

HVACR Maintenance Challenges

As Better Buildings partners in the commercial sector continue to pursue energy efficiency improvements at their buildings, many of them face challenges with procuring contractual services from qualified technicians to perform preventative maintenance, tuning, and repairs of heating, ventilation, air conditioning, and refrigeration (HVACR) equipment.

HVACR Maintenance Contracting Best Practices

The benefits of effective maintenance include improved performance, decreased operations costs, increased equipment service life, and reduced risk of system failure. The resources below can help commercial sector partners implement best practices for contractual HVACR equipment maintenance.

Practice	Description and Resources
<p>Identify organizational needs</p>	<ul style="list-style-type: none"> ▶ How many buildings and sites need HVACR maintenance service? ▶ What is the required contractor response time? How long before an equipment failure disrupts business? ▶ What services and contract type do you require? <ul style="list-style-type: none"> ○ HVACR technicians can be contracted directly to perform scheduled maintenance and repairs. ○ Energy Service Companies (ESCOs) can be contracted to perform bundled energy management and auditing, potentially including provisions for HVACR maintenance.
<p>Identify technical needs</p>	<ul style="list-style-type: none"> ▶ Inventory building mechanical systems including HVAC, refrigeration, controls, and Energy Management Information Systems (EMIS) tied to HVACR equipment. <ul style="list-style-type: none"> ○ Record relevant information about each unit, including the manufacturer, model, year, and date last serviced. ○ Review building management plans or construction operations and maintenance documents for equipment manufacturer’s recommended maintenance procedures including tasks and frequency. ○ Identify local jurisdictional requirements for equipment and system operations, as well as any industry-specific regulations. ▶ Explore the maintenance recommendations for relevant equipment types. Product manuals and manufacturer specifications generally provide the most accurate guidance. <ul style="list-style-type: none"> ○ HVAC ○ Refrigeration ○ Compressed air systems ○ Thermostat calibration ○ Other specialized systems (such as kitchen and restroom water equipment)

	<ul style="list-style-type: none"> ▶ Determine which maintenance tasks can be done in-house and which require a professional technician. <ul style="list-style-type: none"> ○ Assess in-house maintenance staff's capacity (e.g., knowledge, skills, experience, tools, and resources) to conduct desired level of maintenance. 																																
Find certified professionals	<ul style="list-style-type: none"> ▶ Locate a local contractor certified by North American Technical Excellence (NATE). Specialty certifications include air conditioning and commercial refrigeration. ▶ Locate contractors recognized by Air Conditioning Contractors of America (ACCA). Filter by equipment expertise and market. ▶ Ask potential contractors if they are certified as Professional Technicians or Master Specialists by HVAC Excellence. 																																
Requests for proposals	<ul style="list-style-type: none"> ▶ Read through example RFPs. ▶ Review licensing requirements: EPA 608 and state licenses. ▶ Questions to ask contractors: <ul style="list-style-type: none"> ○ What training and experience do you have with my equipment? ○ What predictive and evaluation services do you offer? Are you capable of ultrasonic leak testing or advanced vibration evaluation? ○ How quickly can you obtain replacement parts and send a technician to complete a repair? ▶ ACCA provides a list of items to discuss with contractors, as well as a list of questions contractors should be asking you. 																																
Evaluate proposals	<ul style="list-style-type: none"> ▶ Use the framework below (or similar) to guide internal reviews of proposals and potential contractors: <table border="1"> <thead> <tr> <th>Proposal Evaluation Criteria</th> <th>Score [1-10]</th> <th>Assigned Weight [1-5]</th> <th>Weighted Score (Score x Weight)</th> </tr> </thead> <tbody> <tr> <td>Cost proposal</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Compliance with scope of work</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Ability to deliver additional unspecified value</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Qualifications, experience, and certification</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Quality of site visit</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Overall Quality of the Proposal</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="3" style="text-align: right;"><i>Total Proposal Score</i></td> <td></td> </tr> </tbody> </table>	Proposal Evaluation Criteria	Score [1-10]	Assigned Weight [1-5]	Weighted Score (Score x Weight)	Cost proposal				Compliance with scope of work				Ability to deliver additional unspecified value				Qualifications, experience, and certification				Quality of site visit				Overall Quality of the Proposal				<i>Total Proposal Score</i>			
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Maintenance plans for new equipment	<ul style="list-style-type: none"> ▶ Some HVACR manufacturers offer inspection, maintenance, and remote monitoring services as part of the warranty on new equipment. Ask your retailer if such services are available. 																																

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