I : IV in closed toll system | 4.13                        |
| Existing systems                              | Trucks (Category IV)        |
|   | €/km                        |
| Closed system                                 | 0.33                        |
| Open system                                   | 0.21                        |
| Ratio categories I : IV in open toll system   | 3.75                        |

Motorcycles (category IA) pay 60% of the toll charged for category I vehicles. On all motorways, toll can be paid in cash (in EUR), by credit and debit cards, by INA card and MOL Group cards as well as by SMART cards. Electronic toll collection (ETC) system is available on all motorways except on the A2 Zagreb – Macelj motorway.

As of 14<sup>th</sup> July 2023, the EETS provider Telepass (Italy) provides EETS service for light vehicles through its TLP devices on the EETS domain of HAC.

VAT on tolls is 25%.

## Technology of electronic toll collection system in use

The toll collection systems of HAC and Bina-Istra network has a stop and go system that integrates electronic toll collection (ETC).

The technology of electronic toll collection is in accordance with the legal provisions: DSRC 5.8 GHz

Communication standards: Physical Layer EN 12975, ENV 12795 and EN 12253

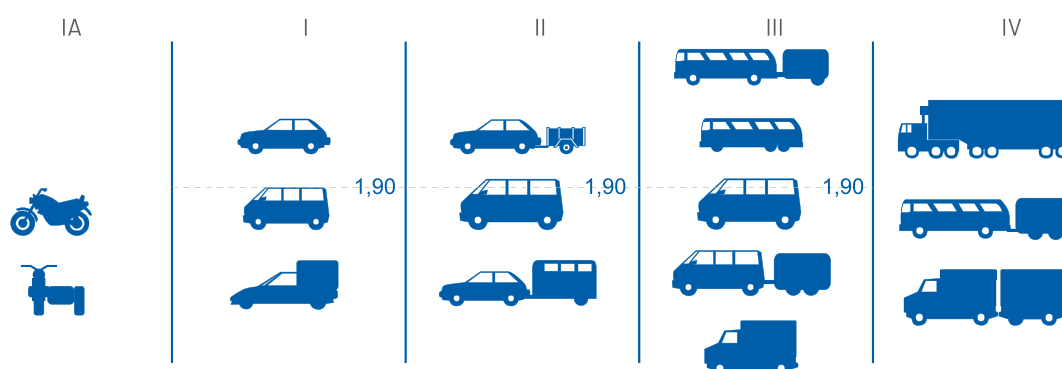
Data Link Layer: ENV 12834 and ENV 13372

Application standards: Application Layer ISO14906 EFC

Transaction models: PISTA and TIS are in use, with openness to other transactional models in accordance with relevant standards.

| Tolling system in the country | Tolling/charging system  | Tolling technology   |
|-------------------------------|--|----------------------|
| Light vehicles                | Distance related system with barriers  | DSRC 5,8 GHz         |
| Heavy vehicles                | Distance related system with barriers  | DSRC 5,8 GHz         |
| Enforcement                   | Different enforcement means; subsequent back office check and analysis of transactions identified by IT system, video cameras and ANPR (OCR) cameras for vehicle plate recognition | ANPR/OCR enforcement |

In the Republic of Croatia tolls are paid according to the following categories of vehicles:



### HRVATSKE AUTOCESTE d.o.o. (HAC)

The Government of the Republic of Croatia started a process aiming to transformation of the existing DSRC tolling system on motorways (which includes toll barriers at toll plazas) into free flow system that will enable electronic tolling without barriers, improvement of road safety and traffic flow levels, that will be acceptable and non-discriminatory for all groups of users paying the toll and will ensure to motorway operators optimum costs and revenues regarding tolling and that will be interoperable with future EETS service.

### BINA-ISTRA d.d. (BINA)

The Istrian Y network has a closed toll system. Toll is paid according to distance travelled and depending on the vehicle category. Users take the toll ticket or register themselves with ETC device at entry toll plaza and toll is paid at exit toll plaza. Users have at their disposal a total of 108 toll lanes, of which 45 are entry lanes and 63 are exit lanes. Payment can be made in cash in EUR, with bank cards or Bina-Istra ETC devices.

For frequent users, Bina-Istra has prepared special offers with significant discounts on toll rates depending on the package chosen. The discounts can be obtained by using the Bina-Istra ETC device, which is compatible with the networks of other motorways operated by HAC.

In addition to discounts for frequent ETC subscribers, Bina-Istra offers to users the possibility to register their credit card or INA fleet card with their ETC subscription which enables them easy passage through toll plazas. Users do not have to replenish their account in advance but the toll payment is done at the end of the month with the registered credit card or INA fleet card.

During low traffic intensity, toll collection at most toll plazas run in automatic mode without the presence of a toll attendant.

Bina-Istra ETC subscribers can use the Internet or SMS subscription to see the balance of their accounts and subscription expiry time and can also obtain the listing of passes through toll plazas. In addition, they can replenish their accounts and fill in and print invoices for payments via bank transfer. At Bina-Istra toll collection points, toll can be paid by all credit and debit cards, and by INA fleet card and the ETC device.

Furthermore, users who already own an ETC device can additionally register devices already bought at HAC with the Bina-Istra toll collection system and in this way become Bina-Istra subscribers (if they are frequent users they are entitled to average discount of 30 to 50%, depending on the section used) or to register their credit cards for an ETC device (if they are non-frequent users).

From August 17<sup>th</sup> 2020, HAC and Bina-Istra introduced a new benefit for post-paid users. ENC IN is a model of interoperable ETC device that allows Bina-Istra users in the post-paid credit card system (Master Card, Diners, Visa, Visa Premium, INA card) to use ETC devices also on HAC network without additional registration with HAC. The ENC IN service will be activated by the first use of ENC device on motorways operated by HAC. Bina-Istra subscribers keep discounts on sections of the Istrian Y while the full amount of toll is charged on the sections of HAC.

### AUTOCESTA ZAGREB-MACELJ d.o.o. (AZM)

Tolls can be paid in cash in EUR, by credit or debit cards, INA fleet card, DKV fleet card (since 22.11.2022.) and by smart cards.

Users of prepaid toll payments via smart card benefit from discount which depends on vehicle category and frequency of trips. For the I and II vehicle categories discount on toll is 25% for smart card without time limit on amount replenished on the card (for amounts equal to or above 30 EUR) or 40% for the Ticket 40 which is valid for 40 days. Users of prepaid smart card for categories III and IV benefit from 13% discount on amount replenished on the card (for amounts equal to or above 250 EUR) for the prepaid smart card without time limit.

## Toll rates in 2023

### HRVATSKE AUTOCESTE d.o.o. (HAC)

In 2023 HAC did not change its unit toll rates. Seasonal toll tariffs (from 15.06. to 14.09.2023.) were not applied for IA, I and II vehicle categories (10% increase on regular toll tariffs).

From January 1<sup>st</sup>, 2023, toll prices are expressed in EUR and are obtained by converting the full amount of tolls in HRK without lipas with the conversion rate 1 EUR=7.5345 HRK and the values obtained are taken with one decimal place without rounding and the toll amounts are expressed to two decimal places, where the second decimal is "0".

### BINA-ISTRA d.d. (BINA)

From January 1<sup>st</sup>, 2023, the toll prices obtained by converting the existing toll prices in HRK on the October 1<sup>st</sup>, 2022, into EUR, by applying Article 15, paragraph 3 of the Act on the introduction of the EUR as the official currency in the Republic of Croatia, were applied.

As of March 7<sup>th</sup>, 2023, toll prices on certain sections have increased. Additionally, the "summer tariff" (from 01.06. to 30.09.2023) was applied at the Istrian Y also this summer. It is a special tariff that was approved by the Ministry of the Sea, Transport and Infrastructure and represents full toll tariff increased by 10%. For subscribers and local population using ETC device tolls remained unchanged. Since summer 2015 Bina-Istra has proposed to its users ETC package called EASY, offering a general discount of 10% without time limit.

ETC users still have the possibility to qualify for a series of discounts on the regular toll price. Bina-Istra ETC subscribers can use the Internet or SMS subscription to see the balance of their accounts and subscription expiry time and can also obtain the listing of passes through toll plazas. Furthermore, they can replenish their accounts and fill in and print invoices for payments via bank transfer.

With the aim of improving the service to its users, the company also launched several projects in 2023, the realization of which is expected in 2024.

### AUTOCESTA ZAGREB-MACELJ d.o.o. (AZM)

As of May 1<sup>st</sup>, 2023, toll rates on Zagreb Macelj motorway network have increased by 8.5%.



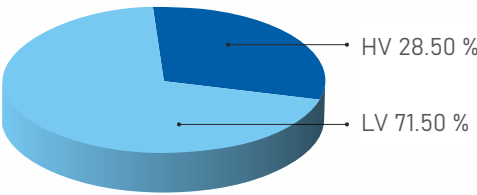
# Toll Revenues (without VAT)

In 2023, the total toll revenues for all motorway companies amounted to € 471,14 million which represents an increase of toll revenues by 10.48% when compared to the previous year.

- in EUR

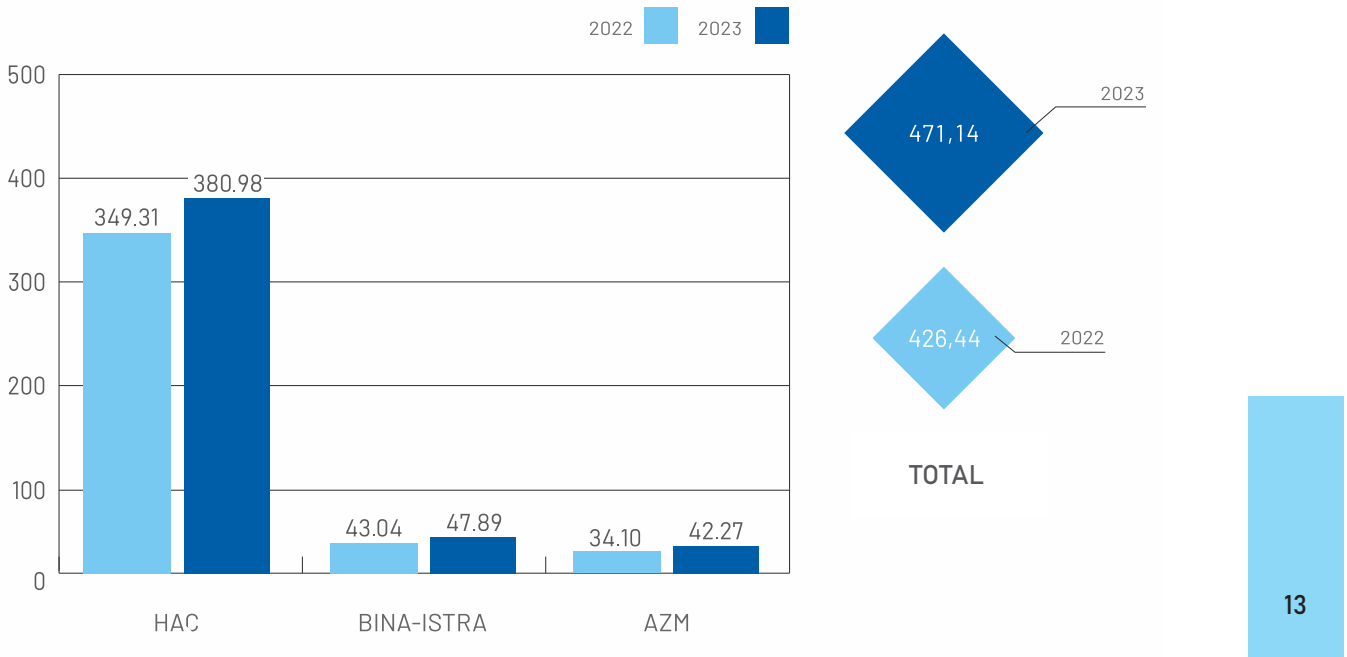
| Company    | 2022           |                |             | 2023           |                |             | change<br>23/22 % |
|------------|----------------|----------------|-------------|----------------|----------------|-------------|-------------------|
|            | Light vehicles | Heavy vehicles | Total       | Light vehicles | Heavy vehicles | Total       |                   |
| HAC        | 245.410.072    | 103.902.007    | 349.312.079 | 269.169.154    | 111.807.304    | 380.976.458 | 9.06              |
| BINA-ISTRA | 33.942.843     | 9.100.597      | 43.043.440  | 37.895.094     | 9.994.518      | 47.889.612  | 11.26             |
| AZM        | 23.476.343     | 10.620.490     | 34.096.832  | 29.810.976     | 12.464.683     | 42.275.659  | 23.99             |
| TOTAL      | 302.829.258    | 123.623.094    | 426.452.351 | 336.875.224    | 134.266.505    | 471.141.729 | 10.48             |

## Toll revenues breakdown for light vehicles and heavy vehicles 2023

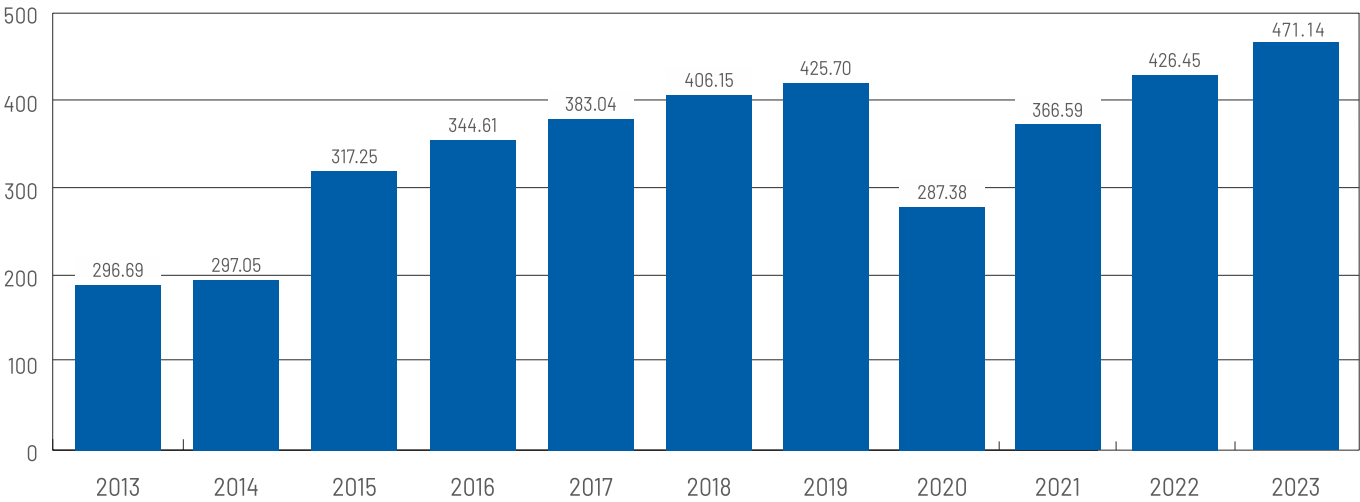


| Company    | 2023                        |                            |                           |                 |                 |              |
|------------|-----------------------------|----------------------------|---------------------------|-----------------|-----------------|--------------|
|            | Light vehicles<br>(IA+I+II) | Heavy vehicles<br>(III+IV) | Total<br>(IA+I+II+III+IV) | LV %<br>(23/22) | HV %<br>(23/22) | %<br>(23/22) |
| HAC        | 269.169.154                 | 111.807.304                | 380.976.458               | 9.68            | 7.61            | 9.06         |
| BINA-ISTRA | 37.895.094                  | 9.994.518                  | 47.889.612                | 11.64           | 9.82            | 11.26        |
| AZM        | 29.810.976                  | 12.464.683                 | 42.275.659                | 26.98           | 17.36           | 23.99        |
| TOTAL      | 336.875.224                 | 134.266.505                | 471.141.729               | 11.24           | 8.61            | 10.48        |

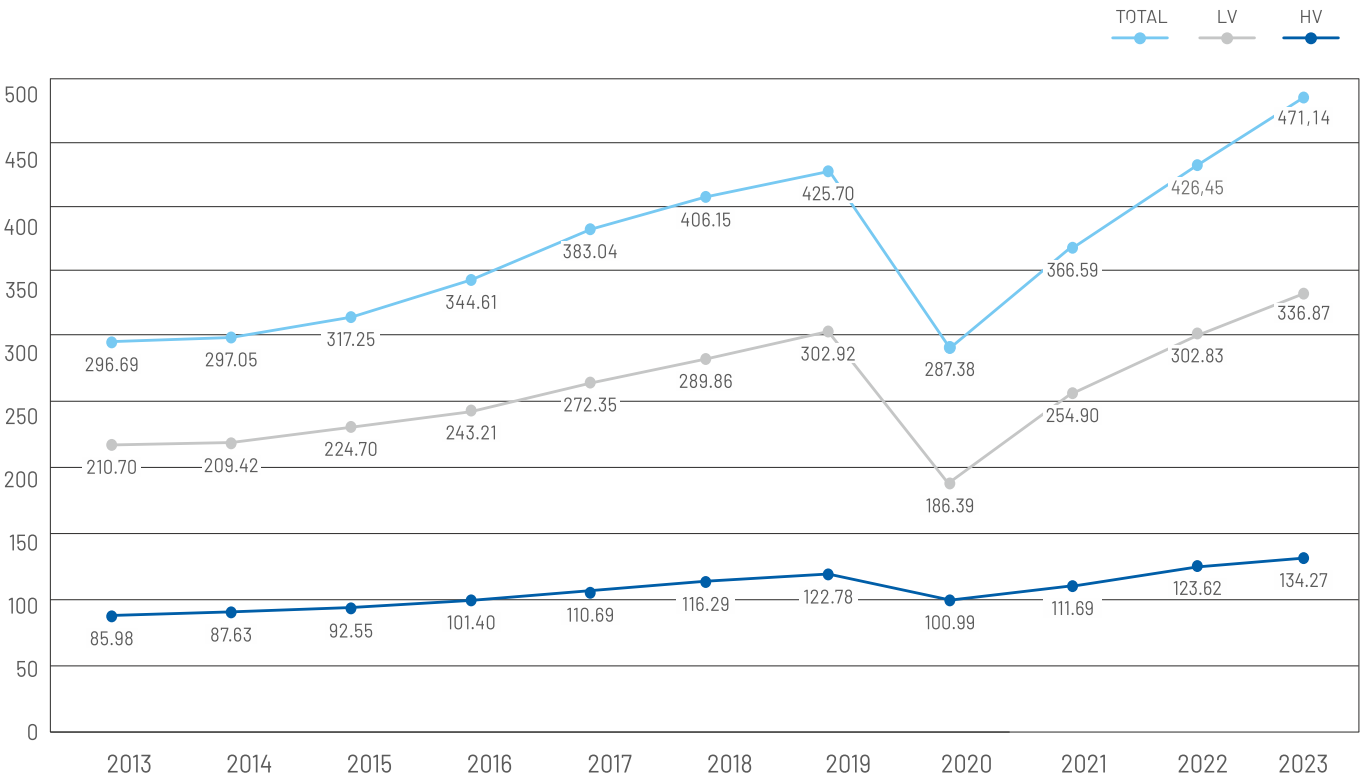
## Toll revenues 2022 – 2023, without VAT (in mio EUR)



Toll revenues 2013 – 2023, without VAT (in mio EUR)



Toll revenues for light and heavy vehicles 2013 – 2023, without VAT (in mio EUR)



# Traffic Safety

In 2023 the total of 3.594 traffic accidents, with 34 fatalities and 543 injuries were reported. The total number of all traffic accidents reported in 2023 increased by 16.61% but the total number of fatalities decreased by 15% when compared to the previous year. Number of injured increased by 5.03% when compared to the year 2022.

| N. of traffic accidents       | 2022    |               |     |         | 2023    |               |     |         | change 23/22 % |
|-------------------------------|---------|---------------|-----|---------|---------|---------------|-----|---------|----------------|
|                               | HAC*    | BINA ISTRAN** | AZM | CROATIA | HAC*    | BINA ISTRAN** | AZM | CROATIA |                |
| km                            | 1,108.4 | 141           | 60  | 1,309.4 | 1,108.4 | 141           | 60  | 1,309.4 |                |
| with fatalities               | 21      | 3             | 3   | 27      | 21      | 3             | 1   | 25      | -7.41          |
| with injured                  | 267     | 16            | 19  | 302     | 308     | 22            | 16  | 346     | 14.57          |
| with material damage          | 2.549   | 80            | 124 | 2.753   | 3.022   | 59            | 142 | 3.223   | 17.07          |
| Total n. of traffic accidents | 2.837   | 99            | 146 | 3.082   | 3.351   | 84            | 159 | 3.594   | 16.61          |
| Total n. of injuries          | 457     | 21            | 39  | 517     | 489     | 35            | 19  | 543     | 5.03           |
| Total n. of fatalities        | 34      | 3             | 3   | 40      | 27      | 6             | 1   | 34      | -15.00         |

Length of network used for calculation of traffic accidents

\* HAC revised number of km

\*\* BINA ISTRAN figures on traffic accidents are given for the total network of Istrian Y (both motorway and semi motorway) while safety ratios are given only for stretches in full motorway profile to be comparable with other concessionaires.

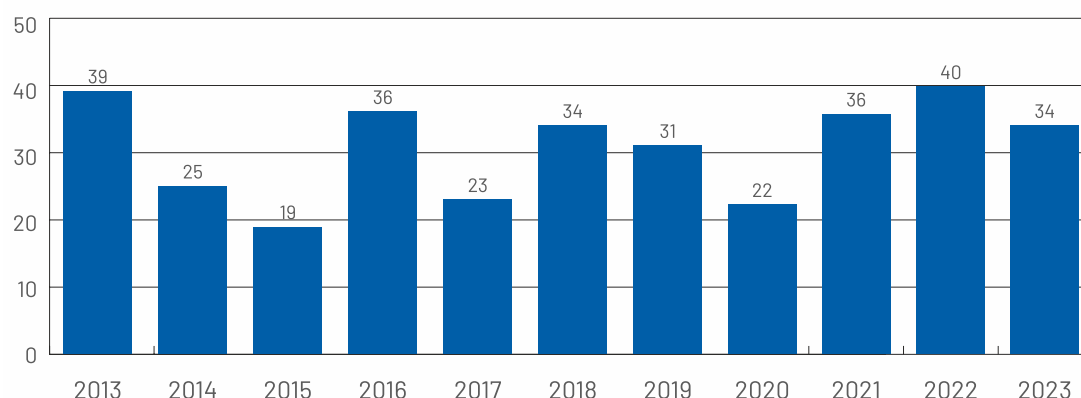
## Main safety ratios

| Rate                          | Per 10 <sup>9</sup> vehicles/ km in 2023 |              |       |         | Change 2023/2022 in % |              |        |         |
|-------------------------------|--|--------------|-------|---------|-----------------------|--------------|--------|---------|
|                               | HAC                                      | BINA ISTRAN* | AZM   | RH      | HAC                   | BINA ISTRAN* | AZM    | CROATIA |
| km                            | 1,108.4                                  | 125          | 60    | 1,293.4 | 1,108.4               | 125          | 60     | 1,293.4 |
| Personal injury accident rate | 36.77                                    | 12.75        | 31.31 | 39.15   | 1.55                  | 30.23        | -26.93 | 14.57   |
| Personal injury rate          | 58.37                                    | 20.29        | 37.18 | 61.44   | -2.96                 | -1.27        | -57.70 | 5.03    |
| Fatal accident rate           | 2.51                                     | 1.74         | 1.96  | 2.83    | -11.62                | -11.22       | 196.00 | -7.41   |
| Rate of dead                  | 3.22                                     | 3.47         | 1.96  | 3.85    | -28.13                | -100         | 196.00 | -15.00  |

Length of network used for calculation of traffic accidents

\* BINA-ISTRAN figures on traffic accidents are given for the total network of Istrian Y (both motorway and semi motorway) while safety ratios are given only for stretches in full motorway profile to be comparable with other concessionaires. In 2023 for calculation were used 125 km of full motorway.

## Total number of fatalities 2013 – 2023



## Road safety

| REPUBLIC OF CROATIA* - ALL ROADS                        | 2022 | 2023 | change 23/22 % |
|---|------|------|----------------|
| N. of dead (fatalities) on ALL roads in the country     | 271  | 273  | 0.74           |
| N. of dead (fatalities) on ALL motorways in the country | 40   | 34   | -15.00         |

\*Source: Ministry of the Interior of the Republic of Croatia 2023.

| MOTORWAY COMPANIES                               | 2022  | 2023  | change 23/22 % |
|--|-------|-------|----------------|
| N. of persons injured (light and heavy injuries) | 517   | 543   | 5.03           |
| Personal injury rate                             | 58.50 | 61.44 | 5.03           |
| N. of fatal accidents                            | 27    | 25    | -7.41          |
| Fatal accident rate                              | 3.06  | 2.83  | -7.41          |
| N. of dead (fatalities)                          | 40    | 34    | -15.00         |
| Fatality rate on members network                 | 4.53  | 3.85  | -15.00         |

## Long and Medium-Term Development Programme

According to the Roads Act, the construction and maintenance of motorways is planned:

- In the long term, through the Public Roads Development Strategy passed by the Croatian Parliament
- In the medium term, through four-year Public Road Construction and Maintenance Programmes passed by the Government of the Republic of Croatia based on the proposal of the Ministry of Sea, Transport, and Infrastructure,
- Annually, through Construction and Maintenance Plans defined by individual motorway operating companies.

In order to provide quality transport planning the Government of the Republic of Croatia prepared in 2017 the National Transport Model which was followed by adoption of the Strategy of Transport Development of the Republic of Croatia for the period 2017–2030 and set up the framework for further development of road network in Croatia.

To date the Government of the Republic of Croatia adopted five four-year Public Road Construction and Maintenance Programms (2001–2004, 2005–2008, 2009–2012, 2013–2016, 2017–2020). The Republic of Croatia will complete its strategic goals and implement the standard of routine road maintenance as planned, harmonize the entire core road network with modern road transport requirements and complete the required network of motorways and fast roads in Croatia.

According to Public Road Construction and Maintenance Programme 2017 – 2020 the following motorways and express roads remain to be completed and opened to traffic:

### A1 Zagreb – Split – Dubrovnik

- Dugopolje Interchange – reconstruction and widening of the existing interchange as to improve traffic flow. Works are under way.

### A5 Beli Manastir – Osijek – Svilaj

- Hungarian border – Beli Manastir Section (5,0 km) – completion of construction of Corridor Vc in full motorway profile and link with Hungarian border. Opening is planned in 2025.

### A7 Rupa – Rijeka – Žuta Lokva

- Učka (Matulji) Interchange – construction of the new Interchange as to improve traffic flow and to prepare future access to motorway towards Učka tunnel. Opening is planned in 2024.
- First Phase of Novi Vinodolski By-Pass, being the first phase of construction of future motorway Križišće –Žuta Lokva (7,0 km). Works are under way. Trinajstići Interchange on the A7 Motorway Rupa–Rijeka was opened to traffic in October 2023.



## **A8 Kanfanar – Matulji**

- Widening to full motorway profile of the subsection Matulji Interchange – Učka Tunnel, and widening of structures Limska Draga Viaduct and Mirna Bridge (3.88km).
- Construction of second tube of Učka Tunnel including the Vranja – Učka Tunnel Section (Subphase 2B2-1).

Opening of this subsection and tunnel is planned for 2024.

Total length of all above widenings is 7.02 km.

## **A11 Zagreb – Sisak**

- Lekenik – Sisak Interchange Section (10,9 km) – completion of Zagreb-Sisak motorway as to enable connection of Sisak town with Croatian motorway network. Opening is planned in 2024.
- Jakuševac Interchange – Sarajevska street – connection of the existing Jakuševac Interchange with urban road network of Zagreb Town (additional southern entrance to the city of Zagreb) – connecting road (1.0 km) including construction of the “Ranžirni” Viaduct – design and land acquisition are under way. The public procurement procedure for the works was launched at the end of 2023.

After 2020, the next Public Road Construction and Maintenance Program was not adopted. Proposals were prepared, but they have not been officially approved. Motorway companies carry out works in accordance with their adopted annual plans.

Projects in the process of procurement and execution of works are as follows:

## **A1 Zagreb – Split – Dubrovnik**

- Rudine – Slano (9.0km) – public procurement procedure is under way.
- Slano – Rest service area Mravinjac – (11.5km) – both subsections will ensure connection with Southern Dalmatia and junction with the existing Pelješac bridge and access roads – public procurement procedure is under way.
- Rašćane Interchange – construction of new interchange for better communication between the A1 motorway and the local road network.
- Šibenik Interchange – Podi – construction of the new Interchange as to ensure access to working zone Podi. Opening is planned in 2024.

## **A3 Bregana – Lipovac**

- Požega (Staro Petrovo Selo) Interchange – connection of A3 motorway with fast road Požega–Staro Petrovo Selo. Both roads will ensure better connection and boost social and economic development of the region.

## **A5 Beli Manastir – Osijek – Svilaj**

- Andrijevi Interchange – construction of new interchange as to ensure better connection of the A5 motorway and surrounding towns as a prerequisite for faster development of the catchment area – public procurement procedure is under way.

## **A6 Bosiljevo – Rijeka**

- Orehovica Interchange – reconstruction and widening of the existing interchange, works are in progress.

## **A7 Rupa – Rijeka – Žuta Lokva**

- Križišće – Jadranovo Section (5.20 km) – public procurement procedure is under way.
- Jadranovo – Selce Section (12.30) construction of the two above sections of motorway – public procurement procedure is under way.

## **A8 Kanfanar – Matulji**

- Opatija – Matulji Interchange – widening of short existing stretch to full motorway profile (0.5 km).
- Widening to full motorway of the existing structures Limska Draga Bridge and Mirna Bridge including the subsection Matulji–Učka Tunnel (3.88 km).

# Significant activities in 2023 and plans for 2024

## HRVATSKE AUTOCESTE d.o.o. (HAC)

In 2023, in the framework of renewal project for rest service area network on the A3 motorway the following works have been carried out:

### A1 Zagreb – Split – Dubrovnik

- Opening to service of the newly built service facilities at the service area Desinec North.

### A3 Bregana – Zagreb – Lipovac

- Construction and arrangement of the service area Črnek North and refurbishment of the service area Nova Gradiška Dragalić North.
- Arranging and equipping of secured parking zone for hauliers at service area Ježevo South.
- Opening to service of the newly built service facilities at the service area Stari Grabovac (Novska) North and South and Nova Gradiška Dragalić North.

### A4 Zagreb – Goričan

- Opening to service of the newly built service facilities at the service areas Sesvete East and West

In 2023 the Company was also focused on works as follows:

### A5 Beli Manastir – Osijek – border with Bosnia and Herzegovina:

- Start of construction works on the A5 motorway the Hungarian border to Beli Manastir Section (5.0 km).

### A6 Bosiljevo – Rijeka

- Start of reconstruction works of the Orehovica Interchange.

### A7 Rupa – Rijeka – Žuta Lokva

- Completion of construction of the Trinajstići Interchange

In addition to the above said in 2023 HAC carried out the following actions:

- Heavy maintenance activities including renewal and reconstruction of pavement and road structures,
- Cleaning up of cuttings, water drainage system, road equipment and road signs,
- Procurement of ITS equipment in TMCC (application of ITS Directive and DATEX II protocol),
- Upgrade of tunnels with requirements of the Directive 2004/54/EC (construction requirements),
- Harmonizing of safety barriers with new regulation requirements, works at TMCC, systems etc. with aim to extend the life span of assets and improve quality and safety of motorway as well as routine maintenance in compliance with Regulations and Standards for Routine Maintenance.



In 2024 the Company plans the following main activities:

**A1 Zagreb – Split – Dubrovnik**

- Completion and opening to traffic of the Šibenik (Podi) Interchange.
- Start of construction works on the Rudine–Slano Section.
- Start of construction works on the Section Slano – Mravinjac service area.

**A3 Bregana – Zagreb – Lipovac:**

- Start of construction works of the Požega (Staro Petrovo Selo) Interchange.
- Continuation of activities related to project of revitalizing of service areas network on A3 motorway: Service areas Gradna North and South, Zagreb (Plitvice) South, Stari Grabovac (Novska) North and South, Kraljeva Velika (Lipovljani) North and South.
- Setting up of noise barriers in accordance with Noise Protection Action Plan for A3 Motorway.

**A5 Beli Manastir – Osijek-Svilaj:**

- Start of construction of the new Andrijeveci Interchange.

**A7 Rupa – Rijeka – Žuta Lokva:**

- Completion of works on the Učka (Matulji) Interchange.
- Start of construction works on the Križišće–Selce Section.
- Start of construction works on the Selce–Novi Vinodolski Section.

**A11 Zagreb – Sisak**

- Completion of works and opening to traffic of the last Section Lekenik–Sisak.

**Start of construction works on junction from the Jakuševac Interchange to Sarajevska street.**

**Commencement of implementation of new free flow tolling system.**

In addition to above said in 2024 HAC plans to carry out heavy maintenance as follows:

- Continuation of implementation of ITS system in TMCC centres (implementation of ITS Directive and DATEX II protocol),
- Upgrade of tunnels with requirements of the Directive 2004/54/EC (equipment),
- Revitalization of service areas network,
- Optimizing of motorway lighting on HAC network in the framework of the National Energy Efficiency Action Plan,
- Several projects aiming at improving the road safety (setting up of signing to prevent ghost drivers, treatment of potentially dangerous road spots, replacement of obsolete variable road signing, implementation of speed monitoring system on motorway network etc.).

In the long term the Company plans as follows:

- Implementation of the new free flow toll system,
- Refurbishment of service areas,
- Construction of the third lane of Zagreb By-Pass,
- Construction of the third lane of Zagreb – Karlovac – Bosiljevo Section on A1 Motorway,
- Upgrade of network of motorway interchanges.



## BINA-ISTRA d.d. (BINA)

In 2023 the Company's activities were focused on:

- Continuation of works of widening of the existing section Matulji-Učka Tunnel (Subphase 2B2-2) to full motorway profile,
- Widening to full motorway profile of road structures Mirna Viaduct and Limska Draga Viaduct (Subphase 2B-3).
- Debt restructuring,
- Continuation of works related to construction of the second tube of the existing Učka tunnel and construction of the new Interchange at Vranja toll plaza on the Vranja-Učka Tunnel Section,
- Promotion of ETC subscription service for new users aimed at improving traffic flow on toll plazas.

For seventh year in a row Bina-Istra proposes to its users a new ETC subscription model with unlimited duration of funds available on their accounts and 10% discount on toll price.

In addition, all current and future ETC users have the possibility to associate their ETC device with their credit card or INA fleet card account. In that way users do not need to replenish their ETC account, but their credit card or INA fleet card is charged on monthly basis for all trips made in one month. The feedback from users is positive.

In 2024 Company plans the following activities:

- Completion of the second tube of Učka tunnel including the Vranja-Učka tunnel Section and enlargement of the Kvarner rest service area (Subphase 2B2-1) and opening to traffic,
- Continuation of construction of two additional traffic lanes between Matulji and Učka tunnel (Subphase 2B2-2) and widening to full motorway profile of the Limska Draga and the Mirna Viaducts (Subphase 2B2-3),
- Debt restructuring,
- Opening to traffic of the Kvarner service area with filling station and restaurant,
- Improving of the service of electric charging stations at service areas,
- Installing of additional equipment as to improve traffic flow at certain toll plazas.

In the long term the Company plans as follows:

- Debt restructuring/refinancing,
- Introduction of free flow toll system.

## AUTOCESTA ZAGREB-MACELJ d.o.o. (AZM)

In 2023 the Company was focused on works as follows:

- Completion of renewal and replacement of lighting system and migration to LED technology on all interchanges, toll plazas and service areas along the motorway as well as full compliance with the requirements and provisions of the Law on Protection from Light Pollution.

In 2024 Company plans the following activities:

- Renewal of lighting system and replacement with LED technology in the tunnels Sveta Tri Kralja, Brezovica and Vidovci.

In the long term the Company plans as follows:

- Construction of the second carriageway (widening to full motorway profile) on the existing Krapina – Đurmanec Section (4.2 km),
- Building of noise barriers on the sections of motorway from Zagreb West Interchange to Krapina Interchange.



## Key data for 2023

| CROATIA   | 2022     | 2023     | % (23/22) |
|---|----------|----------|-----------|
| The total length of motorway network, in km, as on 31/12/2023 | 1,341.10 | 1,341.10 | 0         |
| Tolled network length   | 1,252.06 | 1,252.06 | 0         |
| 2 x 1 lanes not including the emergency lane                  | 15.30    | 15.30    | 0         |
| 2 x 2 lanes not including the emergency lane                  | 1,305.00 | 1,305.00 | 0         |
| 2 x 3 lanes not including the emergency lane                  | 20.80    | 20.80    | 0         |
| 2 x 4 lanes not including the emergency lane                  | 0        | 0        | 0         |
|   |          |          |           |
| Length of tunnels longer than 500 m (in km of tunnel tubes)   | 80.63    | 80.63    | 0         |
| Number of tunnels above 500 m operated by the members         | 31       | 31       | 0         |
| Single directional length of bridges longer than 100 m        | 54.32    | 52.89*   | -2.6      |
| Number of bridges above 100 m operated by the members         | 174      | 173      | -0.2      |
| NETWORK   |          |          |           |
| Number of km opened to traffic                                | 2022     | 2023     |           |
| MOTORWAYS   | 24.60    | 0        | -100      |
| WIDENING OF EXISTING STRETCH TO FULL MOTORWAY                 | 0        | 0        | 0         |
| Number of km under construction                               | 2023     | 2024     |           |
| MOTORWAYS   | 15.90    | 38.00    | 65.9      |
| WIDENING OF EXISTING STRETCH TO FULL MOTORWAY <sup>(1)</sup>  | 7.02     | 4.38     | -37.6     |
| CONSTRUCTION OF THE FIRST PHASE OF FUTURE MOTORWAY            | 7.00     | 0        | -100      |
| Planned opening of new sections, in km                        | 2023     | 2024     |           |
| MOTORWAYS   | 0        | 10.90    | 100       |
| WIDENING OF EXISTING STRETCH TO FULL MOTORWAY <sup>(1)</sup>  | 0        | 5.31     | 100       |
| INVESTMENTS   |          |          |           |
| New investments (in M€)                                       | 98.85    | 132.55   | 99.7      |
| Investments into existing network (in M€)                     | 65.35    | 86.42    | 99.8      |
| Total annual investments (in M€)                              | 164.20   | 218.97   | 99.8      |
| TOLL REVENUES, in EUR (without VAT)                           |          |          |           |
| Annual toll revenues - total (in M€)                          | 426.45   | 471.14   | 10.5      |
| Annual toll revenues from light vehicles (in M€)              | 302.83   | 336.87   | 11.2      |
| Annual toll revenues from heavy vehicles (in M€)              | 123.62   | 134.27   | 8.6       |
| Taxes other than VAT calculated on toll                       | 0        | 0        | 0         |
| VAT %   | 25%      | 25%      | 0         |
| Calculated VAT/VAT charged on tolls (in M€)                   | 106.61   | 117.79   | 10.5      |
| EMPLOYMENT  |          |          |           |
| Total full-time employees <sup>(2)</sup>                      | 2,760    | 2,752    | -0.3      |

| TRAFFIC DATA   |            |            |        |
|--|------------|------------|--------|
| AADT LV + HV   | 18,967     | 20,956     | 10.5   |
| AADT LIGHT VEHICLES  | 16,348     | 17,946     | 9.8    |
| AADT TRUCKS  | 2,619      | 3,010      | 14.9   |
| KILOMETRES TRAVELLED (10 <sup>6</sup> x km)                                  |            |            |        |
| Total number of kilometres travelled (10 <sup>6</sup> x km)                  | 9,062.64   | 10,013.80  | 10.5   |
| Number of kilometres travelled (10 <sup>6</sup> x km) - light vehicles       | 7,808.81   | 8,573.41   | 9.8    |
| Number of kilometres travelled (10 <sup>6</sup> x km) - heavy vehicles       | 1,253.83   | 1,440.39   | 14.9   |
| ROAD SAFETY  |            |            |        |
| Total number of accidents on motorways <sup>(3)</sup>                        | 3,082      | 3,594      | 16.61  |
| Number of accidents with fatalities  | 27         | 25         | -7.4   |
| Number of accidents with injuries  | 302        | 346        | 14.6   |
| Number of fatalities   | 40         | 34         | -15.00 |
| Number of injuries   | 517        | 543        | 5.03   |
| Fatality rate  | 4.53       | 3.85       | -15.00 |
| Number of kilometres travelled (10 <sup>6</sup> x km)                        | 9,062.64   | 10,013.80  | 10.5   |
| TOLLING  |            |            |        |
| Number of toll transactions - total  | 80,172,262 | 89,229,330 | 11.30  |
| Number of toll transactions - light vehicles                                 | 70,344,584 | 78,627,872 | 11.78  |
| Number of toll transactions - heavy vehicles                                 | 9,827,678  | 10,601,458 | 7.87   |
| Total number of ETC transactions   | 29,270,413 | 32,910,194 | 12.44  |
| % of manual transactions<br>(other forms of payment; CC, BC and fleet cards) | 62%        | 55 %       | -10.95 |
| % of ETC transactions <sup>(4)</sup>   | 38%        | 42 %       | 10.53  |
| Number of toll plazas  | 109        | 110        | 0.92   |
| Number of toll lanes   | 753        | 763        | 1.33   |
| Number of ETC lanes or mixed lanes   | 503        | 507        | 0.80   |
| Number of ETC subscribers - light vehicles                                   | 490,821    | 543,275    | 10.69  |
| Number of ETC subscribers - heavy vehicle                                    | 74,426     | 79,188     | 6.40   |
| Number of ETC subscribers - total  | 565,247    | 622,463    | 10.12  |
| Number of ETC devices in use   | 719,095    | 785,917    | 9.29   |
| Length of the network tolled electronically (in km) <sup>(5)</sup>           | 1,178.20   | 1,178.20   | 0      |
| Length of the network tolled in the MLFF (Multi-lane free flow)              | 0          | 0          | 0      |
| ITS  |            |            |        |
| Length of the network covered by traffic monitoring                          | 1,125.50   | 1,172.16   | 4.15   |

| SERVICES   |       |       |       |
|--|-------|-------|-------|
| Number of truck parking lots <sup>(6)</sup>                                    | 2,059 | 2,059 | 0     |
| Number of roadside service areas (with filling stations)                       | 75    | 76    | 1.33  |
| Number of restaurants  | 32    | 40    | 25.00 |
| Number of hotels   | 8     | 8     | 0     |
| Total number of all types of service areas                                     | 124   | 124   | 0     |
| ENVIRONMENT  |       |       |       |
| Euro-emission classes (yes/no)   | N0    | N0    |       |
| If yes: % of »clean traffic«<br>(per Euro class categories EURO V, VI and EEV) | n/a   | n/a   |       |

\* As per 31.12.2023. Krk Bridge was handed over for operation and maintenance to Hrvatske ceste (Croatian Roads)

<sup>(1)</sup> Widening of the existing stretch of Istrian Y to full motorway profile

<sup>(2)</sup> Total number of work force in all motorway companies and their operators

<sup>(3)</sup> BINA-ISTRA figures on traffic accidents are given for the total network of Istrian Y (both motorway and semi motorway) while safety ratios are given only for stretches in full motorway profile (125 km) to be comparable with other operators.

<sup>(4)</sup> The percentage of share of ETC transaction in total transactions including AZM Company (which does not have ETC yet) was 36.9% in 2023

<sup>(5)</sup> Autocesta Zagreb-Macelj d.o.o. has not introduced the ETC yet

<sup>(6)</sup> Number of parking lots for 2023 also includes places for buses (also included in 2022 but not included in 2021)





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