Academic Unit Scenario Modeling: General Scenario Planning

General Overview:

The purpose of this App is to provide a tool and "sandbox" environment which will allow Academic Units to model various scenarios and projections for their college/school. Scenario modeling is broken into two distinct categories: New Program and General Scenario. This guide will focus on the General Scenario tool.

The General Scenario Modeling Tool encompasses the following sections/App pages:

1. Create Scenario

1.01 – Create Scenario
- This page allows users to manage the creation and deletion of scenarios as well as designate scenarios as either New Program or General Scenario.

3. General Scenario Planning

3.01 – Unrestricted Scenario Planning
- This page allows users to input Unrestricted Fund projections for direct revenues and direct expenses. Adjustments will be entered by fund type for each Unrestricted Fund (if applicable).
    - **Please note:** The following pooled revenues, pooled expenses, and model allocations are not available for direct adjustment within the current page: UG Resident Tuition, UG NR Tuition, General State Appropriations, Support Unit Cost Allocations, Participation Fees, Legacy Model Adjustment, and Subvention.

3.02 – Restricted Scenario Planning
- This page allows users to input Restricted Fund projections for direct revenues and direct expenses. However, unlike the 3.01 – Unrestricted Scenario Planning page, projections will be made for total Restricted funds rather than each individual restricted fund type.

3.03 – Variables
- This page will allow users to model the impact of changes to the various metrics which drive pooled revenue and expense allocations per the Budget Model.

3.04 – Unrestricted Report
- This page provides users with Unrestricted Fund summary financial reports including a carryforward/fund balance summary through the final projected year.

3.05 – Restricted Report
- This page provides users with Restricted Fund summary financial reports including a carryforward/fund balance summary through the final projected year.

4. Multi-Scenario Tools

4.04 – Scenario Compare Report – General/New Programs
- This page will allow users to compare different scenarios in a side-by-side view.

Process for Creating a Scenario

1. From the Apps home page, select the Academic Unit Scenario Modeling link:
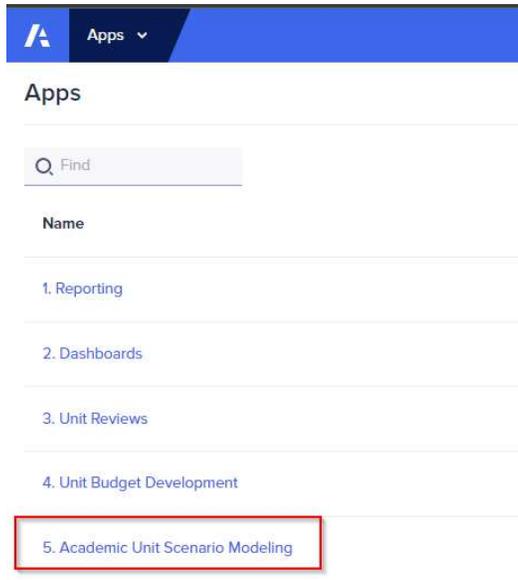
2. Select the 1.01 – Create Scenario link to create a scenario:
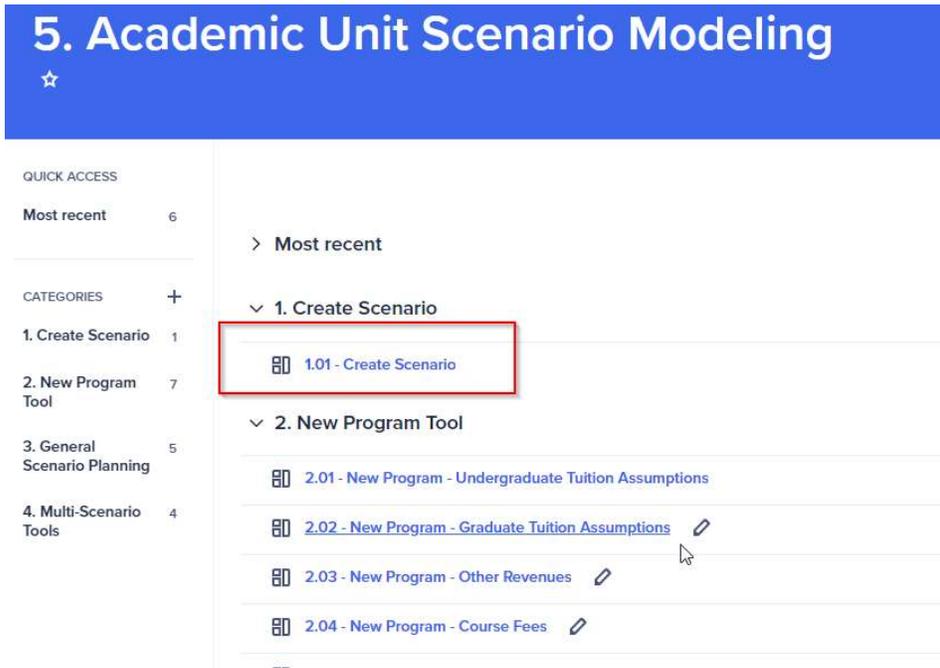
3. In the top right corner of this page, there are two options to choose from: Create Unit Scenario and Delete Unit Scenario. Select "Create Unit Scenario"
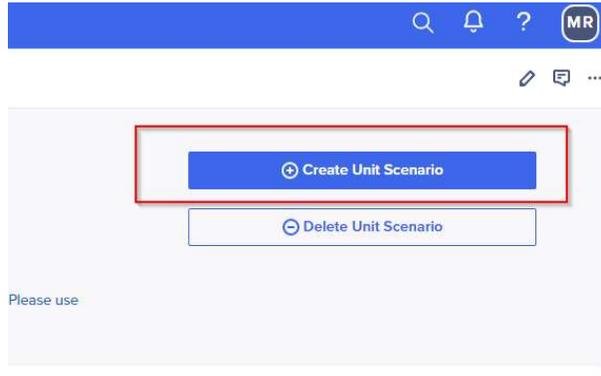
4. A prompt will appear for you to select which unit to create the scenario for. Users will additionally be able to provide a name to the scenario to distinguish different scenarios from one another. Once a unit has been selected and a name entered, click Submit to create the scenario:

5. Once a scenario has been created users will be able to see them populated on the app page. For General Scenarios, it is important to leave the 'New Program Scenario?' and 'Program Start Year' selections blank. Additionally, a comments field has been provided to allow users to add description of the assumptions being modeled.
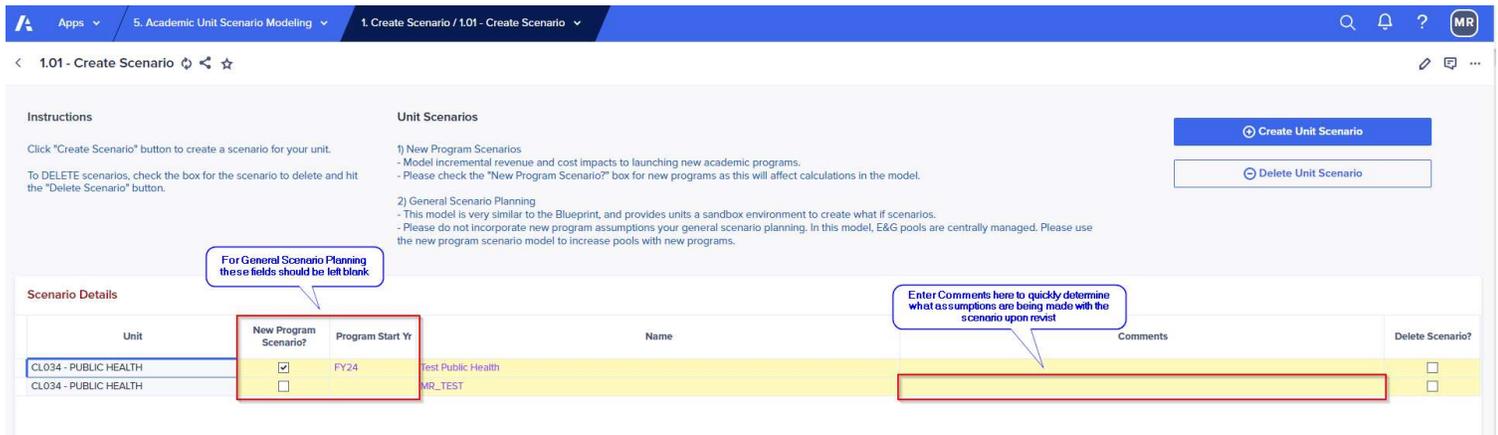
6. Once completed, navigate to the 3.01 – Unrestricted Scenario Planning page using the drop-down navigation bar at the top of the screen:
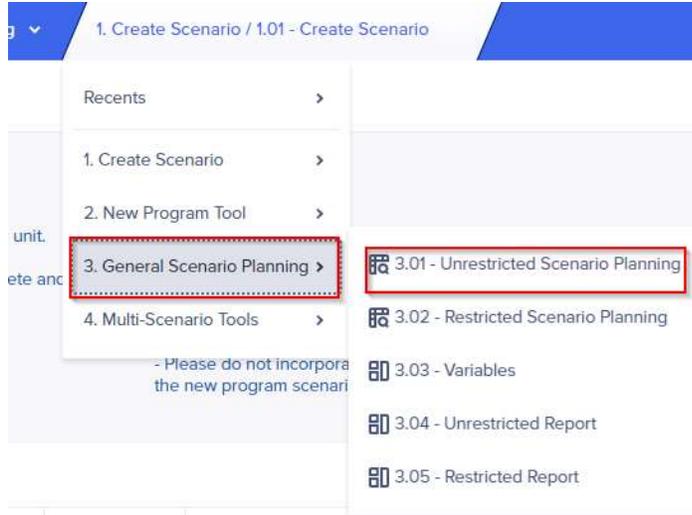
If there are multiple scenarios created for a unit, be sure to select the appropriate one from the drop-down list located in the top right of the screen:

The Unrestricted Scenario Planning page allows input into each Unrestricted fund type using the fund selector in the top right corner of the page; however, it is not required to enter adjustments into each fund type.
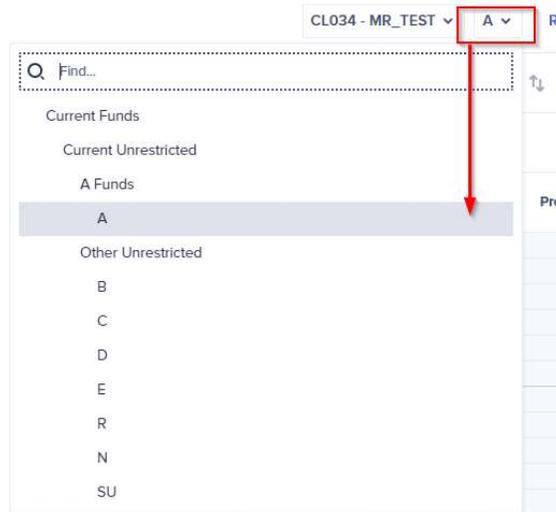
This page is where units will input direct revenue and direct expense projections for each unrestricted fund type. For A Funds, the following pooled revenues, pooled expenses, and model allocations are not available for direct adjustment: UG Resident Tuition, UG NR Tuition, General State Appropriations, Support Unit Cost Allocations, Participation Fees, Legacy Model Adjustment, and Subvention. Please refer to Appendix A for further details on how each of these values is calculated as well as an overview of the projection method for each P&L line item.

Non-A unrestricted fund types will include direct revenue and direct expense inputs only.

Historical actuals are provided for the previous two fiscal years. Additionally, current year-to-date information is included for the current fiscal year. Note that this data is for informational purposes only, and as such, the "$ Adj" columns should be used to input total forecasted values for all projected years.

Users can add comments to each projection input. First, select the row with the category you wish to add comments to, then select the Fiscal Year column header. This will activate the card on the right-hand side under "Additional Insights" for users to input their comments. The card will display the selected items for reference. Once a comment is entered, the Final Projected column will highlight the corresponding cell to indicate that a comment is present.

7. Navigate to the 3.02 – Restricted Scenario Planning page using the same drop-down navigation as in the prior step.

   This page is where units will input direct revenue and direct expense projections for restricted funds. Note that on this page, projections are entered directly into the 'Projected' column rather than into a '$ Adj' column. Unlike Unrestricted Scenario Planning, Restricted projections will be made at the total Restricted Fund level rather than each individual fund type.

8. The final page users will enter changes to is the 3.03 – Variables page. Using the drop-down navigation menu as described in step 6, navigate to this page. Here, users will be able to adjust incremental changes to their metrics.

   The first card on this page provides a mapping reference between the actual metric year (bottom row) and the financial/budget impact year (top row). For example, the FY24 Budget Year will use metrics sourced from FY22.

Metric Year vs. Financial Impact Year Reference Table

	FY24	FY25	FY26	FY27	FY28	FY29
Metric Financial Impact to Actual Yr	FY22	FY23	FY24	FY25	FY26	FY27

The second card on this page is where users will input their incremental adjustments to allocation metrics. As per the Budget Model methodology, metrics are used for the allocation of Undergraduate Tuition, General State Appropriations, and Support Unit Cost Allocations.

When entering metric data into this card, be mindful that these are increases/decreases to your metric information (not the full metric totals). Therefore, as an example, do not enter your full anticipated UG Student FTE into the FY24 column, but rather the incremental changes from the base starting year.

The base starting year of metrics will always be the current budget year. Therefore, in the example from the screen shot below, changes made in the FY24 Column impact the FY22 Metrics (as per the reference table) and will be added to or subtracted from the FY21 Metrics (base year) which are used for the current budget year (FY23).

In addition to the first column (i.e., FY24 below), all other columns also increase/decrease metrics totals from their base year values (not necessarily the previous year). In other words, entering a change of +5 into the FY28 column (FY26 metric) would adjust the value by adding +5 to the FY21 Metric (base year). Therefore, as an example, if a unit wants to model a constant increase of 5 FTE through each projection year, the inputted change value would need to increase each year, as modeled in the screenshot below:

(1) Incremental Metric Impacts [Note: they do not compound]

	FY24	FY25	FY26	FY27	FY28	FY29
Graduate CH Instruction - Non-Resident	-	-	-	-	-	-
Graduate CH Record - Non-Resident	-	-	-	-	-	-
Undergraduate Student FTE	5.0	10.0	15.0	20.0	25.0	30.0
Graduate Student FTE	-	-	-	-	-	-

Note: Although the first column (FY24 below) is a unit input column, the related metric values will be finalized for this year at some point during each Fall term. Therefore, at that point, units will be able to input the "known" adjustment values needed to arrive at the current year metric totals. In the example below, as FY22 metrics are known, the incremental changes from FY21 to FY22 have been entered to provide more precise modeling.

Metric Year vs. Financial Impact Year Reference Table

	FY24	FY25	FY26	FY27	FY28	FY29
Metric Financial Impact to Actual Yr	FY22	FY23	FY24	FY25	FY26	FY27

(1) Incremental Metric Impacts [Note: they do not compound]

	FY24	FY25	FY26	FY27	FY28	FY29
UG CH Instruction - Resident Total	-1,011.3	-	-	-	-	-
UG CH Record - Resident	-3,057.0	-	-	-	-	-
Graduate CH Instruction - Resident	-17.0	-	-	-	-	-
Graduate CH Record - Resident	75.0	-	-	-	-	-
UG CH Instruction - Non-Resident Total	-860.3	-	-	-	-	-
UG CH Record - Non-Resident	296.0	-	-	-	-	-
Graduate CH Instruction - Non-Resident	508.0	-	-	-	-	-
Graduate CH Record - Non-Resident	574.0	-	-	-	-	-
Undergraduate Student FTE	-102.7	-	-	-	-	-
Graduate Student FTE	37.9	-	-	-	-	-
Tenured/Tenure Track Faculty FTE	-3.0	-	-	-	-	-
Non Tenured/Tenure Track Faculty FTE	0.7	-	-	-	-	-
Staff FTE	2.0	-	-	-	-	-
Total Employee Headcount	15.0	-	-	-	-	-
Total Student Headcount	-65.0	-	-	-	-	-
Contract and Grant Revenue	5,071,384.9	-	-	-	-	-
Total Direct Expenses	8,187,452.0	-	-	-	-	-
Net Assignable Square Footage	-6,414.0	-	-	-	-	-

After users have completed their metric assumptions, those changes can be seen in the third and fourth cards on the page:

(2) Estimated Revenue per Unit Change

	FY23			FY24			FY25			FY26		
	Est. Rev per Chg	Unit Metric	Allocated Revenue	Est. Rev per Chg	Unit Metric	Allocated Revenue	Est. Rev per Chg	Unit Metric	Allocated Revenue	Est. Rev per Chg	Unit Metric	Allocated Revenue
UG Res CH Instruction Share of Total Pool	$ 224.42	20,579	$ 4,618,187	$ 232.17	19,567	$ 4,542,836	$ 230.34	20,579	$ 4,740,073	$ 230.34	20,579	$ 4,740,071
UG Res CH Record Share of Total Pool	$ 95.87	44,148	$ 4,232,498	$ 98.55	41,091	$ 4,049,718	$ 97.78	44,148	$ 4,316,808	$ 97.78	44,148	$ 4,316,811
Total UG Resident Pool		64,727	$ 8,850,685		60,658	$ 8,592,554		64,727	$ 9,056,881		64,727	$ 9,056,881
UG NR CH Instruction Share of Total Pool	$ 417.63	11,757	$ 4,909,967	$ 435.67	10,897	$ 4,747,265	$ 425.56	11,757	$ 5,003,168	$ 425.56	11,757	$ 5,003,157
UG NR CH Record Share of Total Pool	$ 176.80	24,925	$ 4,406,822	$ 181.10	25,221	$ 4,567,437	$ 176.89	24,925	$ 4,409,056	$ 176.89	24,925	$ 4,409,060
Total UG Non-Resident Pool		36,682	$ 9,316,789		36,118	$ 9,314,702		36,682	$ 9,412,224		36,682	$ 9,412,217
Gen Approp. Instruction Share of Total Pool	$ 222.53	50,467	$ 11,230,581	$ 231.38	47,485	$ 10,987,172	$ 231.38	50,467	$ 11,677,135	$ 231.38	50,467	$ 11,677,136
Gen Approp. Research Share of Total Pool	$ 0.36	32,278,180	$ 11,639,845	$ 0.33	37,349,565	$ 12,436,118	$ 0.33	32,278,180	$ 10,747,522	$ 0.33	32,278,180	$ 10,694,316
Total General Appropriation Pool		32,328,647	$ 22,870,426		37,397,050	$ 23,423,291		32,328,647	$ 22,424,657		32,328,647	$ 22,371,452

On the third card, highlighted above, the current year (i.e., FY23) Estimated Revenue per Change is a static value that is calculated from current year pools divided by the metrics used in the current fiscal year. For future years, the same calculation is performed with the addition of central Budget Office _assumptions_ regarding total allocated pool amounts and total metric values.

The Allocated Revenue column is calculated by multiplying the Estimated Revenue per Change column by the Unit Metric column.

The Unit Metric column is calculated based off the metrics of the current year (i.e., FY21 metrics used in FY23 Budget) plus the incremental changes made in the prior step.

The fourth card, shown below, provides an overview of the Estimated Costs associated with the Support Unit Cost Pools.

(3A) Estimated Cost per Unit Change

	Total Cost Pool	Total Academic Metric	Est. Cost per Unit Chg	Unit Metric	Estimated Cost
Academic Access & Degree Completion	$ 3,096,318	31,661	$ 97.80	3,015	$ 294,831
Academic Support & Student Services	$ 2,917,998	26,492	$ 110.15	2,408	$ 265,194
Academic Affairs	$ 20,727,752	32,512	$ 637.55	3,085	$ 1,966,654
Central Services & Administration	$ 118,813,677	2,617	$ 45,404.01	311	$ 14,131,545
Enrollment & Scholarships	$ 32,390,432	26,492	$ 1,222.64	2,408	$ 2,943,713
Executive Affairs	$ 9,357,232	550,000,000	$ 0.02	63,023,547	$ 1,072,229
Facilities	$ 44,836,923	1,917,040	$ 23.39	139,107	$ 3,253,521
Honors College	$ 1,345,164	26,492	$ 50.78	2,408	$ 122,251
Information Technology	$ 16,214,562	37,117	$ 436.85	3,547	$ 1,549,507
Libraries	$ 19,817,153	32,498	$ 609.81	3,195	$ 1,948,322
Research	$ 1,390,259	147,066,550	$ 0.01	32,278,180	$ 305,134
Strategic Excellence Pool - Direct	$ 9,751,000	9,751,000	$ 1.00	751,000	$ 751,000
Strategic Excellence Pool - Allocated	$ 7,249,000	550,000,000	$ 0.01	63,023,547	$ 830,650
Strategic Efficiency Pool - Direct	$ 2,739,825	2,739,825	$ 1.00	230,381	$ 230,381
Strategic Efficiency Pool - Allocated	$ 3,560,175	550,000,000	$ 0.01	63,023,547	$ 407,954
Total Cost Pool					$ 30,072,887

CL034 - MR_TEST   FY25 ⌄

For this card, the Total Cost Pool and Total Academic Metrics are calculated based on central Budget Office *assumptions* regarding total Cost Pool amounts and related allocation metric values. The Estimated Cost per Unit Change column is a calculation of the Total Cost Pool divided by Total Academic Metrics for each pool. As units make their incremental adjustments, those changes will be reflected in the Unit Metric column which is in turn used to calculate the Estimated Cost.

To view the different Fiscal Years associated with these cost pools, there is a drop-down selector located in the bottom left-hand portion of the card as highlighted here:

(3A) Estimated Cost per Unit Change

	Total Cost Pool	Total Academic Metric	Est. Cost per Unit Chg	Unit Metric	Estimated Cost
Academic Access & Degree Completion	$ 3,096,318	31,661	$ 97.80	3,015	$ 294,831
Academic Support & Student Services	$ 2,917,998	26,492	$ 110.15	2,408	$ 265,194
Academic Affairs	$ 20,727,752	32,512	$ 637.55	3,085	$ 1,966,654
Central Services & Administration	$ 118,813,677	2,617	$ 45,404.01	311	$ 14,131,545
Enrollment & Scholarships	$ 32,390,432	26,492	$ 1,222.64	2,408	$ 2,943,713
		550,000,000	$ 0.02	63,023,547	$ 1,072,229
🔍 Find...		1,917,040	$ 23.39	139,107	$ 3,253,521
		26,492	$ 50.78	2,408	$ 122,251
FY23		37,117	$ 436.85	3,547	$ 1,549,507
FY24		32,498	$ 609.81	3,195	$ 1,948,322
FY25		147,066,550	$ 0.01	32,278,180	$ 305,134
		9,751,000	$ 1.00	751,000	$ 751,000
FY26		550,000,000	$ 0.01	63,023,547	$ 830,650
FY27		2,739,825	$ 1.00	230,381	$ 230,381
FY28		550,000,000	$ 0.01	63,023,547	$ 407,954
FY29					$ 30,072,887

CL034 - MR_TEST   FY25 ∨

Note: Central Budget Office assumptions regarding total allocation pools (i.e., UG Resident Tuition, UG Non-resident Tuition, General State Appropriations, and Support Unit Cost Allocations) and aggregate academic metric totals (e.g., Credit Hours, Student FTE, etc.) will be updated on an annual basis at the beginning of each fiscal year. However, if instances arise requiring central updates during the fiscal year, the budget office will notify all users prior to the update as any existing unit scenarios would be impacted.

9. After projections have been finalized, page 3.04 – Unrestricted Report and 3.05 – Restricted Report provide users with summary financial reports including a carryforward/fund balance summary through the final projected year.

   To export a report, use the drop-down selectors in the top right corner to select the scenario and fund type (or fund type rollup) and select the ellipsis that appears in the top right of the card when hovering your mouse over the card you wish to export:
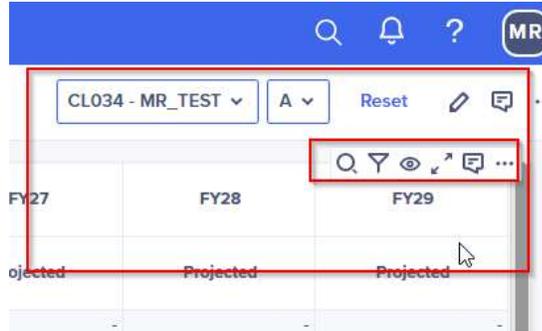
   Select Exports > Export this view, to export into the selected file type. As with the Restricted Scenario Planning page, the Restricted Report is presented at the total Restricted Funds level and cannot be broken into individual fund types.

10. Navigating to the 4.04 – Scenario Compare Report – General/New Programs, will provide users with the ability to compare two different General and/or New Programs in a side-by-side comparison view. Using the drop-down lists in the top left of the page will allow users to pick the scenarios which will be populated below. For General Scenarios, report values reflect total current funds (i.e., Unrestricted + Restricted fund amounts).

	FY23			FY24		
	Scenario A	Scenario B	Variance	Scenario A	Scenario B	Variance
Budget Transfers	-	-	-	-	-	-
Direct Tuition	-	-	-	-	200,000	200,000
Undergraduate Tuition - Resident	8,850,685	-	(8,850,685)	8,592,554	130,697	(8,461,857)
Undergraduate Tuition - Non-Resident	9,316,789	-	(9,316,789)	9,314,702	105,786	(9,208,916)

Appendix A: Projection Methods for A Fund General Scenario Modeling

	2021 PY-1	2022 PY	2023 CY	2024 CY+1	2025 CY+2	2026 CY+3	2027 CY+4	2028 CY+5	2029 CY+6

Direct Revenues:
- Budget Transfers
- Direct Tuition
- Graduate
- Tuition Discounting
- Total Fees
- Direct State Appropriations
- Indirect Cost Recovery (IDC) Revenue
- Grants, Contracts & Gifts
- Sales, Services & Other

Pooled Revenues:
- Undergraduate Tuition - Resident
- Undergraduate Tuition - Non-Resident
- General State Appropriations

Direct Expenses
Contras & Transfers

Indirect Expenses:
- Support Unit Allocations

Model Allocations:
- Legacy Model Adjustment
- Participation Fee Payment
- Subvention
- Strategic Initiative Funding

Projection Method:
- Historical Data
- CY Budget
- Calculation: 16.8% * taxable revenues
- Direct Input
- Calculation: Pool Totals (Budget Office input) \ Metric Assumptions (Budget Office input) * Unit Metrics (Unit input)