ARIZONA HIGHWAY USER REVENUE FUND

Forecasting Process & Results

FY 2017-2026

Financial Management Services
September 2016

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Introduction

This document presents the forecast of expected values for the Arizona Highway User Revenue Fund for the period FY 2017-2026, as prepared by the Arizona Department of Transportation.

Background

The State of Arizona taxes motor fuels and collects a variety of fees relating to the registration and operation of motor vehicles in the state. These collections include gasoline and use fuel taxes, motor carrier fees, vehicle license taxes, motor vehicle registration fees and other miscellaneous fees. These revenues are deposited in the Arizona Highway User Revenue Fund (HURF) and are then distributed to the cities, towns and counties of the State and to the State Highway Fund, which is administered by the Department. These taxes and fees represent a source of revenues available to the state for highway related expenses.

Since 1986, the Department has estimated highway user revenues using a comprehensive regression-based econometric model. In 1989, the model was updated by Dr. Alberta Charney of the University of Arizona. The model relied on the estimates of certain "independent variables" to predict future tax revenues. Any variability between estimated and actual values could lead to variances in the tax forecast. In order to deal with this variability, the Department introduced the Risk Analysis Process (RAP) in 1992. The RAP relies upon probability analysis and the independent evaluation of the model's variables by an expert panel of economists. This results in a series of forecasts with specified probabilities of occurrence, rather than a single or "best guess" estimate.

In 1997, Hickling Lewis Brod Inc. (HLB), working in conjunction with Dr. Dennis Hoffman of Arizona State University, developed a new forecasting model to incorporate certain economic data generated over the past ten years and evaluate the inclusion of independent variables absent from the 1989 model, to enhance the model's forecasting accuracy. The new model also took into consideration 1997 legislation which eliminated the weight distance tax on motor carriers, increased weight and use fees for use class vehicles, and changed the point of taxation on fuel.

In September 2000 and 2003, HLB reviewed the model and updated the equations. The independent variables contained in the model in 2003 included Arizona Real Income Growth Per Capita, Population Growth, Wage & Salary Employment Growth and Fleet Fuel Efficiency.

In 2005, HDR\HLB developed a new forecasting model to incorporate additional economic data that would enhance the model's forecasting accuracy. The Arizona Real Gross Domestic Product Growth independent variable was added to the model to incorporate the impact of the Arizona economy on the commercial registration activities.

In September 2008, HDR\HLB reviewed the forecasting model and added the Arizona Real Gas Price Growth independent variable to improve the model's forecasting accuracy for changes in Arizona gasoline consumption. In September 2009, HDR\HLB reviewed the forecasting model and added

the West Coast No. 2 Real Diesel Price Growth independent variable to improve the model's forecasting accuracy for changes in Arizona use fuel (diesel) consumption. In September 2011, the income, gross domestic product, gas price and diesel price variables were converted to nominal dollars at the request of the panel members from the August 2010 RAP panel meeting. The September 2011 RAP panel recommended the Arizona nominal Gross Domestic Product independent variable be eliminated from the model. The current model includes:

1. Arizona nominal personal income
2. Arizona population
3. Arizona non-farm employment
4. Arizona fleet fuel efficiency (Not part of RAP Process)
5. Arizona nominal gas price
6. West Coast No. 2 nominal diesel price

Risk Analysis Panel

The Risk Analysis Process relies heavily on the judgments of an expert panel of economic and financial participants to provide information critical to the forecasting process. In August 2016, a panel of eleven economic and finance experts representing public, private, and academic sectors submitted their individual estimates of the model's independent variables and comments on the future economic outlook. The information gathered from the panelists was input into the model to produce a series of forecasts with associated probabilities of occurrence. The panelists' inputs are reflected in the attached tables at the back of this report.

Model Results

This year's panel inputs produced a mean forecast of $17,161.1 million for the period FY 2017-2026 with a compound growth rate of 3.7 percent.

The Department's Official Forecast for FY 2017-2026 amounts to $16,680.3 million with a compound growth rate of 3.5 percent. The Official Forecast incorporates the 50 percent confidence interval for all revenue categories. The FY 2017 forecast of $1,415.6 million was developed in July 2016 by ADOT staff using time-series techniques, historical and projected growth rates and recent legislative changes.

FY 2017 Official Forecast
(Dollars in Millions)

Fiscal Year	Mean Forecast	Official Forecast	Confidence Level
2017	$1,433.8	$1,415.6	50%
2018	1,505.5	1,476.4	50%
2019	1,570.1	1,532.8	50%
2020	1,630.7	1,587.6	50%
2021	1,688.4	1,640.2	50%
2022	1,746.1	1,693.0	50%
2023	1,804.6	1,747.8	50%
2024	1,864.6	1,802.3	50%
2025	1,926.6	1,861.4	50%
2026	1,990.7	1,923.2	50%
Total	**$17,161.1**	**$16,680.3**	
Ave. CGR	**3.7%**	**3.5%**	

For comparison purposes, the September 2015 Official Forecast and the September 2016 Official Forecast are shown below:

FY 2017-2026 Comparative Forecast
(Dollars in Millions)

Fiscal Year	Sep. 15 Official Forecast	Sep. 16 Official Forecast	Difference
2017	$1,378.5	$1,415.6	$37.1
2018	1,426.6	1,476.4	49.8
2019	1,474.7	1,532.8	58.1
2020	1,526.2	1,587.6	61.4
2021	1,580.9	1,640.2	59.3
2022	1,635.6	1,693.0	57.4
2023	1,691.6	1,747.8	56.2
2024	1,750.2	1,802.3	52.1
2025	1,810.0	1,861.4	51.4
2026	1,870.6	1,923.2	52.6
Total	**$16,144.9**	**$16,680.3**	**$535.4**
Ave. CGR	**3.4%**	**3.5%**	

Summary

The Department's Official Forecast for FY 2017-2026 totals $16,680.3 million, an increase of $535.4 million from the September 2015 Official Forecast. The Risk Analysis Process panel members continue to see only modest growth for the Arizona economy going forward. The panel was slightly more positive in the near term for growth in Arizona personal income and employment growth and lower fuel prices when compared to last year's estimates. The panel remains more pessimistic for the growth in Arizona population over the forecast period. The main reason for the increase in the September 2016 revenue forecast over the September 2015 revenue forecast is stronger than expected FY 2016 revenues which set a higher revenue base for the FY 2017 forecast and beyond.

Supplementary Information

The remaining pages of this report present supplementary information on the detailed results of the Risk Analysis Process, the Department's model and the values of the independent variables forecast by the expert panel. While the Official Forecast period is FY 2017-2026, panel inputs were requested for FY 2017-2021, 2026, 2031 and 2036. Data displayed for other than the requested years has been extrapolated.

HURF OFFICIAL REVENUE FORECAST
With Category Detail and Confidence Interval By Fiscal Year
(Current Dollars in Millions)

Fiscal Year Percentile	2016 Actual	2017 N/A	2018 50%	2019 50%	2020 50%	2021 50%	2022 50%	2023 50%	2024 50%	2025 50%	2026 50%
Gasoline Tax	$494.8	$514.5	$523.7	$532.8	$540.7	$547.6	$554.9	$562.3	$570.0	$578.8	$587.3
Use Fuel Tax	193.3	201.0	213.5	223.0	231.1	238.7	245.2	251.9	258.6	264.8	271.9
Motor Carrier Fee	41.1	41.9	44.6	46.2	47.7	49.2	50.8	52.3	53.9	55.6	57.2
Vehicle License Tax	396.0	421.8	449.4	478.5	508.8	538.7	569.3	601.7	633.4	668.7	706.1
Registration	173.7	177.9	183.6	188.7	193.8	198.6	203.6	208.5	213.4	218.6	223.9
Other	57.9	58.5	61.6	63.6	65.5	67.4	69.2	71.1	73.0	74.9	76.8
Total	$1,356.8	$1,415.6	$1,476.4	$1,532.8	$1,587.6	$1,640.2	$1,693.0	$1,747.8	$1,802.3	$1,861.4	$1,923.2

HURF TOTAL TAX REVENUE RISK ANALYSIS RESULTS
(Current Dollars in Millions)

Fiscal Year	Mean	10%	20%	30%	40%	50%	60%	70%	80%	90%
2017	$1,433.8	$1,666.5	$1,576.3	$1,514.1	$1,463.7	$1,417.5	$1,374.3	$1,330.5	$1,282.2	$1,221.8
2018	1,505.5	1,839.8	1,705.6	1,614.6	1,542.2	1,476.4	1,416.1	1,356.1	1,289.3	1,208.0
2019	1,570.1	1,964.1	1,804.1	1,695.6	1,610.4	1,532.8	1,463.4	1,393.8	1,316.3	1,222.5
2020	1,630.7	2,068.8	1,888.1	1,767.5	1,673.4	1,587.6	1,510.6	1,433.7	1,349.9	1,246.8
2021	1,688.5	2,162.6	1,965.5	1,834.6	1,731.7	1,640.2	1,557.6	1,474.4	1,385.2	1,274.5
2022	1,746.1	2,253.6	2,040.1	1,900.7	1,790.6	1,693.0	1,605.9	1,519.6	1,423.4	1,307.1
2023	1,804.6	2,341.4	2,112.9	1,965.9	1,850.5	1,747.8	1,655.5	1,563.8	1,464.0	1,342.1
2024	1,864.6	2,427.9	2,189.6	2,033.8	1,911.5	1,802.3	1,707.1	1,611.3	1,506.1	1,379.4
2025	1,926.6	2,517.9	2,265.8	2,102.4	1,974.6	1,861.4	1,760.1	1,660.6	1,551.0	1,417.5
2026	1,990.8	2,609.7	2,346.8	2,175.0	2,040.1	1,923.2	1,816.0	1,711.4	1,596.9	1,458.0
Total	$17,161.1	$21,852.3	$19,895.0	$18,604.2	$17,588.6	$16,682.2	$15,866.5	$15,055.3	$14,164.5	$13,077.8

HURF OFFICIAL REVENUE FORECAST DISTRIBUTION
(Current Dollars in Millions)

Fiscal Year	HURF	DPS/ ESP /1	Net HURF	DPS Parity Comp. Fund /2	ADOT 50.5% /1,3	Cities/Towns 27.5% /1	Cities +300K 3% /1	Counties 19% /1
2017	$1,415.6	$127.7	$1,287.9	($3.2)	$644.4	$368.6	$40.2	$254.7
2018	1,476.4	41.0	1,435.4	(3.4)	718.2	409.2	44.6	282.7
2019	1,532.8	11.0	1,521.8	(3.6)	757.1	418.5	45.7	289.1
2020	1,587.6	11.0	1,576.6	(3.9)	784.0	433.6	47.3	299.6
2021	1,640.2	11.0	1,629.2	(4.1)	809.8	448.0	48.9	309.5
2022	1,693.0	11.0	1,682.0	(4.3)	835.8	462.6	50.5	319.6
2023	1,747.8	11.0	1,736.8	(4.6)	862.7	477.6	52.1	330.0
2024	1,802.3	11.0	1,791.3	(4.8)	889.5	492.6	53.7	340.3
2025	1,861.4	11.0	1,850.4	(5.1)	918.6	508.9	55.5	351.6
2026	1,923.2	11.0	1,912.2	(5.4)	949.0	525.9	57.4	363.3
Total	$16,680.3	$256.7	$16,423.6	($42.5)	$8,169.0	$4,545.4	$495.9	$3,140.4

NOTES:

FY 2017 HURF estimate based on July 2016 Forecast.

FY 2018-2026 HURF estimate based on September 2016 Official Forecast.

/1. The DPS/ESP includes $1 million for Economic Strength Project (ESP) each year.

The DPS transfer in FY 2017 is $96.006 million per JLBC Fiscal Year 2017 Appropriations Report and $10 million each year thereafter, which is subject to change.

In addition, Laws 2014, 2nd Regular Session, Chapter 9 (SB 1487) appropriated $30 million in FY 2015 and FY 2016 and $60 million in FY 2017 to cities, towns and counties. A portion of these monies are distributed to the state highway fund for projects in Maricopa and Pima counties (Counties over 800,000). The distribution of SB 1487 appropriations are included in the columns ADOT 50.5%, Cities/Towns 27.5%, Cities over 300,000 3% and Counties 19%.

Per Laws 2015, 1st Regular Session, Chapter 10 (SB 1471) the $60 million appropriation for FY 2017 in Laws 2014, 2nd Regular Session, Chapter 9, (SB 1487) is reduced to $30 million.

Per Laws 2016, 2nd Regular Session, Chapter 125, (HB 2708) adds an additional year for the $30.0 million distribution to cities, towns and counties to include FY 2018.

FY 2017 also includes a $649,700 appropriation to MVD for the registration compliance program/3rd Party programs.

/2. Per Laws 2005, Chapter 306 (SB 1119), 1.51 percent of the state highway fund share of HURF VLT is transferred to the DPS Parity Compensation Fund.

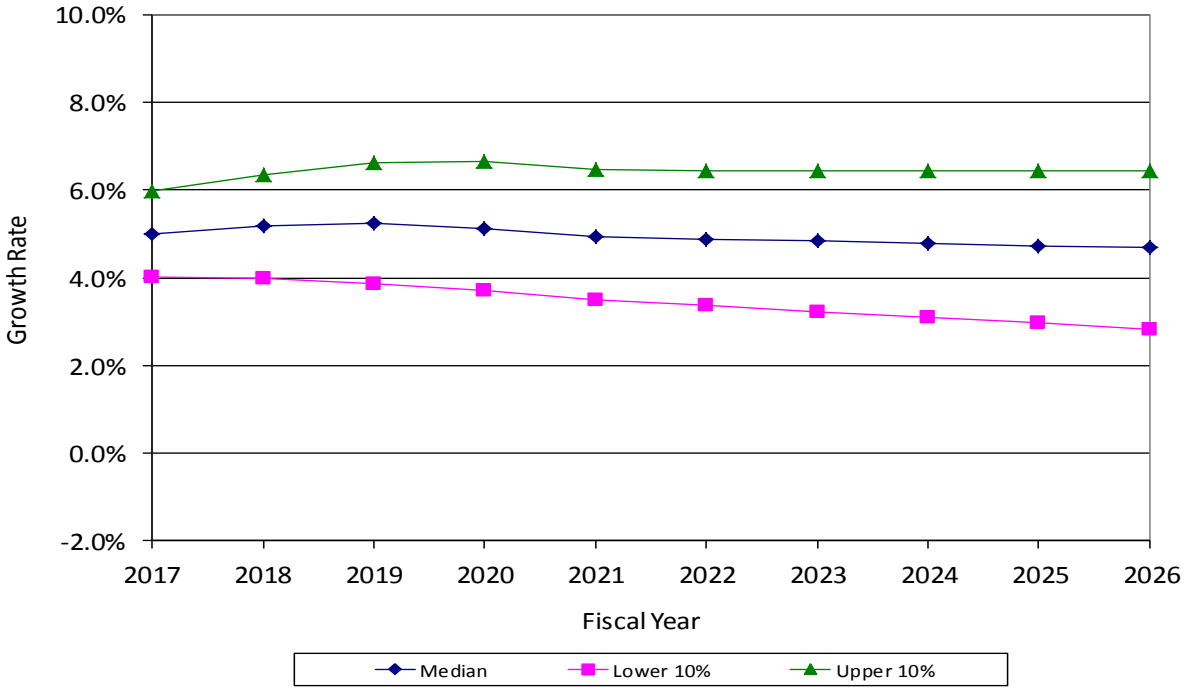
/3 Net of the DPS Parity Compensation Fund transfer and includes transfers per Laws 2011. 1st Regular Session, Chapter 28 (SB 1616) which transfers the state highway fund share of HURF VLT difference between the two-year registration and the five-year registration to the state general fund. Laws 2010, 7th Special Session, Chapter 12, (HB 2012) an amount equal to 90 percent of the fees collected under 28-4802 (A) and 60 percent of the fees

PANELIST DATA VALUES

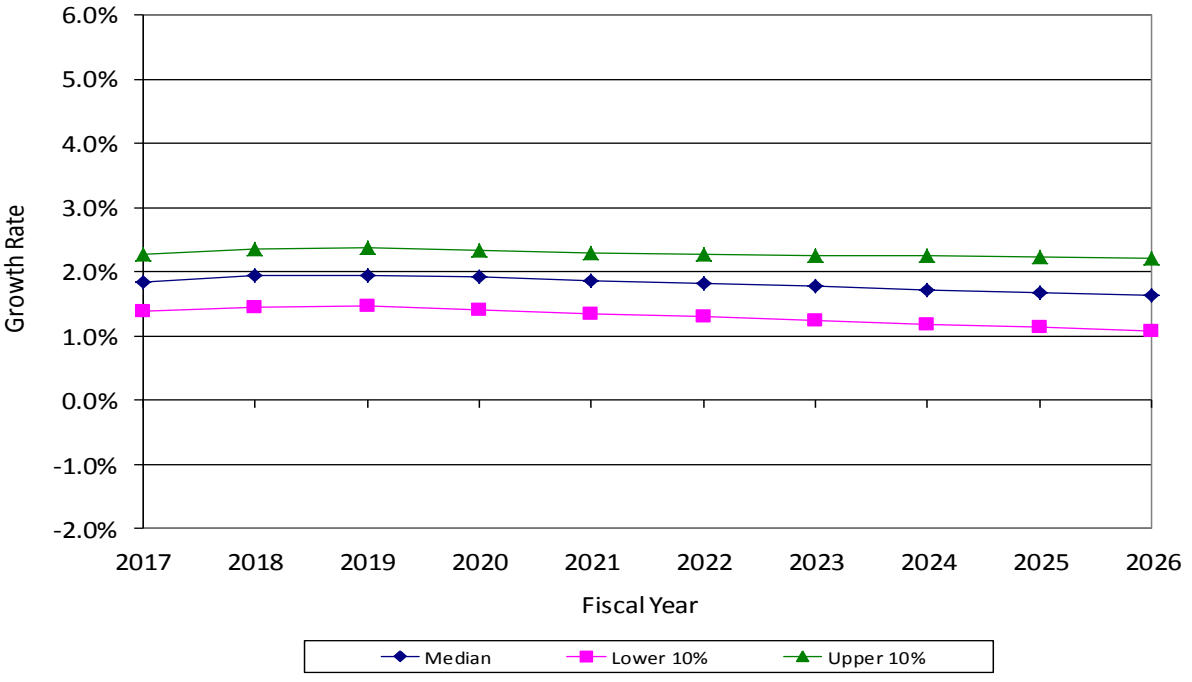
	AZ Nominal Income Growth	Arizona Population Growth	Arizona Non-Farm Employ. Growth	AZ Nominal Gas Price Growth	West Coast Nominal Diesel Price Growth
FY 2017					
Median	5.00%	1.66%	2.81%	-0.25%	-0.46%
Lower 10%	4.03%	1.34%	1.93%	-8.55%	-8.15%
Upper 10%	5.97%	1.97%	3.15%	8.55%	7.68%
FY 2018					
Median	5.18%	1.69%	2.65%	5.60%	5.02%
Lower 10%	4.00%	1.33%	1.90%	-3.07%	-2.71%
Upper 10%	6.34%	2.05%	3.18%	15.14%	14.71%
FY 2019					
Median	5.25%	1.71%	2.58%	6.14%	5.42%
Lower 10%	3.88%	1.30%	1.79%	-2.26%	-2.36%
Upper 10%	6.63%	2.09%	3.33%	15.73%	15.29%
FY 2020					
Median	5.13%	1.68%	2.49%	6.40%	6.80%
Lower 10%	3.73%	1.24%	1.39%	-3.10%	-2.33%
Upper 10%	6.64%	2.11%	3.42%	17.54%	16.88%
FY 2021					
Median	4.93%	1.64%	2.32%	6.15%	6.42%
Lower 10%	3.49%	1.16%	1.24%	-3.96%	-2.80%
Upper 10%	6.46%	2.16%	3.21%	17.33%	16.58%
FY 2026					
Median	4.69%	1.54%	2.07%	2.76%	2.43%
Lower 10%	2.84%	0.56%	0.69%	-9.56%	-9.20%
Upper 10%	6.45%	2.21%	3.53%	15.38%	14.75%
FY 2031					
Median	4.52%	1.47%	1.94%	2.06%	2.10%
Lower 10%	2.29%	0.49%	0.36%	-11.74%	-11.25%
Upper 10%	6.54%	2.23%	3.44%	16.44%	15.20%
FY 2036					
Median	4.41%	1.39%	1.76%	2.05%	1.87%
Lower 10%	1.78%	0.34%	-0.04%	-13.50%	-13.00%
Upper 10%	6.61%	2.22%	3.48%	17.94%	16.63%

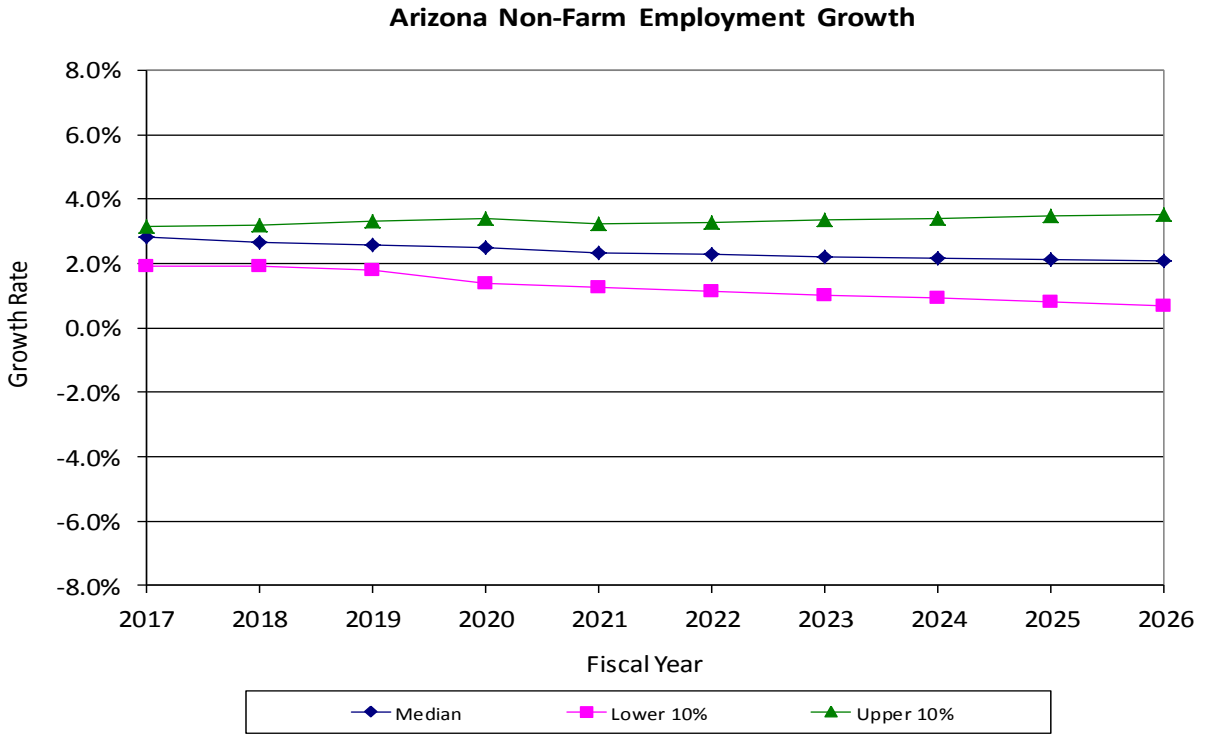
All data in the above table are percentage growth rates.

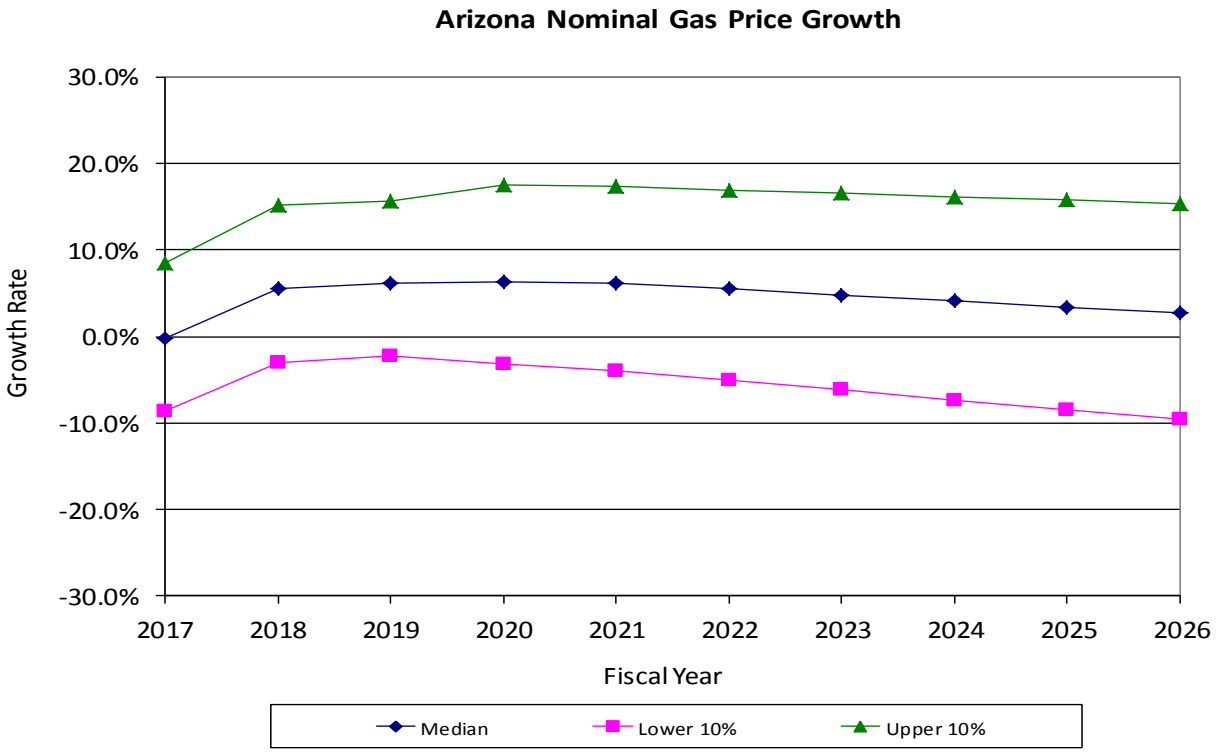
Arizona Nominal Personal Income Growth

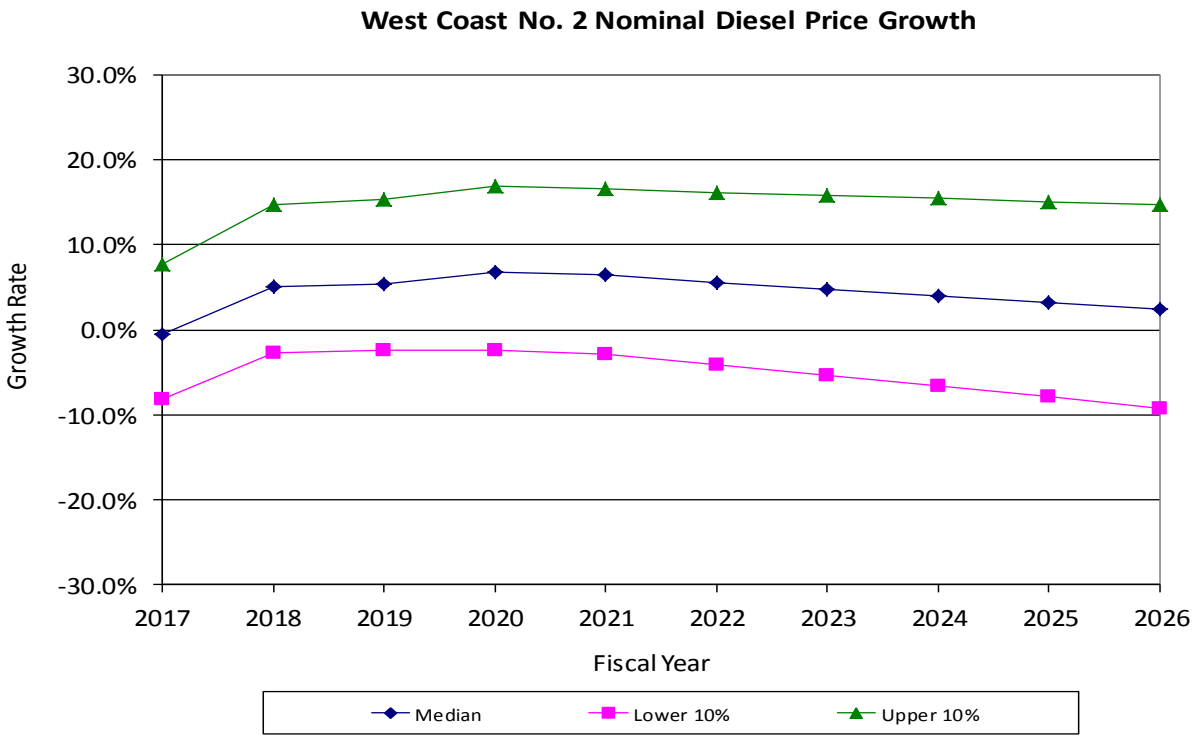


Arizona Population Growth




Arizona Non-Farm Employment Growth
8.0%
6.0%
4.0%
2.0%
0.0%
-2.0%
-4.0%
-6.0%
-8.0%
Growth Rate
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
Fiscal Year
Median
Lower 10%
Upper 10%


Arizona Nominal Gas Price Growth
30.0%
20.0%
10.0%
0.0%
-10.0%
-20.0%
-30.0%
Growth Rate
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
Fiscal Year
Median
Lower 10%
Upper 10%


West Coast No. 2 Nominal Diesel Price Growth
30.0%
20.0%
10.0%
0.0%
-10.0%
-20.0%
-30.0%
Growth Rate
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
Fiscal Year
Median
Lower 10%
Upper 10%

Arizona Nominal Personal Income Growth

	2017	2018	2019	2020	2021	2026	2031	2036
Panelist 1								
Median	5.4%	5.5%	5.6%	5.4%	5.2%	4.8%	4.6%	4.6%
Lower 10%	4.5%	4.4%	4.2%	4.3%	4.0%	3.7%	3.5%	2.0%
Upper 10%	6.1%	6.7%	6.7%	7.1%	7.1%	6.2%	6.7%	7.2%
Panelist 2								
Median	5.5%	5.6%	5.6%	5.5%	5.4%	5.0%	4.8%	4.5%
Lower 10%	5.0%	5.0%	5.0%	4.8%	4.5%	4.0%	3.5%	3.5%
Upper 10%	6.0%	5.9%	5.9%	5.9%	5.5%	5.5%	5.5%	5.5%
Panelist 3								
Median	5.7%	6.0%	6.1%	5.8%	5.7%	5.0%	4.9%	4.8%
Lower 10%	4.9%	5.2%	5.0%	4.7%	4.5%	3.6%	2.8%	2.0%
Upper 10%	6.6%	6.8%	7.2%	7.0%	6.8%	6.4%	7.1%	7.7%
Panelist 4								
Median	4.5%	5.2%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%
Lower 10%	3.5%	3.5%	3.5%	3.0%	3.0%	2.5%	1.5%	0.5%
Upper 10%	5.5%	6.0%	6.1%	6.5%	6.5%	6.5%	6.2%	6.0%
Panelist 5								
Median	5.6%	5.6%	5.9%	5.5%	5.5%	5.0%	4.8%	4.4%
Lower 10%	4.6%	4.5%	4.0%	4.0%	3.8%	3.0%	1.5%	1.2%
Upper 10%	6.1%	6.4%	6.9%	6.9%	7.0%	7.2%	7.4%	7.8%
Panelist 6								
Median	4.5%	4.5%	5.0%	5.0%	4.0%	4.0%	4.0%	4.0%
Lower 10%	4.0%	4.0%	4.0%	4.0%	3.0%	3.0%	3.0%	3.0%
Upper 10%	5.0%	5.0%	6.0%	6.0%	5.0%	5.0%	5.0%	5.0%
Panelist 7								
Median	5.3%	5.5%	5.5%	5.4%	5.2%	4.8%	4.6%	4.4%
Lower 10%	4.6%	4.8%	4.5%	4.3%	4.1%	3.4%	2.5%	1.6%
Upper 10%	6.0%	6.2%	6.5%	6.5%	6.2%	6.0%	6.0%	5.5%
Panelist 8								
Median	3.1%	2.7%	2.7%	2.5%	2.3%	2.3%	2.3%	2.3%
Lower 10%	1.6%	1.2%	1.2%	1.0%	0.8%	0.8%	0.8%	0.8%
Upper 10%	4.1%	3.7%	3.7%	3.5%	3.3%	3.3%	3.3%	3.3%
Panelist 9								
Median	5.0%	5.2%	5.3%	5.3%	5.3%	5.3%	4.8%	4.4%
Lower 10%	4.0%	4.2%	4.4%	4.1%	4.1%	1.3%	1.3%	1.3%
Upper 10%	7.2%	8.0%	7.6%	7.3%	7.3%	8.3%	8.3%	8.3%
Panelist 10								
Median	5.3%	5.4%	5.4%	5.2%	4.8%	4.6%	4.2%	4.6%
Lower 10%	4.6%	4.8%	4.5%	4.3%	4.1%	3.4%	2.5%	1.6%
Upper 10%	6.0%	6.0%	6.5%	6.3%	6.2%	6.3%	6.4%	6.5%
Panelist 11								
Median	5.1%	5.8%	6.1%	6.3%	6.4%	6.4%	6.2%	6.0%
Lower 10%	3.1%	2.5%	2.5%	2.5%	2.5%	2.5%	2.4%	2.2%
Upper 10%	7.1%	9.1%	9.8%	10.1%	10.2%	10.3%	10.1%	9.9%

All data in the above table are percentage growth rates.

Arizona Population Growth

	2017	2018	2019	2020	2021	2026	2031	2036
Panelist 1								
Median	1.6%	1.7%	1.8%	1.7%	1.6%	1.6%	1.6%	1.5%
Lower 10%	1.4%	1.3%	1.2%	1.2%	1.1%	1.0%	0.7%	0.6%
Upper 10%	1.8%	2.0%	2.1%	2.2%	2.4%	2.5%	2.5%	2.6%
Panelist 2								
Median	1.8%	1.9%	2.0%	2.0%	2.0%	1.9%	1.8%	1.5%
Lower 10%	1.5%	1.6%	1.7%	1.7%	1.7%	1.5%	1.3%	1.1%
Upper 10%	2.0%	2.2%	2.2%	2.2%	2.2%	2.1%	2.1%	1.8%
Panelist 3								
Median	1.7%	1.7%	1.7%	1.7%	1.6%	1.5%	1.4%	1.3%
Lower 10%	1.6%	1.6%	1.6%	1.4%	1.4%	1.1%	0.8%	0.5%
Upper 10%	1.8%	1.9%	1.8%	1.9%	1.9%	1.9%	2.0%	2.1%
Panelist 4								
Median	1.5%	1.5%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%
Lower 10%	1.2%	1.1%	1.0%	0.8%	0.5%	0.5%	0.5%	0.5%
Upper 10%	1.6%	1.8%	2.0%	2.2%	2.3%	2.5%	2.5%	2.5%
Panelist 5								
Median	1.5%	1.6%	1.8%	1.8%	1.8%	1.5%	1.2%	1.2%
Lower 10%	1.3%	1.4%	1.4%	1.4%	1.3%	1.0%	0.7%	0.3%
Upper 10%	1.8%	1.8%	2.1%	2.1%	2.2%	2.3%	2.5%	2.7%
Panelist 6								
Median	1.7%	1.7%	1.7%	1.7%	1.6%	1.3%	1.3%	1.3%
Lower 10%	1.6%	1.5%	1.4%	1.4%	1.3%	1.1%	1.1%	1.1%
Upper 10%	1.8%	1.9%	1.9%	1.9%	1.9%	1.5%	1.5%	1.5%
Panelist 7								
Median	1.7%	1.7%	1.7%	1.7%	1.6%	1.5%	1.4%	1.3%
Lower 10%	1.6%	1.6%	1.5%	1.5%	1.4%	1.2%	0.8%	0.5%
Upper 10%	1.8%	1.8%	1.8%	1.9%	1.8%	1.9%	2.0%	2.0%
Panelist 8								
Median	1.8%	1.8%	1.7%	1.8%	1.8%	1.8%	1.8%	1.8%
Lower 10%	0.7%	0.7%	0.7%	0.7%	0.7%	1.5%	1.3%	1.0%
Upper 10%	2.3%	2.3%	2.2%	2.3%	2.5%	3.0%	3.0%	3.0%
Panelist 9								
Median	1.6%	1.6%	1.5%	1.5%	1.5%	1.5%	1.5%	1.4%
Lower 10%	1.0%	1.0%	1.0%	1.0%	1.0%	-5.0%	-4.0%	-3.0%
Upper 10%	2.8%	3.0%	2.9%	2.7%	2.7%	2.9%	2.8%	2.7%
Panelist 10								
Median	1.7%	1.7%	1.7%	1.6%	1.6%	1.5%	1.4%	1.3%
Lower 10%	1.5%	1.5%	1.5%	1.3%	1.2%	1.1%	1.1%	1.0%
Upper 10%	1.8%	1.8%	1.8%	1.8%	1.9%	1.9%	1.9%	1.9%
Panelist 11								
Median	1.7%	1.7%	1.7%	1.7%	1.6%	1.5%	1.4%	1.3%
Lower 10%	1.3%	1.3%	1.3%	1.3%	1.3%	1.1%	1.0%	0.1%
Upper 10%	2.1%	2.1%	2.1%	2.0%	2.0%	1.8%	1.7%	1.6%

All data in the above table are percentage growth rates.

Arizona Non-Farm Employment Growth

	2017	2018	2019	2020	2021	2026	2031	2036
Panelist 1								
Median	3.0%	3.1%	3.0%	2.8%	2.6%	2.8%	2.5%	2.0%
Lower 10%	2.3%	2.3%	2.2%	1.5%	1.3%	0.5%	0.0%	-0.2%
Upper 10%	3.7%	3.8%	4.4%	4.3%	4.5%	4.5%	4.0%	4.0%
Panelist 2								
Median	3.0%	3.0%	2.8%	2.8%	2.7%	2.5%	2.3%	2.0%
Lower 10%	2.5%	2.5%	2.2%	2.2%	2.0%	1.8%	1.5%	1.0%
Upper 10%	3.5%	3.5%	3.5%	3.5%	3.0%	3.0%	2.8%	2.5%
Panelist 3								
Median	3.0%	2.9%	2.7%	2.5%	2.3%	1.6%	1.6%	1.5%
Lower 10%	2.4%	2.3%	2.1%	1.3%	1.1%	0.1%	-0.2%	-0.6%
Upper 10%	3.6%	3.5%	3.3%	3.7%	3.5%	3.1%	3.4%	3.6%
Panelist 4								
Median	2.8%	2.7%	2.5%	2.5%	2.4%	2.4%	2.1%	1.9%
Lower 10%	2.4%	2.4%	2.2%	1.4%	1.4%	0.9%	0.3%	-0.2%
Upper 10%	3.6%	3.6%	3.4%	3.8%	3.8%	3.9%	3.9%	4.0%
Panelist 5								
Median	2.9%	2.8%	2.8%	2.7%	2.7%	2.5%	2.5%	2.5%
Lower 10%	2.0%	1.9%	1.8%	1.5%	1.4%	0.8%	-0.2%	-2.0%
Upper 10%	3.8%	3.9%	4.0%	4.2%	4.2%	4.3%	4.4%	5.1%
Panelist 6								
Median	3.0%	3.0%	2.8%	2.8%	2.5%	2.2%	2.0%	2.0%
Lower 10%	2.8%	2.8%	2.5%	2.3%	2.1%	1.9%	1.8%	1.8%
Upper 10%	3.4%	3.4%	3.2%	3.2%	3.0%	2.8%	2.5%	2.5%
Panelist 7								
Median	3.0%	2.9%	2.8%	2.6%	2.5%	2.4%	2.0%	2.0%
Lower 10%	2.4%	2.3%	2.2%	1.5%	1.2%	0.9%	0.5%	-0.2%
Upper 10%	3.5%	3.5%	3.5%	3.8%	3.8%	3.9%	3.9%	4.0%
Panelist 8								
Median	1.5%	1.1%	1.4%	1.6%	1.0%	1.0%	1.0%	1.0%
Lower 10%	1.1%	0.7%	1.0%	1.2%	0.8%	0.8%	0.8%	0.8%
Upper 10%	2.0%	1.8%	3.4%	3.6%	2.0%	2.0%	2.0%	2.0%
Panelist 9								
Median	2.8%	2.8%	2.8%	2.6%	2.6%	2.4%	2.1%	2.0%
Lower 10%	0.9%	1.4%	1.4%	1.0%	1.0%	0.8%	0.7%	0.6%
Upper 10%	4.0%	4.5%	4.5%	4.1%	4.1%	3.9%	3.8%	3.7%
Panelist 10								
Median	3.0%	2.9%	2.8%	2.6%	2.4%	2.0%	2.5%	2.0%
Lower 10%	2.4%	2.3%	2.0%	1.4%	1.4%	1.0%	1.0%	1.0%
Upper 10%	3.5%	3.5%	3.4%	3.4%	3.5%	3.5%	3.5%	3.5%
Panelist 11								
Median	2.8%	1.9%	1.9%	1.9%	1.9%	1.0%	0.7%	0.5%
Lower 10%	0.0%	0.0%	0.0%	0.0%	0.0%	-2.0%	-2.3%	-2.5%
Upper 10%	0.0%	0.0%	0.0%	0.0%	0.0%	4.0%	3.7%	3.5%

All data in the above table are percentage growth rates.

Arizona Nominal Gas Price Growth

	2017	2018	2019	2020	2021	2026	2031	2036
Panelist 1								
Median	3.0%	12.0%	11.3%	10.9%	9.8%	3.2%	2.2%	2.2%
Lower 10%	-2.0%	4.4%	3.7%	1.6%	0.5%	-8.7%	-12.1%	-14.5%
Upper 10%	10.0%	19.6%	18.8%	20.3%	19.2%	15.1%	16.5%	18.9%
Panelist 2								
Median	-2.8%	12.0%	11.3%	10.9%	9.8%	3.2%	2.2%	2.2%
Lower 10%	-10.4%	4.4%	3.7%	1.6%	0.5%	-8.7%	-12.1%	-14.5%
Upper 10%	4.7%	19.6%	18.8%	20.3%	19.2%	15.1%	16.5%	18.9%
Panelist 3								
Median	12.6%	6.9%	7.7%	8.0%	9.1%	2.2%	1.9%	1.9%
Lower 10%	5.1%	-0.6%	0.1%	-1.4%	-0.3%	-9.8%	-12.4%	-14.8%
Upper 10%	20.2%	14.5%	15.2%	17.3%	18.4%	14.1%	16.2%	18.6%
Panelist 4								
Median	-2.8%	5.0%	8.0%	5.0%	5.0%	3.0%	2.0%	2.0%
Lower 10%	-10.4%	-5.0%	5.0%	1.6%	0.5%	-8.7%	-12.1%	-14.5%
Upper 10%	4.7%	19.6%	18.8%	20.3%	19.2%	15.1%	16.5%	18.9%
Panelist 5								
Median	1.5%	6.0%	6.0%	7.0%	8.0%	4.0%	3.0%	3.0%
Lower 10%	-9.0%	0.0%	-5.0%	-5.0%	-6.0%	-10.0%	-15.0%	-20.0%
Upper 10%	5.0%	17.0%	20.0%	22.0%	23.0%	20.0%	22.0%	24.0%
Panelist 6								
Median	0.0%	4.0%	6.0%	6.0%	6.0%	4.0%	4.0%	4.0%
Lower 10%	-2.0%	2.0%	3.0%	3.0%	3.0%	2.0%	2.0%	2.0%
Upper 10%	2.0%	8.0%	10.0%	10.0%	10.0%	8.0%	8.0%	8.0%
Panelist 7								
Median	-3.0%	10.0%	10.0%	10.0%	7.5%	5.0%	2.5%	2.5%
Lower 10%	-10.5%	0.0%	0.0%	0.0%	-5.0%	-10.0%	-10.0%	-10.0%
Upper 10%	10.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
Panelist 8								
Median	-10.0%	-8.0%	-5.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Lower 10%	-15.0%	-15.0%	-10.0%	-8.0%	-8.0%	-8.0%	-8.0%	-8.0%
Upper 10%	0.0%	0.0%	0.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Panelist 9								
Median	0.0%	0.0%	-0.5%	0.0%	1.0%	1.0%	1.0%	1.0%
Lower 10%	-7.0%	-6.0%	-6.5%	-6.5%	-6.5%	-11.5%	-14.0%	-16.0%
Upper 10%	7.0%	8.0%	11.7%	11.7%	11.7%	15.5%	17.0%	19.4%
Panelist 10								
Median	-2.8%	12.0%	11.3%	10.9%	9.8%	3.2%	2.2%	2.2%
Lower 10%	-10.4%	4.4%	3.7%	1.6%	0.5%	-8.7%	-12.1%	-14.5%
Upper 10%	4.7%	19.6%	18.8%	20.3%	19.2%	15.1%	16.5%	18.9%
Panelist 11								
Median	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
Lower 10%	-22.4%	-22.5%	-22.6%	-22.6%	-22.7%	-23.1%	-23.4%	-23.7%
Upper 10%	25.6%	25.7%	25.7%	25.8%	25.9%	26.2%	26.6%	26.9%

All data in the above table are percentage growth rates.

West Coast No. 2 Nominal Gas Price Growth

	2017	2018	2019	2020	2021	2026	2031	2036
Panelist 1								
Median	3.0%	12.0%	11.3%	10.9%	9.8%	3.2%	2.2%	2.2%
Lower 10%	-2.0%	4.5%	3.7%	2.4%	1.2%	-8.5%	-11.8%	-14.2%
Upper 10%	10.0%	19.5%	18.8%	19.5%	18.4%	14.9%	16.2%	18.5%
Panelist 2								
Median	-2.8%	12.0%	11.3%	10.9%	9.8%	3.2%	2.2%	2.2%
Lower 10%	-10.4%	4.5%	3.7%	2.4%	1.2%	-8.5%	-11.8%	-14.2%
Upper 10%	4.7%	19.5%	18.8%	19.5%	18.4%	14.9%	16.2%	18.5%
Panelist 3								
Median	12.6%	6.9%	7.7%	8.0%	9.1%	2.2%	1.9%	1.9%
Lower 10%	5.1%	-0.6%	0.1%	-1.4%	-0.3%	-9.8%	-12.4%	-14.8%
Upper 10%	20.2%	14.5%	15.2%	17.3%	18.4%	14.1%	16.2%	18.6%
Panelist 4								
Median	-2.8%	3.0%	5.0%	5.0%	5.0%	3.0%	2.0%	2.0%
Lower 10%	-10.4%	-5.0%	-5.0%	1.6%	0.5%	-8.7%	-12.1%	-14.5%
Upper 10%	4.7%	19.6%	18.8%	20.3%	19.2%	15.1%	16.5%	18.9%
Panelist 5								
Median	1.5%	6.0%	6.0%	7.0%	8.0%	4.0%	3.0%	3.0%
Lower 10%	-9.0%	0.0%	-5.0%	-5.0%	-6.0%	-10.0%	-14.0%	-19.0%
Upper 10%	5.0%	17.0%	20.0%	22.0%	23.0%	20.0%	21.0%	23.0%
Panelist 6								
Median	0.0%	4.0%	6.0%	6.0%	6.0%	4.0%	4.0%	4.0%
Lower 10%	-2.0%	2.0%	3.0%	3.0%	3.0%	2.0%	2.0%	2.0%
Upper 10%	2.0%	8.0%	10.0%	10.0%	10.0%	8.0%	8.0%	8.0%
Panelist 7								
Median	-5.0%	10.0%	10.0%	10.0%	10.0%	5.0%	2.5%	2.5%
Lower 10%	-10.0%	0.0%	5.0%	2.5%	2.5%	-10.0%	-10.0%	-10.0%
Upper 10%	5.0%	15.0%	15.0%	15.0%	15.0%	15.0%	10.0%	10.0%
Panelist 8								
Median	-10.0%	-12.0%	-5.0%	5.0%	2.0%	-2.0%	2.0%	0.0%
Lower 10%	-15.0%	-15.0%	-10.0%	-8.0%	-8.0%	-8.0%	-8.0%	-8.0%
Upper 10%	0.0%	0.0%	0.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Panelist 9								
Median	0.0%	0.0%	-5.0%	0.0%	1.0%	1.0%	1.0%	1.0%
Lower 10%	-7.0%	-6.0%	-6.5%	-6.5%	-6.5%	-11.5%	-14.0%	-16.0%
Upper 10%	7.0%	8.0%	11.7%	11.7%	11.7%	15.5%	17.0%	19.4%
Panelist 10								
Median	-2.8%	12.0%	11.3%	10.9%	9.8%	3.2%	2.2%	2.2%
Lower 10%	-10.4%	4.5%	3.7%	2.4%	1.2%	-8.5%	-11.8%	-14.2%
Upper 10%	4.7%	19.5%	18.8%	19.5%	18.4%	14.9%	16.2%	18.5%
Panelist 11								
Median	1.3%	1.2%	1.1%	1.0%	0.1%	0.0%	0.0%	-0.4%
Lower 10%	-18.5%	-18.7%	-18.8%	-18.9%	-19.8%	-19.8%	-19.9%	-20.2%
Upper 10%	21.2%	21.1%	21.0%	20.9%	20.0%	19.9%	19.9%	19.5%

All data in the above table are percentage growth rates.

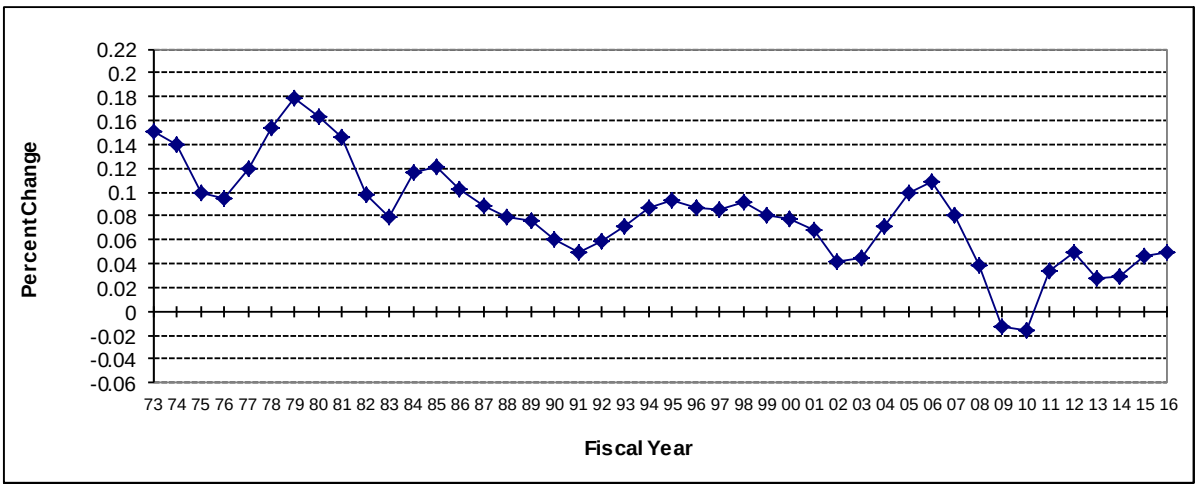
HISTORICAL DATA
ARIZONA NOMINAL PERSONAL INCOME GROWTH
(Annual Percent Change)

HISTORICAL DATA BY FISCAL YEAR (July 1 through June 30)

1970		1980	16.4%	1990	6.1%	2000	7.8%	2010	-1.7%
1971		1981	14.7%	1991	4.9%	2001	6.9%	2011	3.4%
1972		1982	9.8%	1992	5.9%	2002	4.2%	2012	4.9%
1973	15.1%	1983	7.9%	1993	7.2%	2003	4.5%	2013	2.7%
1974	14.0%	1984	11.7%	1994	8.7%	2004	7.2%	2014	2.9%
1975	10.0%	1985	12.1%	1995	9.3%	2005	10.0%	2015	4.6%
1976	9.5%	1986	10.3%	1996	8.6%	2006	10.9%	2016 *	4.9%
1977	11.9%	1987	8.8%	1997	8.5%	2007	8.1%	2017	
1978	15.3%	1988	7.9%	1998	9.2%	2008	3.8%	2018	
1979	17.8%	1989	7.6%	1999	8.0%	2009	-1.2%	2019	

BEA for FY 1973-2015, Western Blue Chip, June 2016 for FY 2016* and FY 2017, and ADOT staff for FY 2018-36.

HISTORICAL DATA - GRAPHED



HISTORICAL DATA - ANALYSIS

Period	Historical Min.	Historical Max.	Mean	Std. Dev.	80% Range Lower	80% Range Upper
5 Years	2.7%	4.9%	4.0%	1.1%	2.8%	4.9%
10 Years	-1.7%	8.1%	3.2%	2.9%	-1.3%	5.3%
Full Period	-1.7%	17.8%	8.2%	4.2%	3.5%	14.5%

HISTORICAL DATA
ARIZONA POPULATION GROWTH
(Annual Percent Change)

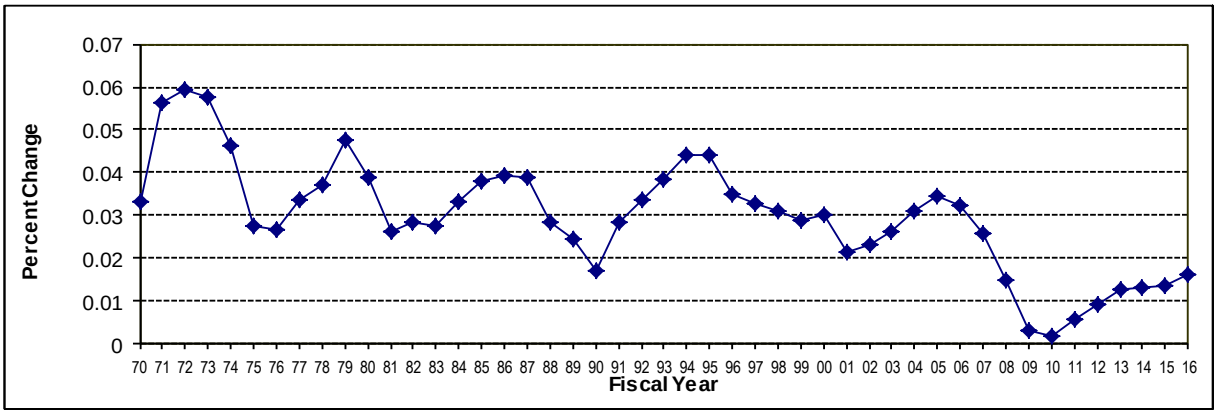
HISTORICAL DATA BY FISCAL YEAR (July 1 through June 30)

1970	3.3%	1980	3.9%	1990	1.7%	2000	3.0%	2010	0.2%
1971	5.6%	1981	2.6%	1991	2.8%	2001	2.2%	2011	0.6%
1972	5.9%	1982	2.8%	1992	3.4%	2002	2.3%	2012	0.9%
1973	5.8%	1983	2.7%	1993	3.8%	2003	2.6%	2013	1.3%
1974	4.6%	1984	3.3%	1994	4.4%	2004	3.1%	2014	1.3%
1975	2.8%	1985	3.8%	1995	4.4%	2005	3.5%	2015	1.4%
1976	2.7%	1986	3.9%	1996	3.5%	2006	3.2%	2016 *	1.6%
1977	3.4%	1987	3.9%	1997	3.3%	2007	2.6%	2017	
1978	3.7%	1988	2.9%	1998	3.1%	2008	1.5%	2018	
1979	4.8%	1989	2.5%	1999	2.9%	2009	0.3%	2019	

Census Bureau FY 1970-2000. FY 2001-2036 from ADOA Office of Employment and Population Statistics.

* FY 2016 Projected.

HISTORICAL DATA - GRAPHED



HISTORICAL DATA - ANALYSIS

Period	Historical Min.	Historical Max.	Mean	Std. Dev.	80% Range Lower	80% Range Upper
5 Years	0.9%	1.6%	1.3%	0.2%	1.1%	1.5%
10 Years	0.2%	2.6%	1.2%	0.7%	0.3%	1.7%
Full Period	0.2%	5.9%	3.0%	1.3%	1.3%	4.5%

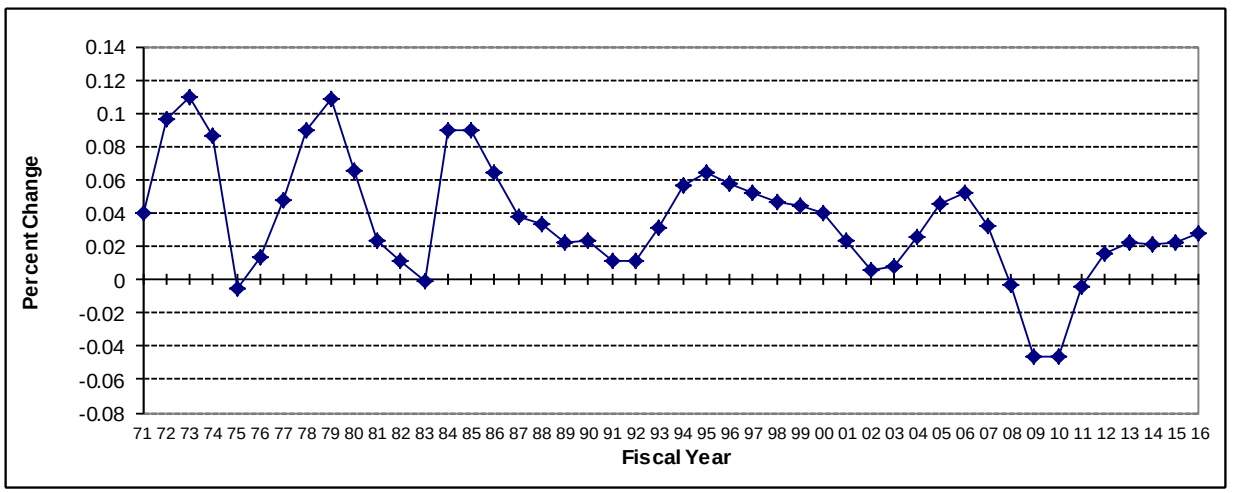
HISTORICAL DATA
ARIZONA TOTAL NON-FARM EMPLOYMENT GROWTH
(Annual Percent Change)

HISTORICAL DATA BY FISCAL YEAR (July 1 through June 30)

1970		1980	6.6%	1990	2.3%	2000	4.0%	2010	-4.7%
1971	4.0%	1981	2.3%	1991	1.1%	2001	2.3%	2011	-0.4%
1972	9.6%	1982	1.1%	1992	1.1%	2002	0.5%	2012	1.6%
1973	10.9%	1983	0.0%	1993	3.1%	2003	0.7%	2013	2.2%
1974	8.6%	1984	9.0%	1994	5.7%	2004	2.6%	2014	2.2%
1975	-0.5%	1985	8.9%	1995	6.4%	2005	4.6%	2015	2.3%
1976	1.4%	1986	6.4%	1996	5.7%	2006	5.2%	2016 *	2.8%
1977	4.8%	1987	3.7%	1997	5.2%	2007	3.2%	2017	
1978	9.0%	1988	3.3%	1998	4.7%	2008	-0.3%	2018	
1979	10.9%	1989	2.2%	1999	4.4%	2009	-4.7%	2019	

Bureau of Labor Statistics for FY 1971-2015, UA Economic and Business Research Center, June 2016 Quarterly Forecast for 2016*-2019 and ADOT staff estimates for FY 2020-2036.

HISTORICAL DATA - GRAPHED



HISTORICAL DATA - ANALYSIS

Period	Historical Min.	Historical Max.	Mean	Std. Dev.	80% Range Lower	80% Range Upper
5 Years	1.6%	2.8%	2.2%	0.4%	1.8%	2.6%
10 Years	-4.7%	3.2%	0.4%	2.9%	-4.7%	2.8%
Full Period	-4.7%	10.9%	3.6%	3.5%	-0.2%	9.0%

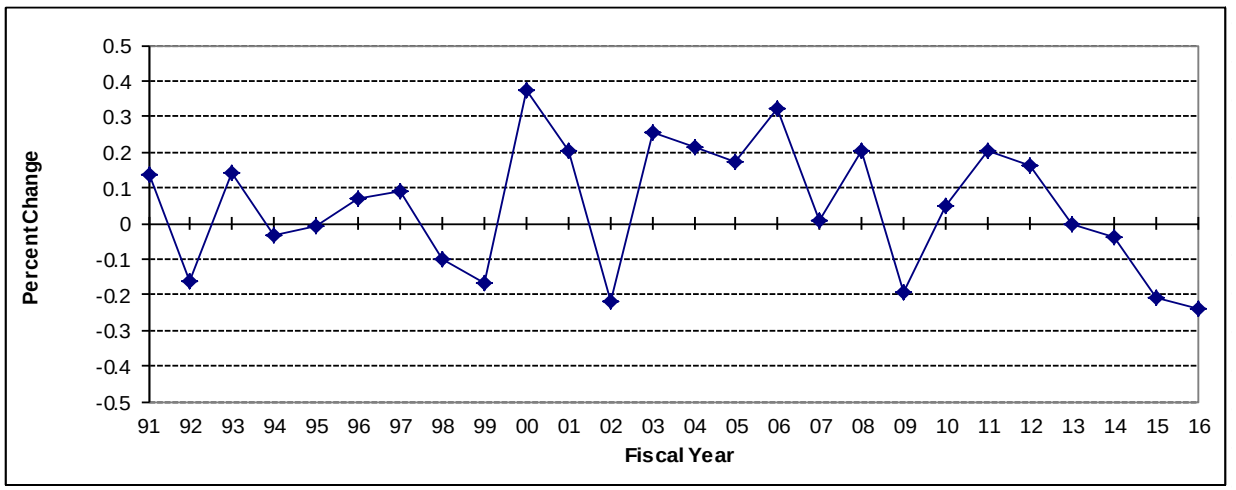
HISTORICAL DATA
ARIZONA NOMINAL GAS PRICE GROWTH
(Annual Percent Change)

HISTORICAL DATA BY FISCAL YEAR (July 1 through June 30)

1970	1980		1990		2000	37.2%	2010	4.7%
1971	1981		1991	13.8%	2001	20.2%	2011	20.1%
1972	1982		1992	-16.0%	2002	-21.9%	2012	16.1%
1973	1983		1993	14.2%	2003	25.4%	2013	-0.5%
1974	1984		1994	-3.3%	2004	21.6%	2014	-3.9%
1975	1985	-0.3%	1995	-0.5%	2005	17.4%	2015	-20.9%
1976	1986	-9.2%	1996	7.2%	2006	32.1%	2016	-23.9%
1977	1987	-25.2%	1997	9.0%	2007	0.5%	2017	
1978	1988		1998	-10.3%	2008	20.2%	2018	
1979	1989		1999	-16.8%	2009	-19.3%	2019	

U.S. Department of Energy (EIA Administration) for FY 1985-2011, AAA Arizona for FY 2012-2016 and Global Insight, 1st Quarter 2016, Trend Forecast report for FY 2017-36.

HISTORICAL DATA - GRAPHED



HISTORICAL DATA - ANALYSIS

Period	Historical Min.	Historical Max.	Mean	Std. Dev.	80% Range Lower	80% Range Upper
5 Years	-23.9%	16.1%	-6.6%	16.3%	-22.7%	9.5%
10 Years	-23.9%	20.2%	-0.7%	16.6%	-21.2%	20.2%
Full Period	-23.9%	37.2%	4.7%	17.7%	-20.1%	23.5%

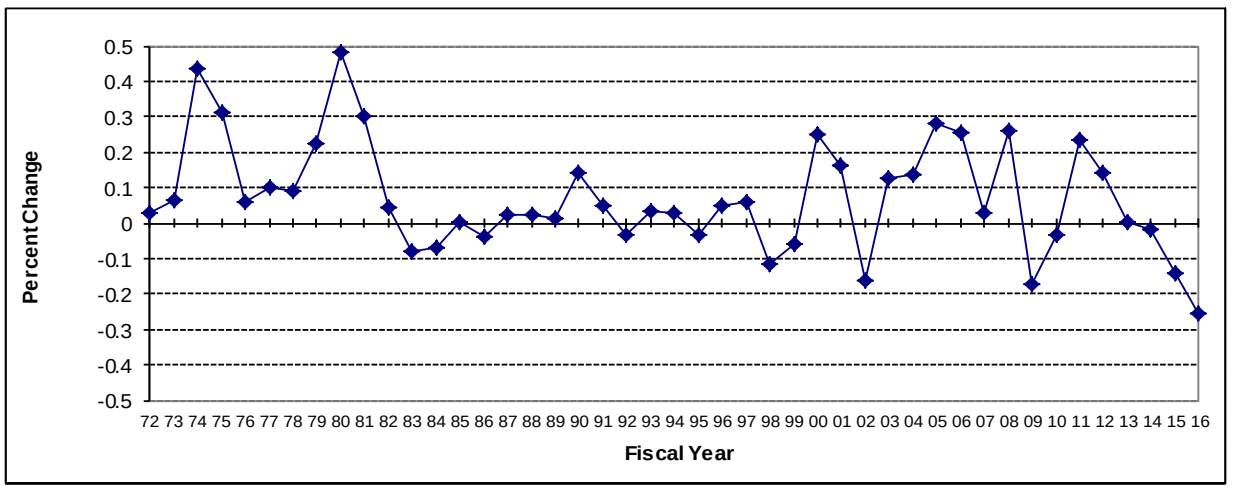
HISTORICAL DATA
WEST COAST NO. 2 NOMINAL DIESEL PRICE GROWTH
(Annual Percent Change)

HISTORICAL DATA BY FISCAL YEAR (July 1 through June 30)

1970		1980	48.1%	1990	14.2%	2000	25.0%	2010	-3.4%
1971		1981	30.2%	1991	4.6%	2001	16.4%	2011	23.5%
1972	2.7%	1982	4.3%	1992	-3.2%	2002	-16.4%	2012	14.2%
1973	6.4%	1983	-8.0%	1993	3.1%	2003	12.4%	2013	0.0%
1974	43.3%	1984	-6.8%	1994	2.7%	2004	13.6%	2014	-2.0%
1975	31.4%	1985	0.1%	1995	-3.4%	2005	27.8%	2015	-14.1%
1976	5.8%	1986	-4.0%	1996	4.9%	2006	25.5%	2016	-25.3%
1977	10.0%	1987	2.1%	1997	5.8%	2007	2.7%	2017	
1978	9.1%	1988	2.3%	1998	-11.8%	2008	25.8%	2018	
1979	22.4%	1989	1.2%	1999	-5.9%	2009	-17.2%	2019	

U.S. Department of Energy (EIA Administration) for FY 1972-2016 and Global Insight, 1st Quarter 2016, Trend Forecast report for FY 2017-36.

HISTORICAL DATA - GRAPHED



HISTORICAL DATA - ANALYSIS

Period	Historical Min.	Historical Max.	Mean	Std. Dev.	80% Range Lower	80% Range Upper
5 Years	-25.3%	14.2%	-5.4%	15.0%	-20.8%	8.5%
10 Years	-25.3%	25.8%	0.4%	16.9%	-18.0%	23.7%
Full Period	-25.3%	48.1%	7.1%	15.6%	-10.3%	27.0%