



INTRODUCTION

The Dallas North Tollway, connecting Texas drivers from downtown Dallas to the surrounding communities, introduced the nation's first use of electronic toll collection (ETC) technology on a roadway in 1989. Since the opening of this first ETC system over 27 years ago, technology has played a critical role in tolling as today's toll facilities—highways, bridges and tunnels—continue to transition from cash to All-Electronic Tolling (AET) and high tech transportation systems.

As AET expands, people and goods travel more efficiently and the economy grows as a result. Across the United States, more and more agencies are turning to all-electronic tolling as a proven congestion-buster, delivering a safer, more predictable ride for users who absolutely have to reach their destination on time. Tolling has always been a choice—drivers almost always have the option of using an alternate route with no tolls. But AET has established itself as a cornerstone of highway operators' efforts to speed up traffic, by funding new lanes and drawing volume away from the general purpose lane.

This report by the International Bridge, Tunnel and Turnpike Association (IBTTA) shines a light on the dramatic changes that technology has brought about for toll operators and their customers. The report provides in-depth statistics and data showing how advancements in electronic tolling are rapidly transforming transportation and tolling by providing greater mobility, flow of traffic and safety to drivers.

The survey, conducted during the third quarter of 2016, collected technology-related data from 36 tolling agencies in 18 states, representing all regions of the country. These 36 agencies account for more than 80% of the industry's toll revenue in the U.S. The data presents a stunning picture of how technology has rapidly altered the transportation landscape in the last five years and forecasts the role it is likely to play well into the future.

36
TOLLING

AGENCIES

18

STATES

= 80%

OF THE INDUSTRY'S TOLL REVENUE IN THE U.S.

The 36 Toll Agencies participating in the 2016 National Toll Technology Survey

Bay Area Toll Authority, Metropolitan Transportation Commission

Central Florida Expressway Authority

Central Texas Regional Mobility Authority

Delaware Department of Transportation

Delaware River & Bay Authority

Delaware River Joint Toll Bridge Commission

E-470 Public Highway Authority

FDOT/Florida's Turnpike Enterprise

Golden Gate Bridge, Highway & Transportation District

Harris County Toll Road Authority

Illinois Tollway

Maine Turnpike Authority

Maryland Transportation Authority (2011 and 2015 data)

Metropolitan Washington Airports Authority

Miami-Dade Expressway Authority

MTA Bridges and Tunnels

New Hampshire Department of Transportation - Bureau of Turnpikes

New Jersey Turnpike Authority

New York State Bridge Authority

North Texas Tollway Authority

Northwest Parkway LLC

Ohio Turnpike and Infrastructure Commission

Orange County Transportation Authority

Pennsylvania Turnpike Commission

Rhode Island Turnpike and Bridge Authority

San Diego Association of Governments (2011 and 2015 data)

State Road & Tollway Authority

Tampa-Hillsborough Expressway Authority

Texas Department of Transportation

The Port Authority of New York & New Jersey

Thousand Islands Bridge Authority

Transportation Corridor Agencies

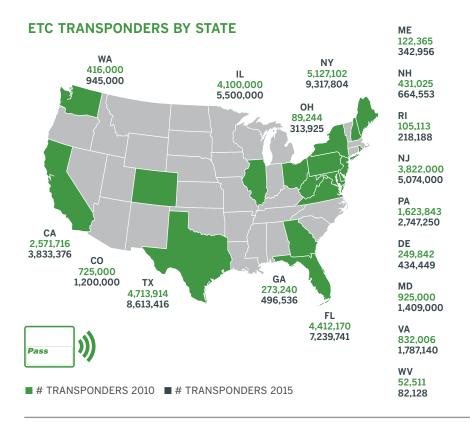
Transurban, 495 Express Lanes, Northern Virginia

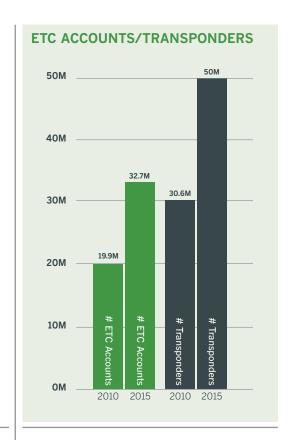
Virginia Department of Transportation

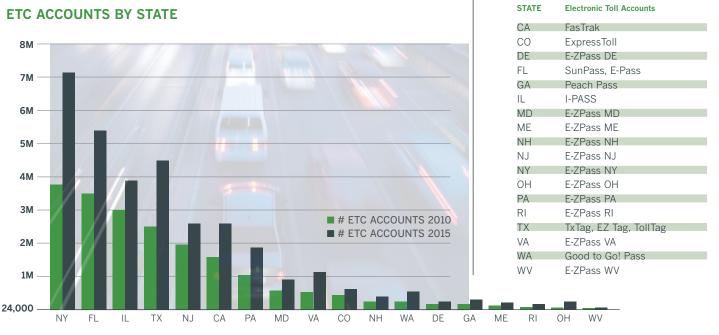
Washington State Department of Transportation

West Virginia Parkways Authority

ELECTRONIC TOLL ACCOUNTS AND TRANSPONDERS 2010 VS. 2015







FACTS & STATS

IBTTA's 2016 National Toll Technology Survey

2010

19,941,530

TOLL ACCOUNTS

30,592,091

TRANSPONDERS

2015

32,695,085

TOLL ACCOUNTS

49,929,464

TRANSPONDERS

Between 2010 and 2015, there has been an increase of more than

19.3 M

electronic transponders on America's roads.



2010

29%

OF TOLL REVENUES WERE COLLECTED IN CASH 2015

18%

OF TOLL REVENUES WERE COLLECTED IN CASH

WITH NEW TECHNOLOGIES,
THE PORTION OF CASH TRANSACTIONS
CONTINUES TO DECLINE.

THE TOTAL TOLL REVENUE COLLECTED FROM THE 36 AGENCIES REPRESENTED IN THE SURVEY JUMPED FROM

\$9.1B

\$13.8 B

= 52%

INCREASE IN TOTAL REVENUE

During the same five-year period, the tolling industry experienced a

76% 1

increase in revenues from cashless toll transactions.

Cashless transactions are paid using transponders or video tolling technology and represent more than \$11 billion in revenue from the surveyed toll agencies in 2015.

TREND IN TOLLING

Today's toll highways, bridges and tunnels use more technology to speed transactions and enhance the motorist experience than a generation ago. Tolling is moving away from cash and embracing technology—all-electronic tolling (AET). Today, all toll roads in the state of Colorado use AET. In Washington State, all toll facilities are AET with the exception of the Tacoma Narrows Bridge (SR16). This October, Massachusetts plans to implement AET statewide. And, there

are numerous other examples of toll facilities in cities across the U.S. that offer AET facilities including the Golden Gate Bridge, the toll roads in Austin, Texas, the Triangle Expressway in the Raleigh/Durham/Chapel Hill Metro Area in North Carolina, the Miami-Dade Expressways in Miami, Florida, Florida's Turnpike roadways in Miami-Dade, Broward and Hillsborough Counties, and the toll roads in Orange County, Southern California, to name a few.

TOLL REVENUE BREAKDOWN



AET AGENCIES - 2015 (SURVEYED AGENCIES ONLY)

AGENCY NAME	STATE
Golden Gate Bridge, Highway & Transportation District	CA
Orange County Transportation Authority	CA
Transportation Corridor Agencies	CA
E-470 Public Highway Authority	CO
Northwest Parkway LLC	CO
Tampa-Hillsborough Expressway Authority	FL
State Road & Tollway Authority - I-85 Toll Road (2015)	GA
Central Texas Regional Mobility Authority	TX
North Texas Tollway Authority	TX
Texas Department of Transportation	TX
Transurban, 495 Express Lanes, Northern Virginia	VA



TOTAL TOLL REVENUE 2010 VS. 2015



TOP 10

from IBTTA's 2016 National Toll Technology Survey based on 2015 Toll Revenues

1. MTA Bridges and Tunnels	\$1,805,845,640
2. The Port Authority of NYNJ	\$1,543,507,000
3. New Jersey Turnpike Authority	
New Jersey Turnpike	\$1,106,123,000
New Jersey Garden State Parkway	\$416,946,000
4. Illinois Tollway	\$1,210,900,000
5. Florida's Turnpike Enterprise	\$977,841,000
6. Pennsylvania Turnpike Commission	\$919,545,342
7. Harris County Toll Road Authority	\$756,119,541
8. Bay Area Toll Authority, Metropolitan Transportation Commission	\$694,954,848
9. North Texas Tollway Authority	\$691,123,100
10. Maryland Transportation Authority	\$649,791,000

The amount of total toll revenue an agency collects is determined by the toll rates it charges and the number of vehicles that use its facilities.

FORECAST FOR THE FUTURE

Over the course of the last five years, the 36 toll agencies participating in *IBTTA's 2016 National Toll Technology Survey* experienced a combined increase of \$4.7 billion in revenues. These tolling agencies represent geographic diversity and include every region of the country.

An IBTTA Report, National Toll Facilities Usage Analysis, released earlier this year, showed the use of toll roads, bridges and tunnels by drivers increased by 7% between 2014 and 2015, a record-breaking rate of growth putting tolling usage on pace to double in less than 10 years.

In 2010, 29% of all toll revenues were collected in cash. However, in 2015, tolls collected in cash dropped to 18%.

This move to cashless tolling is one in a series of technological advances on toll roads that will continue to move people and goods safely, effectively and efficiently across America.

The rise in the use of electronic and video tolling, and the decrease in the use of cash on toll facilities, paints a clear picture of an increasingly high-tech future for tolling and transportation throughout the country.

While vehicle-mounted transponders provide instant payment, video or photos are used to capture images of the license plates of vehicles without transponders that pass through lanes at facilities. The registered owners of those vehicles then receive a bill for their tolled mileage or pay online.

As more tolling innovations make their way through the technology pipeline, and as the industry works toward achieving interoperability nationwide, drivers are looking at a user-financed future enhanced by technology that results in greater convenience and safety on America's highways, bridges and tunnels.

Tolling is Moving America Forward

Toll facilities are located in 35 states and territories and comprise almost 6,000 miles of roadways nationwide, according to a 2013 report from the U.S. Federal Highway Administration.

America's drivers continue to see the benefits of toll roads, including:

SAFETY

Toll roads are typically monitored 24/7 from modern operations centers linked to dedicated maintenance, emergency response, and police personnel.

LOWER FATALITY RATES

For example, the Pennsylvania Turnpike has had a fatality rate of 0.28 per 100 million vehicle miles over the last five years, compared to 1.12 for all national roadways. Similarly, the Turnpike's three-year rate is also 0.28 deaths per 100 million vehicle miles, compared to 0.56 for other interstate highways in the state.

ENVIRONMENT

Electronic tolling improves air quality by eliminating vehicles idling at toll plazas.



This report can be found online at www.IBTTA.org



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The International Bridge, Tunnel and Turnpike Association (IBTTA) is the worldwide association for the owners and operators of toll facilities and the businesses that serve them. Founded in 1932, IBTTA has members in 22 countries on six continents. Through advocacy, thought leadership and education, members are implementing state-of-the-art, innovative user-based transportation financing solutions to address the critical infrastructure challenges of the 21st Century.

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