



Republic of Turkey
Ministry of Transport Maritime Affairs
and Communications



GENERAL DIRECTORATE
of HIGHWAYS

FUNCTIONING & FINANCING OF NATIONAL ROAD MANAGEMENT IN TURKEY

TEM STEERING COMMITTEE & WORKSHOP: FUNCTIONING & FINANCING OF NATIONAL ROAD MANAGEMENT

7-9 November 2017

Sarajevo/Bosnia and Hercegovina



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1

GENERAL OVERVIEW of HIGHWAY NETWORK



ROAD NETWORK IN TURKEY



Type: Village and Forest roads
Responsibility: Special Provincial Administration

Type: Urban roads
Responsibility: Municipal Authorities

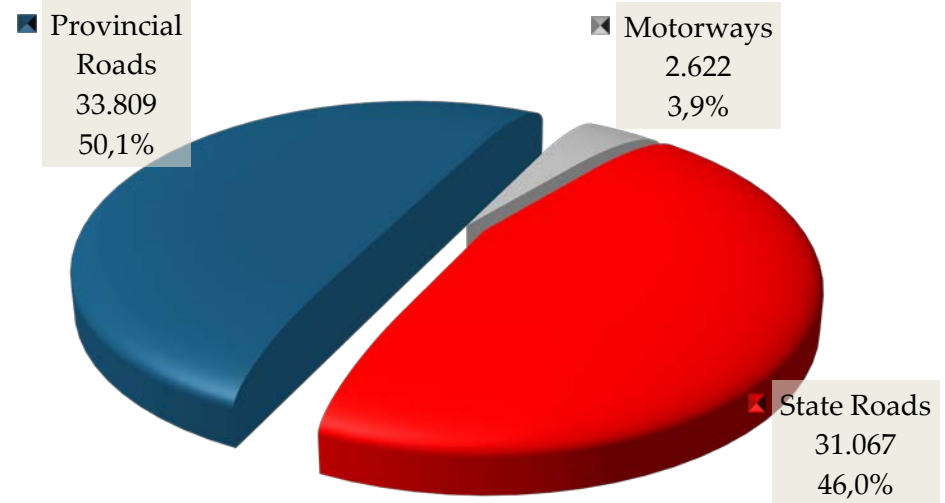
Type: Motorways, State & Provincial roads
Responsibility: General Directorate of Turkish Highways

The road network excluding urban roads is about 385.000 km in length

NATIONAL HIGHWAY NETWORK

Highway Network (Km)

- Total road network is 67.498 km.
- 38% of total road network (25.709 km) is dual carriageway



- Total Replacement Value: **67 Billion \$**
- Road Density: **50 km / 100 km²** (Excl. Urban Roads)
- Motorway Density: **3.34 km/ 1000 km²**



2

ROAD FINANCING IN TURKEY





HIGHWAY FINANCING RESOURCES

National Budget

- financing approximately 95 % of road investment budget
- Road user related taxes and excise taxes on vehicle purchasing taxes directly go to the consolidated budget. Ministry of Finance collects all taxes and allocates those taxes to all public expenditures.

Toll Motorway Revenues

- 400 Million USD, covering %5 of total road investment budget
- Istanbul-Ankara toll rate is about 6 USD for 380 km (0,015 USD/km, 1,5 US Cents/km)
- Two intercontinental suspended bridges over Istanbul Strait 1.5 US \$ for two way

PPP concessions for the construction of BOT motorways

- İstanbul-İzmir Motorway (Inc. İzmit Bay Crossing)
- Northern Marmara Motorway, Odayeri-Paşaköy Section (Inc. Yavuz Sultan Selim Cable Stayed Suspension Bridge) Project

SOURCES OF FUNDING

Billion \$

Sources	2014	2015	2016	2017	2018	2019	2020
Toll(*)	0,380	0,390	0,400	0,400	0,400	0,410	0,410
Loans							
Etc. (\$)	6,860	7,400	5,950	5,770	4,850	4,990	5,090
Total (\$)	7,240	7,790	6,350	6,170	5,250	5,400	5,500

(*) Excluding PPP toll revenues and current expenditures

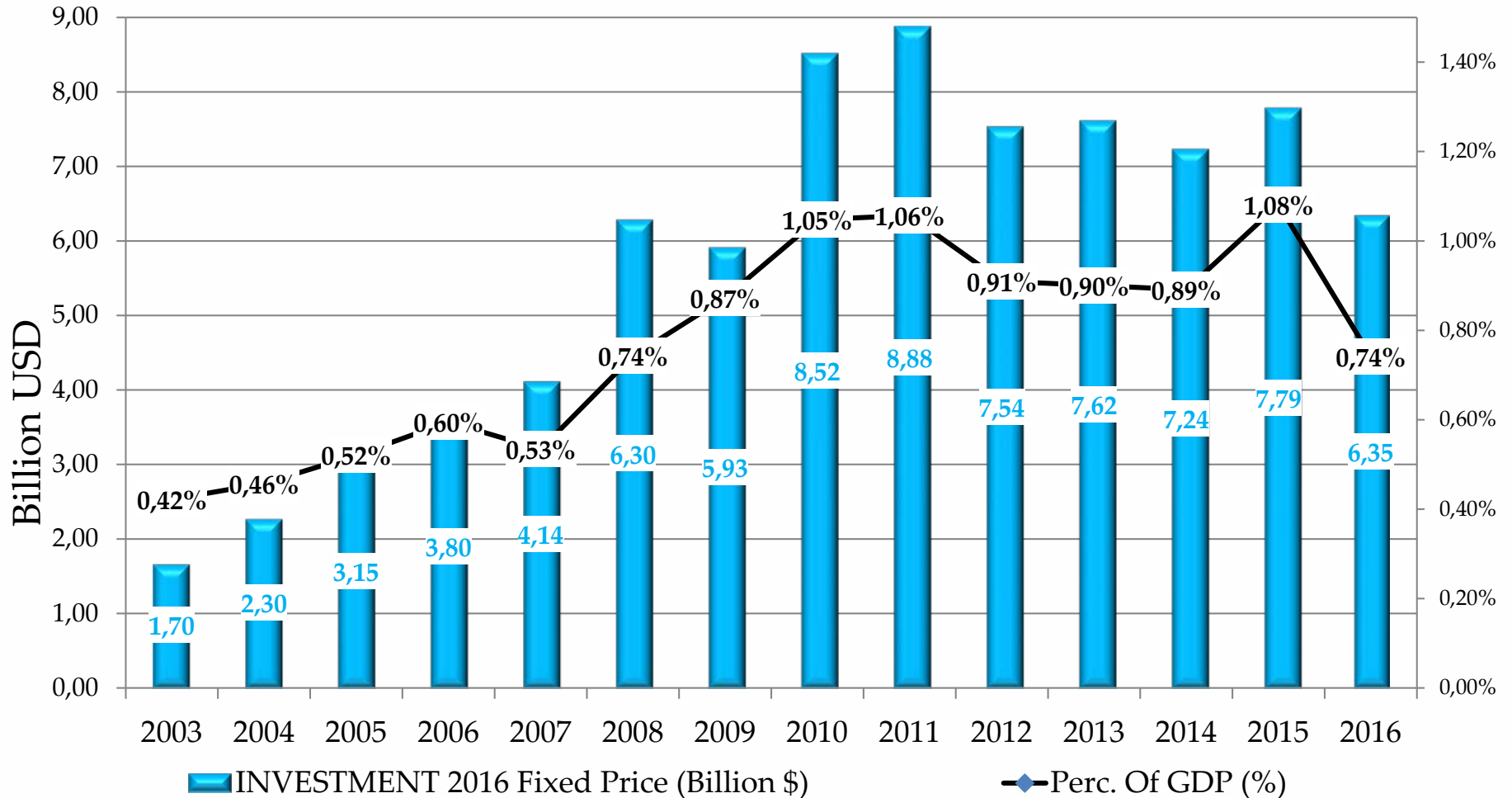
ROAD EXPENDITURES

Billion \$

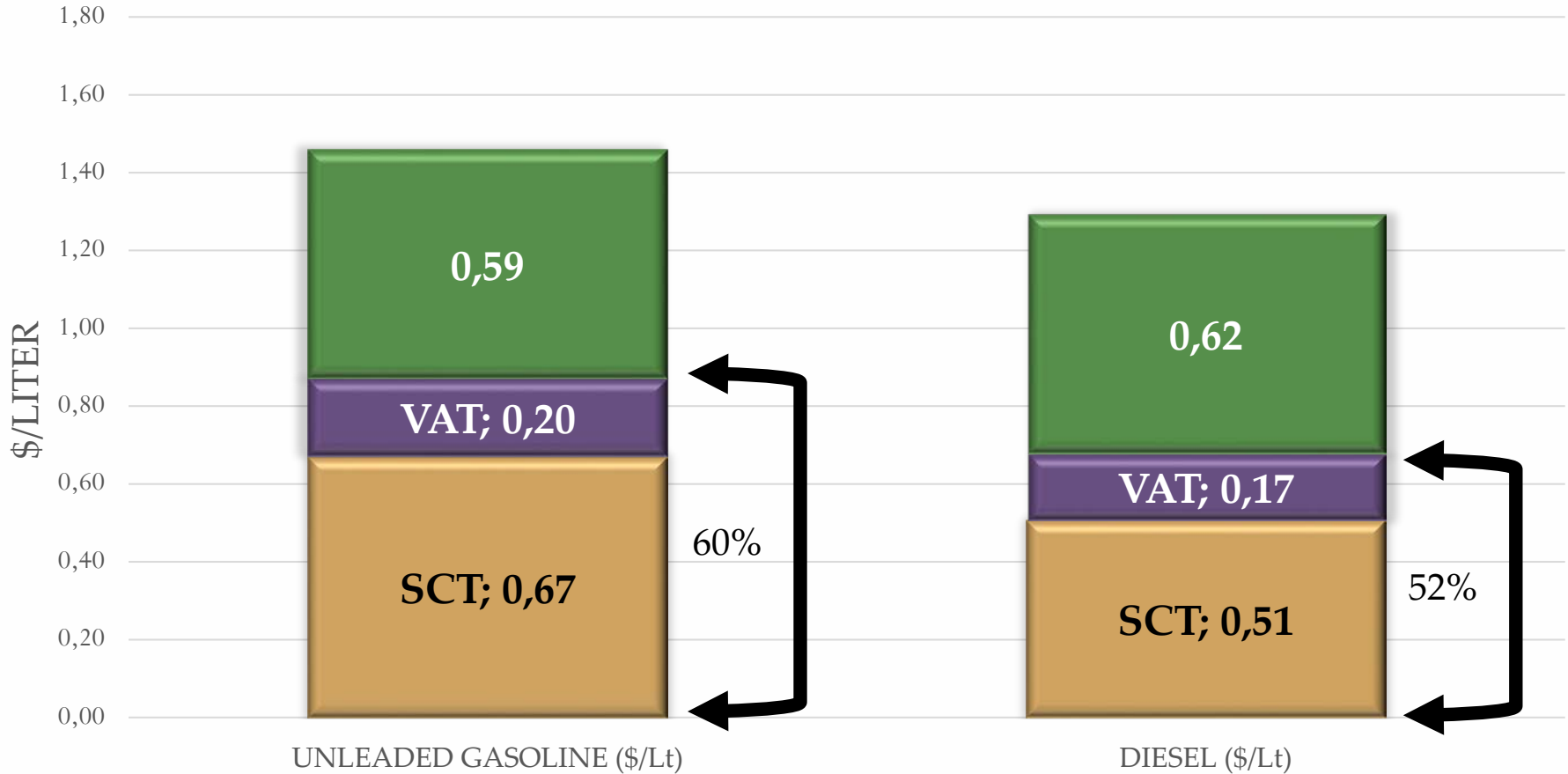
Activity	2014	2015	2016	2017	2018	2019	2020
Maint.	0,490	0,520	0,450	0,400	-	-	-
Investments	6,750	7,270	5,900	5,770	-	-	-
Total	7,240	7,790	6,350	6,170	-	-	-

Activity	2014	2015	2016	2017	2018	2019	2020
Maint.	6,7%	6,7%	7,0%	6,5%	-	-	-
Investments	93,3%	93,3%	93%	93,5%	-	-	-
Total	100%	100%	100%	100%	-	-	-

PERCENTAGE OF GDP USED FOR HIGHWAY INFRASTRUCTURE INVESTMENT

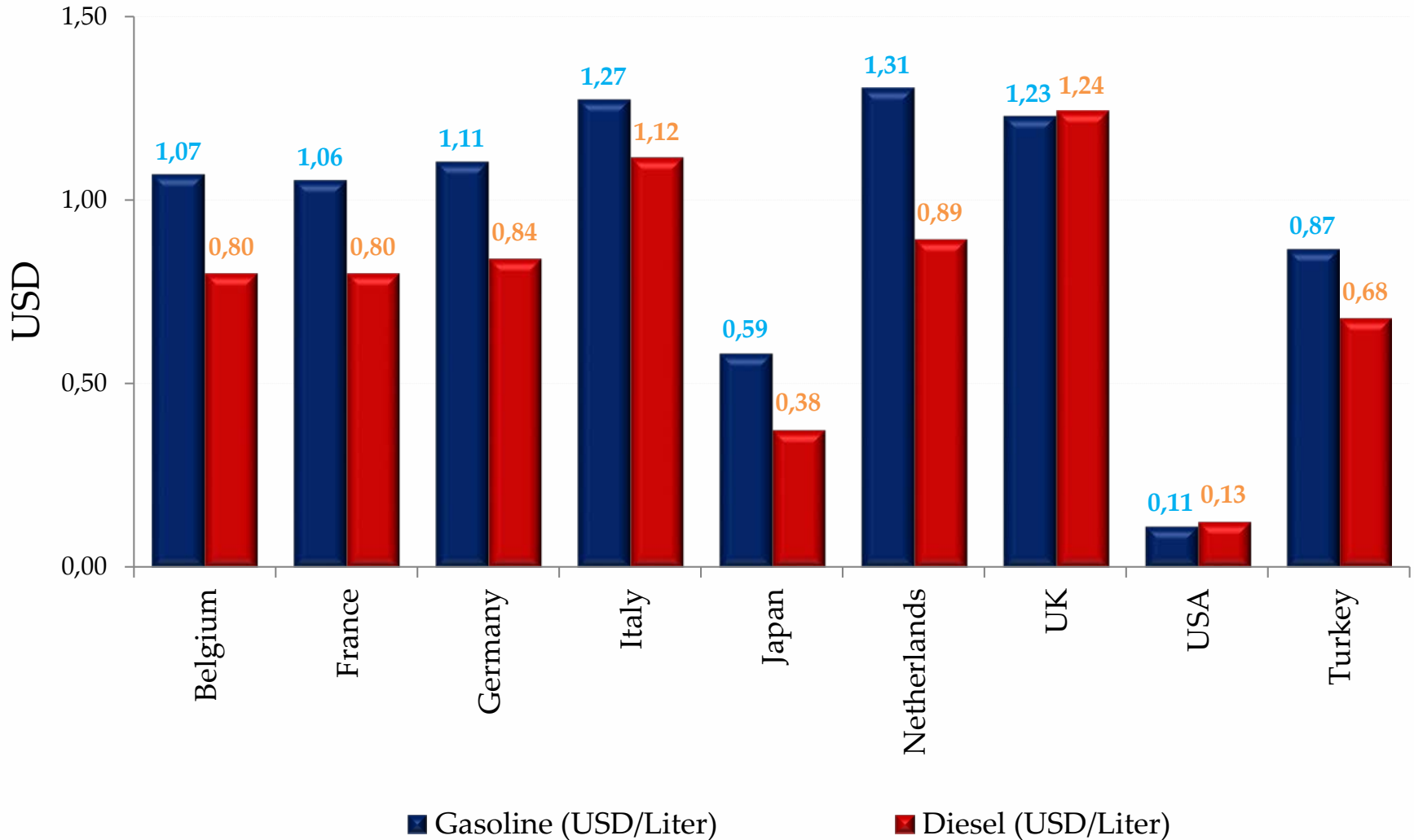


FUEL PRICE AND TAXES IN TURKEY 2017



- 60 % of Gasoline price and 52 % of diesel price is tax. Tax rates of diesel is lower.
- Vehicle purchase taxes and annual motor vehicle taxes are determined according to engine size, age and type of vehicle.
- The revenues from the road related taxes, taxes on gasoline and diesel, vehicle purchase taxes, annual motor vehicle taxes are not tied to highway construction and maintenance.

FUEL TAXES IN SELECTED COUNTRIES (\$/Liter)



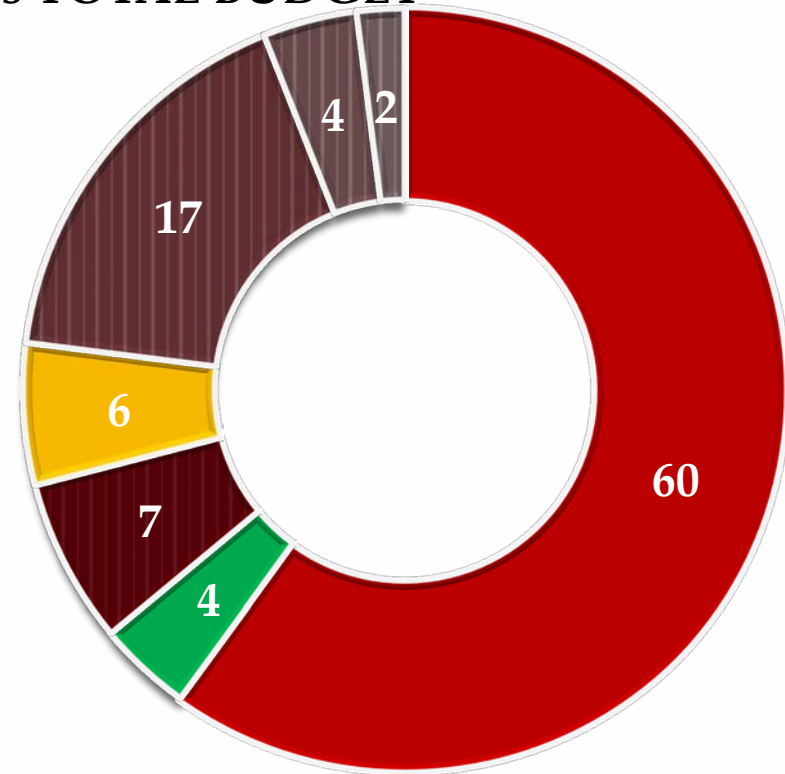
THE BREAKDOWN OF GDH's TOTAL BUDGET

In 2016, Total budget of Turkish Highway amounted to **8.5 Billion US \$**.

Out of total budget,

- 60 % on state and provincial road construction & upgrading
- 4 % on motorway rehabilitation and operation,
- 7 % on routine maintenance,
- 4 % on routine road safety works,
- 6 % on personnel expenditure,
- 17 % on expropriation
- the remaining 2 % on other current expenditures.

KGM's 2016 total expenditures is about 1% of Gross Domestic Product (GDP)



- State & Provincial Road Cons. & Upgrading
- Motorway Rehab. & Oper.
- Routine Maintenance
- Personnel Expenditure
- Expropriation
- Road Safety Works
- Other Current Expenditures



3

HIGHWAY INVESTMENTS AND PPP MOTORWAY PROJECTS





NATIONAL ROAD PROGRAM

ACCORDING TO OUR NATIONAL ROAD PROGRAM :

The road infrastructure investments are planned to ensure;

1

Staying competitive by reducing travel times and transport costs

2

Providing uninterrupted and safe road transportation

3

The improvement of mobility and road user comfort

4

Facilitating the distribution of economic prosperity to all regions of the country

**MULTILANE DIVIDED
HIGHWAY NETWORK
(2003)**

HIGHWAY NETWORK: 63.143



1.714 Km
MOTORWAY

4.387 Km
MULTILANE DIVIDED
STATE&PROVINCIAL
ROADS

6.101 Km
TOTAL

**MULTILANE DIVIDED
HIGHWAY NETWORK
(October 2017)**

HIGHWAY NETWORK : 67.418



2.622 Km
MOTORWAY

23.087 Km
MULTILANE DIVIDED
STATE&PROVINCIAL
ROADS

25.709 Km
TOTAL

EXISTING MOTORWAY NETWORK



With regard to this expedited motorway construction program, up to now, a motorway network with a length of 2.622 km has been opened to traffic. Up to date, the total expenditure for motorway projects has been reached to approximately 25 Billion USD.

MOTORWAYS IN OPERATION

2.622 Km

PPP MOTORWAY PROJECTS UNDER CONSTRUCTION



TURKEY'S PPP POLICY

GENERAL FEATURES OF BOT MOTORWAY CONTRACTS:

- Design specifications and standard are determined by GDH.
(Project start-end points, corridor, technical requirements for special structures like suspension bridges)
- Traffic Guaranty will be provided to secure the pay back of the debt and equity if the generated revenue is not enough
- Expropriation costs are partly or wholly covered by Administration
- In case of the termination of Agreement, used loans will be paid by the Treasury
- The Tolls are updated every year based on the guidelines of United Nations Statistics Office
- Financing of project will be covered by the contractor as equity (at least 20%) and loan (80% at most)

PPP MOTORWAY PROJECTS UNDER CONSTRUCTION

- **The Length of PPP motorway projects under construction**
- **1.200 km**
- **Total investment cost including suspended bridges**
- **13,7 Billion \$**
- **Average investment cost**
- **11,5 Million \$ per km**
- **Annual constructed motorway's length**
- **228 km per year**
- **Average operating time**
- **10 years**

TARGET 2023 BOT PROJECTS (UNDER CONSTRUCTION)



MOTORWAYS IN OPERATION
2.622 Km

BOT PROJECTS UNDER CONSTRUCTION	1.012 km
1-Gebze-Orhangazi-İzmir Motorway (185 km of 433 km is in operation)	433 km
2-North Marmara Motorway (Yavuz Sultan Selim Cable Stayed Suspension Bridge) Kınalı - Odayeri Section	88 km
3-North Marmara Motorway (Yavuz Sultan Selim Cable Stayed Suspension Bridge) Kurtköy - Akyazı Section	169 km
4-Kınalı-Tekirdağ-Çanakkale-Balıkesir Motorway Project (1915 Çanakkale Bridge Inc.)	101 km
5-Menemen-Aliaga-Çandarlı Motorway	76 km
6-Ankara -Niğde Otoyolu	330 km

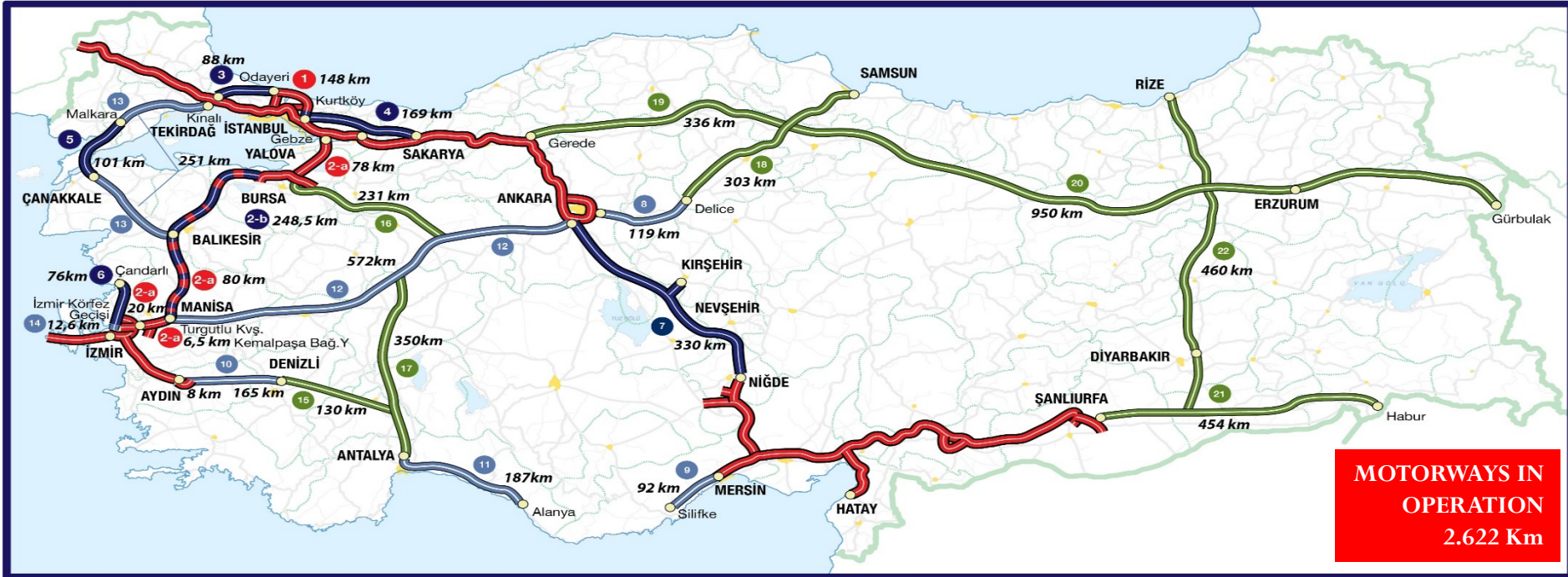
TARGET 2023 BOT PROJECTS (...)



MOTORWAYS IN OPERATION
2.622 Km

BOT PROJECTS (TARGET)	1.023 km
1- Antalya-Alanya Motorway	187 km
2 – Ankara - İzmir Motorway	572 km
3 - Kınalı-Tekirdağ-Çanakkale-Balıkesir Motorway (Included Çanakkale Bridge) (Kınalı-Malkara and Çanakkale-Balıkesir Section)	251 km
4- İzmir Bay Passing	13 km

TARGET 2035 BOT PROJECTS








TARGET BOT PROJECTS (2. GROUP) 3.214 Km

1-Aydın-Denizli-Burdur Motorway (Denizli-Burdur Sec.)	130 Km	6-Gerede-Merzifon-Gürbulak Motorway (Merzifon-Gürbulak Section)	950 Km
2-Sivrihisar-Bursa Motorway	231 Km	7-Şanlıurfa-Diyarbakır-Habur Motorway (Incl. Diyarbakır Connection)	454 Km
3-Afyon-Antalya-Alanya Motorway (Afyon-Antalya Section)	350 Km	8-Rize-Erzurum-Diyarbakır Motorway	460 Km
4-Gerede-Merzifon-Gürbulak Motorway (Gerede-Merzifon Section)	336 Km		
5-Delice-Samsun Motorway	303 Km		

TARGET MOTORWAY NETWORK



	MOTORWAYS IN OPERATION (2.285+44 Km BOT)		
	TARGET 2023 BOT PROJECTS (UNDER CONSTRUCTION)	2.622 km	
	TARGET 2023 BOT PROJECTS (IN TENDERING PROCESS)	1.012 km	
	TARGET 2023 BOT PROJECTS (1.GROUP)	376 km	
	TARGET 2023 BOT PROJECTS (2.GROUP)	1.023 km	
		3.214 km	5.625 KM

TOTAL: 8.247 KM



4

CONCLUSIONS



CONCLUSIONS

- It is important that road infrastructure investments are made on time to avoid negative effects on economy.
- In addition to the traditional direct budget allocations from general revenues, innovative financing mechanisms should be put into application for sustainable and efficient financing of road infrastructure. In this regard, Users have to pay for the quality of the service offered and collected toll revenues should be earmarked to the road infrastructure.
- Financing mechanism on the basis of PPP is one of the most effective alternative to realize large scale highway projects without causing public burden and reducing duration of the road construction works without waiting for the availability of public funding.

Successful PPP Projects needs;

- Government commitment
- Appropriate risk allocation between concession Authority and concessionaire
- Expropriation done by the Public side.
- Correct management of construction risks
- Toll rates are reasonable for traffic level

A nighttime photograph of the Bosphorus Bridge in Istanbul, Turkey. The bridge's two main towers are illuminated with purple light, and the suspension cables are strung with small lights. In the foreground, the Ortaköy Mosque is brightly lit with green and white lights, reflecting on the water. The city lights of Istanbul are visible in the background under a dark blue sky.

*THANK YOU FOR
YOUR ATTENTION !*

Mucahit ARMAN
Deputy Director General

Kenan KAYACI
Director of Strategic Planning Division

General Directorate of Turkish Highways
Ministry of Transport, Maritime Affairs and Communications