**RISK AND RESPONSIBILITY MATRIX**

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| **RESPONSIBILITY/DESCRIPTION** | **ESP PROPOSED APPROACH** |
| **1. Financial** |  |
| **a. Interest rates**: Neither the ESP nor the Entity has significant control over prevailing interest rates. Higher interest rates will increase project cost, financing term, or both. The timing of the EPC signing may impact the available interest rate and project cost. |  |
| **b. Utility prices**: Neither the ESP nor the Entity has control over actual utility prices. For calculating projected savings, the value of the saved energy may either be constant or change at a fixed escalation rate. Actual rates should be used for verified savings per IPMVP. |  |
| **c. Escalation rates**: Neither the ESP nor the Entity has control over actual escalation rates. The increase of commodity or O&M costs may have a significant impact on the total cost savings for the project. Escalation is permitted by statute and is applied to determine shortfall payments to the Entity. **Clarify how escalation rates shall be determined by the ESP using the EERC and the impact to the project if projected rates differ from actual rates.** |  |
| **d. Construction costs:** The ESP is responsible for determining construction costs and defining a budget. In a fixed-price EPC contract, the Entity assumes little responsibility for cost overruns. However, if construction estimates are significantly greater than originally assumed, the ESP may find that the project or measure is no longer viable and drop it before EPC award. In any EPC contract, the Entity loses some design control. **Clarify design standards and the design approval process (including changes) and how costs will be reviewed.** |  |
| **e. M&V confidence:** The Entity assumes the responsibility to determine the confidence that it desires to have in the M&V program and energy savings determinations. The desired confidence will be reflected in the resources required for M&V, and the ESP must consider the requirement prior to submittal of the final proposal. **Clarify how project savings are being verified (e.g., equipment performance, operational factors, energy use) and the impact on M&V costs.** |  |
| **f. Energy Related Cost Savings:** The Entity and the ESP may agree that the project will include savings from recurring and/or one-time costs. This may include one-time savings from avoided expenditures for projects that were appropriated but will no longer be necessary. Including one-time cost savings before the money has been appropriated may involve some risk to the Entity. Recurring savings generally result from reduced O&M expenses or reduced water consumption. These O&M and water savings must be based on actual spending reductions. **Clarify sources of non-energy cost savings and how they will be verified.** |  |
| **g. Delays:** Both the ESP and the Entity can cause delays. Failure to implement a viable project in a timely manner costs the Entity in the form of lost savings, and can add cost to the project (e.g., construction interest, re-mobilization). **Clarify schedule and how delays will be handled.** |  |
| **h. Major changes in facility:** The Entity controls major changes in facility use, including closure. **Clarify responsibilities in the event of a premature facility closure, loss of funding, or other major change.** |  |
| **2. Operational** |  |
| **a. Operating hours:** The Entity generally has control over operating hours. Increases and decreases in operating hours can show up as increases or decreases in savings depending on the M&V method (e.g., operating hours multiplied by improved efficiency of equipment vs. whole-building/utility bill analysis). **Clarify whether operating hours are to be measured or stipulated and what the impact will be if they change.** If the operating hours are stipulated, the baseline must be carefully documented and agreed to by both parties. |  |
| **b. Load:** Equipment loads can change over time. The Entity generally has control over hours of operation, conditioned floor area, intensity of use (e.g., changes in occupancy or level of automation). Changes in load can show up as increases or decreases in “savings” depending on the M&V method. **Clarify whether equipment loads are to be measured or stipulated and what the impact will be if they change**. If the equipment loads are stipulated, the baseline should be carefully documented and agreed to by both parties. |  |
| **c. Weather:** Some cost-saving measures are affected by weather. Neither the ESP nor the Entity has control over the weather. Should the Entity agree to accept risk for weather fluctuations, it shall be contingent upon aggregate payments not exceeding aggregate savings. **Clearly specify how weather corrections will be performed.** |  |
| **d. User participation:**  Many cost-saving measures require user participation to generate savings (e.g., control settings). The savings can be variable and the ESP may be unwilling to invest in these measures. **Clarify what degree of user participation is needed and utilize monitoring and training to mitigate risk.** If performance is stipulated, document and review assumptions carefully and consider M&V to confirm the capacity to save (e.g., confirm that the controls are functioning properly). |  |

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| **3. Performance** |  |
| **a. Equipment performance:** The ESP has control over the selection of equipment and is responsible for its proper installation, commissioning, and performance. The ESP has the responsibility to demonstrate that the new improvements meet expected performance levels including specified equipment capacity, standards of service, and efficiency. **Clarify who is responsible for initial and long-term performance, how it will be verified, and what will be done if performance does not meet expectations.** |  |
| **b. Operations:** Performance of the day-to-day operations activities is negotiable and can impact performance. However, the ESP bears the ultimate risk regardless of which party performs the activity. **Clarify which party will perform equipment operations, the implications of equipment control, how changes in operating procedures will be handled, and how proper operations will be assured.** |  |
| **c. Preventive Maintenance:** Performance of day-to-day maintenance activities is negotiable and can impact performance. However, the ESP bears the ultimate risk regardless of which party performs the activity. **Clarify how long-term preventive maintenance will be assured, especially if the party responsible for long-term performance is not responsible for maintenance (e.g., ESP provides maintenance checklist and reporting frequency). Clarify who is responsible for performing long-term preventive maintenance to maintain operational performance throughout the contract term. Clarify what will be done if inadequate preventive maintenance impacts performance.** |  |
| **d. Equipment Repair and Replacement:** Performance of day-to-day repair and replacement of ESP-installed equipment is negotiable; however, it is often tied to project performance. The ESP bears the ultimate risk regardless of which party performs the activity. **Clarify who is responsible for performing replacement of failed components or equipment replacement throughout the term of the contract. Specifically address potential impacts on performance due to equipment failure. Specify expected equipment life and warranties for all installed equipment. Discuss replacement responsibility when equipment life is shorter than the term of the contract.** |  |