

Economic Impacts from Implementation of the Louisiana Statewide Transportation Plan

April 2017

Revised August 2018



Objective

- **Estimate the impact on Louisiana's economy resulting from implementation of the Louisiana Statewide Transportation Plan**

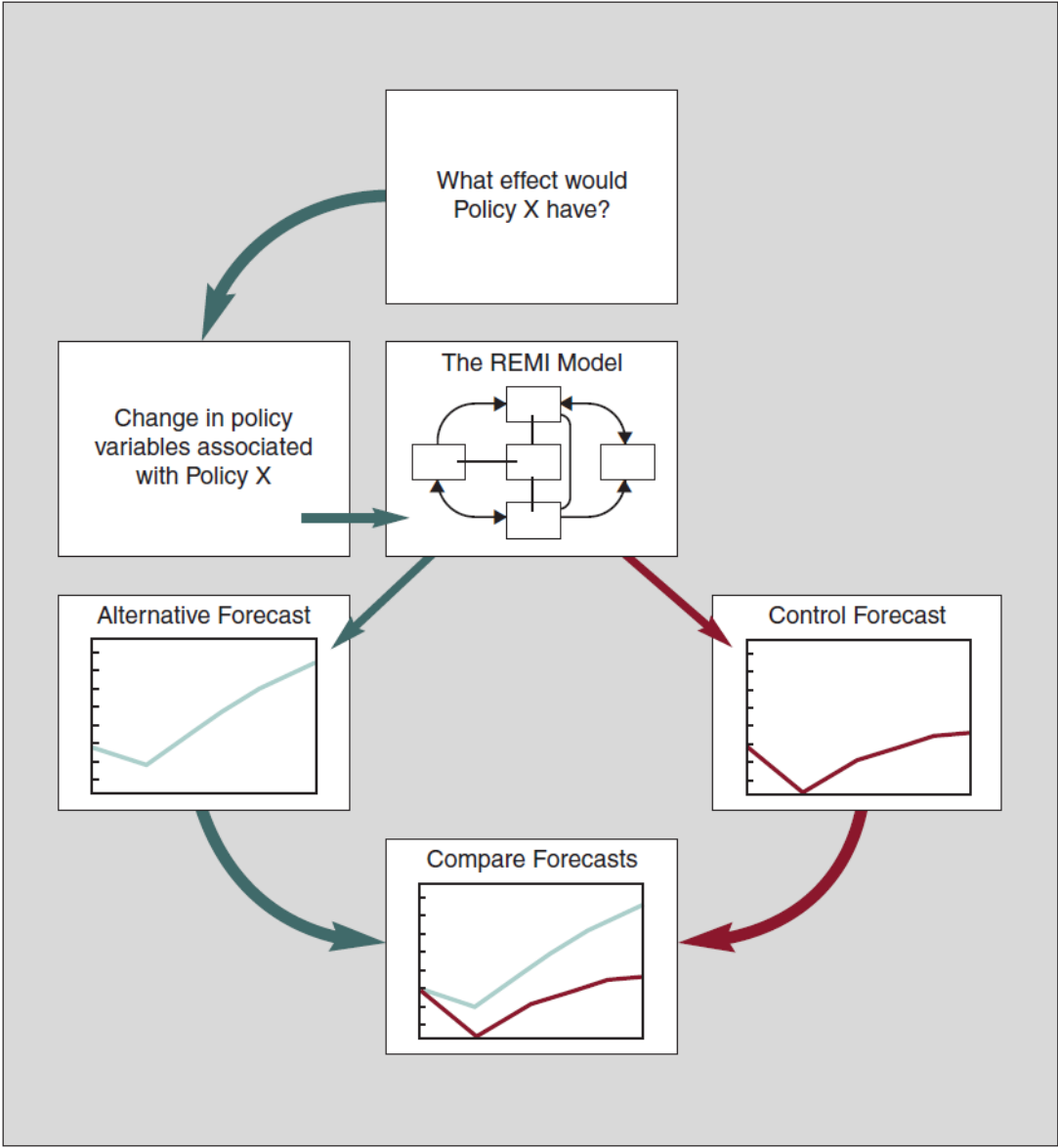


Louisiana Statewide Transportation Plan

- Nearly four years in development
- Extensive technical analyses and modeling
- Comprehensive stakeholder and public involvement
- 30-year statewide plan
- Four possible funding futures
- Covers all modes – passenger and freight
- Economic growth is a major driver

Economic Analysis Tool

- Regional Economic Models Inc. (REMI) software
- Nationally-respected dynamic input-output model
- Estimates economic changes over time
- Employed two REMI products linked together – TranSight and Tax PI
- “One Area” model – the State of Louisiana
- Consulted with REMI economists to ensure proper model application



Revenues

- Revenues derived from 16-cent/gallon motor fuel tax + 0.25% general sales tax + 1.00% sales tax on aviation fuel effective July 1, 2018 + small increase in capture of federal grants
- 16-cent/gallon Gasoline & Special Fuels = **\$520.40 million**
- 0.25% General Sales Tax = **\$183.64 million** (retains one-quarter of sales tax scheduled to retire on July 1, 2018)
- 1.00% Sales Tax on Aviation Fuel = **\$7.45 million**
- Increased capture of federal grants = **\$45.96 million**

Revenues

- Total Additional General Transportation = **\$704.04 million** State + **\$45.96 million** Federal = **\$750.00 million** in FY 18-19
- Total Additional Aviation = **\$7.45 million** in FY 18-19
- All additional state revenues assumed to grow with inflation (e.g. new fuel tax indexed to inflation)
- Additional federal grants assumed to grow at 0.5% annually

Expenditures

- Expenditures allocated in accordance with Task Force recommendations and Funding Scenario 4 of the Statewide Transportation Plan
- Expenditures account for both preconstruction and construction
- Assumes some bonding to advance megaprojects
- Construction of all Priority A & B Megaprojects begins in Years 1 - 15 and is completed no later than Year 20



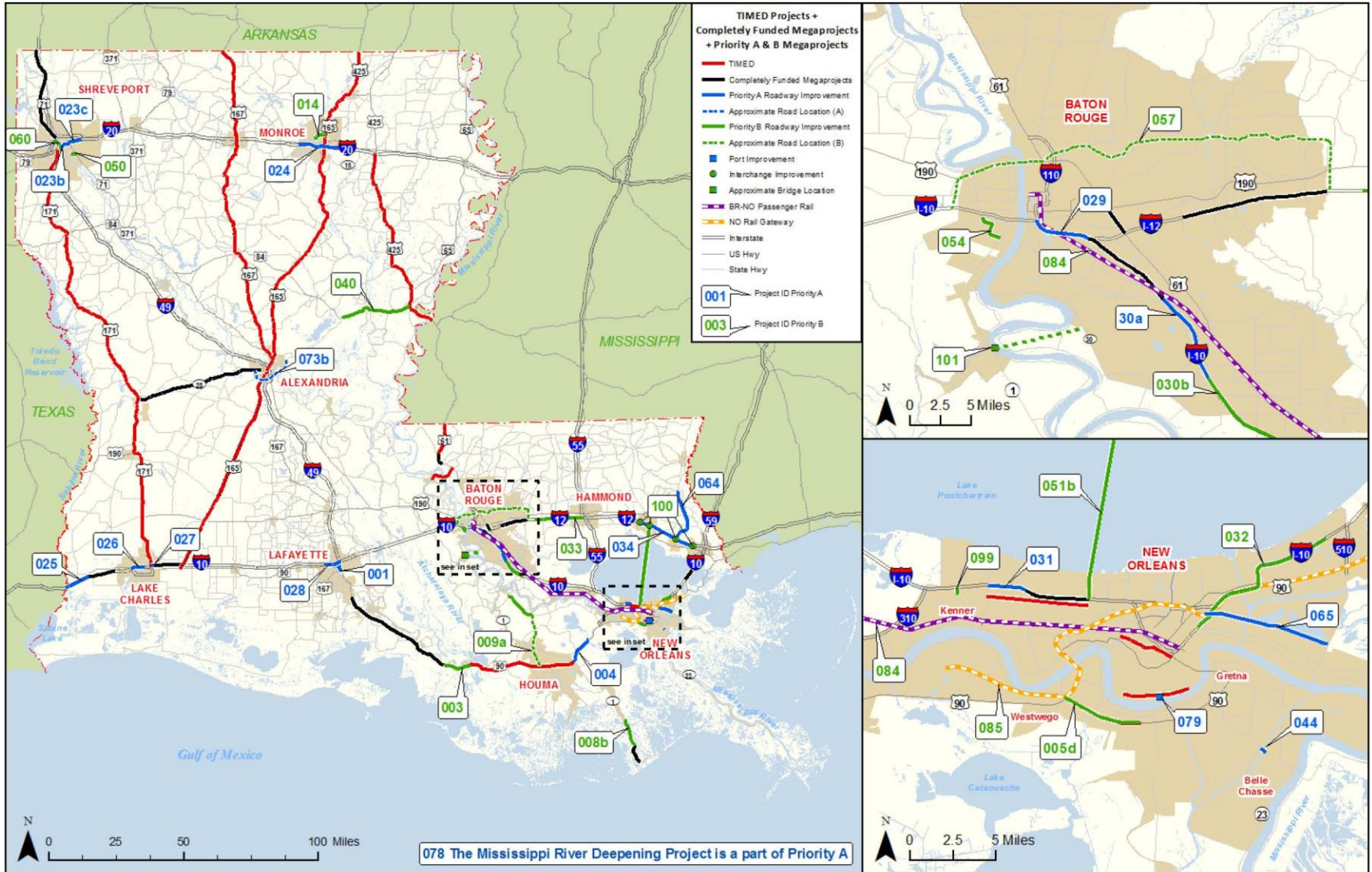
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Overall Expenditures

Total \$ million	Preconst. \$ million	Construct \$ million	Items
\$ 10.0	\$ -	\$ -	Transit rural operating assistance
48.0	-	-	Maintenance (District equipment, supplies, contract maintenance.)
7.5	0.8	6.7	Aviation (10% preconstruction)
11.7	1.1	10.6	Ports (\$1.1 for marketing program, all remainder construction)
3.0	0.3	2.7	Freight Rail (10% preconstruction)
71.4	3.2	68.2	Pavement Preservation (state roads, intermodal connectors, local road rehab – assume no preconstruction on state roads [\$39.4], 10% on intermodal connectors & local road rehab [\$32.0])
298.1	54.4	243.7	Bridge Preservation (On, Off, moveable – 20% preconstruction On-System, 10% preconstruction Off-System & Moveable)
40.0	4.0	36.0	Safety (roadway safety, RR crossings, RR grade separations, traffic control devices, lighting, TSM, roadway flooding, access management.)
50.0	10.0	40.0	Regular Capacity
217.8	43.6	174.2	Megaprojects
757.5	117.4	582.1	Totals

Mega Projects A&B

Priority A and B Megaprojects + TIMED Program Projects + Completely Funded Megaprojects





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Megaprojects A

- \$4.8 billion
- 13 interstate upgrades/widening
- 3 bridge projects
- 2 new highways
- River deepening and Port of NO container terminal
- Funded with Scenarios 3 or 4

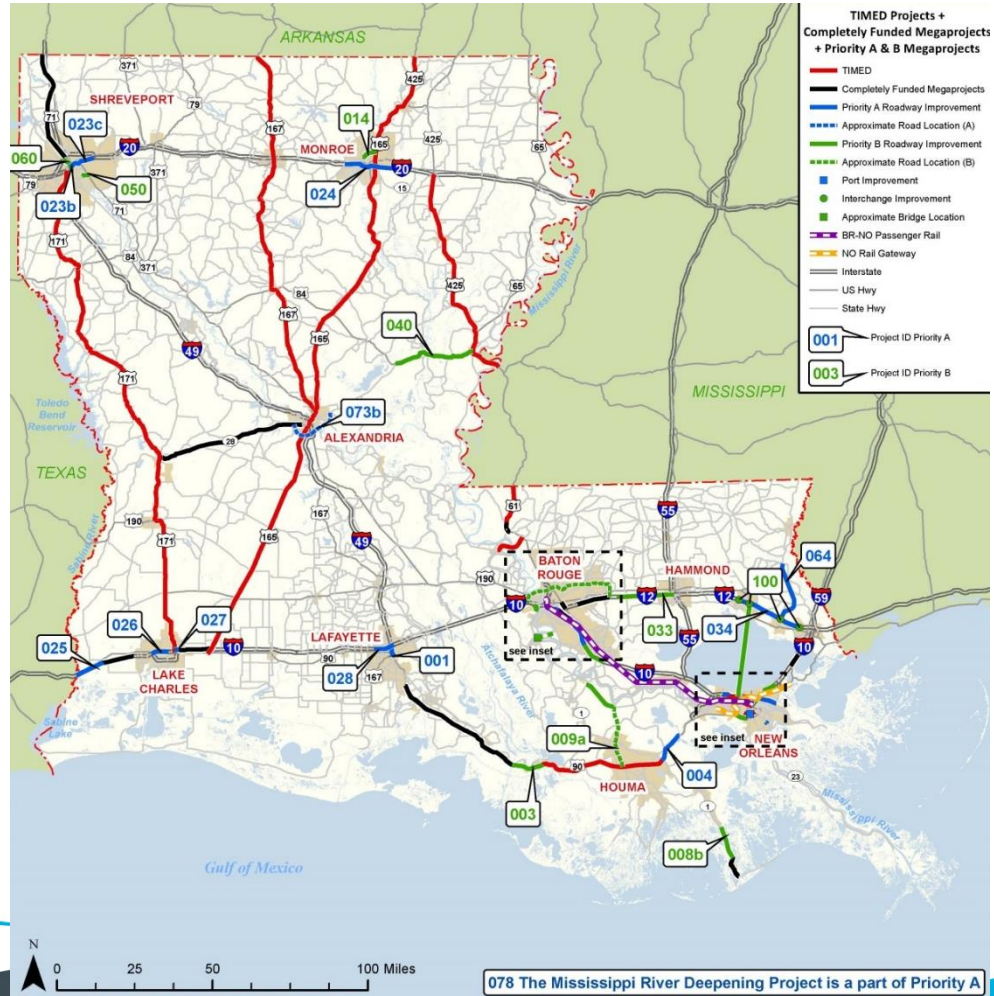




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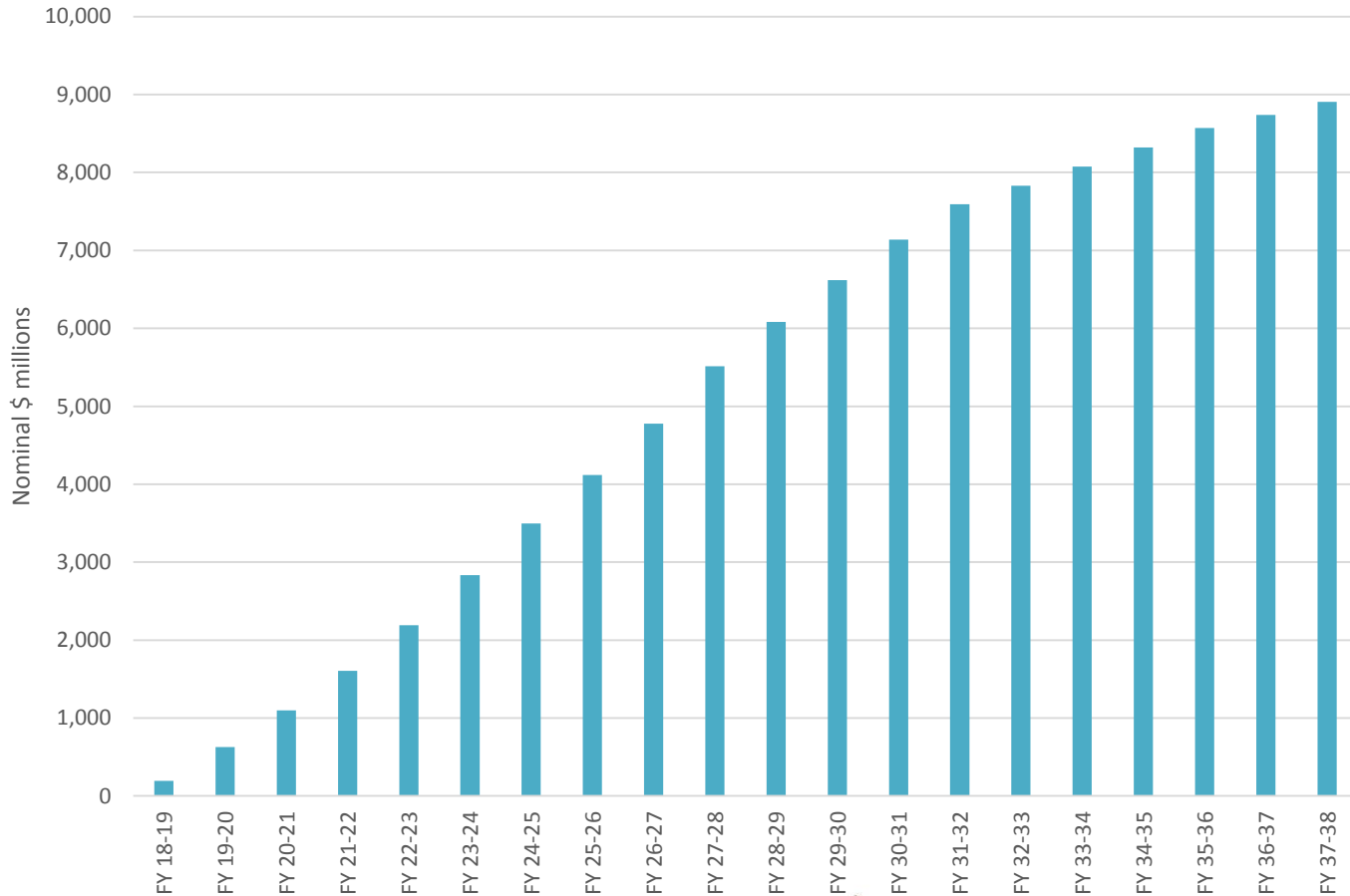
Megaprojects B

- \$5.8 billion
- 6 hwy & interstate upgrades/ widening
- 5 new highways
- 3 new bridges
- 2 rail projects
- 2 interchange improvements
- Causeway safety improvements
- Funded under Scenario 4





Megaproject Cumulative Expenditures





Aggregate Statewide Benefits

- Employment associated with preconstruction/construction
- Travel time savings to consumers and businesses
- Travel cost savings to consumers and businesses
- Safety benefits to consumers and businesses
- Direct employment benefits from port, freight rail, and aviation projects
- Increased revenues for ports, railroads, and airports
- Market accessibility benefits (computed by REMI TranSight)
- Air quality benefits (computed by REMI TranSight)

REMI Variables Employed

- Exogenous Final Demand – Transit and Ground Transportation
- Exogenous Final Demand – Repair and Maintenance
- Exogenous Final Demand – Professional, Scientific, and Technical Services
- Exogenous Final Demand – Construction
- Consumer Price – Net Motor Vehicle and other Transportation Insurance
- Production Cost – Truck Transportation
- Industry Sales/Exogenous Production – Insurance Carriers and Related Activities
- Industry Employment/Exogenous Production – Air Transportation
- Industry Employment/Exogenous Production – Rail Transportation
- Industry Employment/Exogenous Production – Water Transportation
- Industry Sales/Exogenous Production – Air Transportation
- Industry Sales/Exogenous Production – Rail Transportation
- Industry Sales/Exogenous Production – Water Transportation
- Non-Pecuniary Amenity (computed by REMI TranSight)



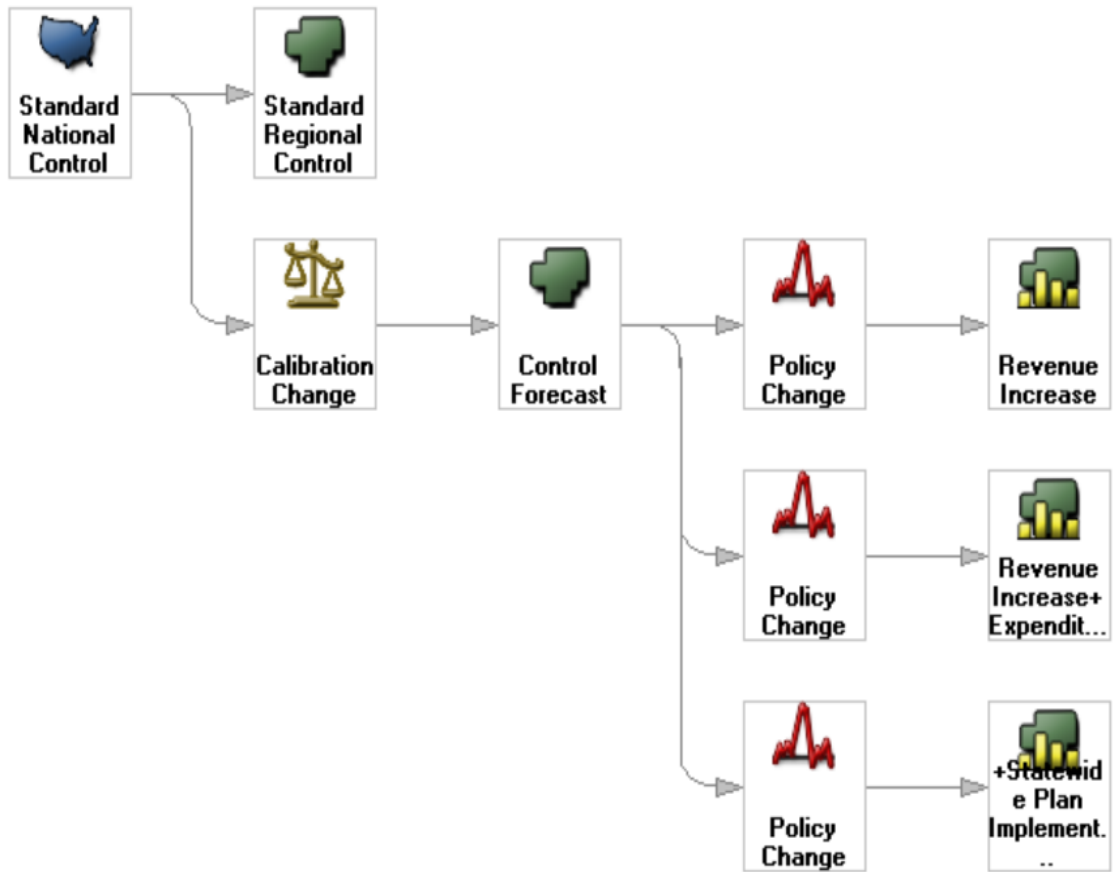
Four Scenario Analysis (Demonstration of Policy Logic)

1. Control Forecast (status quo)
2. Revenue Increase
3. Revenue Increase + Expenditures
4. Revenue Increase + Expenditures
+ Statewide Plan Implementation

FILE HOME

Budget Regional Simulation Regional Control National Simulation National Control Workbook Inputs Results Model Details REMI Online Travel Demand Sources Editor

Configure Add a Forecast Views About TranSight



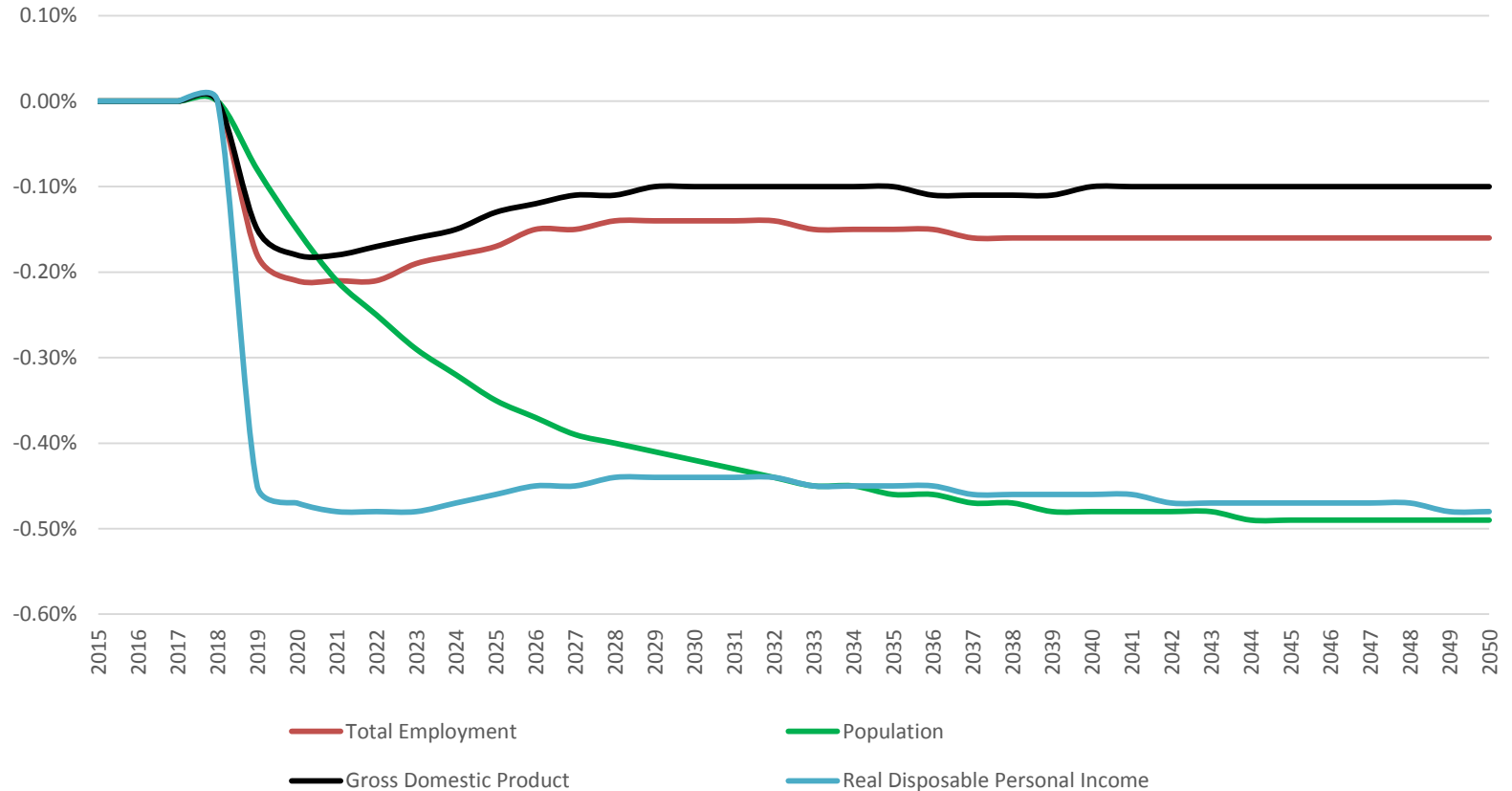


Variables for New Revenue

Policy Variable Inputs

Active	Edit	Group																								
<input checked="" type="checkbox"/>		Gasoline and Aviation Tax																								
Active	View	Category	Detail	Region	Units	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	20
<input checked="" type="checkbox"/>		Custom Revenues	Gasoline and Special Fuel	Louisiana	Nominal \$ (M)	0	0	0	0	527.85	538.29525	548.94884	559.81495	570.89781	582.20177	593.73123	605.49071	617.48480	629.71820	642.19569	654.92213	667.90252	681.14193	694.64554	708.41861	722.4
<input checked="" type="checkbox"/>		Sales Tax																								
Active	View	Category	Detail	Region	Units	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	20
<input checked="" type="checkbox"/>		Custom Revenues	Sales	Louisiana	Nominal \$ (M)	0	0	0	0	183.64	187.3128	191.05905	194.88023	198.77784	202.75339	206.80846	210.94463	215.16352	219.46679	223.85613	228.33325	232.89992	237.55792	242.30908	247.15526	252.0
<input checked="" type="checkbox"/>		Federal																								
Active	View	Category	Detail	Region	Units	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	20
<input checked="" type="checkbox"/>		Custom Revenues	Federal	Louisiana	Nominal \$ (M)	0	0	0	0	45.96	46.1898	46.420749	46.652852	46.886117	47.120547	47.356150	47.592931	47.830895	48.070050	48.310400	48.551952	48.794712	49.038685	49.283879	49.530298	49.77

Economic Impacts: Revenue Increase Only





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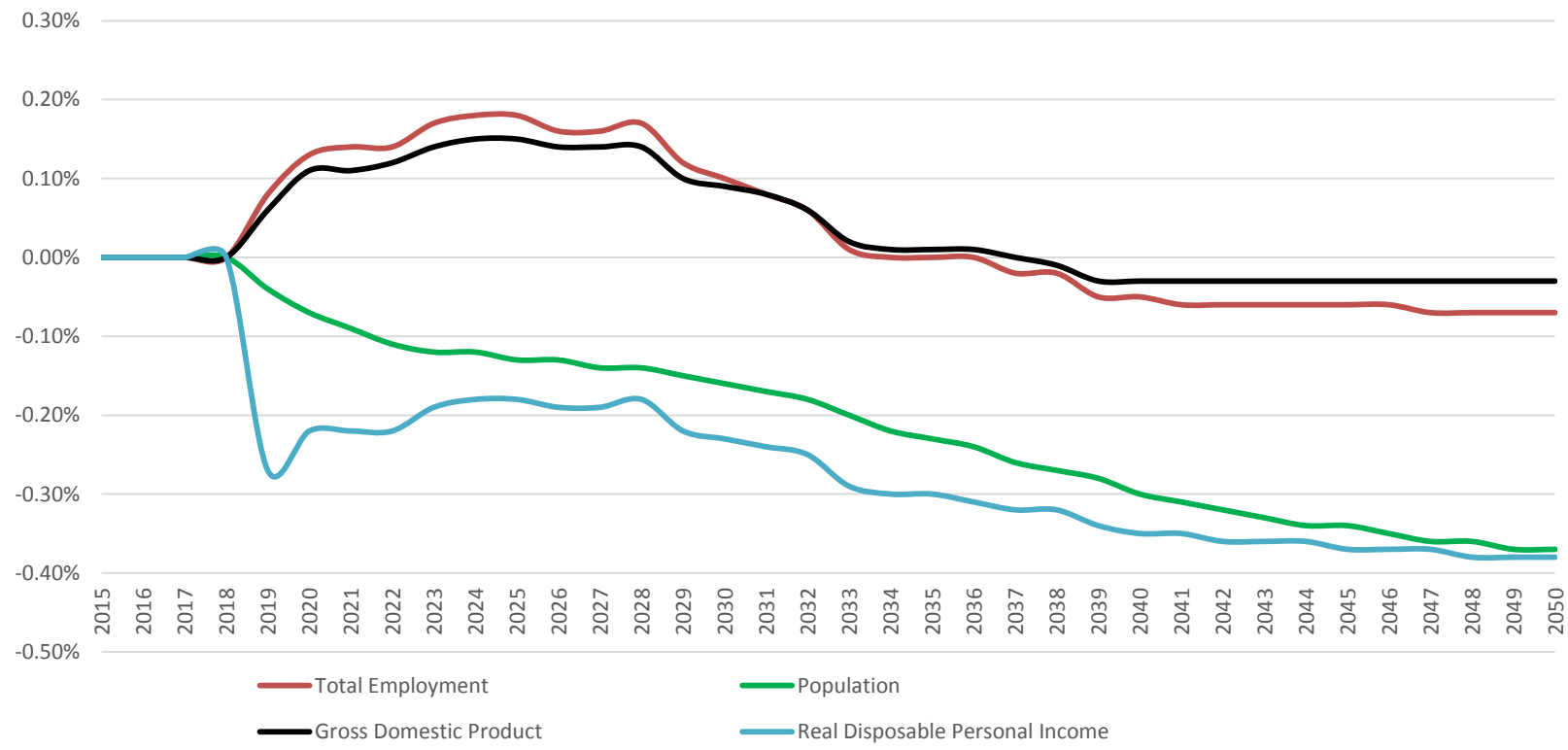
Variables for Expenditures

Policy Variable Inputs

Active	Edit	Group																						
<input checked="" type="checkbox"/>		New Construction																						
Active	View	Category	Detail	Region	Units	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034		
<input checked="" type="checkbox"/>		Exogenous Final Demand	Construction	Louisiana	Nominal \$ (M)	0	0	0	552.3	643.7	660.3	688.4	913.4	976	1023.4	985.5	1022.7	1116.6	947.9	966.9	958.2	926.7	743.5	754.9
<input checked="" type="checkbox"/>		New Professionals																						
Active	View	Category	Detail	Region	Units	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034		
<input checked="" type="checkbox"/>		Exogenous Final Demand	Professional, scientific, and technical services	Louisiana	Nominal \$ (M)	0	0	0	122.7	279.8	307.6	322.2	182.3	186.1	167.5	173.2	179.5	174.2	180.1	137.1	139.2	116	91.3	92.7
<input checked="" type="checkbox"/>		Transit																						
Active	View	Category	Detail	Region	Units	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034		
<input checked="" type="checkbox"/>		Exogenous Final Demand	Transit and ground passenger transportation	Louisiana	Nominal \$ (M)	0	0	0	10	10.132	10.265742	10.401250	10.538546	10.677655	10.818600	10.961406	11.106096	11.252697	11.401232	11.551729	11.704211	11.858707	12.015242	12.173843
<input checked="" type="checkbox"/>		Repair and Maintenance																						
Active	View	Category	Detail	Region	Units	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034		
<input checked="" type="checkbox"/>		Exogenous Final Demand	Repair and maintenance	Louisiana	Nominal \$ (M)	0	0	0	48	48.384	48.771072	49.161240	49.554530	49.950966	50.350574	50.753379	51.159406	51.568681	51.981230	52.397080	52.816257	53.238787	53.664697	54.094015
<input checked="" type="checkbox"/>		Gasoline and Aviation Tax																						
<input checked="" type="checkbox"/>		Sales Tax																						
<input checked="" type="checkbox"/>		Federal																						



Economic Impacts: Revenue Increase + Expenditures



Policy Variable Inputs

Active	Edit	Group
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Gasoline and Aviation Tax
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Sales Tax
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Federal
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	New Construction
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	New Professionals
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Transit
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Repair and Maintenance
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Pavement Preservation Truck Savings
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Pavement Preservation Auto spending savings on Maintenance, etc.
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Pavement Preservation Auto Savings into reallocation spending
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Pavement Preservation Auto Business 4% benefit
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Safety Project Benefit for Trucks
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Safety Project Benefit for Rest of Auto
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Safety projects benefit for business auto
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	CapacityVHT:Travel Demand - Emissions
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Travel Demand - Leisure Time
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Travel Demand - Operating Costs
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Operator Costs for Cost-Benefit Analysis
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Travel Demand - Effective Distance
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	PreservationVHT: Travel Demand - Emissions
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Travel Demand - Leisure Time
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Travel Demand - Operating Costs
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Operator Costs for Cost-Benefit Analysis
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Travel Demand - Effective Distance
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	BenefitFromBridgeVMT&VHT: Travel Demand - Emission
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Travel Demand - Leisure Time
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Travel Demand - Safety Costs
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Travel Demand - Operating Costs
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Operator Costs for Cost-Benefit Analysis
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Travel Demand - Effective Distance
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	MEGAVHT&VHT:Travel Demand - Emissions
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Travel Demand - Leisure Time
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Travel Demand - Safety Costs
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Travel Demand - Operating Costs
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Operator Costs for Cost-Benefit Analysis

Policy variables for new revenue

Policy variables for expenditures

Policy variables for expenditures according to the Statewide Transportation Plan:

- Pavement Preservation
- Safety Projects
- Capacity Investments
- Bridge Preservation
- Mega A&B Projects
- VHT and VMT Changes
- Air, Rail, and Port



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Variables - Air, Rail, & Port

Policy Variable Inputs

Active Edit Group

Air new jobs

Active	View	Category	Detail	Region	Units	2015	2016	2017	2018	2019	2020	2021	2022	2023
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Industry Employment (Exogenous Production)	Air transportation	Louisiana	Thousands	0	0	0	0	0.0536	0.1072	0.1608	0.2144	0.268

Rail new jobs

Active	View	Category	Detail	Region	Units	2015	2016	2017	2018	2019	2020	2021	2022	2023
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Industry Employment (Exogenous Production)	Rail transportation	Louisiana	Thousands	0	0	0	0	0.0216	0.0432	0.0648	0.0864	0.108

Water new jobs

Active	View	Category	Detail	Region	Units	2015	2016	2017	2018	2019	2020	2021	2022	2023
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Industry Employment (Exogenous Production)	Water transportation	Louisiana	Thousands	0	0	0	0	0.0848	0.1696	0.2544	0.3392	0.424

Air new sales

Active	View	Category	Detail	Region	Units	2015	2016	2017	2018	2019	2020	2021	2022	2023
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Industry Sales (Exogenous Production)	Air transportation	Louisiana	Nominal \$ (M)	0	0	0	0	1.5008	3.0016	4.5024	6.0032	7.504

Rail new sales

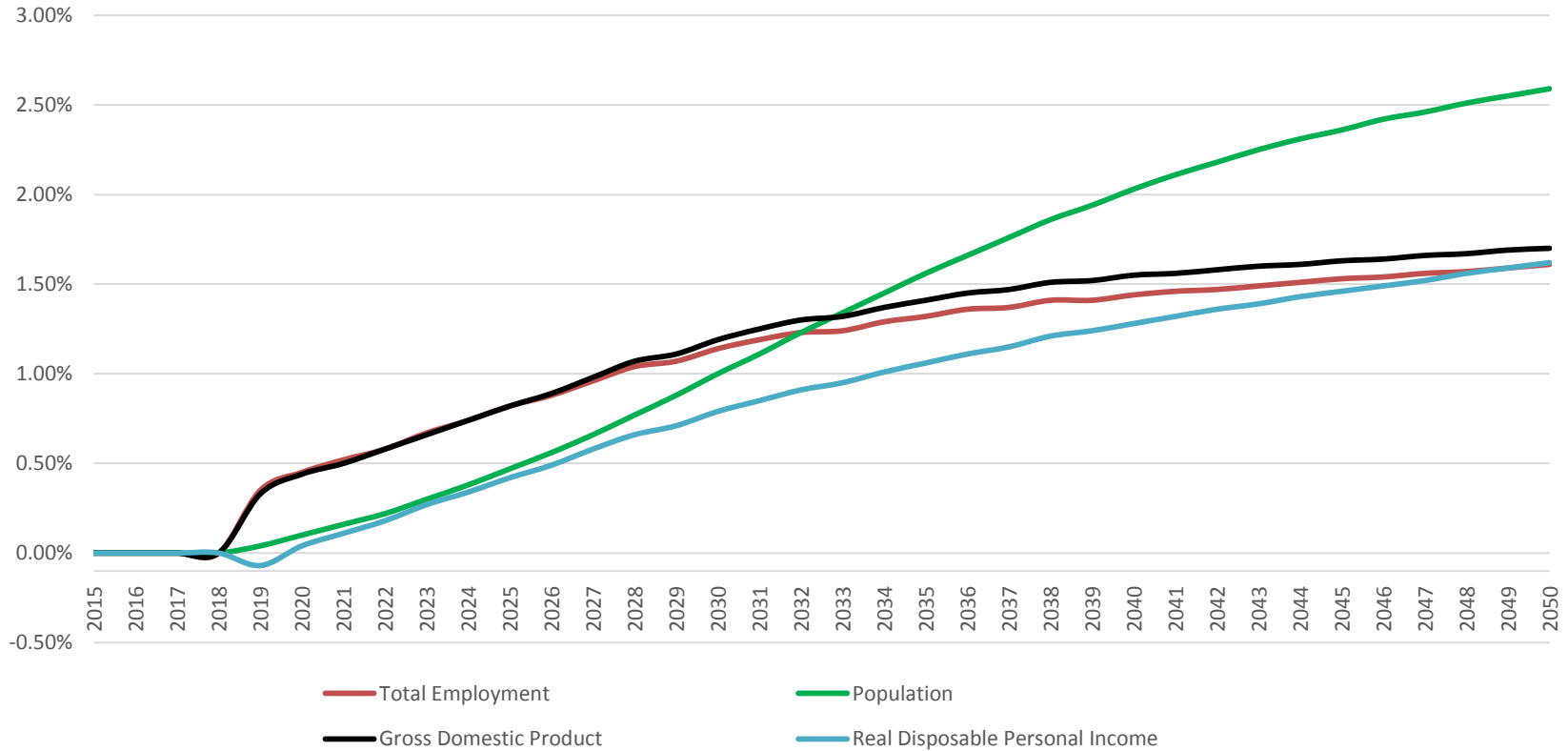
Active	View	Category	Detail	Region	Units	2015	2016	2017	2018	2019	2020	2021	2022	2023
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Industry Sales (Exogenous Production)	Rail transportation	Louisiana	Nominal \$ (M)	0	0	0	0	0.6048	1.2096	1.8144	2.4192	3.024

Water new sales

Active	View	Category	Detail	Region	Units	2015	2016	2017	2018	2019	2020	2021	2022	2023
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Industry Sales (Exogenous Production)	Water transportation	Louisiana	Nominal \$ (M)	0	0	0	0	2.3744	4.7488	7.1232	9.4976	11.872



Economic Impacts: Revenue Increase + Expenditures + Statewide Plan Implementation





Economic Impacts

Output, GDP & Personal Income

Output - The sum of output for private non-farm industries, state and local government, federal civilian, federal military, and farm sectors.

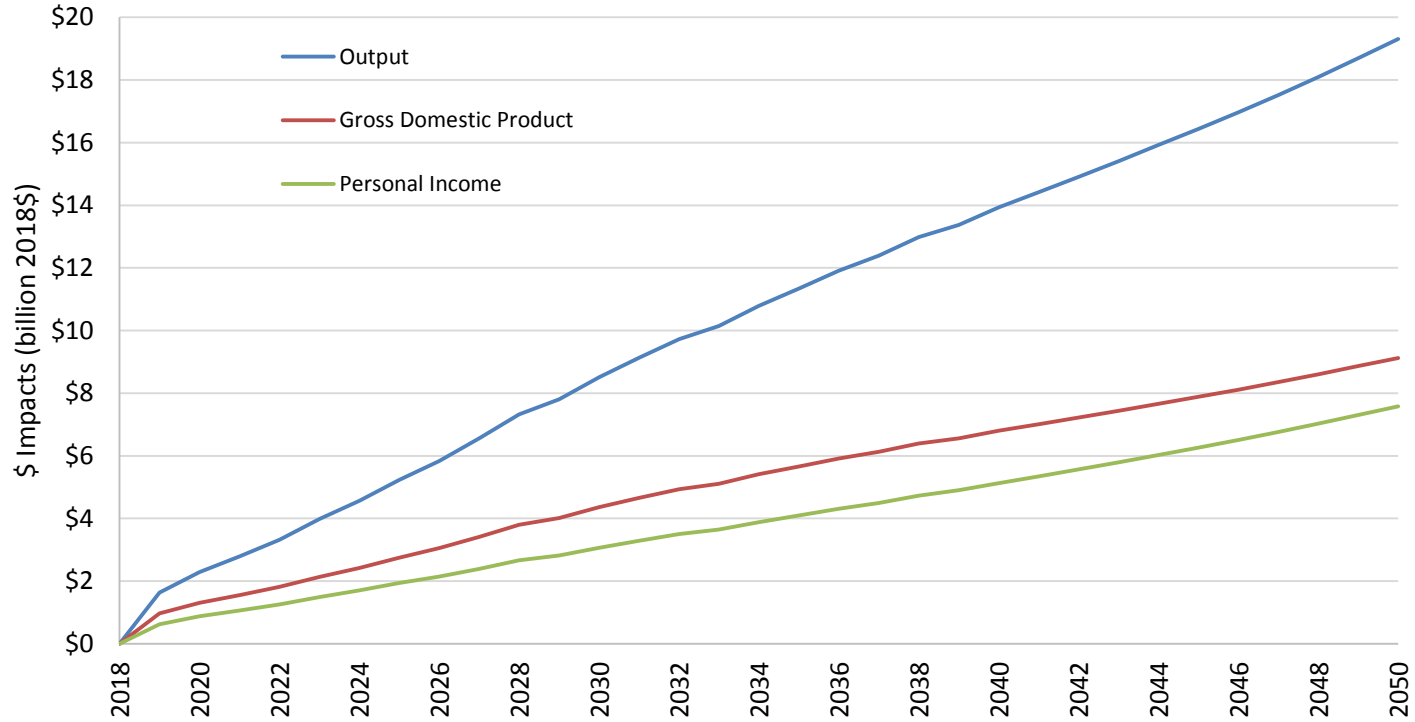
Gross Domestic Product - The market value of goods and services produced by labor and property in the United States, regardless of nationality.

Personal Income - Income received by persons from all sources.



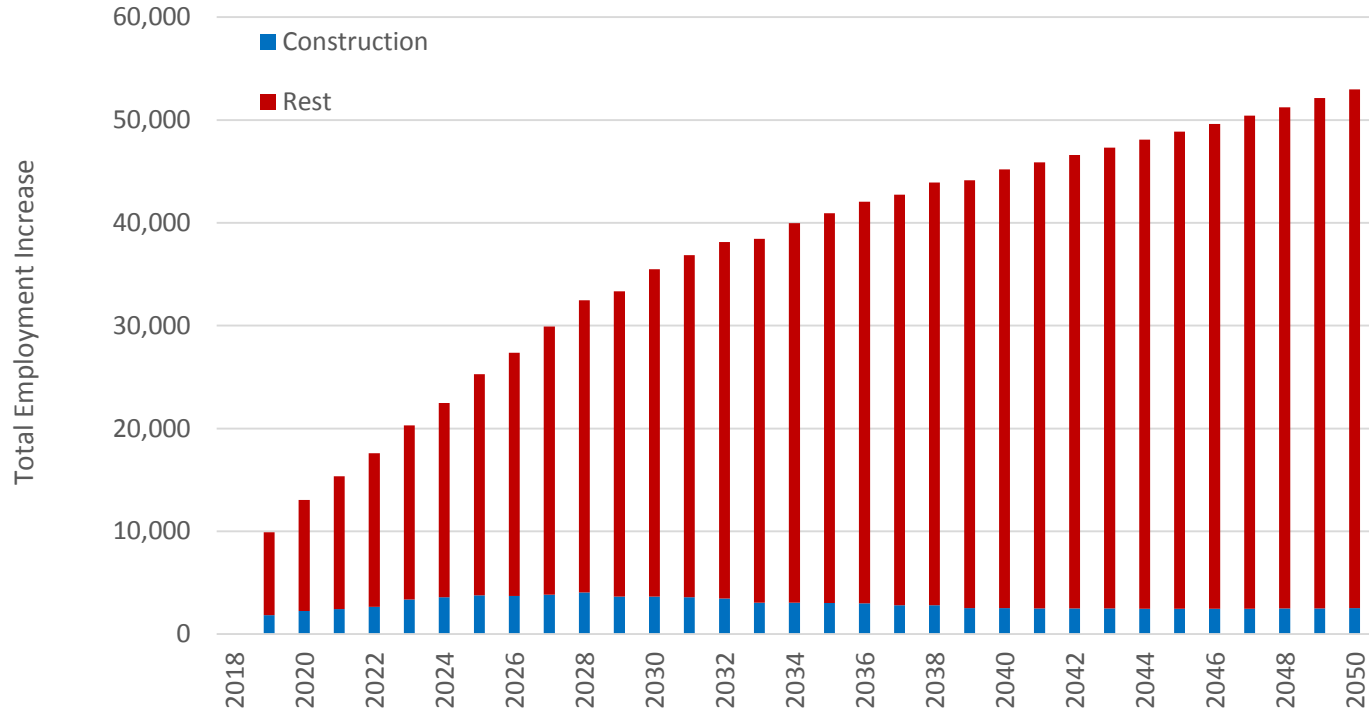
Economic Impacts

Output, GDP & Personal Income



Economic Impacts

Total Employment Increase





Economic Impacts

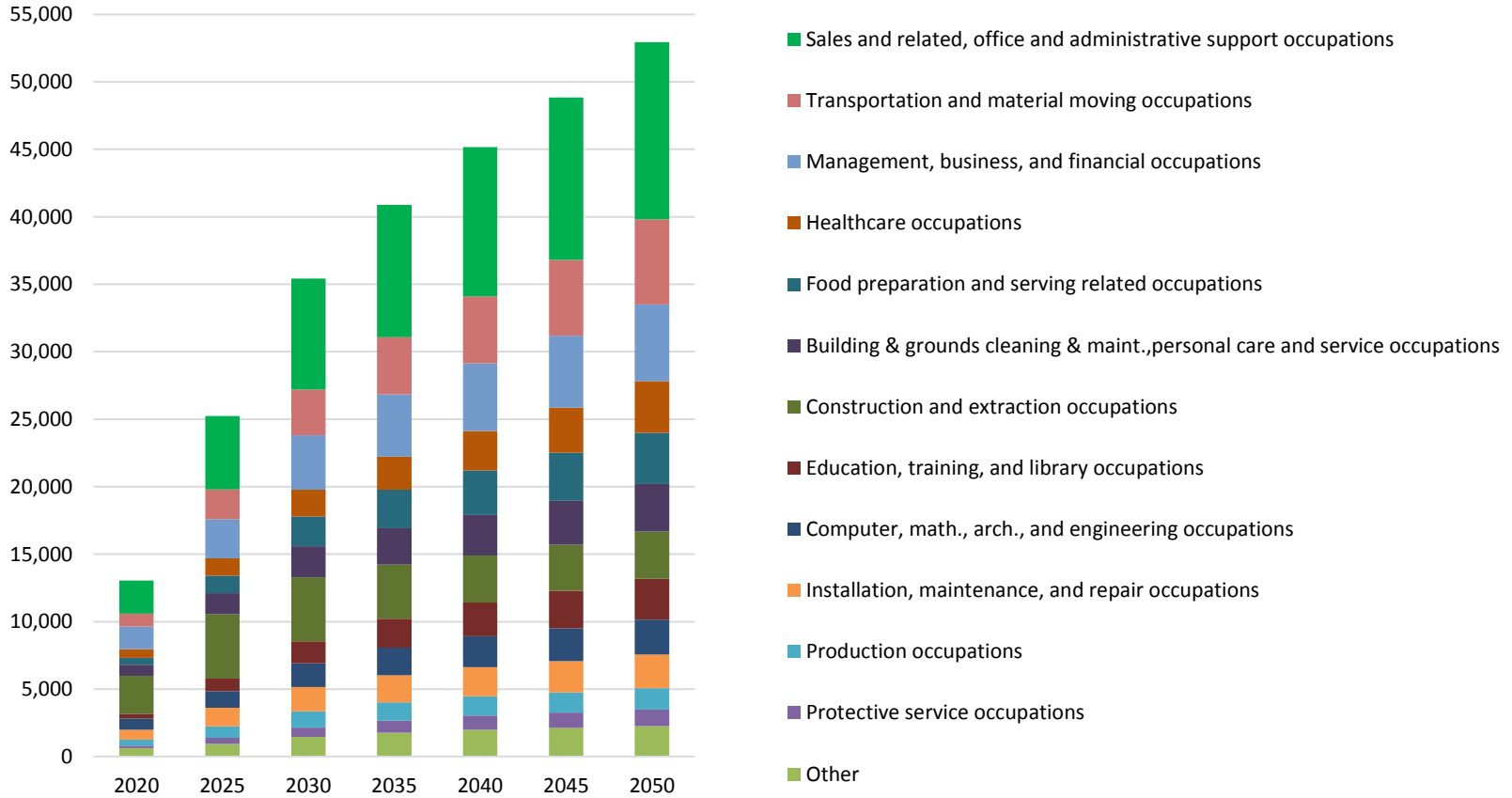
Total Employment (thousands)

Year	2019	2020	2025	2030	2035	2040	2045	2050
Status Quo	2,865	2,879	2,953	3,016	3,054	3,106	3,180	3,275
New Transportation Plan	2,875	2,892	2,977	3,050	3,095	3,151	3,228	3,328
Increase	9.9	13.1	24.1	34.3	40.4	44.8	48.5	52.7
Percent Increase	0.3%	0.5%	0.8%	1.1%	1.3%	1.4%	1.5%	1.6%



Economic Impacts

Employment by Category

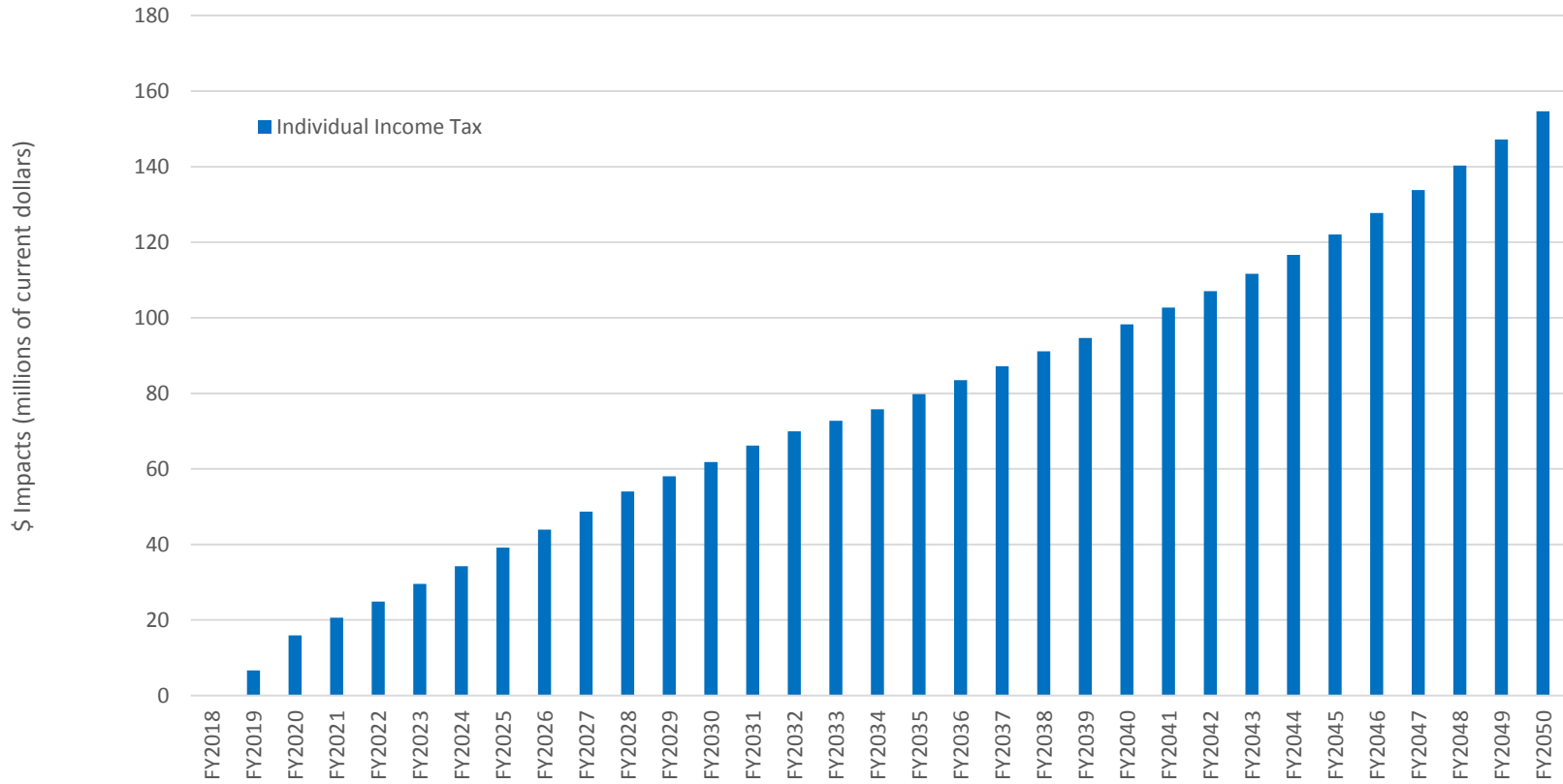




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Economic Impacts

Individual Income Tax Revenues

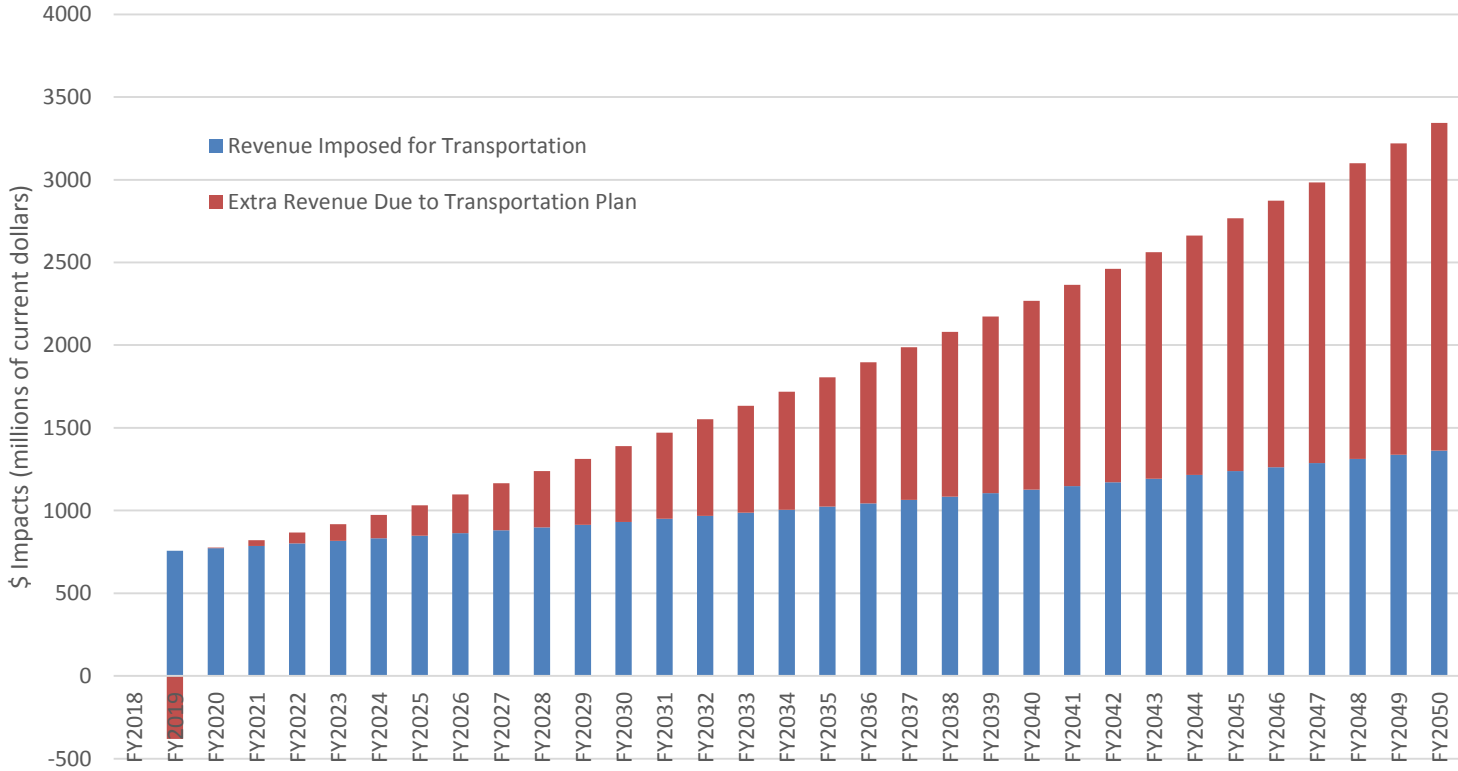




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Economic Impacts

Total Tax Revenues



Questions?

