SER Strategic Economic Research, LLC

DATE: February 22, 2024

TO: Illinois Power Agency (IPA), 105 West Madison Street, Suite 1401, Chicago, Illinois 60602

FROM: Dr. David G. Loomis, President, Strategic Economic Research LLC

SUBJECT: Response to IPA's release of IMPLAN inputs for SOO Green transmission line's economic impact modeling

Background: On January 22, 2024, the IPA provided a draft of its 2024 Policy Study and invited comments on that draft. On February 12, 2024, Strategic Economic Research LLC (SER) submitted comments on that draft. On Feb 13, 2024, the IPA published the cost inputs for SOO Green's economic modeling. SER also conducted an economic impact analysis of SOO Green, but the impacts in the SER study differ significantly from the IPA's impacts[1]. SER will challenge certain methodological choices in the Response below. These comments are meant to supplement the comments made on February 12, 2024.

Response: Firstly, SER thanks the IPA and Levitan & Associates, Inc. (LAI) for sharing their inputs and methodology for their SOO Green analysis.

As mentioned in SER's first round of comments, SER believes the deflation of cost inputs for CAPEX modeling was unnecessary. Deflation was used in the LAI analysis because the costs list in the Feb 2023 SER report, from which the LAI CAPEX costs were based on, did not include specific mention of a dollar year nor construction years. At the time of study, SER did not have a firm construction period from SOO Green that was publishable. SER used the working assumption that construction would take place over approximately three years for analysis. LAI decision to use a deflator in the absence of an explicit dollar year associated with SER CAPEX costs is reasonable, however, SER believes the better methodology would have been to input the unadjusted costs into IMPLAN since the software will deflate/inflate based on the dollar year stipulated[2]. By deflating costs prior to input into IMPLAN, the costs will be adjusted twice, once by LAI and once more by IMPLAN during modeling.

The deflated CAPEX inputs were then used to create construction period impacts. SER was able to recreate LAI's construction modeling in IMPLAN and found comparable results, however, the notable difference between the two published results is the construction period direct impacts. SER manually calculated the Feb 2023 report's direct construction impacts outside of IMPLAN modeling by utilizing information provided by SOO Green. This information included labor spending for Illinois based workers

[1] SOO Green commissioned SER to study the transmission line's economic impacts to the state of Illinois, Iowa, and the United States in Feb. 2023.

[2] Selecting a Dollar Year & Data Year – IMPLAN - Support

and the expected fully loaded wage rate resulting in an estimated Illinois workforce that was consistent with SOO Green's construction intent.

These manually calculated direct impacts are different from the direct impacts output by SER's IMPLAN construction period model. According to Analysis-By-Parts methodology, the direct and indirect impacts output from IMPLAN are to be summed to create the official indirect impacts while the direct impacts are to be calculated outside of the IMPLAN model. This methodology was utilized in the creation of SER's Feb 2023 report's economic impacts. It appears that LAI construction model does not utilize manual direct impacts calculation.

It is clear from the results that LAI misinterpreted the cost inputs. The construction cost includes $371 million in direct labor payments yet their results only have $15 million in direct earnings. Where did the additional $355 million in payments go? If they assumed that those earnings went to out-of-state workers, it would be incorrect because those workers' payments have already been excluded from the total costs represented in Table 4.1. By incorrectly handling the direct labor payments, LAI has excluded 87% of the costs in construction costs as shown in Table 4.2. This direct construction impact is the major source of the difference between the analysis that SER did and the one that LAI performed.

LAI also created OPEX impacts using their CAPEX results and scalars. SER believes the preferred way to calculate impacts during the operations period is to ascertain categorized operations costs which are then input into an IMPLAN model. SER was able obtain OPEX inputs from SOO Green for the Feb 2023 report, but such inputs were rough estimations not ready for publishing. SER will not speculate as to why LAI did not use operations costs for calculating operations impacts, but SER believes basing operations impacts off construction impacts through use of scalars, while convenient, is ultimately unsatisfactory as it doesn't consider the unique economic conditions of the study area and the ripple effects of operations spending in the study area. Construction impacts don't necessarily foretell operations impacts which include a different set of spending categories. This hypothetical spending wasn't run through an Input-Output (IMPLAN) model that factored in the economic interplay between businesses, consumers, and governments like the construction model did. Therefore, the scalar method was insufficient for estimating operations period economic impacts.

Other benign differences in modeling include the 20-year operation period assumption used by LAI and the 30-year operations period assumed by SER in the Feb 2023 report, as well as, the 45 month construction period used by LAI and the three year construction period used by SER.

On a minor note, the explanation of methodology written in the spreadsheet, "ipa-2023-ces-implan-inputs" which was provided by the IPA, contains an error. The written description of the direct output scalar contains two instances of multiplication instead of a division. The formulas which derive the scalars contain the correct division operation i.e., the math is correct, the explanation contains typos.