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HYPOTHETICAL RESIDENTIAL
DEVELOPMENT OF 74 LOTS CONTAINED IN
THE SPOTSYLVANIA SOLAR ENERGY
CENTER'S PROPOSED FOOTPRINT

NET FISCAL IMPACT



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About Mangum Economics, LLC

Mangum Economics, LLC is a Richmond, Virginia based firm that specializes in producing objective economic, quantitative, and qualitative analysis in support of strategic decision making. Examples of typical studies include:

POLICY ANALYSIS

Identify the intended and, more importantly, unintended consequences of proposed legislation and other policy initiatives.

ECONOMIC IMPACT ASSESMENTS AND RETURN ON INVESTMENT ANALYSES

Measure the economic contribution that business, education, or other enterprises make to their localities.

WORKFORCE INFORMATION

Project the demand for, and supply of, qualified workers.

CLUSTER ANALYSIS

Use occupation and industry clusters to illuminate regional workforce and industry strengths and identify connections between the two.

ENVIRONMENTAL SCANNING

Assess the economic, demographic, and other factors likely to affect your enterprise in the future.

The Project Team

A. Fletcher Mangum, Ph.D.
Founder and CEO

Introduction

In this fiscal impact note, we provide an estimate of the net fiscal impact that would be associated with the residential development of 74 lots that would be contained in the proposed footprint of the Spotsylvania Solar Energy Center. It should be emphasized that there are currently no known plans for the residential development of those 74 lots, and such development may or may not ever take place. As a result, the estimates provided in this fiscal note should be considered hypothetical.

Assumptions

In conducting our analysis of the hypothetical fiscal impact of residential development of 74 lots that would be contained in the proposed footprint of the Spotsylvania Solar Energy Center, we employ the following assumptions:

- The population of Spotsylvania County was 129,668 in fiscal year (FY) 2017.¹
- The average number of persons per household in Spotsylvania County was 2.8 in FY 2017.²
- Locally funded school expenditures in Spotsylvania County were \$106,622,374 in FY 2017.³
- Total non-school related county expenditures in Spotsylvania County were \$132,615,183 in FY 2017.⁴
- The average assessed value of the 74 lots would be \$540,000 after development.⁵
- The real estate tax rate in Spotsylvania County at the time the “Economic and Fiscal Contribution that the Spotsylvania Solar Energy Center would make to Spotsylvania County” report was written was \$0.833 per \$100 of assessed value.⁶
- Total local sales tax revenue in Spotsylvania County was \$17,707,867 in FY 2017.⁷
- Total meals sales tax revenue in Spotsylvania County was \$8,836,806 in FY 2017.⁸
- Total consumer utility tax revenue in Spotsylvania County was \$2,601,318 in FY 2017.⁹
- Total motor vehicle license tax revenue in Spotsylvania County was \$3,126,291 in FY 2017.¹⁰

¹ Data Source: Virginia Auditor of Public Accounts.

² Data Source: United States Census Bureau, American Community Survey, Demographic and Housing Estimates, 5-year estimates.

³ Data Source: Virginia Auditor of Public Accounts.

⁴ Data Source: Virginia Auditor of Public Accounts.

⁵ Data Source: Sean Fogarty, in November 27, 2018 letter to Spotsylvania County Officials.

⁶ Data Source: Spotsylvania County.

⁷ Data Source: Virginia Auditor of Public Accounts.

⁸ Data Source: Virginia Auditor of Public Accounts.

⁹ Data Source: Virginia Auditor of Public Accounts.

¹⁰ Data Source: Virginia Auditor of Public Accounts.

Results

Table 1 provides our estimate of the net fiscal impact that would be associated with the hypothetical residential development of 74 lots that would be contained in the proposed footprint of the Spotsylvania Solar Energy Center. In this table:

- The *Demographics* section lists the estimated population of Spotsylvania County in FY 2017 and the likely addition to that population from the hypothetical residential development of the 74 lots in question.
- The *County Expenditures* section provides a calculation of the additional annual county expenditures that the hypothetical residential development would generate for Spotsylvania County. That calculation uses data from Spotsylvania County's FY 2017 budget, in conjunction with the county population estimate for FY 2017, to derive estimated per capita county expenditures for education and non-education services. We then multiply those per capita expenditures by the additional population associated with the hypothetical residential development to derive an estimate of the annual addition to county expenditures that the development would likely necessitate.
- The *County Revenues* section provides a similar calculation for the additional annual county revenues that the hypothetical residential development would generate for Spotsylvania County. The calculation of real estate tax revenue is derived by multiplying the assumed \$540,000 in assessed value for each of the 74 lots times the county's real estate tax rate of \$0.833 per \$100 of assessed value that was in place when the "Economic and Fiscal Contribution that the Spotsylvania Solar Energy Center would make to Spotsylvania County" report was written.

To estimate the other annual county tax revenues that would be produced by the hypothetical residential development, we use data from Spotsylvania County's FY 2017 budget, in conjunction with the county population estimate for FY 2017, to derive estimated per capita county revenue from appropriate revenue streams. We then multiply those estimates by the additional population associated with the hypothetical residential development to derive an estimate of the annual addition to county revenues that the development would likely generate.

- The *Net Annual Fiscal Impact* section provides an estimate of the likely annual county revenues that the hypothetical residential development would generate, net of county expenditures for required services.

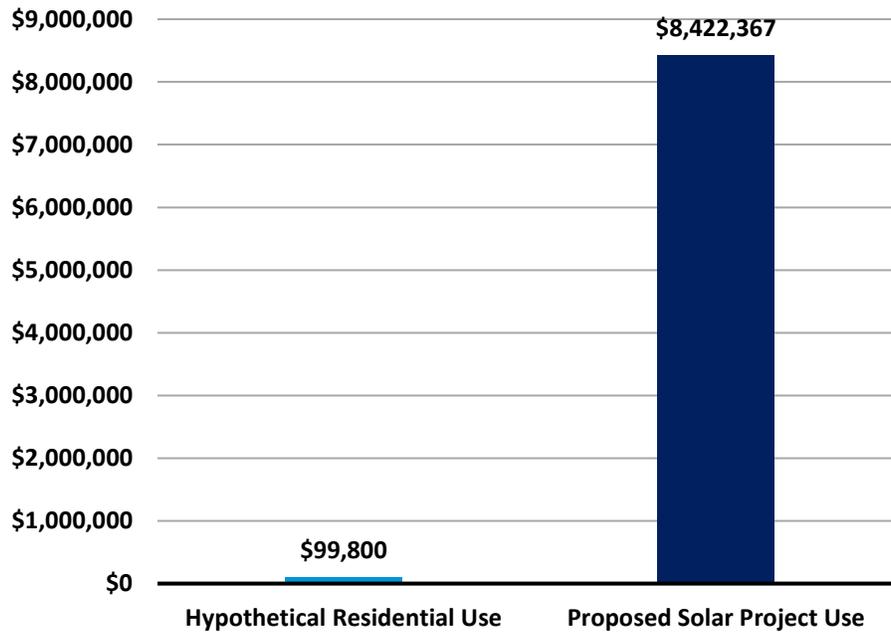
Based on these calculations, we find that the net fiscal impact on Spotsylvania County from the hypothetical residential development of 74 lots that would be contained in the proposed footprint of the Spotsylvania Solar Energy Center would be approximately \$2,495 per year, for a cumulative total of \$99,800 over 40 years.

Table 1: Estimated Net Annual Fiscal Impact on Spotsylvania County from Residential Development of 74 Lots Contained in the Spotsylvania Solar Energy Center’s Proposed Footprint

Demographics:			
	County Population in FY 2017	Addition from Residential Development	
Population	129,668	207	
County Expenditures:			
	Total in FY 2017	Per Capita	Addition from Residential Development
Locally Funded County Education Expenditures	\$106,622,374	\$822	\$170,154
County Non-Education Expenditures	\$132,615,183	\$1,023	\$211,761
Total Additional County Expenditures from Development			\$381,915
County Revenues:			
	Residential Units	Estimated Median Assessed Value	Addition from Residential Development
Real Estate Tax Revenue	74	\$540,000	\$332,867
	Total in FY 2017	Per Capita	Addition from Residential Development
Other Tax Revenue			
<i>Local Sales Tax</i>	\$17,707,867	\$137	\$28,359
<i>Meals Tax</i>	\$8,836,806	\$68	\$14,076
<i>Consumer Utility Taxes</i>	\$2,601,318	\$20	\$4,140
<i>Motor Vehicle License Taxes</i>	\$3,126,291	\$24	\$4,968
Total Additional County Revenues from Development			\$384,410
Net Annual Fiscal Impact:			
Net Additional County Revenues from Residential Development			\$2,495

Figure 1 below compares the estimated cumulative Spotsylvania tax revenue from the hypothetical residential development of 74 lots that would be contained in the footprint of the Spotsylvania Solar Energy Center to the estimated cumulative tax revenue from the proposed Spotsylvania Solar Energy Center.¹¹

Figure 1: Cumulative Spotsylvania County Tax Revenue over 40 Years



¹¹ Data Source: "The Economic and Fiscal Contribution that the proposed Spotsylvania Solar Energy Center would make to Spotsylvania County," Mangum Economics, May 2018.