Heat Pump Installation: Considerations for the Supply Chain

Supply chain advice pack

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Funded by:



Introduction

Heat pumps are a key technology in the transition to sustainable and decarbonised heating and cooling. This Advice Pack explores the different stages of heat pump installation, and proposed actions for the supply chain to enhance customer satisfaction and streamline the installation process.

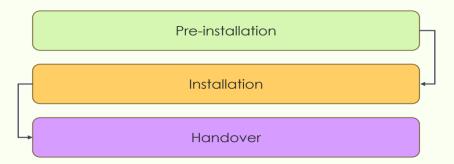


Figure 1: Heat pump installation stages.

Pre-installation

Proper planning and preparation are essential for smooth heat pump installations. This stage encompasses accurate site assessments, efficient logistics and proactive resident engagement. By giving residents clear advance notice of appointment dates, followed by reminders via their preferred channel, the risk of refusals or last-minute rescheduling is minimised. Ensuring installers and suppliers are aligned with specifications, delivery schedules and customer expectations then reduces delays and costly errors.

Site assessment and surveyor engagement	
Issue	 Inaccurate or incomplete site assessments cause installation challenges.
Solution	 Provide detailed site evaluations to avoid unexpected installation difficulties. Establish a pre-installation risk register that logs potential site challenges identified during survey (e.g. access issues, structural constraints)

System identification and accuracy	
Issue	 Misidentifying systems (e.g., solar PV vs. solar thermal) leads to unnecessary replacements and costs.

Solution	 Verify system types thoroughly before installation to prevent misconfigurations.
	 Maintain clear technical documentation and checks to ensure correct system identification.

Supply chain and team coordination	
Issue	 Miscommunication between technical and installation teams disrupts material delivery and workflow.
Solution	 Establish clear communication channels between suppliers, surveyors, and installation teams. Maintain synchronised schedules to ensure materials arrive when needed. Conduct pre-installation briefings to align teams on expected challenges and solutions.

Installation

The installation process requires precision, adaptability, and effective communication. Installers must ensure all components are correctly integrated while managing unexpected challenges like site constraints or system misconfigurations. Coordinating clearly with suppliers and installers helps prevent workflow bottlenecks and ensures that the process functions smoothly from the start.

Planning and specification accuracy	
Issue	Incorrect heat pump model, or other equipment specified
Solution	 Ensure property assessments are detailed and accurate before ordering equipment Verify heat pump specifications against the property's heating requirements before ordering Maintain flexibility in case adjustments are needed

Logistics and material management	
Issue	Delayed material deliveries slow work progress
Solution	 Strengthen supply chain coordination for timely deliveries Keep customers informed about delays and revised schedules Where possible, maintain stock of commonly required materials

Managing disruptions and contingencies	
Issue	 Boiler failure and prolonged delays leave the customer without heating Materials arrived unexpectedly, causing sudden work resumption.
Solution	 Establish contingency heating solutions for households during installation. Clearly communicate potential downtime and alternative arrangements. Ensure emergency plans are in place for unforeseen breakdowns. Build flexibility into scheduling to accommodate supply fluctuations. Keep installation teams informed of material availability in realtime.

Minimising service interruptions	
Issue	Water supply disruption when installing new water cylinder.
Solution	 Plan work sequences to reduce downtime for essential services. Inform residents in advance about expected disruptions. Prioritise tasks to restore services quickly.

Space planning and equipment placement	
Issue	 Larger-than-expected cylinder caused storage and placement issues.
Solution	 Ensure accurate measurements during initial assessments. Prepare alternative installation strategies in case of sizing challenges. Communicate layout adjustments clearly to the resident.

Handover

The final handover stage is critical for ensuring the heating system is fully operational and that the customer understands how to use it effectively. A well-executed handover reduces follow-up issues and improves overall satisfaction. This section highlights key handover steps and potential challenges based on real installation experiences.

System setup and configuration	
Issue	 Customer needed to set up the controller and app. A solar PV diverter conflict was identified.
Solution	 Ensure customers have clear app setup guidance. Identify compatibility issues early, particularly with diverters. Arrange follow-up electrician support if adjustments are needed.

Balancing the system	
Issue	 Temperature differences between rooms require thermostat adjustments.
Solution	 Test temperature variations across the home. Adjust thermostats based on the coldest room to ensure even heating. Guide customers on how thermostat settings impact system efficiency

Post installation checks	
Issue	Heating stopped due to a firmware update.
Solution	 Complete firmware updates before handover. Verify radiator functionality. Show resident how to update/give them a user support contact if update is needed again.

Key takeaways

- **Effective Coordination** Clear communication between suppliers, installers, and contractors prevents delays and ensures smooth execution.
- **Technical Precision** Accurate specifications and careful checking reduces errors and improves installation efficiency.
- Integrated Planning Heat pumps must align with other technologies. Suppliers should support installers in ensuring system compatibility.
- Adaptability Supply chain disruptions and site constraints require flexible solutions. A proactive approach minimises the risk of setbacks.

Useful resources



MCS Guide "Domestic Heat Pumps A Best Practice Guide" available here.

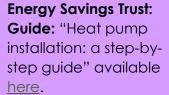




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RISE Quick Guide:

"Update to the Air Source Heat Pumps Planning Regulations" available here.







RISE Podcast: "Heat Pump Lessons from Retrofit with Kensa" available <u>here</u>.

RISE Masterclass:

"Heat pumps in retrofit projects with Sureserve" available here.





