



Vermont Economic Progress Council

Agency of Commerce and Community Development
6th Floor, Deane C. Davis State Office Building
1 National Life Drive, Montpelier, VT 05620-0501

Thursday, September 12, 2019

Senator Ann Cummings
Chair, Joint Fiscal Committee
One Baldwin Street
Montpelier, Vermont 05633

Dear Senator Cummings,

In accordance with 32 V.S.A. § 3326 please accept the attached memo and Standard Variable Change document for review by the Joint Fiscal Committee of an annual update to the cost benefit model used in the Vermont Employment Growth Incentive for measuring the potential the net revenue benefit to the state of Vermont for proposed economic development activities.

This update has been prepared by ACCD Policy Analyst Kenneth Jones and has been reviewed by the Vermont Legislature's Economist Tom Kavet.

Dr. Jones and I look forward to the opportunity to answer any questions that the Committee may have on the update to the cost benefit model at the September 16, 2019 Committee meeting.

Sincerely,

A handwritten signature in black ink, appearing to read 'Megan Sullivan'.

Megan Sullivan

Executive Director
Vermont Economic Progress Council
Vermont Agency of Commerce & Community Development
1 National Life Dr, Davis Bldg, 6th Floor
Montpelier, VT 05620-0501

To: Megan Sullivan, Executive Director, Vermont Economic Progress Council
From: Ken Jones
Date: September 12, 2019
Re: Annual Update: Fiscal Cost-Benefit Model, Calendar Year 2019

I. Background

The completion of calendar year 2019 will mark the thirteenth full year of operations for the Vermont Employment Growth Incentive (VEGI). VEGI is the current economic development incentive program overseen by the Vermont Economic Progress Council (VEPC). VEPC has provided oversight for the state's economic development incentive programs since 1999 when the Economic Advancement Tax Incentive (EATI) program was passed by the Vermont General Assembly. The EATI program was replaced by the 2006 General Assembly with the current VEGI program. As part of the new program, a VEGI Technical Working Group – including representation from VEPC, the Legislature and the Vermont Department of Taxes – was formulated to monitor, assess, and evaluate the implementation of the new VEGI program. This process was undertaken given the implementation experience with the EATI program.

II. Purpose of Memorandum

This memo is intended to document the process of the annual update of the VEGI model for use during calendar year 2019. As we have done in the past, changes in the economy necessitate annual updates of the VEGI analytical model in order to maintain the model's validity. As the Vermont economy continues on its labor market recovery from the recession of 2007-2009, the new long-term economic and fiscal consensus forecasts of the Vermont Joint Fiscal Office and the Agency of Administration continue to form the basis of the fiscal cost-benefit model assumptions and other parameters included in the model which apply to calendar year 2019. This annual update of the VEGI model incorporates all of the most recent consensus forecasts and all of the latest fiscal information available as of July, 2019. All of the key fiscal and demographic data in the model which informs the conversion from economic impact concepts into relevant fiscal data used in the cost/benefit scorekeeping have been updated.

III. Standard Annual Model Updates

a. Firm Data Page

The basic components of the analysis are entered into this page. This basic information provides context to the calculations of the model, setting high-order

calibrations in order to capture such important variables as industry classification and project location. On this page, the only edit was to change the application year from 2018 to 2019 to reflect the calendar year. As a dynamic variable, this change carried through to the rest of the model.

b. Project Data and Modular Settings Page:

The Project Data Page is where the specifics regarding number of jobs, total payroll, and capital investment expenditures proposed by the applicant's project are entered. This page also contains several statistics used in the various calculations of costs and benefits found throughout the model. The Modular Settings Page consists of support calculations metrics for some the data which flows through to the Project Data Page. The following is a list of the specific items updated on these pages which are consistent with all previous annual updates.

1. Property Value Inflation: The property value inflator is relevant to the calculation of an applicant's benefits to state revenue, specifically in the calculation of the effects on the Education Fund. It is used to measure the growth of property values resulting from an applicant's project. The difference between education fund revenues with and without the applicant's project is calculated. As has been the practice in past model updates, this figure was obtained from the most recent Consensus Forecast for Education Fund concepts of the Legislative Joint Fiscal Office and the Agency of Administration. The prior model's figures are updated with the new forecast figures. This statistic is used in conjunction with the Projected Statewide Grand List Growth Rate. The figure is used as a projected measure of growth of the statewide grand list and used in the calculations of changes in property values as a background rate growth.
2. Statewide School Tax Rate for Residential and Nonresidential Property: These metrics are used in the calculation of the revenue generated from the proposed project which will be contributed to the Education Fund Based on both residential and nonresidential property improvements. The original data source for this update was the Vermont Department of Taxes (for fiscal year 2019).
3. State & Local Government Price Deflator: This figure is used in the calculation of various costs and benefits associated with an applicant's project. It is used in the formula which projects the growth of the various funds' costs and revenues forward in time. This figure was obtained from the same Consensus Forecast of the Legislative Joint Fiscal Office and the Agency of Administration referred to in #1 above.
4. Estimated per Student Grant, Estimated Special Education Per Equalized Pupil: These figures are used in the calculation of changes in education costs associated with the applicant's project. The calculation is based on the

total education fund expenditures divided by the total enrollment published by the Agency of Education to arrive at a per pupil expenditure.

5. Vermont Estimated Population: As this update takes place in an intercensal year, the figure used in this update of the cost/benefit model is the population estimates for the state of Vermont embedded in the REMI input-output model. This figure is used when converting any of the data in the cost-benefit model into per capita figures.
6. FY General Fund Expenditures, FY Expenditures Fund Appropriations: These figures are used to calculate the changes in General Fund and Transportation Fund costs associated with the change in population related to an applicant's project in the most recent fiscal year. The figures are converted to a per capita basis and used in conjunction with the change in population associated with each applicant's project. The updated figures are obtained from the Vermont Department of Finance and Management and the Legislative Joint Fiscal Office.
7. Corporate Revenue/Nonfarm Supervisory Job: This figure is used to estimate revenues associated with a change in employment from an applicant's project. It relates levels of corporate income tax to a per job basis. This can then be used to estimate the incremental corporate income tax associated with a change in employment related to an applicant's project. This figure is obtained from the most recent total corporate tax revenue divided by the BEA's concept of employment data (and includes both full and part time jobs and also proprietors). The BEA employment series data is used as a predictor of future revenues in the model and is preferred for this model since it is the most inclusive data for proprietors and workers in the farm sector.
8. Per Capita Other General Fund Revenues, Per Capita Other Transportation Fund Revenues, Per Capita Other Education Fund Revenues: These figures are used to capture the 'Other' category for revenues found in the General, Transportation and Education Funds. They are converted to a per capita basis and used in conjunction with the change in population associated with an applicant's project. The updated figure is obtained from the 2018 Calendar year tax revenues divided by the population.
9. State Personal Income Tax Rate, State Sales & Use Tax Rate, State Gas Tax Rate, State MVP&U Tax Rate, State Meals and Rooms Tax Rate, Background Statewide Education Property Tax Rate: These figures are used to determine part of the forecasted revenues over the forecast impact period from the new demand from an applicant's proposed project. They are applied to the changes in consumption associated with an applicant's project to yield projected incremental tax revenues. These figures are obtained from the most recent fiscal year data available on total taxes

received. These data are then applied to various REMI consumption items to complete the bridge between REMI economic output data and the state's fiscal cost-benefit concepts. ***For the 2019 model, I added the Meals and Rooms tax rate which results in a decrease in the "other" General Fund tax revenue calculation. Also, in 2019, I used a new set of consumption categories from REMI to better reflect the consumption categories that are the basis for each of these taxes.***

c. REMI Economic Output Page

In addition to being the recipient of the output of the REMI input/output model, there are several embedded REMI control variables which are updated as part of the annual model review. Consistent with the previous year's updates, the equilibrium data from the REMI control is updated for the year of application. These variables include several consumption related factors such as overall consumption, general price indices, as well as specific price indices by consumption category.

d. Qualifying and Non-Qualifying Jobs & Wages Pages

As a result of the change in the model's base year from 2018 to 2019, the lookup function which finds the REMI input-output anticipated level of compensation by industry was updated to ensure accurate future wage levels were taken into account.

e. Present Value Calculations Page

This page calculates the present value of the total benefits and costs associated with a project. The updated present value discount rate was obtained from the analysis of the three year moving average of the Muni Bond Advisors index: General Obligations Bonds: 20-Years to Maturity.

Bond rates from <http://www.munibondadvisor.com/market.htm>

2010	4.6
2011	4.4
2012	4.1
2013	4.1
2014	4.1
2015	4.1
2016	3.7
2017	3.6
2018	3.6

f. 'NAICS Row' Lookup Page

No changes have been made to this page that prescribes background growth rates.

g. Regional Differential

The list of counties subject to different discount rates for estimating present value cost benefit streams was changed in 2019 to reflect changing economic conditions.

Tier One

Caledonia

Essex

Orleans

Rutland *

Windham *

Tier Two

Addison

Bennington

Franklin **

Grand Isle **

Lamoille **

Orange

Washington

Windsor

Tier Three

Chittenden

Rutland and Windham Counties were formerly in Tier Two

Franklin, Grand Isle and Lamoille Counties were formerly in Tier One

I did not use this one.

The existing model value(s) and the proposed updated value(s) are described below:

VEGI MODEL UPDATE: ROUTINE VALUE UPDATES			
Value Description	Value used in 2018 model	Value proposed for use in 2019 model	Source
Property Value Inflator	1.4%	2.25%	Consensus Ed Fund Projections (12/18)
Statewide School Tax Rate: Homestead	\$1.00		Current Law (7/1/18)
Statewide School Tax Rate: Non-residential	\$1.535		Current Law (7/1/18)
State & Local Government Price Deflator	2.03%	2.6%	2019 Fiscal Facts
Vermont Estimated Population	633,753		REMI
Per pupil expenditure	\$18,443	\$18,613	Ed Fund (FY19) / student pop'n (Oct 18)
FY General Fund Expenditures (\$ million)	1523.9	1640.5	2018 number is 2017 revenue from 2017 Fiscal Facts, 2019 number is 2018 appropriation
FY T Fund Expenditures (\$ million)	252.6	276.6	2019 Fiscal Facts
Corporate Revenue/Nonfarm Supervisory Job	\$227		Calculated from current year (calendar 2018) revenues
Per Capita Other General Fund Revenues	\$320		Calculated from current year revenues
Per Capita Other Transportation Fund Revenues	\$207		Calculated from current year revenues
State Personal Income Tax Rate	2.30%		Calculated from REMI income and actual revenues
State Sales & Use Tax Rate	1.70%		Calculated from REMI consumption and actual revenues
State Gas Tax Rate	13.72%		Calculated from REMI consumption and actual revenues
State MVP&U Tax Rate	5.40%		Calculated from REMI consumption and actual revenues

Three Year Moving Average Bond Index	3.6%		MuniBondAdvisor.com