

Appendix C – Net Benefit Analysis

Introduction

As with prior incentive programs, such as Emerge and ERG - the predecessor to Aspire, a key statutory requirement is that the Authority must ensure fiscal prudence by determining that the award of **tax credits creates a net positive economic benefit to the State for most commercial projects**. While the Aspire program can support a variety of real estate projects, the ERA specifies that the requirement of a **net positive economic benefit to the State shall not apply** to the following:

1. **Residential projects**
2. Any portion of a commercial project that is **a health care or health services center with a minimum of 10,000 square feet located in a community with an MRI Distress score greater than 50 and that is lacking adequate access to such health care or services, as determined by the Commissioner of Health**
3. Any portion of a commercial project that is a “**food delivery source,**” defined in the Aspire statute as **access to nutritious foods through a grocery operator of greater than 16,000 square feet**. Examples of nutritious foods are fresh fruits and vegetables, and grocery operators include, but is not limited to, supermarkets, grocery stores, or a prepared food establishment selling primarily nutritious ready-to-serve meals

For pre-ERA programs, the Authority relied upon a proprietary model that was developed by a third party but largely managed in-house. In the interest of greater transparency and consistency the Board approved, as part of the Emerge Program approval, that the best approach for new programs for such analysis is to rely upon an external third-party model that would not need to be updated or maintained by the NJEDA.

As described in the Emerge Program memorandum and appendices, to increase transparency and consistency, NJEDA staff determined that it would be important to utilize a third-party economic development model that is widely known, understood and utilized at the state, federal, and international levels. In addition, after evaluating several widely known, national level models, staff determined that utilizing a tool that was more easily understood by a broader set of stakeholders would be beneficial. Based on a thorough analysis of available alternatives that would meet the Authority’s requirements, staff previously proposed the use of the IMPLAN model to calculate the expected net positive economic benefit from projects awarded within ERA programs, and the Board approved a specific approach within the Emerge program at the Authority’s June 2021 Board Meeting. This memo provides background (*provided previously with approved Emerge Rules where noted*) on the fundamental theory underpinning IMPLAN’s model, the history of EDA’s work with the net benefit test, a brief overview of IMPLAN and its features, and an overview of the application of IMPLAN to calculate the net benefit for the Aspire program.

Overview & History of Input-Output Analysis – (provided previously with Approved Emerge Rules)

IMPLAN’s model is built on a macroeconomic analysis known as Input-Output analysis (I-O), which estimates the interdependence between economic sectors and industries. A product of I-O is an input-output table, which is a data matrix that shows the inputs from industries and sectors of the economy necessary to create the output of a given industry. As an example, Table 1 shows the intermediate input (inputs from other firms and industries) and within-firm factors of production (calculated as income going to labor, capital, and taxes) that go into producing an industry’s output.

Table 1 – I-O for US Manufacturing in 2019, millions of dollars

	Commodities/Industries	Manufacturing
A	Agriculture, forestry, fishing, and hunting	\$322,670
B	Mining	\$371,488
C	Utilities	\$55,663
D	Construction	\$14,197
E	Manufacturing	\$2,458,644
F	Wholesale trade	\$25,085
G	Retail trade	...
H	Transportation and warehousing	\$54,383
I	Information	\$22,650
J	Finance, insurance, real estate, rental, and leasing	\$108,329
K	Professional and business services	\$373,668
L	Educational services, health care, and social assistance	\$146
M	Arts, entertainment, recreation, accommodation, & food services	\$12,127
N	Other services, except government	\$21,587
O	Government	\$4,698
Sum, A-O Total Intermediate		\$3,913,382
P	Compensation of employees	\$1,131,337
Q	Other taxes on production	\$60,414
R	Gross operating surplus	\$1,125,415
Sum, P-R GDP		\$2,317,167
Total industry output (Intermediate + GDP)		\$6,230,548

This data provides two important sources of information. One is, when an industry’s output is “shocked,” or increased/decreased by a specified amount, an analyst can estimate the impact of that shock on all other associated industries and sectors of the economy. Another important source of information is the understanding and ability to estimate the ripple effects of any one shock through all the associated industries and sectors of the economy. These estimated impacts are known as multipliers, and they estimate the total change in output across all industries and sectors expected when a specified industry’s final demand is shocked.

Moreover, these multipliers can be broken down into three categories, typically referred to as direct, indirect, and induced impacts, which are explained as follows:¹

- Direct effects -- occur directly from the focus industry’s shock.
- Indirect effects – occur from impacts on other industries. They are akin to second-round impacts. For example, if we shock a pharmaceutical manufacturer, a second-round impact would be from

¹ <https://blog.implan.com/understanding-implan-effects>; <https://www.investopedia.com/terms/i/input-output-analysis.asp>

an industry that produces an intermediate good for the pharmaceutical industry, such as a chemicals manufacturer. The economic impact of the shock on the chemicals manufacturer would be considered an indirect effect.

- Induced effects – occur through household spending from labor income generated by the shock. These effects are created by the spending of employees in the directly and indirectly impacted industries.

Expanding on the pharmaceutical industry shock explained above, using an economic impact model, we can estimate how this one focused shock impacts the economy through areas such as employment, consumer and industrial demand, and State tax revenues

IMPLAN - (provided previously with Approved Emerge Rules)

IMPLAN was created in the 1970s, when the National Forest Management Act required the United States Forest Service to prepare a plan for alternative land management strategies and potential resource outputs. IMPLAN, short for “impact analysis for planning,” estimated the economic impacts of those resource outputs on local communities.² IMPLAN’s data is based on federal data sources from the Bureau of Labor Statistics, Bureau of Economic Analysis, and the Census Bureau.³

A distinguishing feature of IMPLAN is that it estimates tax revenue impacts from events. Taxes by level of government are sourced from the Census Bureau’s Annual Survey of State and Local Government Finances, state government tax collections, Census of Government Finance, and the Bureau of Economic Analysis’s National Income and Product Accounts.⁴ The taxes are not estimated based on an analysis of what the specific company may pay, but is an estimate based on the general data. Therefore, the model does not incorporate such details about the company as individual salary or whether a company is already in the State.

IMPLAN’s methodology for tax estimates has been used by other states to evaluate their incentive programs as well as industries – examples include the following:

- Nevada Governor’s Office of Economic Development, which used IMPLAN to determine tax revenue estimates for the Tesla Gigafactory project in 2014⁵
- Oklahoma Incentive Evaluation Commission, which issued a report in 2016 on the effectiveness of several incentive programs and used IMPLAN to estimate the economic impacts of projects receiving tax credits⁶
- The Louisiana Economic Development Office & Legislative Fiscal Office has used IMPLAN to estimate the economic and fiscal impacts of entertainment-related industries in Louisiana⁷

² <https://www.implan.com/history/>

³ <https://implanhelp.zendesk.com/hc/en-us/articles/115009674448-IMPLAN-Data-Sources>

⁴ <https://implanhelp.zendesk.com/hc/en-us/articles/115009674528-Generation-and-Interpretation-of-IMPLAN-s-Tax-Impact-Report>

⁵ Economic Impact of Tesla on Washoe and Storey Counties, September 2014

⁶ State of Oklahoma Incentive Evaluation Commission, Tax Incentive Evaluation Report, 2016

⁷ BaxStarr Consulting Group LLC, Fiscal & Economic Impact Analysis of Louisiana’s Entertainment Incentives. Prepared in conjunction with the Louisiana Economic Development Office of Entertainment Industry Development & the Legislative Fiscal office, April 2011

- Maryland’s Department of Commerce has used IMPLAN to estimate the economic impacts of incentive programs in annual reporting⁸

IMPLAN is also currently used by the California Governor’s Office of Planning and Research, the California Research Bureau, and the Washington State Department of Transportation.

IMPLAN also counts federal agencies as clients, including the Bureau of Ocean Energy Management, NASA, US Department of Agriculture, US Department of Interior, and the US Geological Survey. IMPLAN’s model outputs have been published in peer-reviewed academic journals and professional publications and have been used by economists for decades.⁹

IMPLAN & Net Benefit Test Application for Aspire

IMPLAN provides flexibility to model impacts at different levels of geographic region, including at the state, county, Metropolitan Statistical Area (MSA), ZIP code, and congressional district. To align with the distinction in the allocation of the Emerge, Aspire, and Community-Anchored Development tax credits in the Economic Recovery Act of 2020 and account for distinctly different labor and housing markets within the State, **for the Aspire program there will be two regions in which projects will be modelled – Northern and Southern New Jersey.** Southern New Jersey comprises the counties of Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Ocean and Salem, and Northern New Jersey is the counties of Bergen, Essex, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Passaic, Somerset, Sussex, Union, and Warren.

IMPLAN has several types of economic shocks that users can model, including industry output, industry employment, commodity output, and employee compensation. For the purposes of the NJEDA’s net positive economic benefit test, the Authority will be shocking **industry employment** and **industry employee compensation** associated with the underlying real estate project within the Aspire Program.

For each applicant, two scenarios will be run: the **ongoing activities at the project** and any **up-front construction** associated with the real estate project. IMPLAN’s model includes estimates of federal, state, county, and municipal taxes. **Except as explained below regarding local taxes, only the model’s estimate of state taxes will be used to estimate the benefit to New Jersey,** as the ERA requires the determination of the net benefit to the State. Additionally, the vast majority of the tax benefit to New Jersey occurs at the state level. **For ongoing activities at the project, only direct and indirect state taxes will be used. For the construction work, direct, indirect, and induced state taxes will be used.** This follows the methodology previously approved with the Emerge rules.

When calculating the impacts from ongoing activities at the project, in the interest of fiscal prudence and acknowledging uncertainty in project outcomes with respect to occupancy and tenant types throughout the life of the award, **the Authority will model average employment scenarios.** The Authority will **use regional averages for wages and industry standards for employment density (i.e. workers per square foot) to determine expected economic activities at the real estate project.** This will be done based upon

⁸ Fiscal Year 2017, Consolidated Incentives Performance Report, As required by the Maryland Jobs Development Act Economic Development Article 2.5-109, February 2018, Maryland Department of Commerce

⁹ <https://implanhelp.zendesk.com/hc/en-us/articles/360044985833-About-IMPLAN>

the real estate use or uses represented at the project such as **office, research and development, warehouse, retail, hospitality, etc.** This is a departure from historic practices of relying on employment and salary information provided by the applicant which are more likely to reflect a best-case scenario. For example, if a project represents 40,000 square feet of office and 10,000 square feet of ground-floor retail; the Authority will rely upon industry standards to determine expected employment in both the office and retail spaces, and determine total compensation based upon the average wages in the region for office workers and retail workers respectively. As stated in the rules, the applicant will have an **ongoing obligation to demonstrate physical occupancy of the project during the eligibility period to provide assurances to the Authority** that this economic activity is ongoing.

Also as stated in the Aspire Rules, the net positive economic benefit will be **calculated for the eligibility period of the project which is set at 10 years.** For a phased **Transformative project**, this would include the period of time **from the certification of the first phase of the project until 10 years after the certification (that is, the end of the eligibility period) of the final phase of the project.**

The ERA statute requires the Authority to perform this analysis in terms of net present value, i.e., the benefit in the future should be expressed in dollars today. Additionally, the statute requires the discount to reflect the uncertainty of the underlying outcomes related to the real estate project. As such, the Authority will discount expected future revenues to the State accordingly. This, in practice, is a two-step process. First, given the IMPLAN model estimates a one-time (essentially, the 1st year) impact on government revenue, the Authority must estimate the growth of future annual revenues. The Authority does this by growing future revenues by an estimated rate of inflation. **The inflation rate will be set based on a five-year mean of the Personal Consumption Expenditures Price Index as provided by the Survey of Professional Forecasters adjusted annually; initially this is set at an annualized rate of two percent.** Second, the Authority must then discount these future revenues. **To calculate the discount rate, staff starts with an industry accepted net present value discount rate, which currently is six percent. To account for the significant risk and uncertainty associated with State revenues in the furthest years out, the discount rate is increased by two percent (so, currently eight percent).** Tax revenues resulting from construction expenditures and upfront costs do not need to be discounted as they would occur prior to the issuance of any tax credits awarded to a company. This follows the methodology previously approved with the Emerge rules.

In certain instances, taxes at the local level or with inherently local implications, impact the State and thus such taxes would be factored into the economic benefit analysis. The local taxes that could be considered are property taxes from new construction and local payroll taxes. As both of these local tax revenues offset State funds needed for municipal aid and/or appropriations to reduce property taxes, they may directly benefit the State thus making them appropriate to be considered in this analysis. To include such local property taxes, the business will need to provide a PILOT agreement, real estate appraisal, preliminary assessment from tax assessor, or any other relevant third-party document. Conversely, the State's Urban Enterprise Zone program affords projects located in certain geographies an exemption from a portion of the State sales tax associated with a construction project, as such where this is the case the analysis will be adjusted accordingly to best reflect actual sales tax revenues to the State from the related construction project. This follows the methodology previously approved with the Emerge rules.

The Aspire Statute directs the Authority to set a minimum threshold which a project must exceed to determine that the project sufficient provides a net positive economic benefit to the State. Furthermore, it

allows for projects within Government Restricted Municipalities to have a minimum threshold that is as much as 35% less than the standard applied to projects in other locations. Staff is recommending that commercial projects located in **Government Restricted Municipalities demonstrate a minimum net positive economic benefit to the State of 150% of the Aspire award** and that **all other commercial projects demonstrate a minimum net positive economic benefit to the State of 185%** of the Aspire award. In the event that the project either previously received an approval or is being considered in concert with the Aspire application for additional NJEDA administered subsidies, the net positive economic benefit to the State would be calculated after accounting for both the Aspire award and these additional subsidies.

This set of thresholds prioritizes investment into communities in the greatest need while also adequately accounting for the inherent uncertainty of modeling economic outcomes by providing sufficient cushion. While this standard is less than that which was included in the Emerge program by statute (200-400%), it is significantly larger than the comparable threshold that was contained in the predecessor program ERG (100-110%). Additionally, the State is afforded further risk mitigation resulting from staff relying on average outcomes occurring at these real estate project versus a best-case scenario presented by an applicant. In addition to an ongoing condition of physical occupancy consistent with the project as approved, **if prior to certification the capital investment or real estate uses in the project were to materially change the approval would be subject to a revised net positive benefits test and potential award resizing. As with the Emerge Program, staff proposes re-evaluating the net positive economic benefit if the capital investment is reduced by more than 10% or if the square foot per use in the net positive economic benefit changes by more than 10%.**