

Overview of Engineering Feasibility Study Model

Background

During a webinar hosted by the IESO on November 19, 2018 where an overview of proposed changes to the Industrial Accelerator Program (IAP) was provided, there were a number of questions related to the change from the current engineering study model, which includes Preliminary Engineering Study (PES) and Detailed Engineering Study (DES) funding, to the proposed Engineering Feasibility Study (EFS) model. To address these questions, the IESO indicated that further details on the EFS model would be provided along with responses to other feedback received on the proposed changes.

Purpose of Engineering Studies

One of the primary objectives of the IAP is to implement energy efficiency projects that achieve measurable and persistent electricity savings. Prior to entering into a project incentive contract for these projects, the IESO requires detailed economic and technical analysis to be provided to validate the expected energy savings and project costs. To support Participants with providing the required information, the IESO provides funding to enable the necessary engineering analysis to be completed.

Rationale for Change to EFS

Some Participants have raised concern with the rigid requirements under the existing PES/DES model. Under the current model, the IESO's Technical Reviewer must request information to meet accuracy requirements specified by the Program and this level of accuracy isn't always necessary to determine the feasibility of the project from an economic and technical perspective. Few opportunities have proceeded from a PES to a DES to project due to the time and effort required to satisfy the existing requirements and some Participants have opted to proceed directly to an incentive application to avoid delays with moving the project forward to approval and implementation.

Some opportunities may be well developed requiring only a few more details to be analyzed whereas other projects may be in the conceptual stage requiring significant effort to determine technical and economic feasibility. Similarly, larger projects may require more accuracy for the Participant's capital expenditure approval process, while smaller projects may require less. The objective of transitioning to the EFS model is to provide a more flexible, single-study approach with the ability to adjust the scope of the Study Report to meet the needs of the Participant and the program's project incentive application requirements.

In addition to the benefits noted above, it is expected that the market will benefit from consistency across both the Process and Systems Upgrades Program (PSUP) and IAP as many consultants conduct studies through both programs.

Further EFS Details

Details of the EFS requirements are available for review through the PSU Program Rules. The Rules are available on the [IESO website](#) and the relevant EFS content can be found in Appendix 3 and Exhibit 1.

While the EFS does not have the defined expectations of accuracy of a DES (+/- 10 % on electricity savings, and +/- 25% on eligible costs), the Participant must recognize that an EFS Study Report with high levels of uncertainty represents a risk to the project. The actual study scope should be tailored to fit the stage of project development (e.g. preliminary, detailed, investment), as well as the Participant`s own technical or economic requirements.

Statistical analysis of measured data, sampling and modelling can all be used to inform the overall estimated accuracy of the study. Study Reports should be well organized with assumptions clearly stated and accompanied by rationale. In addition, a baseline model to determine the electricity that “would have been used” after measure installation is best practice. This analysis will enable the IESO’s Technical Reviewer to determine the quality of the supporting information and produce a recommendation to the IESO.

An appropriately scoped and accurate study is expected to lead to approval within a quicker timeframe under the EFS model.