

# CROATIA NATIONAL REPORT ON MOTORWAYS 2013

## I Current State of the Network

As on 1 January 2014, the total length of the motorway network in Croatia amounted to **1,288.5 km**. Motorways are operated by 4 companies:

- Hrvatske autoceste d.o.o. (operates motorways A1, A3, A4, A5, A10, A11)\*,
- 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	2012 Total network	2013 Total network	Total network plan for 2014
1.	HAC d.o.o.	868.0	900.5	911.5
2.	ARZ d.d.	181.7	187.0**	187.0
3.	BINA-ISTRA d.d.	141.0	141.0	141.0
4.	AZM d.o.o.	60.0	60.0	60.0
<b>TOTAL</b>		<b>1,250.7</b>	<b>1,288.5</b>	<b>1,299.5</b>

\* Pursuant to the *Decision on the Changes of and Additions to the Decision on Classification of Public Roads* (Official Gazette 130/2012) dated 19 November 2012, motorway categories A12 and A13 have been converted into national road categories DC10 and DC12

\*\*In June 2012 network was expanded for 5,34 km of approach road from Novigrad Interchange to Netretić

OPENING OF NEW MOTORWAY SECTIONS IN 2013			
New motorways	New semi-motorways	Widening of existing sections to full motorway profile	Total completed network
24,5 km	8 km	0 km	1.288,5

NEW SECTIONS OPENED IN 2013			
Motorway	Section	Km	Description
A1 Zagreb - Split - Dubrovnik	Vrgorac-Ploče	11	Construction work and supervision
A1 Zagreb - Split - Dubrovnik	Ploče Interchange - Karamatići	6	Construction work and supervision
A10 Ploče Interchange - Metković - B&H border	B&H border-Metković-Ploče Interchange	7,5	Construction work, equipment work, and supervision
Link road Zagvozd-Baška Voda (DC532) with the St. Ilija Tunnel	Link road with sv. Ilija Tunnel	8	Construction work and supervision

In 2013 overall 32,5 km of new motorway and semi-motorway were opened to traffic.

## II Works in Progress

On 1 January 2014, the works were in progress on:

- 26,5 km of motorways,
- 22,0 km of fast roads

<b>WORKS IN PROGRESS ON 1 JANUARY 2014</b>			
<b>Motorway</b>	<b>Section</b>	<b>Km</b>	<b>Description</b>
A5 Beli Manastir-Osijek- B&H border	Sredanci-B&H border	3	Construction work and supervision
A5 Beli Manastir-Osijek- B&H border	Bridge over the Drava River	2,5	Construction work and supervision
A11 Zagreb - Sisak	Jakuševac-V. Gorica south	10	Construction work, equipment work and supervision
A11 Zagreb - Sisak	Buševac - Lekenik	11	Construction work, equipment work and supervision
Fast road: DC10 Podravina Y	Gradec-Križevci	12	Construction work and supervision
Fast road: DC12 Podravina Y	Vrbovec - Farkaševac	10	Construction work and supervision

In 2014, road works will be completed on the total of:

- 11 km of new motorways

### **THE FOLLOWING SECTIONS WILL BE OPENED TO TRAFFIC IN 2014**

<b>Motorway</b>	<b>Section</b>	<b>Km</b>	<b>Opening to traffic scheduled</b>
A11 Zagreb - Sisak	Buševac - Lekenik	11	June,2014

In addition to the continuation of work from the previous year, the following **new work** will start in 2014:

- 10,68 km of widening to full profile

### **START OF NEW WORK IN 2014.**

<b>Motorway</b>	<b>Section</b>	<b>Km</b>	<b>Description</b>
A8 Kanfanar - Matulji	Rogovići - Cerovlje	10,68	Widening to full profile
Link road TS Karamatići-Ploče Harbour	Entry to Ploče Harbour		Construction work and supervision

### III Cost of Investment and Financing

The total of HRK 1,577.37 million (€ 208.37 million) was invested in the construction of new motorways in 2013, while HRK 274.01 million (€ 36.20 million) was invested in sections under traffic.

-in mio HRK

Company	Investment in 2013		Plan for 2014	
	in new sections	in completed sections	in new sections	in completed sections
HAC*	1,577.37	200.29	1,035.81	262.03
ARZ	0.00	22.86	0.00	49.18
BINA ISTR	0.00	23.93	180,21	23.93
AZM	0.00	26.96	0.00	16.44
<b>TOTAL</b>	<b>1,577.37</b>	<b>274,01</b>	<b>1,216.02</b>	<b>351.58</b>
<b>TOTAL INVESTMENT</b>	<b>1,851.38</b>		<b>1,567.60</b>	

- in mio EUR (1 EUR = 7,57\* HRK)

Company	Investment in 2013		Plan for 2014	
	in new sections	in completed sections	in new sections	in completed sections
HAC**	208.37	26.46	136,83	34.61
ARZ	0.00	3.02	0.0	6.50
BINA ISTR	0.00	3.16	23.81	3.16
AZM	0.00	3.56	0.00	2.17
<b>TOTAL</b>	<b>208,37</b>	<b>36,20</b>	<b>160.64</b>	<b>46.44</b>
<b>TOTAL INVESTMENT</b>	<b>244.57</b>		<b>207.08</b>	

\*1 EUR=7.57 HRK (Annual average exchange rate in 2013, Source: Croatian National Bank)

\*\*The investment amounts are based on the temporary report for 2013

#### Sources of financing in 2013

Source of financing (%)	HAC	ARZ	BINA ISTR	AZM
loan	51			
company's funds			7	
toll revenues	26	76	48	100
revenues generated from the price of fuel (HRK 0.20/l i.e. EUR 0,026 /l)	23		0	
reimbursable and non-reimbursable state funding	0	24	45	
<b>TOTAL</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

## IV Traffic

In 2013 only ARZ registered a small decrease in traffic, while all other concessionaries registered an increase in traffic when compared to the previous year. The total traffic of all vehicles increased by 0.90 % in comparison with the previous year.

- number of vehicles in toll collection zones

Company	2012		2013				% Total (13/12)
	Light vehicles (IA+I+II)	Trucks (III+IV)	Light vehicles (IA+I+II)	% (13/12)	Trucks (III+IV)	% (13/12)	
HAC	27,961.710	3,914.412	27,946.068	-0.06	4,098.525	4.70	0.53
ARZ	16,823.972	1,663.240	16,712.976	-0.66	1,678.786	0.93	-0.52
BINA ISTRRA	7,021.802	626.242	7,211.433	2.70	653.493	4.35	2.84
AZM	6,030.501	664.417	6,223.327	3.20	761.870	14.67	4.34
TOTAL	57,837.985	6,868.311	58,093.804	0.44	7,192.674	4.72	
<b>TRAFFIC, TOTAL</b>	<b>64,706.296</b>		<b>65,286.478</b>				<b>0.90</b>

GDP 2011/2010 (%)	GDP 2012/2011 (%)	GDP 2013/2012 (%)	Traffic 2012/2011 (%)	Traffic 2013/2012 (%)
0.0	-2.0	-1.0*	-1.64	0.90

\* 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, and on the Krk Bridge).

(1 EUR = 7,57 HRK)

TOLL COLLECTION SYSTEM		
Existing systems	Light vehicles (Category I)	
	HRK/km without VAT	€/km without VAT
Closed system	0.470	0.062
Open system	0.480	0.063
Ratio categories I : IV closed tolling system	1:4.3	
	Trucks (Category IV)	
	HRK/km without VAT	€/km without VAT
Closed system	2.013	0.266
Open system	1.785	0.236
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).

#### **HRVATSKE AUTOCESTE D.O.O. (HAC)**

On 7 June 2012 HAC increased its toll rates by 15% for all vehicle categories, except in the ETC toll collection system where the price remained unchanged thanks to additional discounts granted to prepaid account users. At HAC toll stations, the toll can be paid either in cash (in HRK or in foreign currency), by credit cards, and through subscription (prepaid account).

Users who pay toll in advance through the ETC device system benefit from the 21.74% discount throughout the year. By purchasing the seasonal ETC the users benefit from the 33.48% discount in the period from 1 November of the current year to the 31 March of the next year while in other periods of the year they benefit from the 21.74% discount.

The users of the truck program operated in the scope of the ETC model of delayed payment by means of credit and diesel cards benefit from the basic 30.43% discount and from an additional 3% annual discount for the EURO 4 emission class and 5% for the EURO 5 emission class.

The ETC prepaid account can be replenished 24 hours a day at the following toll stations: Sveta Helena, Varaždin, Zagreb istok, Okučani, Slavonski Brod zapad, Županja, Lipovac, Đakovo, Osijek, Žuta Lokva, Gospić, Zadar 1 (zapad), Zadar 2 (istok), Šibenik, Dugopolje, Šestanovac, Vrgorac, Karamatići i Čarapine. In addition, the ETC device replenishment can be operated by credit cards via a web portal "prodaja.hac.hr", via a mobile device linked to credit card and prepaid account, at 12 retail outlets and also via SMS vouchers.

SMS vouchers are available at the retail outlets of INA, TIFON, CRODUX DERIVATI LUKOIL, PETROL, ZABA, Inovine, TISAK and SLOBODNA DALMACIJA while ETC packages can be purchased at all HAC toll stations.

#### **BINA-ISTRA D.D.**

From January 1, 2013 toll rates on Istrian Y including Učka Tunnel were adjusted for inflation for 4%. Users can still choose from a number of discounts given on the regular toll rate. Bina-Istra subscribers via Internet or SMS can 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, the users who already own ETC device can additionally register devices already bought at HAC and ARZ with the BINA-ISTRA toll collection system and become in this way Bina-Istra subscribers (this is valid for frequent users entitled to 30-50% discount, depending on section used) or to register their credit cards for ETC device (applicable to non-frequent users).

#### **AUTOCESTA RIJEKA-ZAGREB D.D. (ARZ)**

In 2013 toll rates remained unchanged. Users who pay toll in advance by ETC device or a Smart Card benefit from the 21.74% discount throughout the year and in the period from 1 November of the current year to the 31 March of the next year the users benefit from the 33.48% discount with the seasonal ETC or the seasonal Smart card. Replenishment of prepaid account is possible at authorised ARZ sales offices (cash, credit and debit cards), bank transfer, internet banking, via web shop and also via SMS vouchers. For categories III and IV the following discounts apply for post paid ETC permanent transfer order: EURO 3 benefit from 30,43% discount, EURO 4 30,43+3% and EURO 5 30,43+5%.

In 2013 Autocesta Rijeka-Zagreb introduced free applications for Android, Apple and Windows supporting phones. Free ARZ ETC applications enable easy replenishment of the account for the users with ARZ SMS vouchers as well as insight into ETC account at any time.

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

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 2013, the total toll revenues amounted to EUR 296,688.044 which represents an increase of toll revenues by 5.62 percent when compared to the previous year.

1 EUR = 7,57 HRK

Company		2012.		2013.		% (13/12)
		HRK	€	HRK	€	
1.	HAC*	1,283,196.275	169,510.736	1,362,562.977	179,995.109	6.19
2.	ARZ	480,014.214	63,410.068	490,281.810	64,766.421	2.14
3.	BINA-ISTRA	182,839.779	24,153.207	194,049.562	25,634.024	6.13
4.	AZM	180,449.821	23,837.493	199,034.147	26,292.490	10.30
<b>TOTAL</b>		<b>2,126,500.089</b>	<b>280,911.505</b>	<b>2,245,928.496</b>	<b>296,688.044</b>	<b>5.62</b>

\*Toll revenue based on the temporary report for 2013

## VII Traffic Safety

The total of 2,162 traffic accidents, with 39 fatalities and 308 accidents with injuries, was registered in 2013. The total number of all traffic accidents registered in 2013 was reduced by 2.35%, and the number of fatalities decreased by 13%, when compared to the previous year.

Number of traffic accidents	2012.					2013.				
	HAC 868km	BINA ISTRA 141 km	ARZ 182 km	AZM 60 km	CROATIA 1251 km	HAC 901km	BINA ISTRA 141 km	ARZ 187 km	AZM 60 km	CROATIA 1289 km
- with fatalities	20	2	5	2	<b>29</b>	22	0	5	4	<b>31</b>
- with injured	232	19	76	19	<b>346</b>	188	18	88	14	<b>308</b>
- with material damage	1,339	90	291	119	<b>1,839</b>	1,356	78	293	96	<b>1,823</b>
<b>Total number of traffic accidents</b>	<b>1,591</b>	<b>111</b>	<b>372</b>	<b>140</b>	<b>2,214</b>	<b>1,566</b>	<b>96</b>	<b>386</b>	<b>114</b>	<b>2,162</b>
<b>Total number of fatalities</b>	35	2	6	2	<b>45</b>	28	0	7	4	<b>39</b>

## Main safety ratios

	10 <sup>9</sup> vehicles/km in 2013					change 2013/2012 in %				
	HAC 901 km	BINA ISTRA 141 km	ARZ 187 km	AZM 60 km	CROATIA 1289 km	HAC 901 km	BINA ISTRA 141 km	ARZ 187 km	AZM 60 km	CROATIA 1289 km
Personal injury rate	42.21	1.62	83	40.11	48.06	-31.70	-7.95	14.80	-27.79	-11.63
Fatal accident rate	5.76	0	4.72	11.46	4.84	8.07	-100.00	-0.84	95.90	6.07
Rate of dead	7.33	0	6.6	11.46	6.09	-21.44	-100.00	15.79	95.90	-13.93

## 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 as adopted 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 Hrvatske autoceste d.o.o. and Hrvatske ceste d.d. with approval of the County Road Authority.

The Croatian Parliament adopted in 1999 the Strategy of Transport Development. Since then, the Government of the Republic of Croatia adopted four four-year Public Road Construction and Maintenance Programs (2001-2004, 2005-2008, 2009-2012, 2013-2016). As a candidate country for EU membership Croatia has invested great efforts and significant financial resources in dealing with transport problems and construction of road infrastructure in order for it to be compliant with the EU standards. Achieved level of motorway development imposes 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 2013 - 2016 Public Road Construction and Maintenance Program 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

**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

**DC532 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 100 km of new motorway sections and fast roads will be opened to traffic.

## **IX Significant activities started or completed in 2013 and plans for 2014**

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

In 2013 the following activities were undertaken:

In 2013 the restructuring of the company was undertaken and a subsidiary company for toll and maintenance of motorways was founded named Hrvatske autoceste održavanje i naplata cestarine d.o.o. (HAC ONC).

Regarding construction the company was focused on:

1. Finalisation of road works and opening to traffic of additional 32,5 km of motorways and fast roads: 17 km on the A1 Zagreb-Split-Dubrovnik motorway (section Vrgorac-Ploče and section Ploče Interchange-Karamatići), 7,5 km on the A10 motorway B&H border-Metković-Ploče Interchange and 8 km long link road Zagvozd-Baška Voda (DC 532) with Sv. Ilija Tunnel and opened to traffic.
2. Construction of Split-Ploče direction, bridge over the Drava River and section Sredanci-B&H border on corridor Vc, construction of Zagreb-Sisak motorway, reconstruction and upgrade of Ivanja Reka Interchange and construction of new frontal toll station Zagreb Istok.
3. Construction of fast roads DC 10 Podravina Y (Koprivnica) and DC 12 Podravina Y (Bjelovar).

The following objectives have been set for 2014:

During 2014 HAC ONC will be established as the only maintenance and toll operator of the network managed by companies Autocesta Rijeka - Zagreb d.d. i Hrvatske autoceste d.o.o.

In accordance with the Motorway Construction Plan and Program the following activities are planned in 2014:

1. Construction of bridge over the Drava River and section Čeminac-Osijek on the motorway A5 Beli Manastir-Osijek-B&H border.
2. Opening to traffic of Buševac-Lekenik section and completion of Jakuševac-Velika Gorica section on the motorway A11 Zagreb-Sisak.

#### **AUTOCESTA RIJEKA - ZAGREB d.d.**

In 2013 the company's activities were focused on:

- Restructuring of the company according to the guidelines of the Government of the Republic of Croatia and founding of the subsidiary company ARZON
- Rationalisation of expenditures, maintenance of the existing motorway sections and hence ensuring safety and comfort to the motorway users

The company has set the following objectives for the year 2014:

- Implementation of rationalisation measures and goals of restructuring
- Merging with subsidiary company HAC ONC and establishment of common operator for toll and maintenance of motorway network
- Project development and application for investments in road infrastructure with a goal of raising the level of safety to the users

#### **BINA-ISTRA d.d.**

In 2013 the company's activities were directed towards:

- Preparation of project documentation needed for realisation of phase 2B1 (construction of full motorway profile, section Rogovići-Vranja) and negotiations with bank consortium with a goal of closing the financial construction and ensure the necessary investment funds for realisation of the phase 2B1.

In 2014 the company has set the following objectives for the oncoming period:

- Closing of financial construction for phase 2B1 and beginning of works on subphase 2b1-1 (Rogovići-Cerovlje) in summer 2014.
- Introduction of INA cards connected to ETC device on all toll stations of the Istrian Y with a goal of raising the quality of the service provided and flexibility of the INA CARD users.

#### **AUTOCESTA ZAGREB-MACELJ d.o.o.**

In 2013 the company's activities were focused on:

- Regular and periodic maintenance, environmental protection, making and public presentation of action plans for noise protection, implementation of a new product - TICKET 40 (40 trips in 40 days for 40% discount).

The company has set the following objectives for 2014:

- 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 plans to widen the route to the full motorway profile at the Krapina - Đurmanec subsection, 3.7 km in length.

## KEY DATA FOR 2013

<b>CROATIA</b>	<b>2013.</b>
The total length of network according to concession agreement, in km, as on 31/12/2013	1,288.5
2 x 1 lanes not including the stopping lane	61.23
2 x 2 lanes not including the stopping lane	1,206.55
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 2013	
MOTORWAYS	24.5
SEMI-MOTORWAYS	8.0
WIDENING TO FULL MOTORWAY PROFILE	0
Number of km under construction as on 01/01/2014	
MOTORWAYS	26.5
SEMI-MOTORWAYS/FAST ROADS	22.0
WIDENING TO FULL MOTORWAY PROFILE	
Planned opening of new sections in 2014, in km	
MOTORWAYS	11.0
SEMI-MOTORWAYS	
WIDENING TO FULL MOTORWAY PROFILE	
Annual toll collection revenues in 2013, in EUR	296,688.044
Full time employees	3,562
AADT LIGHT VEHICLES	11,918
AADT TRUCKS	1,709
AADT LV + T	13,627
Total number of accidents	2,162
Number of accidents with injuries	308
Number of fatalities	39
Number of kilometres travelled (10 <sup>6</sup> x km)	6.409,082
Number of toll stations	105
Number of toll collection lanes	686
Number of ETC lanes*	466*
Number of ETC subscribers	229.303
Number of roadside rest areas (with filling stations)	75
Number of rest areas	123
Number of restaurants	16
Number of hotels	8

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