



GUIDE: Small-Scale Supplier NOFO Full Application Financial Model Template Instructions

On April 26th, 2024, the CHIPS for America Program invited a select subset of applicants to participate in the Full Application for its second Notice of Funding Opportunity (CHIPS Incentives Program – Facilities for Semiconductor Materials and Manufacturing Equipment). This guide provides instructions for completing the example Financial Model Template to assist applicants who choose to use the [Financial Model Template](#) provided by the CHIPS Program Office.

1. Overview

This document serves as a tool for applicants submitting a full application under the CHIPS Incentives Program-Facilities for Semiconductor Materials and Manufacturing Equipment Notice of Funding Opportunity (NOFO). This white paper and accompanying financial model tool have been created as an example of the “Financial Model” to be submitted as part of a full application per section IV.H.8 of the NOFO.

Disclaimer: Use of the CHIPS financial model tool is not a requirement for a CHIPS full application submission under the NOFO. Any materials submitted that fulfill the requirements of the “Financial Model” portion of the full application is acceptable. The provided financial model is intended to act as an illustrative example and may not appropriately meet the needs of all projects. It is an applicant’s responsibility to ensure its financial forecasts are suitable and accurate, and aligned with the requirements listed in Section IV.H.8 of the NOFO. Nothing in this white paper or the model are intended to contradict the requirements in the NOFO.

The CHIPS financial model tool is generally structured in two main components:

- **Inputs:** Data on key project assumptions are inputted in designated input fields in the “Control” worksheet in the “Inputs” section
- **Annual Model:** Using the information in the “Control Panel” worksheet, the model processes the key assumptions through processing worksheets (“CapEx & Depr Schedule”)

Further, the CHIPS financial model tool has the following features:

- The model is pre-populated. All pre-populated values are purely illustrative and intended to demonstrate how the model works, rather than provide any guidance on the magnitude or timing of assumptions.
- The model contemplates certain simplifying assumptions. Applicants may want to reflect additional complexities in their materials.
- The model uses an annual timestep and covers the entire expected life of an illustrative facility (including construction and operation phases); the life of the facility is assumed to be 20 years with year “1” reflecting the first year of the forecast and year “20” reflecting the final year.
- The financial information in the model is all in U.S. dollars.

The tool features 7 worksheets grouped into four sections (“Inputs”, “Processing”, “Outputs”, and “Other”). The sections are described in the table below.

Table 1: CHIPS Financial Model Tool Contents

Worksheet Legend:		
Worksheet		Description
Inputs >>	Control Panel	Main tab for the user that controls assumptions and inputs
Processing >>	CapEx & Depr. Schedule	Helper worksheet to calculate depreciation schedule model outputs
Outputs >>	Annual Model	Model output summarizing income statement for the project

2. Control Panel Inputs & Assumptions

The “Control” worksheet is the source for all assumptions. It is the only worksheet that requires user inputs.

In this worksheet there are three different types of cells, as described in the figure below.

Figure 1: Control Panel Legend

Tab Specific:	
Cell Type	Description
1,000	User Input
\$100	Automatic Calculation
1,100	Link to Other Worksheet

The “Control” assumption inputs are segmented into a series of themes throughout the tab. These themes are designated through a light blue line and reflect assumption groups (e.g., “Revenue Assumptions” or “Cash COGS Assumptions”). The following subsections provide an overview of each theme.

2.1. Beginning Year

The section “Beginning Year” is where the project start date can be set. This input should be the date in months and years of when this project begins. This will be used as the “Year 1” for the model. The financial model uses numbered years (e.g., 1-20) to delineate when an activity is occurring. For example, when a project capital cost is spread out equally over year 1 and year 2, half the cost will be incurred in the 1st year and half the cost will be incurred in the 2nd year.

Beginning Year
12/31/2022

2.2. Revenue Assumptions

The “Revenue Assumptions” section of the “Control” worksheet is used to enter details on the production revenue build.

In the example financial model, this build consists of:

- **Nominal Capacity:** This reflects the amount of available production capacity expected from the facility each year at peak capacity.
- **Utilization %:** This reflects the facility’s production capacity utilization for that given year. For example, Figure 2 shows utilization starting at 20% in Year 1 and increasing to 75% in Year 3.
- **% Yield:** This reflects the production yield for the facility’s output.
- **ASP (\$ in actuals):** This reflects the per unit average selling price of the facility’s output.

Figure 2: Revenue Assumptions Build

	Year 1	Year 2	Year 3
Nominal Capacity (actual units)	1,100	1,100	1,100
Utilization %	20%	50%	75%
% Yield	20%	50%	80%
ASP (\$ in actuals)	\$150	\$500	\$500

2.3. Cash COGS Assumptions

The “Cash COGS Assumptions” section of the “Control” worksheet is used to enter details on the costs of goods sold for project, excluding the impact of capex depreciation. These costs relate directly to the expenses incurred during the production process. Some of these costs are calculated as % of revenue (variable cost), and others a fixed \$ amount (fixed cost).

% of Revenue Cash COGS

- **Labor:** Costs for direct labor in unit production
- **Materials:** Costs for materials, chemicals, consumables, etc. that are direct inputs
- **Utilities:** Costs for utilities such as water and electricity

Fixed \$ Amount Cash COGS

- **Fixed Costs YoY Growth:** This refers to the assumption for the rate at which facility fixed costs will grow as the project matures. This growth rate will be the annual rate at which they grow (e.g., reflecting inflation). A negative value will mean that costs decrease, a positive value means the costs will increase, and a value of zero means the costs will remain the same.
- **Starting Fixed Cost:** This refers to the Year 1 starting fixed cost from which the other years will be building from.

Figure 3: Cash COGS Assumptions Build

	Year 1	Year 2	Year 3
Labor as % of Revenue	10%	10%	10%
Materials as % of Revenue	10%	10%	10%
Utilities as % of Revenue	10%	10%	10%
Fixed Costs YoY % Growth		10%	10%
Starting Fixed Cost	\$1,000	\$1,100	\$1,210

2.4. Operating Expenses Assumptions

The “Operating Expense Assumptions” section of the “Control” worksheet is used to capture other operating expense items that are incurred during the general operation of the facility and are calculated on a % of revenue basis.

- **SG&A:** This reflects selling general, and administrative costs.
- **R&D:** This reflects expenses incurred on research and development.

Figure 4: Operating Expenses Assumptions Build

	Year 1	Year 2	Year 3
SG&A as % of Revenue	5%	5%	5%
R&D as % of Revenue	1%	1%	1%

2.5. Balance Sheet Assumptions

The “Balance Sheet Assumptions” section of the “Control” worksheet is used to capture the net working capital assumptions of the business, based on the current assets and current liabilities. For each of the current assets, these are calculated on a % of revenue basis. For each of the current liabilities, these are calculated on a % of COGS basis.

Current Assets

- **Accounts Receivable:** This reflects the assumed proportion of accounts receivable as a % of revenue.
- **Inventory:** This reflects the assumed proportion of inventory kept as a % of revenue.
- **Other Current Assets:** This general category can reflect any other current assets that should be considered.

Current Liabilities

- **Accounts Payable:** This reflects the assumed proportion of accounts payable as a % of the overall cash COGS.

Other Current Liabilities: This general category can reflect any other current liabilities that should be considered.

Figure 5: Balance Sheet Assumptions Build

	Year 1	Year 2	Year 3
<u>Current Assets</u>			
Accounts Receivable as % of Revenue	10%	10%	10%
Inventory as % of Revenue	10%	10%	10%
Other Current Assets as % of Revenue	—	—	—
<u>Current Liabilities</u>			
Accounts Payable as % of COGS	1%	1%	1%
Other Current Liabilities as % of COGS	1%	1%	1%

2.6. Capex Assumptions

The “Capex Assumptions” section of the “Control” worksheet is used to enter the details on the project capital expenditures. In the model, this includes various components:

- **Capex type:** This reflects the sort of capital investment (e.g., land, construction, equipment, etc.)
- **% Eligible for ITC:** This reflects what proportion of the specific capex line item is eligible for ITC benefit. For example, if equipment capex is \$100M and 50% of it is eligible for the ITC, then any ITC calculations will be based on the \$50M of eligible equipment capex.

- **Useful life:** This reflects the useful life for the relevant capex type and impacts the capex depreciation.
- **Timing of Capex Spend:** This should reflect when the facility capex is expected to be spent. The sum for each row should total 100%.

Figure 6: Capex Assumptions Build

	Total Capex	% Eligible for ITC	Useful Life (Yrs.)
Land	\$5	100%	
Construction	\$40	100%	30
Equipment	\$100	100%	15
Administrative Expenses	\$5	100%	5
Infrastructure Improvements	\$5	100%	5
Other Capital Investment	\$50	100%	5
Total	\$205		

Timing of Capex Spend	Year 1	Year 2	Year 3	Year 4
Land	100%	—	—	—
Construction	—	25%	25%	25%
Equipment	—	—	25%	25%
Administrative Expenses	100%	—	—	—
Infrastructure Improvements	—	—	—	—
Other Capital Investment	—	—	—	—

2.7. Financing Assumptions

The “Financing Assumptions” section of the “Control” worksheet is used to enter the details on the project funding sources.

Sponsor Equity

- **Sponsor Equity Injection:** This reflects the schedule for the Sponsor equity investments in the project.

US Government Support

- **CHIPS Direct Funding:** This reflects the % of capex assumption for the grant size. This assumption is made of a drop down with options for 10%, 20% or 30%, per the NOFO.
- **State & Local Grants** – This reflects the total \$ grant amount from any state and local incentives.
- **Investment Tax Credit** – This reflects the ITC % applicable to capex that is ITC eligible.
- **CHIPS Direct Funding Timing** – This should reflect the timing of when the CHIPS Direct Funding is expected to be received. The total for this row should add up to 100%.
- **State & Local Grants Timing** – This should reflect the timing of when the State & Local grants are expected to be received. The total for this row should add up to 100%.

Third Party Debt

- **Debt Financing Used** – This is a toggle to account for if third party debt will be used as part of the sources of funds. If third party debt will be used, the option “1” in the dropdown should be used, and “0” if there will be no third-party debt.
- **Max Third Party Debt** – This represents the total \$ amount of third-party debt available.

- **Interest Rate** – This reflects the expected interest rate for the third party debt and should represent the full cash interest rate (i.e., benchmark rate and spread).
- **Third Party Debt Drawdown** – This reflects the schedule for the third-party debt drawdown for the project. For example, if 100% is inputted in Year 1, the model will reflect the entire debt balance being drawn in Year 1.
- **Third Party Debt Repayment** – This reflects the schedule for the third-party debt repayment for the project.

Tax Assumptions

- **Overall Tax Rate** – This reflects the overall tax rate intended to estimate all taxes the company may have to pay on earnings related to the facility.

Cash Balance Assumptions

- **Min. Cash Balance** – This reflects the minimum amount of cash that must be maintained on the balance sheet.

Figure 7: Financing Assumptions Build

<u>Sponsor Equity Injection</u>	Year 1	Year 2	Year 3
Equity Inflow	–	–	–
<u>US Government Support</u>	% of Capex	\$ in M	
CHIPS Direct Funding	10%	\$16	
State & Local Grants	–	–	
Investment Tax Credit	25%		
<u>US Government Grant Timing</u>	Year 1	Year 2	Year 3
CHIPS Direct Funding	100%	–	–
State & Local Grants	100%	–	–
<u>Third-Party Debt</u>			
Debt Financing Used	1		
Max Third-Party Debt	\$ 15		
Interest Rate	7.37%		
<u>Third-Party Debt Timing</u>	Year 1	Year 2	Year 3
Third-Party Debt Drawdown	100%	–	–
Third-Party Debt Repayment	–	–	–
Overall Tax Rate	25.5%		
<u>Cash Balance Assumptions</u>			
Min. Cash Balance	\$ –		

3. Depreciation Schedule

The “CapEx & Depr Schedule” worksheet calculates the depreciation of the project’s capital costs and the estimates the benefit from the Investment Tax Credit (ITC).

- All depreciation is calculated on a straight-line basis (i.e., the annual depreciation expense is equal across the useful life of the asset)

This worksheet is entirely driven by the control panel. Each applicant should show a depreciation schedule that accurately reflects its project.

The ITC is calculated by multiplying each of the capital investment types in a given year (e.g., construction year 1 investment) by (1 - effective ITC rate), and then subtracting that value from the original investment.

DISCLAIMER: The advanced manufacturing investment tax credit under the CHIPS Act is administered by the Department of Treasury. The CHIPS Financial Model helps applicants estimate the benefit they may receive from the ITC but does not represent a determination that an applicant is eligible for or entitled to any particular amount under the ITC.

Figure 8: Depreciation Schedule and ITC

[illegible]

\$Ms		Year 1 2022	Year 2 2023	Year 3 2024	Year 4 2025	Year 5 2026
CapEx						
Land	Total \$ 5	\$ 5	\$ -	\$ -	\$ -	\$ -
Construction	\$ 40	-	10	10	10	10
Equipment	\$ 100	-	-	25	25	25
Administrative Expenses	\$ 5	5	-	-	-	-
Infrastructure Improvements	\$ 5	-	-	-	-	-
Other Capital Investment	\$ 50	-	-	-	-	-
CapEx: Total	\$ 205	\$ 10	\$ 10	\$ 35	\$ 35	\$ 35
Investment Tax Credit						
ITC %: 25.0%						
	% ITC Eligible					
ITC: Land	100%	1	-	-	-	-
ITC: Construction	100%	-	-	-	-	10
ITC: Equipment	100%	-	-	6	6	6
ITC: Administrative Expenses	100%	1	-	-	-	-
ITC: Infrastructure Improvements	100%	-	-	-	-	-
ITC: Other Capital Investment	100%	-	-	-	-	-
ITC: Total (Year T)		\$ 3	\$ -	\$ 6	\$ 6	\$ 16
ITC: Total (Year T +1)			\$ 3	\$ -	\$ 6	\$ 6
Depreciable Basis						
Depreciable Basis: Land (Note - Not Depreciated)		4	-	-	-	-
Depreciable Basis: Construction		-	-	-	-	30
Depreciable Basis: Equipment		-	-	19	19	19
Depreciable Basis: Administrative Expenses		4	-	-	-	-
Depreciable Basis: Infrastructure Improvements		-	-	-	-	-
Depreciable Basis: Other Capital Investment		-	-	-	-	-
Depreciable Basis: Total		\$ 8	\$ -	\$ 19	\$ 19	\$ 49
Total Depreciation		\$ 1	\$ 1	\$ 2	\$ 3	\$ 6

4. Annual Model

The Financial model contains one output tab, summarizing each of the different financial statements. There are no inputs in any of these tabs and they are intended to act as reference outputs only. The sections below are designed to give an example of how these financial statements could be presented.

The following sub-sections provide an overview of each worksheet.

4.1. Income Statement

The "Income Statement" section shows the income, or profit and loss, statement that has been generated using the assumptions entered on the "Control Panel" worksheet. This section shows the revenues and operating expenses in \$ USD millions unless specifically noted otherwise.

Figure 9: Project Income Statement

<i>\$ in Ms unless otherwise noted</i> Income Statement	Year 1 2022	Year 2 2023	Year 3 2024	Year 4 2025
Output Capacity (actuals)	220	550	825	825
(x) % Yield	20.0%	50.0%	80.0%	100.0%
Units Produced ('000s)	44	275	660	825
% YoY	-	525.0%	140.0%	25.0%
(x) ASP (\$s in Actuals)	\$ 150	\$ 500	\$ 500	\$ 500
% YoY	-	233.3%	-	-
Revenue (\$ in M)	\$ 6.6	\$ 137.5	\$ 330.0	\$ 412.5
% YoY	-	1983.3%	140.0%	25.0%
Labor	(0.7)	(13.8)	(33.0)	(41.3)
% of Revenue	10.0%	10.0%	10.0%	10.0%
Materials	(0.7)	(13.8)	(33.0)	(41.3)
% of Revenue	10.0%	10.0%	10.0%	10.0%
Utilities	(0.7)	(13.8)	(33.0)	(41.3)
% of Revenue	10.0%	10.0%	10.0%	10.0%
Fixed Costs	(1.0)	(1.1)	(1.2)	(1.3)
COGS Ex-Depreciation	\$ (3.0)	\$ (42.4)	\$ (100.2)	\$ (125.1)
% of Revenue	45.2%	30.8%	30.4%	30.3%
Construction	\$ -	\$ -	\$ -	\$ -
Equipment	-	-	(2.5)	(5.0)
Administrative Expenses	(2.3)	(2.3)	(2.3)	(2.3)
Infrastructure Improvements	-	-	-	-
Other Capital Investment	-	-	-	-
Total Depreciation	\$ (2.3)	\$ (2.3)	\$ (4.8)	\$ (7.3)
% of Revenue	34.1%	1.6%	1.4%	1.8%
COGS	\$ (5.2)	\$ (44.6)	\$ (105.0)	\$ (132.3)
Gross Profit	\$ 1.4	\$ 92.9	\$ 225.0	\$ 280.2
Gross Margin %	20.8%	67.6%	68.2%	67.9%
SG&A	(0.3)	(6.9)	(16.5)	(20.6)
% of Revenue	5.0%	5.0%	5.0%	5.0%
R&D	(0)	(1)	(3)	(4)
% of Revenue	1.0%	1.0%	1.0%	1.0%
Operating Expenses	\$ (0.4)	\$ (8.3)	\$ (19.8)	\$ (24.8)
Operating Income	\$ 1.0	\$ 84.7	\$ 205.2	\$ 255.4
Operating Margin %	14.8%	61.6%	62.2%	61.9%
Memo: EBITDA	\$ 3.2	\$ 86.9	\$ 210.0	\$ 262.7
Memo: EBITDA Margin	48.8%	63.2%	63.6%	63.7%
Third-Party Debt Interest Expense	(0.6)	(0.6)	-	-
Total Interest Expense	\$ (0.6)	\$ (0.6)	\$ -	\$ -
CHIPS Direct Grant	47.0	-	-	-
State & Local Incentives	-	-	-	-
Non-Operating Income	\$ 47.0	\$ -	\$ -	\$ -
Taxable Income	\$ 47.4	\$ 84.1	\$ 205.2	\$ 255.4
Tax Expense	(12.1)	(21.4)	(52.3)	(65.1)
Effective Tax Rate	25.5%	25.5%	25.5%	25.5%
Total Taxes	\$ (12.1)	\$ (21.4)	\$ (52.3)	\$ (65.1)
Net Income	\$ 35.3	\$ 62.7	\$ 152.9	\$ 190.3
Net Income Margin %	535.3%	45.6%	46.3%	46.1%

4.2. Balance Sheet

The “Balance Sheet” portion brings together all the flows, cash and non-cash, to show the “accumulation” of each type of asset and liability/equity at the end of each period.

Figure 10: Balance Sheet

<i>\$ in Ms unless otherwise noted</i>	Year 1 2022	Year 2 2023	Year 3 2024	Year 4 2025
Balance Sheet				
Assets				
Cash	\$ 2.8	\$ 43.2	\$ 140.4	\$ 297.2
AR	0.7	13.8	33.0	41.3
Inventory	0.3	4.2	10.0	12.5
Other Current Assets	-	-	-	-
Current Assets	\$ 3.8	\$ 61.2	\$ 183.5	\$ 350.9
Land	3.8	3.8	3.8	3.8
Construction	-	10.0	20.0	30.0
Equipment	-	-	18.8	37.5
Administrative Expenses	3.8	3.8	3.8	3.8
Infrastructure Improvements	-	-	-	-
Other Capital Investment	-	-	-	-
Accumulated Depreciation	(0.8)	(1.5)	(3.5)	(6.8)
ITC Receivable	2.5	-	6.3	6.3
Non-Current Assets	\$ 9.3	\$ 16.0	\$ 49.0	\$ 74.5
Total Assets	\$ 13.0	\$ 77.2	\$ 232.5	\$ 425.4
Liabilities & Stockholders' Equity				
AP	0.0	0.4	1.0	1.3
Other Current Liabilities	0.0	0.4	1.0	1.3
Current Debt	-	-	-	-
Current Liabilities	\$ 0.1	\$ 0.8	\$ 2.0	\$ 2.5
Long-Term Debt	15.0	15.0	15.0	15.0
Non-Current Liabilities	\$ 15.0	\$ 15.0	\$ 15.0	\$ 15.0
Stock and Paid-In Capital	(15.0)	(15.0)	(15.0)	(15.0)
Retained Earnings	13.0	76.3	230.5	422.9
Total Stockholders' Equity	\$ (2.0)	\$ 61.3	\$ 215.5	\$ 407.9
Total Liabilities & Stockholder's Equity	\$ 13.0	\$ 77.2	\$ 232.5	\$ 425.4

4.3. Cash Flow Statement

The “Cash Flow” portion has three output sections.

- **Cash Flow from Operations** – The first section is the cash flow statement for the project.
- **Cash Flow from Investing** – The second section is the investing cash flows related to capital expenditures and includes ITC benefits received.
 - The “(Based on T+1)” section refers to the timing of ITC, with the Balance Sheet showing the ITC receipt 1 year after the capital expenditures.
- **Cash Flow from Financing** – The third section is the financing cash flows, showing the capital injections for the project.

The second is the debt service coverage analysis. This shows the project’s ability to pay debt service in each period.

The final section is the cash flow to equity which shows the cashflows for the equity position in the project. Equity investments reflect outflows for the equity holder from equity injections and equity payouts reflect cash inflows from the project to the equity holder.

Figure 11: Cash Flow Statement

	Year 1 2022	Year 2 2023	Year 3 2024	Year 4 2025	Year 5 2026
\$ in Ms unless otherwise noted					
Cash Flow Statement					
Net Income	\$ 35.3	\$ 62.7	\$ 152.9	\$ 190.3	\$ 186.8
(+) D&A	2.3	2.3	4.8	7.3	11.8
(+) Decrease in NWC / (-) Increase in NWC	(0.9)	(16.2)	(23.9)	(10.2)	(0.0)
Cash Flow From Operations	\$ 36.7	\$ 48.7	\$ 133.8	\$ 187.3	\$ 198.6
Memo: CFO Pre-Gov. Direct Funding Support	1.7	49	134	187	199
(-) Total CapEx	(165)	(20)	(70)	(70)	(70)
(+) ITC (Based on T+1)	-	41	-	13	13
Cash Flow from Investing	\$ (165.0)	\$ 21	\$ (70)	\$ (58)	\$ (58)
(+) Equity Inflow Per Co. Model	-	-	-	-	-
(+) Draw of Third-Party Debt	15.0	-	-	-	-
(-) Repayment of Third-Party Debt	-	(15)	-	-	-
(+) Equity Inflow to Remain at Min. Cash	113.3	-	-	-	-
Cash Flow from Financing	\$ 128.3	\$ (15.0)	\$ -	\$ -	\$ -
Net Cash Flow	\$ -	\$ 55	\$ 64	\$ 130	\$ 141
BOP Cash	-	-	55	119	248
Change in Cash	-	55	64	130	141
EOP Cash	\$ -	\$ 55	\$ 119	\$ 248	\$ 390
Min. Cash Balance	\$ -				
Max. Third-Party Debt Balance	\$ 15				
Cash Balance Prior to Third-Party Debt	\$ (128.3)	\$ 69.9	\$ 118.7	\$ 248.5	\$ 389.6
Cash Required to Remain at Min. Cash Prior to Third-Party Debt	\$ 128.3	\$ -	\$ -	\$ -	\$ -

4.3. Debt Schedule

The “Debt Schedule” portion shows the debt drawdowns and repayment. This will show the drawdown and repayment schedule per the timing assumptions made in the “Control” tab.

Figure 12: Debt Schedule

	Year 1 2022	Year 2 2023	Year 3 2024	Year 4 2025
\$ in Ms unless otherwise noted				
Debt Schedule				
Third-Party Debt				
Beginning Balance	-	15	-	-
Draw	15	-	-	-
Repayment	-	(15)	-	-
Ending Balance	\$ 15	\$ -	\$ -	\$ -
Third-Party Debt Interest Expense	1	1	-	-
Third-Party Debt Interest Rate	7.4%	7.4%	7.4%	7.4%