The Economic and Fiscal Contribution that the
OTTER CREEK SOLAR FACILITY WOULD MAKE TO MECKLENBURG COUNTY

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Mangum Economic Consulting, 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:

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

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Executive Summary

This report assesses the economic and fiscal contribution that the proposed Otter Creek Solar Facility would make to Mecklenburg County. The primary findings from that assessment are as follows:

1) **The proposed Otter Creek Solar Facility would make a significant economic contribution to Mecklenburg County. We estimate that the proposed facility would be responsible for:**

   - An estimated one-time pulse of economic activity during its construction phase of up to:
     - 132 full-time-equivalent jobs in Mecklenburg County.
     - $5.3 million in associated labor income.
     - $19.1 million in additional economic output in Mecklenburg County.

   - An ongoing estimated annual economic impact during its operational phase of up to:
     - 8 full-time-equivalent jobs in Mecklenburg County
     - $351,158 in associated labor income.
     - $725,570 in additional economic output in Mecklenburg County

2) **The proposed Otter Creek Solar Facility would also make a significant fiscal contribution to Mecklenburg County. After taking into account the proposed facility's effect on the county's composite index and locally funded school budget, we estimate that the proposed facility would generate:**

   - $29,438 in net county revenue in the facility's first year of operation (exclusive of county fees for permitting), with that figure projected to gradually decline to $7,573 in the facility's 25th year of operation, as the value of the proposed projected-related capital investments is depreciated.

   - A Net Present Value (NPV), or value in todays' dollars of the stream of local tax revenue payments from the proposed Otter Creek Solar facility over its 25 year life expectancy, of $392,922 in local tax revenue.

3) **The proposed Otter Creek Solar Facility would also provide Mecklenburg County with a significantly higher annual economic and fiscal impact compared to what the property produces in its current agricultural use:**

- o 8 vs. 9 current full-time-equivalent jobs in Mecklenburg County
- o $351,158 vs. $105,929 in current associated labor income.
- o $725,570 vs. $385,733 in current additional economic output in Mecklenburg County.
- o $29,438 in additional net county revenue in the facility's first year of operation over and above what the county currently receives from the property.

The estimates provided in this report are based on the best information available and all reasonable care has been taken in assessing that information. However, because these estimates attempt to foresee circumstances that have not yet occurred, it is not possible to provide any assurance that they will be representative of actual events. These estimates are intended to provide a general indication of likely future outcomes and should not be construed to represent a precise measure of those outcomes.

Introduction

This report assesses the economic and fiscal contribution that the proposed Otter Creek Solar Facility would make to Mecklenburg County. The remainder of the report is divided into six sections. The *Otter Creek Solar Facility* section provides a brief description of the project. The *Economic Impact* section provides an empirical assessment of the economic contribution that the Otter Creek Solar Facility would make to Mecklenburg County, as well as an estimate of the economic contribution that the property currently makes to the county. The *Fiscal Impact* section provides an assessment of the net fiscal contribution that the Otter Creek Solar Facility would make to Mecklenburg County, once the impact on the county's composite index is taken into account.

Otter Creek Solar Facility

The proposed Otter Creek Solar Facility would involve development of up to a 60-megawatt photovoltaic solar facility on approximately 690 acres of rural property in Mecklenburg County, Virginia. The proposed Otter Creek Solar Facility site would be located northeast of the intersection of Highway 92 and Spanish grove Road, about two miles west of Chase City. Once the facility is operational, there will be little activity on the site, little to no associated traffic, and it will generate only minimal demands on county services. The solar panels employed at the site will be no more than ten feet tall and the project will be designed to minimize visual impact. In addition, because solar projects generate electricity with few or no moving parts, the facility will produce no audible noise at the fence line.

Economic Impact

In this section, we quantify the economic contribution that the proposed Otter Creek Solar Facility would make to Mecklenburg County. Our analysis separately evaluates the one-time pulse of economic activity that would occur during the construction phase of the project, as well as the annual economic activity that the project would generate during its ongoing operations phase. In addition, to provide a baseline for our analysis, we also estimate the economic contribution that the property provides to Mecklenburg County in its current agricultural use.

Method

To empirically evaluate the likely local and statewide economic impact attributable to the proposed Otter Creek Solar Facility, we employ a regional economic impact model called IMPLAN.[1] The IMPLAN model is one of the most commonly used economic impact simulation models in the U.S., and in Virginia is used by UVA's Weldon Cooper Center, the Virginia Department of Planning and Budget, the Virginia Employment Commission, and other state agencies and research institutes. Like all economic impact models, the IMPLAN model uses economic multipliers to quantify economic impact.

Economic multipliers measure the ripple effects that an expenditure generates as it makes its way through the economy. For example, as when the Otter Creek Solar Facility purchases goods and services – or when facility employees use their salaries and wages to make household purchases – thereby generating income for someone else, which is in turn spent, thereby becoming income for yet someone else, and so on, and so on. Through this process, one dollar in expenditures generates multiple dollars of income. The mathematical relationship between the initial expenditure and the total income generated is the economic multiplier.

One of the primary advantages of the IMPLAN model is that it uses regional and national production and trade flow data to construct region-specific and industry-specific economic multipliers. As a result, the economic impact estimates produced by IMPLAN are not generic, they reflect as precisely as possible the economic realities of the specific industry, and the specific study area, being evaluated.

In the analysis that follows, these impact estimates are divided into three categories. First round direct impact measures the direct economic contribution of the entity being evaluated (*e.g.*, own employment, wages paid, goods and services purchased, by the Otter Creek Solar Facility). Second round indirect and induced impact measures the economic ripple effects of this direct impact in terms of business to business, and household (employee) to business, transactions. Total impact is simply the sum of the preceding two. These categories of impact are then further defined in terms of employment (the jobs that are created), labor income (the wages and benefits associated with those jobs), economic output (the total amount of economic activity that is created in the economy), and fiscal impact (the state and local tax revenues that are generated by this economic activity).

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[1] IMPLAN v.3 is produced by Minnesota IMPLAN Group, Inc.

Construction Phase

In conducting our analysis of the one-time economic and fiscal impact that the proposed Otter Creek Solar Facility would have on Mecklenburg County during the construction phase of the project, we employ the following assumptions:

- Total design, engineering, and construction costs are estimated to be $61,377,087 for the Otter Creek Solar Facility.[2]

- It is anticipated that approximately 22 percent of design, engineering, and construction expenditures would be spent with vendors in Mecklenburg County.[3]

- Capital equipment costs are estimated to be $32,718,000 for the Otter Creek Solar Facility.[4]

- It is anticipated that no capital equipment will be purchased from vendors in Mecklenburg County.[5]

By feeding these assumptions into the IMPLAN model, we obtain the following estimates of one-time economic and fiscal impact. As shown in Table 1, construction of the proposed Otter Creek Solar Facility would directly provide a one-time pulse of approximately: 1) 86 full-time-equivalent jobs, 2) $3.6 million in labor income, and 3) $13.3 million in economic output to Mecklenburg County. Taking into account the economic ripple effects that direct investment would generate, we estimate that the total one-time impact on Mecklenburg County would be: 1) 132 full-time-equivalent jobs, 2) $5.3 million in labor income, and 3) $19.1 million in economic output.

Table 2 details the ten industries within Mecklenburg County that would receive the largest economic benefit from the proposed Otter Creek Solar Facility during its construction phase.

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[2] *Data Source*: Brookfield Renewable.
[3] *Data Source*: Brookfield Renewable.
[4] *Data Source*: Brookfield Renewable.
[5] *Data Source*: Brookfield Renewable.

Table 1: One-Time Economic Impact of the Otter Creek Solar Facility on Mecklenburg County – Construction Phase (2017 Dollars)

Economic Impact:			
	FTE Employment	**Labor Income**	**Output**
First Round Direct Economic Activity	86	$3,577,079	$13,253,947
Second Round Indirect and Induced Economic Activity	46	$1,748,030	$5,856,119
Total, Direct, Indirect, and Induced Economic Activity*	**132**	**$5,325,109**	**$19,110,066**

*May not sum due to rounding

Table 2: Top-Ten Industries Affected by Construction of the Otter Creek Solar Facility in Mecklenburg County (2017 Dollars)

Industry	FTE Employment	Labor Income	Output
Construction of new highways and streets	51	$2,072,371	$8,868,947
Construction of new power and communication structures	27	$1,178,030	$3,400,000
Construction of new commercial structures, including farm structures	7	$278,881	$880,000
Architectural, engineering, and related services	2	$145,956	$304,643
Wholesale trade	2	$132,723	$433,603
Full-service restaurants	2	$30,300	$75,894
Hospitals	2	$98,346	$248,337
Limited-service restaurants	2	$26,881	$134,531
Truck transportation	2	$119,235	$321,698

Table 2: **Top-Ten Industries Affected by Construction of the Otter Creek Solar Facility in Mecklenburg County (2017 Dollars)**

Industry	FTE Employment	Labor Income	Output
Retail - Nonstore retailers	2	$16,525	$130,458

Ongoing Operations Phase

In conducting our analysis of the annual economic and fiscal impact that the proposed Otter Creek Solar Facility would have on Mecklenburg County during the ongoing operations phase of the project, we employ the following assumptions:

- The Otter Creek Solar Facility would employ one full-time employee at a salary of approximately $70,000.[6]

- The Otter Creek Solar Facility would spend approximately $397,400 each year on the purchase of goods and services (*i.e.*, primarily for vegetation control and electrical maintenance).[7]

By feeding these assumptions into the IMPLAN model, we obtain the following estimates of annual economic and fiscal impact. As shown in Table 3, annual operation of the proposed Otter Creek Solar Facility would directly provide approximately: 1) 6 full-time-equivalent jobs, 2) $278,029 in labor income, and 3) $467,400 in economic output to Mecklenburg County. Taking into account the economic ripple effects that direct impact would generate, we estimate that the total annual impact on Mecklenburg County would be: 1) 8 full-time-equivalent jobs, 2) $351,158 in labor income, and 3) $725,570 in economic output.[8]

Table 4 details the ten industries within Mecklenburg County that would receive the largest economic benefit from the proposed Otter Creek Solar Facility during its operational phase.

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[6] *Data Source*: Brookfield Renewable.
[7] *Data Source*: Brookfield Renewable.
[8] This estimate includes the economic impact attributable to property lease payments to local landowners. However, it does not include the economic value of the electricity produced by the facility, which would be substantial.

Table 3: **Total Annual Economic Impact of the Otter Creek Solar Facility on Mecklenburg County – Operations Phase (2017 Dollars)**

Economic Impact:			
	FTE Employment	**Labor Income**	**Output**
First Round Direct Economic Activity	6	$278,029	$467,400
Second Round Indirect and Induced Economic Activity	2	$73,129	$258,170
Total, Direct, Indirect, and Induced Economic Activity*	**8**	**$351,158**	**$725,570**

*May not sum due to rounding

Table 4: **Top-Ten Industries Affected by Annual Operation of the Otter Creek Solar Facility in Mecklenburg County (2017 Dollars)**

Industry	FTE Employment	Labor Income	Output
Electronic and precision equipment repair and maintenance	2	$121,976	$238,928
Landscape and horticultural services	3	$86,870	$160,006
Hospitals	less than 1	$7,656	$19,333
Real estate	less than 1	$559	$14,060
Limited-service restaurants	less than 1	$1,921	$9,618
Employment services	less than 1	$2,822	$5,587
Full-service restaurants	less than 1	$2,004	$5,019
Nursing and community care facilities	less than 1	$2,239	$4,458
Dry-cleaning and laundry services	less than 1	$1,582	$3,194

Table 4: **Top-Ten Industries Affected by Annual Operation of the Otter Creek Solar Facility in Mecklenburg County (2017 Dollars)**

Industry	FTE Employment	Labor Income	Output
Offices of physicians	less than 1	$1,730	$3,142

Current Agricultural Use

In this portion of the section, we provide a benchmark for the previous estimates of the economic contribution that the proposed Otter Creek Solar Facility would make to Mecklenburg County, by estimating the economic contribution that the site makes to the county in its current agricultural use. In conducting that analysis, we employ the following assumptions:

- The proposed Otter Creek Solar Facility would be situated on a 690-acre tract of land.

- This property is currently used for agricultural production. However, nine percent of the property is water, wetland, or riparian and unsuitable for agricultural use.[9]

- Average revenue per acre for Virginia farmland is approximately $456.10.[10]

By feeding these assumptions into the IMPLAN model, we obtain the following estimates of annual economic and fiscal impact. As shown in Table 5, in its current agricultural use we estimate that the proposed Otter Creek Solar Facility site directly provides approximately: 1) 9 full-time-equivalent jobs, 2) $65,118 in labor income, and 3) $286,385 in economic output to Mecklenburg County. Taking into account the economic ripple effects that direct impact generates, we estimate that the total annual impact on Mecklenburg County is: 1) 9 full-time-equivalent jobs, 2) $105,929 in labor income, and 3) $385,733 in economic output.

Table 6 details the ten industries within Mecklenburg County that currently receive the largest economic benefit from the proposed Otter Creek Solar Facility in its current agricultural use.

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[9] *Data Source*: Brookfield Renewable in consultation with current landowners.
[10] *Data Source*: Estimated based on data from the Virginia Department of Agriculture and Consumer Services.

Table 5: **Total Annual Economic Impact of the Otter Creek Solar Facility site on Mecklenburg County – Current Agricultural Use (2017 Dollars)**

Economic Impact:			
	FTE Employment	**Labor Income**	**Output**
First Round Direct Economic Activity	9	$65,118	$286,385
Second Round Indirect and Induced Economic Activity	1	$40,811	$99,348
Total, Direct, Indirect, and Induced Economic Activity*	**9**	**$105,929**	**$385,733**

May not sum due to rounding

Table 6: **Top-Ten Industries Affected by the Current Agricultural Use of the Otter Creek Solar Facility site in Mecklenburg County (2017 Dollars)**

Industry	FTE Employment	Labor Income	Output
All other crop farming	9	$65,294	$287,159
Support activities for agriculture and forestry	less than 1	$20,010	$22,507
Tobacco farming	less than 1	$1,619	$3,897
Hospitals	less than 1	$1,955	$4,937
Real estate	less than 1	$139	$3,503
Limited-service restaurants	less than 1	$472	$2,360
Full-service restaurants	less than 1	$476	$1,192
Individual and family services	less than 1	$303	$522
Monetary authorities and depository credit intermediation	less than 1	$913	$4,072

Table 6: **Top-Ten Industries Affected by the Current Agricultural Use of the Otter Creek Solar Facility site in Mecklenburg County (2017 Dollars)**

Industry	FTE Employment	Labor Income	Output
Nursing and community care facilities	less than 1	$571	$1,137

Fiscal Impact

In this section, we quantify the net fiscal contribution that the proposed Otter Creek Solar Facility would make to Mecklenburg County. This analysis explicitly take into account the effect the proposed facility would have on the county's composite index and the local contribution to the county's school budget.

Table 7 provides a calculation of the gross additional revenue that the proposed Otter Creek Solar Facility would generate for Mecklenburg County over its 25 year life expectancy. This calculation is based on the value of the proposed capital improvements to the property (excludes development costs), times depreciation (pursuant to the State Corporation Commission's stipulated schedule), times the 80 percent local real property tax exemption (pursuant to Virginia Code § 58.1-3660), times Mecklenburg County's real property tax rate of $0.42 per $100 of assessed value (pursuant to Virginia Code § 58.1-2606 and the county's published tax rate for real property).

As the data in Table 7 indicate, we estimate gross county revenue from the facility to be $68,153 in the facility's first year of operation (exclusive of county fees for permitting), with that figure projected to gradually decline to $7,573 in the facility's 25th year of operation, as the value of the proposed capital investments is depreciated. It is important to note that these estimates do not include county revenue from real estate tax on the existing property, and are therefore properly viewed as an addition to those existing revenues.

Table 7: **Estimated Gross County Tax Revenue Generated by the Otter Creek Solar Facility over its 25 Year Life Expectancy (2017 Dollars)**

Year	Capital Investment[11]	Depreciation[12]	Depreciated Value of Capital Investment	Taxable Capital Investment (less 80% exemption)[13]	Gross Additional Annual County Tax Revenue[14]
1	$90,148,900	90%	$81,134,010	$16,226,802	$68,153
2	$90,148,900	90%	$81,134,010	$16,226,802	$68,153
3	$90,148,900	90%	$81,134,010	$16,226,802	$68,153
4	$90,148,900	90%	$81,134,010	$16,226,802	$68,153
5	$90,148,900	90%	$80,890,608	$16,178,122	$67,948
6	$90,148,900	87%	$78,690,975	$15,738,195	$66,100
7	$90,148,900	85%	$76,356,118	$15,271,224	$64,139
8	$90,148,900	82%	$73,886,038	$14,777,208	$62,064
9	$90,148,900	79%	$71,271,720	$14,254,344	$59,868
10	$90,148,900	76%	$68,495,134	$13,699,027	$57,536
11	$90,148,900	73%	$65,547,265	$13,109,453	$55,060
12	$90,148,900	69%	$62,428,113	$12,485,623	$52,440
13	$90,148,900	66%	$59,119,649	$11,823,930	$49,661
14	$90,148,900	62%	$55,621,871	$11,124,374	$46,722
15	$90,148,900	58%	$51,907,737	$10,381,547	$43,602
16	$90,148,900	53%	$47,968,230	$9,593,646	$40,293
17	$90,148,900	49%	$43,794,336	$8,758,867	$36,787
18	$90,148,900	44%	$39,368,025	$7,873,605	$33,069
19	$90,148,900	38%	$34,680,282	$6,936,056	$29,131
20	$90,148,900	33%	$29,704,063	$5,940,813	$24,951
21	$90,148,900	27%	$24,439,367	$4,887,873	$20,529
22	$90,148,900	21%	$18,850,135	$3,770,027	$15,834
23	$90,148,900	14%	$12,927,352	$2,585,470	$10,859
24	$90,148,900	10%	$9,014,890	$1,802,978	$7,573
25	$90,148,900	10%	$9,014,890	$1,802,978	$7,573

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[11] *Data Source*: Brookfield Renewable. Excludes development costs.
[12] *Data Source*: State Corporation Commission.
[13] Calculated pursuant to Virginia Code § 58.1-3660 which stipulates that solar facilities over 20MW are subject to an 80 percent exemption from local property taxes.
[14] Calculated pursuant to Virginia Code § 58.1-2606 which stipulates that capital equipment owned by utilities is taxed as real property and the local tax rate on that capital equipment would be capped at Mecklenburg County's real property tax rate of $0.42 per $100 of assessed value.

On average, Virginia localities fund 45 percent of their primary and secondary education expenditures and the Commonwealth of Virginia funds the remaining 55 percent. But, each locality's share is adjusted up or down based on a composite index that measures the locality's "ability to pay," as determined by the locality's property tax base, adjusted gross income, and taxable retail sales. Table 8 illustrates the likely effect that the capital improvements proposed as part of the Otter Creek Solar Facility would have on Mecklenburg County's composite index, and the county's share of its school budget, over the proposed facility's 25 year life expectancy.

The calculation presented in Table 8 is derived by: 1) using baseline data for Mecklenburg County on County Taxable Real Property, Adjusted Gross Income, Taxable Retail Sales, County School Average Daily Membership (ADM), and County Population from the Virginia Department of Education's 2016-2018 Composite Index of Local Ability to Pay, 2) adjusting County Taxable Real Property in subsequent years using the Taxable Capital Investment figures from Table 7, and 3) applying those figures to the Virginia Department of Education's composite index formula to compute a revised composite index for Mecklenburg County in each subsequent year.[15] That revised composite index is then applied to the County of Mecklenburg's baseline FY 2016 locally funded school budget as reported by the Virginia Auditor of Public Accounts to determine the additional local school funding that would be required in each subsequent year relative to the baseline.

It is important to note that this calculation measures changes from the baseline only. No attempt is made to forecast future changes in county data beyond the addition to County Taxable Real Property from the capital improvements proposed as part of the Otter Creek Solar Facility. As shown in Table 8, based on these calculations, we estimate the Otter Creek Solar Facility's addition to Mecklenburg County's Taxable Real Property would increase required local school funding by $38,715 in the facility's first year of operation, with that figure projected to gradually decline to $0 in the facility's 25th year of operation, as the value of the proposed capital investments is depreciated.

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[15] The Virginia Department of Education's composite index formula is: (0.5*(((0.66)*((County Taxable Real Property/County School ADM)/(State Taxable Real Property/State School ADM))+((0.33)*((County Taxable Real Property/County Population)/(State Taxable Real Property/State Population)))))+(0.4*(((0.66)*((County Adjusted Gross Income/County School ADM)/(State Adjusted Gross Income/State School ADM))+((0.33)*((County Adjusted Gross Income/County Population)/(State Adjusted Gross Income/State Population)))))+(0.1*(((0.66)*((County Taxable Retail Sales/County School ADM)/(State Taxable Retail Sales/State School ADM))+((0.33)* ((County Taxable Retail Sales/County Population)/(State Taxable Retail Sales/State Population)))))).

Table 8: Change in Composite Index and Required Local Contribution to School Budget Attributable to the Otter Creek Solar Facility over its 25 Year Life Expectancy (2017 Dollars)

Year	County Taxable Real Property[16]	Taxable Proposed Capital Investment [17]	Adj. County Taxable Real Property	Adj. Gross Income[18]	Taxable Retail Sales[19]	County School ADM[20]	County Pop.[21]	Composite Index[22]	Locally Funded School Budget[23]	Change in Locally Funded School Budget
Baseline	$3,731,642,952		$3,731,642,952	$520,275,959	$325,321,736	4,419	31,980	0.3491	$16,503,569	$0
1	$3,731,642,952	$16,226,802	$3,747,869,754	$520,275,959	$325,321,736	4,419	31,980	0.3499	$16,503,569	$38,715
2	$3,731,642,952	$16,226,802	$3,747,869,754	$520,275,959	$325,321,736	4,419	31,980	0.3499	$16,503,569	$38,715
3	$3,731,642,952	$16,226,802	$3,747,869,754	$520,275,959	$325,321,736	4,419	31,980	0.3499	$16,503,569	$38,715
4	$3,731,642,952	$16,226,802	$3,747,869,754	$520,275,959	$325,321,736	4,419	31,980	0.3499	$16,503,569	$38,715
5	$3,731,642,952	$16,178,122	$3,747,821,074	$520,275,959	$325,321,736	4,419	31,980	0.3499	$16,503,569	$38,590
6	$3,731,642,952	$15,738,195	$3,747,381,147	$520,275,959	$325,321,736	4,419	31,980	0.3499	$16,503,569	$37,463
7	$3,731,642,952	$15,271,224	$3,746,914,176	$520,275,959	$325,321,736	4,419	31,980	0.3499	$16,503,569	$36,266
8	$3,731,642,952	$14,777,208	$3,746,420,160	$520,275,959	$325,321,736	4,419	31,980	0.3498	$16,503,569	$35,000
9	$3,731,642,952	$14,254,344	$3,745,897,296	$520,275,959	$325,321,736	4,419	31,980	0.3498	$16,503,569	$33,660
10	$3,731,642,952	$13,699,027	$3,745,341,979	$520,275,959	$325,321,736	4,419	31,980	0.3498	$16,503,569	$32,236

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[16] *Data Source*: Virginia Department of Education, 2016-18 Composite Index of Local Ability to Pay.

[17] *Data Source*: Baseline data are taken from the Virginia Department of Education, 2016-18 Composite Index of Local Ability to Pay. Subsequent annual calculations are taken from Table 7.

[18] *Data Source*: Virginia Department of Education, 2016-18 Composite Index of Local Ability to Pay.

[19] *Data Source*: Virginia Department of Education, 2016-18 Composite Index of Local Ability to Pay.

[20] *Data Source*: Virginia Department of Education, 2016-18 Composite Index of Local Ability to Pay.

[21] *Data Source*: Virginia Department of Education, 2016-18 Composite Index of Local Ability to Pay.

[22] *Data Source*: Baseline data taken from the Virginia Department of Education, 2016-18 Composite Index of Local Ability to Pay. Subsequent annual calculations are based on the Adjusted County Taxable Real Property, Adjusted Gross Income, County School Average Daily Membership (ADM), and County Population data presented for each year.

[23] *Data Source*: Virginia Auditor of Public Accounts.

Table 8: Change in Composite Index and Required Local Contribution to School Budget Attributable to the Otter Creek Solar Facility over its 25 Year Life Expectancy (2017 Dollars)

Year	County Taxable Real Property[16]	Taxable Proposed Capital Investment [17]	Adj. County Taxable Real Property	Adj. Gross Income[18]	Taxable Retail Sales[19]	County School ADM[20]	County Pop.[21]	Composite Index[22]	Locally Funded School Budget[23]	Change in Locally Funded School Budget
11	$3,731,642,952	$13,109,453	$3,744,752,405	$520,275,959	$325,321,736	4,419	31,980	0.3497	$16,503,569	$30,725
12	$3,731,642,952	$12,485,623	$3,744,128,575	$520,275,959	$325,321,736	4,419	31,980	0.3497	$16,503,569	$29,127
13	$3,731,642,952	$11,823,930	$3,743,466,882	$520,275,959	$325,321,736	4,419	31,980	0.3497	$16,503,569	$27,431
14	$3,731,642,952	$11,124,374	$3,742,767,326	$520,275,959	$325,321,736	4,419	31,980	0.3496	$16,503,569	$25,638
15	$3,731,642,952	$10,381,547	$3,742,024,499	$520,275,959	$325,321,736	4,419	31,980	0.3496	$16,503,569	$23,734
16	$3,731,642,952	$9,593,646	$3,741,236,598	$520,275,959	$325,321,736	4,419	31,980	0.3496	$16,503,569	$21,715
17	$3,731,642,952	$8,758,867	$3,740,401,819	$520,275,959	$325,321,736	4,419	31,980	0.3495	$16,503,569	$19,575
18	$3,731,642,952	$7,873,605	$3,739,516,557	$520,275,959	$325,321,736	4,419	31,980	0.3495	$16,503,569	$17,306
19	$3,731,642,952	$6,936,056	$3,738,579,008	$520,275,959	$325,321,736	4,419	31,980	0.3494	$16,503,569	$14,904
20	$3,731,642,952	$5,940,813	$3,737,583,765	$520,275,959	$325,321,736	4,419	31,980	0.3494	$16,503,569	$12,353
21	$3,731,642,952	$4,887,873	$3,736,530,825	$520,275,959	$325,321,736	4,419	31,980	0.3493	$16,503,569	$9,654
22	$3,731,642,952	$3,770,027	$3,735,412,979	$520,275,959	$325,321,736	4,419	31,980	0.3492	$16,503,569	$6,789
23	$3,731,642,952	$2,585,470	$3,734,228,422	$520,275,959	$325,321,736	4,419	31,980	0.3492	$16,503,569	$3,753
24	$3,731,642,952	$1,802,978	$3,733,445,930	$520,275,959	$325,321,736	4,419	31,980	0.3491	$16,503,569	$0
25	$3,731,642,952	$1,802,978	$3,733,445,930	$520,275,959	$325,321,736	4,419	31,980	0.3491	$16,503,569	$0

Finally, Table 9 combines the results from the calculations depicted in Table 7 and 8 to provide an estimate of the net fiscal contribution that the proposed Otter Creek Solar Facility would make to Mecklenburg County over the period of its 25 year life expectancy. As these data indicate, we estimate net county revenue from the facility to be $29,438 in the facility's first year of operation (exclusive of county fees for permitting), with that figure projected to gradually decline to $7,573 in the facility's 25th year of operation, as the value of the proposed capital investments is depreciated. Overall, we estimate the Net Present Value (NPV), or value in todays' dollars, of the stream of local tax revenue payments from the proposed Otter Creek Solar facility over its 25 year life expectancy to be $392,922.[24]

Table 9: **Estimated Net County Tax Revenue Generated by the Otter Creek Solar Facility over its 25 Year Life Expectancy (2017 Dollars)**

Year	Gross Additional Annual County Tax Revenue[25]	Change in Locally Funded School Budget [26]	Net Additional Annual County Tax Revenue
1	$68,153	$38,715	$29,438
2	$68,153	$38,715	$29,438
3	$68,153	$38,715	$29,438
4	$68,153	$38,715	$29,438
5	$67,948	$38,590	$29,358
6	$66,100	$37,463	$28,638
7	$64,139	$36,266	$27,873
8	$62,064	$35,000	$27,065
9	$59,868	$33,660	$26,209
10	$57,536	$32,236	$25,299
11	$55,060	$30,725	$24,334
12	$52,440	$29,127	$23,313
13	$49,661	$27,431	$22,230
14	$46,722	$25,638	$21,085
15	$43,602	$23,734	$19,868
16	$40,293	$21,715	$18,579
17	$36,787	$19,575	$17,212
18	$33,069	$17,306	$15,763
19	$29,131	$14,904	$14,228

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[24] The discount rate used in this calculation is 2.78 percent, the rate on 30-year U.S. Treasury bonds as of November 17, 2017. *Data Source*: U.S. Department of Treasury.
[25] From Table 7.
[26] From Table 8.

Table 9: **Estimated Net County Tax Revenue Generated by the Otter Creek Solar Facility over its 25 Year Life Expectancy (2017 Dollars)**

Year	Gross Additional Annual County Tax Revenue[25]	Change in Locally Funded School Budget [26]	Net Additional Annual County Tax Revenue
20	$24,951	$12,353	$12,599
21	$20,529	$9,654	$10,875
22	$15,834	$6,789	$9,045
23	$10,859	$3,753	$7,106
24	$7,573	$0	$7,573
25	$7,573	$0	$7,573
NPV			$392,922

The estimates provided in this report are based on the best information available and all reasonable care has been taken in assessing that information. However, because these estimates attempt to foresee circumstances that have not yet occurred, it is not possible to provide any assurance that they will be representative of actual events. These estimates are intended to provide a general indication of likely future outcomes and should not be construed to represent a precise measure of those outcomes.