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# State of Wyoming



## Wyoming Energy Conservation Improvement Program

For State Agencies, County & Municipal Governments,  
Higher Education Facilities, Public School Districts,  
Hospitals, and other Public Entities

### PROGRAM MANUAL Appendix 1J

### WYECIP CONTRACT ATTACHMENT E RISK ASSESSMENT MATRIX

## APPENDIX 1J – WYECIP CONTRACT ATTACHMENT E

### Attachment E

### Energy Performance Contract Risk Assessment Matrix

Contractor shall complete and submit with its proposal this Risk Assessment Matrix detailing its proposed approach or method to address each of the potential risk factors listed. Facility Owner will review the ESCo’s proposed approaches and provide comments in the appropriate column. The ESCo and Facility Owner shall discuss the completed Risk Assessment to develop a mutually agreed upon method to proceed with addressing the Risk Factors in the Energy Performance Contract.

RISK FACTOR	ESCO PROPOSED APPROACH	FACILITY OWNER ASSESSMENT
<b>1. Financial</b>		
<p><b>a. <u>Interest rates:</u></b> Neither Contractor nor Facility Owner has significant control over prevailing interest rates. During all phases of the project, interest rates will change with market conditions. Higher interest rates will increase project cost, financing/project term, or both. The timing of the Contract signing may impact the available interest rate and project cost. <b>Clarify how fluctuating interest rates will be handled.</b></p>		
<p><b>b. <u>Energy prices:</u></b> Neither Contractor nor Facility Owner has significant control over actual energy prices. For calculating savings, the value of the saved energy may either be constant, change at a fixed inflation rate, or float with market conditions. If the value changes with the market, falling energy prices place Contractor at risk of failing to meet cost savings guarantees. If energy prices rise, there is a small risk to Facility Owner that energy saving goals might not be met while the financial goals are. If the value of saved energy is fixed (either constant or escalated), Facility Owner risks making payments in excess of actual energy cost savings. <b>Clarify how future energy costs will be treated.</b></p>		



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<p><b>c. <u>Construction costs:</u></b> The Contractor is responsible for determining construction costs and defining a budget. In a fixed-price design/build Contract, the Facility Owner assumes little responsibility for cost overruns. However, if construction estimates are significantly greater than originally assumed, the Contractor may find that the project or measure is no longer viable and drop it before Contract award. In any design/build Contract, the Facility Owner loses some design control. <b>Clarify design standards and the design approval process (including changes) and how costs will be reviewed.</b></p>		
<p><b>d. <u>M &amp; V costs:</u></b> The Facility Owner assumes the financial responsibility for M &amp; V costs directly or through the Contractor. If the Facility Owner wishes to reduce M &amp; V cost, it may do so by accepting less rigorous M &amp; V activities with more uncertainty in the savings estimates. <b>Clarify how project savings are being verified (e.g., equipment performance, operational factors, energy use) and the impact on M&amp;V costs.</b></p>		
<p><b>e. <u>Non-Energy Cost Savings:</u></b> Facility Owner and Contractor may agree that the project will include savings from <i>recurring</i> and/or <i>one-time</i> 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 entails some risk to the Facility Owner. Recurring savings generally result from reduced O&amp;M expenses or reduced water consumption. These O&amp;M and water savings must be based on actual spending reductions. <b>Clarify sources of non-energy cost savings and how they will be verified.</b></p>		
<p><b>f. <u>Delays:</u></b> Both the Contractor and the Facility Owner can cause delays. Failure to implement a viable project in a timely manner costs the Facility Owner in the form of lost savings, and can add cost to the project (e.g. construction interest, re-mobilization). <b>Clarify schedule and how delays will be handled.</b></p>		



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<p><b><i>g. Major changes in facility:</i></b> Facility Owner controls major changes in facility use, including closure. <b><i>Clarify responsibilities in the event of a premature facility closure, loss of funding, or other major change.</i></b></p>		
<p><b>2. Operational</b></p>		
<p><b><i>a. Operating hours:</i></b> Facility Owner 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&amp;V method (e.g., operating hours multiplied by improved efficiency of equipment vs. whole-building/utility bill analysis). <b><i>Clarify whether operating hours are to be measured or stipulated and what the impact will be if they change.</i></b> If the operating hours are stipulated, the baseline should be carefully documented and agreed to by both parties.</p>		
<p><b><i>b. Load:</i></b> Equipment loads can change over time. Facility Owner 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 &amp; V method. <b><i>Clarify whether equipment loads are to be measured or stipulated and what the impact will be if they change.</i></b> If the equipment loads are stipulated, the baseline should be carefully documented and agreed to by both parties.</p>		
<p><b><i>c. Weather:</i></b> A number of energy efficiency measures are affected by weather. Neither Contractor nor Facility Owner has control over the weather. Changes in weather can increase or decrease “savings” depending on the M&amp;V method (e.g. equipment run hours multiplied by efficiency improvement vs. whole-building/utility bill analysis). If weather is “normalized,” actual savings could be less than payments for a given year, but will average out over the long run. <b><i>Clearly specify how weather corrections will be performed.</i></b></p>		



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<p><b><i>d. <u>User participation:</u></i></b> Many energy conservation measures require user participation to generate savings (e.g., control settings). The savings can be variable and Contractor may be unwilling to invest in these measures. <b><i>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&amp;V to confirm the capacity to save (e.g., confirm that the controls are functioning properly).</i></b></p>		
<p><b><i>3. Performance</i></b></p>		
<p><b><i>a. <u>Equipment performance:</u></i></b> Generally Contractor has control over the selection of equipment and is responsible for its proper installation, commissioning, and performance. Generally Contractor has responsibility to demonstrate that the new improvements meet expected performance levels including specified equipment capacity, standards of service, and efficiency. <b><i>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.</i></b></p>		
<p><b><i>b. <u>Operations:</u></i></b> Responsibility for operations is negotiable, and it can impact performance. <b><i>Clarify responsibility for operations, the implications of equipment control, how changes in operating procedures will be handled, and how proper operations will be assured.</i></b></p>		



RISK FACTOR	ESCO PROPOSED APPROACH	FACILITY OWNER ASSESSMENT
<p><b>c. <u>Preventive Maintenance:</u></b> Responsibility for maintenance is negotiable, and it can impact performance. 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., Contractor provides maintenance checklist and reporting frequency). <b>Clarify who is responsible for long-term preventive maintenance to maintain operational performance throughout the Contract term. Clarify what will be done if inadequate preventive maintenance impacts performance.</b></p>		
<p><b>d. <u>Equipment Repair and Replacement:</u></b> Responsibility for repair and replacement of Contractor-installed equipment is negotiable, however it is often tied to project performance. <b>Clarify who is responsible for replacement of failed components or equipment 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.</b></p>		