



Memo

To: Susan Sherman, Legislative Program Manager. Department of Revenue Services
From: Lucy Charpentier, Manager of Evaluation, Measurement and Verification; Eric Shrago, Director of Operations
Date: March 8, 2018
Re: Connecticut Green Bank/Navigant Consulting Development and use of a Tax Revenue Calculator for Income, Sales and Use Taxes

BACKGROUND

Founded in 2011, the Connecticut Green Bank is a quasi-public institution that has leveraged its own capital and financing partners to close over 26,000 projects and deploy over \$1 Billion dollars into the Connecticut economy in support of cleaner, more efficient energy projects for homes, businesses, and institutions across the state. The benefits from these projects are not just energy related. They have led to the creation of over 14,000 jobs and improved the air quality in state by reducing greenhouse gasses by over 9 million tons that have saved millions of dollars on public health expenditures.

The economic activity sparked by the Green Bank's activities also generates tax revenue for the general fund through personal income taxes paid by those employed in jobs created by these projects, corporate taxes paid on profits earned from these projects and through sales and use taxes generated when these projects are sold. The Green Bank is proposing a methodology for quantifying this tax revenue generation.

ECONOMIC DEVELOPMENT

Economic Development is a positive externality of the Green Bank's programs and activities. Directly, the capital deployed is used to buy the hardware for projects and pay for the labor needed to implement them. Indirectly, this economic activity creates jobs as those in the supply chain increase their operations in response to the implementation of projects. In 2009, the Connecticut Clean Energy Fund (CCEF), the predecessor to the Green Bank, in partnership with the Department of Economic and Community Development (DECD) and the Connecticut Energy Efficiency Fund (CEEF),¹ engaged Navigant Consulting to complete a study to quantify the job years and their wages created because of the support from the CCEF and CEEF activities. This study was refreshed in 2016 by the Connecticut Green

¹ CT Renewable Energy / Energy Efficiency Economy Baseline Study (March 27, 2009)

Bank (Green Bank) in coordination with DECD and with assistance from Eversource Energy and United Illuminating.

The resulting job factors are unique to the combination of project type (technology used) and the Green Bank Program leveraged for the project. The job factors estimate the number of direct and indirect and induced job-years created per \$1 million of gross project costs deployed² in a given combination of project type and program. More on this can be found here:

- [Jobs Fact Sheet](#)
- [Job Study](#)

Since inception, the Green Bank has stimulated the creation of more than 16,000 jobs-years³.

This economic activity also results in revenue for the state in the form of individual income, corporate, and sales taxes. The Green Bank engaged Navigant in 2017 to develop a methodology for estimating this revenue. At present, the Green Bank is reviewing the methodology with the Department of Revenue Services.

INCOME TAX ESTIMATION METHODOLOGY

Building on the Green Bank's Jobs Calculator, the Income Tax Calculator uses the technology specific number of jobs and estimated wages⁴ produced by both the 2009 and 2016 Job studies⁵. Then the appropriate effective tax rate is applied based on the tax calculator that can be found on the Department of Revenue Services' [website](#)⁶ to determine the taxes generated created per \$1 million in project costs.

For Corporate Income Taxes, the Green Bank uses the Navigant-developed. This method reviews all parties (installer, lender, investor, etc.) involved in a project, estimates their taxable income from their involvement with the project over its lifetime, and then applies the appropriate standard corporate tax rate. The estimations used for profitability come from an

² Note that the Green Bank differentiates between Capital Deployed, Gross Project Cost, and Total Investment. The Capital Deployed and Total Investment metrics include financing costs but might exclude the portion of project costs borne by the building owners. For calculating job-years and taxes, the Green Bank uses Gross Actual project cost as that metric best reflects the cashflows going to lenders and installers.

³ This number includes job-years created by the Green Bank's requirement of the Energy Efficiency Board's Home Energy Solutions audit for all RSIP program participants which has not previously be included.

⁴ Only the 2016 study included wages for indirect and induced job-years. Navigant identified a wage based off of NREL models for 2009 that is consistent with what was done for the 2016 study.

⁵ The Green Bank applies the wages and factors from the 2009 study to all projects closed prior to July 1, 2017. The Factors resulting from the 2016 study are applied to all projects closed after June 30, 2017.

⁶ For the purposes of this, it is assumed that all job-years created are located in Connecticut and everyone is filing taxes as a single filer.

in-depth analysis prepared by Navigant based on a review of publicly traded companies and qualified CT Green Bank contractors (installers).

SALES AND USE TAX ESTIMATION METHODOLOGY

The Green Bank and Navigant reviewed each technology type to determine the taxable labor and non-labor portions of projects to determine and applied the state sales tax rate of 6.25% to determine the sales and use taxes generated per \$1 million of project costs. Both the Green Bank and Navigant have reviewed relevant statutes to determine and apply existing tax exemptions.

RECOMMENDATION

The Green Bank proposes to use above mentioned methodologies as its official tool for measuring Tax Revenues generated and will automate its use where and when possible in our Data Warehouse.

Enc: Tax Calculator