

CROATIA NATIONAL REPORT ON MOTORWAYS 2014

I Current State of the Network

As on 31 December 2014, the total length of the motorway network in Croatia amounted to **1,289.4 km**. Motorways are operated by 4 companies:

- Hrvatske autoceste d.o.o. (operates motorways A1, A3, A4, A5, A10, A11 and Sv. Ilija tunnel),
- BINA-ISTRA d.d. (it operates the so called Istrian Y - A8 and A9),
- Autocesta Rijeka - Zagreb d.d. (operates motorways A6, A7, part of A1, and the Krk Bridge) and
- Autocesta Zagreb - Macelj d.o.o. (operates motorway A2).

	Company	2013 Total network	2014 Total network	Total network plan for 2015
1.	HAC d.o.o.*	901.4	901.4	925.6
2.	ARZ d.d.*	187.03	187.03	187.03
3.	BINA-ISTRA d.d.	141.0	141.0	141.0
4.	AZM d.o.o.	60.0	60.0	60.0
TOTAL		1,289.43	1,289.43	1,313.63

*revised km according to km of network in service

OPENING OF NEW MOTORWAY SECTIONS IN 2014

There were no new openings in 2014 therefore total completed network remain unchanged and amounted to 1,289.4 km

Tunnels and Bridges on the Network

Company	Km of Tunnels	Km of Bridges	Total Tunnels and Bridges
HAC	31.63	8.51	40.14
ARZ	12.88	13.10	25.98
BINA ISTRA	5.31	9.36	14.67
AZM	5.90	7.87	13.77
TOTAL	55.72	38.84	94.56

II Works in Progress

On 31 December 2014, the works were in progress on:

- 26.7 km of motorways,
- 23.1 km of fast roads

WORKS IN PROGRESS ON 31 DECEMBER 2014			
Motorway	Section	Km	Description
A5 Beli Manastir-Osijek- B&H border	Bridge over the Drava River	2.5	Construction work and supervision
A5 Beli Manastir - Osijek - BiH	Sredanci-B&H border	3.2	Construction work and supervision
A11 Zagreb - Sisak	Jakuševac-V. Gorica south	10.0	Construction work, equipment work and supervision
A11 Zagreb - Sisak	Buševac - Lekenik	11.0	Construction work, equipment work and supervision
Fast road: DC10 Podravina Y	Gradec-Križevci	12.5	Construction work and supervision
Fast road: DC12 Podravina Y	Vrbovec - Farkaševac	10.6	Construction work and supervision

In 2015, road works will be completed on the total of:

- 24.2 km of new motorways

THE FOLLOWING SECTIONS WILL BE OPENED TO TRAFFIC IN 2015			
Motorway	Section	Km	Opening to traffic scheduled
A5 Beli Manastir - Osijek - BiH	Sredanci - border with BiH	3.2	March 2015
A11 Zagreb - Sisak	Buševac - Lekenik	11.0	June,2015
A11 Zagreb - Sisak	Jakuševac-V. Gorica South	10.0	June,2015

In addition to the continuation of work from the previous year, the following **new work** will start in 2015:

- 5.7 km of new motorways
- 10.68 km of widening to full profile

START OF NEW WORK IN 2015.			
Motorway	Section	Km	Description
A3 Bregana-Zagreb-Lipovac	Lipovljani Interchange		Construction work and supervision
A5 Beli Manastir - Osijek - BiH	Drava Bridge- Osijek section	3.8	Construction work and supervision
A5 Beli Manastir - Osijek - BiH	Sava Bridge	0.7	Construction work and supervision
Link Road TP Karamatići-Ploče Port		1.2	Construction work and supervision
A8 Kanfanar - Matulji	Rogovići - Cerovlje *	10.68*	Widening to full profile

*plan

III Cost of Investment and Financing

The total of HRK 438.72 million (€ 57.50 million) was invested in the construction of new motorways in 2014, while HRK 229.92 million (€ 30.13 million) was invested in sections under traffic.

- in mio HRK

Company	Investments in 2014		Plan for 2015	
	Into new sections	Into existing sections	Into new sections	Into existing sections
HAC***	438.72	160.76	481.82	142.98
ARZ*	0.00	17.13	0,00	39.95
BINA ISTRRA	0.00	23.93	195.48	24.04
AZM	0.00	28.10	0.00	7.30
TOTAL	438.72	229.92	677.30	214.27
TOTAL INVESTMENTS	668.64		891.57	

-in mio EUR, 1 EUR** = 7,63

Company	Investments in 2014		Plan for 2015	
	Into new sections	Into existing sections	Into new sections	Into existing sections
HAC***	57.50	21.07	63.15	18.74
ARZ*	0.00	2.25	0.00	5.24
BINA ISTRRA	0.00	3.14	25.62	3.15
AZM	0.00	3.68	0.00	0.96
TOTAL	57.50	30.13	88.77	28.08
TOTAL INVESTMENTS	87.63		116.85	

The investment amounts are based on the temporary report for 2014

*ARZ – Betterment and reconstruction of the road network

**1 EUR=7.63 HRK (Annual average exchange rate in 2014, Source: Croatian National Bank)

***Remarque HAC: Investment amount for the year 2014 is based on temporary report and for the year 2015 is based on Draft Plan of construction and maintenance approved by Supervisory Bord of the Company

In 2014 investements were financed as follows:

- 59,21 % through benefits from excise taxes
- 33,50% through loans from development banks
- 7,29% through cofinancing of construction of IKEA

Sources of financing

Source of financing (%)	HAC	ARZ	BINA ISTRRA	AZM
toll revenues	20.99	100	53.8	100
other (loans, revenues generated from the price of fuel HRK 0.20/l i.e. EUR 0,026 /l, reimbursable and non-reimbursable state funding)	79.01	0	46.2	0
TOTAL	100	100	100	100

IV Traffic

In 2014 only AZM registered a decrease in traffic, while all other concessionaries registered an increase when compared to the previous year. The total traffic of all vehicles increased by 0.56 % in comparison with the previous year.

- number of vehicles in toll collection zones

Company	2013		2014				Total (14/13)
	Light vehicles (IA+I+II)	Heavy Vehicles (III+IV)	Light vehicles (IA+I+II)	% (14/13)	Heavy Vehicles (III+IV)	% (14/13)	
HAC	27,946.068	4,098.525	28,322.549	1.35	4,323.945	5.50	1.88
ARZ	16,712.976	1,678.786	16,905.622	1.15	1,832.433	9.15	1.88
BINA ISTRA	7,211.433	653.493	7,449.854	3.31	651.036	-0.38	3.00
AZM	6,223.327	761.870	5,448.753	-12.45	720.778	-5.39	-11.68
TOTAL	58,093.804	7,192.674	58,126.778	0.06	7,528.192	4.66	0.56
TOTAL TRAFFIC	65,286.478		65,654.970				0.56

GDP 2012/2011 (%)	GDP 2013/2012 (%)	GDP 2014/2013 (%)	Traffic 2013/2012 (%)	Traffic 2014/2013 (%)
-2.0	-1.0	-0.5*	0.90	0.56

* Flash estimate (source: Central Bureau of Statistics)

V Toll Rates

The closed toll collection system, with several entrance and exit points, is predominantly operated in the Republic of Croatia. The open toll collection system is less used (e.g. on Bregana - Zagreb Motorway, on the Krk Bridge and on the St. Ilija Tunnel).

(1 EUR = 7.63 HRK)

AVERAGE TOLL RATE PER KM		
Existing systems	Light vehicles (Category I)	
	HRK/km without VAT	€/km without VAT
Closed system	0.468	0.061
Open system	0.480	0.063
Ratio categories I : IV closed tolling system	1 : 4.25	
	Trucks (Category IV)	
	HRK/km without VAT	€/km without VAT
Closed system	1.938	0.254
Open system	1.785	0.234
Ratio categories I : IV open tolling system	1 : 3.7	

Motorcycles (category IA) pay 60% of the toll charged for category I vehicles.

On all motorways, toll can be paid in cash (HRK and €), by credit and debit cards, by INA card, by SMART cards. Electronic toll collection (ETC) system is available on all motorways except on the Zagreb-Macelj Motorway (A2).

TECHNOLOGY OF ELECTRONIC TOLL COLLECTION SYSTEM IN USE

The toll collection systems of HAC, ARZ and BINA ISTRAN 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 EN12975, ENV 12795 and ENV 12253

Data Link Layer EN12834, 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.

Future ARZ projects are focused on the need to increase the flow of toll stations by introducing more fast toll lanes without stopping (currently there are two) and to introduce new products based on electronic tags and ANPR modules.

In the upcoming period, Bina Istra plans to offer its users full ETC interoperability, which will be introduced in two phases:

- ETC interoperability between all motorway concessionaires in Croatia
- ETC interoperability in the EU

AUTOCESTA RIJEKA-ZAGREB D.D.

In 2014 the company analyzed the toll rates and, due to shortcomings in the previous price list, on 28 April 2014 the toll rates were changed in accordance with the provisions of the Regulation on Toll Collection, primarily the guidelines prescribing relationships between categories of vehicles and sums between sections. From a total of 778 toll prices on the price list, 616 toll prices were changed, whereby 452 toll prices were increased and 164 were lowered, while 164 toll prices were not changed in the Zagreb-Rijeka closed toll collection system. The toll price on the Rupa - Rijeka section and at the Krk Bridge remained unchanged.

BINA-ISTRAN D.D.

The Istrian Y network has a closed toll system, whereby motorway usage is charged according to mileage and vehicle category.

For users who travel frequently, 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 motorway concessionaires in Croatia - ARZ and HAC.

During low traffic intensity, toll collection at most toll stations runs in automatic mode without the presence of a toll collector.

As of 1 January 2014, toll rates on the Istrian Y were increased on average by 2.9%. However, such increase was not applied on Učka Tunnel, where tariffs remain unchanged as well as on the majority of short sections on which regular users drive for their daily purposes. 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 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 also by INA card and the ETC device. Furthermore, users who already own an ETC device can additionally register devices already bought at HAC and ARZ with the BINA-ISTRAN toll

collection system and in this way become Bina-Istra subscribers (this is valid for frequent users entitled to 30-50% discount, depending on the section used) or to register their credit cards for an ETC device (applicable to non-frequent users). In order to improve services for its users, in 2014 the company launched a number of projects whose implementation is expected in 2015. These include introduction of a subscription account via the Zagrebačka banka e-platform and the possibility of generating passes with the ETC device by charging the INA card if the user does not have sufficient funds on their subscription account.

HRVATSKE AUTOCESTE D.O.O. (HAC)

In 2014 HAC did not change its toll rates. At the HAC toll stations, toll can be paid in cash (kuna and foreign currencies), with credit cards and by means of subscription.

Users of HAC and ARZ network who pay toll in advance through the ETC device system receive a 21.74% discount throughout the year. By purchasing a seasonal ETC the users of HAC and ARZ receive a 33.48% discount in the period from 1 November of the current year to 31 March of the following year, while in other periods of the year they receive a 21.74% discount.

HAC and ARZ users of the truck program operated in the scope of the ETC model of delayed payment by means of credit and diesel cards receive a basic 30.43% discount and an additional 3% annual discount for the EURO 4 emission class and 5% for the EURO 5, EEV, EURO 6.

The ETC prepaid account can be replenished 24 hours a day at 19 toll stations of HAC. In addition, the ETC device replenishment can be operated by credit cards via the web portal "prodaja.hac.hr", via a mobile device linked to credit card and prepaid account, at 12 retail outlets, as well as via SMS vouchers. SMS vouchers are available at the retail outlets of INA, TIFON, CRODUX DERIVATI, PETROL, ZAGREBAČKA BANKA, iNOVINE, TISAK, HRVATSKA POŠTA and HRVATSKA POŠTANSKA BANKA, while ETC packages for all vehicle categories can be purchased at HAC toll stations.

AUTOCESTA ZAGREB-MACELJ D.O.O. (AZM)

In 2014 toll rates remained unchanged. For prepaid toll payments via SMART card the discount of 15% is calculated for categories I and II and 13% for categories III and IV (for amounts in excess of HRK 2,000.00). In addition to SMART card, payments can also be made via debit and credit cards, and by INA card.

VI Toll Revenues (without VAT)

In 2014, the total toll revenues amounted to **EUR 297,045.638** which represents an increase of toll revenues by **2.59 percent** when compared to the previous year.

1 EUR = 7,63 HRK

Company	2013		2014		% (14/13)
	HRK	€	HRK	€	
1. HAC	1,362,562.977	179,995.109	1,401,302.962	183,657.007	2.84
2. ARZ	492,304.406	64,522.203	505,273.019	66,221.890	2.63
3. BINA-ISTRA	155,239.650	20,345.957	164,568.435	21,568.602	6.01
4. AZM	199,034.147	26,292.490	195,313.803	25,598.139	-1.87
TOTAL	2,209,141.180	289,533.575	2,266,458.219	297,045.638	2.59

Toll revenues are based on the temporary reports for 2014

VAT on tolls is 25%.

VII Traffic Safety

The total of 2,177 traffic accidents, with 25 fatalities and 293 accidents with injuries, was registered in 2014. The total number of all traffic accidents registered in 2014 increased by 0.7 % but the number of fatalities decreased by 35.9 %, when compared to the previous year.

Number of traffic accidents	2013					2014					%
	HAC 882* km	BINA ISTRA 141 km	ARZ 182 km	AZM 60 km	CROATIA 1265 km	HAC 888* km	BINA ISTRA 141 km	ARZ 187 km	AZM 60 km	CROATIA 1276 km	
- with fatalities	22	0	5	4	31	16	2	3	0	21	-32,26
- with injured	188	18	88	14	308	188	11	68	26	293	-4,87
- with material damage	1,356	78	293	96	1,823	1,436	62	240	125	1,863	2,19
Total number of traffic accidents	1,566	96	386	114	2,162	1,640	75	311	151	2,177	0,69
Total number of fatalities	28	0	7	4	39	19	2	4	0	25	-35,90

* km used for calculating safety figures correspond to km of the network maintained

Main safety ratios

	10 ⁹ vehicles/km in 2014					change 2014/2013 in %				
	HAC 888* km	BINA ISTRA 141 km	ARZ 187 km	AZM 60 km	CROATIA 1270 km	HAC 888* km	BINA ISTRA 141 km	ARZ 187 km	AZM 60 km	CROATIA 1270 km
Personal injury rate	47.69	9.62	54.87	75.58	44.81	-3.11	-40.73	-29.90	88.43	-5.89
Fatal accident rate	4.06	1.75	3.17	0	3.21	-29.51	0.00	-2.76	-100.00	-32.98
Rate of dead	4.82	1.75	4.22	0	3.82	-34.24	0.00	-22.43	-100.00	-36.58

VIII 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 road development strategy
- 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 its session held on 30 October 2014 the Government of the Republic of Croatia adopted a new Strategy of Transport Development of the Republic of Croatia for the period 2014-2030.

This strategic document represents global reform of transport policy of the Republic of Croatia in the following 15 years period. It defines six strategic multimodal goals, 28 special multimodal goals as well as 180 measures and actions per sectors in order to reach the goals defined by the Strategy.

Strategy of Transport Development shows new approach to planning of transport system whereby the accent is not only on the infrastructure as such but on multimodality, organisation and functioning of all transport services in the Republic of Croatia. There are five regions defined in the Strategy and they are not related to administrative border of regions but are set according to regional and functional analysis of existing data and transport demands (Central Croatia, Eastern Croatia, Northern Adriatic, Northern and Central Dalmatia and Southern Dalmatia).

Further activities include drafting of National transport model already started in May 2014. Once the transport figures will be available National transport model shall be finalized by the end of 2016 and shall constitute the basis for Revision of the Strategy of Transport development of the Republic of Croatia.

National transport model shall be basis for future dynamic transport planning and well as guideline for clear diversification of cost benefit investments in all mode of transport in Croatia.

After years of intensive construction of motorways and important debts burdening the state finances Croatia looks for a new approach to development policy in this sector. Instead of heretofore policy of rapid road development, Croatia needs to apply a moderate, sustainable road development policy in order to maximally rationalise further processes of construction and road management. This does not imply that further construction will be stopped. Croatia will finish realisation of defined strategic goals (attainment of planned regular maintenance of roads, ensuring the total core road network matches the up to date transport standards and completion of the necessary planned motorway and fast roads network).

According to the latest Public Road Construction and Maintenance Program 2013 - 2016 the following motorways and express roads are to be completed and opened to traffic:

A5 Beli Manastir - Osijek - B&H Border Section

- Sredanci-B&H Border Section
- Bridge over the Drava River
- Osijek-Beli Manastir Section
- Sava Bridge

A7 Rupa - Rijeka - Žuta Lokva

- Grobničko Polje (Konje) - Mali Svib - Križišće Section

A8 Kanfanar - Matulji Motorway

- Rogovići - Vranja - widening to the full motorway profile

A11 Zagreb - Sisak Motorway

- Jakuševac - Velika Gorica south Section
- Buševac - Lekenik Section

DC 532 Link road TS Karamatići-Ploče Harbour

- Entry to Ploče Harbour

DC 10 Podravina Y (Koprivnica)

- Gradec - Križevci Section

DC 12 Podravina Y (Bjelovar) - Vrbovec 2 - Farkaševac Section

According to the Public Road Construction and Maintenance Program for 2013-2016, the work will also be initiated on the following new projects: upgrade of Zagreb-Karlovac section to 6 lanes motorway, construction of the Novigrad - Lišnica approach road, construction of Kosnica and Lipovljani interchange on the A3 roadway Bregana - Zagreb - Lipovac, construction of the "Classification" Overpass on the A11 roadway Zagreb - Sisak, construction of sections on the New Zagreb Bypass.

According to the Public Road Construction and Maintenance Program, in the period 2013 - 2016 around 54 km of new motorway sections and fast roads as well as 11 km of widening to full motorway profile remain to be opened to traffic.

IX Significant activities started or completed in 2014 and plans for 2015

HRVATSKE AUTOCESTE D.O.O.

In 2013 a tender was issued for the monetization of Croatian motorways, and a large part of long-term plans depends on the course of the monetization process. The Roads Act obliges concessionaires to introduce interoperability across Croatia within five years.

In 2014 the company Hrvatske autoceste održavanje i naplata cestarine d.o.o. (HAC ONC) became the single operator for providing services of regular motorways maintenance and toll collection to the companies Autocesta Rijeka-Zagreb d.d. and Hrvatske autoceste d.o.o..

In terms of motorway construction in 2014, the company was focused on:

1. Opening to traffic of the reconstructed Ivanja Reka Interchange on the A3 Bregana-Zagreb-Lipovac motorway.
2. Construction of the bridge over the Drava River and the Sredanci section - B&H border on the Vc corridor (A5 motorway).
3. Construction of the A11 Zagreb-Sisak motorway, Buševac-Velika Gorica section, Buševac-Lekenik subsection.

In 2015 the company will focus on:

1. Start of construction of the Lipovljani Interchange on the A3 Bregana-Zagreb-Lipovac motorway.
2. Continuation of construction of the Vc corridor, completion of construction of the Drava Bridge, opening to traffic of the Sredanci section - B&H border, and start of works on the Drava Bridge-Osijek Interchange section and Sava Bridge.
3. A11 Zagreb-Sisak completion of construction and opening to traffic of the Jakuševac-Velika Gorica section and Buševac-Lekenik subsection, and preparation activities for the Ranžirni overpass.
4. Continuation of construction of fast roads DC 10 Vrbovec 2 - Koprivnica - Hungarian border (first construction phase of the Gradec-Križevci section) and DC 12 Vrbovec 2 - Bjelovar - Hungarian border (first construction phase of the Vrbovec 2-Farkaševac section)
5. Start of construction of the entrance to the port of Ploče and the city of Ploče.

AUTOCESTA RIJEKA-ZAGREB D.D.

In 2014 the company's activities were focused on:

- Implementation of measures for business rationalization and restructuring objectives in accordance with the Croatian Government's guidelines

- Merging of the ARZON subsidiary company with the HAC ONC company and establishment of a common operator for toll collection and motorway network maintenance
- Investment in existing shares with the goal of maintaining the required level of motorway safety
- Development of an application for projects for co-financing from EU funds with the goal of investing in road infrastructure to raise the level of serviceability and safety of users

In 2015 the company has set the following goals:

- Implementation of projects partially financed from European Union funds and programs (total of 3 projects), and preparation of new projects
- Investments relating to the rehabilitation and maintenance of existing facilities on the motorway and of the motorway itself, as well as improvement of functionality
- Continuous monitoring of the implementation of regular motorway maintenance and toll collection in order to increase the level of traffic safety and quality of services provided.

BINA -ISTRA D.D.

In 2014 the company's activities were focused on:

The most important project that the company focused on last year was the development and preparation of financial construction for the construction of a full motorway profile on the 28 km-long stretch between Pazin and Učka Tunnel (so-called 2B1 phase of the Istrian Y construction).

The company has set the following objectives for 2015:

Closing of financial construction for the 2B1 phase and start of works on the Rogovići-Cerovlje section (10.68 km).

In order to improve services for its users, in 2014 the company launched a number of projects whose implementation is expected in 2015. These include introduction of a subscription account via the Zagrebačka banka e-platform and the possibility of generating passes with the ETC device by charging the INA card if the user does not have sufficient funds on their subscription account.

AUTOCESTA ZAGREB-MACELJ D.O.O.

In 2014 the company's activities were focused on:

Regular and periodic maintenance, lowering the number of traffic accidents, preparations for ETC implementation, energy savings, environmental protection, energy certification of motorway objects.

The company has set the following objectives for 2015:

Regular and periodic maintenance, lowering the number of traffic accidents, preparations for ETC implementation, energy savings, environmental protection.

Preparation of plans and documents for construction of a full motorway profile at the Krapina-Durmanec subsection, 3.7 km in length.

KEY DATA FOR 2014

CROATIA	2014
The total length of network according to concession agreement, in km, as on 31/12/2014	1.289,43
2 x 1 lanes not including the stopping lane	61.23
2 x 2 lanes not including the stopping lane	1.207,45
2 x 3 lanes not including the stopping lane	20.75
2 x 4 lanes not including the stopping lane	0
Number of km opened to traffic in 2014	
MOTORWAYS	0
SEMI-MOTORWAYS	0
WIDENING TO FULL MOTORWAY PROFILE	0
Number of km under construction as on 31/12/2014	
MOTORWAYS	26.7
SEMI-MOTORWAYS/FAST ROADS	23.1
WIDENING TO FULL MOTORWAY PROFILE	
Planned opening of new sections in 2015, in km	
MOTORWAYS	24.2
SEMI-MOTORWAYS	
WIDENING TO FULL MOTORWAY PROFILE	
Annual toll collection revenues in 2014, in EUR	297.045.638
Full time employees	3.209
AADT LIGHT VEHICLES	12.163
AADT TRUCKS	1.739
AADT LV + TV	13.903
Total number of accidents	2.177
Number of accidents with injuries	293
Number of fatalities	25
Number of kilometres travelled (10 ⁶ x km)	6.538,63
Number of toll stations	105
Number of toll collection lanes	686
Number of ETC lanes*	466*
Number of ETC subscribers	255.101
Number of roadside rest areas (with filling stations)	76
Number of rest areas	124
Number of restaurants	20
Number of hotels	9

* The Autocesta Zagreb-Macelj d.o.o. has not as yet introduced the ETC