



Kavet, Rockler & Associates, LLC
Economic and Public Policy Consulting

985 Grandview Road
Williamstown, Vermont 05679-9003 U.S.A.
Telephone: 802-433-1360
Facsimile: 866-433-1360
Cellular: 802-433-1111
E-Mail: tek@kavet.net
Website: www.kavetrockler.com

January 2015 Economic Review and Revenue Forecast Update

Prepared for the
State of Vermont
Emergency Board and
Legislative Joint Fiscal Committee

January 20, 2015

Economic Review and Revenue Forecast Update

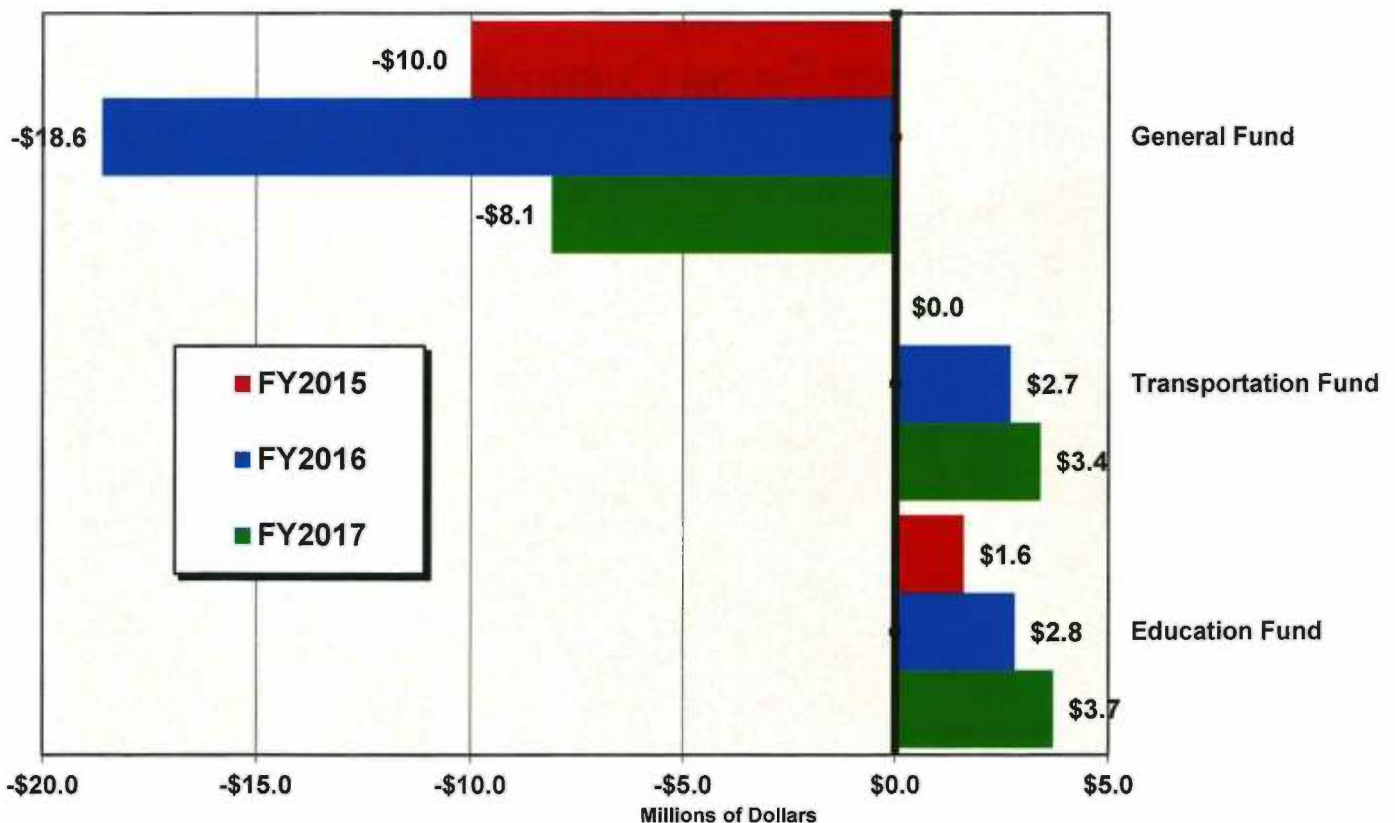
January 2015

Overview

After a disappointing start to FY2015, prospects for accelerating economic growth are finally emerging in earnest. Led by an epic plunge in oil and gasoline prices, steady job gains, soaring consumer optimism and supportive monetary policy, the economy is poised to register its strongest growth in more than a decade. As a result, revenue expectations in many of the key consumption taxes have been upgraded. Offsetting this revenue benefit, however, are volatile negative external and isolated "one-time" events primarily affecting Personal Income, Estate, Corporate and the TIB Gas fund.

Although the net changes in total revenues are slightly negative in FY15 (-\$8M), FY16 (-\$13M) and FY17 (-\$1M), the possibility of upside events affecting individual revenue categories will be elevated as the economy improves. As conditions warrant, future revenue upgrades may be possible, especially in FY16 and FY17. Given the strong equity market performance in both 2013 and 2014, for example, an upside FY15 "April surprise" in personal income paid receipts is a credible possibility.

Recommended Net Revenue Changes from July 2014 Forecast



January 2015 Economic and Revenue Forecast Commentary

- After 51 consecutive months of employment growth, the U.S. economy has added more than 10 million jobs and driven the unemployment rate to 5.6% in December, its lowest rate in more than 6 years. Real GDP growth in the third quarter of 2014 (the last available reading) soared to 5%, the highest level in more than a decade. Vermont employment in November of 2014 reached a record 311,700 jobs, finally exceeding its 2007 pre-recession peak after 90 grueling months – the slowest post-WWII recovery on record. Wage growth remains tepid to non-existent, but leading indicators, including an accelerating quit rate, suggest it may finally be poised to register meaningful growth. Adding to these tailwinds, crude oil prices have plunged nearly 60% in the last 6 months, and supply imbalances may keep prices low for much of 2015.

Epic Oil Price Decline Enhances Prospects for State Economy (West Texas Intermediate Crude Oil, PPB in December 2014 Constant Dollars)



Sources: Wall Street Journal, Moody's Analytics, KRA

- Petroleum-based products account for about three-quarters of Vermont's energy expenditures – mostly for transportation and home heating. Being a rural state, Vermont has relatively high per capita gasoline consumption rates and is also among the most reliant on oil for winter heating.¹ In 2012, Vermont spent more than \$2 billion on petroleum-based energy sources.

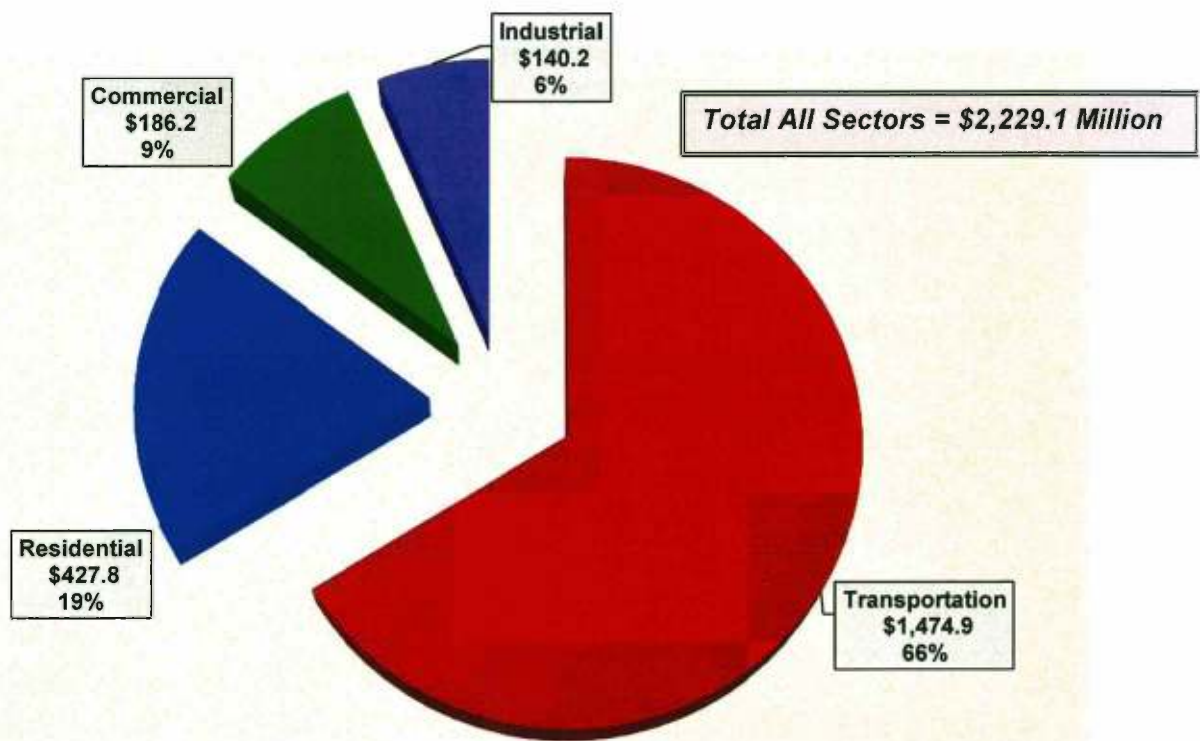
¹ Vermont has the 10th highest number of per capita vehicle miles travelled in the nation at 11,399, and, with about half of all buildings heated with fuel oil, the 2nd highest reliance on petroleum-based space heating.

Since Vermont neither produces nor refines any petroleum products, virtually all of this expenditure exits the Vermont economy, with only minor related transportation, storage and distribution activities in-State.

- The most recent U.S. Energy Information Administration analysis now projects crude oil prices in 2015 to be about 42% below last year, with gasoline down 31% and heating oil down 27%. Based on these estimates, Vermont could experience savings of more than \$600 million in 2015, or about \$2,500 per household. These savings will redistribute consumption expenditure patterns, with significant beneficial local economic impacts.

Petroleum-Based Energy Expenditures in Vermont, 2012

Millions of Dollars by Consumption Sector, Source: U.S. Energy Information Administration



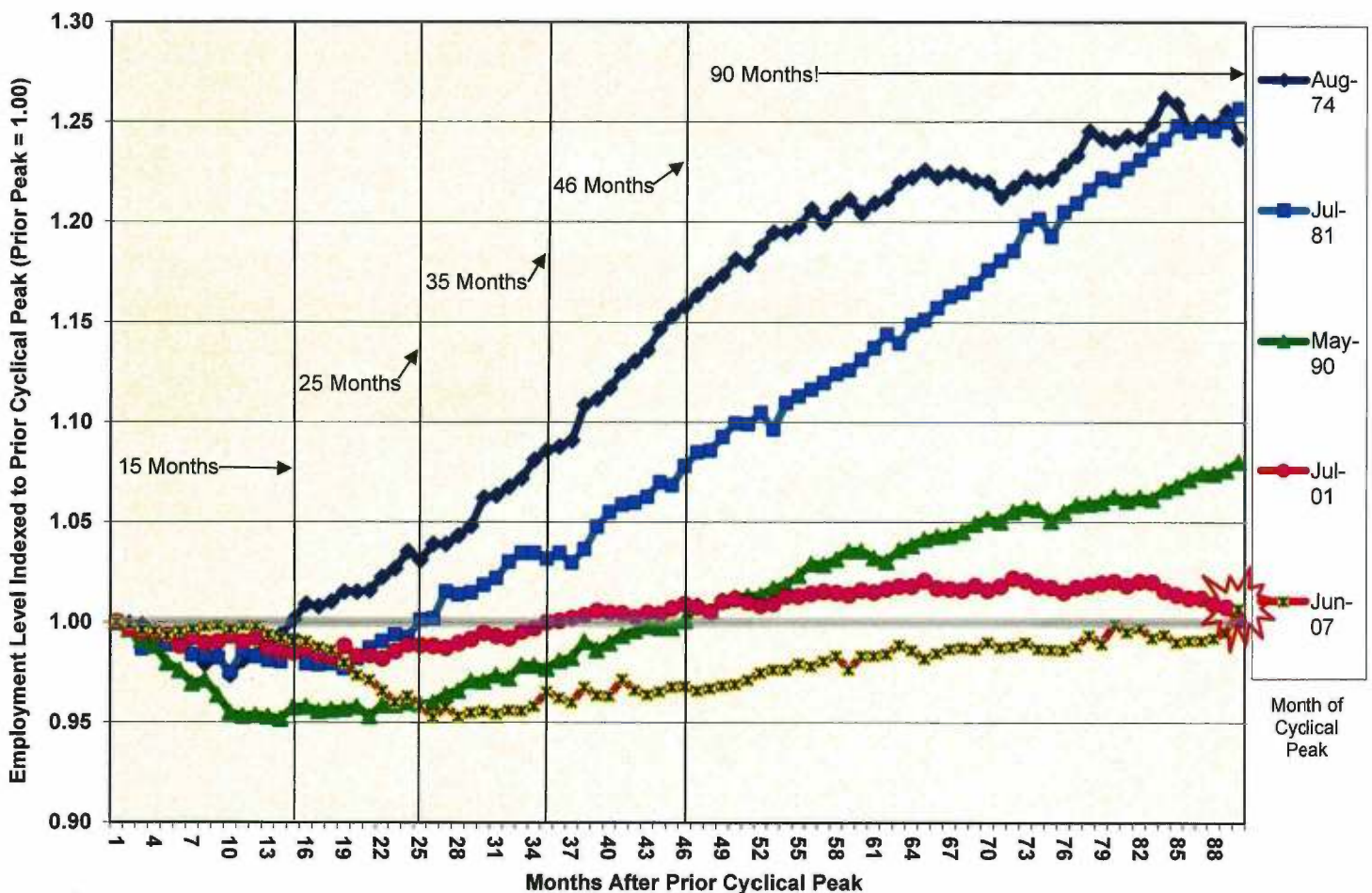
- Although no one knows how long these lower prices may persist (and as illustrated in the chart on the preceding page, oil prices are notoriously volatile), growing production from U.S. shale oil drilling has fundamentally changed the industry landscape. Global prices now hinge on U.S. production, which will slow dramatically as prices drop below production costs, and the unwillingness of Saudi Arabia, or any other major producer, to cut supply. Although most forecasts anticipate prices bottoming out in the first half of 2015, few are now forecasting a quick return to \$100ppb crude oil.
- Energy prices are critical to economic development and have long been a detriment to business growth in New England and Vermont (see electricity

price chart on page 12). While some U.S. states will suffer investment and production losses from declining gas and oil prices (notably ND, TX, AK, LA and OK), New England is an unqualified beneficiary. Although relative prices will remain higher in the region than the rest of the U.S., lower absolute prices will reduce the importance of these price spreads and benefit consumers.

- The only Vermont revenue source that will suffer from lower gasoline prices is the TIB fund gasoline assessment. Unlike the new Motor Fuel Assessment tax, which has a rate floor that prevents steep revenue losses during times of declining prices, TIB fund revenues from gasoline sales will drop from \$19.2M in FY14, to \$17.4M in FY15, to \$14.0M in FY16, a two year decline of 27%.

A Tale of 5 Employment Cycles in Vermont: The 90 Month Recovery

(Total Vermont Nonagricultural Employment Relative to Prior Cyclical Peak, Source: US Bureau of Labor Statistics)

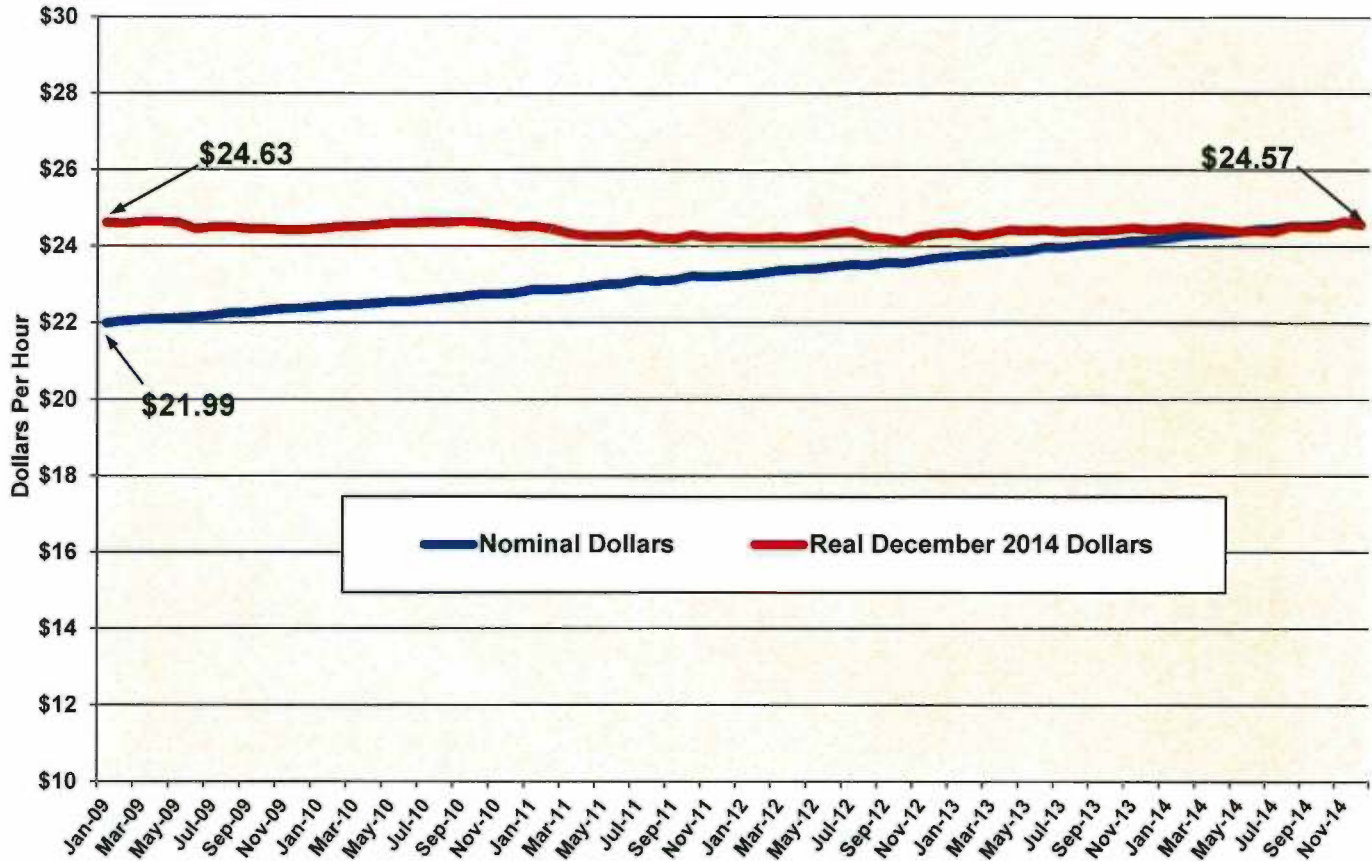


- While employment growth in Vermont has finally surpassed its pre-recession peak and the unemployment rate, at 4.3% remains one of the lowest in the nation (though now surpassed by NH as the lowest in New England), wage growth remains weak. Nationally, real average annual wages have remained essentially unchanged, *declining* one cent per year over the last 6 years, from \$24.63 per hour in January of 2009 to \$24.57 per hour in December of 2014. Although comparable hourly data are not available at the state level, other

indicators of wage growth in Vermont,² including income tax receipts, suggest a similar stagnation in real wages for the average Vermont worker.

Minus 1 Cent Per Year: Real Hourly Wage "Growth" 2009-2014

Average Hourly Earnings - All U.S. Employees, Source: U.S. Bureau of Labor Statistics



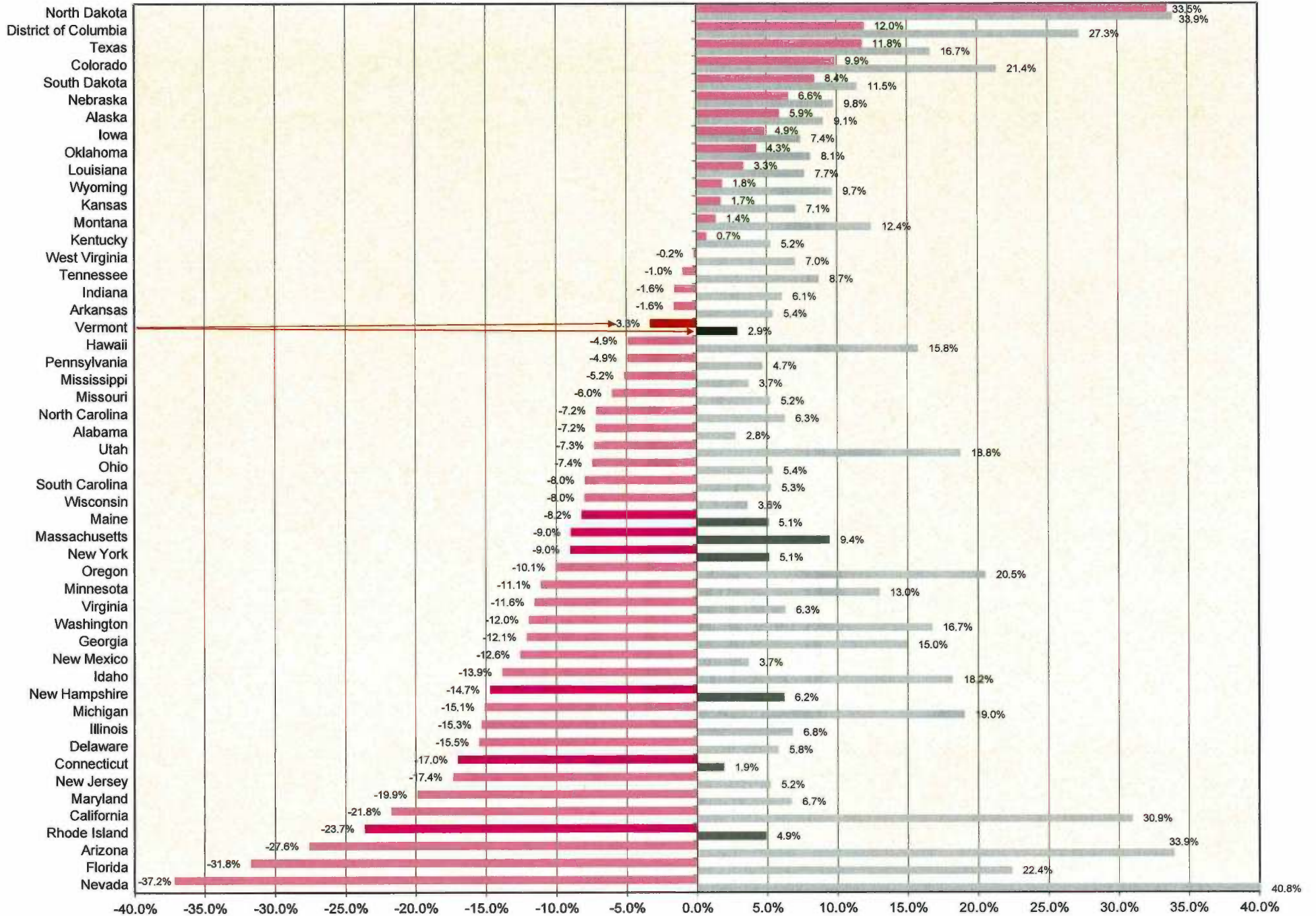
- While adding jobs throughout the year (on a year over year basis), the Vermont labor market struggled to gain traction in 2014, entering the year with a 4.2% unemployment rate and ending the year in about the same place (4.3% as of November). Fluctuating participation rates pushed the rate as low as 3.3% in April, but it is clear there is still considerable slack in labor markets. With unemployment expected to more significantly improve in 2015 (to about 3.5%), wages and related taxable income should finally exhibit stronger growth. Accordingly, revenues from personal income withholding taxes are projected to grow about 2.8% in FY15 and 4.9% in FY16.
- Real estate markets continue to heal, but on a delayed cycle, as is normal for the industry. For the second quarter in a row, all 51 states posted year over year growth in home prices in the third quarter of 2014 – the first time this has happened since early in 2006. As depicted in the chart on the following page, 14 states reached new record home price levels, surpassing their prior

² For example, in 2009, total private sector average annual wages in Vermont were about 84% of U.S. levels and in 2012 (the latest year available), they were about 82%. Real household income in Vermont between 2009 and 2013 declined about 6.2% and about 7.9% for the U.S. as a whole.

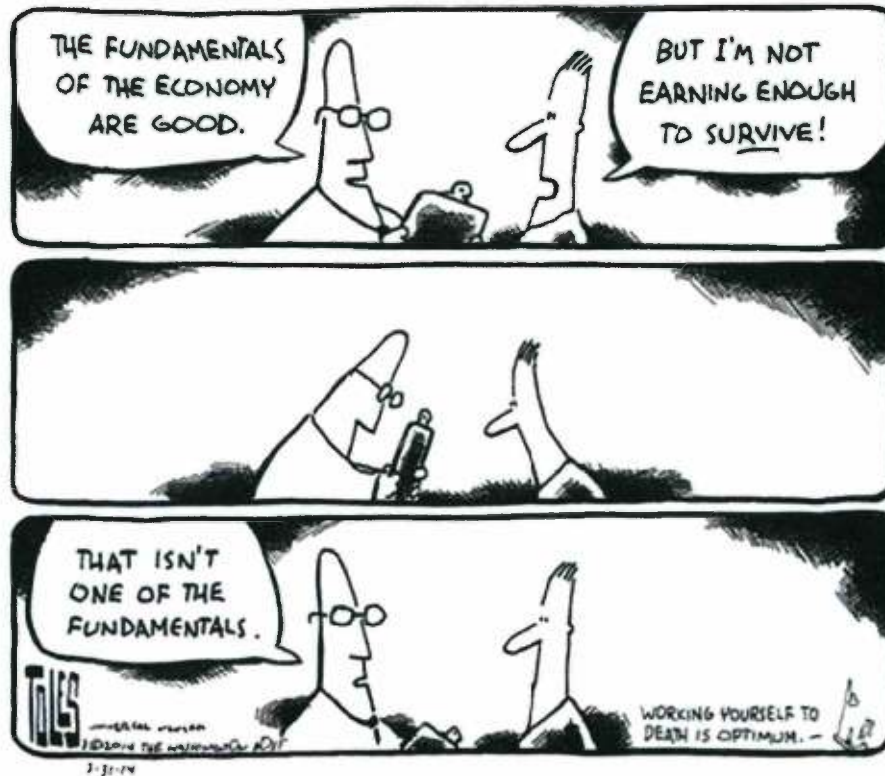
Real Estate Update: Housing Values Relative to Last Peak (pink) and Trough (grey)

Percent Change, 2014Q3 vs. Peak Price by State Reached Between 2005Q3 and 2009Q2 - Pink and 2014Q3 vs. Trough Price Reached Between 2009Q3 and 2014Q3 - Grey

Source: FHFA Home Priced Index



cyclical peaks reached between 2005 and 2009. Most of these were, until a few weeks ago, booming energy producing states, such as North Dakota, Texas, Alaska, Oklahoma, Louisiana and Wyoming. As investment in energy slows in some of these states, real estate prices are likely to do the same.



- The states with the farthest still to go to regain their pre-recession home price valuations include Nevada, Florida, Arizona, Rhode Island and California. Some of these states, however, are experiencing the strongest rebounds in the nation since their cyclical lows in 2009 to 2014. Nevada home prices, for example, have grown more than 40% since their low point in the second quarter of 2012. Rhode Island is notable in having experienced among the worst downturns and also one of the slowest recoveries – up only 4.9% from its trough in 2012, leaving current home prices nearly 25% below 2006 levels.
- Home price growth in Vermont in the third quarter of 2014 advanced 1.1% - close to expectations. Despite having the least severe recessionary price decline of all the New England states, Vermont home prices are not expected to reach their prior 2008 peak until mid-2016. While the tax impact of this is massive, affecting both homestead and non-homestead E-Fund property tax revenues, these revenues forecasts are not included herein.³
- Sluggish home price appreciation has muted the recovery in residential construction in Vermont. As outlined in the following table, total housing

³ Education Fund property taxes are forecast in October/November of each year and are not included as a part of the biannual revenue forecasting process. Only Education Fund revenues transferred from the General and Transportation Funds are included herein, as detailed in Table 3 on page 23.

starts are still 70% below their prior peak in March of 2006, despite recovering 48% from their cyclical low in July of 2009.

VERMONT HOUSING STARTS THROUGH NOVEMBER 2014

(Source: Dodge Data & Analytics. McGraw Hill Construction)

THE GOOD NEWS:

Percent Change Since Last Trough (July 2009)

One-family Houses	Two-family Houses	Apartments	TOTAL
56.6%	90.9%	28.3%	48.3%

THE BAD NEWS:

Percent Change Since Last Peak (March 2006)

One-family Houses	Two-family Houses	Apartments	TOTAL
-67.9%	-78.1%	-82.9%	-70.1%

- Following a spate of nonbuilding⁴ construction activity financed by Federal stimulus funds early in the recession, nonresidential⁵ construction has been the mainstay of Vermont building for the past two years. In a rare reversal of primacy, nonresidential building starts in the past 24 months have exceeded residential starts by more than \$200 million. This is the longest stretch on record in which nonresidential building has exceeded residential construction starts.
- The increasing volatility in revenues due to a growing reliance on Personal Income, Corporate and Estate taxes,⁶ was on full display in both FY14 and FY15 to date. In FY04, these three tax categories comprised 50.6% of Available General Fund tax revenues. By FY14, they represented 60.3% of revenues, and are expected to exceed 62% within the next five years.
- Available General Fund revenues through the first half of FY15 lagged targets by about \$11 million, however, timing and allocation issues affecting several of these large tax categories accounts for much of this miss. With adjustment for these issues, which will affect FY16 as well, the General Fund is expected to close the fiscal year about \$10 million below prior projections and about \$18 million below FY16 projections.

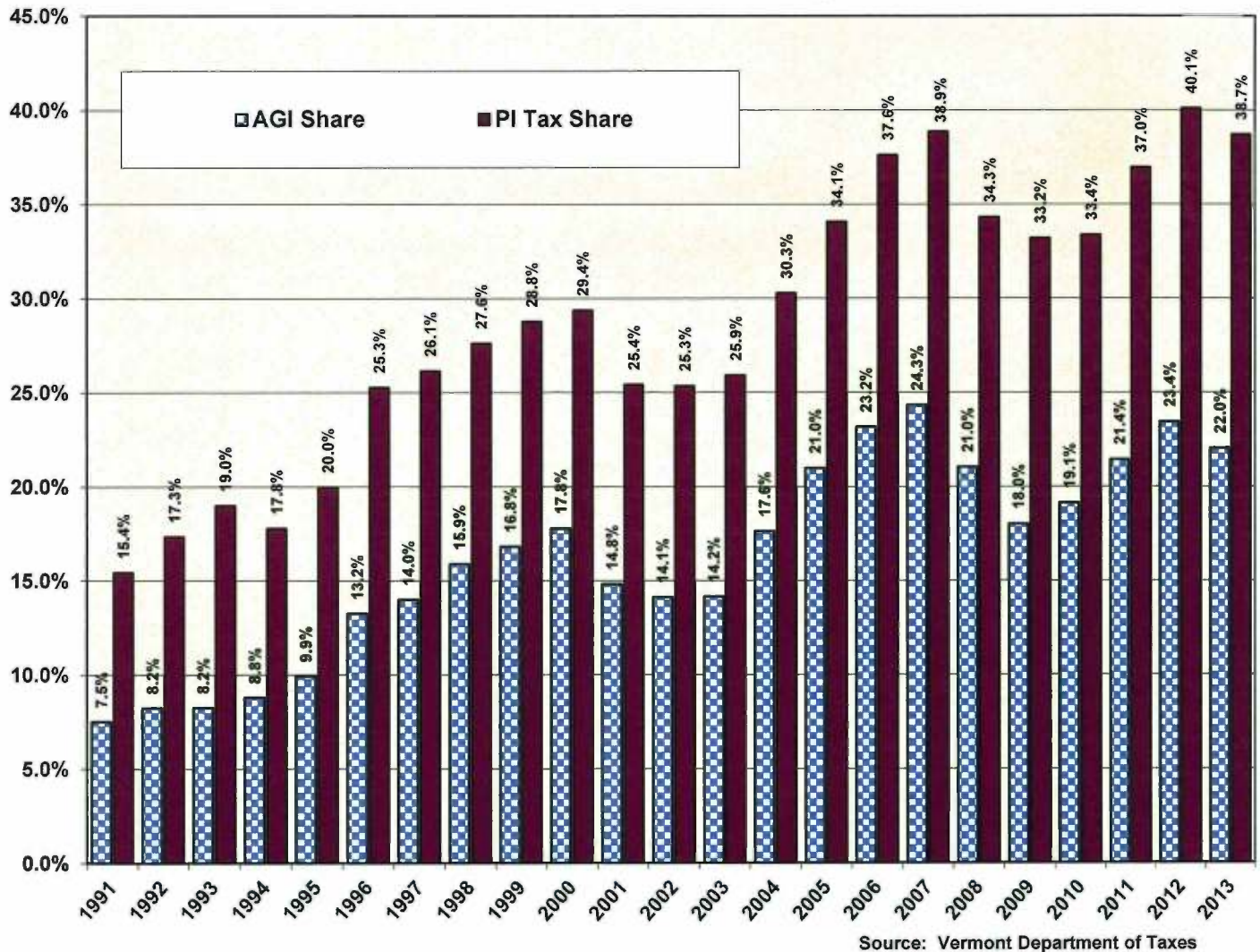
⁴ Nonbuilding construction consists of street, highways, bridges, sewer, septic and water systems, electric power plants, transmission lines, airports, dams and communication systems.

⁵ Nonresidential construction consists of commercial, manufacturing, education, hospital, public, religious, hotel, amusement and recreational buildings.

⁶ See page 13 of the July 2013 Economic and Revenue Forecast at: <http://www.leg.state.vt.us/jfo/reports/2013-07%20Revenue%20Update.pdf>

- Personal income statistics for tax year 2013 were recently released by the Tax Department and show a general continuation of longer term trends towards greater income and tax liabilities among a relatively small number of high income taxpayers. Despite declining disproportionately during recessionary times (and receding slightly from 2012's income that was inflated by Federal tax policy changes), tax year 2013 showed that 2.8% of the Vermont taxpayers who earned more than \$200K accounted for 22% of total adjusted gross income and paid nearly 39% of all Vermont personal income taxes.

High Income (\$200K+) Taxpayers' Share of Total Vermont Income and Income Tax Receipts



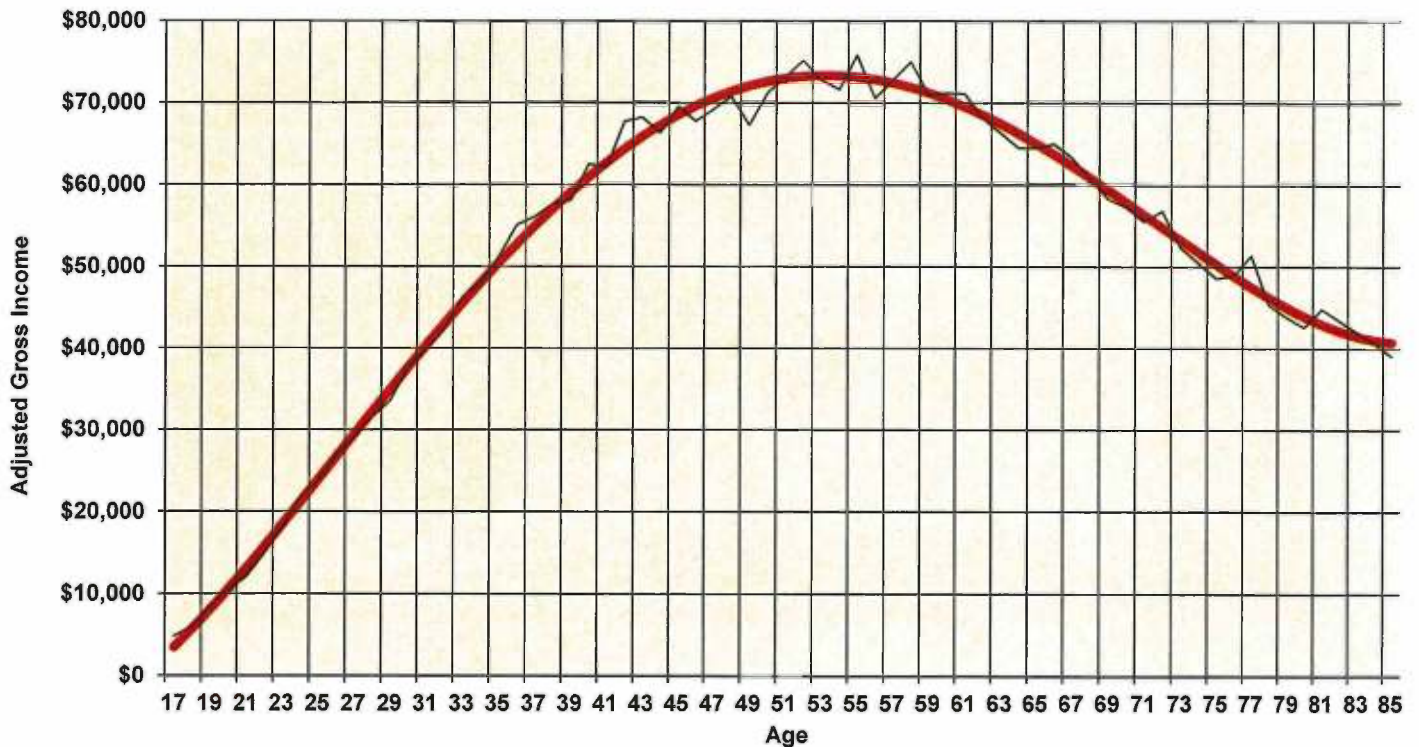
- In tax year 2013, older taxpayers, age 65 and over, continued to both earn more and pay more in State taxes on average than those under 65. The average state personal income tax payment for those 65 and older was \$1,987 in 2013, versus \$1,837 for those under 65. Despite widespread assertions of fiscal catastrophe inherent with a greater reliance on older

taxpayers, and equally widespread assertions regarding the fiscal benefits of retaining young workers in the State, older residents generally pay more in taxes and have lower State service needs (by virtue of the fact that few have school-aged children) than younger residents.

- More extensive personal income taxpayer data compiled from tax year 2011 illustrates the relationship between age and income in more detail (see below chart). It shows that earnings peak in the early 50's and remain elevated through about age 65 before declining gradually to age 85, at which time earnings are about the same as a 31 year old. This chart also shows the fiscal advantage the State has in attracting in-migrants in the 35-60 year old age cohorts, from which most net in-migration to the State has typically occurred.

2011 Vermont Income by Age

(Average AGI per Single Age of Primary Filer, Source: Vermont Department of Taxes)



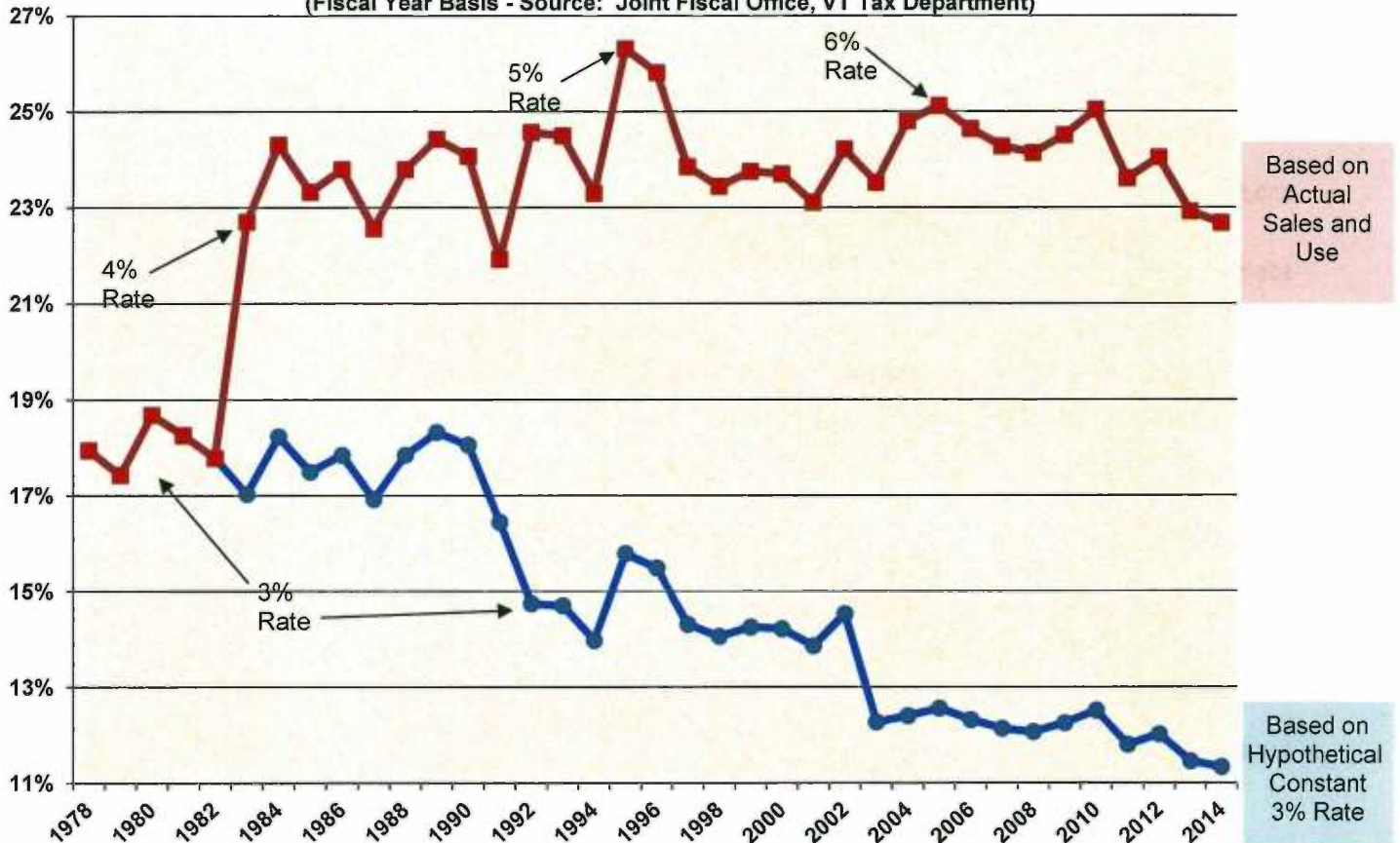
- Corporate tax receipts were exceptionally strong in the first half of FY15, exceeding targets by more than \$10 million, due to several “one time” events that gave rise to higher than usual tax liabilities. Although corporate income tax revenues have a higher and more stable “floor” with the mix of companies subject to unitary taxation, this revenue source is among the most volatile in the General Fund. To date, corporate profitability remains elevated and is expected to continue to outperform growth in wage and salary income. However, at this phase of the business cycle, as companies begin to hire more full-time workers, profitability typically declines. As this occurs, and with a very high level of carry-forwards now in the pipeline, a decline of \$20 million or more is possible in FY16 or FY17. Along with other technical adjustments made for individual taxpayer circumstances, FY15 revenue is expected to top

\$100 million for the first time ever, before receding to a more sustainable level of about \$80 to \$90 million in FY16 and FY17.

- Sales and Use tax revenues will directly benefit from lower gas prices as consumers (both residents and tourists) reallocate spending. FY15 upgrades are expected to total \$3.6 million, with an additional \$5.3 million now expected in FY16.

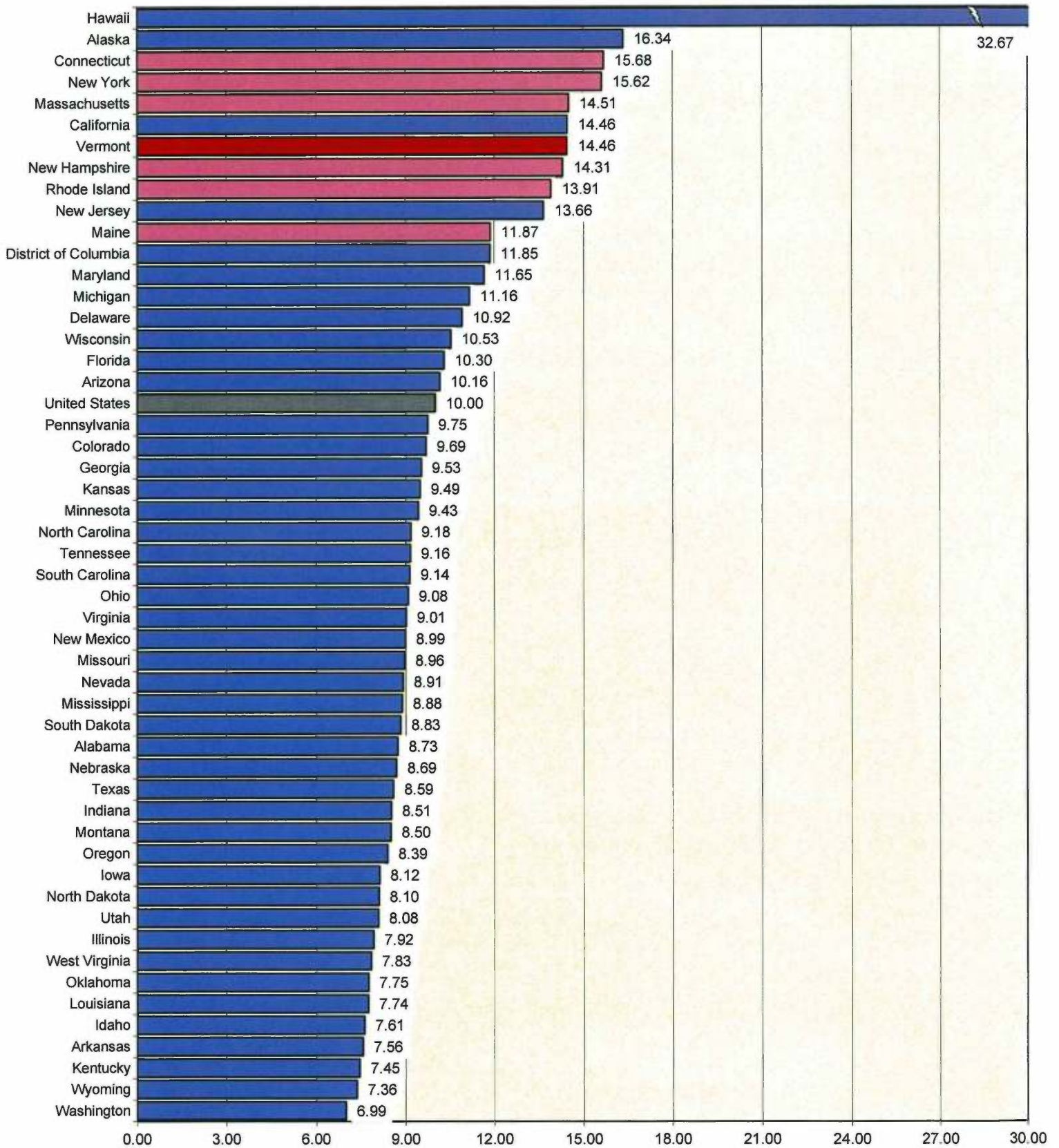
VT Sales & Use Revenues as a Percent of Source General Fund

Actual Revenue Data, Based on 3-4-5-6% Rates (Red Line) vs. 3% Constant Tax Rate Basis (Blue Line)
(Fiscal Year Basis - Source: Joint Fiscal Office, VT Tax Department)



- Unlike the volatile corporate, estate and personal income taxes, sales and use tax revenues are relatively stable and predictable, growing in tandem with population, tourist visitation and income. Unfortunately, growing tax base erosion from internet, mail order and cross-border NH sales have required constant rate increases to maintain revenue growth. As illustrated in the chart above, despite the last two rate increases, the share of G-Fund revenues provided by the sales and use tax remains essentially unchanged at 23%.
- As anticipated, the Vermont Yankee nuclear power plant in Vernon ended taxable power generation activities on December 29, 2014. After a lagged payment in the third quarter of FY15, the electric energy tax will effectively cease to exist. FY15 revenues are now expected to total \$9.4 million, \$3.6 million below FY14 levels, before disappearing entirely in FY16 and beyond.

Average State Retail Electricity Prices, 2013 (Total Electric Industry Average Price, Cents Per Kilowatthour)



Cents Per Kilowatthour - Preliminary 2013 Data, Source: U.S. Energy Information Administration

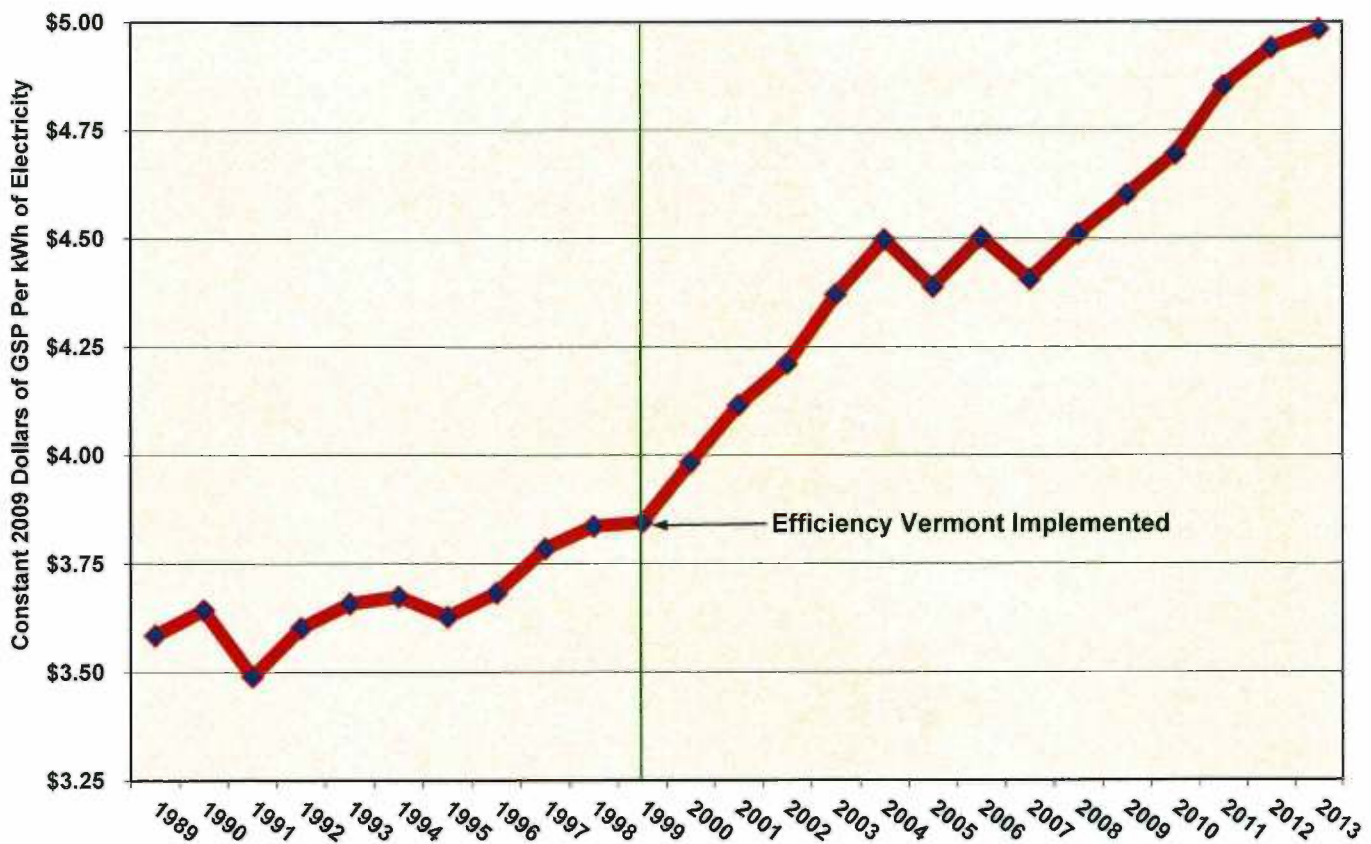
Efficiency Programs Can Help Mitigate High Regional Energy Prices

High relative energy prices represent a significant competitive disadvantage to the economies of New England and Vermont. Retail gasoline prices in Vermont are currently as much as 40% above some U.S. states and electricity prices, as detailed in the chart on page 12, are roughly double those in the lowest cost states. In regions without large local sources of energy, such as Vermont, secondary indirect and induced effects from energy expenditures are also minimal. While this magnifies economic losses when energy prices rise, it magnifies benefits when prices decline. It also encourages energy efficiency measures, by increasing the return on investment for high mileage vehicles, local energy production and thermal building improvements.

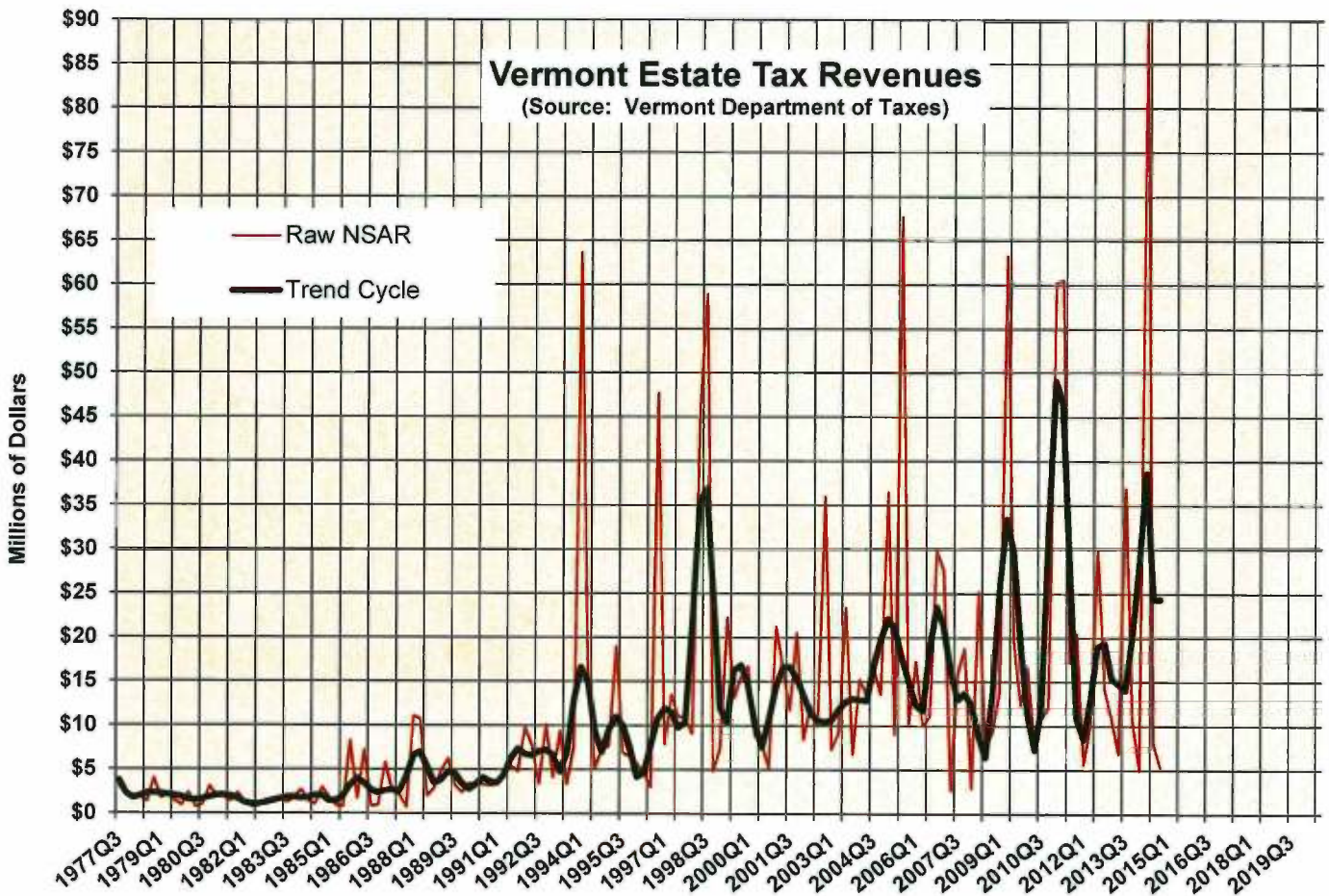
The success of Vermont businesses, politicians and consumers to embrace efficiency measures is illustrated in the below chart depicting real (inflation-adjusted) Gross State Product per kWh of electricity consumed. It shows remarkable productivity growth in the use of electric power, especially after the creation of Efficiency Vermont in 1999, yielding 30% more economic output in 2013 per unit of electric energy used than in 1999. During the same period, U.S. efficiency growth was about 10%, a third of that achieved in Vermont. Growth in Vermont was also the highest in New England, with CT a distant second at 19%. In a related metric, three year average per capita residential electricity consumption in Vermont grew a mere 1.2% between 1998 and 2013, while U.S. consumption over the same period grew by 11% and New England by 15%.

Real Vermont Gross State Product Per kWh of Electricity Sold

(Sources: U.S. Energy Information Administration, U.S. Bureau of Economic Analysis)



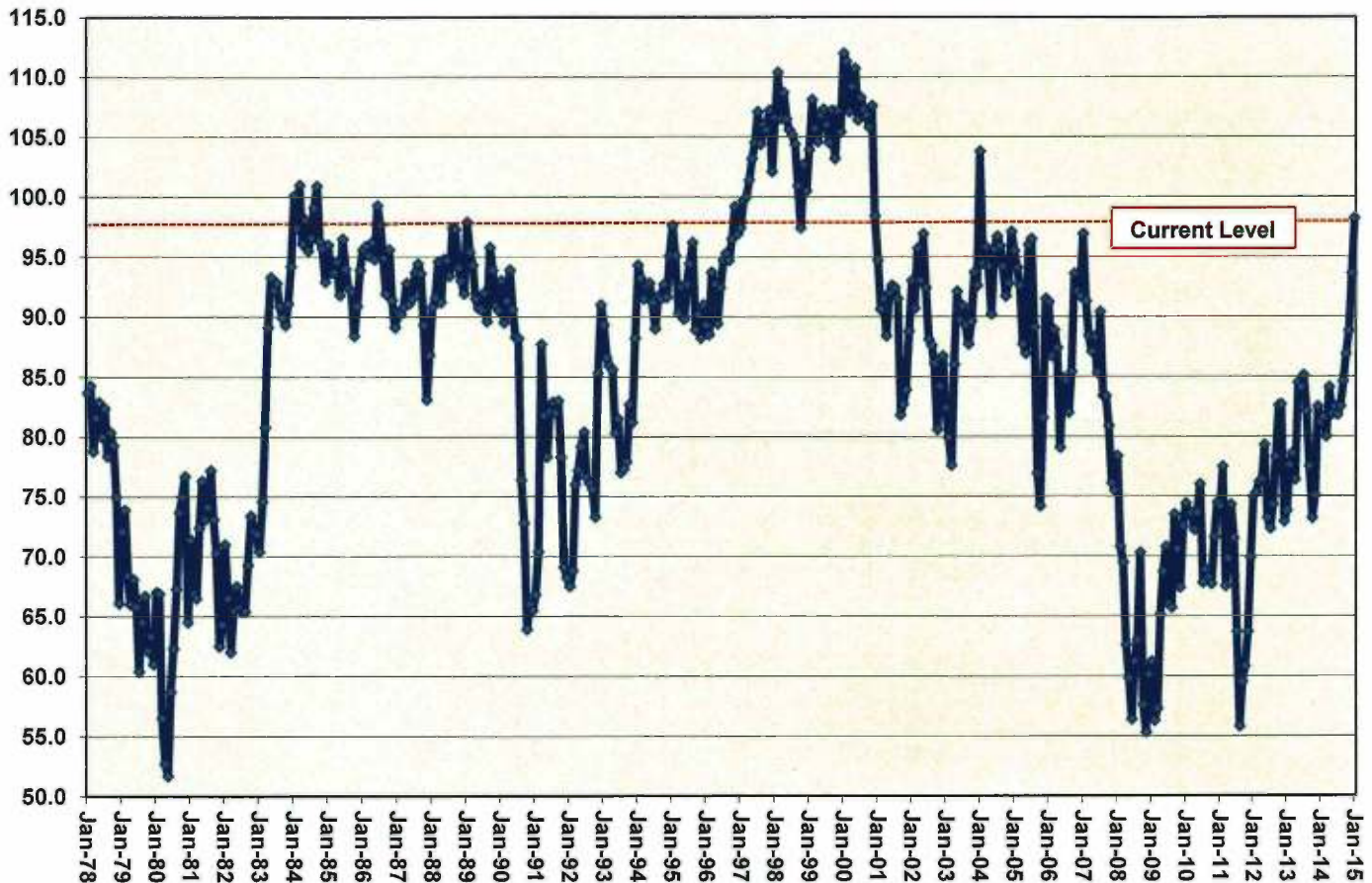
- After a near-record \$35.5 million in FY14 receipts, estate tax revenue in the first half of FY15 shriveled to its lowest 6 month tally since the second half of FY2000. This rendered YTD estate tax revenues nearly \$9 million below target. As shown in the below chart, annualized quarterly collections regularly swing from as low as \$5 million to more than \$60 million. Although rising potential tax liabilities caused by equity market gains and demographic trends that will increase the number of estates offer opportunities for future growth, the small number of affected estates and the wide variability in tax liabilities will continue to make revenues from this tax source highly volatile. Current trends suggest likely annual revenues in the \$20+ million range, however, year to year volatility could vary this by \$15 million per year or more.



- The recently enacted tax increase for cigarettes and other tobacco products (OTP) has thus far generated slightly higher revenues than forecast in July of 2014. Based on revenues through the first half of FY15, total cigarette and OTP revenues in FY15 are now expected to reach \$73.8 million, about \$1.4 million above prior forecasts. Lower gasoline prices will particularly benefit cigarette (and lottery) sales because they are often purchased at gas station convenience stores where there is an immediate opportunity and temptation to spend any savings.

- A loss of more than \$6 million in FY15 General Fund business license, fee and other service revenues can be attributed to the diversion of General Fund revenues to a new special fund dedicated to the Office of the Secretary of State. This allocation change does not affect the collection of these revenues, but will serve to reduce reported Schedule 2 revenues and General Fund revenues reported herein. FY16 revenue reductions from this accounting change will total approximately \$7 million.

Consumer Psychology Matters: Gas Prices Fuel Rising Optimism (University of Michigan Survey, Index of Consumer Sentiment)



- Aside from sales and use tax upgrades, other major revenue categories that will benefit from lower gas prices and growing consumer optimism include meals and rooms, and motor vehicle purchase and use taxes. Meals and rooms revenues were upgraded by \$2.2 million in FY15 and \$3.4 million in FY16, while motor vehicle purchase and use revenues are likely to benefit by at least an additional \$1.1 million in FY15 and \$2.5 million in FY16.
- As important as the actual income boost consumers will experience from lower gas prices, is its effect on consumer psychology. As shown in the above chart, consumer sentiment in January soared to its highest level in more than a decade. This is a critical metric that, if sustained, will have far-reaching effects on consumer spending and general economic activity.

- The primary downside risks to this forecast stem from potential negative external global developments and concerns about the timing and magnitude of Federal Reserve Board monetary tightening. The global threat comes from worsening economic conditions in many of the world's largest economies. The European and Japanese economies are mired in close to zero growth conditions and beset by looming deflationary fears. Although monetary action has been promised for some time now, it is still an open question as to whether Europe will be able to develop the political unity that will allow decisive monetary and fiscal actions that are now essential to its recovery. Growth in China and India, meanwhile, is decelerating, and instability in oil and commodity-dependent economies such as Russia, Venezuela, Iran, Nigeria, Brazil, Mexico and others could create both economic and military situations that could threaten U.S. growth.
- The Federal Reserve has promised monetary tightening in 2015, but both the timing and magnitude of this could have unintended negative consequences, if not managed carefully. With inflation well under 2%, the Fed has considerable flexibility in timing and should delay tightening until labor market recovery is evident, however, economic history is replete with monetary policy error that leads to recession.
- The U.S. and Vermont macro-economic forecasts upon which the revenue forecasts in this Update are based are summarized in Tables A and B on pages 17 and 18, and represent a consensus JFO and Administration forecast developed using internal JFO and Administration State economic models with input from Moody's Analytics December and January 2014 projections and other major forecasting entities, including the Federal Reserve, EIA, CBO, IMF, Conference Board and private forecasting firms.
- Due to the reduced availability of forecasts from the New England Economic Partnership (and its possible demise), for the first time, State consensus macroeconomic forecasts were developed using a new State on-line modeling capability provided by Moody's Analytics. This forecasting capability allows timely, customized state forecasts with extensive modeling capabilities.

TABLE A
Comparison of Recent Consensus U.S. Macroeconomic Forecasts
June 2013 Through December 2014, Selected Variables, Calendar Year Basis

	2008	2009	2010	2011	2012	2013	2014	2015	2016
Real GDP Growth									
June-13	-0.3	-3.1	2.4	1.8	2.2	2.0	3.4	4.3	3.3
December-13	-0.3	-2.8	2.5	1.8	2.8	1.8	3.1	4.0	2.9
June-14	-0.3	-2.8	2.5	1.8	2.8	1.9	2.8	3.9	3.2
December-14	-0.3	-2.8	2.5	1.6	2.3	2.2	2.2	3.6	3.8
S&P 500 Growth (Annual Avg.)									
June-13	-17.3	-22.5	20.3	11.4	8.7	14.4	3.6	-0.7	0.4
December-13	-17.3	-22.5	20.3	11.4	8.7	19.2	9.6	-0.1	0.4
June-14	-17.3	-22.5	20.3	11.4	8.7	19.1	13.1	3.4	-5.5
December-14	-17.3	-22.5	20.3	11.4	8.7	19.1	11.4	7.1	1.3
Employment Growth (Non-Ag)									
June-13	-0.6	-4.4	-0.7	1.2	1.7	1.4	1.6	2.7	2.4
December-13	-0.6	-4.4	-0.7	1.2	1.7	1.6	1.7	2.2	2.1
June-14	-0.6	-4.4	-0.7	1.2	1.7	1.7	1.8	2.4	2.4
December-14	-0.6	-4.4	-0.7	1.2	1.7	1.7	2.0	2.4	2.6
Unemployment Rate									
June-13	5.8	9.3	9.6	8.9	8.1	7.7	7.0	6.2	5.7
December-13	5.8	9.3	9.6	8.9	8.1	7.4	6.6	6.1	5.8
June-14	5.8	9.3	9.6	8.9	8.1	7.4	6.3	6.0	5.7
December-14	5.8	9.3	9.6	8.9	8.1	7.4	6.2	5.4	5.1
West Texas Int. Crude Oil \$/Bbl									
June-13	100	62	79	95	94	97	105	110	114
December-13	100	62	79	95	94	98	105	112	115
June-14	100	62	79	95	94	98	100	103	104
December-14	100	62	79	95	94	98	94	63	76
Prime Rate									
June-13	5.09	3.25	3.25	3.25	3.25	3.25	3.25	4.26	6.60
December-13	5.09	3.25	3.25	3.25	3.25	3.25	3.25	3.38	5.31
June-14	5.09	3.25	3.25	3.25	3.25	3.25	3.25	3.37	5.00
December-14	5.09	3.25	3.25	3.25	3.25	3.25	3.25	3.37	5.12
Consumer Price Index Growth									
June-13	3.8	-0.3	1.6	3.1	2.1	1.7	2.1	2.3	2.5
December-13	3.8	-0.3	1.6	3.1	2.1	1.5	1.7	2.1	2.4
June-14	3.8	-0.3	1.6	3.1	2.1	1.5	1.9	2.2	2.5
December-14	3.8	-0.3	1.6	3.1	2.1	1.5	1.6	1.5	2.3
Average Home Price Growth									
June-13	-4.7	-5.3	-3.9	-3.6	-0.1	2.7	4.9	3.7	2.3
December-13	-4.8	-5.4	-4.0	-3.7	0.0	4.1	6.2	2.2	0.3
June-14	-4.9	-5.5	-4.0	-3.7	-0.1	4.1	4.9	5.6	6.4
December-14	-4.9	-5.5	-4.0	-3.7	-0.1	4.1	4.6	5.0	5.4

TABLE B
Comparison of Consensus Administration and JFO Vermont State Forecasts
June 2012 Through December 2014, Selected Variables, Calendar Year Basis

	2008	2009	2010	2011	2012	2013	2014	2015	2016
Real GSP Growth									
June-12	-0.2	-3.6	4.1	0.5	2.3	2.9	3.3	3.4	2.5
December-12	-0.2	-3.6	4.1	0.5	2.0	2.2	3.7	4.0	3.1
June-13	-0.2	-2.9	5.6	1.3	1.2	1.3	3.0	4.2	2.9
December-13	-0.2	-2.9	5.6	1.3	1.2	1.4	3.1	4.1	2.9
June-14	-0.2	-2.9	5.6	1.3	1.2	0.5	2.9	4.0	3.2
December-14	0.2	-2.5	4.4	2.2	1.1	1.9	1.0	3.3	3.6
Population Growth									
June-12	0.1	0.1	0.2	0.1	0.3	0.3	0.4	0.4	0.4
December-12	0.1	0.1	0.2	0.1	0.3	0.3	0.3	0.4	0.5
June-13	0.1	0.1	0.2	0.1	-0.1	0.3	0.3	0.3	0.4
December-13	0.1	0.1	0.2	0.1	-0.1	0.1	0.1	0.1	0.2
June-14	0.1	0.1	0.2	0.1	-0.1	0.1	0.1	0.1	0.2
December-14	0.1	0.1	0.2	0.1	0.0	0.1	0.0	0.1	0.2
Employment Growth									
June-12	-0.3	-3.3	0.2	0.7	1.2	1.1	2.0	2.3	1.4
December-12	-0.3	-3.3	0.2	0.7	1.1	0.9	1.8	2.3	1.8
June-13	-0.4	-3.3	-0.2	0.7	1.2	1.0	0.9	2.2	1.9
December-13	-0.4	-3.3	-0.2	0.7	1.2	1.0	1.3	2.2	1.9
June-14	-0.4	-3.3	0.3	0.8	1.3	0.5	1.4	2.0	1.8
December-14	-0.4	-3.3	0.3	0.8	1.3	0.5	1.0	1.6	1.9
Unemployment Rate									
June-12	4.6	6.9	6.4	5.6	4.8	4.7	4.3	3.9	3.2
December-12	4.6	6.9	6.4	5.6	5.0	5.0	4.4	3.9	3.5
June-13	4.6	6.9	6.4	5.6	5.0	4.4	4.1	3.6	3.3
December-13	4.6	6.9	6.4	5.6	5.0	4.4	4.1	3.6	3.3
June-14	4.6	6.9	6.4	5.6	4.9	4.4	3.9	3.6	3.3
December-14	4.6	6.9	6.4	5.6	4.9	4.4	3.7	3.5	3.2
Personal Income Growth									
June-12	4.4	-1.3	3.4	4.3	3.3	4.4	6.0	6.2	5.0
December-12	4.4	-2.2	3.3	4.7	3.2	3.4	5.6	6.3	5.2
June-13	4.4	-2.2	3.3	4.7	3.4	1.0	2.8	4.2	3.7
December-13	4.4	-2.2	3.3	4.7	3.4	3.8	5.7	6.2	5.1
June-14	3.9	-1.4	1.7	7.1	3.7	2.9	4.9	5.6	5.0
December-14	3.9	-1.4	1.7	7.1	3.7	2.9	3.8	5.1	5.4
Home Price Growth (JFO)									
June-12	0.0	-1.6	-0.9	-0.4	0.6	1.1	1.6	2.0	3.0
December-12	0.0	-1.9	-1.0	-0.4	0.5	1.0	1.5	2.0	3.1
June-13	0.0	-2.0	-1.1	-0.5	0.5	0.7	1.5	2.0	3.2
December-13	-0.1	-2.0	-1.2	-0.6	0.5	0.5	1.5	2.1	3.1
June-14	-0.1	-2.1	-1.2	-0.6	0.5	0.2	0.4	1.7	2.9
December-14	-0.1	-2.1	-1.2	-0.6	0.5	0.2	0.9	2.1	2.7

Methodological Notes and Other Comments

- This analysis has benefited significantly from the input and support of Tax Department and Joint Fiscal Office personnel. In the Joint Fiscal Office, Sara Teachout, Stephanie Barrett, Dan Dickerson, Catherine Benham, Neil Schickner and Mark Perrault have contributed to numerous policy and revenue impact analyses and coordinated JFO forecast production and related legislative committee support functions. Theresa Utton-Jerman and Dan Dickerson have diligently organized and updated large tax and other databases in support of JFO revenue forecasting activities. In the Tax Department, Sharon Asay, Mary Cox, Victor Gauto, Doug Farnham and Terry Edwards provided important analytic contributions to many tax and revenue forecasts, including tax law change analyses and statistical and related background information associated with the detailed tax databases they maintain. Our thanks to all of the above for their many contributions to this analysis.
- The analysis in support of JFO economic and revenue projections are based on statistical and econometric models, and professional analytic judgment. All models are based on 36 years of data for each of the 25 General Fund categories (three aggregates), 32 years of data for each of the Transportation Fund categories (one aggregate), and 14 to 36 years for each of the Education Fund categories. The analyses employed includes seasonal adjustment using U.S. Census Bureau X-12, X-13-ARIMA-SEATS and TRAMO-SEATS methods, various moving average techniques (such as Henderson Curves, etc.), Box-Jenkins ARIMA type models, pressure curve analysis, comparable-pattern analysis of monthly, quarterly and half year trends for current year estimation, and behavioral econometric forecasting models.
- Because the State does not currently fund an internal State or U.S. macro-economic model, this analysis relies primarily on macro-economic models from Moody's Analytics and, when available, the New England Economic Partnership (NEEP). The NEEP forecast for Vermont is managed by Jeff Carr, of Economic & Policy Resources, Inc., who is also the current Administration economist. Since October of 2001, input and review of initial Vermont NEEP model design and output prior to its release has been provided by the Joint Fiscal Office through KRA. For the first time, in this forecast cycle, consensus macroeconomic State forecasts were developed using a new Moody's on-line Vermont model. In future forecasts, we expect to base all output on this consensus macroeconomic forecast. Dynamic and other input/output-based models for the State of Vermont, including those from Regional Economic Models, Inc. (REMI), Regional Dynamics, Inc. (REDYN), and IMPLAN are also maintained and managed by the JFO and KRA for use in selected economic impact and simulation analyses used herein.
- The Consensus JFO and Administration forecasts are developed following discussion, analysis and synthesis of independent revenue projections, econometric models and source data produced by Administration and Joint Fiscal Office economic advisors.

**TABLE 1A - STATE OF VERMONT
LEGISLATIVE JOINT FISCAL OFFICE
SOURCE GENERAL FUND REVENUE FORECAST UPDATE
Consensus JFO and Administration Forecast - January 2015**

SOURCE G-FUND

revenues are prior to all E-Fund allocations
and other out-transfers; used for
analytic and comparative purposes only

	FY 2011	%	FY 2012	%	FY 2013	%	FY 2014	%	FY 2015	%	FY 2016	%	FY 2017	%
	(Actual)	Change	(Actual)	Change	(Actual)	Change	(Actual)	Change	(Forecast)	Change	(Forecast)	Change	(Forecast)	Change
REVENUE SOURCE														
Personal Income	\$553.3	11.1%	\$597.0	7.9%	\$660.6	10.7%	\$671.1	1.6%	\$701.8	4.6%	\$740.3	5.5%	\$777.1	5.0%
Sales & Use*	\$325.6	4.7%	\$341.8	5.0%	\$346.8	1.4%	\$353.6	2.0%	\$365.8	3.4%	\$377.8	3.3%	\$389.4	3.1%
Corporate	\$89.7	42.7%	\$85.9	-4.2%	\$95.0	10.5%	\$94.8	-0.1%	\$102.6	8.2%	\$82.4	-19.7%	\$86.1	4.5%
Meals and Rooms	\$122.6	4.0%	\$126.9	3.5%	\$134.8	6.2%	\$142.7	5.9%	\$149.1	4.5%	\$154.9	3.9%	\$160.8	3.8%
Cigarette and Tobacco**	\$72.9	4.0%	\$80.1	9.9%	\$74.3	-7.2%	\$71.9	-3.3%	\$73.8	2.6%	\$70.9	-3.9%	\$68.5	-3.4%
Liquor	\$15.4	3.1%	\$16.4	7.0%	\$17.0	3.4%	\$17.7	4.0%	\$18.0	1.9%	\$18.6	3.3%	\$19.2	3.2%
Insurance	\$55.0	3.3%	\$56.3	2.5%	\$55.0	-2.3%	\$57.1	3.7%	\$56.5	-1.0%	\$56.9	0.7%	\$57.4	0.9%
Telephone	\$11.4	44.4%	\$9.6	-15.3%	\$9.4	-2.6%	\$8.8	-6.1%	\$8.7	-1.1%	\$8.6	-1.1%	\$8.5	-1.2%
Beverage	\$5.8	2.2%	\$6.0	3.3%	\$6.2	3.3%	\$6.4	3.6%	\$6.6	3.2%	\$6.8	3.0%	\$7.0	2.9%
Electric***	\$2.9	0.8%	\$2.9	0.3%	\$8.9	204.5%	\$13.1	46.9%	\$9.4	-28.6%	\$0.0	-100.0%	\$0.0	NM
Estate	\$35.9	153.3%	\$13.3	-62.8%	\$15.4	15.4%	\$35.5	131.0%	\$14.3	-59.8%	\$23.2	62.2%	\$24.9	7.3%
Property	\$25.6	7.7%	\$24.1	-6.0%	\$28.5	18.3%	\$30.9	8.5%	\$33.6	8.6%	\$36.2	7.7%	\$38.7	6.9%
Bank	\$15.4	49.0%	\$10.7	-30.9%	\$10.7	0.2%	\$11.0	2.7%	\$11.1	1.2%	\$11.2	0.9%	\$11.3	0.9%
Other Tax	\$3.7	1.7%	\$1.2	-66.7%	\$1.8	42.9%	\$1.9	9.6%	\$2.1	8.4%	\$2.3	9.5%	\$2.5	8.7%
Total Tax Revenue	\$1335.1	11.6%	\$1372.4	2.8%	\$1464.3	6.7%	\$1516.7	3.6%	\$1553.4	2.4%	\$1590.1	2.4%	\$1651.4	3.9%
Business Licenses	\$3.0	-0.6%	\$3.0	2.8%	\$2.8	-8.0%	\$1.1	-61.4%	\$0.4	-63.0%	\$0.4	2.5%	\$0.4	4.9%
Fees	\$20.5	6.4%	\$20.9	2.1%	\$21.4	2.2%	\$20.6	-3.4%	\$21.4	3.7%	\$22.0	2.8%	\$22.6	2.7%
Services	\$1.1	-8.7%	\$2.3	105.8%	\$2.5	8.3%	\$1.3	-47.3%	\$1.4	5.4%	\$1.5	7.1%	\$1.6	3.3%
Fines	\$5.7	-22.2%	\$7.4	28.7%	\$4.7	-35.9%	\$3.6	-24.2%	\$4.3	20.3%	\$4.7	9.3%	\$5.0	6.4%
Interest	\$0.3	-49.7%	\$0.4	42.4%	\$0.6	26.3%	\$0.2	-59.2%	\$0.4	77.1%	\$0.7	80.0%	\$1.4	87.5%
Lottery	\$21.4	-0.7%	\$22.3	4.2%	\$22.9	2.7%	\$22.6	-1.6%	\$22.6	0.1%	\$23.0	1.8%	\$23.4	1.7%
All Other	\$0.7	115.7%	\$0.9	15.8%	\$1.7	93.1%	\$1.3	-24.0%	\$1.3	2.4%	\$1.4	7.7%	\$1.5	7.1%
Total Other Revenue	\$52.8	-1.1%	\$57.3	8.6%	\$56.6	-1.2%	\$50.7	-10.4%	\$51.8	2.2%	\$53.7	3.7%	\$55.8	3.9%
TOTAL GENERAL FUND	\$1387.9	11.0%	\$1429.7	3.0%	\$1520.9	6.4%	\$1567.3	3.1%	\$1605.2	2.4%	\$1643.9	2.4%	\$1707.2	3.9%

* Includes Telecommunications Tax; includes \$3.76M transfer in FY08 to the T-Fund for prior years Jet Fuel tax processing error

** Includes Cigarette, Tobacco Products and Floor Stock tax revenues

*** Reflects closure of Vermont Yankee in December of 2014, taxed per Act 143 of 2012 effective in FY13; Stated Electric Energy Tax revenues exclude appropriations to the Clean Energy Development Fund and Education Fund

**TABLE 1 - STATE OF VERMONT
LEGISLATIVE JOINT FISCAL OFFICE
AVAILABLE GENERAL FUND REVENUE FORECAST UPDATE
Consensus JFO and Administration Forecast - January 2015**

CURRENT LAW BASIS

including all Education Fund

allocations and other out-transfers

	FY 2011	%	FY 2012	%	FY 2013	%	FY 2014	%	FY 2015	%	FY 2016	%	FY 2017	%
	<i>(Actual)</i>	<i>Change</i>	<i>(Actual)</i>	<i>Change</i>	<i>(Actual)</i>	<i>Change</i>	<i>(Actual)</i>	<i>Change</i>	<i>(Forecast)</i>	<i>Change</i>	<i>(Forecast)</i>	<i>Change</i>	<i>(Forecast)</i>	<i>Change</i>
REVENUE SOURCE														
Personal Income	\$553.3	11.1%	\$597.0	7.9%	\$660.6	10.7%	\$671.1	1.6%	\$701.8	4.6%	\$740.3	5.5%	\$777.1	5.0%
Sales and Use*	\$217.1	4.7%	\$227.9	5.0%	\$231.2	1.4%	\$229.9	-0.6%	\$237.8	3.4%	\$245.6	3.3%	\$253.1	3.1%
Corporate	\$89.7	42.7%	\$85.9	-4.2%	\$95.0	10.5%	\$94.8	-0.1%	\$102.6	8.2%	\$82.4	-19.7%	\$86.1	4.5%
Meals and Rooms	\$122.6	4.0%	\$126.9	3.5%	\$134.8	6.2%	\$142.7	5.9%	\$149.1	4.5%	\$154.9	3.9%	\$160.8	3.8%
Cigarette and Tobacco	\$0.0	NM	\$0.0	NM	\$0.0	NM	\$0.0	NM	\$0.0	NM	\$0.0	NM	\$0.0	NM
Liquor	\$15.4	3.1%	\$16.4	7.0%	\$17.0	3.4%	\$17.7	4.0%	\$18.0	1.9%	\$18.6	3.3%	\$19.2	3.2%
Insurance	\$55.0	3.3%	\$56.3	2.5%	\$55.0	-2.3%	\$57.1	3.7%	\$56.5	-1.0%	\$56.9	0.7%	\$57.4	0.9%
Telephone	\$11.4	44.4%	\$9.6	-15.3%	\$9.4	-2.6%	\$8.8	-6.1%	\$8.7	-1.1%	\$8.6	-1.1%	\$8.5	-1.2%
Beverage	\$5.8	2.2%	\$6.0	3.3%	\$6.2	3.3%	\$6.4	3.6%	\$6.6	3.2%	\$6.8	3.0%	\$7.0	2.9%
Electric**	\$2.9	0.8%	\$2.9	0.3%	\$8.9	204.5%	\$13.1	46.9%	\$9.4	-28.6%	\$0.0	-100.0%	\$0.0	NM
Estate***	\$21.0	48.3%	\$13.3	-36.5%	\$15.4	15.4%	\$35.5	131.0%	\$14.3	-59.8%	\$23.2	62.2%	\$24.9	7.3%
Property	\$8.4	7.7%	\$7.9	-6.2%	\$9.2	16.5%	\$10.0	9.3%	\$10.9	8.6%	\$11.7	7.7%	\$12.5	6.9%
Bank	\$15.4	49.0%	\$10.7	-30.9%	\$10.7	0.2%	\$11.0	2.7%	\$11.1	1.2%	\$11.2	0.9%	\$11.3	0.9%
Other Tax	\$3.7	1.7%	\$1.2	-66.7%	\$1.8	42.9%	\$1.9	9.6%	\$2.1	8.4%	\$2.3	9.5%	\$2.5	8.7%
Total Tax Revenue	\$1121.6	11.4%	\$1162.1	3.6%	\$1255.0	8.0%	\$1300.0	3.6%	\$1328.8	2.2%	\$1362.5	2.5%	\$1420.4	4.3%
Business Licenses	\$3.0	-0.6%	\$3.0	2.8%	\$2.8	-8.0%	\$1.1	-61.4%	\$0.4	-63.0%	\$0.4	2.5%	\$0.4	4.9%
Fees	\$20.5	6.4%	\$20.9	2.1%	\$21.4	2.2%	\$20.6	-3.4%	\$21.4	3.7%	\$22.0	2.8%	\$22.6	2.7%
Services	\$1.1	-8.7%	\$2.3	105.8%	\$2.5	8.3%	\$1.3	-47.3%	\$1.4	5.4%	\$1.5	7.1%	\$1.6	3.3%
Fines	\$5.7	-22.2%	\$7.4	28.7%	\$4.7	-35.9%	\$3.6	-24.2%	\$4.3	20.3%	\$4.7	9.3%	\$5.0	6.4%
Interest	\$0.3	-49.9%	\$0.4	52.6%	\$0.5	20.5%	\$0.2	-66.6%	\$0.3	91.3%	\$0.6	100.0%	\$1.2	100.0%
All Other	\$0.7	115.7%	\$0.9	15.8%	\$1.7	93.1%	\$1.3	-24.0%	\$1.3	2.4%	\$1.4	7.7%	\$1.5	7.1%
Total Other Revenue	\$31.3	-1.2%	\$34.9	11.5%	\$33.5	-3.9%	\$28.0	-16.4%	\$29.1	3.8%	\$30.6	5.2%	\$32.3	5.5%
TOTAL GENERAL FUND	\$1152.8	11.0%	\$1197.0	3.8%	\$1288.6	7.7%	\$1328.1	3.1%	\$1357.9	2.2%	\$1393.1	2.6%	\$1452.7	4.3%

* Includes \$2.5M transfer to the T-Fund in FY08 for prior years Jet Fuel tax processing errors; Transfer to the Education Fund increases from 33.3% to 35.0% effective in FY14

** Reflects closure of Vermont Yankee in December of 2014, taxed per Act 143 of 2012 effective in FY13;

Stated Electric Energy Tax revenues exclude appropriations to the Clean Energy Development Fund and Education Fund

*** Excludes transfer to the Higher Education Trust Fund of \$2.4M in FY05, \$5.2M in FY06 and \$11.0M in FY11

**TABLE 2A - STATE OF VERMONT
LEGISLATIVE JOINT FISCAL OFFICE
SOURCE TRANSPORTATION FUND REVENUE FORECAST UPDATE
Consensus JFO and Administration Forecast - January 2015**

SOURCE T-FUND

revenues are prior to all E-Fund allocations
and other out-transfers; used for
analytic and comparative purposes only

	FY 2011	%	FY 2012	%	FY 2013	%	FY 2014	%	FY 2015	%	FY 2016	%	FY 2017	%
	(Actual)	Change	(Actual)	Change	(Actual)	Change	(Actual)	Change	(Forecast)	Change	(Forecast)	Change	(Forecast)	Change
REVENUE SOURCE														
Gasoline	\$60.6	-0.6%	\$59.3	-2.2%	\$59.9	1.1%	\$76.5	27.6%	\$76.7	0.3%	\$78.5	2.3%	\$78.2	-0.4%
Diesel	\$15.4	2.0%	\$16.0	3.9%	\$15.6	-2.2%	\$17.2	9.7%	\$18.2	6.0%	\$18.5	1.6%	\$18.8	1.6%
Purchase and Use*	\$77.1	10.5%	\$81.9	6.3%	\$83.6	2.0%	\$91.8	9.9%	\$97.7	6.4%	\$102.6	5.0%	\$106.9	4.2%
Motor Vehicle Fees	\$72.3	-0.3%	\$73.5	1.7%	\$77.9	5.9%	\$79.0	1.5%	\$80.4	1.7%	\$80.8	0.5%	\$81.8	1.2%
Other Revenue**	\$17.9	-1.9%	\$18.3	2.2%	\$19.1	4.2%	\$19.5	2.3%	\$20.1	3.1%	\$20.4	1.5%	\$20.7	1.5%
TOTAL TRANS. FUND	\$243.3	2.8%	\$249.0	2.3%	\$256.0	2.8%	\$284.0	10.9%	\$293.1	3.2%	\$300.8	2.6%	\$306.4	1.9%

**TABLE 2 - STATE OF VERMONT
LEGISLATIVE JOINT FISCAL OFFICE
AVAILABLE TRANSPORTATION FUND REVENUE FORECAST UPDATE
Consensus JFO and Administration Forecast - January 2015**

CURRENT LAW BASIS

including all Education Fund
allocations and other out-transfers

	FY 2011	%	FY 2012	%	FY 2013	%	FY 2014	%	FY 2015	%	FY 2016	%	FY 2017	%
	(Actual)	Change	(Actual)	Change	(Actual)	Change	(Actual)	Change	(Forecast)	Change	(Forecast)	Change	(Forecast)	Change
REVENUE SOURCE														
Gasoline	\$60.6	-0.6%	\$59.3	-2.2%	\$59.9	1.1%	\$76.5	27.6%	\$76.7	0.3%	\$78.5	2.3%	\$78.2	-0.4%
Diesel	\$15.4	2.0%	\$16.0	3.9%	\$15.6	-2.2%	\$17.2	9.7%	\$18.2	6.0%	\$18.5	1.6%	\$18.8	1.6%
Purchase and Use*	\$51.4	10.5%	\$54.6	6.3%	\$55.7	2.0%	\$61.2	9.9%	\$65.1	6.4%	\$68.4	5.0%	\$71.3	4.2%
Motor Vehicle Fees	\$72.3	-0.3%	\$73.5	1.7%	\$77.9	5.9%	\$79.0	1.5%	\$80.4	1.7%	\$80.8	0.5%	\$81.8	1.2%
Other Revenue**	\$17.9	-1.9%	\$18.3	2.2%	\$19.1	4.2%	\$19.5	2.3%	\$20.1	3.1%	\$20.4	1.5%	\$20.7	1.5%
TOTAL TRANS. FUND	\$217.6	2.0%	\$221.7	1.9%	\$228.2	2.9%	\$253.4	11.0%	\$260.5	2.8%	\$266.6	2.3%	\$270.8	1.6%

OTHER

TIB Gasoline	\$16.5	23.6%	\$20.9	26.6%	\$21.2	1.4%	\$19.2	-9.5%	\$17.4	-9.3%	\$14.0	-19.5%	\$15.9	13.6%
TIB Diesel and Other***	\$2.0	32.1%	\$1.9	-2.1%	\$1.8	-8.1%	\$1.8	4.0%	\$2.0	5.8%	\$2.0	1.5%	\$2.0	1.5%
Total TIB	\$18.5	24.4%	\$22.8	23.5%	\$23.0	0.6%	\$21.0	-8.4%	\$19.4	-8.0%	\$16.0	-17.4%	\$17.9	12.1%

* As of FY04, includes Motor Vehicle Rental tax revenue

** Beginning in FY07, includes Stabilization Reserve interest; FY08 data includes \$3.76M transfer from G-Fund for prior Jet Fuel tax processing errors and inclusion of this tax in subsequent years

*** Includes TIB Fund interest income of less than \$15,000

**TABLE 3 - STATE OF VERMONT
LEGISLATIVE JOINT FISCAL OFFICE
AVAILABLE EDUCATION FUND* REVENUE FORECAST UPDATE**
(Partial Education Fund Total - Includes Source General and Transportation Fund Allocations Only)
Consensus JFO and Administration Forecast - January 2015

CURRENT LAW BASIS

Source General and Transportation

Fund taxes allocated to or associated
with the Education Fund only

	FY 2011	%	FY 2012	%	FY 2013	%	FY 2014	%	FY 2015	%	FY 2016	%	FY 2017	%
	(Actual)	Change	(Actual)	Change	(Actual)	Change	(Actual)	Change	(Forecast)	Change	(Forecast)	Change	(Forecast)	Change
GENERAL FUND														
Sales & Use**	\$108.5	4.7%	\$113.9	5.0%	\$115.6	1.4%	\$123.8	7.1%	\$128.0	3.4%	\$132.2	3.3%	\$136.3	3.1%
Interest	\$0.1	-48.8%	\$0.0	-7.5%	\$0.1	72.8%	\$0.1	-17.2%	\$0.1	44.7%	\$0.1	20.0%	\$0.2	25.0%
Lottery	\$21.4	-0.7%	\$22.3	4.2%	\$22.9	2.7%	\$22.6	-1.6%	\$22.6	0.1%	\$23.0	1.8%	\$23.4	1.7%
TRANSPORTATION FUND														
Purchase and Use***	\$25.7	10.5%	\$27.3	6.3%	\$27.9	2.0%	\$30.6	9.9%	\$32.6	6.4%	\$34.2	5.0%	\$35.6	4.2%
TOTAL	\$155.7	4.8%	\$163.6	5.1%	\$166.5	1.7%	\$177.0	6.3%	\$183.3	3.5%	\$189.6	3.4%	\$195.5	3.1%

* Includes only General and Transportation Fund taxes allocated to the Education Fund.

This Table excludes all Education Fund property taxes, which are updated in October/November of each year and are the largest Education Fund tax sources.

** Includes Telecommunications Tax; Includes \$1.25M transfer to T-Fund in FY08 for prior Jet Fuel Tax processing errors; Transfer percentage from the General Fund increases from 33.3% to 35.0% effective in FY14

*** Includes Motor Vehicle Rental revenues, restated