

Church Heating Decision Process

- Evaluating options for comfort and reduced emissions



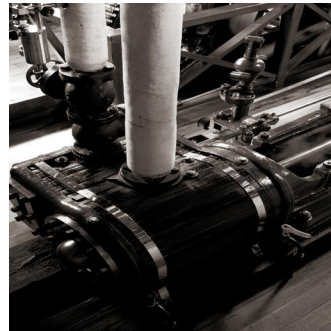


Introduction and Overview



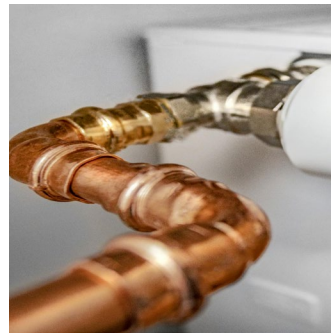


Overview of the Decision Process



Unique Heating Challenges

Large church volumes and heritage constraints create unique heating challenges requiring tailored solutions.



Decision-Making Process

A structured process guides selection between heat pumps and far-infrared heating based on technical and economic factors.



Sustainability and Comfort

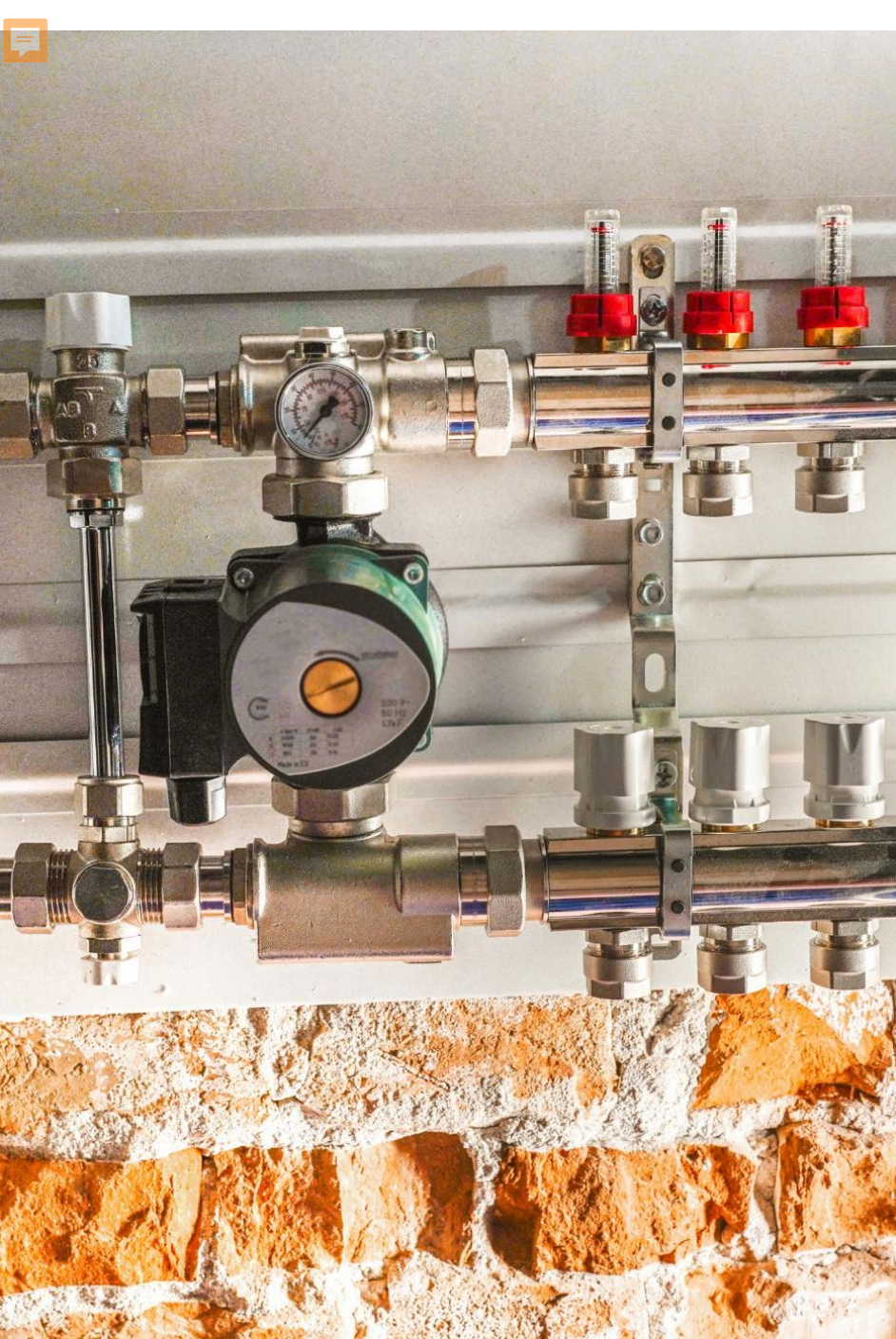
Choosing the right system ensures energy efficiency, cost-effectiveness, and user comfort in intermittent church use.





Initial Considerations





Key Factors Before Selecting a Technology

Assess Usage Patterns

Determine if heating needs are continuous or intermittent to select the right system efficiency.

Define Comfort Expectations

Clarify if the goal is to heat the air or provide direct occupant warmth for comfort.

Consider Heritage Constraints

Heritage limits may restrict visible or external units, influencing technology selection.

Evaluate Building Fabric

Building insulation and airtightness impact heat retention and energy efficiency of systems.

Dampness and water ingress

Fix any issues of dampness and water ingress identified in the quinquennial report as a priority.

Acquiring Funding

Identify grants for low-carbon heating

- Explore government and local energy-efficiency schemes
- Seek denominational or diocesan grants
- Collect quotes to support funding applications



Finding Qualified Installers

Identify certified heat pump and far infra-red installers

- Check accreditation bodies (MCS, NICEIC)
- Request site surveys and compare proposals
- Ask for church-specific installation experience



Obtaining Permissions

Determine what permissions are required

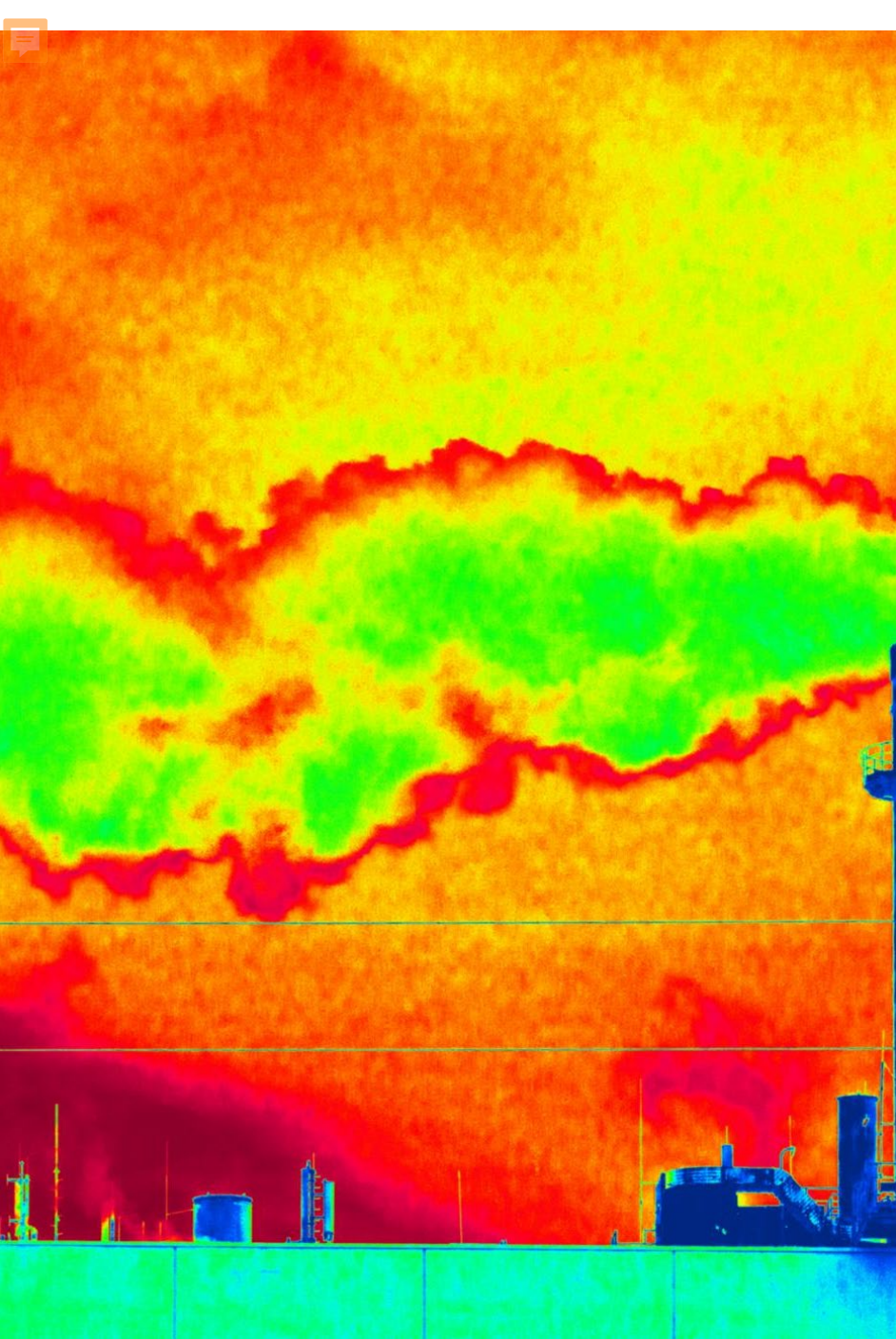
- Engage with heritage bodies and local authority for listed buildings
- Consult the diocese or provincial office about Canon 35
- Prepare documentation and drawings for approvals





Technical and Economic Analysis





Assessment Components

Heat Loss Modelling

Heat loss modelling determines energy needed to maintain building comfort and efficiency.

Cost Estimates

Capital and operational costs include equipment, installation, usage, and electricity tariffs.

Carbon Impact Evaluation

Carbon impact assessment ensures sustainability goals are met through energy solutions.

Infrastructure Assessment

Infrastructure checks verify electrical capacity and space requirements for heat pump installation.



Technology Comparison





Heat Pump vs Far Infra-red

CRITERION	HEAT PUMP	FAR INFRA-RED
Best for	Continuous use, warm air	Intermittent use, direct warmth
Installation complexity	High	Low
Capital cost	High	Medium
Operating cost	Medium (steady use)	Low (if used intermittently) High (if used continuously)
Heritage impact	Moderate	Low





Installation and Commissioning



Key Steps for Implementation



Installation Planning

Select qualified suppliers and plan system layout ensuring safety and heritage compliance.

Heat Pump Setup

Install external heat pump units with pipework and buffer tanks for optimal performance.

Far Infra-Red Panel Positioning

Strategically place FIR panels to ensure effective coverage and system efficiency.

System Commissioning

Set up controls, test performance, and train users to ensure efficiency from day one.



Maintenance and Monitoring





Long-Term Stewardship



Annual Heat Pump Maintenance

Heat pumps need yearly service including refrigerant level checks, coil cleaning, and performance assessment to operate efficiently.

Far Infra-Red System Inspections

FIR systems require periodic electrical inspections and visual checks to ensure panel integrity and proper functionality.

Energy Monitoring Benefits

Monitoring energy consumption for both systems helps optimize settings and reduce operational costs over time.

Planning and Budgeting

Regular comfort reviews and planning for system replacement with budgeting support long-term system reliability.

Users

Train those who will be responsible for operating the new heating in how to use it efficiently.



Further reading from the Provincial Buildings Committee [Church heating guidance](#)

