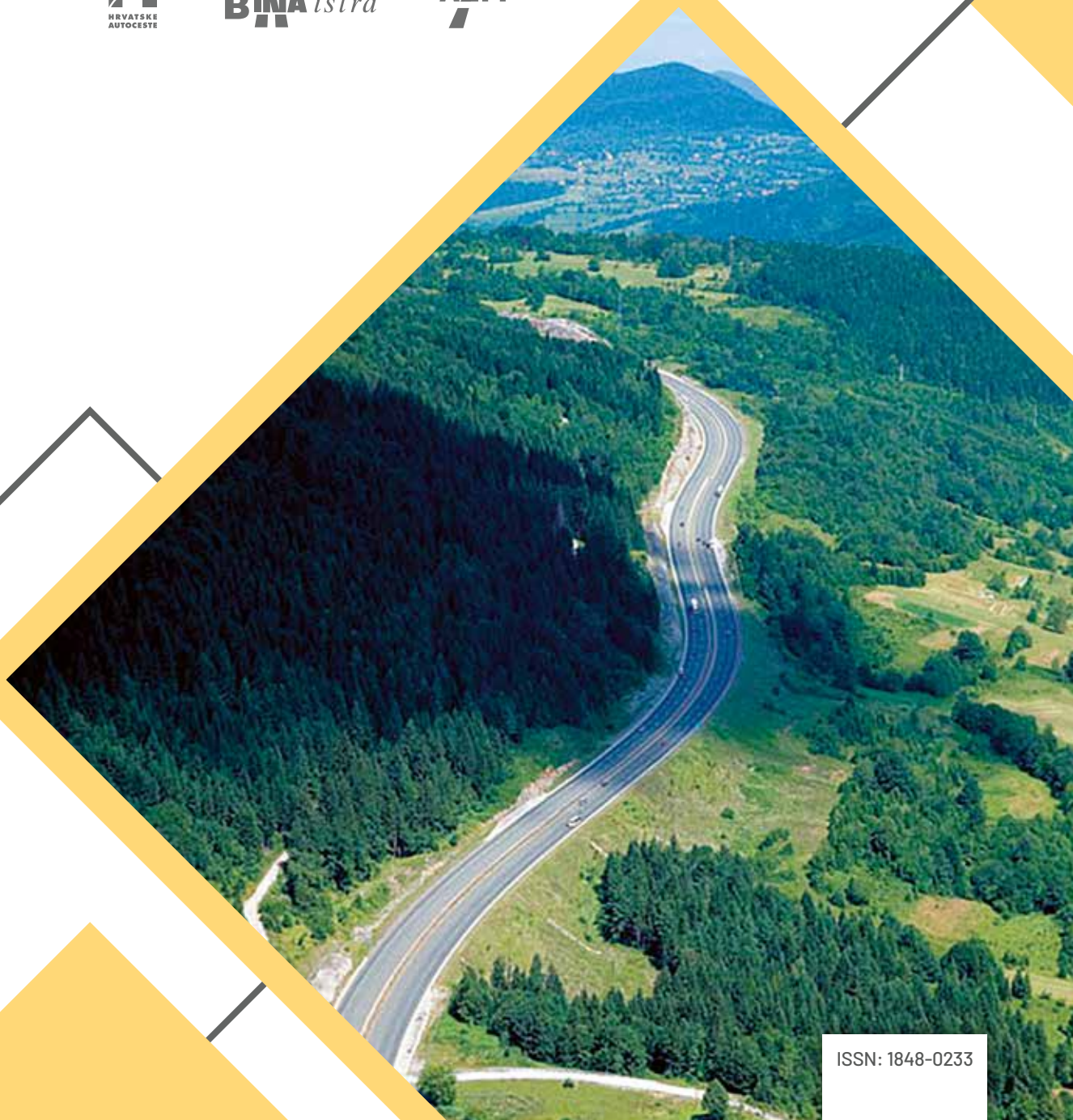




THE CROATIAN ASSOCIATION OF TOLL
MOTORWAYS CONCESSIONAIRES

NATIONAL REPORT ON MOTORWAYS 2022



ISSN: 1848-0233



The Croatian Association of Toll
Motorways Concessionaires

Širolina 4
10 000 Zagreb – CRO

phone: + 385 1 4694 526
e-mail: info@huka.hr
brankica.bajic@huka.hr
www.huka.hr

Boris Huzjan
President

Dario Silić
Vice-President

Publisher: HUKA
Editorial Board:
Boris Huzjan, Editor in Chief
Brankica Bajić, Technical Editor
Graphic design:
Modacom plus d.o.o.
Photographs: HUKA Archive
Printed by: Kerschoffset d.o.o.
Published: May 2023

*In 2022, on A5 motorway Beli Manastir – Osijek –
Bosnian border (part of Vc Corridor) the Hrvatske
autoceste Motorway Company completed works
on the 17,5 km long subsection from Beli Manastir
to Halasica Bridge whereby the entire section
from Beli Manastir to Osijek Interchange of total
length of 24.6 km was opened to traffic.*



Current State of the Network

As on 31 December 2022, the total length of the motorway network in Croatia amounted to 1,341.10 km. In 2022 motorways were operated by 3 companies:

- Hrvatske autoceste d.o.o. (operates motorways A1, A3, A4, A5, A6, A7, A10, A11 and Bridge Krk)
- Bina-Istra d.d. (operates the so-called Istrian Y – A8 i A9),
- Autocesta Zagreb – Macelj d.o.o. (operates motorway A2).

Company	Total network 2021	Openings in 2022	Total network 2022	Plan openings in 2023	Total network plan for 2023
HAC d.o.o.*	1,112.40*	24.60	1,140.10*	0	1,140.10*
BINA-ISTRA d.d.	141.00	0	141.00	0	141.00
AZM d.o.o.	60.00	0	60.00	0	60.00
TOTAL	1,313.40*	24.60	1,341.10*	0	1,341.10*

*Revised number of km

Opening of new stretches in 2022

In 2022, on A5 motorway Beli Manastir – Osijek – Bosnian border (part of Vc Corridor) the Hrvatske autoceste Motorway Company completed works on the 17,5 km long subsection from Beli Manastir to Halasica Bridge whereby the entire section from Beli Manastir to Osijek Interchange of total length of 24.6 km was opened to traffic.

Tunnels and bridges on the network – single direction

Company	Km of Tunnels	Km of Bridges	Total Tunnels and Bridges
HAC*	41.52	54.92	96.44
BINA-ISTRA	5.31	9.36	14.67
AZM*	4.70	1.67	6.37
TOTAL	51.53	65.95	117.48

*Length of tunnels and bridges was revised

Works in Progress

Works in progress as per 31st December 2022

As per 31st December 2022 the works were in progress as follows:

- 10.9 km motorways
- 7.0 km of first phase of full motorway by-pass
- 3.14 km widening to full motorway profile

Motorway	Section	Km	Description
A1 ZAGREB-SPLIT-DUBROVNIK	Šibenik (Podi) Interchange	0.0	Access to Podi business zone
	Dugopolje Interchange (reconstruction)	0.0	Widening of the existing interchange to improve traffic flow
A7 RUPA – RIJEKA – ŽUTA LOKVA	First Phase of Novi Vinodolski by-pass	7.0	Construction of a section of future motorway Križišće – Žuta Lokva
	Trinajstići Interchange	0.0	Access to business zones. Opening to traffic planned for 2023
	Matulji Interchange	0.0	Interchange shall improve traffic flow and later the connection to the motorway to Učka tunnel
A8 KANFANAR – MATULJI	Construction of 2 nd tube of the tunnel Učka including Subsection Vranja – Učka Tunnel	3.14	Widening to full motorway profile of the existing stretch
A11 ZAGREB – SISAK	Lekenik – Sisak Interchange	10.9	Completion of motorway in order to connect Sisak to the motorway network. Opening is planned for 2024

Openings to traffic In 2023

In 2023, construction works on the motorway sections already started in 2022 will continue but no new section will be completed nor opened to traffic.

Start of new works in 2023










In addition to the continuation of works from the previous year, the following new works will start in 2023:

- 5.0 km of new motorways
- 2.0 km of widening to full motorway profile

Motorway	Section	Km	Description
A5 BELI MANASTIR – OSIJEK – SVILAJ	Hungarian border – Beli Manastir	5.0	Completion of construction of the Corridor Vc
A6 BOSILJEVO – RIJEKA	Orehovica Interchange	0.0	Reconstruction and upgrade of the existing Interchange
A8 KANFANAR – MATULJI A9 UMAG – PULA	Vranja – Učka Tunnel	2.0	Upgrade to full motorway profile of the existing structures Limska Draga viaduct and Mirna bridge, including subsection Matulji Interchange – Učka Tunnel
A11 ZAGREB – SISAK	Lekenik Interchange	0.0	Reconstruction of the Lekenik Interchange and connection with Lekenik business zone

Motorways in 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 31/12/2022			1.341.10



Cost of Investment and Financing

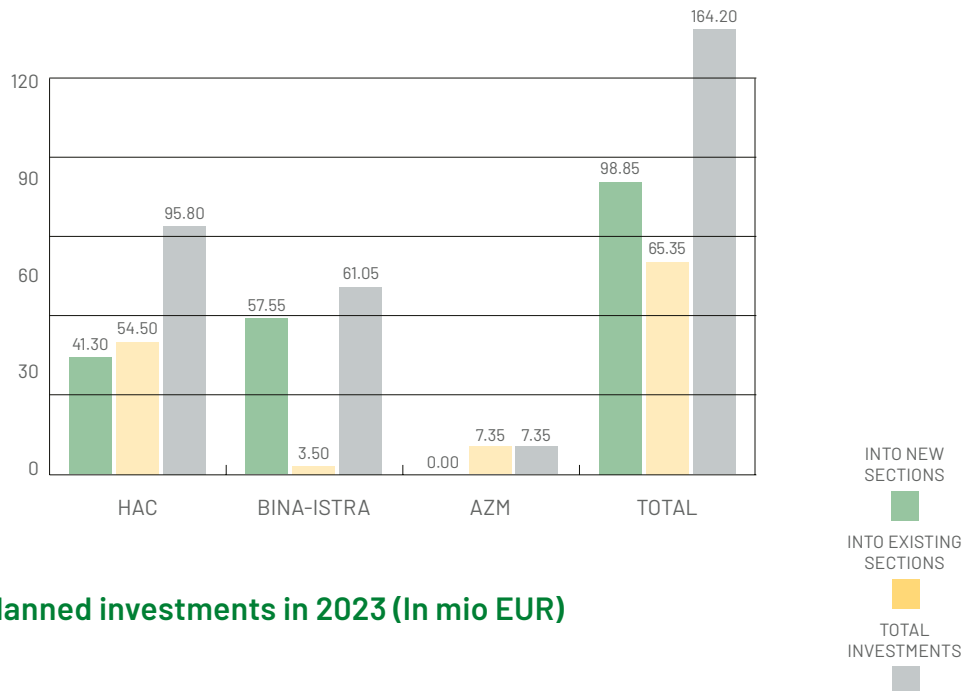
The total of € 98.85 million was invested in the construction of new motorways in 2022, while € 65.35 million was invested into sections under traffic.

- In mio EUR

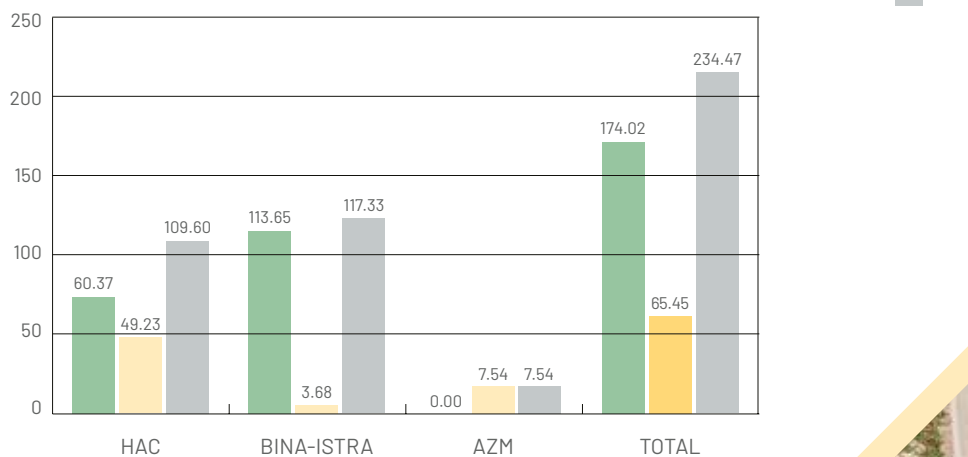
Company	Investments in 2022		Plan for 2023	
	Into new sections	Into existing sections	Into new sections	Into existing sections
HAC	41.30	54.50	60.37	49.23
BINA-ISTRA	57.55	3.50	113.65	3.68
AZM	0	7.35	0	7.54
TOTAL	98.85	65.35	174.02	60.45
TOTAL INVESTMENTS	164.20		234.47	

1 EUR=7.53450 HRK (The Council of the EU decided on July 12, 2022 that the Republic of Croatia had fulfilled the necessary conditions for adoption of the euro with effect from January 1, 2023, and that the conversion rate should be set at 7.53450 Croatian Kuna per 1 EUR)

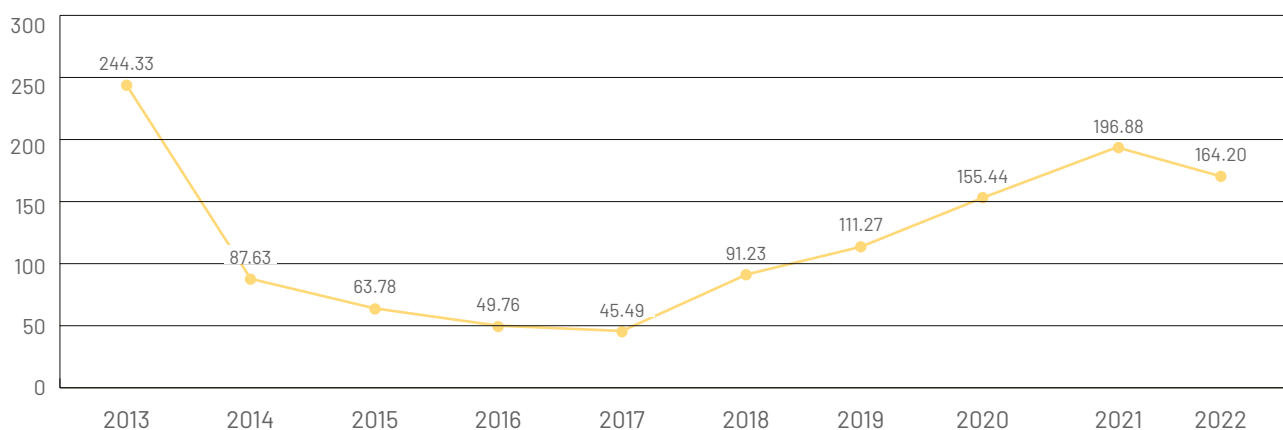
Investments in 2022 (In mio EUR)



Planned investments in 2023 (In mio EUR)



Total investments 2013 – 2022 (In mio EUR)



Source of investments financing in 2022 (%)	HAC	BINA-ISTRA	AZM
Loans	27.48	0	0
Proper resources	54.49	0	0
Revenues from tolls and other revenues	0	56.00	100
Revenues from fuel (EUR 0.026/l)	15.66	0	0
Reimbursable and non-reimbursable state funding	0	44.00	0
EU funds	2.37	0	0
TOTAL	100	100	100



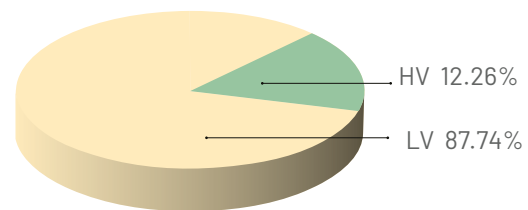
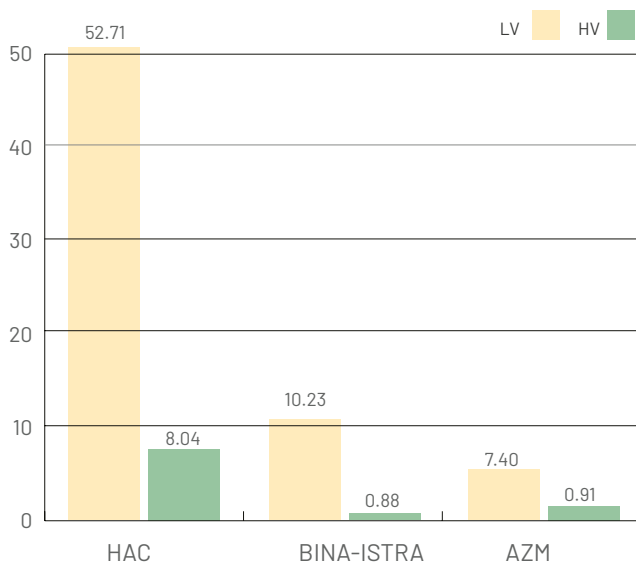
Traffic

In 2022 all motorway companies experienced increase in total traffic for all categories of vehicles by 15% in comparison with the previous year.

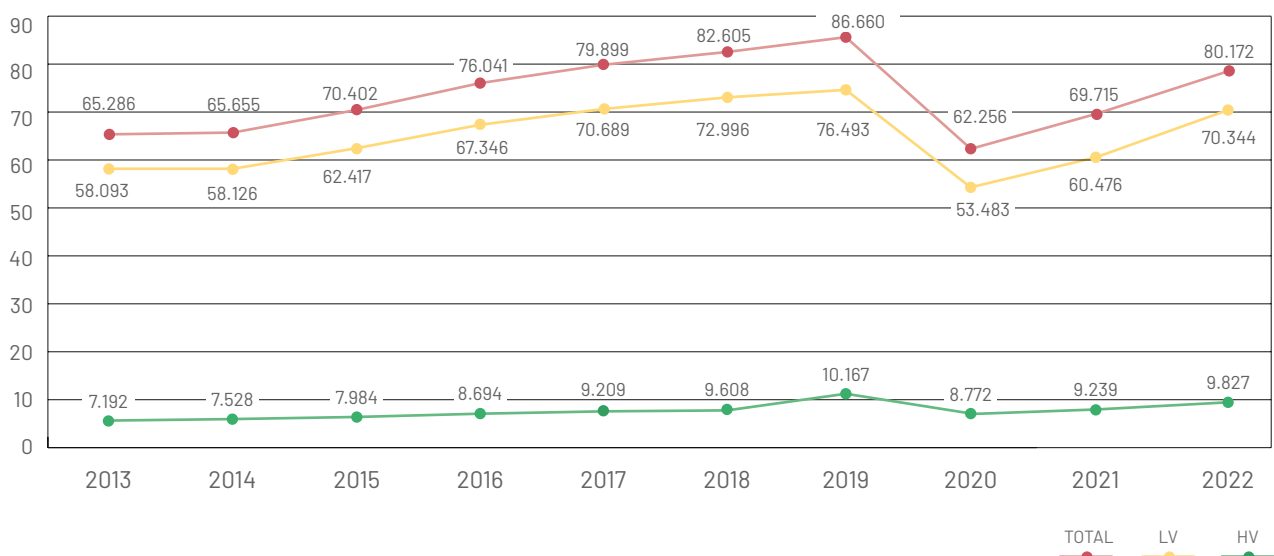
- Number of vehicles in toll collection zones

Company	2021		2022				Total % (22/21)
	Light vehicles (IA+I+II)	Heavy vehicles (III+IV)	Light vehicles (IA+I+II)	LV % (22/21)	Heavy vehicles (III+IV)	HV % (22/21)	
HAC	45.525.345	7.513.322	52.714.527	15.79	8.039.743	7.01	14.55
BINA-ISTRA	8.622.635	834.402	10.226.291	18.60	880.659	5.54	17.45
AZM	6.328.432	891.308	7.403.766	16.99	907.276	1.79	15.12
TOTAL	60.476.412	9.239.032	70.344.584	16.32	9.827.678	6.37	15.00
TOTAL TRAFFIC	69.715.444		80.172.262				15.00

Number of vehicles in toll collection zones 2022 (in Mio. vehicles)



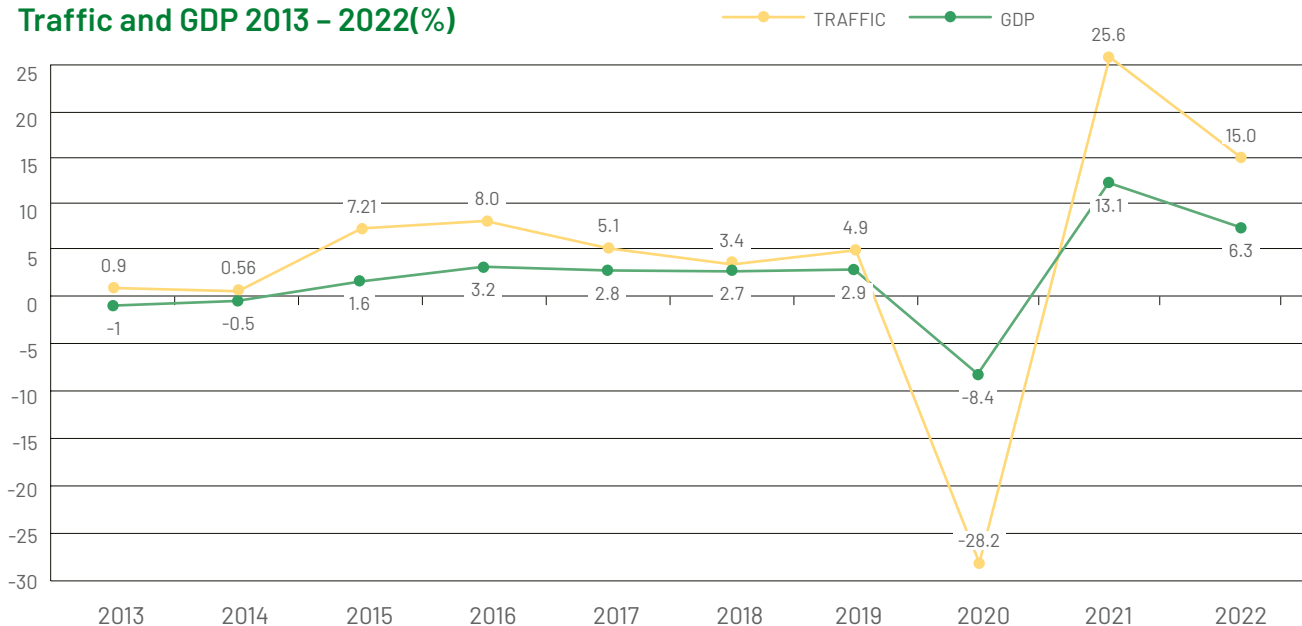
Total number of vehicles in toll collection zones 2013 – 2022 (in Mio. vehicles)



GDP 2021/2020 (%)	Traffic 2021/2020 (%)	CPI 2021/2020 (%)	GDP 2022/2021 (%)	Traffic 2022/2021 (%)	CPI 2022/2021 (%)
13.1	25.6	5.5	6.3	15.0	10.8

Source: Central Bureau of Statistics, 2022

Traffic and GDP 2013 – 2022(%)



Tolling

The closed toll collection system, with several entrances 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 card (or the entry is recorded on their ETC device) and the payment is made on exit toll stations according to distance travelled. The open toll collection system is used on Bregana – Zagreb and on Rupa – Rijeka motorway.

Average toll rate per km (with VAT)

Existing systems		Light vehicles (Category I)
		€/km
Closed system		0.09
Open system		0.06
Ratio categories I : IV in closed tolling system		4.33
		Trucks (Category IV)
		€/km
Closed system		0.39
Open system		0.21
Ratio categories I : IV in open tolling system		3.30

1 EUR=7,53450 HRK

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 by SMART cards. Electronic toll collection (ETC) system is available on all motorways except on the Zagreb – Macelj Motorway (A2).

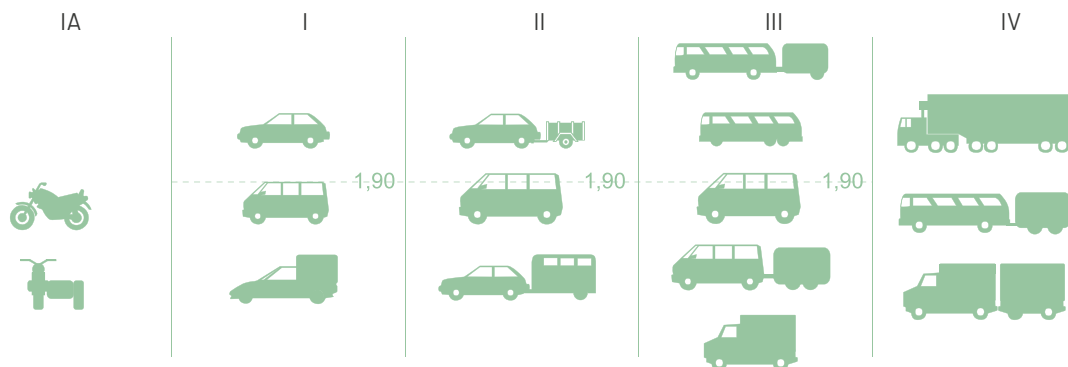
VAT on tolls is 25%.

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 category of vehicle. Users take the toll ticket or register themselves with ETC device at entry toll station and toll is paid at exit toll station. 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 a 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 stations runs in automatic mode without the presence of a toll collector.

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 stations. 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 17th 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 devices on motorways managed 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 HRK and EUR (only for non-residents), 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 depend on category of vehicle and frequency of trips. For the I and II category of vehicles discount on toll is 25% for smart card without time limit on amount replenished on the card (for amounts equal to or above 200,00 HRK) 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 2.000,00 HRK) for the prepaid smart card without time limit).

Toll rates in 2022

HRVATSKE AUTOCESTE d.o.o. (HAC)

In 2022 HAC did not change its unit toll rates. In peak traffic period during tourist season, from 15th June to 14th September 2022, seasonal toll tariffs have not been applied this summer for IA, I and II category of vehicles (10% increase on regular toll tariffs) due to COVID-19 pandemic.

BINA-ISTRA d.d. (BINA)

As of January 1st, 2022 same toll tariffs as the ones set on the October 1st, 2021 were applied. Toll has been introduced on the upgraded section Cerovlje – Lupoglav (2B1-2) as of 26th July 2021 and also on the last section of the phase 2B1 – the Lupoglav – Vranja Section (2B1-3) as of 25th September 2021. Since the introduction of toll on the above said sections until the 31st December 2021, as temporary measure aiming to mitigate the impact of toll increase to lower traffic caused by decreased economic activity due to COVID-19, BINA has offered to frequent ETC Plus subscribers a higher discount (from 30% to 40%) but only on the two above mentioned subsections 2B1-2 and 2B1-3. The discounts have been harmonized on the related sections. The summer tariffs have been applied on Istrian Y also this summer (from 1.6.-30.9.2022.). This special tariff 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 remain 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 continue to 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 stations. In addition, they can replenish their accounts and fill in and print invoices for payments via bank transfer. To improve services for its users, in 2022 the company launched several projects whose implementation is expected in 2023.

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

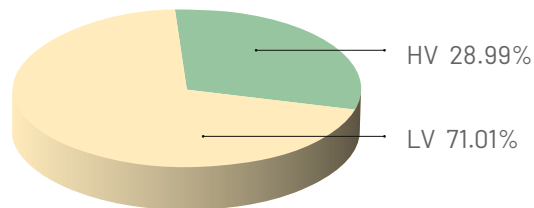
As of June 1st, 2022 toll rates on Zagreb Macelj motorway network have changed.

Toll Revenues (without VAT)

In 2022, the total toll revenues for all motorway companies amounted to € 426,45 million which represents an increase of toll revenues by 16.33 % when compared to the previous year.

Company	2021			2022			% (22/21)
	LV	HV	TOTAL	LV	HV	TOTAL	
HAC	209.821.935	93.952.403	303.774.338	245.410.072	103.902.007	349.312.079	14.99
BINA-ISTRA	26.580.102	7.932.570	34.512.672	33.942.843	9.100.597	43.043.440	24.72
AZM	18.499.413	9.809.786	28.309.200	23.476.343	10.620.490	34.096.832	20.44
TOTAL	254.901.450	111.694.760	366.596.210	302.829.258	123.623.094	426.452.351	16.33

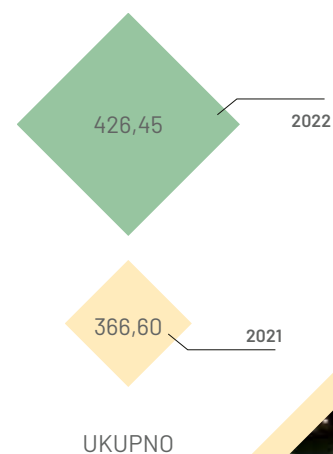
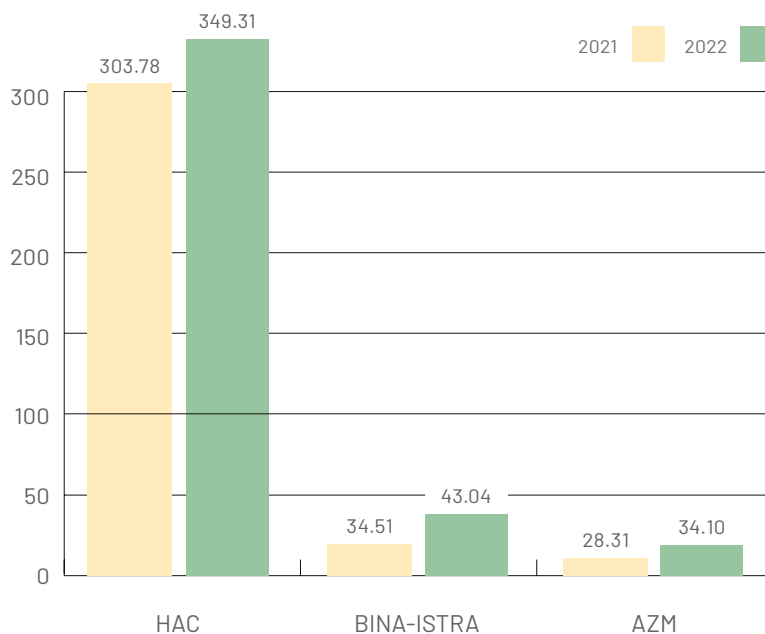
Toll revenues breakdown for light vehicles and heavy vehicles 2022



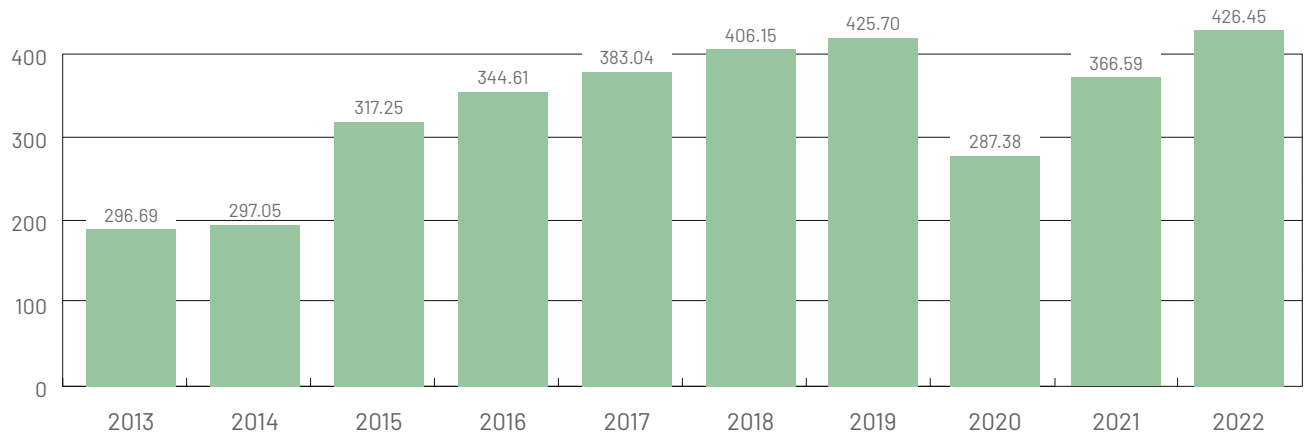
Company	2022 (u EUR)					
	Light vehicles	Heavy vehicles	Total	LV%	HV%	% (22/21)
	(IA+I+II)	(III+IV)	(IA+I+II+III+IV)	(22/21)	(22/21)	
HAC	245.410.072	103.902.007	349.312.079	16.96	10.59	14.99
BINA-ISTRA	33.942.843	9.100.597	43.043.440	27.70	14.72	24.72
AZM	23.476.343	10.620.490	34.096.832	26.90	8.26	20.44
TOTAL	302.829.258	123.623.094	426.452.351	18.80	10.68	16.33

Toll revenues are based on temporary reports for 2022

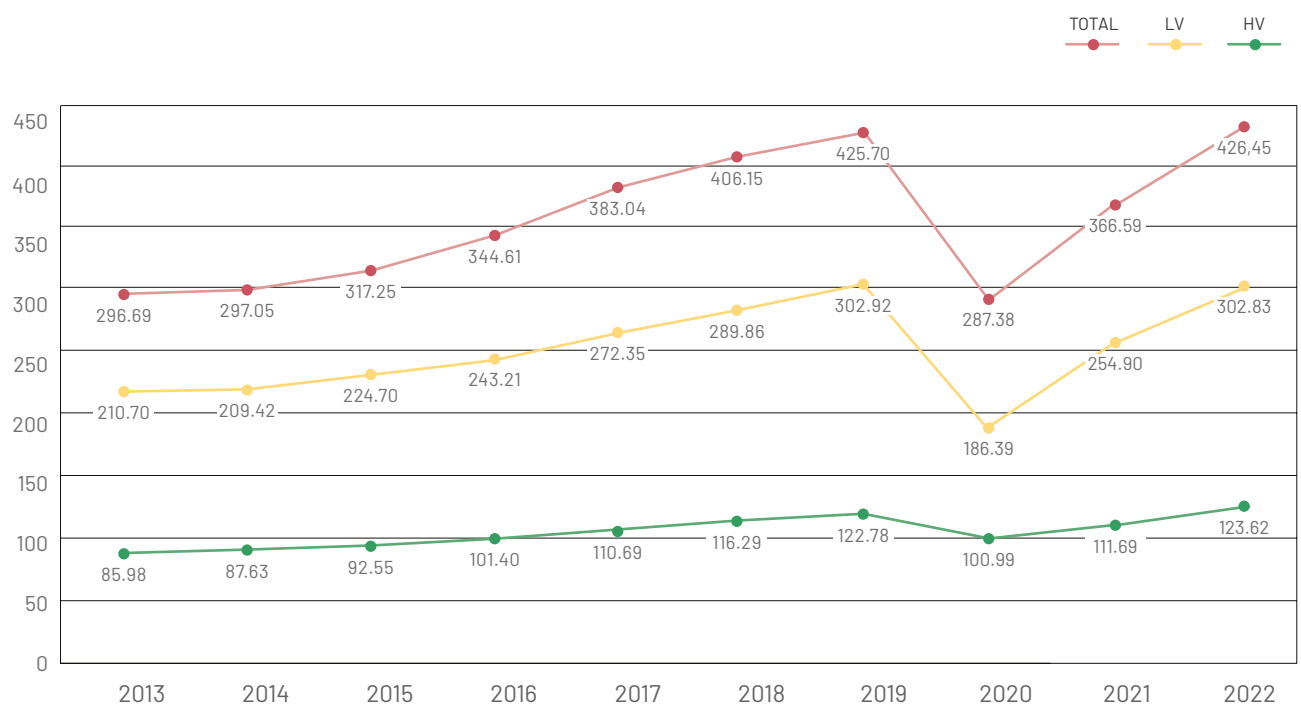
Toll revenues 2021 – 2022, without VAT (in Mio. EUR)



Toll revenues 2013 – 2022, without VAT (in Mio. EUR)



Toll revenues for light and heavy vehicles 2013 – 2022, without VAT (in Mio. EUR)



Toll revenues are based on temporary reports for 2022



Traffic Safety

In 2022 the total of 3.082 traffic accidents, with 40 fatalities and 517 injuries was registered. The total number of all traffic accidents registered in 2022 increased by 12.20 % and total number of fatalities increased by 11.11% when compared to the previous year. Number of injured people also increased by 12.88 % when In comparison with the year 2021.

N. of traffic accidents	2021				2022				change (22/21) %
	HAC**	BINA ISTRA*	AZM	CROATIA	HAC**	BINA ISTRA*	AZM	CROATIA	
km	1.105	141	60	1.306	1.086	141	60	1.287	
with fatalities	18	2	0	20	21	3	3	27	35.00
with injured	225	11	7	242	267	16	19	302	24.79
with material damage	2.322	54	108	2.485	2.549	80	124	2.753	10.78
Total n.of traffic accidents	2.565	67	115	2.747	2.837	99	146	3.082	12.20
Total n.of injuries	432	17	9	458	457	21	39	517	12.88
Total n.of fatalities	33	3	0	36	34	3	3	40	11.11

Length of network used for calculation of traffic accidents

* 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 to be comparable with other concessionaires.

** HAC revised number of km

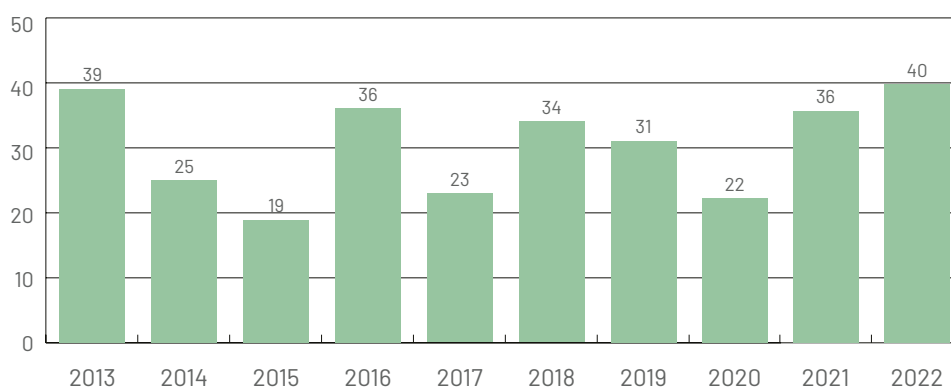
Main safety ratios

Rate	Per 10 ⁹ vehicles/ km in 2022				Change 2022/2021 in %			
	HAC	BINA- ISTRA*	AZM	CROATIA	HAC	BINA- ISTRA*	AZM	CROATIA
km	1.086	125	60	1.271	1.105	100	60	1.265
Personal injury accident rate	36.21	9.79	42.85	34.17	4.20	-24.46	49.41	9.19
Personal injury rate	2.84	1.96	6.76	3.06	1.43	51.94	676.00	18.12
Fatal accident rate	61.99	20.55	87.90	58.50	-7.09	5.71	138.34	-1.23
Rate of dead	4.61	2.93	6.76	4.53	-9.61	13.13	676.00	-2.78

Length of network used for calculation of traffic accidents

* 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 to be comparable with other concessionaires. In 2022 for calculation were used 125 km of full motorway (100 km in 2021).

Total number of fatalities 2013 – 2022



Road safety

REPUBLIC OF CROATIA*	2021	2022	% (2022/2021)
N. of dead (fatalities) on ALL roads in the country	292	271	-1.68
N. of dead (fatalities) on ALL motorways in the country	36	40	16.13

*Source: Ministry of the Interior of the Republic of Croatia 2022.

HUKA MEMBERS	2021	2022	% (2022/2021)
N. of persons injured (light and heavy injuries)	458	517	12.88
Personal injury rate	59.23	58.50	-1.23
N. of fatal accidents	20	27	35.00
Fatal accident rate	2.59	3.06	18.12
N. of dead (fatalities)	36	40	11.11
Fatality rate on members network	4.66	4.53	-2.78

Long and Medium - Term Development Program

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. The Government of the Republic of Croatia adopted by now five four-year Public Road Construction and Maintenance Programs (2001-2004, 2005-2008, 2009-2012, 2013-2016, 2017-2020). Procedure for adoption of the Program for the period 2021- 2024 is under way. The Republic of Croatia will complete its strategic goals and implement the standard of regular road maintenance as planned, harmonize the entire core road network with modern road transport requirements and complete the needed network of motorways and fast roads in Croatia.

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

A5 Beli Manastir - Osijek - Svilaj

- Completion of construction of Corridor Vc in full motorway profile and link with Hungarian border. Beli Manastir - Hungarian border Section (5.0 km)

A7 Rupa - Rijeka - Žuta Lokva

- First Phase of Novi Vinodolski by-pass, being the first phase of construction of future motorway Križišće -Žuta Lokva (7,0 km)

A8 Kanfanar - Matulji

- Finalizing of widening to full motorway profile of the Pazin - Učka Tunnel Section (Phase 2B1) i.e. completion of the Istrian Y - widening to full motorway profile of structures Limska Draga Viaduct and Mirna Bridge including subsection Matulji Interchange - Učka Tunnel
- Construction of second tube of Učka Tunnel including the Vranja - Učka Tunnel Section (Subphase 2B2-1)

A11 Zagreb - Sisak

- Completion of Lekenik - Sisak Interchange Section (10,9 km)
- Plan of construction of the "Ranžirni" Viaduct on the A11 Motorway

Significant activities in 2022 and plans for 2023

HRVATSKE AUTOCESTE d.o.o. (HAC)

In 2022 the company was focused on works as follows:

- **On A1 Motorway Zagreb – Split – Dubrovnik:**
 - Start of upgrade works of Dugopolje Interchange – II and III Phase
 - Start of construction works of Šibenik Interchange (Podi)
- **On A3 Motorway Bregana – Zagreb – Lipovac:**
 - In the framework of renewal project for rest service area network on the A3 motorway, arrangements activities/general reconstruction of the rest service areas Ježev South and Nova Gradiška Dragalić North were carried out
- **On A5 Motorway Beli Manastir – Osijek – border with Bosnia and Herzegovina**
 - Completion of construction works on full motorway profile subsection from Beli Manastir to Halasica Bridge of total length of 17,5 km and opening to traffic of the entire A5 motorway section from Beli Manastir to Osijek of total length of 24,6 km
- **On A7 Motorway Rupa – Rijeka**
 - Start of construction works of Novi Vinodolski By-Pass, being the First Phase of construction of future full motorway Križišće – Žuta Lokva
 - Start of reconstruction works at Matulji Interchange
- **On A11 Motorway Zagreb – Sisak**
 - Start of works of Lekenik – Sisak Interchange Section

In addition to above said in 2022 HAC carried out the following actions:

- Heavy maintenance activities including renewal and reconstruction of pavement and 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 and protection fences 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 regular maintenance in compliance with Regulations and Standards for Regular Maintenance.

In 2023 the main activities are planned as follows:

- **A1 Motorway Zagreb – Split – Dubrovnik**
 - Continuation of upgrade of the Dugopolje Interchange – Phases II and III
 - Continuation of construction works of the Šibenik (Podi) Interchange
- **A3 Motorway Bregana – Zagreb – Lipovac**
 - Continuation of activities related to project of revitalizing of rest service areas network on A3 motorway : rest service areas Gradna, Zagreb (Plitvice) and Črnc
 - Setting up of noise protection walls in accordance with Noise Protection Action Plan for A3 Motorway
- **A5 Motorway Beli Manastir – Osijek-Svilaj:**
 - Start of construction works on the section from Beli Manastir to Hungarian border (5,0 km)
- **A6 Motorway:**
 - Start of works of reconstruction and upgrade of Orehovica Interchange
- **A7 Motorway Rupa – Rijeka – Žuta Lokva:**
 - Completion of construction of Trinajstići Interchange
- **A11 Motorway Zagreb – Sisak:**
 - Start of construction of Lekenik Interchange
- **Commencement of implementation of new free flow tolling system.**

In addition to above said in 2023 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)
- Revitalizing of road side facilities
- 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 over-speed monitoring project on motorway network etc.)

In the long term the Company plans as follows:

- Refurbishment of rest service facilities and rest areas
- Construction of third lane of Zagreb By-Pass
- Construction of third lane of Zagreb – Karlovac – Bosiljevo Section on A1 Motorway
- Construction of Section of Križišće – Žuta Lokva on A7 Motorway
- Construction of Metković – Dubrovnik Section on A1 Motorway
- Upgrade of network of motorway interchanges

BINA-ISTRA d.d. (BINA)

In 2022 the Company's activities were focused on:

- Progress of construction works of the second tube of the Učka tunnel including new Vranja Interchange on the Vranja – Učka Tunnel Section
- Preparation of tolling system for introduction of EUR currency as of 1.1.2023.
- Promotion of ETC service for new users with aim to improve traffic flow on toll stations

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 2023 Company plans the following activities:

- Continuation of construction of second tube of the Učka Tunnel including the Vranja – Učka Tunnel Section and enlargement of Kvarner rest area (Subsection 2B2-1)
- Financial closing and commencement of widening i.e. of construction of two additional lanes between the Matulji and Učka Tunnel (Subsection 2B2-2), also doubling of Mirna and Limska Draga viaducts as well as restructuring of existing loans
- Opening to service of the rest area Rebri East with petrol station and restaurant and closing of petrol station on the rest area Vranja South
- Improvement of electric vehicles charging services at rest service areas
- Installing of additional equipment as to improve traffic flow at certain toll stations

In the long term the Company plans as follows:

- Debt restructuring/refinancing
- Introduction of free flow tolling system

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

In 2022 the Company was focused on works as follows:

- Implementation of regular and extraordinary motorway maintenance plans

In 2023 Company plans the following activities:

- Continuation of works related to renewal of public lighting on the motorway, renewal and replacement of public lighting system along motorway in accordance with Law about the Protection of light pollution as to fulfil legal requirements and increase energy of lighting system (replacement of existing system with LED based technology system)
- Continuation of activities related to preparation of project documentation and obtaining of approvals for construction of motorway's photovoltaic system
- Implementation of regular and extraordinary motorway maintenance plans.

In the long term the Company plans as follows:

- Construction of second carriageway (full motorway profile) on the Krapina – Đurmanec Section
- Improvement of road safety and fulfilment of requirements set by the Directive 2004/54/EC on minimum safety requirements for tunnels in the Trans-European Road Network (compliance of existing tunnels with Rulebook on minimum safety requirements for tunnels)
- Building of noise protection walls on the Jankomir – Krapina Section
- Implementation of noise protection measures – building of noise protection walls on sections of A2 motorway which do not fulfil requirements regarding noise protection with aim to protect zones for living from the noise generated by motorway users and harmonization with legislation in force (Noise Protection Act and Rulebook on the maximum permissible noise levels in the environment in which people work and live).

Key data for 2022

CROATIA	2021	2022	Change (22/21) %
The total length of motorway network, in km, as on 31/12/2022	1.313.40	1.341.10	2.11
Tolled network length	1.229.60	1.252.06	1.83
2 x 1 lanes not including the stopping lane	20.20	15.30	-24.26
2 x 2 lanes not including the stopping lane	1.272.40	1.305.00	2.56
2 x 3 lanes not including the stopping lane	20.80	20.80	0.00
2 x 4 lanes not including the stopping lane	0	0	
Length of tunnels longer than 500 m (in km of tunnel tubes)	80.63	80.63	0.00
Number of tunnels longer than 500 m	31	31	0.00
Single directional length of bridges longer than 100 m*	55.35	54.32 *	-1.86
Number of bridges longer than 100m	174	174	0.00
NETWORK			
Number of km opened to traffic	2021	2022	
MOTORWAYS	0.7	24.6	
WIDENING OF EXISTING STRETCH TO FULL MOTORWAY	16.82 ⁽¹⁾	0	
Number of km under construction	2022	2023	
MOTORWAYS	10.90	5.00	
WIDENING OF EXISTING STRETCH TO FULL MOTORWAY	3.14	2.00	
CONSTRUCTION OF THE PHASE I OF THE BY-PASS	7.00	0	
Planned opening of new sections, in km	2022	2023	
MOTORWAYS	24.6	0	
WIDENING OF EXISTING STRETCH TO FULL MOTORWAY	0	0	
INVESTMENTS			
New investments (in M€)	144.42	98.85	-31.55
Investments into existing network (in M€)	52.46	65.35	24.57
Total annual investments (in M€)	196.88	164.20	-16.60
TOLL REVENUES (WITHOUT VAT)			
Annual toll revenues - total (in M€)	366.59	426.45	16.33
Annual toll revenues from light vehicles (in M€)	254.90	302.83	18.80
Annual toll revenues from heavy vehicles (in M€)	111.69	123.62	10.68
Taxes other than VAT calculated on toll	0	0	
VAT %	25%	25%	0.00
Calculated VAT/VAT charged on tolls (in M€)	91.65	106.61	16.33
EMPLOYMENT			
Total full-time employees ⁽²⁾	2.801	2.760	-1.46
TRAFFIC DATA			
AADT LIGHT VEHICLES	14.061	16.177	15.05
AADT TRUCKS	2.399	2.634	9.81
AADT LV + HV	16.460	18.811	14.28
KILOMETRES TRAVELLED (10⁶ x km)			
Total number of kilometres travelled (10 ⁶ x km)	7.732.20	8.837.15	14.29
Number of kilometres travelled (10 ⁶ x km) - light vehicles	6.625.30	7.599.64	14.71
Number of kilometres travelled (10 ⁶ x km) - heavy vehicles	1.106.90	1.237.51	11.80

CROATIA	2021	2022	Change (22/21) %
ROAD SAFETY			
Total number of accidents on motorways ⁽³⁾	2.747	3.082	12.20
Number of accidents with fatalities	20	27	35.00
Number of accidents with injuries	242	302	24.79
Number of fatalities	36	40	11.11
Number of injuries	458	517	12.88
Fatality rate	4.66	4.53	-2.79
Number of kilometres travelled (10 ⁶ x km)	7.732.20	8.837.23	14.29
TOLLING			
Number of toll transactions - total	69.715.444	80.172.262	15.00
Number of toll transactions - light vehicles	60.476.412	70.344.584	16.32
Number of toll transactions - heavy vehicles	9.239.032	9.827.678	6.37
Total number of ETC transactions	25.961.630	29.270.413	12.74
% of manual transactions (other forms of payment; CC, BC and fleet cards)	61%	75%	22.95
% of ETC transactions ⁽⁴⁾	26%	25%	-2.79 **
Number of toll stations	108	109	0.93
Number of toll lanes	747	753	0.80
Number of ETC lanes or mixed lanes	503	503	0.00
Number of ETC subscribers - light vehicles	441.707	490.821	11.12
Number of ETC subscribers - heavy vehicles	74.306	74.426	0.16
Number of ETC subscribers - total	516.013	565.247	9.54
Number of ETC devices in use ⁽⁵⁾	655.999	719.095	9.62
Length of the network tolled electronically (in km) ⁽⁶⁾	1.178.20	1.178.20	0.00
Length of the network tolled in the MLFF (Multi-lane free flow)	0.00	0.00	
ITS			
Length of the network covered by traffic monitoring	1.125.50	1.125.50	0.00
SERVICES			
Number of truck parking lots ⁽⁷⁾	1.670 ⁽⁷⁾	2.059 ⁽⁸⁾	1.23
Number of roadside rest areas (with filling stations)	72	75	4.17
Number of rest areas	121	124	2.48
Number of restaurants	29	32	10.34
Number of hotels	8	8	0.00
ENVIRONMENT			
Euro-emission classes (yes/no)	NO	NO	
If yes: % of »clean traffic« (per Euro class categories EURO V, VI and EEV)	n/a	n/a	

*Revised number of km

⁽¹⁾ Widening of the existing stretch of Istrian Y to full motorway profile

⁽²⁾ Total number of work force in all motorway companies and their operators

⁽³⁾ 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 to be comparable with other concessionaires.

⁽⁴⁾ The percentage of penetration of ETC in total transactions without AZM Company which does not have ETC is 39,3% in 2021 and 38,2% in 2022

**Portion of ETC transactions is lower in 2022 due to higher usage of bank cards

⁽⁵⁾ Revised number of ETC OBUs after merger of ARZ into HAC Company

⁽⁶⁾ Autocesta Zagreb-Macelj d.o.o. has not yet introduced the ETC

⁽⁷⁾ Reduction in number of parking lots is due to renewal of rest areas on A3 motorway

⁽⁸⁾ Number of parking lots dates from 2021, thus the number for 2022 also includes parking lots for buses which in 2021 were not included



MEMBERS

THE CROATIAN ASSOCIATION
OF TOLL MOTORWAYS
CONCESSIONAIRES

www.huka.hr



Hrvatske autoceste d.o.o.
(HAC)

Stjepana Širole 4
10 000 Zagreb - HR

tel.: + 385 1 46 94 444
fax: + 385 1 46 94 505
e-mail: info@hac.hr
www.hac.hr

Boris Huzjan
Director of the Company



Autocesta
Zagreb-Macelj d.o.o. (AZM)

Garićgradska 18
10 000 Zagreb - HR

tel.: + 385 1 36 89 600
fax: + 385 1 36 89 620
e-mail: office@azm.hr
www.azm.hr

Miloš Savić
*President of the
Managing Board*

Ivica Mlinarević
*Member of the
Managing Board*



Bina-Istra d.d.
(BINA)

Savska cesta 106
10 000 Zagreb - HR

tel.: + 385 1 61 38 300
fax: + 385 1 61 38 301
e-mail:
ured@bina-istra.hr
www.bina-istra.com

Dario Silić
General Manager

