

THE CROATIAN ASSOCIATION OF TOLL MOTORWAYS CONCESSIONAIRES (HUKA)

# NATIONAL REPORT 2011 ON MOTORWAYS





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# NATIONAL REPORT ON MOTORWAYS 2011

## CURRENT STATE OF THE NETWORK

As on 1 January 2012, the total length of completed motorway and semi-motorway network in Croatia amounted to **1,250.7 km**. Motorways are operated by 4 companies:

- **Hrvatske autoceste d.o.o.** (operates motorways A1, A3, A4, A5, A10, A11, A12 and A13),
- **Bina-Istra d.d.** (operates motorways A8 and A9, the so called Istrian Y),
- **Autocesta Rijeka - Zagreb d.d.** (operates motorways A6, A7, part of A1, and the Krk Bridge),
- **Autocesta Zagreb - Macelj d.o.o.** (operates motorway A2).

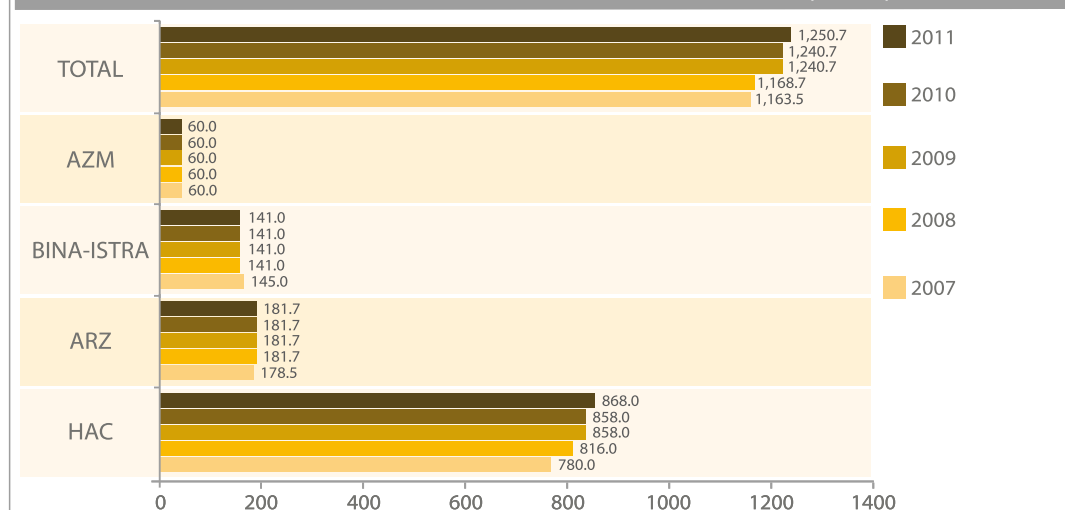
### MOTORWAY AND SEMI-MOTORWAY NETWORK (in km)

	COMPANY	2010 TOTAL NETWORK	2011 TOTAL NETWORK	TOTAL NETWORK PLAN FOR 2012
1.	HAC d.o.o.	858.0	868.0	869.5
2.	ARZ d.d.	181.7	181.7	181.7
3.	BINA-ISTRA d.d.	141.0	141.0	141.0
4.	AZM d.d.	60.0	60.0	60.0
	<b>TOTAL</b>	<b>1,240.7</b>	<b>1,250.7</b>	<b>1,252.2</b>

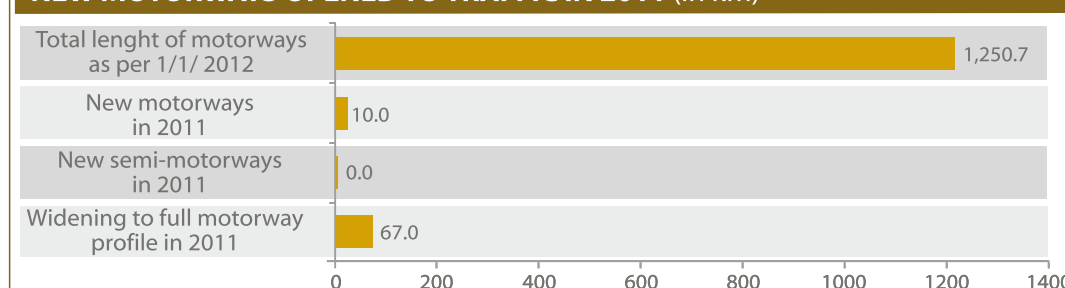
### NEW SECTIONS OPENED IN 2011

MOTORWAY	SECTION	km	DESCRIPTION
A1 Zagreb-Split-Dubrovnik	Ravča-Vrgorac	10	Motorway
A8 Kanfanar-Matulji	Kanfanar-Rogovići	18	Widening to full profile
A9 Umag - Pula	Umag-Kanfanar	49	Widening to full profile
Link road	Pula-Pomer	7.3	Opened in July 2011 and handed over to Istrian County Road Authority

### MOTORWAY AND SEMI-MOTORWAY NETWORK 2007-2011 (in km)















### NEW MOTORWAYS OPENED TO TRAFFIC IN 2011 (in km)



**Total network of  
motorways and  
semi-motorways  
in Croatia on  
1/1/ 2012  
amounted to  
1,250.7 km**

## MOTORWAYS IN THE REPUBLIC OF CROATIA





## NETWORK AND CONCESSIONAIRES:

CONCESSIONAIRE	MOTORWAYS	STATUS OF CONSTRUCTION	KM IN SERVICE
 HRVATSKE AUTOCESTE d.o.o.			868
 AUTOCESTA RIJEKA ZAGREB d.d.			181.7
 BINA ISTRA d.d.			141
 AUTOCESTA ZAGREB MACELJ d.o.o.			60
<b>TOTAL KM IN SERVICE ON 1/1/2012</b>			<b>1,250.7</b>

 Part of the motorway A1 from Zagreb to Bosiljevo is operated by ARZ



## MAP LEGEND

-  TUNNEL OVER 5 KM
-  TOLLED BRIDGE
-  BORDER CROSSING
-  BRIDGE



## WORKS IN PROGRESS

On 1 January 2012, the works were in progress on:

- 83.5 km of motorways
- 15.34 km of link roads

### WORKS IN PROGRESS ON 1 JANUARY 2012

MOTORWAY	SECTION	km	DESCRIPTION
A1 Zagreb-Split-Dubrovnik	Vrgorac-Ploče Interchange	11	Construction of route and structures
A1 Zagreb-Bosiljevo	Vukova Gorica-Karlovac	5.34	Construction of Novigrad Interchange and approach road (5.34 km) from Novigrad Interchange to Netretić
A5 Beli Manastir-Osijek-Svilaj	Sredanci-B&H border	3	Land acquisition and construction of motorway route
A5 Beli Manastir-Osijek-Svilaj	Bridge over Drava river	2.5	Foundation work on the bridge
A7 Rupa-Rijeka-Križišće-Žuta Lokva	Orehovica-Diračje (Rijeka Bypass)		Final works on solar power plant
A10 B&H border-link to Metković	B&H border-link to Metković	1.5	Construction of motorway route and border crossing platform
A11 Zagreb-Sisak	Jakuševac- Velika Gorica Interchange	10	Land acquisition, diversion of utilities, construction work on the motorway route, and Odra viaduct construction
A11 Zagreb-Sisak	Buševec-Lekenik	11	Land acquisition and route construction is finalized
A12 Vrbovec-Križevci-Koprivnica-Gola (H)	Gradec-Kloštar Vojakovački	20	Land acquisition, archaeological explorations, diversion of utilities, construction of road route and structures
A13 Vrbovec-Bjelovar-Virovitica-Terezino Polje (H)	Vrbovec 2-Bjelovar	27	Land acquisition, archaeological explorations, diversion of utilities, construction of road route and structures
Express road Zagvozd-Vinjani Donji	Link road Zagvozd- Baška Voda with the St. Ilija Tunnel	10	Start of work relating to tunnel equipment and north-side road

In 2012, road works will be completed on the total of:

- 1.5 km of new motorways
- 15.34 km of link roads

### OPENING TO TRAFFIC OF NEW SECTIONS IN 2012

MOTORWAY	SECTION	km	DESCRIPTION
A1 Zagreb-Bosiljevo	Vukova Gorica-Karlovac	5.34	Novigrad Interchange and approach road (5.34 km) from Novigrad Interchange to Netretić
A7 Rupa-Rijeka-Križišće-Žuta Lokva	Orehovica-Diračje (Rijeka Bypass)		Completion of solar power plant
A8 Kanfanar-Matulji	Učka Tunnel-Matulji		Andeli Interchange
A10 B&H border-Metković Internchange	B&H border-Metković Internchange	1.5	Due for completion in mid 2012
Express road Zagvozd-Vinjani Donji	Link road Zagvozd-Baška Voda with the St. Ilija Tunnel	10	Opening to traffic scheduled for June 2012

In addition to the continuation of work from the previous year, the following new work will start in 2012:

- 6 km of motorways
- 29 km of widening to full motorway profile
- 5 km of tunnels

### START OF NEW WORK IN 2012

MOTORWAY	SECTION	km	DESCRIPTION
A1 Zagreb-Split-Dubrovnik	Ploče Interch.-link to Metković	6	Bidding procedure is under way
A3 Bregana-Zagreb-Lipovac	Ivanja Reka-V. Kapanica		Construction of Ivanja Reka frontal toll station and Ikea Interchange
A8 Kanfanar-Matulji	Rogovići-Učka Tunnel	29	Widening to full profile
	Učka Tunnel	5	Second tube of Učka Tunnel



**In 2012  
a total of  
1.5 km  
of new  
motorways  
will be  
opened to traffic**

**as well as  
15.34 km  
of link roads**

## COST OF INVESTMENT AND FINANCING

The total of HRK 1,829.70 million (€ 241.39 million) was invested in the construction of new motorways in 2011, while HRK 210.58 million (€ 27.78 million) was invested in sections under traffic.

### INVESTMENT IN 2011 (in mio. HRK)

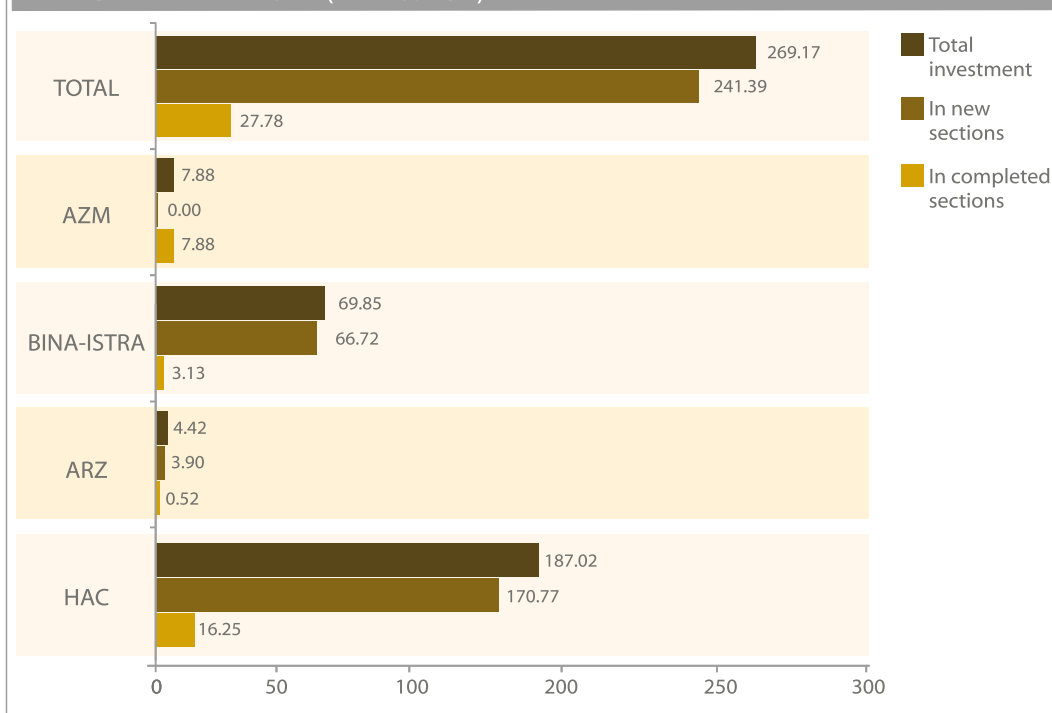
/1 EUR=7.58 HRK/

COMPANY	INVESTMENTS IN 2011		PLAN FOR 2012	
	in new sections	in completed sections	in new sections	in completed sections
HAC*	1,294.43	123.21	1,766.63	291.96
ARZ**	29.55	3.94	54.02	112.50
BINA ISTRRA	505.72	23.70	265.76	23.70
AZM	0.00	59.73	0.00	90.93
TOTAL	1,829.70	210.58	2,086.41	519.09
<b>TOTAL INVESTMENT</b>	<b>2,040.28</b>		<b>2,605.50</b>	

**In 2011  
the total of  
€ 241.39 million  
was invested  
in the construction  
of new motorways**

**In sections under  
traffic  
€ 27.78 million  
was invested in  
2011**

### INVESTMENT IN 2011 (in mio. EUR)



### INVESTMENT IN 2011 (in mio. EUR)

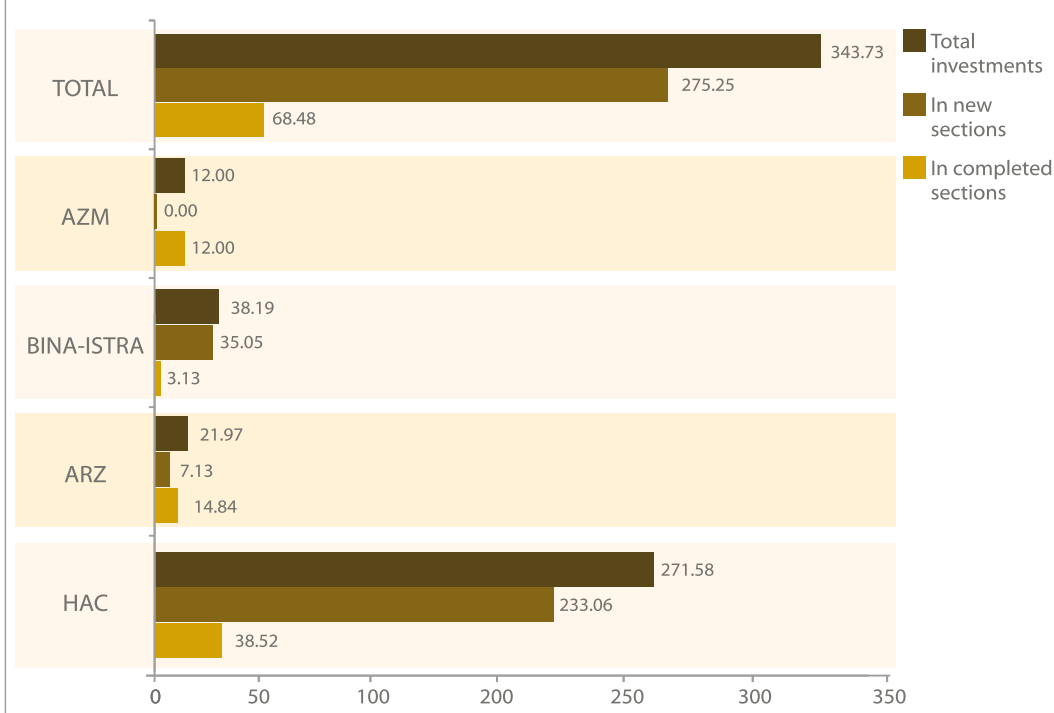
COMPANY	INVESTMENTS IN 2011		PLAN FOR 2012	
	in new sections	in completed sections	in new sections	in completed sections
HAC*	170.77	16.25	233.06	38.52
ARZ**	3.90	0.52	7.13	14.84
BINA ISTRRA	66.72	3.13	35.06	3.13
AZM	0.00	7.88	0.00	12.00
TOTAL	241.39	27.78	275.25	68.48
<b>TOTAL INVESTMENT</b>	<b>269.17</b>		<b>343.73</b>	

\* In 2011 the entire investment was financed through loans. Individual investment amounts given for 2011 are based on the temporary report for 2011, while the amounts given for 2012 are based on the Construction and Maintenance Plan approved by the HAC Supervisory Board

\*\* The investment amounts are based on the temporary report for 2011

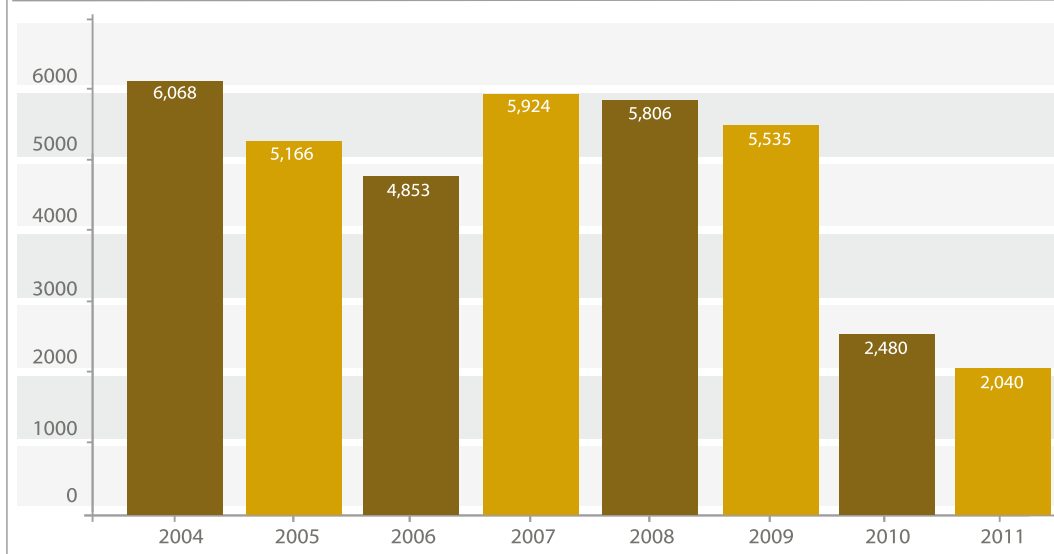
## INVESTMENT PLAN FOR 2012 (in mio. EUR)

/1 EUR=7.58 HRK/



**In 2012,  
motorway  
companies plan to  
invest a total  
amount of  
343.73 mio. EUR  
in new and  
completed  
motorway sections**

## TOTAL INVESTMENT 2004-2011 (in mio. HRK)



1 EUR= 7.58 HRK as in March 2012

## FINANCING STRUCTURE IN 2011

SOURCES OF FINANCING (%)	HAC	ARZ	BINA-ISTRA	AZM
loan	63	46.6	46	
company's funds			17	
toll revenues	17	43.1	17	100
revenues generated from the price of fuel (HRK 0.60/l)	19	0	0	
reimbursable and non-reimbursable state funding	1	10.3	20	
<b>TOTAL</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>





## TRAFFIC

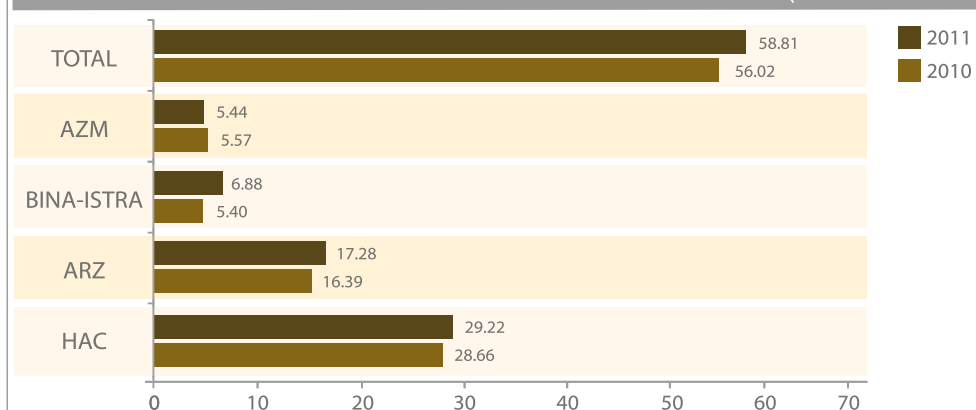
All concessionaires, with the exception of AZM, registered in 2011 a rise in traffic when compared to the previous year, and so the total traffic of all vehicles increased in 2011 by 5.14%, in comparison with the previous year. This is mainly due to significant increase in traffic on the Bina Istra sections that were opened to traffic in full motorway profile in 2011 whereby the traffic is counted differently.

### NUMBER OF VEHICLES IN TOLL COLLECTION ZONES 2010-2011

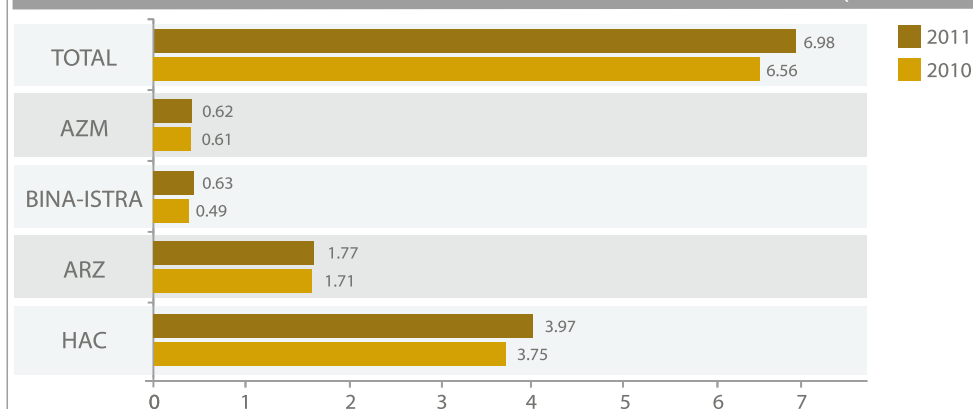
COMPANY	2010		2011				
	Light vehicles (IA+I+II)	Trucks (III+IV)	Light vehicles (IA+I+II)	% 11/10	Trucks (III+IV)	% 11/10	% TOTAL
HAC	28,655.480	3,751.193	29,219.908	1.97	3,969.093	5.81	2.41
ARZ	16,388.087	1,706.956	17,275.751	5.42	1,764.400	3.37	5.22
BINA ISTR	5,402.286	486.184	6,875.400	27.27	630.550	29.69	27.47
AZM	5,569.339	613.822	5,436.793	-2.38	615.877	0.33	-2.11
TOTAL	56,015.192	6,558.155	58,807.852	4.99	6,979.920	6.43	
<b>TOTAL TRAFFIC</b>	<b>62,573.347</b>		<b>65,787.722</b>		<b>5.14</b>		

**In 2011,  
the total number  
of vehicles  
in toll collection  
zones  
increased by  
5.14%,  
in comparison  
with the previous  
year**

### LIGHT VEHICLES IN TOLL COLLECTION ZONES 2010-2011 (in mio. vehicles)



### NUMBER OF TRUCKS IN TOLL COLLECTION ZONES 2010-2011 (in mio. vehicles)

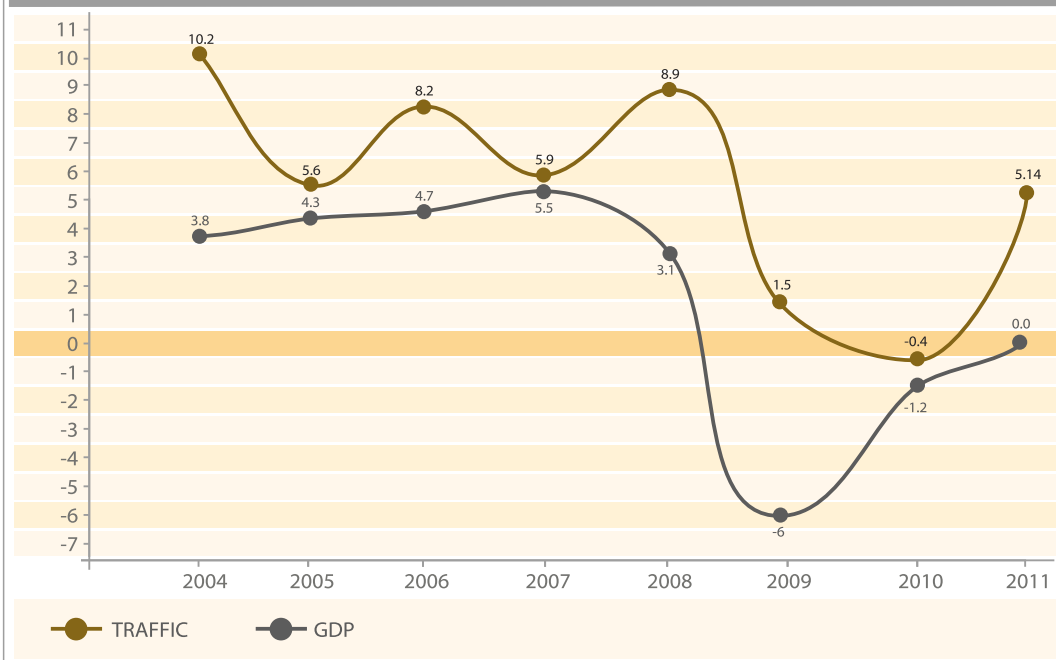


### TRAFFIC AND GDP

GDP 2009 / 2008 (%)	GDP 2010 / 2009 (%)	GDP 2011 / 2010 (%)	TRAFFIC 2010 / 2009 (%)	TRAFFIC 2011 / 2010 (%)
-6.0*	-1.2*	0.0*	-0.39*	5.14*

\* revised GDP data based on information provided by the Central Bureau of Statistics.

## TRAFFIC AND GDP 2004-2011



**In 2011,  
10 km  
of new motorways  
were opened  
to traffic,  
while  
67 km  
of roads  
were widened to  
the full motorway  
profile**

## 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 (Bregana - Zagreb Motorway and on the Krk Bridge).

TOLL COLLECTION SYSTEMS		/1 EUR = 7.58 HRK/	
EXISTING SYSTEMS	LIGHT VEHICLES (Category I)		
	HRK/km without VAT	€/km without VAT	
CLOSED SYSTEM	0.438	0.058	
OPEN SYSTEM	0.473	0.036	
Ratio categories I : IV (closed tolling system)		1 : 4.2	
EXISTING SYSTEMS	TRUCKS (Category IV)		
	HRK/km without VAT	€/km without VAT	
CLOSED SYSTEM	1.833	0.242	
OPEN SYSTEM	1.113	0.147	
Ratio categories I : IV (open tolling system)		1 : 4.4	

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





**Level of  
toll rates  
did not  
change  
in 2011**

## HRVATSKE AUTOCESTE d.o.o.

In 2011, HAC did not increase the level of toll rates.

At HAC toll collection points, toll can be paid in cash (in HRK and in foreign currencies), by credit cards and via prepayment.

Road users that pay toll in advance using the ETC system devices benefit from the 10% discount throughout the year. By purchasing the seasonal ETC subscription, the users benefit from the 23.5% discount in the period from 1 November of the current year to the 31 March of the following year, while the basic prepaid rate with the 10% discount is applied in the remaining periods of the year.

Truck users (categories III and IV) can pay toll via the ETC device that is linked to the credit card. In this way they benefit from the year round 20% discount, while an additional year round discount is applied for vehicles included in the EURO emission categories 4 and 5. Users of category III and IV vehicles with ETC standing order accounts are eligible for the following discounts: 23% for EURO 4 trucks, 25% for EURO

5 trucks, and 20% for other euro-emission categories for trucks, and this based on valid documents confirming that the truck is included in the emission category for which discount is claimed. The ETC prepaid account can be replenished round the clock on toll collection booths of the following toll stations: Bregana, Ivanja Reka, Sveta Helena, Varaždin, Osijek, Đakovo, Sl.Brod-West, Županja, Lipovac, Žuta Lokva, Gospić, Zadar-East, Zadar-West, Šibenik, Dugopolje, Šestanovac and Ravča.

In addition, the amount on the ETC device can be replenished via credit cards at the hac.hr web portal, via mobile device linked to credit card and prepaid account, at 15 sales points during normal working hours, and via SMS voucher to replenish the amount on the ETC device. The SMS vouchers and ETC packages are readily available at sales points of INA, TIFON, OMV, HAK, BINA ISTRA, LUK OIL, PETROL I TISAK, while SMS vouchers are also available through ZABA sales points (internet banking, cash machines (ATM), and ZABA kiosks).

## BINA-ISTRA d.d.

The closed toll collection system was introduced at Istrian Y in mid 2011. At that, the toll rates have not been increased, and the users can still benefit from a number of discounts applied on regular toll rates.

Bina-Istra prepaid account users are able to see via Internet and SMS the balance on their accounts and account expiry information, the list of passages through toll points, and account replenishment information, and can prepare and print bank transfer invoices.

In addition to cash payment, users can pay by all credit and debit cards, INA card, and via the ETC device. Furthermore, users who already have an ETC device can reregister 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 did not increase level of its toll rates in 2011. Toll can be paid by cash, and via credit and debit cards, SMART card, INA card and ETC. A 10% discount is granted throughout the year if toll is paid through subscription via SMART card. A seasonal discount of 23.5% is granted for seasonal Smart and seasonal ETC during the winter season, from 1 November to 31 March.

A 10% discount is granted throughout the year if toll is prepaid via ETC device.

At the promotional discount sale that lasted from 1 January 2011 to 31 December 2011, the

commercial ETC devices were sold for the category I vehicles at HRK 1 + VAT = HRK 1.23, subject to minimum toll prepayment of HRK 100 and user registration.

ETC packages can be purchased at FINA (160 offices), PETROL (30 filling stations), TIFON (15 filling stations), and EURO PETROL (19 filling stations). This project, enabling purchase of ETC devices for category I users, has been undertaken to make the product more available to end users, and especially to tourists.

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

AZM did not increase level of toll rates in 2011.

Toll can be paid in cash, via debit and credit cards, INA card and also with SMART card.

A 15% discount is granted to categories I and II for toll payment by subscription to SMART card.

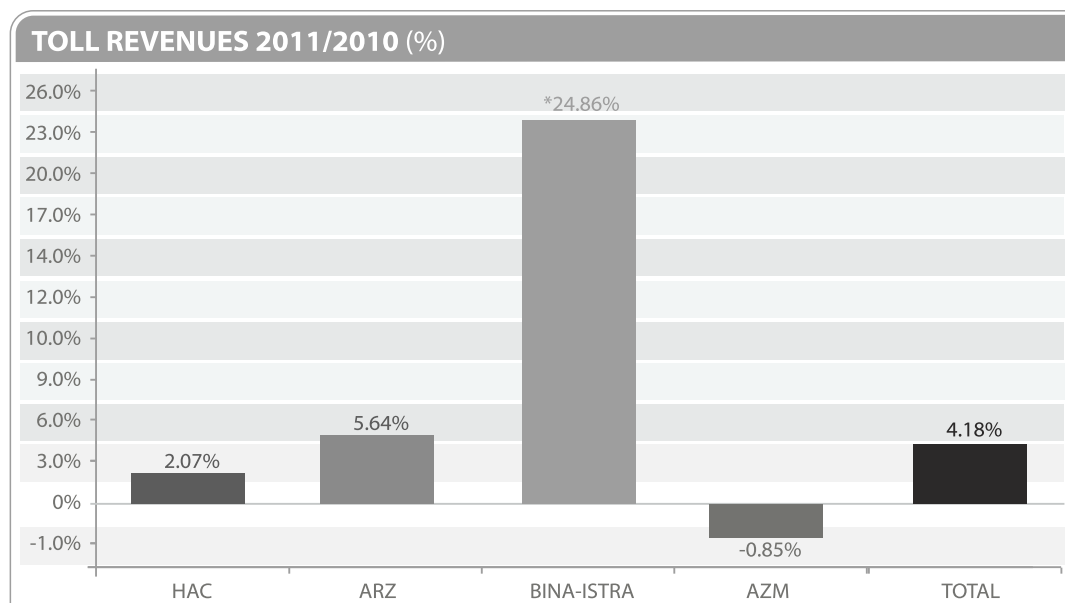
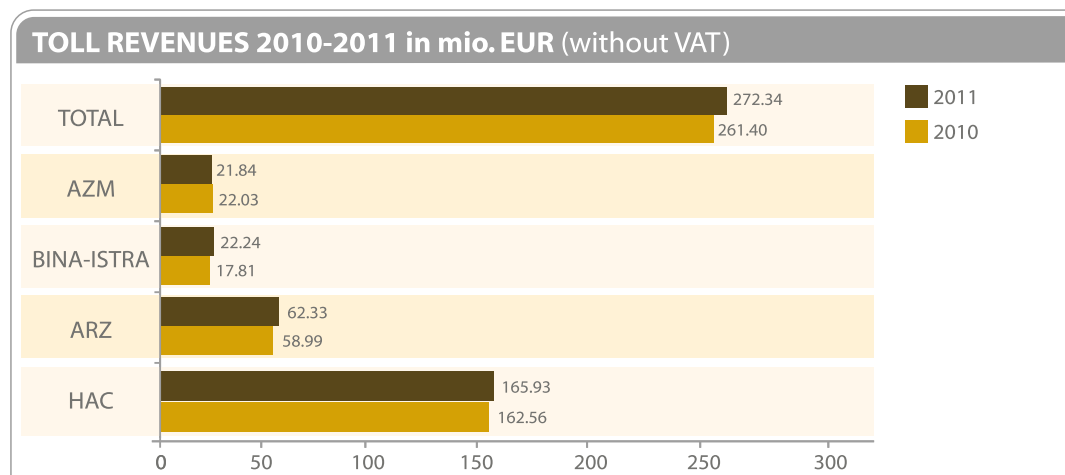
SMART card subscribers with vehicles belonging to categories III and IV enjoy the year round discount of 10% (for purchases in excess of HRK 4,000).



## TOLL REVENUES (without VAT)

In 2011, the total toll revenues on all motorways amounted to EUR 272,337.034 which represents an increase of toll revenues by 4.18%, when compared to the previous year.

TOLL REVENUES (without VAT)					/1 EUR = 7.58 HRK/
COMPANY	2010		2011		% (11/10)
	kn	EUR	kn	EUR	
HAC	1,232,212.309	162,560.991	1,257,728.814	165,927.284	2.07
ARZ	447,200.934	58,997.485	472,431.515	62,326.057	5.64
BINA ISTRRA	135,020.590	17,812.743	168,579.984	22,240.103	*24.86
AZM	166,985.990	22,029.814	165,574.407	21,843.589	-0.85
<b>TOTAL</b>	<b>1,981,419.823</b>	<b>261,401.032</b>	<b>2,064,314.720</b>	<b>272,337.034</b>	<b>4,18</b>



\* Higher revenues are due to the shift from opened to closed toll collection system on most parts of the network of BINA-ISTRRA.

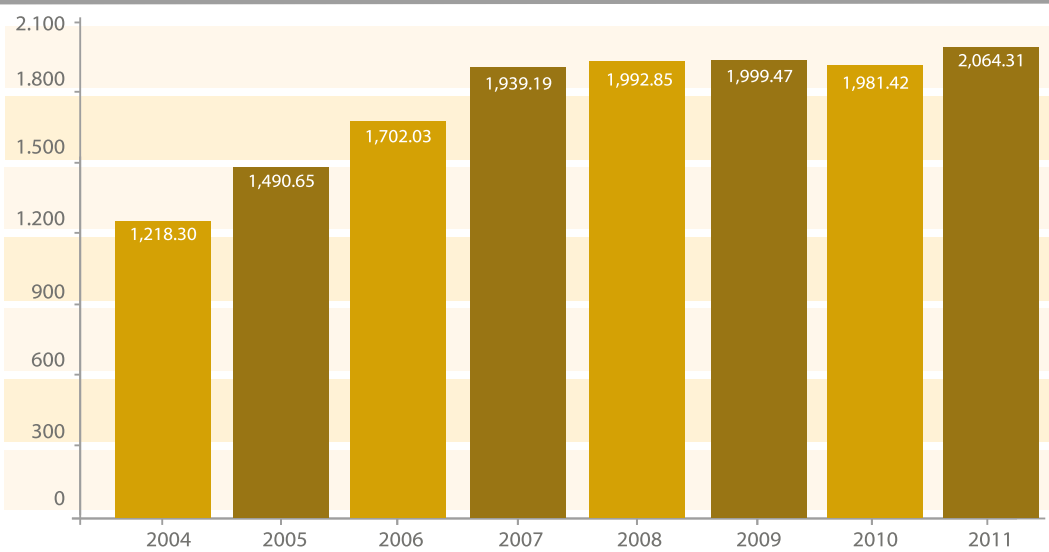


**In 2011, the total toll revenues on all motorways amounted to EUR 272,337.034 which represents an increase of toll revenues by 4.18 %, when compared to the previous year**



**In 2011, total number of traffic accidents was reduced by 12.08%, while fatalities were reduced by 32.61%, when compared to the year 2010**

### TOLL REVENUES 2004-2011 in mio. HRK (without VAT)



1 EUR = 7.58 HRK as in March 2012

### TRAFFIC SAFETY

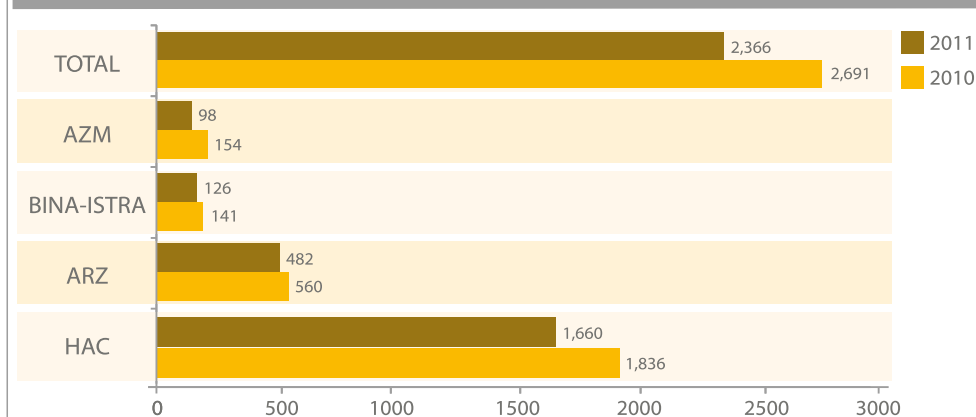
The total of 2,366 traffic accidents, with 31 fatalities and 367 accidents with injuries, was registered in 2011.

The total number of all traffic accidents registered in 2011 was reduced by 12.08%, and the number of fatalities fell by 32.61%, when compared to the previous year.

#### TRAFFIC SAFETY 2010-2011

NUMBER OF TRAFFIC ACCIDENTS	2010					2011				
	HAC (858km)	BINA-ISTRA (141km)	ARZ (182km)	AZM (60km)	CROATIA (1241km)	HAC (868km)	BINA-ISTRA (141km)	ARZ (182km)	AZM (60km)	CROATIA (1251km)
with fatalities	29	3	6	1	39	18	3	5	2	28
with injured	259	14	105	29	407	260	11	86	10	367
with material damage	1,548	124	449	124	2,245	1,382	112	391	86	1,971
<b>Total number of traffic accidents</b>	<b>1,836</b>	<b>141</b>	<b>560</b>	<b>154</b>	<b>2,691</b>	<b>1,660</b>	<b>126</b>	<b>482</b>	<b>98</b>	<b>2,366</b>
<b>Total number of fatalities</b>	<b>35</b>	<b>4</b>	<b>6</b>	<b>1</b>	<b>46</b>	<b>21</b>	<b>3</b>	<b>5</b>	<b>2</b>	<b>31</b>

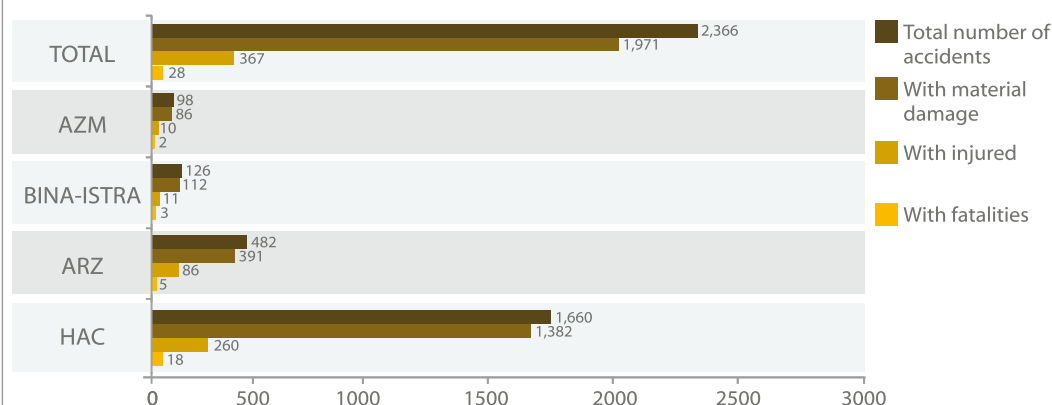
#### TOTAL NUMBER OF TRAFFIC ACCIDENTS 2010-2011



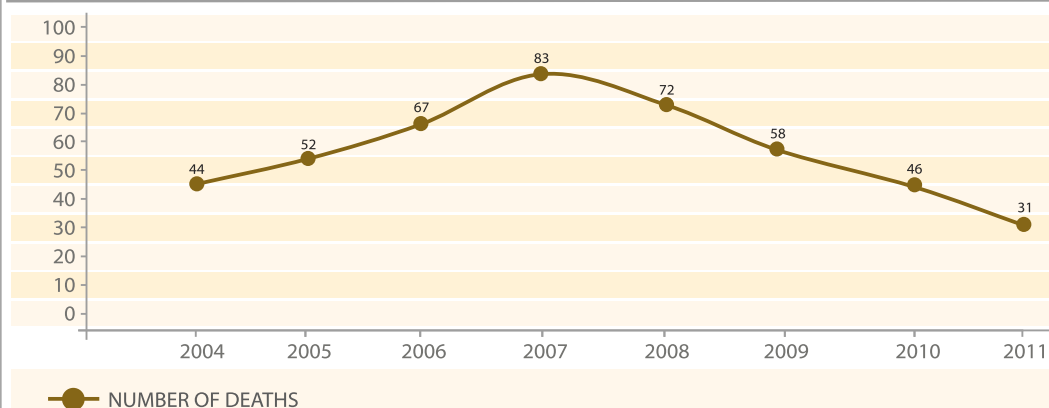
## TRAFFIC ACCIDENTS 2004-2011 BY TYPE OF ACCIDENT

TRAFFIC ACCIDENTS:	2004	2005	2006	2007	2008	2009	2010	2011
<b>With fatalities</b>	<b>39</b>	<b>44</b>	<b>43</b>	<b>68</b>	<b>48</b>	<b>43</b>	<b>39</b>	<b>28</b>
With injured	315	411	437	414	420	420	391	367
With material damage	1,760	2,070	2,257	2,133	2,072	2,287	2,245	1,971
Total number of traffic accidents	2,103	2,525	2,737	2,615	2,540	2,755	2,691	2,366
<b>Total number of fatalities</b>	<b>44</b>	<b>52</b>	<b>67</b>	<b>83</b>	<b>72</b>	<b>58</b>	<b>46</b>	<b>31</b>

## TRAFFIC ACCIDENTS IN 2011 BY TYPE OF ACCIDENT



## TOTAL NUMBER OF DEATHS 2004-2011

MAIN SAFETY RATIOS (per 10<sup>9</sup> km travelled)

	2011					CHANGE 2011/2010 (%)				
	HAC (858km)	BINA-ISTRA (141km)	ARZ (182km)	AZM (60km)	CROATIA (1241km)	HAC (868km)	BINA-ISTRA (141km)	ARZ (182km)	AZM (60km)	CROATIA (1251km)
Personal injury rate	66.43	31.8	73.63	30.09	63.16	-2.04	-26.80	-9.88	-65.19	-12.81
Fatal accident rate	4.59	8.56	4.28	6.02	4.82	-39.53	-8.06	-22.18	102.01	-30.58
Rate of dead	5.37	8.57	4.28	6.02	5.34	-41.38	-30.94	-22.18	102.01	-34.83



In  
2011,  
31 person died  
in traffic accidents,  
which represents  
15 deaths less  
than the  
previous year





**By the end of 2012, Government of the Republic of Croatia should adopt new Public Roads Construction and Maintenance Programme for the period from 2013 to 2016**

## 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 the Sea, Transport and Infrastructure,
- Annually, through Construction and Maintenance Plans defined by individual motorway operating companies.

The Government of the Republic of Croatia adopted three four-year Public Roads Construction and Maintenance Programmes (2001-2004, 2005-2008, 2009-2012), and by the end of 2012 a new Program for the period from 2013 to 2016, and also a new long-term Transport Development Plan should be adopted.

Previous two four-year periods were marked by accelerated and intensive motorway construction in the Republic of Croatia. Due to limited funding possibilities caused by global financial crisis and recession the priorities in the current 2009 - 2012 period have shifted to the completion of sections started in previous periods on motorways A1, A5 and A11, to widening of Istrian Y (A8 and A9) to the full motorway profile, and to maintenance and preservation of the existing motorway network, including quality improvements and construction of new roadside service facilities.

Out of the works anticipated in the Public Roads Construction and Maintenance Programme (2009-2012), the following activities still remain to be realized:

### A1 Zagreb-Split-Dubrovnik

- Vrgorac-Ploče Interchange Section – construction of motorway route with structures, completion planned after 2012
- Ploče Interchange - Metković Section – preparation of design documents

### A2 Zagreb-Macelj

- Macelj-Krapina Section – completion of the Macelj border crossing with Slovenia

### A5 Beli Manastir-Osijek-B&H Border

- Sredanci-B&H Border Section – land acquisition and motorway route construction
- Bridge over the Drava River - foundation work

### A7 Rupa-Rijeka-Križišće-Žuta Lokva

- Sveti Kuzam-Križišće Section – finalisation of works

### A8 Kanfanar-Matulji

- Rogovići-Učka Tunnel Section – preparations for widening to the full motorway profile
- Učka Tunnel – preparations for construction of the second tunnel tube

### A10 B&H Border-Metković Interchange

- B&H Border-Metković Interchange Section – construction of motorway route and border crossing platform

### A11 Zagreb-Sisak

- Jakuševac-Velika Gorica Interchange Section – completion of land acquisition, diversion of utilities, construction of motorway route including the Odra Viaduct
- Buševac-Lekenik Section - completion of land acquisition, and motorway route construction

### A12 Vrbovec-Križevci-Koprivnica-Gola (H)

- Gradec- Kloštar Vojakovački Section – land acquisition, diversion of utilities, construction of motorway route with structures

### A13 Vrbovec-Bjelovar-Virovitica-Terezino Polje (H)

- Vrbovec 2 Interchange-Bjelovar Section – land acquisition, diversion of utilities, construction of motorway route with structures

## SIGNIFICANT ACTIVITIES STARTED OR COMPLETED IN 2011 AND PLANS FOR 2012

### HRVATSKE AUTOCESTE d.o.o.

#### Activities related to traffic safety

- improvement of traffic statistics and analysis of traffic accidents in order to define dangerous spots, and propose improvement of such spots through appropriate measures and traffic engineering solutions,
- improvement of the traffic information system (PIS) for the detection of ghost drivers, in order to enable more efficient work of competent services in the incidental situation known as "ghost driver",
- several projects for improvement of traffic/technical solutions on some parts of the road, equipment and system, i.e. on spots where safety analyses have shown that such improvements are needed, in order to avoid accidents or reduce their consequences.

#### Activities related to improvement of services to motorway users

- provision of better real-time information about traffic situation and road condition on the oncoming road sections, and this through use of information displays,
- improvement of technical and organisational measures for operation of traffic in emergency situations on existing motorways,
- redesign of HAC web pages, so as to include useful traffic information.

#### Activities related to toll collection

Appropriate processes aimed at increasing the share of toll collected via ETC system were initiated in 2011. The trend of including users of vehicle categories III and IV (trucks), started in 2010 by introduction of stimulating and environmental conditions for payment via ETC device coded to a specific truck licence plate linked to credit cards (Amex, Diners, Mastercard, and Visa), will be continued in 2012 as well as this: by including INA and LUKOIL cards into the ETC standing order accounts for trucks, i.e. by replacement of 9,847 Smart Cards with ETC devices, without any charge. This will increase the part of the ETC truck traffic in the total truck traffic, from 44% realized in 2011, to the estimated 60% of the total truck traffic in 2012.

In addition, activities undertaken in 2011 also focused on increasing the number of ETC temporary users belonging to vehicle categories I and II (passenger cars). In this respect, a promotional sale of ETC package was implemented from 15 June to 15 September 2011, when the price of ETC device amounted to HRK 0.00 only. To ensure success of this promotional sale, we devised the commission sale distribution system and concluded contracts about commission sale of ETC packages and SMS vouchers with the greatest

oil companies INA, Tifon, OMV, LUKOIL and Petrol, and with the greatest retail network of kiosks owned by Tisak and Slobodna Dalmacija. In addition, we entered into contract with Zagrebačka banka for commission sale of SMS vouchers for replenishment of ETC accounts. We thus created a distribution network that sold, over the above mentioned promotional period, as many as 22,149 of ETC packages, and the said number of new users was included in the ETC toll collection system, which amounts to 13% of the total number of active ETC devices.

#### Activities planned in 2012:

It is planned to increase motorway traffic and attract the through truck traffic (transit traffic) in the Republic of Croatia to motorways. This includes preparation of the Byelaw on European Electronic Toll Collection (Art. 12, Para. 2, and Art. 14, Para. 1. of the Roads Act (Official Gazette 84/11)), and harmonization of existing electronic toll collection protocols with European guidelines. This also includes realization of negotiation on the acceptance of ETC devices for trucks issued by the French Eurotoll, which expressed its intention to open its office in the Republic of Croatia, just like in all EU countries. The said activities and full application of the European electronic toll collection in the Republic of Croatia is to be realized by June 2013, which will ensure implementation of regional interoperability with EU countries and hence it will be possible to pay toll in the Republic of Croatia using the ETC device sold by the EETC service provider from an EU country, and vice versa.

Pursuant to Art. 9, Para. 1, Subpara. 3, of the Roads Act (Official Gazette 84/11), a new Byelaw is currently prepared to determine vehicle categories for toll collection, methodology for determining toll rates, and parameters for adjustment of toll rates with cost increase rates. The objective is to unify, for all motorway operators present in the Republic of Croatia, the rules for classification of vehicles in price categories, and to standardise an approach for determining toll rates for toll road sections, i.e. to define methodology for adjusting toll rates with an increase in the motorway operation and maintenance costs, and for using optimum charging models dependent on specific time intervals, days or seasons in the year, all in order to achieve maximum use of all motorway sections on which tolls are charged.

It is planned also to optimize operating costs in future periods through implementation of the pilot project for the fully automated toll





## HRVATSKE AUTOCESTE d.o.o.

collection at the exit toll lane of the Komin TS on the Zagreb - Goričan Motorway (A4), where it will be confirmed during testing in the first quarter of 2012 whether the system is compliant with toll collection requirements set in the Republic of Croatia. The use of equipment for fully automated toll collection requires definition and development of a special hardware and software package, completely adjusted to HAC needs, and fully compliant with Croatian regulations relating to foreign-currency toll payment by non-residents, and exemption from toll payment based on regulations on traffic safety and use of motorways by vehicles owned by persons

with physical disability. According to this pilot project, the automatic toll lane would ensure toll collection without toll attendant, using all payment methods via credit and smart cards, and ETC device, while cash payments would be limited to Croatian currency "kuna" and European currency "euro". Upon successful implementation of this pilot project, HAC plans to open every new toll motorway section in such a way that toll stations positioned on roads with lower traffic density will be equipped with fully automated toll collection systems, which will contribute to long term optimization of operating costs.

## BINA - ISTRA d.d.

### Long-term plans:

Widening of the Istrian Y route to the full motorway profile (Phase 2A) is currently under way and the stopping lane is systematically being realized on all new sections. However, the stopping lane on the side with lay-bys will be built in Phase 2B, as specified in the written agreement signed between the Government of the Republic of Croatia and Bina-Istra.

The second viaduct over the Limska Draga, as well as the Mirna bridge, will be built in Phase 2B. This phase also includes the second carriageway at the Rogovići-Učka Tunnel-Matulji Section, 45 km in length, and construction of the second tube of the Učka Tunnel (5 km).

### Activities in 2011:

Almost 75 km of widening to full motorway profile were opened to traffic (Umag-Kanfanar Section in June and Kanfanar-Pazin Section in October).

In June 2011, the closed toll collection system was implemented on the entire Istrian Y.

In the course of 2011, preparations were being made for widening of the Pazin-Učka Tunnel Section to the full motorway profile, including the second tube of the Učka Tunnel.

### Activities planned in 2012:

Start of construction of the full motorway profile at the Pazin-Učka Tunnel Section, including the second tube of the Učka Tunnel.

## AUTOCESTA RIJEKA-ZAGREB d.d.

### Activities in 2011:

Construction of the Novigrad Interchange with access road from Novigrad Interchange to Netretić. Works on solar power plant at the Rijeka Bypass.

### Activities planned in 2012:

Completion of the Novigrad Interchange with access road from Novigrad Interchange to Netretić.

Completion of work on the solar power plant at the Rijeka Bypass.

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

Regular activities relating to road safety, service level improvement, environmental protection and optimisation of operating costs are underway. Since the concession area has been set for the entire concession period, there is no room for extension of the network. It is planned to widen the Krapina-Đurmanec sub-section, 3.7 km in length, to the full motorway profile.

As to competition with railway traffic, AZM expects that the road traffic will steadily be increasing as the rail infrastructure in the zone around the concession area has been greatly neglected, and is currently negligible.

### Activities in 2011:

Regular and periodic maintenance, environmental protection, prevention of traffic accidents, and preparation of the Strategic Noise Map for the entire Zagreb-Macelj Motorway.

### Activities planned in 2012:

Regular and periodic maintenance, preparations for introduction of ETC, environmental protection, and noise protection action plans.





## KEY DATA

### KEY DATA ON CROATIAN MOTORWAYS IN 2011

<b>The total length of network according to concession agreement, in km, as on 31/12/2011†</b>	<b>1,250.7</b>
<b>2 x 1 lanes not including the stopping lane</b>	<b>47.89</b>
<b>2 x 2 lanes not including the stopping lane</b>	<b>1,182.05</b>
<b>2 x 3 lanes not including the stopping lane</b>	<b>20.75</b>
<b>2 x 4 lanes not including the stopping lane</b>	<b>0.00</b>
<b>Number of km opened to traffic in 2011</b>	
MOTORWAYS	10.00
SEMI-MOTORWAYS	0.00
WIDENING TO FULL MOTORWAY PROFILE	67.00
<b>Number of km under construction as on 1/1/2012</b>	
MOTORWAYS	83.50
SEMI-MOTORWAYS	0.00
WIDENING TO FULL MOTORWAY PROFILE	0.00
<b>Planned opening of new sections in 2012, in km</b>	
MOTORWAYS	1.50
SEMI-MOTORWAYS	0.00
WIDENING TO FULL MOTORWAY PROFILE	0.00
<b>Annual toll collection revenues in 2011, in EUR</b>	<b>272,337.034</b>
<b>Full time employees</b>	<b>3,936</b>
<b>AADT LIGHT VEHICLES</b>	<b>11,249</b>
<b>AADT HEAVY VEHICLES</b>	<b>1,476</b>
<b>AADT LV + HV</b>	<b>12,725</b>
<b>Total number of accidents</b>	<b>2,366</b>
<b>Number of accidents with injuries</b>	<b>367</b>
<b>Number of fatalities</b>	<b>31</b>
<b>Number of kilometres travelled (10<sup>6</sup>x km)</b>	<b>5,810.311</b>
<b>Number of toll stations</b>	<b>93</b>
<b>Number of toll collection lanes</b>	<b>638</b>
<b>Number of ETC lanes*</b>	<b>411*</b>
<b>Number of ETC subscribers</b>	<b>196.171</b>
<b>Number of roadside rest areas (with filling stations)</b>	<b>76</b>
<b>Number of rest areas</b>	<b>123</b>
<b>Number of restaurants</b>	<b>18</b>
<b>Number of hotels</b>	<b>8</b>

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

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