

Final Report: Projection of Estimated Property Tax Liability for Swallowtail Solar Development in Bartholomew County, Indiana

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21 February 2024



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Summary

Arevon plans to invest approximately \$250 million to construct a 1,100-acre solar electricity facility and associated transmission lines in Bartholomew County, Indiana (i.e., the Swallowtail development). This report describes an analysis by Gnarly Tree Sustainability Institute to model a reasonable estimate of Arevon’s potential property tax implications from the development over the period 2026 to 2055.

There is no simple rule of thumb or “off the shelf” model to estimate the expected property tax liability for the development; the projections are the product of a customized analysis that reflects historic trends in key variables, legal restrictions on allowable levies and liabilities, and possible future developments in the area of the development. It begins with an understanding of Indiana’s unique property tax structure.

Every year, each local government in Indiana calculates its property tax rate by dividing the revenue to be collected (the levy) by the net assessed value (NAV) of taxable property within its borders. The total levy for each unit is the sum of the approved levies for each of its funds. Most of the funds that make up each unit’s levy are limited by a state-imposed maximum, which increases each year by a statewide percentage known as the maximum levy growth quotient (MLGQ). Levies for debt service and those set by referendum are outside the maximum limits. The NAV is established by a county assessor based on the value of the taxable land, buildings, and business equipment within the jurisdiction minus applicable deductions.

Any given parcel is located in multiple jurisdictions (or units), including a county, township, and school district; it may also be in a city or town, a library district, and one or more special districts, such as those for solid waste management, fire protection, or mass transit. An area with a particular set of overlapping jurisdictions is called a tax district. The district rate that taxpayers pay on the NAV of their property is the sum of the rates of the units in which the property is located. The district rate times the NAV for the property is its gross tax bill. Circuit breaker caps trigger additional relief on the property tax bill in cases where it exceeds 1 percent of gross assessed value (GAV) for homesteads, 2 percent of GAV for rental properties and farmland, or 3 percent of GAV for businesses.

The Swallowtail property is located on parcels in three tax districts that are defined by the boundaries of the Clay, Columbus, and Flat Rock Townships outside the City of Columbus. These districts include eight local government jurisdictions (Table 1). Projecting a tax rate for the development requires projections of the property tax levies of these overlapping units. It also requires projections of the total assessed values of the various types of property within the units. In addition, Swallowtail’s assessment will itself affect the total assessed values, levies, and rates of the units and districts where it is located.

Table 1: Tax districts and government units encompassing Swallowtail development

Jurisdictional Unit	Tax District		
	Clay	Columbus	Flat Rock
Bartholomew County	✓	✓	✓
Clay Township	✓		
Columbus Township		✓	
Flat Rock Township			✓
Bartholomew Consolidated School Corp	✓	✓	
Flat Rock - Hawcreek School Corporation			✓
Bartholomew County Public Library	✓	✓	✓
Bartholomew County Solid Waste Management	✓	✓	✓

To project the amount of property taxes that will be paid by Arevon to the units shown in Table 1 for each year between 2026 and 2055, we projected the following variables:

- **NAV for the Swallowtail property in each tax district**, including parcels that will be converted from farmland to solar panels and a substation (in Clay and Flat Rock Townships) and parcels that

will remain farmland but have transmissions lines (in Clay and Columbus Townships); we calculated the NAV based on Arevon’s anticipated investments, projected growth in the solar land base rate (which is set by the state and determines the value of the land), growth in business property values based on projected consumer price index trends, expected methods for valuing personal property pursuant to Indiana laws and practices (e.g. a 30 percent depreciation “floor” on personal property), and typical state deductions.

- **NAV for each of the jurisdictional units** based on a) trends in housing counts and values in Bartholomew County from the past decade, b) farmland values based on a state formula that includes corn and soybean prices, yields, costs, land rents, and interest rates, with each element projected based on government forecasts and regression results, c) farmland acreage based on recent trends in each unit; e) business property values based on projected CPI trends; f) deductions based on average percentages in each unit in the last five years; and g) the impact of the Swallowtail project addition.
- **Tax levies for each fund in each unit** including a) constrained funds, which are expected to grow in accordance with the projected MLGQ, which in turn is based on projections of Indiana non-farm personal income, and b) unconstrained funds, which are assumed to have constant rates based on available information.
- **Tax rates for each tax district** based on the sum of tax rates for all applicable units (calculated as the unit’s total tax levy divided by its NAV).

Based on this approach, the projected liability paid on Swallowtail will grow from \$1.4 million in 2026 to \$2.4 million in 2055, with the tax revenues allocated to government units based on their tax rate and the share of the Swallowtail property that is within their jurisdiction (Table 2). Some of this payment will become added revenue for local government units, resulting in higher overall tax revenues than they would have had in the absence of the project. In particular, units with debt service or referendum rates (e.g. the Bartholomew Consolidated School Corporation) will realize added revenue since the tax rate for those funds is not affected by the unit NAV. The rest of the payments substitute for taxes paid by existing property owners in Bartholomew County. Local units’ assessed values will be higher as a result of the Swallowtail project, but the maximum levy will grow with the state-level MLGQ. With higher assessed values but the same levy amount, tax rates will be lower than they would have been without the project. As such, existing taxpayers will benefit from lower tax bills.

Table 2: Summary of projected tax revenues by unit from Swallowtail, 2026 to 2055 (thousands)

Unit	2026	2055	Annual Average	Total
Bartholomew County	\$378.2	\$699.5	\$519.2	\$15,575.8
Clay Township	\$45.1	\$77.3	\$59.1	\$1,773.5
Columbus Township	\$0.8	\$1.2	\$0.9	\$28.2
Flat Rock Township	\$5.6	\$10.4	\$7.7	\$230.8
Bartholomew Consolidated School Corp	\$865.7	\$1,307.4	\$1,055.6	\$31,669.3
Flat Rock - Hawcreek School Corp	\$63.9	\$105.2	\$82.0	\$2,460.3
Bartholomew County Public Library	\$56.5	\$111.9	\$80.9	\$2,426.2
Bartholomew County Solid Waste Management	\$31.2	\$61.7	\$44.6	\$1,338.7
Total	\$1,446.9	\$2,374.7	\$1,850.1	\$55,502.7

1 Introduction and Background

This report describes an analysis by Gnarly Tree Sustainability Institute to develop a central tendency projection and a range of reasonable expectations for the local tax rates applicable to a potential solar photovoltaic power development (Swallowtail) and associated transmission lines in Bartholomew County, Indiana over the period 2026 to 2055. There is no simple rule of thumb or “off the shelf” model to estimate the expected tax rate; the projections are the product of a customized analysis that reflects historic trends in key variables, legal restrictions on allowable levies and liabilities, and possible future developments in the area of the development.

This report documents the methods, data, and assumptions used to project the tax rate over the analysis period, as well as a description of the uncertainties inherent in the exercise; an accompanying spreadsheet contains the model. The rest of this section provides a brief background overview of the unique local tax structure in Indiana and its implications for the tax liability of the development (Section 1.1) followed by a brief overview of the tax districts where the Swallowtail development and associated transmission equipment will be located – the Clay Township, Columbus Township, and Flat Rock Township tax districts (Section 1.2). Section 2 presents an approach to estimating Swallowtail tax liability for each year and identifies key variables that will drive the results. Sections 3 through 5 describe the methods, data, and assumptions used to project each of the key variables to execute the model. Section 6 presents the best-estimate results based on the assumptions described, characterizes key uncertainties, and provides a range of results based on reasonable assumptions. Section 7 provides references.

1.1 Property Tax Liability in Indiana

For each year, the property tax liability for the Swallowtail project will be based on the assessed value of its real and personal property, which is typically determined by county assessors. Real property includes land and buildings, with the assessed value being based on the potential market value in its current use. In some cases, including for farmland and solar power installations, land assessments are determined by legislative rules (the farmland base rate and the solar land base rate, respectively). Personal property is almost entirely business equipment, which is assessed relative to its initial purchase price, depreciated each year until it reaches 30 percent which represents the lower limit in Indiana.

The gross assessed value (GAV) of the property is the sum of the real and personal property, and the net assessed value (NAV) is the GAV minus any deductions (called abatements when applied to businesses) that the project’s owners have negotiated with the tax district. The project’s tax liability is calculated as the NAV multiplied by the tax rate for the district. This liability is subject to a “circuit breaker” tax cap representing the maximum amount that the property can be billed. For real and personal business property, the cap is 3 percent of GAV. Homestead properties have a 1 percent cap, while farmland and rentals have a 2 percent cap. If a property’s calculated tax bill exceeds its cap, then the owner is issued a credit to reduce the bill to an allowable amount. In cases where a property’s NAV and GAV are equal to each other (i.e., with no deductions), then the cap is triggered when the tax rate exceeds the cap for the property category. However, in cases where the NAV is lower than the GAV (i.e., the owner is receiving an abatement or other deduction), the tax rate would have to be higher to trigger the cap, since the cap is calculated based on the GAV while the tax liability is based on the NAV.

Each tax district in Indiana is made up of overlapping local units of government that each have jurisdiction over the properties within it, including counties, cities, towns, townships, school districts, and other entities including public libraries, waste management districts, and others. Every year, each of these units establishes its own tax rate, expressed as dollars to be collected through property taxes to meet operating expenses per 100 dollars of the NAV of all properties within the unit’s jurisdiction. Summing the tax rates

of all units for a given year yields the tax rate that applies to all of the properties within the tax district. The revenue from the district is then distributed among units pursuant to their relative share of the rate.

A key constraint on the tax rate is that the state imposes a maximum on a large part of each unit's levies. In cases where the calculated levy needed to meet operating expenses exceeds the maximum, the total levy must be adjusted downward so that it is at or below the maximum. Typically, counties issue levies that are below their maximum, while other jurisdictions tend to issue levies that track closely to their maximums. Some categories of expenses are exempt from the maximum levy constraint, including debt service and referendums, but they often have controlled tax rates.

This approach – with overlapping jurisdictional units, constrained and unconstrained levy funds, regulations governing the values of different types of property, deductions, negotiated abatements, and variable circuit breaker caps – results in a complicated system that can be difficult to predict even over the short term. As an example, consider what happens when a new development locates within a county. The GAV and NAV increase within the units that make up the applicable tax district. The added assessed value multiplied by the tax rate will increase the tax levy, unless the unit is already at its maximum levy, or reaches its maximum levy. Units at or near their maximum levies cannot collect the full added revenue from new assessed value. Instead, the maximum levy is distributed across a larger overall NAV, which will reduce the overall tax rate, lowering the taxes paid by existing taxpayers. In turn, lower tax bills for existing taxpayers means that fewer taxpayers will be eligible for circuit breaker credits. Thus, even with no change to the maximum levy, the local units will be able to collect a larger share of their property tax levies as a result of the new development's effect on assessments. Effectively, the new development's tax payment can be thought of as going directly to local governments to provide services, indirectly reducing existing taxpayer payments, or indirectly adding to local government revenues by reducing circuit breaker credits.

Additionally, the system is further complicated for large developments like Swallowtail because the property can overlap multiple tax districts (whereas most properties are located and taxed in a single tax district). Because this is typical of energy utilities – particularly with respect to transmission lines – they are handled differently from other types of property (Indiana DLGF, 2024). For the parcels where solar panels are located, each tax district will levy taxes on the portion of the property that is located within its boundaries. Transmission lines are defined as distributable property by the state's Real Property Guidelines and are assessed by the state rather than by the county assessor. The state then allocates the assessed value to the district where the transmission lines are located.¹ As such, while the equipment may be assessed by the state rather than the county, the tax district location of each piece of equipment still determines the effective tax rate and tax liability.

1.2 Tax Districts for Swallowtail Development

The Swallowtail development will be located in three tax districts in Bartholomew County:

- **Clay Township** has a population of 6,980, and the area is predominantly agricultural. The unincorporated town of Petersville is the township's largest municipality (but does not have taxing power), and the City of Columbus stretches into the township as well.
- **Columbus Township** occupies the center of Bartholomew County and is home to most of the City of Columbus. Its population is 51,310. The township encompasses most of the county's industrial, commercial, and residential land. Outside of the City, the township is primarily agricultural.

¹ IC 6-1.1-8-25

- **Flat Rock Township** has a population of 1,593 and is predominantly agricultural. There is one incorporated town (Clifford) with a population of 205, and the City of Columbus also stretches into the township.

Figure 1 at the end of this chapter shows the township boundaries as well as the applicable tax districts in the relevant area of Bartholomew County. It also identifies land parcels allocated for different uses, including the installation of solar panels on parcels in Clay and Flat Rock townships, transmission lines and substations in Clay and Columbus townships, and a utility-owned switchyard in Columbus Township.

In addition to their respective township units, these tax districts all encompass three additional units:

- **Bartholomew County** is located in central south Indiana and has a population of approximately 82,475. The County is composed of 12 Townships including Columbus, Clay, and Flat Rock (Figure 1). It has seven incorporated cities and towns, the largest of which is the City of Columbus.
- **Bartholomew County Public Library** is located in Columbus with a branch in Hope and serves all of Bartholomew County. It became a public entity in 1969 and is run by a board of trustees appointed by the county council, county commissioners, and school corporations.
- **Bartholomew County Solid Waste Management District** provides waste management services in Bartholomew County, including recycling drop-off centers, bins, and assistance grants. It is overseen by a board of directors and funded by property taxes, sales of recyclables, and landfill fees.

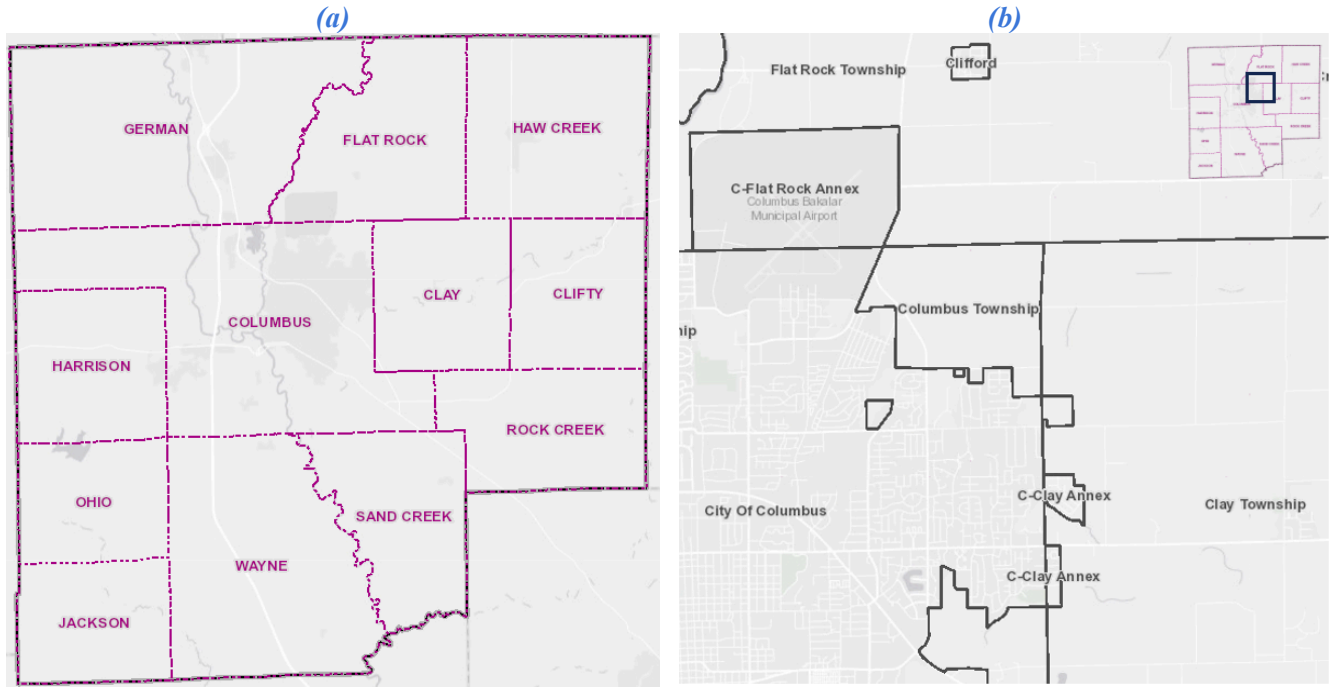
The three townships also span two school district units.

- **Bartholomew Consolidated School Corporation (BCSC)** is the only school system in the Clay and Columbus townships. It had 11,635 students in 2023, with enrollment increasing by an average of 0.38 percent each year since 2006. It consists of 15 buildings, including 11 elementary schools, two middle schools, and two high schools.
- **Flat Rock-Hawcreek School Corporation** is the school district for Flat Rock Township. It had 972 students in 2023, with enrollment decreasing by an average of 1.11 percent each year since 2006. It consists of an elementary school and a high school.

Table 3 shows the applicable units and 2024 tax rates for the three relevant tax districts; blank cells indicate that the tax district does not encompass or collect taxes for the unit.

Table 3: 2024 Tax rates by unit for relevant tax districts

Unit	2024 Certified Tax Rate by District		
	Clay	Columbus	Flat Rock
Bartholomew County	0.398	0.398	0.398
Clay Township	0.063		
Columbus Township		0.338	
Flat Rock Township			0.089
Bartholomew Consolidated School Corporation	0.999	0.999	
Flat Rock - Hawcreek School Corporation			1.008
Bartholomew County Public Library	0.059	0.059	0.059
Bartholomew County Solid Waste Management	0.033	0.033	0.033
Total	1.551	1.827	1.586



(c)

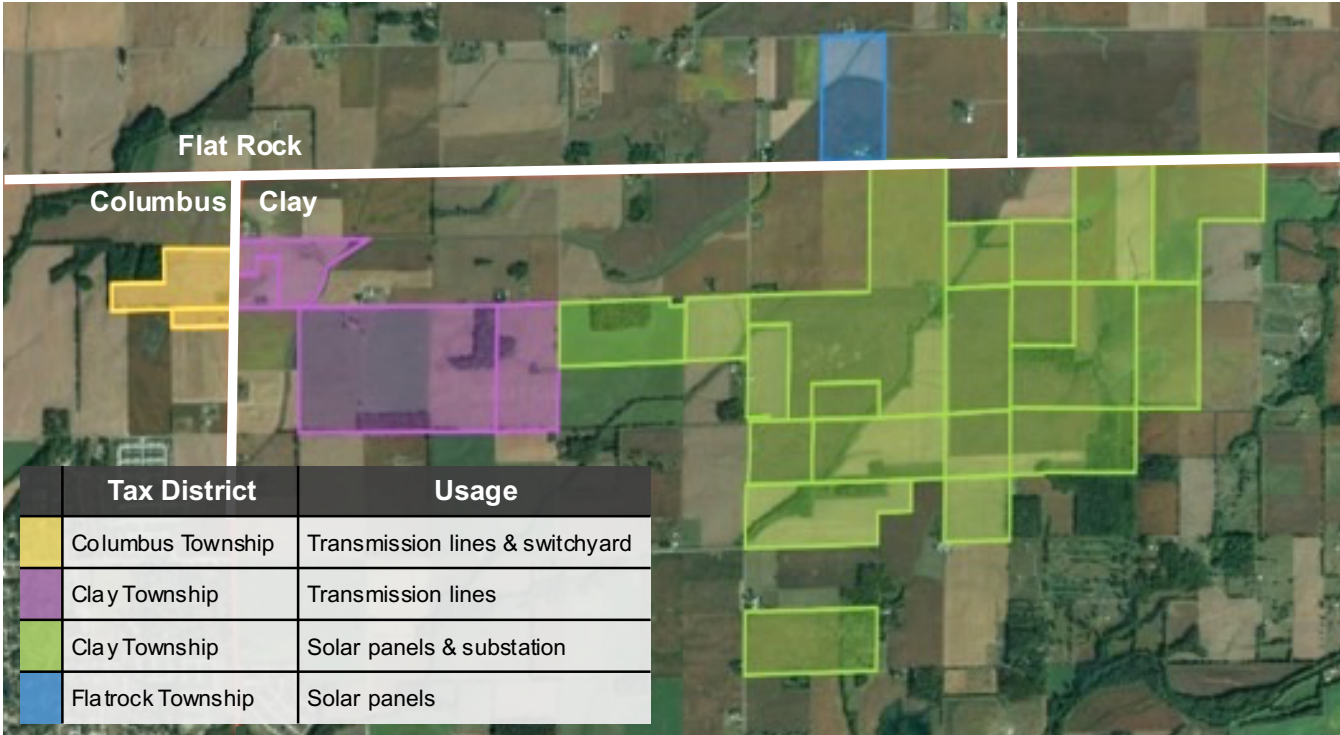


Figure 1: Bartholomew County townships (a), tax district boundaries in relevant area (b),² and planned project location and land uses (c)³

² Source: (Bartholomew County, 2023)

³ Source: based on parcel location data provided by Arevon and Google Earth township boundaries

2 Approach: Modeling the Tax Liability

Ultimately, modeling the tax rate an individual business will pay over a thirty-year time horizon starts at the most basic level – the tax liability of individual property i in year y calculated as the net assessed value of the property for that year (NAV_{iy}) multiplied by the tax rate for the tax district d (TR_d), as shown in Equation 1.

Starting with just those two variables, we can begin to expand the calculation to further elaborate their underlying variables until we reach a level of disaggregation that enables a meaningful projection of key contributing variables based on available data and trends, but without implying a level of precision that is not supported by the data (particularly over the 30-year time horizon of the analysis).

Sections 2.1 and 2.2 detail the underlying calculations for the NAV_i and TR_d variables, respectively. In describing the calculation of the variables, it also describes some of the key constraints/rules bounding the results and explains how they affect the tax liability calculation. Section 2.3 summarizes the final model of the tax liability for each year based on this breakout.

$$\text{Equation 1:} \quad T_{i,d} = TR_d \times NAV_{i,d}$$

$T_{i,d}$ = tax liability for property i in district d (in dollars)
 $NAV_{i,d}$ = net assessed value for property i in district d (in dollars)
 TR_d = tax rate for district d (in dollars per hundred dollars NAV)

2.1 Net Assessed Value for Swallowtail Property

The NAV for the property (NAV_i) is based on its gross assessed value (GAV_i) minus any abatements that it has received. The GAV is calculated as the sum of the value of real property (the land and associated improvements) and personal property (primarily solar energy equipment).

In Indiana, the value of real property for solar developments is determined based on the solar land base rate (SLBR) for that year and the size of the development plus the value of real improvements to the property. The value of personal property is calculated based on the initial purchase and the applicable depreciation schedule. As such, the calculation of NAV for the property can be expressed as:

$$\text{Equation 2:} \quad NAV_i = (S_i \times SLB_d) + (P_i \times D_i) + Im_i - A_i$$

NAV_i = net assessed value for property i (in dollars)
 S_i = the size of property i (in acres)
 SLB_d = the solar land base for the district (in dollars per acre)
 P_i = the initial purchase price for the property's equipment (in dollars)
 D_i = the applicable depreciation adjustment based on the age of property i (percent)
 Im_i = the value of real improvements to the land (in dollars)
 A_i = the value of abatements and tax deductions received by the property (in dollars)⁴

In addition to the solar development itself, there will also be transmission lines associated with the Swallowtail property. These transmission lines will be located on easements on agricultural land; as such, there is no real property associated with them. However, there will likely be tax liability associated with the equipment as personal property, again calculated as the initial purchase and depreciation schedule. In

⁴ Note that abatements and deductions are typically expressed in terms of percentages of GAV so the dollar value of A_i is calculated accordingly before being used in Equation 2.

other words, the NAV for the transmission lines is calculated based on Equation 2 but assuming that the size of the property is zero acres and that there are no real improvements to the land.

2.2 Tax Rate for the District

The tax rate for the district is considerably more complex since it reflects both the tax base and the operating budgets of several overlapping jurisdictional units. In the case of the Swallowtail development, three tax districts encompass eight relevant units:

1. Bartholomew County (County);
2. Clay Township (Clay Twp);
3. Columbus Township (Columbus Twp);
4. Flat Rock Township (Flat Rock Twp);
5. Bartholomew Consolidated School Corporation (BCSC);
6. Flat Rock-Hawcreek School Corporation (F-H Schools);
7. Bartholomew County Public Library (Library); and
8. Bartholomew County Solid Waste Management District (Solid Waste).

The tax rate for each district is calculated as the sum of the tax rates for the government units that comprise it (Equation 3).

Equation 3: $TR_d = \sum_1^n TR_u$

- TR_d = tax rate for district *d* (in dollars per hundred dollars NAV)
- n* = the number of government units *u* in district *d*
- TR_u = tax rate for government unit *u* within district *d* (in dollars per hundred dollars NAV)

Note that, because the Swallowtail development will be located in three different tax districts, an additional step is needed to calculate the effective tax rate for the property. As shown in Equation 4, this involves applying a fraction to the tax rate for each district corresponding to the percentage of the Swallowtail property that is located within it, then summing the weighted rates.⁵

Equation 4: $TR_{SW} = TR_{CL} \times p_{CL} + TR_{CO} \times p_{CO} + TR_{FR} \times p_{FR}$

- TR_{SW} = tax rate for Swallowtail property (in dollars per hundred dollars NAV)
- TR_{CL} = tax rate for the Clay Township tax district (in dollars per hundred dollars NAV)
- p_{CL} = percentage of the Swallowtail property located in Clay Township
- TR_{CO} = tax rate for the Columbus Township tax district (in dollars per hundred dollars NAV)
- p_{CO} = percentage of the Swallowtail property located in Columbus Township
- TR_{FR} = tax rate for the Flat Rock Township tax district (in dollars per hundred dollars NAV)
- p_{FR} = percentage of the Swallowtail property located in Flat Rock Township

⁵ Note that the Swallowtail property will pay the full Clay Township tax rate on the share of its NAV that is located within the Clay Township tax district, and the full Columbus Township tax rate on the share located within the Columbus Township tax district, etc. However, for the purposes of this analysis, we also project an overall weighted average “applicable” rate for the property over the analysis period. This is a simplified representation of the likely overall tax liability for the development.

Each of the units in each tax district calculates its annual tax rate based on its annual operating budget, other sources of revenue besides property taxes, and the NAV of all properties within the unit’s boundaries (Equation 5).

Equation 5:
$$TR_u = \frac{TL_u}{NAV_u} \times 100$$

- TR_u = tax rate for government unit *u* (in dollars per hundred dollars NAV)
- TL_u = tax levy for government unit *u* (in dollars)
- NAV_u = the net assessed value for all properties encompassed by government unit *u*

The numerator in Equation 5, the tax levy, is the operating budget minus other sources of revenue; in other words, it is the amount that the unit must collect through property taxes to meet its funding needs for the year. Derivation of each unit’s tax levy is not as simple as the above relation implies, however. In Indiana, jurisdictions have maximums on the amount of the levy that they can legally impose. These unit-specific maximums increase each year by a certain state-wide percentage, known as the maximum levy growth quotient, or MLGQ.

Moreover, the maximums are not applicable to all expenses. Each jurisdiction has some funds that are subject to the maximum and others that are exempt; the latter includes debt service levies, levies passed by referendum, and a few other categories. These unconstrained funds are typically limited by rate maximums rather than by levy limitations. As such, it is not sufficient even to project the operating budgets of each unit within the district and sum across them to derive the district’s overall rate for a given year. Instead, we must disaggregate further within each unit to project the levies of those funds that are constrained by the maximum levy (to calculate the tax rate together with the NAV) and the tax rates for those that are not.

For the constrained funds, the maximum levy that can be imposed is based on the unit’s previous year maximum levy multiplied by the state’s MLGQ for the year. In Indiana, the majority of units impose tax levies that are at or very near their maximum every year. As such, a projection of the MLGQ for the state together with a starting maximum levy for the constrained funds in each unit will yield a projection of the constrained levies in each unit of the district.

For unconstrained funds in each unit, it will be necessary instead to project the likely tax rate based on other factors such as the operating budget and non-property tax revenues or based on trends in rates over time. For these funds, it is not necessary to calculate the likely operating budget or tax levy.

Equation 6 shows the calculation that will be needed to project the tax rate for each of the units in the district each year.

Equation 6:
$$TR_{u,y} = \frac{(TL_{u,c,y-1} \times MLGQ_y)}{NAV_{u,y}} \times 100 + TR_{u,f,y}$$

- TR_{u,y} = tax rate for government unit *u* (in dollars) in year *y*
- TL_{u,c,y-1} = tax levy for constrained funds in government unit *u* in the preceding year
- MLGQ_y = the state’s maximum levy growth quotient in year *y*
- NAV_{u,y} = the net assessed value for all properties encompassed by government unit *u* in year *y*
- TR_{u,f,y} = tax rate for unconstrained funds *f* in government unit *u* (in dollars)

The NAV for each unit, the denominator in the calculation of the tax rate for constrained funds, is the sum of the NAV of all the properties that are within the boundaries of the unit’s jurisdiction. The properties are

divided into five categories: a) homestead; b) non-homestead residential; c) farmland; d) business real property; and e) business personal property.

The NAV for the unit, then, is the sum of the NAV of the five categories (Equation 7), and each category NAV is the sum of all properties in that category within the unit. To project NAV for each unit, it is necessary to develop projections of each category over the analysis period.

Equation 7:
$$NAV_u = NAV_{h,u} + NAV_{n,u} + NAV_{f,u} + NAV_{r,u} + NAV_{p,u}$$

- NAV_u = Net assessed value for all properties in government unit *u* (in dollars)
- NAV_{h,u} = Net assessed value for all homestead properties in government unit *u* (in dollars)
- NAV_{n,u} = Net assessed value for all non-homestead residential properties in government unit *u* (in dollars)
- NAV_{f,u} = Net assessed value for all farmland properties in government unit *u* (in dollars)
- NAV_{r,u} = Net assessed value for all business real property in government unit *u* (in dollars)
- NAV_{p,u} = Net assessed value for all business personal property in government unit *u* (in dollars)

Additionally, parts of all three relevant townships overlap the City of Columbus. The city has its own fire department, so its taxpayers do not pay the township fire department tax rates. This means that the township fire department rates apply only to a part of the township’s total NAV. As such, to calculate the tax rate for those funds within the township units, it is also necessary to project the NAV for the parts of the districts that are outside of the city.⁶

2.3 Summary of Tax Liability Calculation and Key Variables

Equation 8 brings together all of the preceding equations to elucidate the variables that must be projected over the analysis period to estimate the likely tax liability of the Swallowtail property each year.

Equation 8:

$$T_{i,y} = [(S_i \times SLBR_d) + (P_i \times D_i) + Im_i - A_i] \times \sum_1^n \left(\frac{TL_{u,c,y-1} \times MLGQ}{NAV_{h,u} + NAV_{n,u} + NAV_{f,u} + NAV_{r,u} + NAV_{p,u}} + TR_{u,f,y} \right) \times p_d$$

- T_{i,y} = the tax liability of property *i* in year *y*
- n* = the number of units with jurisdiction over property *i*
- S_{*i*} = the size of property *i* (in acres)
- SLBR_{*d*} = the solar land base for the district (in dollars per acre)
- P_{*i*} = the initial purchase price for the property’s equipment (in dollars)
- D_{*i*} = the applicable depreciation adjustment established by the state based on the age of property *i*
- Im_{*i*} = the value of real improvements to the land (in dollars)
- A_{*i*} = the abatements and deductions received by property *i* (in dollars)
- TL_{u,c,y-1} = tax levy for constrained funds in government unit *u* in the preceding year
- MLGQ = the state’s maximum levy growth quotient
- NAV_{h,u} = net assessed value for all homestead properties in government unit *u* (in dollars)
- NAV_{n,u} = net assessed value for all non-homestead residential properties in government unit *u* (in dollars)
- NAV_{f,u} = net assessed value for all farmland properties in government unit *u* (in dollars)
- NAV_{r,u} = net assessed value for all business real property in government unit *u* (in dollars)
- NAV_{p,u} = net assessed value for all business personal property in government unit *u* (in dollars)
- TR_{u,f,y} = tax rate for unconstrained funds *f* in government unit *u* (in dollars)
- p_{*d*} = percentage of the property *i* that is located within district *d*

⁶ See Section 5.1 for additional details on this adjustment.

3 Net Assessed Value for Swallowtail Property

The Swallowtail development encompasses a) an 1,100-acre solar farm consisting of solar panels and a substation; b) 33 transmission line supports; and c) a separate switchyard and substation. After construction is completed and the development is operational, the separate switchyard and substation (c) will be owned and maintained by the utility company; as such, Arevon is not expected to incur any property tax liability associated with it. Table 2 shows key assumptions used in the calculation of NAV for the solar farm (a) and transmission lines (b).

Equation 2 in Section 2.1 shows the calculation of the net assessed value (NAV) for the property in a given year based on the sum of real and personal property values minus abatements and other deductions. This section describes how we projected the Swallowtail development’s real property value (GAV_{r_i}), personal property value (GAV_{p_i}), and the abatements (A_i) to calculate the NAV_i each year in the analysis period. It also briefly characterizes some key uncertainties and their implications. Section 3.4 summarizes the results.

Table 4: Key Assumptions for Swallowtail Development NAV

	Solar farm	Transmission lines
Percent in Clay Township	93% ^a	76% ^b
Percent in Columbus Township	0% ^a	24% ^b
Percent in Flat Rock Township	7% ^a	0% ^b
Personal property investment	\$216,009,164	\$2,706,764
Improvements investment	\$28,749,374	n/a ^c
Property size (acres)	1,100	n/a ^c
First year of operations	2026	2026
a. Based on 82 acres in Flat Rock Township and 1,018 acres in Clay Township. b. Based on 25 transmission line supports in Clay Township and 8 in Columbus Township. c. The transmission lines will be located on agricultural land with easements that will continue to operate as agricultural land; no investments in real property or improvements are expected.		

3.1 Real Property Value

The real property value for Swallowtail will include the value of the 1,100-acre solar farm land as well as associated improvements (i.e. permanent changes to the land that are not equipment).

The state sets an annual per-acre assessed value for the land under and associated with solar equipment – the solar land base rate (SLBR). As such, GAV for the land will be determined based on the size in acres multiplied by the SLBR in each year. We assume the Swallowtail development will encompass approximately 1,100 acres over the entire analysis period. The state sets the SLBR for three regions based on the median “true tax value” per acre of land classified as utility property for the preceding year. Bartholomew County is in the south district, which has a 2023 SLBR of \$5,400. However, the state does not provide the underlying data, and the values for 2020 to 2022 are not well correlated with available land value measures.⁷ As such, there is not sufficient information to project the SLBR over the analysis period. We assume that it will increase by 2 percent annually.

⁷ The 2020 SLBR for the south district was \$5,120, and it was \$5,250 for 2021.

For improvements, we assume the Swallowtail development will have an initial investment of \$28.75 million, which will have an assessment of 50 percent or \$14.37 million in the first year of operation, 2026, and then increase according to the projected growth in business property values within the tax district (described in Section 4.3).

For each year, GAV_{R_i} will be the sum of the land assessed value and the value of the improvements.

3.2 Personal Property Value

The GAV for business personal property (GAV_{P_i}) is determined by the investment amount and a depreciation schedule. We assume that the initial investment in the solar farm equipment (panels and substation) will be \$216,009,164. For transmission lines, we assume an initial investment of \$2,706,764. As such, total personal property investments are \$218.72 million.

Personal property assessments depreciate over time based on a depreciation schedule but are subject to a 30 percent floor. This means that the total assessed value of a business’s equipment cannot fall below 30 percent of its original cost or purchase price, even if individual equipment depreciates to lower values. As such, we assume that the lowest GAV for the personal property will be \$65.6 million, which is 30 percent of the original investment.

Table 5 shows the calculation of the GAV_{P_i} , based on the estimated investment amount and the MACRS 5-year double declining balance depreciation schedule, subject to the 30 percent floor.

Table 5: Projected GAV_{P_i} for Swallowtail

	Depreciation Percentage ^a	Depreciation Deduction ^b	Calculated Value ^c	Value Floor ^d	GAV_{P_i} ^e
2026	20.00%	\$43,743,186	\$174,972,743	\$65,614,779	\$174,972,743
2027	32.00%	\$69,989,097	\$104,983,646	\$65,614,779	\$104,983,646
2028	19.20%	\$41,993,458	\$62,990,188	\$65,614,779	\$65,614,779
2029	11.52%	\$25,196,075	\$37,794,113	\$65,614,779	\$65,614,779
2030	11.52%	\$25,196,075	\$12,598,038	\$65,614,779	\$65,614,779
2031	5.76%	\$12,598,038	\$0	\$65,614,779	\$65,614,779
2032+	0.00%	\$0	\$0	\$65,614,779	\$65,614,779

a. Based on MACRS 5-year double declining balance half-year convention depreciation table.
 b. Percentage times equipment investment amount.
 c. For Year 1, investment amount (\$247,465,303) minus deduction; otherwise, value from preceding year minus deduction.
 d. Value floor percentage (30 percent) times equipment investment amount.
 e. Greater of either the calculated value or the value floor.

Note that there is potential for the 30 percent floor on personal property valuation to change over the course of the analysis period, given political will in the state to eliminate or reduce it. Given this political context, we conducted a sensitivity analysis on this variable to evaluate the effect of its removal or reduction during the analysis period, which is detailed in Section 6.2.

3.3 Deductions

The NAV_i for the Swallowtail property will be the GAV_i (the sum of real and personal property) minus applicable tax deductions and negotiated abatements. Indiana Administrative Code Section 50 IAC 5.1-6-8

provides a 60 percent tax deduction on the personal property value in the first year of operation (the deduction for gross additions). We assume that the development will not receive any abatements.

3.4 Summary of Swallowtail Net Assessed Value Projection

Table 6 shows the projected NAV for the Swallowtail property over the analysis period based on the assumptions described in this section. For discussion of key uncertainties and associated sensitivity analyses, see Section 6.2.

Since the solar equipment will be located on land converted from agricultural purposes, the development will represent an increase in NAV since each acre will be assessed using the SLBR (with a projected 2026 value of \$5,508) rather than the farmland base rate (with a projected 2026 value of \$2,280 as described further in Section 4.2.2). Additionally, the property’s real improvements and personal property investments will also represent increases to the tax district NAVs. Relative to a baseline scenario of maintaining the 1,100 acres as farmland, the projected NAV_i represents an increase of over \$86 million in 2026, \$122 million in 2027, and \$83 million to \$100 million each year between 2028 and 2055. By increasing the denominator of tax rate formula (i.e. the unit-wide NAV, as shown in Equation 5), this increased NAV will result in lower overall tax rates for residents and businesses in the tax districts.

Table 6: Summary of Projected Net Assessed Value for Swallowtail Property, 2026 to 2055

	Solar Land Base Rate	Gross Assessed Value		State Tax Deduction	Net Assessed Value
		Real Property	Personal Property		
2026	\$5,618	\$20,554,663	\$174,972,743	\$104,983,646	\$90,543,760
2027	\$5,731	\$20,974,671	\$104,983,646	\$0	\$125,958,317
2028	\$5,845	\$21,421,378	\$65,614,779	\$0	\$87,036,156
2029	\$5,962	\$21,887,967	\$65,614,779	\$0	\$87,502,746
2030	\$6,081	\$22,367,090	\$65,614,779	\$0	\$87,981,869
2031	\$6,203	\$22,857,278	\$65,614,779	\$0	\$88,472,057
2032	\$6,327	\$23,358,944	\$65,614,779	\$0	\$88,973,723
2033	\$6,453	\$23,872,624	\$65,614,779	\$0	\$89,487,403
2034	\$6,583	\$24,398,553	\$65,614,779	\$0	\$90,013,332
2035	\$6,714	\$24,935,767	\$65,614,779	\$0	\$90,550,546
2036	\$6,849	\$25,482,043	\$65,614,779	\$0	\$91,096,822
2037	\$6,985	\$26,037,812	\$65,614,779	\$0	\$91,652,591
2038	\$7,125	\$26,603,902	\$65,614,779	\$0	\$92,218,681
2039	\$7,268	\$27,181,019	\$65,614,779	\$0	\$92,795,798
2040	\$7,413	\$27,769,728	\$65,614,779	\$0	\$93,384,506
2041	\$7,561	\$28,370,630	\$65,614,779	\$0	\$93,985,409
2042	\$7,713	\$28,984,366	\$65,614,779	\$0	\$94,599,144
2043	\$7,867	\$29,611,409	\$65,614,779	\$0	\$95,226,188
2044	\$8,024	\$30,252,469	\$65,614,779	\$0	\$95,867,248
2045	\$8,185	\$30,907,870	\$65,614,779	\$0	\$96,522,648
2046	\$8,348	\$31,578,380	\$65,614,779	\$0	\$97,193,158
2047	\$8,515	\$32,265,487	\$65,614,779	\$0	\$97,880,266

	Solar Land Base Rate	Gross Assessed Value		State Tax Deduction	Net Assessed Value
		Real Property	Personal Property		
2048	\$8,686	\$32,969,189	\$65,614,779	\$0	\$98,583,968
2049	\$8,859	\$33,689,218	\$65,614,779	\$0	\$99,303,996
2050	\$9,036	\$34,425,735	\$65,614,779	\$0	\$100,040,514
2051	\$9,217	\$35,179,382	\$65,614,779	\$0	\$100,794,161
2052	\$9,402	\$35,950,328	\$65,614,779	\$0	\$101,565,107
2053	\$9,590	\$36,738,222	\$65,614,779	\$0	\$102,353,001
2054	\$9,781	\$37,543,437	\$65,614,779	\$0	\$103,158,216
2055	\$9,977	\$38,366,355	\$65,614,779	\$0	\$103,981,133

4 Net Assessed Value for Tax District Units

The net assessed value of all property in a given jurisdiction (NAV_u) is the denominator in that jurisdictional unit's tax rate calculation (see Equation 5 in Section 2.2). This is calculated as the unit's gross assessed value (GAV_u) minus deductions, and the GAV_u is in turn made up of the sum of GAV for five categories: a) homestead; b) non-homestead residential; c) farmland; d) business real property; and e) business personal property.

Table 7 shows the breakout of the estimated 2023 NAV for the eight units that levy property taxes in the Clay, Columbus, and Flat Rock tax districts.

Table 7: Estimated Net Assessed Valuation for Tax District Units, 2023 (millions)

	County	Clay Twp	Columbus Twp	Flat Rock Twp	BCSC	F-H Schools	Library	Waste
GAV	\$9,085.1	\$292.1	\$5,260.1	\$159.6	\$8,618.4	\$452.8	\$9,008.6	\$9,085.9
Homestead	\$4,834.0	\$218.0	\$2,820.0	\$95.7	\$4,542.8	\$284.6	\$4,827.3	\$4,834.0
Non-homestead res	\$1,058.9	\$26.1	\$711.5	\$14.9	\$1,008.5	\$46.5	\$1,054.9	\$1,058.9
Farmland	\$204.3	\$17.1	\$21.7	\$22.7	\$155.6	\$48.7	\$204.0	\$204.3
Business real	\$1,762.6	\$21.6	\$1,064.9	\$20.6	\$1,703.6	\$56.6	\$1,728.0	\$1,763.4
Business personal	\$1,225.3	\$9.3	\$642.0	\$5.7	\$1,207.8	\$16.4	\$1,194.5	\$1,225.3
Deductions	\$3,498.8	\$116.0	\$2,135.8	\$56.0	\$3,325.3	\$167.8	\$3,490.8	\$3,499.6
Estimated NAV	\$5,586.3	\$176.0	\$3,124.3	\$103.6	\$5,293.1	\$285.0	\$5,517.8	\$5,586.3
<i>Certified NAV^a</i>	\$5,493.5	\$173.7	\$3,072.8	\$102.2	\$5,204.0	\$281.3	\$5,426.2	\$5,493.5

Source: Based on data from the Indiana DLGF.
a. see Section 4.5 for an explanation of the estimated versus certified NAV and its treatment in the analysis.

The rest of this section describes the method for breaking out the GAV_u for each property category for 2023 and then for projecting the NAV_u for each unit for each year through the analysis period. This entails estimating the magnitude of likely changes in the GAV_u of the component categories, including residential properties (homestead and non-homestead; Section 4.1), farmland (Section 4.2), and business properties (real and personal; Section 4.3). Section 4.4 describes the projection of deductions. Section 4.5 explains the treatment of final adjustments between estimated and certified NAV and summarizes the results.

4.1 Residential Properties

The assessed value of residential properties (including homesteads and non-homestead residential properties) is primarily a function of the number of units and the average value of a unit. Table 8 shows summary data from the U.S. Census Bureau (2023) on the median housing value and number of occupied homes in Bartholomew County. As shown in the table, the median house price has been variable, but on average increased by about 3 percent annually, with sharp increases in 2021 and 2022. The number of occupied houses increased slightly between 2011 and 2022, primarily due to increases in the last three years.

In projecting the change in residential GAV_u for the analysis period, we assume that it will reflect growth in both the number of households and the average price of each household. Projections for these variables are not available over the analysis period, and there is a high degree of variability in the growth rates which makes trend extrapolation highly uncertain. The 2020 to 2022 period was particularly volatile, likely due to

the COVID pandemic,⁸ and is not likely to be representative of future trends. Based on averages over the 2011 to 2019 period, we assume a 2.5 percent annual increase in homestead and non-homestead residential GAV_u for all units (the average annual growth in median value plus the average annual growth in the number of occupied units).

Table 8: Summary of Housing Trends in Bartholomew County

	Median Housing Value		Occupied Units	
	Value	Growth	Value	Growth
2011	\$139,100	0.36%	29,086	-6.31%
2012	\$136,900	-1.58%	29,640	1.90%
2013	\$129,800	-5.19%	30,359	2.43%
2014	\$132,400	2.00%	31,827	4.84%
2015	\$136,800	3.32%	31,131	-2.19%
2016	\$147,500	7.82%	31,626	1.59%
2017	\$148,500	0.68%	31,498	-0.40%
2018	\$155,700	4.85%	31,891	1.25%
2019	\$174,000	11.75%	30,383	-4.73%
2020	\$163,400	-6.09%	31,772	4.57%
2021	\$191,100	16.95%	32,518	2.35%
2022	\$207,800	8.74%	34,436	5.90%
Average (2011 to 2022)	\$150,473	3.17%	31,066	0.48%
Average (2011 to 2019)	\$144,522	2.67%	30,827	-0.18%

Source: Based on data from the U.S. Census Bureau's American Community Survey 1-year estimates for 2011 to 2022 (Table DP04).

4.2 Farmland

The GAV of a given parcel of farmland is based on the acreage multiplied by the farmland base rate (FLBR) for the year established by the state, adjusted for soil productivity and other “influence factors” affecting yields. Changes in farmland acreage and the FLBR tend to drive changes in GAV, while the soil productivity and influence factors do not tend to vary significantly. As such, we project the GAV_u for each unit based on projections in the farmland acreage and the FLBR.

4.2.1 Farmland Acreage

Table 9 shows the GAV_u of farmland in Bartholomew County as well as the state’s FLBR for 2019 to 2023. To estimate the farmland acreage in each year, we divided the GAV_u by the FLBR. As shown in the table, estimated farmland acreage has decreased from approximately 142,000 in 2018 to 136,200 in 2023, representing an average of one percent of acres in the county being removed from agriculture each year.

There is inherent uncertainty in this estimate, since the FLBR is not the only determining factor in farmland value; a more detailed analysis could examine the role of productivity factors and other considerations. However, we assume that this is a reasonable assumption for this analysis. According to data from the

⁸ Changes after 2019 may also reflect methodological changes in the Decennial Census and subsequent ACS data.

United States Department of Agriculture (USDA) Census of Agriculture, there were 160,437 acres of farmland in Bartholomew County in 2017, representing a 7 percent decrease relative to 2012 (USDA, 2017). Although not a precise match, the approximate acreage and trend are consistent with our estimates.

Table 9: Summary of Bartholomew County Farmland Value and Acreage

	Gross Assessed Value of Farmland ^a	Farmland Base Rate ^a	Farmland Acreage ^b	Change in Farmland Acreage
2019	\$228,470,120	\$1,610	141,907	
2020	\$219,494,610	\$1,530	143,461	1.1%
2021	\$174,651,200	\$1,290	135,389	-5.6%
2022	\$176,233,600	\$1,290	136,615	0.9%
2023	\$204,339,600	\$1,500	136,226	-0.3%
Average	\$200,637,800	\$1,444	138,720	-1.0%

a. Based on data from the Indiana DLGF.
 b. Estimated as gross assessed value of farmland divided by farmland base rate.

For Bartholomew County, we assume that the trend in declining agricultural acreage will continue over the analysis period, with 1 percent of acres being removed each year. For the other units, we conducted equivalent calculations which yielded annual declines ranging from 0.3 percent (for Clay Township) to 1.7 percent (for Columbus Township). In all cases, we subtract an additional 1,100 acres from the total farmland acreage in 2026 to account for the Swallowtail development.

4.2.2 Farmland Base Rate

The state uses a formula to determine the base assessed value at the beginning of each year, as described by the Indiana DLGF (2024a). The calculation is based on a capitalization formula with measures of farm income per acre in the numerator and an interest rate in the denominator, as shown in Equation 9.

Equation 9: $MVU = \frac{NI}{CR}$

- Where:
- MVU = market value in use for an acre of farmland (in dollars)
 - NI = net income for an acre of farmland (in dollars)
 - CR = capitalization rate (percentage)

To measure income for the formula’s numerator, the state uses two measures:

1. cash rent per acre, or the statewide average rent paid for average productive land, minus estimated property taxes, and
2. operating income calculated as corn and soybean prices multiplied by yield minus variable and overhead costs plus government payments.

The state conducts the calculation in two stages that use different approaches to the capitalization rate in the denominator. The preliminary calculation uses actual farm-related interest rates reported by the Chicago Federal Reserve, while the final calculation sets the rate at 6, 7, or 8 percent depending on the change in the preliminary base rate relative to the preceding year’s final base rate, with increases greater than 10 percent resulting in the 8 percent capitalization rate, decreases greater than 10 percent resulting in

6, and intermediate changes resulting in 7. Since the advent of this approach to calculating the base rates, this interest rate has been set at 8 percent every year.

The formula yields the market value in use for an acre of farmland separately for cash rent and operating income; the average of the two is the yearly capitalized value. The state first calculates this average capitalized value for each of the six preceding years using the preliminary approach and eliminates the highest resulting value. For the remaining five years, it then calculates the value using the final approach and averages the results to establish the base rate for the year. Table 10 shows this calculation for the 2025 FLBR based on data from 2018 to 2023, which yields an FLBR of \$2,280 (after eliminating the 2021 value which represented the highest of the 6 years based on the preliminary approach).

Table 10: Calculation of 2024-pay-2025 Farmland Base Rate

	Net Incomes		Capitalization Rate	Market Value in Use		
	Cash Rent	Operating		Cash Rent	Operating	Average
2018	\$181	\$51	8%	\$2,263	\$638	\$1,450
2019	\$181	\$6	8%	\$2,263	\$75	\$1,169
2020	\$192	\$141	8%	\$2,400	\$1,763	\$2,081
2024	\$206	\$343	8%	\$2,575	\$4,288	\$3,434
2022	\$230	\$319	8%	\$2,875	\$3,988	\$3,431
2023	\$233	\$289	8%	\$2,913	\$3,613	\$3,263
Average Market Value in Use:						\$2,280
Source: Based on data from Indiana DLGF (2024a).						

To project the FLBR over the analysis period, we reproduced the state’s calculation using Equation 10:

Equation 10:
$$MVU_{av} = \left[\frac{R-T}{CR} + \frac{P \times Y - VC - FC + GP}{CR} \right] \div 2$$

- MVU_{av} = average market value in use for an acre of farmland (in dollars)
- R = cash rent for an acre of farmland (in dollars)
- T = average property tax payment for an acre of farmland (dollars)
- CR = capitalization rate (percentage)
- P = average of corn and soybean prices (in dollars per bushel)
- Y = average of corn and soybean yields (in bushels per acre of farmland)
- VC = variable costs (in dollars per acre of farmland)
- FC = fixed/overhead costs (in dollars per acre of farmland)
- GP = government payments (in dollars per acre of farmland)

For each year, we projected the average MVU using the preliminary and final approaches to replicate the state’s approach. We derived projections of each of the underlying components as follows.

- **Cash rent net income** is calculated as cash rent minus average property tax payments.

- **Cash rent** is based on a regression equation derived from a Purdue University Department of Agricultural Economics annual land value survey (Purdue University, 2023). Lagged rent, soybean price, and soybean yield are the explanatory variables.⁹
- **Average property tax payment** is based on a regression equation with the base rate from the previous year as the explanatory variable.
- **Operating net income** is calculated as corn and soybean prices multiplied by yields,¹⁰ minus fixed and variable costs, plus government payments.
 - **Corn and soybean prices** are projected by the United States Department of Agriculture (USDA) statistics service (USDA, 2022) for 2023 through 2032; after 2032, we assume the prices will remain constant, consistent with USDA's projections for 2025 through 2032.
 - **Corn and soybean yields** are based on year-to-year changes in the yields as predicated by the USDA but starting from 2022 values specific to Indiana from the Indiana Agricultural Statistics Service.¹¹ The projected yields are higher than those projected at the national level, since Indiana has relatively productive land compared to the nation. We assume yields are constant after 2032 which is consistent with the USDA's approach.
 - **Corn and soybean variable costs** are based on year-to-year changes from USDA's projections, starting from 2022 values specific to Indiana from the Purdue Crop Guides (Purdue University, 2023). Costs are assumed to be constant after 2032.
 - **Overhead costs** are assumed to remain constant at 2022 levels over the analysis period. The Purdue Crop Guides provide historical data, which show a high degree of variability, but underlying explanatory variables are unclear.
 - **Government payments** are based on 2022 data from the Indiana DLGF together with percentage changes from the Congressional Budget Office (CBO) forecast of federal program expenditures (CBO, 2022a) through 2032. We assume the percentage changes for the later years is equal to the average of the preceding ten years.
- **Capitalization rate (preliminary)** is based on a regression equation using the projected 10-year Treasury bond interest rates from the CBO as the explanatory variable through 2032, since the variation in the historical rate has tracked with this metric. The rate is held constant after 2032.
- **Capitalization rate (final)** is selected based on the state's approach (i.e., based on the change in the preliminary base rate relative to the preceding year's final base rate).

For each year in the analysis period, we calculated the preliminary MVU_{av} for the preceding six years and dropped the highest value in the six-year period. For the remaining five years, we recalculated the MVU_{av} using the same income but with the final capitalization rate. The average of the five final MVU_{av} values is the final FLBR for the year.

⁹ While the actual rents are based on both corn and soybean prices and yields, the two crops are closely related.

¹⁰ Note that corn and soybean prices are multiplied by yields separately, then averaged.

¹¹ https://www.nass.usda.gov/Statistics_by_State/Indiana/

Using this approach, we projected that the FLBR will increase from \$1,900 in 2024 to \$3,320 by 2028 before declining over the next several years (to \$2,670 in 2033) before rising gradually to \$3,730 by the end of the analysis period.

Note that there is significant uncertainty in the trajectory of the FLBR over the coming decades. While rents, yields, and costs tend to rise at predictable rates, the prices of corn and soybeans tend to vary significantly. Higher prices would cause the FLBR values to increase, whereas lower prices would depress the FLBR values. Additionally, as noted above, we assumed that overhead costs remain constant over the analysis period; if these costs were to increase, this would result in decreased FLBR values over the analysis period. See Section 6.2 for a more detailed discussion of these uncertainties and an associated sensitivity analysis.

4.3 Business Properties

Change in GAV_u for real and personal business property will depend on a variety of factors, including whether any large businesses enter or leave the tax district in the analysis period, general economic trends, and changes in assessment practices. A detailed projection of these factors is beyond the scope of this analysis. For the purposes of projecting GAV_u for business property over the analysis period, we assume that both real and personal property will increase at the rate of the Consumer Price Index as projected by the Congressional Budget Office (CBO, 2022b; CBO, 2023). Both projections also account for the addition of the Swallowtail NAV summarized in Section 3.4, with the value of the property apportioned to the three townships based on the share of the property acreage expected to be located in each.

4.4 Deductions

After projecting and summing the GAV_u across the five property categories, the last step to calculate the NAV_u is to subtract deductions. Table 7 shows the average deductions for each unit in 2023, which includes three categories of adjustments: personal, real, and TIF. Table 11 breaks out the deductions into these categories, averaging across the 2019 to 2023 period and calculating the adjustments as a share of the associated GAV_u . Note that the majority of real property adjustments are associated with homesteads and as such we vary this adjustment with the homestead GAV_u . We assume that the deductions over the analysis period will correspond to these percentages.

Table 11: Summary of Tax Deductions for Tax District Units (Average of 2019 to 2023)

	County	Clay Twp	Columbus Twp	Flat Rock Twp	BCSC	F-H Schools	Library	Waste
TIF adjustment	\$602.54	\$0.00	\$443.52	\$0.00	\$602.53	\$0.00	\$601.91	\$602.54
Business GAV	\$2,888.12	\$27.41	\$1,675.05	\$24.57	\$2,815.86	\$69.20	\$2,824.09	\$2,888.92
TIF adj (% of business GAV)	20.9%	0.0%	26.5%	0.0%	21.4%	0.0%	21.3%	20.9%
Real prop adj	\$2,449.71	\$103.02	\$1,460.77	\$48.62	\$2,301.81	\$142.87	\$2,444.80	\$2,450.51
Homestead GAV	\$4,020.96	\$183.15	\$2,318.20	\$75.69	\$3,794.90	\$220.69	\$4,015.49	\$4,020.96
Real prop adj (% of homestead GAV)	60.9%	56.2%	63.0%	64.2%	60.7%	64.7%	60.9%	60.9%
Personal prop adj	\$123.92	\$0.01	\$29.71	\$0.00	\$123.77	\$0.14	\$121.25	\$123.92
Personal prop GAV	\$1,196.25	\$8.64	\$635.76	\$5.75	\$1,178.26	\$16.97	\$1,165.73	\$1,196.25
Pers prop adj (% of pers prop GAV)	10.4%	0.1%	4.7%	0.1%	10.5%	0.8%	10.4%	10.4%

4.5 Summary of Unit Net Assessed Value Projections

Assessment data contained in different reports and released at different times may have some amount of variation in the final values. The data reporting the category-specific GAV_u , deduction, and NAV_u values shown in Table 7 above reflect the estimated assessed values for each unit. However, the final certified NAV_u for each unit varies from these values, typically about 1 to 2 percent lower.¹² To account for this, we calculated an adjustment factor for each unit and each year with available data, equal to the percent difference between the certified NAV_u and the estimated NAV_u . For each projected year in the analysis period, we applied the average adjustment factor for that unit¹³ to the calculated NAV_u .

Table 12 shows the final projected NAV_u for each unit for each year in the analysis period based on the methods and data described in Sections 4.1 through 4.4. See Section 6.2 for a discussion of key uncertainties and associated sensitivity analyses.

Table 12: Summary of Projected NAV for Tax District Units (millions)

	County	Clay Twp	Columbus Twp	Flat Rock Twp	BCSC	F-H Schools	Library	Waste
2023	\$5,493.5	\$173.7	\$3,072.8	\$102.2	\$5,204.0	\$281.3	\$5,426.2	\$5,493.5
2024	\$5,721.1	\$188.9	\$3,158.1	\$112.1	\$5,412.0	\$300.9	\$5,651.9	\$5,721.1
2025	\$5,638.9	\$183.0	\$3,094.3	\$111.2	\$5,332.2	\$298.0	\$5,569.0	\$5,638.9
2026	\$5,912.3	\$272.7	\$3,171.7	\$123.4	\$5,578.6	\$321.8	\$5,840.8	\$5,912.3
2027	\$6,117.9	\$312.8	\$3,248.7	\$132.4	\$5,765.5	\$340.0	\$6,044.8	\$6,117.9
2028	\$6,225.1	\$282.4	\$3,325.5	\$133.1	\$5,866.3	\$346.1	\$6,150.4	\$6,225.1
2029	\$6,339.2	\$285.4	\$3,401.3	\$132.7	\$5,979.9	\$346.5	\$6,262.9	\$6,339.2
2030	\$6,453.8	\$288.1	\$3,479.0	\$132.1	\$6,094.6	\$346.4	\$6,375.8	\$6,453.8
2031	\$6,566.1	\$290.5	\$3,558.1	\$130.9	\$6,208.1	\$345.1	\$6,486.4	\$6,566.1
2032	\$6,700.8	\$294.6	\$3,641.2	\$131.7	\$6,339.4	\$348.3	\$6,619.3	\$6,700.8
2033	\$6,847.8	\$299.4	\$3,727.3	\$133.5	\$6,480.9	\$353.7	\$6,764.5	\$6,847.8
2034	\$6,999.9	\$304.5	\$3,815.6	\$135.5	\$6,626.9	\$359.5	\$6,914.7	\$6,999.9
2035	\$7,159.2	\$310.0	\$3,906.5	\$137.9	\$6,779.1	\$366.3	\$7,072.0	\$7,159.2
2036	\$7,323.1	\$315.7	\$3,999.4	\$140.5	\$6,935.4	\$373.6	\$7,233.9	\$7,323.1
2037	\$7,490.3	\$321.5	\$4,094.4	\$143.1	\$7,095.0	\$380.9	\$7,399.1	\$7,490.3
2038	\$7,662.3	\$327.5	\$4,191.5	\$145.9	\$7,258.9	\$388.7	\$7,569.0	\$7,662.3
2039	\$7,838.0	\$333.7	\$4,290.8	\$148.7	\$7,426.4	\$396.7	\$7,742.7	\$7,838.0
2040	\$8,017.7	\$340.0	\$4,392.4	\$151.6	\$7,597.7	\$404.7	\$7,920.2	\$8,017.7
2041	\$8,201.3	\$346.5	\$4,496.4	\$154.5	\$7,772.8	\$413.0	\$8,101.7	\$8,201.3
2042	\$8,389.2	\$353.1	\$4,602.9	\$157.5	\$7,951.9	\$421.4	\$8,287.4	\$8,389.2

¹² This is due to the authority of the county auditors to withhold up to 2 percent of a unit's NAV to cover appeals, late deductions, and other needed adjustments that occur after certification.

¹³ ranging from -1.87 percent for Columbus to -1.07 for the Flat Rock-Hawcreek School Corp.

	County	Clay Twp	Columbus Twp	Flat Rock Twp	BCSC	F-H Schools	Library	Waste
2043	\$8,581.5	\$359.8	\$4,711.9	\$160.6	\$8,135.3	\$430.0	\$8,477.4	\$8,581.5
2044	\$8,778.3	\$366.7	\$4,823.5	\$163.7	\$8,323.0	\$438.8	\$8,671.8	\$8,778.3
2045	\$8,979.7	\$373.8	\$4,937.8	\$166.9	\$8,515.1	\$447.7	\$8,870.8	\$8,979.7
2046	\$9,186.0	\$381.0	\$5,054.9	\$170.1	\$8,711.8	\$456.9	\$9,074.7	\$9,186.0
2047	\$9,398.4	\$388.5	\$5,175.1	\$173.6	\$8,914.3	\$466.5	\$9,284.6	\$9,398.4
2048	\$9,615.0	\$396.0	\$5,298.3	\$176.9	\$9,121.0	\$476.0	\$9,498.6	\$9,615.0
2049	\$9,836.9	\$403.7	\$5,424.4	\$180.4	\$9,332.7	\$485.8	\$9,717.8	\$9,836.9
2050	\$10,065.0	\$411.7	\$5,553.8	\$184.0	\$9,550.2	\$496.0	\$9,943.3	\$10,065.0
2051	\$10,297.7	\$419.8	\$5,686.2	\$187.7	\$9,772.2	\$506.2	\$10,173.2	\$10,297.7
2052	\$10,536.9	\$428.2	\$5,822.0	\$191.4	\$10,000.4	\$516.9	\$10,409.6	\$10,536.9
2053	\$10,781.8	\$436.8	\$5,961.0	\$195.3	\$10,233.9	\$527.8	\$10,651.6	\$10,781.8
2054	\$11,031.4	\$445.4	\$6,103.3	\$199.1	\$10,472.2	\$538.7	\$10,898.2	\$11,031.4
2055	\$11,287.9	\$454.4	\$6,249.1	\$203.2	\$10,716.9	\$550.1	\$11,151.6	\$11,287.9

5 Tax Rate for Tax District Units

The state sets a maximum on most of the operating property tax levies of Indiana local governments. As described in Section 2.2, this maximum is the most important factor determining the budgets for affected funds for the majority of units across the state. As such, we have categorized each fund for each unit based on whether it is subject to the maximum (“constrained funds”) or not (“unconstrained funds”), as shown in Table 13. We use different approaches to projecting the tax rate over the analysis period for each category; Section 5.1 describes the projection of the tax levy and tax rate for constrained funds and Section 5.2 describes the projection of the tax rate for unconstrained funds for each unit.

Note that while most funds are borne by the whole unit, there are some exceptions. Specifically, for the three township units, the fire department taxes are paid only by the portions of the units that are outside boundary of the City of Columbus since the city has its own fire department. This affects the projection of the tax rate for constrained funds in those units since it is based on the NAV for all properties within the applicable area (see Equation 5 in Section 2.2).¹⁴ Section 5.1 describes an adjustment to account for this in the calculation of the tax rate for relevant units.

Table 13: Certified Levy for Tax District Units

Unit	Fund	Category	Tax Levy		
			2022	2023	2024
County	2015 Reassessment	Constrained	\$207,527	\$549,345	\$549,223
	Cumulative Bridge	Unconstrained	\$1,857,863	\$2,065,538	\$2,151,122
	Debt Service	Unconstrained	\$1,650,336	\$1,675,503	\$1,630,505
	Election/Registration	Constrained	\$103,764	\$115,362	\$297,496
	General	Constrained	\$15,302,667	\$16,529,798	\$17,054,508
	Health	Constrained	\$1,887,510	\$1,098,690	\$1,098,445
Clay Twp	Fire ^a	Constrained	\$26,736	\$29,403	\$30,495
	Fire Building Debt ^a	Unconstrained	\$50,643	\$53,035	\$39,334
	General	Constrained	\$12,033	\$13,204	\$26,254
	Township Assistance	Constrained	\$14,725	\$14,941	\$2,833
Columbus Twp	Cumulative Fire (Township) ^a	Unconstrained	\$30,807	\$35,576	\$35,995
	Fire ^a	Constrained	\$257,895	\$410,937	\$627,216
	General	Constrained	\$180,054	\$208,950	\$296,865
	Township Assistance	Constrained	\$664,816	\$722,106	\$672,685
Flat Rock Twp	Fire ^a	Constrained	\$31,449	\$32,985	\$34,270
	Cumulative Fire ^a	Unconstrained	\$25,357	\$32,117	\$35,441
	General	Constrained	\$19,023	\$20,231	\$21,301
	Township Assistance	Constrained	\$4,998	\$4,904	\$4,821

¹⁴ BCSC also has a referendum fund that is borne by the unit as well as a TIF district; however, since this is an unconstrained fund, the applicable NAV is not needed for the projection of the tax rate based on the methodology described in Section 5.2.

Unit	Fund	Category	Tax Levy		
			2022	2023	2024
BCSC	Debt Service	Unconstrained	\$12,941,086	\$16,095,865	\$16,290,148
	Operations	Constrained	\$21,160,108	\$22,215,728	\$23,109,280
	Referendum Capital	Unconstrained	\$6,022,276	\$5,594,263	\$6,337,463
	Referendum Operating ^b	Unconstrained	\$8,282,939	\$9,062,390	\$9,329,193
F-H Schools	Debt Service	Unconstrained	\$354,667	\$308,319	\$251,548
	Operations	Constrained	\$1,275,600	\$1,339,330	\$1,392,844
	Referendum Capital	Unconstrained	\$1,459,787	\$1,382,933	\$1,387,728
Library	General	Constrained	\$3,047,941	\$3,201,485	\$3,328,953
Solid Waste	Special Solid Waste Mgmt	Constrained	\$785,639	\$1,236,027	\$1,859,348

Source: (Indiana DLGF, 2024b) (Indiana DLGF, 2023c) (Indiana DLGF, 2022)
a. Township fire department fund levies apply only to the portion of the township that is outside the City of Columbus.
b. BCSC's referendum operating fund applies to the unit as well as a TIF district which results in a higher applicable NAV.

5.1 Unit Tax Levies for Constrained Funds

The maximum tax levy imposed by the state is unit-specific, but all units have the same allowable increase expressed as a percentage of the previous year's maximum allowable levy – the maximum levy growth quotient (MLGQ). Historical data suggests that most of the units comprising the tax districts impose levies that are close to the maximum allowable amount. For the funds that are constrained by the MLGQ, we assume that the levy amount for a given year will be equal to the previous year's levy multiplied by the MLGQ.

As such, the data needed to project the units' tax levy for constrained funds in each year is that year's MLGQ for the state and the unit's levy for the funds in the preceding year. Table 14 shows the 2023 and 2024 levy for the units categorized as constrained for each unit.

Table 14: Tax Levy for Constrained Funds by Unit

Unit	Constrained Fund Levy		Max Levy		Percent of Max	
	2023	2024	2023	2024	2023	2024
County	\$18,293,195	\$18,999,672	\$22,037,863	\$22,917,327	83.0%	82.9%
Clay Twp	\$57,548	\$59,582	\$57,646	\$59,952	99.8%	99.4%
Columbus Twp	\$1,341,993	\$1,596,766	\$1,641,788	\$1,707,459	81.7%	93.5%
Flat Rock Twp	\$58,120	\$60,392	\$58,332	\$60,665	99.6%	99.5%
BCSC	\$22,215,728	\$23,109,280	\$22,220,642	\$23,109,438	100.0%	100.0%
F-H Schools	\$1,339,330	\$1,392,844	\$1,339,498	\$1,393,078	100.0%	100.0%
Library	\$3,201,485	\$3,328,953	\$3,204,737	\$3,332,926	99.9%	99.9%
Solid Waste	\$1,236,027	\$1,859,348	\$1,955,751	\$2,033,981	63.2%	91.4%

Source: (Indiana DLGF, 2023c) (Indiana DLGF, 2024b)

The MLGQ for each year is calculated at the state level based on the average change in nonfarm personal income in Indiana over the preceding 6 years, capped at 6 percent. This version of the MLGQ calculation

was first used in 2003. Figure 2 shows the underlying income change data from the U.S. Bureau of Economic Analysis (2022) together with a calculated MLGQ value in each year for the period 1982 to 2022.¹⁵ Had this MLGQ calculation been used prior to 2003, the income data for Indiana would have resulted in the MLGQ being capped at 6 percent in many years prior to 1995. Starting in the mid-90s there was increased variability in the metric, with an average of 3.9 percent since 2000 and 3.8 percent since 2011. For 2023, the MLGQ is 5 percent based on income growth from the years 2016 to 2021. For 2024 and 2025, Indiana’s General Assembly has capped the MLGQ at 4 percent under House Bill 1499.

Projections for changes in personal income are not available at the state level. However, the CBO projects related economic variables at a national level over a 10-year or 30-year period. As shown in Figure 3, trends in Indiana’s nonfarm personal income tend to track closely to changes in personal income for the United States. As such, we used data on and projections of U.S. personal income from the CBO for 2018 through 2032 as the basis to calculate the estimated MLGQ for 2024 to 2038, assuming a constant value of 4.1 percent thereafter (consistent with the levelling of the income and MLGQ shown in Figure 3).

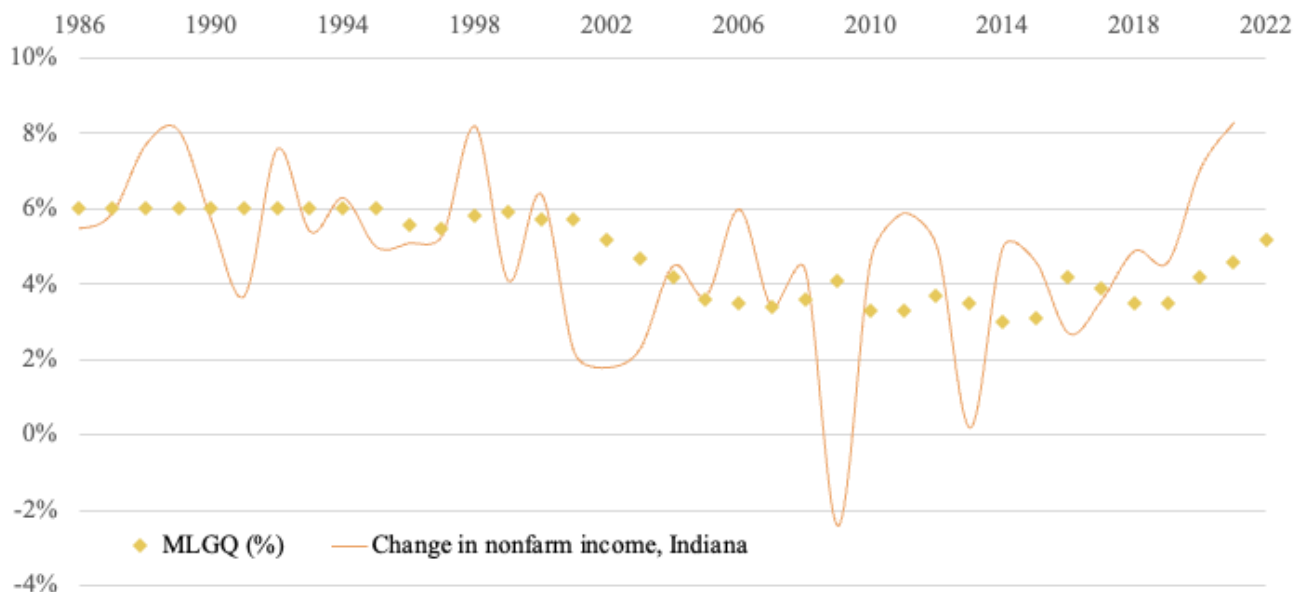


Figure 2: Trends in Percent Change in Indiana Nonfarm Personal Income and Calculated Maximum Levy Growth Quotient, 1982 to 2022¹⁶

¹⁵ Note that, even in recent years, historic calculations sometimes differ from the actual adopted MLGQ because of subsequent data revisions in BEA releases.

¹⁶ Source: Nonfarm personal income change percent based on data from the U.S. Bureau of Economic Analysis (2022), downloaded on January 20, 2023 and last updated September 30, 2022. MLGQ calculated for each year as the average of the percent change in nonfarm personal income over the preceding six years.

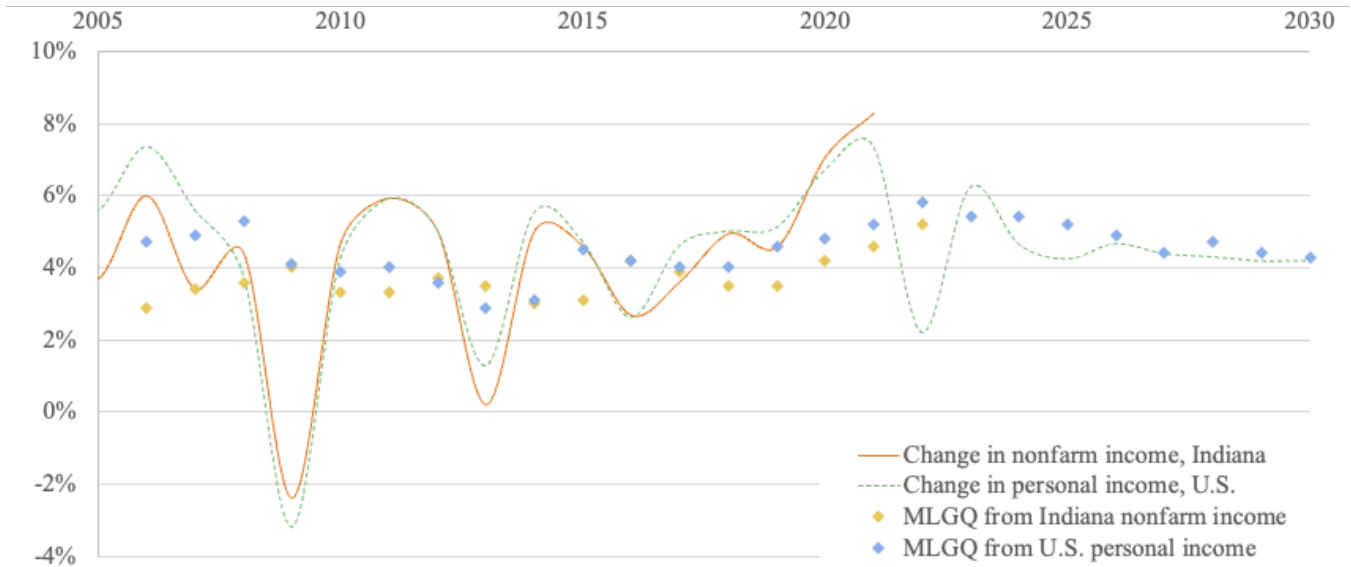


Figure 3: Comparison of MLGQ calculated based on historical and projected measures of Indiana nonfarm income and U.S. personal income¹⁷

Table 15 shows the projected tax levy for each unit’s constrained funds over the analysis period, based on the 2023 levy amounts shown in Table 14 together with the annual projected MLGQ. For a discussion of the effect of different MLGQ assumptions, see Section 6.2.

Table 15: Summary of Projected Tax Levy for Constrained Funds (thousands)

	County	Clay Twp	Columbus Twp	Flat Rock Twp	BCSC	F-H Schools	Library	Waste	MLGQ
2023	\$18,293	\$58	\$1,342	\$58	\$22,216	\$1,339	\$3,201	\$1,236	5.0%
2024	\$19,000	\$60	\$1,597	\$60	\$23,109	\$1,393	\$3,329	\$1,859	4.0%
2025	\$19,760	\$62	\$1,661	\$63	\$24,034	\$1,449	\$3,462	\$1,934	4.0%
2026	\$20,787	\$65	\$1,747	\$66	\$25,283	\$1,524	\$3,642	\$2,034	5.2%
2027	\$21,806	\$68	\$1,833	\$69	\$26,522	\$1,599	\$3,821	\$2,134	4.9%
2028	\$22,765	\$71	\$1,913	\$72	\$27,689	\$1,669	\$3,989	\$2,228	4.4%
2029	\$23,835	\$75	\$2,003	\$76	\$28,991	\$1,747	\$4,176	\$2,333	4.7%
2030	\$24,884	\$78	\$2,091	\$79	\$30,266	\$1,824	\$4,360	\$2,435	4.4%
2031	\$25,954	\$81	\$2,181	\$82	\$31,568	\$1,903	\$4,547	\$2,540	4.3%
2032	\$27,070	\$85	\$2,275	\$86	\$32,925	\$1,984	\$4,743	\$2,649	4.3%
2033	\$28,207	\$88	\$2,371	\$90	\$34,308	\$2,068	\$4,942	\$2,760	4.2%
2034	\$29,392	\$92	\$2,470	\$93	\$35,749	\$2,155	\$5,150	\$2,876	4.2%
2035	\$30,626	\$96	\$2,574	\$97	\$37,250	\$2,245	\$5,366	\$2,997	4.2%
2036	\$31,912	\$100	\$2,682	\$101	\$38,815	\$2,339	\$5,591	\$3,123	4.2%

¹⁷ Indiana nonfarm income based on data from U.S. Bureau of Economic Analysis (2022) and U.S. personal income based on data from CBO (2022b).

	County	Clay Twp	Columbus Twp	Flat Rock Twp	BCSC	F-H Schools	Library	Waste	MLGQ
2037	\$33,221	\$104	\$2,792	\$106	\$40,406	\$2,435	\$5,821	\$3,251	4.1%
2038	\$34,583	\$108	\$2,906	\$110	\$42,063	\$2,535	\$6,059	\$3,384	4.1%
2039	\$36,001	\$113	\$3,026	\$114	\$43,788	\$2,639	\$6,308	\$3,523	4.1%
2040	\$37,477	\$118	\$3,150	\$119	\$45,583	\$2,747	\$6,566	\$3,668	4.1%
2041	\$39,013	\$122	\$3,279	\$124	\$47,452	\$2,860	\$6,836	\$3,818	4.1%
2042	\$40,613	\$127	\$3,413	\$129	\$49,397	\$2,977	\$7,116	\$3,974	4.1%
2043	\$42,278	\$133	\$3,553	\$134	\$51,423	\$3,099	\$7,408	\$4,137	4.1%
2044	\$44,011	\$138	\$3,699	\$140	\$53,531	\$3,226	\$7,711	\$4,307	4.1%
2045	\$45,816	\$144	\$3,850	\$146	\$55,726	\$3,359	\$8,027	\$4,484	4.1%
2046	\$47,694	\$150	\$4,008	\$152	\$58,010	\$3,496	\$8,357	\$4,667	4.1%
2047	\$49,650	\$156	\$4,173	\$158	\$60,389	\$3,640	\$8,699	\$4,859	4.1%
2048	\$51,685	\$162	\$4,344	\$164	\$62,865	\$3,789	\$9,056	\$5,058	4.1%
2049	\$53,804	\$169	\$4,522	\$171	\$65,442	\$3,944	\$9,427	\$5,265	4.1%
2050	\$56,010	\$176	\$4,707	\$178	\$68,125	\$4,106	\$9,814	\$5,481	4.1%
2051	\$58,307	\$183	\$4,900	\$185	\$70,918	\$4,274	\$10,216	\$5,706	4.1%
2052	\$60,697	\$190	\$5,101	\$193	\$73,826	\$4,450	\$10,635	\$5,940	4.1%
2053	\$63,186	\$198	\$5,310	\$201	\$76,853	\$4,632	\$11,071	\$6,184	4.1%
2054	\$65,777	\$206	\$5,528	\$209	\$80,004	\$4,822	\$11,525	\$6,437	4.1%
2055	\$68,473	\$215	\$5,755	\$218	\$83,284	\$5,020	\$11,997	\$6,701	4.1%

The tax rate for the constrained funds in each unit is the tax levy (Table 15) divided by the NAV for the unit (Table 12) in a given year. However, some of the constrained funds in the township units (for the fire departments) apply the levies only to a portion of the properties – those that are within the unit boundaries but outside of the City of Columbus (see the applicability for each fund in Table 13). As such, we also calculated the NAV for the applicable unit portions for those funds based on the average ratio of the NAV for the circumscribed portion to the NAV of the whole unit for 2019 to 2023. Table 16 shows the projected levy and NAV for those funds based on this approach.

Table 16: Summary of Assumptions for Constrained Fire Dept. Funds^a

	Amount of Levy in Constrained Fire Dept. Funds ^b			NAV for Constrained Fire Dept. Funds		
	Clay Twp	Columbus Twp	Flat Rock Twp	Clay Twp	Columbus Twp	Flat Rock Twp
2023	\$29,403	\$410,937	\$32,985	\$137,396,445	\$213,030,848	\$96,446,722
2024	\$30,495	\$627,216	\$34,270	\$147,317,132	\$215,538,063	\$106,428,868
2025	\$31,715	\$652,305	\$35,641	\$146,014,486	\$214,709,587	\$105,175,273
2026	\$33,364	\$686,224	\$37,494	\$220,334,643	\$220,085,923	\$116,928,452
2027	\$34,999	\$719,849	\$39,331	\$255,590,270	\$225,430,041	\$125,680,686
2028	\$36,539	\$751,523	\$41,062	\$227,506,694	\$230,755,232	\$126,009,962
2029	\$38,256	\$786,844	\$42,992	\$229,762,348	\$236,018,616	\$125,669,172
2030	\$39,939	\$821,466	\$44,883	\$231,877,424	\$241,406,242	\$125,054,272

	Amount of Levy in Constrained Fire Dept. Funds ^b			NAV for Constrained Fire Dept. Funds		
	Clay Twp	Columbus Twp	Flat Rock Twp	Clay Twp	Columbus Twp	Flat Rock Twp
2031	\$41,657	\$856,789	\$46,813	\$233,693,101	\$246,894,667	\$123,932,111
2032	\$43,448	\$893,631	\$48,826	\$236,803,647	\$252,659,741	\$124,712,220
2033	\$45,273	\$931,163	\$50,877	\$240,567,368	\$258,633,428	\$126,394,972
2034	\$47,174	\$970,272	\$53,014	\$244,507,829	\$264,766,918	\$128,253,466
2035	\$49,156	\$1,011,023	\$55,241	\$248,781,108	\$271,071,820	\$130,515,039
2036	\$51,220	\$1,053,486	\$57,561	\$253,224,892	\$277,519,201	\$132,936,197
2037	\$53,320	\$1,096,679	\$59,921	\$257,763,109	\$284,105,605	\$135,401,517
2038	\$55,506	\$1,141,643	\$62,377	\$262,477,428	\$290,845,953	\$138,026,026
2039	\$57,782	\$1,188,450	\$64,935	\$267,292,999	\$297,738,890	\$140,697,221
2040	\$60,151	\$1,237,177	\$67,597	\$272,213,095	\$304,790,155	\$143,417,176
2041	\$62,617	\$1,287,901	\$70,369	\$277,241,120	\$312,005,774	\$146,188,054
2042	\$65,185	\$1,340,705	\$73,254	\$282,380,616	\$319,392,066	\$149,012,109
2043	\$67,857	\$1,395,674	\$76,257	\$287,634,802	\$326,954,382	\$151,891,307
2044	\$70,639	\$1,452,897	\$79,384	\$293,007,483	\$334,699,588	\$154,828,077
2045	\$73,535	\$1,512,465	\$82,638	\$298,501,640	\$342,632,216	\$157,824,146
2046	\$76,550	\$1,574,476	\$86,027	\$304,121,328	\$350,759,637	\$160,882,103
2047	\$79,689	\$1,639,030	\$89,554	\$309,947,989	\$359,100,346	\$164,108,703
2048	\$82,956	\$1,706,230	\$93,225	\$315,832,402	\$367,643,766	\$167,298,514
2049	\$86,357	\$1,776,186	\$97,048	\$321,852,373	\$376,397,701	\$170,556,089
2050	\$89,898	\$1,849,009	\$101,027	\$328,085,785	\$385,372,256	\$173,982,714
2051	\$93,584	\$1,924,819	\$105,169	\$334,386,509	\$394,561,737	\$177,380,384
2052	\$97,421	\$2,003,736	\$109,481	\$340,907,318	\$403,982,604	\$180,949,222
2053	\$101,415	\$2,085,889	\$113,969	\$347,575,170	\$413,629,484	\$184,590,184
2054	\$105,573	\$2,171,411	\$118,642	\$354,319,693	\$423,502,020	\$188,209,549
2055	\$109,902	\$2,260,439	\$123,506	\$361,292,922	\$433,617,605	\$192,002,023

a. includes portions of township units outside of Columbus City; used for calculation of tax rate for fire department funds.
b. note that the amount of the levy in the fire department funds is a subset of the total constrained funds levy in Table 15.

Table 17 shows the projected tax rates for constrained funds in each unit based on the tax levies (Table 15) and applicable NAVs (Table 12) with adjustments for fire department funds (Table 16).

Table 17: Summary of Projected Tax Rate for Constrained Funds by Unit, 2023 to 2055

	County	Clay Twp	Columbus Twp	Flat Rock Twp	BCSC	F-H Schools	Library	Waste
2023	0.3330	0.0376	0.2232	0.0588	0.4269	0.4761	0.0590	0.0225
2024	0.3321	0.0361	0.3217	0.0555	0.4270	0.4629	0.0589	0.0325
2025	0.3504	0.0383	0.3364	0.0583	0.4507	0.4861	0.0622	0.0343
2026	0.3516	0.0270	0.3453	0.0553	0.4532	0.4735	0.0624	0.0344

	County	Clay Twp	Columbus Twp	Flat Rock Twp	BCSC	F-H Schools	Library	Waste
2027	0.3564	0.0247	0.3536	0.0541	0.4600	0.4702	0.0632	0.0349
2028	0.3657	0.0286	0.3606	0.0562	0.4720	0.4823	0.0649	0.0358
2029	0.3760	0.0296	0.3691	0.0589	0.4848	0.5043	0.0667	0.0368
2030	0.3856	0.0306	0.3768	0.0618	0.4966	0.5267	0.0684	0.0377
2031	0.3953	0.0316	0.3843	0.0651	0.5085	0.5514	0.0701	0.0387
2032	0.4040	0.0326	0.3916	0.0674	0.5194	0.5698	0.0717	0.0395
2033	0.4119	0.0334	0.3987	0.0693	0.5294	0.5846	0.0731	0.0403
2034	0.4199	0.0342	0.4058	0.0712	0.5395	0.5993	0.0745	0.0411
2035	0.4278	0.0350	0.4130	0.0729	0.5495	0.6128	0.0759	0.0419
2036	0.4358	0.0358	0.4203	0.0746	0.5597	0.6262	0.0773	0.0426
2037	0.4435	0.0366	0.4274	0.0762	0.5695	0.6393	0.0787	0.0434
2038	0.4513	0.0374	0.4346	0.0778	0.5795	0.6522	0.0801	0.0442
2039	0.4593	0.0382	0.4420	0.0795	0.5896	0.6653	0.0815	0.0449
2040	0.4674	0.0390	0.4495	0.0811	0.6000	0.6788	0.0829	0.0457
2041	0.4757	0.0399	0.4571	0.0829	0.6105	0.6925	0.0844	0.0466
2042	0.4841	0.0407	0.4648	0.0846	0.6212	0.7065	0.0859	0.0474
2043	0.4927	0.0416	0.4727	0.0864	0.6321	0.7208	0.0874	0.0482
2044	0.5014	0.0425	0.4807	0.0882	0.6432	0.7353	0.0889	0.0491
2045	0.5102	0.0434	0.4888	0.0901	0.6544	0.7502	0.0905	0.0499
2046	0.5192	0.0443	0.4970	0.0920	0.6659	0.7653	0.0921	0.0508
2047	0.5283	0.0453	0.5054	0.0939	0.6774	0.7803	0.0937	0.0517
2048	0.5375	0.0462	0.5139	0.0959	0.6892	0.7960	0.0953	0.0526
2049	0.5470	0.0472	0.5225	0.0979	0.7012	0.8119	0.0970	0.0535
2050	0.5565	0.0482	0.5313	0.0999	0.7133	0.8278	0.0987	0.0545
2051	0.5662	0.0492	0.5402	0.1020	0.7257	0.8443	0.1004	0.0554
2052	0.5760	0.0502	0.5492	0.1041	0.7382	0.8608	0.1022	0.0564
2053	0.5860	0.0512	0.5584	0.1062	0.7510	0.8776	0.1039	0.0574
2054	0.5963	0.0523	0.5677	0.1084	0.7640	0.8951	0.1057	0.0584
2055	0.6066	0.0534	0.5772	0.1106	0.7771	0.9125	0.1076	0.0594

5.2 Unit Tax Rates for Unconstrained Funds

Table 18 shows the certified tax rate (in dollars per hundred dollars NAV) for the funds identified as unconstrained in the tax districts. The largest is the Bartholomew Consolidated School Corporation (BCSC) debt service fund, which raises revenue to repay borrowing for the construction of large infrastructure projects. Such debt repayment funds are not subject to the MLGQ because the state realizes that restrictions on the ability of local units to raise funds to repay debt would discourage lenders, increasing the cost of borrowing or discouraging lenders from lending at all.

Table 18: Certified Tax Rate for Unconstrained Funds, 2022 to 2024

Unit	Fund	Tax Rate		
		2022	2023	2024
County	Cumulative Bridge	0.0376	0.0376	0.0376
	Debt Service	0.0334	0.0305	0.0285
Clay Twp	Fire Building Debt	0.0394	0.0386	0.0267
Columbus Twp	Cumulative Fire	0.0167	0.0167	0.0167
Flat Rock Twp	Cumulative Fire	0.0333	0.0333	0.0333
BCSC	Debt Service	0.2757	0.3093	0.3010
	Referendum Capital	0.1283	0.1075	0.1171
	Referendum Operating	0.1560	0.1560	0.1534
F-H Schools	Debt Service	0.1475	0.1096	0.0836
	Referendum Debt Fund - Exempt Capital	0.6071	0.4916	0.4612

Source: (Indiana DLGF, 2024b) (Indiana DLGF, 2023c) (Indiana DLGF, 2022)

BCSC has several outstanding debt obligations totaling \$33.6 million, yielding a 2023 tax rate of 0.573 (in addition to the constrained fund rates). The total unconstrained funds levy for BCSC increased from \$30.75 million to \$31.96 million in 2024 but the rate decreased slightly (to 0.572) due to increased NAV in the unit. The School’s referendum operating fund rate for 2024 was likely affected by Indiana’s HB 1499, which restricted the growth of referendum operating funds to 3 percent in 2024, with a rate reduction required if the NAV grows by more than 3 percent. Based on the applicable levies and NAVs for the fund in 2023 and 2024, the NAV increased by over 4 percent while the levy increased by just under 3 percent which resulted in a rate decrease of about 2 percent. However, the bill’s restrictions apply only to 2024 and as such will not affect future rates for the fund.

As detailed in the BCSC Long-Range Facility Plan (BCSC, 2023), the district is proposing several significant capital projects in coming years, which will necessitate additional debts of up to \$306 million by 2030 (Table 19). The School Corp is currently considering whether to pursue these investments as part of a referendum. Without a referendum, the investments would be timed to correspond to the expiration of existing debts between 2024 and 2029 so that the tax rates would remain the same. If, instead, it pursues a referendum, then the investments may result in increased effective tax rates (BCSC, 2023).

Table 19: Proposed Bartholomew Consolidated School Corporation Capital Improvements

Project	Est cost (millions)	Est start date
12 th elementary school	\$60	2024
Renovation of remaining elementary schools	\$114	2024 – 2028
Renovation at Northside Tech and equipment updates at Central	\$53	2025
Additions and renovations to both high schools	\$14	2027
PE and athletics expansion	\$62	2027
Relocation of Bright Beginnings to Johnson	\$3	2024
Relocation of Columbus Virtual Pathway to McDowell		2026

Source: (BCSC, 2023)

For the purpose of this analysis, we assume that the BCSC debt service and referendum capital rates will be held constant at 2024 levels over the duration of the analysis period. For the referendum operating fund, we assume that the rate will be held constant at the 2023 level (after the removal of the HB 1499 restrictions). The School Corporation’s debt fund represents a relatively large share of the overall tax rate for the district, and as such the rate may be sensitive to variations in the fund’s levy. For a sensitivity analysis on this variable, see Section 6.2.

The Flat Rock-Hawcreek School Corp also has some debt that is funded through unconstrained funds, with a combined rate of 0.545. However, additional information about potential future debt for the unit is not available; we assume that the rate will be held constant over the duration of the analysis period.

Bartholomew County has a debt service fund for approximately \$10.5 million in outstanding debts for lease rental bonds as well as some capital projects including construction of highway garage facilities and jail additions. Clay Township also has a debt service fund for debts associated with its fire building. The rates for these funds decreased in both 2024 and 2023 even as the levy increased, due to increased NAV for the units in each year.

The other two unconstrained funds are cumulative funds (Bartholomew County’s Cumulative Bridge and Columbus Township’s Cumulative Fire). These funds collect smaller amounts of revenue over many years, saving for equipment purchases and infrastructure projects. Rather than being controlled by the MLGQ, cumulative funds are rate-constrained, with maximum rate limits set by law. Both rates remained constant from 2022 to 2024, and we assume the rates will remain constant over the analysis period.

5.3 Summary of Unit Tax Rate Projections

Table 20 shows the total projected tax rate for each unit over the analysis period, which is the sum of the projected tax rates for constrained and unconstrained funds (projected each year for constrained funds in Table 17 and based on the 2023 rate for the BCSC referendum operating fund and the 2024 rates for all other unconstrained funds in Table 18).

Table 21 shows the tax rates for the three tax districts based on the sum of the relevant units for each.

Table 20: Summary of Projected Total Tax Rate by Unit, 2023 to 2055

	County	Clay Twp	Columbus Twp	Flat Rock Twp	BCSC	F-H Schools	Library	Waste
2023	0.4011	0.0762	0.2399	0.0921	0.9997	1.0773	0.0590	0.0225
2024	0.3982	0.0628	0.3384	0.0888	0.9985	1.0077	0.0589	0.0325
2025	0.4165	0.0650	0.3531	0.0916	1.0248	1.0309	0.0622	0.0343
2026	0.4177	0.0537	0.3620	0.0886	1.0273	1.0183	0.0624	0.0344
2027	0.4225	0.0514	0.3703	0.0874	1.0341	1.0150	0.0632	0.0349
2028	0.4318	0.0553	0.3773	0.0895	1.0461	1.0271	0.0649	0.0358
2029	0.4421	0.0563	0.3858	0.0922	1.0589	1.0491	0.0667	0.0368
2030	0.4517	0.0573	0.3935	0.0951	1.0707	1.0715	0.0684	0.0377
2031	0.4614	0.0583	0.4010	0.0984	1.0826	1.0962	0.0701	0.0387
2032	0.4701	0.0593	0.4083	0.1007	1.0935	1.1146	0.0717	0.0395
2033	0.4780	0.0601	0.4154	0.1026	1.1035	1.1294	0.0731	0.0403

	County	Clay Twp	Columbus Twp	Flat Rock Twp	BCSC	F-H Schools	Library	Waste
2034	0.4860	0.0609	0.4225	0.1045	1.1136	1.1441	0.0745	0.0411
2035	0.4939	0.0617	0.4297	0.1062	1.1236	1.1576	0.0759	0.0419
2036	0.5019	0.0625	0.4370	0.1079	1.1338	1.1710	0.0773	0.0426
2037	0.5096	0.0633	0.4441	0.1095	1.1436	1.1841	0.0787	0.0434
2038	0.5174	0.0641	0.4513	0.1111	1.1536	1.1970	0.0801	0.0442
2039	0.5254	0.0649	0.4587	0.1128	1.1637	1.2101	0.0815	0.0449
2040	0.5335	0.0657	0.4662	0.1144	1.1741	1.2236	0.0829	0.0457
2041	0.5418	0.0666	0.4738	0.1162	1.1846	1.2373	0.0844	0.0466
2042	0.5502	0.0674	0.4815	0.1179	1.1953	1.2513	0.0859	0.0474
2043	0.5588	0.0683	0.4894	0.1197	1.2062	1.2656	0.0874	0.0482
2044	0.5675	0.0692	0.4974	0.1215	1.2173	1.2801	0.0889	0.0491
2045	0.5763	0.0701	0.5055	0.1234	1.2285	1.2950	0.0905	0.0499
2046	0.5853	0.0710	0.5137	0.1253	1.2400	1.3101	0.0921	0.0508
2047	0.5944	0.0720	0.5221	0.1272	1.2515	1.3251	0.0937	0.0517
2048	0.6036	0.0729	0.5306	0.1292	1.2633	1.3408	0.0953	0.0526
2049	0.6131	0.0739	0.5392	0.1312	1.2753	1.3567	0.0970	0.0535
2050	0.6226	0.0749	0.5480	0.1332	1.2874	1.3726	0.0987	0.0545
2051	0.6323	0.0759	0.5569	0.1353	1.2998	1.3891	0.1004	0.0554
2052	0.6421	0.0769	0.5659	0.1374	1.3123	1.4056	0.1022	0.0564
2053	0.6521	0.0779	0.5751	0.1395	1.3251	1.4224	0.1039	0.0574
2054	0.6624	0.0790	0.5844	0.1417	1.3381	1.4399	0.1057	0.0584
2055	0.6727	0.0801	0.5939	0.1439	1.3512	1.4573	0.1076	0.0594

Table 21: Summary of Projected Total Tax Rate by Tax District, 2023 to 2055

	Clay ^a	Columbus ^b	Flat Rock ^c
2023	1.558	1.722	1.652
2024	1.551	1.827	1.586
2025	1.603	1.891	1.636
2026	1.595	1.904	1.621
2027	1.606	1.925	1.623
2028	1.634	1.956	1.649
2029	1.661	1.990	1.687
2030	1.686	2.022	1.724
2031	1.711	2.054	1.765
2032	1.734	2.083	1.797
2033	1.755	2.110	1.823
2034	1.776	2.138	1.850

	Clay ^a	Columbus ^b	Flat Rock ^c
2035	1.797	2.165	1.875
2036	1.818	2.193	1.901
2037	1.839	2.219	1.925
2038	1.859	2.247	1.950
2039	1.880	2.274	1.975
2040	1.902	2.302	2.000
2041	1.924	2.331	2.026
2042	1.946	2.360	2.053
2043	1.969	2.390	2.080
2044	1.992	2.420	2.107
2045	2.015	2.451	2.135
2046	2.039	2.482	2.164
2047	2.063	2.513	2.192
2048	2.088	2.546	2.222
2049	2.113	2.578	2.252
2050	2.138	2.611	2.282
2051	2.164	2.645	2.313
2052	2.190	2.679	2.344
2053	2.216	2.714	2.375
2054	2.244	2.749	2.408
2055	2.271	2.785	2.441

a. sum of the rates for the units Bartholomew County, Clay Township. Bartholomew Consolidated School Corp., Bartholomew County Public Library, and Bartholomew County Solid Waste Management District.
b. sum of the rates for the units Bartholomew County, Columbus Township. Bartholomew Consolidated School Corp., Bartholomew County Public Library, and Bartholomew County Solid Waste Management District.
c. sum of the rates for the units Bartholomew County, Flat Rock Township, Flat Rock-Hawcreek School Corp., Bartholomew County Public Library, and Bartholomew County Solid Waste Management District.

6 Results, Discussion, and Uncertainties

The final step in calculating the tax liability for the Swallowtail property in a given year is to sum the tax rates for the units making up the tax district and multiplying that rate by the property’s NAV (Equation 11).

Equation 11:
$$T_i = NAV_i \times \sum_1^{n_d} (\sum_1^{n_{u,d}} TR_{u,d} \times P_d)$$

- T_i = tax liability for property *i* (in dollars)
- NAV_i = the net assessed value of property *i* (in dollars)
- n_d = the number of districts *d* applicable to property *i*
- n_{u,d} = the number of government units *u* in district *d*
- TR_{u,d} = tax rate for government unit *u* in district *d* (in dollars of tax liability per dollar NAV)
- p_d = percentage of the property *i* that is within district *d*

Section 3 details the projection of NAV_i over the 2023 to 2055 period; Section 4 details the projection of NAV_u for the applicable units; and Section 5 details the projection of TR_{u,d} for each unit and district.

Additionally, the tax liability of the property is subject to a “circuit breaker” tax cap representing the maximum amount that the project can be billed. In the case of the Swallowtail property, the cap is 3% of GAV which is the standard cap for real and personal business property.¹⁸ If a property’s calculated tax bill exceeds its cap, then the owner is issued a credit to bring the bill down to an allowable amount. For each year in the analysis period, we calculated the maximum allowable tax liability for the property as 3 percent of the GAV. If the calculated tax liability exceeds that amount, then the tax liability is set at the maximum.

The rest of this section presents the resultant projected tax rates for the tax district as well as the projected tax liability for the Swallowtail property (Section 6.1), then characterizes key uncertainties in the analysis (Section 6.2), and provides a range of low and high estimates for the results based on a range of reasonable estimates for the key variables (Sections 6.3 and 6.4).

6.1 Central Estimate

Table 22 summarizes the results of the analysis described in Sections 3 through 5, broken out for the solar property (in the Clay and Flat Rock tax districts) and the transmission lines (in the Clay and Columbus tax districts). In each case, the tax liability is the sum of liabilities across districts. Table 23 shows the projected property tax revenues that each unit will collect from property taxes paid from the solar property and transmission lines.

Table 22: Summary of Projected Results, 2026 to 2055, Central Estimate (millions)

	Solar property		Transmission lines		Total	
	NAV	Liability ^a	NAV	Liability ^b	NAV	Liability
2026	\$89.678	\$1.432	\$0.866	\$0.014	\$90.544	\$1.447
2027	\$124.659	\$2.004	\$1.299	\$0.022	\$125.958	\$2.026
2028	\$86.224	\$1.410	\$0.812	\$0.014	\$87.036	\$1.424
2029	\$86.691	\$1.441	\$0.812	\$0.014	\$87.503	\$1.455
2030	\$87.170	\$1.472	\$0.812	\$0.014	\$87.982	\$1.486
2031	\$87.660	\$1.503	\$0.812	\$0.015	\$88.472	\$1.518
2032	\$88.162	\$1.533	\$0.812	\$0.015	\$88.974	\$1.547

¹⁸ Homestead properties have a 1% cap, while farmland and rentals have a 2% cap.

	Solar property		Transmission lines		Total	
	NAV	Liability ^a	NAV	Liability ^b	NAV	Liability
2033	\$88.675	\$1.560	\$0.812	\$0.015	\$89.487	\$1.575
2034	\$89.201	\$1.589	\$0.812	\$0.015	\$90.013	\$1.604
2035	\$89.739	\$1.617	\$0.812	\$0.015	\$90.551	\$1.633
2036	\$90.285	\$1.647	\$0.812	\$0.015	\$91.097	\$1.662
2037	\$90.841	\$1.676	\$0.812	\$0.016	\$91.653	\$1.691
2038	\$91.407	\$1.705	\$0.812	\$0.016	\$92.219	\$1.721
2039	\$91.984	\$1.736	\$0.812	\$0.016	\$92.796	\$1.752
2040	\$92.572	\$1.767	\$0.812	\$0.016	\$93.385	\$1.783
2041	\$93.173	\$1.799	\$0.812	\$0.016	\$93.985	\$1.816
2042	\$93.787	\$1.832	\$0.812	\$0.017	\$94.599	\$1.849
2043	\$94.414	\$1.866	\$0.812	\$0.017	\$95.226	\$1.883
2044	\$95.055	\$1.901	\$0.812	\$0.017	\$95.867	\$1.918
2045	\$95.711	\$1.937	\$0.812	\$0.017	\$96.523	\$1.954
2046	\$96.381	\$1.974	\$0.812	\$0.017	\$97.193	\$1.991
2047	\$97.068	\$2.012	\$0.812	\$0.018	\$97.880	\$2.029
2048	\$97.772	\$2.050	\$0.812	\$0.018	\$98.584	\$2.068
2049	\$98.492	\$2.091	\$0.812	\$0.018	\$99.304	\$2.109
2050	\$99.228	\$2.132	\$0.812	\$0.018	\$100.041	\$2.150
2051	\$99.982	\$2.174	\$0.812	\$0.019	\$100.794	\$2.192
2052	\$100.753	\$2.217	\$0.812	\$0.019	\$101.565	\$2.236
2053	\$101.541	\$2.262	\$0.812	\$0.019	\$102.353	\$2.281
2054	\$102.346	\$2.308	\$0.812	\$0.019	\$103.158	\$2.327
2055	\$103.169	\$2.355	\$0.812	\$0.019	\$103.981	\$2.375
Total		\$55.002		\$0.501		\$55.503

a. Based on NAV for the property and equipment (Section 3; 93% in Clay and 7% in Flat Rock) and applicable tax rate (Table 19).

b. Based on NAV for the equipment (Section 3; 76% in Clay and 24% in Columbus) and applicable tax rate (Table 19).

Table 23: Projected Tax Payments by Unit, 2026 to 2055, Central Estimate

	County	Clay Twp	Columbus Twp	Flat Rock Twp	BCSC	F-H Schools	Library	Waste
2026	\$378,196	\$45,143	\$752	\$5,561	\$865,687	\$63,925	\$56,461	\$31,154
2027	\$532,208	\$60,093	\$1,155	\$7,624	\$1,212,321	\$88,566	\$79,612	\$43,935
2028	\$375,822	\$44,649	\$735	\$5,399	\$847,350	\$61,990	\$56,445	\$31,149
2029	\$386,844	\$45,729	\$752	\$5,598	\$862,307	\$63,661	\$58,348	\$32,197
2030	\$397,390	\$46,800	\$767	\$5,805	\$876,699	\$65,380	\$60,165	\$33,198
2031	\$408,186	\$47,926	\$781	\$6,037	\$891,359	\$67,263	\$62,025	\$34,223
2032	\$418,250	\$48,949	\$796	\$6,218	\$905,419	\$68,783	\$63,753	\$35,175
2033	\$427,759	\$49,912	\$809	\$6,371	\$918,973	\$70,108	\$65,380	\$36,073
2034	\$437,452	\$50,893	\$823	\$6,525	\$932,814	\$71,439	\$67,038	\$36,987
2035	\$447,214	\$51,875	\$837	\$6,671	\$946,833	\$72,720	\$68,706	\$37,908

	County	Clay Twp	Columbus Twp	Flat Rock Twp	BCSC	F-H Schools	Library	Waste
2036	\$457,195	\$52,874	\$852	\$6,817	\$961,167	\$74,008	\$70,413	\$38,849
2037	\$467,077	\$53,871	\$866	\$6,963	\$975,421	\$75,294	\$72,100	\$39,780
2038	\$477,174	\$54,887	\$880	\$7,110	\$989,993	\$76,588	\$73,824	\$40,732
2039	\$487,556	\$55,931	\$894	\$7,261	\$1,004,951	\$77,920	\$75,598	\$41,711
2040	\$498,231	\$57,004	\$908	\$7,416	\$1,020,309	\$79,290	\$77,422	\$42,717
2041	\$509,206	\$58,108	\$923	\$7,576	\$1,036,077	\$80,699	\$79,297	\$43,752
2042	\$520,489	\$59,243	\$938	\$7,741	\$1,052,268	\$82,150	\$81,226	\$44,817
2043	\$532,088	\$60,411	\$954	\$7,912	\$1,068,894	\$83,643	\$83,209	\$45,911
2044	\$544,013	\$61,612	\$969	\$8,087	\$1,085,968	\$85,179	\$85,248	\$47,037
2045	\$556,272	\$62,848	\$985	\$8,268	\$1,103,505	\$86,760	\$87,345	\$48,194
2046	\$568,877	\$64,120	\$1,001	\$8,454	\$1,121,518	\$88,388	\$89,502	\$49,384
2047	\$581,776	\$65,419	\$1,017	\$8,643	\$1,139,967	\$90,037	\$91,708	\$50,602
2048	\$595,098	\$66,766	\$1,034	\$8,841	\$1,158,980	\$91,762	\$93,988	\$51,860
2049	\$608,799	\$68,153	\$1,051	\$9,045	\$1,178,515	\$93,538	\$96,333	\$53,155
2050	\$622,836	\$69,571	\$1,068	\$9,251	\$1,198,534	\$95,340	\$98,736	\$54,481
2051	\$637,334	\$71,041	\$1,085	\$9,468	\$1,219,165	\$97,222	\$101,218	\$55,851
2052	\$652,194	\$72,543	\$1,103	\$9,688	\$1,240,315	\$99,134	\$103,763	\$57,255
2053	\$667,488	\$74,090	\$1,121	\$9,915	\$1,262,057	\$101,103	\$106,382	\$58,701
2054	\$683,286	\$75,693	\$1,139	\$10,152	\$1,284,461	\$103,157	\$109,089	\$60,195
2055	\$699,492	\$77,333	\$1,157	\$10,394	\$1,307,442	\$105,245	\$111,866	\$61,728
Total	\$15,575,802	\$1,773,489	\$28,155	\$230,811	\$31,669,269	\$2,460,291	\$2,426,200	\$1,338,712
Avg.	\$519,193	\$59,116	\$938	\$7,694	\$1,055,642	\$82,010	\$80,873	\$44,624
<i>Perc.</i>	28.1%	3.2%	0.1%	0.4%	57.1%	4.4%	4.4%	2.4%

6.2 Characterization of Uncertainty and Discussion of Key Variables

As described throughout this document, the actual tax rate applicable to the Swallowtail property will depend on many factors, including those elucidated above as well as other economic, legal, political, demographic, environmental, and other developments that are not possible to project. Each of the factors that influence the property’s ultimate tax liability are subject to uncertainties and those uncertainties increase as projections extend decades into the future.

The wide range of scenarios that may significantly affect the applicable tax rate for the property over the course of the analysis include:

- large capital expenditures, such as school referendums, which increase the tax levy;
- significant growth in the residential sector in rural areas, which may affect the district’s net assessed value and the distribution of liability across taxpayers;
- removal or adjustment of the 30 percent floor on personal property values;
- elimination of personal property taxation;

- changes to other constraints such as a decrease in the circuit-breaker tax cap for businesses, an increase or decrease in the limits on the MLGQ, the introduction of an Indiana-specific depreciation schedule for solar farms, etc., any of which may increase or decrease the likely tax liability;
- substantial changes in agricultural land values due to changes in corn and soybean prices; and
- annexations and other significant changes that shift tax district boundaries.

In this section, we briefly describe the importance of some of the variables that a) are particularly important in the projection of the tax rate, b) have particular uncertainty around their future trajectory, or c) both. These include 1) the personal property value floor; 2) variables impacting the farmland base rate (FLBR) including corn and soybean prices; 3) the maximum levy growth quotient (MLGQ); and 4) the BCSC tax rate. After discussing each of these variables, we calculate the district tax rate and Swallowtail tax liability over the analysis period using a range of reasonable estimates, presenting low and high tax burden scenarios that may be reasonably expected.

Table 24 shows median tax rates and percentiles for Indiana’s 2,000 taxing districts, and for those that include cities and towns, and those rural districts that do not. With 2023 rates of 1.56, 1.72, and 1.65, the Clay, Columbus, and Flat Rock Township districts (respectively) are near the median rate among rural districts in Indiana. This information provides useful context for evaluating likely scenarios for the districts’ tax rate going forward. Many things will change for Indiana property taxes in the coming thirty years, but in the current environment rural district tax rates above 3 are very unusual.

Table 24: Property Tax Rate Percentiles for Indiana Tax Districts (2023)

Percentile	All Districts	City/Town Districts	Rural Districts
10%	1.3042	1.6919	1.1839
25%	1.5586	2.0509	1.3832
Median	1.9660	2.5659	1.6344
75%	2.6160	3.1137	1.9201
90%	3.3493	3.9879	2.3008

6.2.1 Personal Property Value Floor

As described in Section 3.2, business personal property in Indiana is subject to an assessed value floor equal to 30 percent of the original investment amount. For Swallowtail, this means that the GAVp for the property will never fall below approximately \$74.2 million over the course of the analysis period regardless of depreciation.

There is potential for this floor to be reduced or even removed over the course of the analysis period, given political will in the state. The Indiana General Assembly has considered bills to reduce or remove it several times, including in 2022 when Governor Holcomb announced in his legislative agenda that eliminating the floor was a top priority (Holcomb, 2022). Furthermore, both the House and the Senate attempted to pass

legislation to either eliminate or lower this number,¹⁹ and the Indiana Chamber of Commerce supports the removal of the floor as well (Indiana Chamber, 2022).

Removal of the floor before 2028 would result in GAV_p declining pursuant to the depreciation schedule shown in Table 5, rather than staying constant at \$65.6 million for the years 2028 to 2055. This would reduce the NAV_i value considerably. At the same time, however, this would also reduce the NAV_u for all of the units, resulting in higher tax rates.

The low estimate scenario summarized in Section 6.3 assumes that changes to the personal property value floor would reduce GAV_p for Swallowtail and all other personal property in the units by 50 percent.

6.2.2 FLBR Variables

The farmland base rate (FLBR) is an important variable in the calculation of NAV_u. As described in Section 4.2.2, some of the variables that determine the FLBR (including rents, yields, and costs) tend to rise at predictable rates. However, corn and soybean prices tend to vary widely and thus represent a source of significant uncertainty in the projection. We used projections of the prices from USDA (2022) for the central estimate included above, which start at \$6.80 per bushel for corn and \$14.00 per bushel for soybeans in 2023, before declining to steady prices of \$4.30 and \$10.30 by 2029.

However, the projected tax rate is somewhat sensitive to this assumption; lower crop prices result in lower NAV_u which in turn increases the tax rates. Given the importance of this variable and its relative uncertainty, we incorporated higher corn and soybean prices into the lower estimate and lower prices into the high estimate.

6.2.3 MLGQ

The maximum levy growth quotient (MLGQ) is an important variable in the projection of property tax liability since it dictates the rate at which most units' levies can grow each year. As described in Section 5.1, we assume that constrained funds, which make up the majority of unit levies, will grow at the rate of the MLGQ every year. While this is consistent with typical practices in the state, there is some uncertainty associated with it, and it could overestimate or underestimate changes in unit budgets in each year.

First, while most units operate very near their maximums, those that operate below their maximums may increase their levy by more than the MLGQ in a given year. This is because the maximum growth applies to the preceding year's maximum, not its actual levy. As such, using the MLGQ to project changes in the constrained tax levy could result in an underestimate for some units for some years, if they are operating under their maximums and increase their levies to be closer to their maximums. However, we do not anticipate that this results in a significant underestimate overall given historical trends and the status of the levies in the district in relation to their maximums (Table 25). Also, for units that are operating at their maximum, the approach could result in an overestimate, since they may choose to increase their levy by a smaller amount (but cannot increase it by a larger amount).

There is also uncertainty around the projection of the MLGQ over the analysis period. While available data suggest that our assumptions around the MLGQ trajectory are consistent with both historical data and with long-term economic projections, it is important to model alternative assumptions for the low and

¹⁹ House Bill 1002 was a larger bill pertaining to several issues revolving around taxation, and the original draft included a measure to phase out the 30% floor for any property purchased in 2023 and beyond (Brown, 2022). However, this section was amended out before the General Assembly passed it into law. Senate Bill 378 was a measure focused on lowering the 30% minimum to 25% by 2024, but the bill failed to make it into committee before the legislative session ended (Buchanan & Rogers, 2022).

high estimates to establish a realistic range of potential tax levy projections. The actual MLGQ is likely to reflect higher variability than projected. As such, the low and the high estimates incorporate lower and higher assumed MLGQ over the analysis period (respectively).

Table 25: Summary of Total Levy for Constrained Funds

	2023	2024	Change	2024 Max	Percent of Max
County	\$18,293,195	\$18,999,672	3.9%	\$22,917,327	82.9%
Clay Twp	\$57,548	\$59,582	3.5%	\$59,952	99.4%
Columbus Twp	\$1,341,993	\$1,596,766	19.0%	\$1,707,459	93.5%
Flat Rock Twp	\$58,120	\$60,392	3.9%	\$60,665	99.5%
BCSC	\$22,215,728	\$23,109,280	4.0%	\$23,109,438	100.0%
F-H Schools	\$1,339,330	\$1,392,844	4.0%	\$1,393,078	100.0%
Library	\$3,201,485	\$3,328,953	4.0%	\$3,332,926	99.9%
Waste	\$1,236,027	\$1,859,348	50.4%	\$2,033,981	91.4%

6.2.4 School Corporations’ Debt Fund

The central estimate assumes that all of the unconstrained funds in the units will maintain a constant tax rate over the analysis period, with the levy varying in proportion to NAV_u. We assume that this is a reasonable assumption based on typical debt financing and repayment in local jurisdictions and based on trends in each of the unconstrained funds. However, the uncertainty around these rates may have a significant effect on the projected tax liability, particularly in the case of BCSC, which accounts for a large share of the overall tax burden. Specifically, the BCSC unconstrained funds account for approximately 28 percent of the overall projected tax payments from Swallowtail based on the assumption that the debt fund levy will grow at the same rate as the NAV_u, meaning that the rate will be held constant. To account for this uncertainty and the potential for additional increases over the analysis period, the high estimate incorporates periodic increases in the BCSC tax rate over the analysis period.

6.3 Low Estimate

Table 26 and Table 27 summarize the low end of the potential range of tax liability for the Swallowtail property based on reasonable assumptions around the variables described in Section 6.2 (all other methods and assumptions are the same as the central estimate). Specifically, this scenario varies from the central estimate as follows:

- The personal property value (GAV_p) for Swallowtail and for each unit is reduced by 50 percent to approximate the impact of potential legislative changes to the personal property value floor.
- Corn and soybean prices are increased by 25 percent over the analysis period (relative to the central estimates), which is within the range of prices observed in recent years.
- MLGQ is set to 3.6 percent in each year of the projection, which is based on the average value calculated for 2001 to 2021 based on Indiana nonfarm personal income (U.S. Bureau of Economic Analysis, 2022).

Table 26: Summary of Projected Results, 2026 to 2055, Low Estimate (millions)

	Solar property		Transmission lines		Total	
	NAV	Liability	NAV	Liability	NAV	Liability
2026	\$55.116	\$0.951	\$0.433	\$0.008	\$55.549	\$0.959
2027	\$72.817	\$1.259	\$0.650	\$0.012	\$73.466	\$1.271
2028	\$53.823	\$0.939	\$0.406	\$0.007	\$54.229	\$0.947
2029	\$54.289	\$0.956	\$0.406	\$0.008	\$54.695	\$0.963
2030	\$54.768	\$0.973	\$0.406	\$0.008	\$55.174	\$0.980
2031	\$55.259	\$0.992	\$0.406	\$0.008	\$55.665	\$1.000
2032	\$55.760	\$1.012	\$0.406	\$0.008	\$56.166	\$1.020
2033	\$56.274	\$1.031	\$0.406	\$0.008	\$56.680	\$1.039
2034	\$56.800	\$1.050	\$0.406	\$0.008	\$57.206	\$1.058
2035	\$57.337	\$1.070	\$0.406	\$0.008	\$57.743	\$1.078
2036	\$57.883	\$1.089	\$0.406	\$0.008	\$58.289	\$1.097
2037	\$58.439	\$1.109	\$0.406	\$0.008	\$58.845	\$1.117
2038	\$59.005	\$1.130	\$0.406	\$0.008	\$59.411	\$1.138
2039	\$59.582	\$1.151	\$0.406	\$0.008	\$59.988	\$1.159
2040	\$60.171	\$1.172	\$0.406	\$0.008	\$60.577	\$1.180
2041	\$60.772	\$1.194	\$0.406	\$0.008	\$61.178	\$1.202
2042	\$61.386	\$1.217	\$0.406	\$0.008	\$61.792	\$1.225
2043	\$62.013	\$1.240	\$0.406	\$0.009	\$62.419	\$1.249
2044	\$62.654	\$1.264	\$0.406	\$0.009	\$63.060	\$1.272
2045	\$63.309	\$1.288	\$0.406	\$0.009	\$63.715	\$1.297
2046	\$63.980	\$1.313	\$0.406	\$0.009	\$64.386	\$1.322
2047	\$64.667	\$1.339	\$0.406	\$0.009	\$65.073	\$1.348
2048	\$65.371	\$1.366	\$0.406	\$0.009	\$65.777	\$1.375
2049	\$66.091	\$1.393	\$0.406	\$0.009	\$66.497	\$1.402
2050	\$66.827	\$1.421	\$0.406	\$0.009	\$67.233	\$1.430
2051	\$67.581	\$1.450	\$0.406	\$0.009	\$67.987	\$1.459
2052	\$68.352	\$1.480	\$0.406	\$0.009	\$68.758	\$1.489
2053	\$69.140	\$1.510	\$0.406	\$0.009	\$69.546	\$1.519
2054	\$69.945	\$1.541	\$0.406	\$0.009	\$70.351	\$1.551
2055	\$70.768	\$1.573	\$0.406	\$0.010	\$71.174	\$1.583
		\$36.473		\$0.256		\$36.729

Table 27: Projected Tax Payments by Unit, 2026 to 2055, Low Estimate

	County	Clay Twp	Columbus Twp	Flat Rock Twp	BCSC	F-H Schools	Library	Waste
2026	\$259,072	\$29,823	\$423	\$3,496	\$564,983	\$39,843	\$39,316	\$21,760
2027	\$344,327	\$37,972	\$646	\$4,459	\$750,431	\$51,636	\$52,275	\$28,944
2028	\$257,132	\$29,156	\$410	\$3,281	\$557,887	\$38,005	\$39,105	\$21,656
2029	\$262,617	\$29,634	\$416	\$3,337	\$566,666	\$38,575	\$40,017	\$22,162

	County	Clay Twp	Columbus Twp	Flat Rock Twp	BCSC	F-H Schools	Library	Waste
2030	\$268,066	\$30,134	\$421	\$3,399	\$575,416	\$39,188	\$40,922	\$22,664
2031	\$274,433	\$30,760	\$426	\$3,498	\$585,109	\$40,081	\$41,990	\$23,256
2032	\$281,018	\$31,421	\$432	\$3,606	\$595,078	\$41,041	\$43,096	\$23,868
2033	\$287,304	\$32,046	\$437	\$3,701	\$604,825	\$41,903	\$44,147	\$24,450
2034	\$293,621	\$32,674	\$442	\$3,793	\$614,684	\$42,756	\$45,202	\$25,034
2035	\$299,936	\$33,298	\$447	\$3,883	\$624,622	\$43,585	\$46,256	\$25,617
2036	\$306,309	\$33,924	\$452	\$3,970	\$634,691	\$44,403	\$47,318	\$26,205
2037	\$312,847	\$34,566	\$457	\$4,059	\$644,999	\$45,243	\$48,409	\$26,809
2038	\$319,509	\$35,217	\$463	\$4,150	\$655,511	\$46,090	\$49,520	\$27,425
2039	\$326,350	\$35,886	\$468	\$4,242	\$666,285	\$46,960	\$50,661	\$28,057
2040	\$333,328	\$36,567	\$473	\$4,336	\$677,285	\$47,839	\$51,825	\$28,702
2041	\$340,544	\$37,272	\$479	\$4,434	\$688,614	\$48,758	\$53,030	\$29,369
2042	\$347,957	\$37,996	\$484	\$4,536	\$700,234	\$49,702	\$54,268	\$30,055
2043	\$355,573	\$38,741	\$490	\$4,640	\$712,155	\$50,674	\$55,541	\$30,759
2044	\$363,353	\$39,499	\$496	\$4,745	\$724,344	\$51,657	\$56,840	\$31,479
2045	\$371,394	\$40,285	\$501	\$4,856	\$736,900	\$52,685	\$58,185	\$32,224
2046	\$379,614	\$41,087	\$507	\$4,968	\$749,745	\$53,726	\$59,559	\$32,985
2047	\$388,111	\$41,918	\$513	\$5,086	\$762,985	\$54,814	\$60,980	\$33,772
2048	\$396,802	\$42,767	\$519	\$5,206	\$776,540	\$55,919	\$62,433	\$34,577
2049	\$405,782	\$43,646	\$525	\$5,331	\$790,504	\$57,070	\$63,936	\$35,409
2050	\$414,971	\$44,544	\$531	\$5,457	\$804,800	\$58,240	\$65,473	\$36,261
2051	\$424,422	\$45,467	\$537	\$5,588	\$819,485	\$59,444	\$67,055	\$37,137
2052	\$434,142	\$46,417	\$543	\$5,723	\$834,567	\$60,683	\$68,682	\$38,038
2053	\$444,137	\$47,394	\$549	\$5,862	\$850,054	\$61,958	\$70,356	\$38,966
2054	\$454,418	\$48,398	\$555	\$6,005	\$865,959	\$63,270	\$72,079	\$39,920
2055	\$464,991	\$49,431	\$561	\$6,153	\$882,291	\$64,619	\$73,851	\$40,901
Total	\$10,412,081	\$1,137,940	\$14,601	\$135,798	\$21,017,651	\$1,490,368	\$1,622,327	\$898,461
Avg.	\$347,069	\$37,931	\$487	\$4,527	\$700,588	\$49,679	\$54,078	\$29,949
<i>Perc.</i>	28.3%	3.1%	0.0%	0.4%	57.2%	4.1%	4.4%	2.4%

6.4 High Estimate

Table 28 and Table 29 summarize the high end of the potential range of tax liability for the Swallowtail property based on reasonable assumptions around the variables described in Section 6.2 (all other assumptions are the same as the central estimate). This scenario varies from the central estimate as follows:

- Corn and soybean prices are decreased by 25 percent over the analysis period (relative to the central estimates), which is within the range of prices observed in recent years.
- MLGQ is set to 6 percent in each year of the projection, which is the upper limit on the metric.
- The BCSC debt fund tax rate increases by 2 percent every four years rather than staying constant throughout the period.

In this scenario, the Columbus tax district rate would exceed 3.0 in 2043, and the 3% circuit breaker cap would be triggered for the portion of the Swallowtail property located in the district, constraining the projected tax liability for the remainder of the analysis period. The cap would be triggered in the Flat Rock district in 2048 and in the Clay district in 2051.

Table 28: Summary of Projected Results, 2026 to 2055, High Estimate (millions)

	Solar property		Transmission lines		Total	
	NAV	Liability	NAV	Liability	NAV	Liability
2026	\$89.678	\$1.445	\$0.866	\$0.015	\$90.544	\$1.460
2027	\$124.659	\$2.042	\$1.299	\$0.022	\$125.958	\$2.064
2028	\$86.224	\$1.465	\$0.812	\$0.014	\$87.036	\$1.479
2029	\$86.691	\$1.509	\$0.812	\$0.015	\$87.503	\$1.524
2030	\$87.170	\$1.557	\$0.812	\$0.015	\$87.982	\$1.572
2031	\$87.660	\$1.607	\$0.812	\$0.016	\$88.472	\$1.622
2032	\$88.162	\$1.665	\$0.812	\$0.016	\$88.974	\$1.681
2033	\$88.675	\$1.714	\$0.812	\$0.016	\$89.487	\$1.731
2034	\$89.201	\$1.770	\$0.812	\$0.017	\$90.013	\$1.787
2035	\$89.739	\$1.823	\$0.812	\$0.017	\$90.551	\$1.840
2036	\$90.285	\$1.888	\$0.812	\$0.018	\$91.097	\$1.905
2037	\$90.841	\$1.945	\$0.812	\$0.018	\$91.653	\$1.963
2038	\$91.407	\$2.004	\$0.812	\$0.019	\$92.219	\$2.023
2039	\$91.984	\$2.066	\$0.812	\$0.019	\$92.796	\$2.085
2040	\$92.572	\$2.141	\$0.812	\$0.020	\$93.385	\$2.161
2041	\$93.173	\$2.208	\$0.812	\$0.020	\$93.985	\$2.228
2042	\$93.787	\$2.279	\$0.812	\$0.021	\$94.599	\$2.299
2043	\$94.414	\$2.352	\$0.812	\$0.021	\$95.226	\$2.373
2044	\$95.055	\$2.440	\$0.812	\$0.022	\$95.867	\$2.462
2045	\$95.711	\$2.520	\$0.812	\$0.022	\$96.523	\$2.542
2046	\$96.381	\$2.604	\$0.812	\$0.022	\$97.193	\$2.626
2047	\$97.068	\$2.692	\$0.812	\$0.023	\$97.880	\$2.714
2048	\$97.772	\$2.790	\$0.812	\$0.023	\$98.584	\$2.814
2049	\$98.492	\$2.880	\$0.812	\$0.024	\$99.304	\$2.904
2050	\$99.228	\$2.973	\$0.812	\$0.024	\$100.041	\$2.998
2051	\$99.982	\$2.999	\$0.812	\$0.024	\$100.794	\$3.024
2052	\$100.753	\$3.023	\$0.812	\$0.024	\$101.565	\$3.047
2053	\$101.541	\$3.046	\$0.812	\$0.024	\$102.353	\$3.071
2054	\$102.346	\$3.070	\$0.812	\$0.024	\$103.158	\$3.095
2055	\$103.169	\$3.095	\$0.812	\$0.024	\$103.981	\$3.119
Total		\$67.611		\$0.601		\$68.212

Table 29: Projected Tax Payments by Unit, 2026 to 2055, High Estimate

	County	Clay Twp	Columbus Twp	Flat Rock Twp	BCSC	F-H Schools	Library	Waste
2026	\$382,940	\$45,599	\$759	\$5,718	\$870,834	\$65,102	\$57,306	\$31,618
2027	\$546,550	\$61,239	\$1,178	\$8,040	\$1,228,100	\$91,783	\$82,166	\$45,339
2028	\$392,834	\$46,238	\$762	\$5,864	\$875,613	\$65,518	\$59,474	\$32,813
2029	\$408,618	\$47,700	\$788	\$6,141	\$896,271	\$67,791	\$62,221	\$34,328
2030	\$425,555	\$49,302	\$816	\$6,466	\$918,231	\$70,411	\$65,173	\$35,954
2031	\$443,344	\$51,003	\$844	\$6,822	\$941,205	\$73,243	\$68,274	\$37,664
2032	\$460,606	\$52,605	\$873	\$7,109	\$973,581	\$75,595	\$71,279	\$39,320
2033	\$478,149	\$54,215	\$903	\$7,375	\$996,802	\$77,824	\$74,331	\$41,004
2034	\$498,040	\$56,137	\$934	\$7,775	\$1,022,498	\$80,964	\$77,802	\$42,917
2035	\$516,838	\$57,856	\$966	\$8,045	\$1,047,384	\$83,243	\$81,073	\$44,721
2036	\$536,396	\$59,640	\$999	\$8,321	\$1,083,361	\$85,579	\$84,479	\$46,600
2037	\$556,751	\$61,491	\$1,033	\$8,604	\$1,110,281	\$87,978	\$88,024	\$48,556
2038	\$578,016	\$63,426	\$1,068	\$8,900	\$1,138,331	\$90,483	\$91,729	\$50,601
2039	\$600,152	\$65,435	\$1,105	\$9,204	\$1,167,487	\$93,059	\$95,587	\$52,729
2040	\$623,360	\$67,549	\$1,143	\$9,528	\$1,208,542	\$95,793	\$99,634	\$54,963
2041	\$647,524	\$69,745	\$1,182	\$9,861	\$1,240,289	\$98,608	\$103,849	\$57,288
2042	\$672,853	\$72,055	\$1,223	\$10,216	\$1,273,464	\$101,592	\$108,269	\$59,728
2043	\$699,210	\$74,454	\$1,265	\$10,581	\$1,307,926	\$104,665	\$112,870	\$62,267
2044	\$726,805	\$76,974	\$1,308	\$10,969	\$1,354,975	\$107,916	\$117,690	\$64,926
2045	\$755,646	\$79,611	\$1,353	\$11,376	\$1,392,568	\$111,315	\$122,729	\$67,706
2046	\$785,700	\$82,354	\$1,400	\$11,795	\$1,431,696	\$114,825	\$127,980	\$70,605
2047	\$817,191	\$85,241	\$1,448	\$12,240	\$1,472,594	\$118,540	\$133,485	\$73,642
2048	\$848,851	\$88,124	\$1,496	\$12,683	\$1,524,713	\$122,211	\$139,034	\$76,704
2049	\$881,327	\$91,079	\$1,544	\$13,137	\$1,565,989	\$125,966	\$144,733	\$79,849
2050	\$915,317	\$94,185	\$1,594	\$13,619	\$1,609,119	\$129,936	\$150,699	\$83,142
2051	\$928,722	\$95,162	\$1,608	\$13,790	\$1,615,756	\$130,937	\$153,283	\$84,568
2052	\$937,615	\$95,684	\$1,613	\$13,895	\$1,626,130	\$131,314	\$155,120	\$85,582
2053	\$950,240	\$96,595	\$1,624	\$14,057	\$1,631,341	\$132,226	\$157,572	\$86,936
2054	\$963,004	\$97,525	\$1,635	\$14,222	\$1,636,847	\$133,167	\$160,045	\$88,301
2055	\$975,911	\$98,477	\$1,646	\$14,390	\$1,642,654	\$134,136	\$162,541	\$89,679
Total	\$19,954,064	\$2,136,700	\$36,110	\$300,739	\$37,804,581	\$3,001,719	\$3,208,453	\$1,770,049
Avg.	\$665,135	\$71,223	\$1,204	\$10,025	\$1,260,153	\$100,057	\$106,948	\$59,002
<i>Perc.</i>	29.3%	3.1%	0.1%	0.4%	55.4%	4.4%	4.7%	2.6%

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