



E Source Space Heating Atlas

[Back](#)

This volume is a comprehensive review of the principles and technologies that comprise effective heating systems. In the context of whole-system design, the volume covers issues of human comfort, behavior, and productivity; examines codes and standards; and summarizes end-use and market data. Chapters are devoted to means of reducing heating loads; ventilation systems and requirements; heat distribution systems; and an in-depth look at the range of heating plants from furnaces and boilers to heat pumps, space heaters, and stoves. The resources section offers thorough lists of manufacturers and trade and professional organizations, a glossary, and an index.

Contents

1 Basic Concepts (26.5M)

- 1.1 Begin with the End in Mind
- 1.2 Whole-System Design
- 1.3 Watch the Details: Construction, Installation, and Maintenance
- 1.4 Summary of Space Heating Efficiency Opportunities

2 Understanding Comfort, Behavior, and Productivity (108K)

- 2.1 Thermal Comfort
- 2.2 Behavior
- 2.3 Productivity

3 Codes, Standards, and Programs (155K)

- 3.1 Building Energy Standards Development
- 3.2 Residential Buildings
- 3.3 Commercial Buildings
- 3.4 Efficiency Standards for Existing Buildings
- 3.5 Minimum Efficiency Standards for Heating Equipment
- 3.6 Exemplary Programs Can Pave the Way for Codes

4 End-Use and Market Data (130K)

- 4.1 Space Heating and Energy Use
- 4.2 Fuel Price
- 4.3 Peak Demand and Load Shape
- 4.4 Heating Plant Market Split

5 Reducing Heating Loads (1.3M)

- 5.1 Passive Solar Heating
- 5.2 Insulation
- 5.3 Construction Systems
- 5.4 Air Leakage
- 5.5 Windows

6 Residential Mechanical Ventilation (221K)

- 6.1 Why Ventilate?
- 6.2 Ventilation Requirements in Standards, Codes, and Programs

- 6.3 Types of Mechanical Ventilation Systems
- 6.4 Successful Ventilation
- 6.5 Economics

7 Distribution Systems (569K)

- 7.1 Understanding the Basics
- 7.2 Electric Distribution
- 7.3 Residential Water Distribution Systems
- 7.4 Commercial Water Distribution Systems
- 7.5 Steam Distribution Systems
- 7.6 Forced-Air Distribution Systems
- 7.7 Commercial Air-Distribution Systems
- 7.8 District Heating

8 Heating Plants (277K)

- 8.1 Elements of Heating Efficiency
- 8.2 Furnaces
- 8.3 Boilers
- 8.4 Heat Pumps
- 8.5 Space Heaters
- 8.6 Combination Space and Water Heaters
- 8.7 Solar Space Heating

Resources (216K)

- A: Glossary
- B: Manufacturers
- C: Trade, Professional, and Governmental Organizations
- Index

TA-SH-04; January 2004; 237 pages

To Subscribe or for Additional Information

For more information on the E Source Technology Atlases, call 303-444-7788 or e-mail us at esource@esource.com.
