

*Winning Acceptance and
Gaining Member Participation*

ASHRAE Strategic Plan
1985

**American Society of Heating, Refrigerating
and Air-Conditioning Engineers, Inc.**

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Introduction

The American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. (ASHRAE) is a technical society with a worldwide membership of persons interested in the advancement of technology for public benefit.

Created by the merger in 1959 of the American Society of Heating and Air-Conditioning Engineers, founded in 1894, and The American Society of Refrigerating Engineers, founded in 1904, ASHRAE operates on a not-for-profit basis. To encourage the unrestricted improvement and utilization of technology without regard to product promotion, ASHRAE has neither corporate nor organizational members.

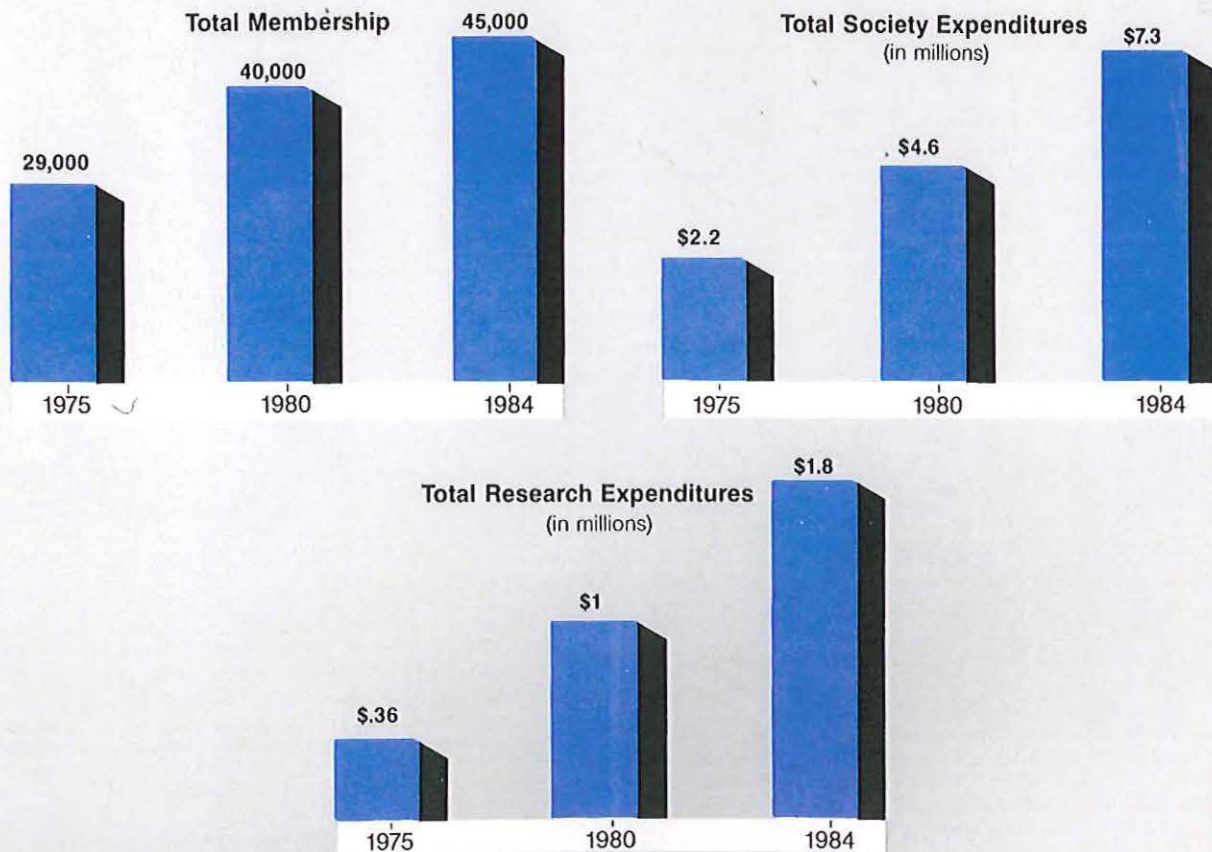
ASHRAE activity in recent years has become significantly broader. Growth in membership, total fiscal expenditures and research expenditures reflect this.

To assure fulfillment of the Society's mission in future years, the ASHRAE Board of Directors adopted the strategic plan contained in the following pages. As part

of this process, the Society reviewed its past, objectively looked at its present, and examined how resources can be most effectively expended in the future.

For each of the twenty-five objectives which comprise the ASHRAE Strategic Plan, responsibilities for action are assigned and five-year impact upon financial resources and human resources or volunteer effort is assessed. For some objectives, studies must be completed before the full five-year impact can be estimated.

Each year, the ASHRAE Strategic Plan will be reviewed. Objectives that have been completed will be deleted from the plan, action assignments and impact assessments for current objectives will be updated, and the addition of new objectives will be considered.



ASHRAE's Mission

ASHRAE's Bylaws state that the Society's sole objective is to advance the arts and sciences of heating, refrigeration, air conditioning, ventilation, their allied arts and sciences and related human factors for the benefit of the public. In meeting its objective, ASHRAE recognizes the effect of its technology on the environment and natural resources to protect the welfare of posterity.

ASHRAE achieves its objective in these ways, as outlined in the Society's Certificate of Consolidation:

- Encourages and conducts scientific research in the study of principles and methods;
- Promotes the unrestricted dissemination of knowledge and information by publishing and fostering the publication of scientific and educational data;

- Engages in educational activities and encourages the adoption and maintenance of high standards of instruction and professional training;
- Cooperates with governmental agencies, educational institutions and groups having the same or similar aims and objectives;
- Establishes standards and procedures with the proviso that all such activities are conducted solely for the advancement of engineering science;
- Organizes local regions, chapters and student branches.

Development of ASHRAE's Strategic Plan

The time required to develop resources is so extended and the time-scale of opportunities is so brief, that organizations without a strategic plan cannot expect to realize their potential.

ASHRAE has long recognized the importance of strategic planning. The Society has had a Long-Range Planning Committee as a Standing General Committee since 1967. In recent years, strategic planning has become even more important to ASHRAE because of a sustained period of membership growth, increased delivery of membership service, and greater recognition of and reliance upon ASHRAE technological resources. The demand for energy technology is one factor which has largely contributed to ASHRAE's prominence.

In 1983, the Board of Directors, acting upon the recommendation of the Long-Range Planning Committee, authorized the development of a strategic planning program.

The purpose of the program, developed with assistance of professors from the Emory University School of Business Administration, in Atlanta, Georgia, was to identify policies and objectives as part of a strategic plan, taking into account broad societal issues, technological challenges, and past ASHRAE experience. ASHRAE believes that by guiding the application of its resources in accordance with a plan which anticipates future needs of members and the public, the Society will best be able to accomplish its mission.

In April 1983, a five-phase program to develop ASHRAE's Strategic Plan was initiated:

Phase I — A group of some 30 Society leaders identified key developments, trends and issues that would affect the organization over the next five years.

Phase II — Based upon the conclusions of Phase I, the strategic planning group determined specific objectives and the probability, importance and desirability of their attainment.

Phase III — More than 180 selected ASHRAE members rated the probability, importance and desirability of attaining the objectives determined in Phase II.

Phase IV — A Presidential Ad Hoc Committee selected the highest rated objectives from Phases II and III and prepared the ASHRAE Strategic Plan document.

Phase V — After review by ASHRAE's Long Range Planning Committee, the President Elect's Advisory Committee, and Executive Committee, the Board of Directors approved the ASHRAE Strategic Plan.

Each year, the ASHRAE Strategic Plan will be reviewed and updated by the Society's councils, Long Range Planning and Executive Committees, and Board of Directors. Periodically, participation by the Society's membership will be solicited to allow for grass-roots involvement in major updates.

Use of Estimated Resource Impacts

A fundamental concept recognized in development of the ASHRAE Strategic Plan is the importance of both financial resources and human resources or volunteer effort in planning initiatives. This allows for the relative value of each objective to be measured.

As a result, graphs depicting estimated resource impacts for five years are shown for each objective. The bars in each graph illustrate annual estimated impact. In implementation of plan objectives, resource impacts will be continually monitored, and as the plan is updated, graphs will be revised.

Approval of the ASHRAE Strategic Plan by the Board of Directors in no way represents approval of any expenditures included in fiscal resource impact estimates. The Society's standard operating procedures for expenditure approval are to be followed in the execution of all action responsibilities.

Years shown in graphs represent ASHRAE fiscal years (July 1 through June 30), with 1986 representing the period July 1, 1985 through June 30, 1986.

Fiscal resource impacts are based on these assumptions:

\$300 One-day cost of professional staff support

with secretarial assistance and office overhead.

- \$400 One-person cost of transportation reimbursement for volunteer travel in North America.
- \$25 Annual cost to provide membership service to one overseas member.
- \$20,000 Annual cost of Society support of one Chapters Regional Conference outside of North America.
- \$10,000 Annual cost of Society support of one chapter outside of North America.
- \$75 Annual membership dues for one full member.

To put future fiscal and human resource impacts into perspective, the recent pattern of overall Society growth must be considered. With continued membership growth, greater fiscal and human resources will be available for implementation of objectives contained in the ASHRAE Strategic Plan. For example, ASHRAE membership grew by 17 percent from 1980 through 1984. Fiscal income during that period increased by 48 percent.

Assumptions for Planning Period

Assumptions Based on External Factors:

1. The United States and most developed countries will experience relative economic and political stability. Economic growth will average approximately three to four percent per year.
2. Public awareness of and pressure relating to indoor and outdoor environmental issues will continue.
3. Because of fewer entry level workers and longer work lives, the average age of the work force will increase.
4. Increased research and development expenditures by the public and private sectors will be necessitated by increased sophistication of technology in the HVAC&R fields.
5. Expenditures in the HVAC&R industry as a percentage of Gross National Product will grow faster in many developing countries than in the United States, Canada and Europe.
6. Depletion of non-renewable energy resources will continue to influence the HVAC&R industry.
7. Food production and preservation will become increasingly important, especially in developing nations, as the world's population increases.

8. New technology and its widespread application will improve global communication and transport, leading to further growth of a global economy.

Assumptions Based on Internal Factors:

1. ASHRAE will continue to be looked to for guidance in the Society's fields of interest by the world's people.
2. ASHRAE will continue to rely upon volunteer support by members for the execution of most programs and will remain an organization whose policies and activities are directed by volunteer members participating in the Society through appointment to committees and by holding elected office.
3. ASHRAE will consider human resource allocation as carefully as the allocation of financial resources.
4. ASHRAE's organizational structure will change as needed to meet membership needs.

Strategic Plan Objectives

Technology

1. **Research will continue as the core of ASHRAE activities, and expenditures in this area will increase from 18 percent of all Society revenue (\$1.25 million) in 1984-85 to 24 percent of all Society revenue (\$2.0 million) by 1989-90.**

Society-funded research activities have provided the foundation and focus of the ASHRAE mission for more than 60 years.

ASHRAE research is the basis for the ASHRAE Handbook and for ASHRAE standards. It attracts to the membership individuals who have imagination, vision and leadership. It provides a vehicle for persons who would like to improve the human environment.

ASHRAE research draws a wide range of professional interests. Research and development staffs of manufacturing firms come to ASHRAE for ideas which lead to product improvement. Consulting engineers, contractors, and facility operating personnel look to ASHRAE for design ideas which improve system effectiveness. Researchers from government and academia participate in ASHRAE to expand their work and to test their theories.

Responsibility for developing a plan which provides funding for increased research:

Research Promotion Committee (see Objective 2)

Responsibility for putting increased funding to use:

Research & Technical Committee (see Objective 3)

2. **The total amount of investments made in ASHRAE research by contributors who invest \$1,000 or more will increase from a total of \$190,000 in 1984-85 to \$1 million in 1989-90.**

Funding for ASHRAE research is provided by voluntary contributions, the annual International Air-Conditioning, Heating, Refrigerating Exposition co-sponsored by ASHRAE and the Air-Conditioning and Refrigeration Institute, member dues and interest earned by the ASHRAE Research Fund.

A potential exists to substantially increase investments of \$1,000 or more each from companies in industries related to HVAC&R technology.

To be successful, the highest level of ASHRAE management must become involved in

the solicitation effort. This may involve a paid solicitor or a calling committee of past Society and chapter presidents with the use of specially prepared literature.

Responsibility for developing and implementing a plan which increases large investments:

Research Promotion Committee (see Objective 1)

3. **Total annual research expenditures will increase from \$300,000 in 1983-84 to \$850,000 in 1989-90 in areas relating to:**
- **Occupant health and safety, including indoor air quality**
 - **Interface of building systems with thermal envelopes**
 - **Energy conservation**

Occupant health and safety, including indoor air quality, and energy utilization, including interface of building systems with thermal envelopes, are areas in which the profession depends upon ASHRAE for leadership.

Efforts to conserve energy have resulted in decreased natural infiltration and ventilation and increased problems with indoor air quality. ASHRAE, long a leader in thermal comfort research, must increase research relating to occupant health and safety from indoor contaminants to meet the profession's need for solutions to this problem of growing importance.

In the past, much of ASHRAE's research has been limited to building components. Today, however, it is recognized that a systems approach is required. In some instances, the value of an improvement in equipment performance can be enhanced by a corresponding improvement in the building envelope.

Because energy cost and availability will be of concern for the foreseeable future, ASHRAE must lead research efforts which promote the effective utilization of energy.

Responsibility for identifying research opportunities:

Research & Technical Committee (see Objectives 1 and 8)

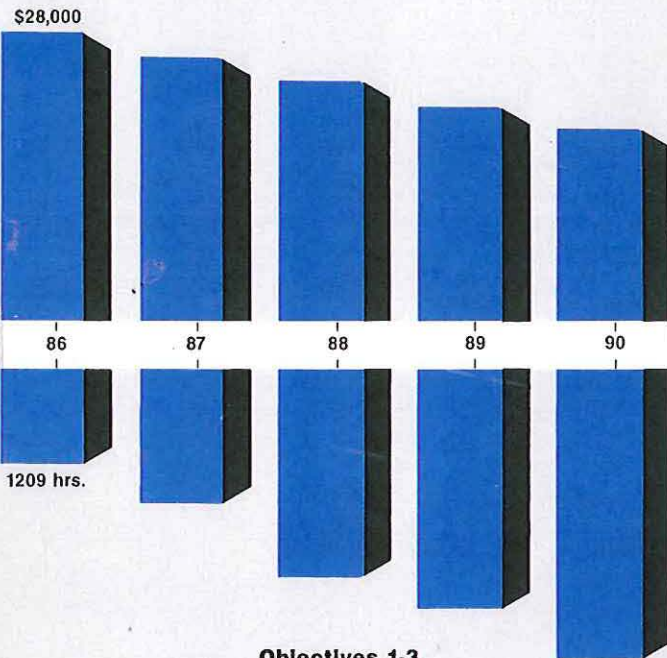
Responsibility for proposing specific research projects:

Technical Committees and Task Groups

Objectives 1-3

Estimated Fiscal Resource Impact

1986	\$150,000	Research expenditures, 75% of which is for projects.
	\$40,000	Research promotion expenditures, including literature, transportation, professional staff and overhead.
	\$162,000	Research income.
1987-90	\$150,000	Increased research expenditures each year.
	\$50,000-80,000	Increased (in annual increments of \$10,000 beginning at \$50,000) research promotion expenditures, mostly for transportation of increased number of solicitors.
	\$162,000	Increased research income each year.



Objectives 1-3

Estimated Human Resource Impact

1986	364 hr	Meetings (14 people x 8 hours x 2 meetings) and research/correspondence (14 people x 10 hours) for plan development.
	75 hr	Monitoring increased number of projects (15 people x 5 hrs.)
	870 hr	Solicitation (145 chapters x 6 hours)
1987-90	870 hr	Increased solicitation each year.
	75 hr	Increased monitoring of projects each year.

Objective 4

Estimated Fiscal Resource Impact

1986	\$5,100	Professional staff and overhead (17 days x \$300) for review and recommendation development.
	\$4,000	Transportation (5 people x \$400 x 2 meetings) for review and recommendation development.
1987-90		Impact cannot be assessed until recommendations are developed.



Objective 4

Estimated Human Resource Impact

1986	105 hr	Meetings (5 people x 8 hours x 2) and research/correspondence (5 people x 5 hours) for review and recommendation development.
1987-90		Impact cannot be assessed until recommendations are developed.

- To keep pace with changing technology and to ensure responsiveness to member interests and needs, the committee structure for technical activities will be formally reviewed on a five-year cycle beginning in 1985-86.

ASHRAE's technical committees and task groups develop the technological information which is disseminated by ASHRAE. They write the Society's Handbooks and other technical publications, identify the need for standards, organize educational programs at ASHRAE meetings, and monitor research projects. To ensure that the structure adequately addresses all areas of interest to the membership, especially in light of a rapidly advancing technology, it needs periodic review with changes to the structure made as needed.

Responsibility for reviewing technical structure and making needed changes:

Technology Council (see Objective 14)

- A survey to identify needs for specific standards and guidelines will be initiated in 1985-86, and based upon the survey a long-range plan will be formulated in 1986-87, with a repeat of the survey and modifications made to the plan as needed every five years.

ASHRAE Standards are established to assist industry and the public. To allow the Standards Committee to anticipate the need for standards or guidelines in key areas of activity as a basis for preparing consensus documents based on sound technological judgments, a survey needs to be conducted.

Because ASHRAE standards are widely used by the design, construction, manufacturing and distributing elements of the industry, it will be necessary to survey not only technical committees but also to reach outside the Society to identify all potential needs.

Responsibility for surveying needs for standards and developing a long-range plan:

Technology Council (see Objective 6)

- Initiatives to promulgate voluntary consensus standards and guidelines will be continued to retain private sector responsibility for development of industry standards on heating, ventilation, air conditioning and refrigeration and their allied arts and sciences and related human factors.

Industry self-regulation, as provided for in the development of voluntary, consensus standards, has long benefited the public. ASHRAE must aggressively pursue and defend this process, even

at the risk of increased exposure to challenges to the objectivity or unbiased nature of its standards-writing program.

To retain private sector responsibility for standards development and to promote acceptance by government of standards promulgated by ASHRAE, the Society will establish a formal procedure for obtaining effective participation of public-sector personnel in the identification of needs for voluntary consensus standards and guidelines and in their development. This will be considered as part of the long-range plan for Standards development.

Responsibility for developing a plan for the continued promulgation of voluntary consensus standards:
Technology Council (see Objective 5)

7. **Domestic and international standards-writing organizations with which there may be interest in joint development of standards, guidelines or similar technical documents will be identified, and participation by and with such organizations in the development of documents will be actively solicited.**

The effectiveness and acceptance of ASHRAE Standards can be increased by bringing into the development process organizations that represent peripheral interests impacted by ASHRAE Standards. Also, overlap with other organizations can be reduced, either by inviting their direct participation in the development of ASHRAE Standards or by participating in the development of standards others initiate.

Responsibility for developing and implementing a plan for joint standards development:
Standards Committee

8. **A program will be maintained for the effective dissemination and application of building energy conservation technology to the public and private sectors.**

Interest in energy conservation wanes when energy supplies appear adequate and the sense of emergency is abated. Nonetheless, available oil and gas fuel supplies are declining, the cost of most renewable energy sources promises to be considerably higher than for fossil fuels, and the utilization of coal resources carries with it the significant problems of waste disposal, acid rain, desulfurization, and air pollution.

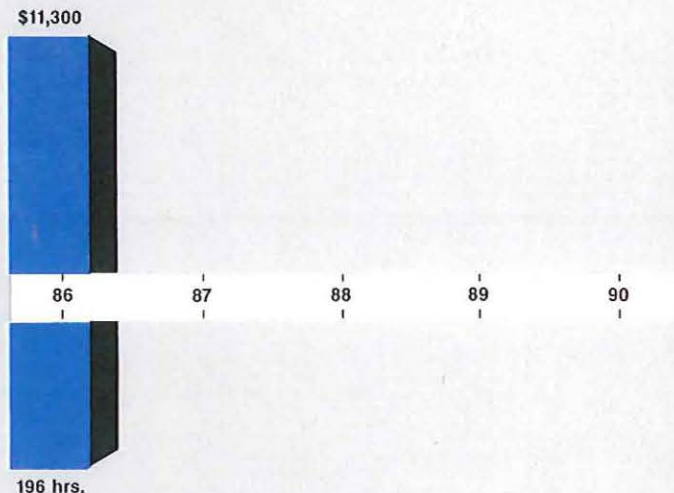
Energy conservation offers economic benefits, promotes better environmental quality, and lessens the potential for military conflict in areas where most of the world's oil reserves exist.

It is essential that ASHRAE maintain a strong effort in the field of energy conservation. The Society will continue to promote research in the

Objectives 5-6

Estimated Fiscal Resource Impact

1986	\$6,000	Professional staff and overhead (20 days x \$300) for survey and plan development.
	\$2,800	Transportation (7 people x \$400) for survey and plan development.
	\$1,500	Printing and mailing for survey.
1987-90		Impact cannot be assessed until plan is developed.



Objectives 5-6

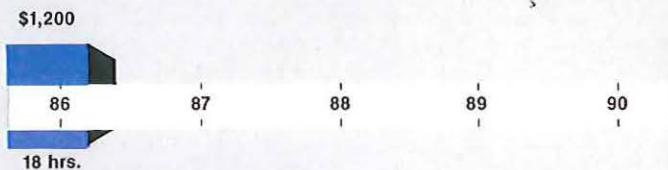
Estimated Human Resource Impact

1986	196 hr	Meetings (7 people x 8 hours) and research/correspondence (7 people x 20 hours) for survey and plan development.
1987-90		Impact cannot be assessed until plan is developed.

Objective 7

Estimated Fiscal Resource Impact

1986	\$1,200	Professional staff and overhead (4 days x \$300) for plan development.
1987-90		Impact cannot be assessed until plan is developed.



Objectives 7

Estimated Human Resource Impact

1986	18 hr	Research and correspondence (3 people x 6 hours) for plan development.
1987-90		Impact cannot be assessed until plan is developed.

Objective 8

Estimated Fiscal Resource Impact

1986-90 No impact is anticipated. (Increased research impact is assessed in Objective 3. Implementation of other objective elements is accommodated in existing programs.)

Objective 8

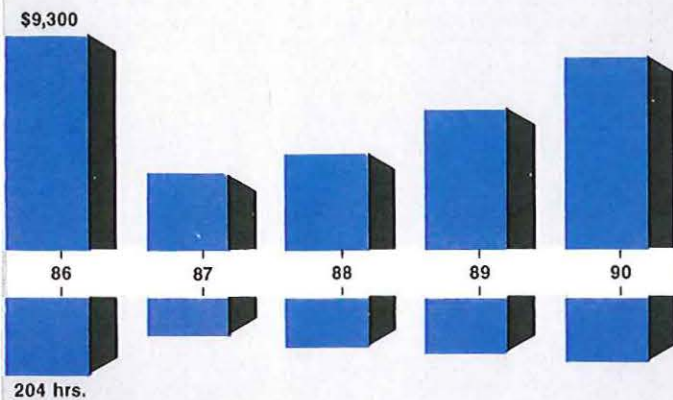
Estimated Human Resource Impact

1986-90 No impact is anticipated. (Increased research impact is assessed in Objective 3. Implementation of other objective elements is accommodated in existing programs.)

Objective 9

Estimated Fiscal Resource Impact

1986	\$3,000	Professional staff and overhead (10 days x \$300 for program initiation.
	\$4,800	Transportation (12 people x \$400) for program initiation.
	\$1,500	Professional staff and overhead (5 days x \$300) for project support.
1987-90	\$1,500	Increased professional staff and overhead each year (5 days x \$300) for project support.



Objective 9

Estimated Human Resource Impact

1986	144 hr	Meetings (12 people x 8 hours) and research/ correspondence (12 people x 4 hours) for program initiation.
	40 hr	Investigating (10 hours x 4 people).
	20 hr	Monitoring (10 hours x 2 projects).
1987-90	10 hr	Increased investigating each year.
	10 hr	Increased monitoring each year.

public and private sectors which develops improved materials, equipment and systems for buildings and energy-conversion processes. It will provide leadership in demonstrating the effectiveness of new technology in saving energy. It will increase its activities in education and technology transfer so that a larger percentage of manufacturers, designers, builders, and operators of energy-using equipment can effectively and economically apply new technology.

Responsibility for proposing energy conservation research:

Research & Technical Committee (see Objective 3)

Responsibility for demonstrating opportunities for energy conservation:

Energy Management Committee

Government Affairs Committee

Responsibility for educating the membership on energy conservation technology:

Education Committee

Professional Development Committee

9. Participation with government agencies on special projects related to the research program and the acceleration of consensus standards and guidelines will be increased.

Government research on energy conservation, air and water quality, energy recovery, energy storage, lighting, renewable energy, and health and safety requirements significantly impacts all citizens and most industries.

In response to government's need for reliable technical data in these important areas, ASHRAE has in recent years conducted or managed substantial research and standards programs for or in cooperation with the U.S. Government. The results of these technical programs have been valued highly by government because of their objectivity and comprehensiveness. ASHRAE participation has added value to government because it coordinates the knowledge and expertise of the private sector and because the results of its research and standards activities are substantially endorsed by the private sector.

ASHRAE benefits from increased technical information at no or little cost.

Responsibility for coordinating initiatives to increase cooperative research and standards activities with government:

Technology Council

Responsibility for proposing initiatives to increase cooperative research and standards activities with government:

Government Affairs Committee

International Activities Committee

Research & Technical Committee

Standards Committee

10. **A plan will be developed to utilize regional and chapter officers in the identification of state, provincial and municipal agencies which are potential recipients of ASHRAE technical and consultative services.**

During the past decade, ASHRAE has established a strong public service image. The Society has demonstrated its ability to enlist individuals with outstanding experience and judgment to analyze key issues, to promote the substitution of voluntary consensus standards for regulations, to educate government officials on energy conservation standards, and to advise government on proposed legislation and regulation related to health, safety, energy and air quality issues.

This role of promoting the public interest will be enlarged to specifically provide greater assistance to state, provincial and municipal agencies.

The two-way flow of information between state, provincial or municipal governments and regional or chapter officers of ASHRAE will meet the need for the availability of technical assistance from the Society to the public at local and regional levels.

Responsibility for developing a plan to utilize chapter and regional officers in technology transfer to state, provincial and municipal governments:
Government Affairs Committee

11. **A formal mechanism will be developed for responding to public inquiries, including monitoring selected issues; identifying, developing and maintaining timely position papers and policy statements with particular attention devoted to energy, health and safety issues; and establishing a network of recognized experts to respond to inquiries of a specific technical nature.**

It is important that the considered views of an informed technical society be put on record on issues that have a significant impact on its membership and on the general public, based on the research, technical knowledge and experience embodied in the organization.

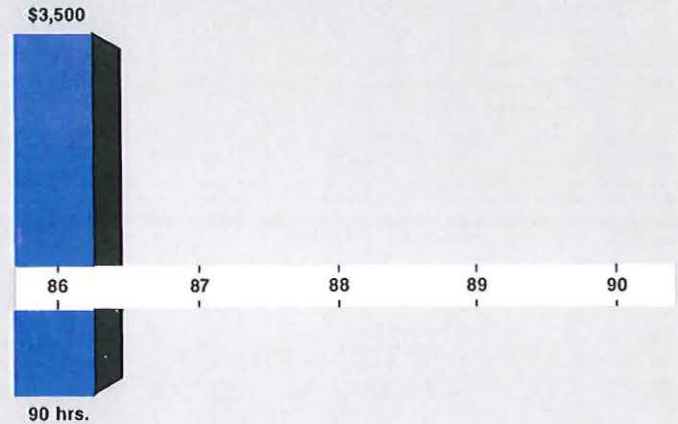
ASHRAE, because of its long history in research, its extensive system of technical committees, its continuing efforts to produce consensus standards and its outstanding record in publishing technical information on good design practice, is in a strong position to issue technically sound and carefully considered guidance on subjects related to its mission.

Government, news media, other technical societies, industry, and the general public all look to ASHRAE for guidance on varied issues.

Objective 10

Estimated Fiscal Resource Impact

1986	\$1,500	Professional staff and overhead (5 days x \$300) for plan development.
	\$2,000	Transportation (5 people x \$400) for plan development.
1987-90		Impact cannot be assessed until plan is developed.



Objective 10

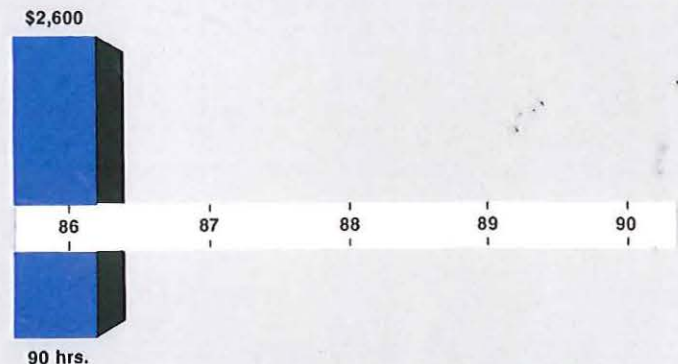
Estimated Human Resource Impact

1986	90 hr	Meetings (5 people x 8 hours) and research/correspondence (5 people x 10 hours) for plan development.
1987-90		Impact cannot be assessed until plan is developed.

Objective 11

Estimated Fiscal Resource Impact

1986	\$600	Professional staff and overhead (2 days x \$300) for mechanism development.
	\$2,000	Transportation (5 people x \$400) for mechanism development. Monitoring issues and developing position statements is currently accommodated.
1987-90		No impact is anticipated.



Objective 11

Estimated Human Resource Impact

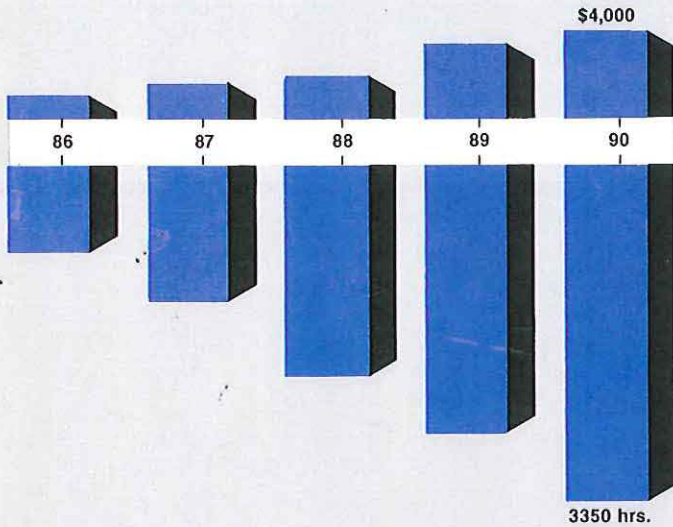
1986	90 hr	Meetings (5 people x 8 hours) and research/correspondence (5 people x 10 hours) for mechanism development. Monitoring issues and developing position statements is currently accommodated.
1987-90		No impact is anticipated.

Objective 12

Estimated Fiscal Resource Impact

1990 Assuming overseas membership will increase to 7,500 members by 1991, estimated impact is:

\$204,075	Dues income (2,721 new members x \$75).
\$68,025	Member service cost (2,721 new members x \$25).
\$40,000	Regional conference cost (2 conferences x \$20,000).
\$100,000	Chapter support cost (10 chapters x \$10,000).



Objective 12

Estimated Human Resource Impact

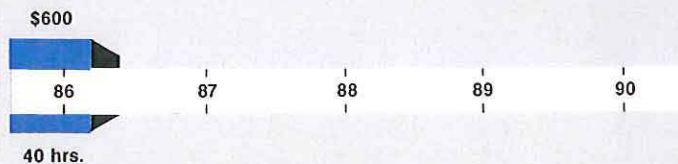
1990 Assuming overseas membership will increase to 7,500 members by 1991, estimated impact is:

2250 hrs	Chapter effort (10 chapters x 15 people x 15 hours).
900 hrs	Regional effort (2 regions x 6 people x 75 hours).
200 hrs	Society effort (10 people x 20 hours).

Objective 13

Estimated Fiscal Resource Impact

1986	\$600	Professional staff and overhead (2 days x \$300) for plan development.
1987-90		Impact cannot be assessed until plan is developed.



Objective 13

Estimated Human Resource Impact

1986	40 hr	Research/correspondence (5 people x 8 hours) for plan development.
1987-90		Impact cannot be assessed until plan is developed.

Responsibility for monitoring selected issues in government and maintaining and developing position statements:

Government Affairs Committee

Responsibility for establishing a mechanism to respond to public inquiries other than from government:

Presidential Ad Hoc Committee

Regions

12. Overseas membership in the Society and the participation of overseas members in Society activities will be increased.

A viable international HVAC&R industry is emerging, supported by the export and import of products and technologies across country and continental boundaries. ASHRAE's international growth over the last decade reflects this. All Society members benefit from the increased amount of technical information made possible by an expanded geographic membership base and a more active international membership.

Chapters-at-large, establishment of overseas regions and cooperation with International Associates all can potentially contribute to increased overseas membership and greater overseas member involvement.

Responsibility for promoting overseas membership growth:

Membership Committee

Responsibility for achieving greater overseas member participation:

International Activities Committee

Responsibility for integration of chapters-at-large into Society activity:

Regions Council

13. An appropriate strategy and action plan to participate with national and multi-national technical societies in the HVAC&R field for mutual benefit will be developed.

Worldwide activity in the HVAC&R industry and technology provides impetus to the development and growth of national societies the world over and international technical societies. Cooperation with other organizations from other parts of the world expands the amount of technical information available to ASHRAE members.

ASHRAE currently has a total of 26 International Associates, organizations in the same or similar fields of technical and scientific endeavor

as ASHRAE. At present, 13 Associates are in Europe, 7 in Asia, 4 in South America and one each in South Africa and Israel. In addition, formal relationships are maintained with two multinational organizations: the International Institute of Refrigeration (IIR) and the Representatives of European Heating and Ventilating Associations (REHVA).

ASHRAE policies and guidelines are needed to define relations and inter-relationships with these overseas technical societies, including the joint development of standards, participation in co-sponsored conferences, engaging in cooperative educational activities, and entering into agreements for publishing, distribution and developing shared technical data bases.

Responsibility for developing a plan for international cooperation:

International Activities Committee

Administration and Member Services

14. Membership growth will be achieved by broadening the membership base to include related disciplines.

Membership growth provides ASHRAE with additional resources — both human and financial. In the development of HVAC&R technology, contact between ASHRAE members and professionals in related disciplines is increasing, such as in the study of indoor air quality.

Over the past ten years, membership growth has averaged nearly 6 percent annually. To continue a comparable rate of growth, new members will have to be solicited from related disciplines. New membership grades and criteria and an expanded technical structure, may be required to attract members from these disciplines and to actively involve them in the Society.

Responsibility for examining membership criteria:

Admissions & Advancement Committee

Responsibility for reviewing technical structure:

Technology Council (see Objective 4)

15. Chapter and regional support of student branch activity will be increased and use of student branches as a source of membership will be continually examined.

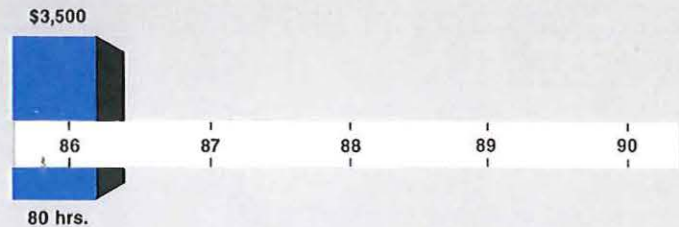
One of ASHRAE's fundamental missions is to cooperate with educational institutions.

Student branches provide ASHRAE with a

Objective 14

Estimated Fiscal Resource Impact

1986	\$1,500	Professional staff and overhead (5 days x \$300) for criteria survey.
	\$2,000	Transportation (5 people x \$400) for criteria survey. Technical structure review impact is assessed in Objective 4.
1987-90		Impact cannot be assessed until criteria survey is completed.



Objective 14

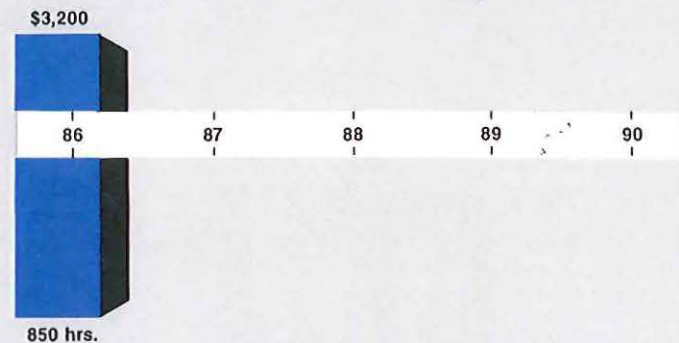
Estimated Human Resource Impact

1986	80 hr	Meetings (8 people x 5 hours) and research/correspondence (8 people x 5 hours) for criteria survey. Technical structure review impact is assessed in Objective 4.
1987-90		Impact cannot be assessed until criteria survey is completed.

Objective 15

Estimated Fiscal Resource Impact

1986	\$1,200	Professional staff and overhead (4 days x \$300) for review and recommendation development.
	\$2,000	Transportation (5 people x \$400) for review and recommendation development.
1987-90		Impact cannot be assessed until increased number of branches is determined and support plan is developed.



Objective 15

Estimated Human Resource Impact

1986	785 hr	Increased contact with institutions (145 chapters x 5 hours + 12 regions x 5 hours) for identification.
	65 hr	Meetings (5 people x 8 hours) and research/correspondence (5 people x 5 hours) for review and recommendation development.
1987-90		Impact cannot be assessed until increased number of branches is determined and support plan is developed.

Objective 16

Estimated Fiscal Resource Impact

1986	\$600	Professional staff and overhead (2 days x \$300) for recommendation development.
1987-90		Impact cannot be assessed until recommendation is approved.



Objective 16

Estimated Human Resource Impact

1986	48 hr	Meetings (4 people x 4 hours) and research/correspondence (4 people x 8 hours) for recommendation development.
1987-90		Impact cannot be assessed until recommendation is approved.

Objective 17

Estimated Fiscal Resource Impact

1986	\$1,500	Professional staff and overhead (5 days x \$300) for proposal development.
	\$2,000	Transportation (5 people x \$400) for proposal development.
1987-90		Impact cannot be assessed until proposal is developed.



Objective 17

Estimated Human Resource Impact

1986	90 hr	Meetings (5 people x 8 hours) and research/correspondence (5 people x 10 hours) for proposal development.
1987-90		Impact cannot be assessed until proposal is developed.

direct link to students studying in the Society's fields of interest. They also allow members from industry to interact with engineering faculty, promoting high educational standards.

Along with promoting student membership, branches involve young people in the Society and expose them to the benefit of ASHRAE membership during their professional years. Typically, 20 percent of student members continue membership in the Society after employment.

Responsibility for identifying institutions where student branches should be formed and where branches should be revitalized:

Education Committee

Responsibility for reviewing student branch support programs and developing recommendations:

Education Committee

16. Time demands imposed on members of the Executive Committee in service to the Society will be reduced.

On the average, ASHRAE officers are currently contributing on behalf of the Society 50-55 "out-of-office" days, 30-40 "in-the-office" days, plus 50 "in-office" days on the part of support personnel at their places of employment. This time commitment excludes some individuals from ASHRAE leadership positions whose service would benefit the Society.

Among actions which can reduce time commitments are: (1) addition of new officer positions, (2) greater reliance on staff and staff structure, (3) appointment of other members not on the Executive Committee to serve as council chairmen, (4) greater utilization of past presidents and directors-at-large, and (5) redefinition and focusing of job responsibilities.

Responsibility for recommending methods of reducing officer time commitments:

Board of Directors

Education

17. All educational and professional development activities will be consolidated into one unit.

ASHRAE's objective and mission statements establish that education is a fundamental responsibility of the Society. To fully achieve educational objectives in the most effective manner, a higher degree of commitment to educational and professional development activities must be made.

ASHRAE's educational responsibilities include operation of student branches; interaction with secondary schools, technical schools and institutions of higher learning; the continuing education of members as provided for at chapter and regional levels; the presentation of technical programs at and in conjunction with Society meetings; Professional Development Seminars; and ASHRAE Continuing Education Studies. Reorganization of ASHRAE committees with primary educational missions into one unit with staff support will permit the Society to more effectively fulfill one of its fundamental missions.

Responsibility for proposing organizational alignment and staffing requirements:
Board of Directors

18. **A library program, including appropriate staff and using computer-based methods, will be developed to provide a repository for or reference to (1) publications referenced in the Handbooks, (2) all past, present and future Society literature, and (3) selected specialized publications related to ASHRAE's scope.**

Many items referenced in Handbook chapters have limited distribution and availability. Some references are pamphlets, small reports or theses. To ensure availability of these references for the integrity of the Handbooks and as a service to members, a computer-based storage or referral service is needed. All Society publications and Society-sponsored research reports and conference proceedings should be available to members and accessible by computer-based methods, and other important technical publications relating to ASHRAE membership interests should be identified for reference.

If the Society develops as part of its communications program an electronic technical data base accessible for a fee by members and the public, the library program should inter-relate with it.

Responsibility for developing a library program:
Technology Council

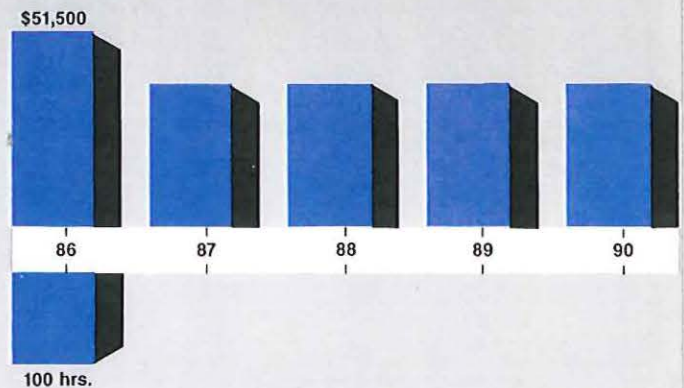
19. **Programs will be developed to assist developing countries through technology transfer.**

ASHRAE's objective calls for service to the public, without regard to national boundary. As ASHRAE broadens its membership internationally, greater awareness in developing countries of the services provided to humanity by ASHRAE will result. Also, there will be greater appreciation within ASHRAE of the benefit its services can provide in developing countries.

Objective 18

Estimated Fiscal Resource Impact

1986	\$1,500	Professional staff and overhead (5 days x \$300) for program development.
	\$25,000	Data processing enhancement and publication acquisition.
	\$20,000	Part-time staffing and consulting services.
	\$5,000	Facility improvement.
1987-90	\$20,000	Data processing enhancement and publication acquisition each year.
	\$20,000	Part-time staffing and consulting services each year.
	\$1,000	Facility improvement each year.



Objective 18

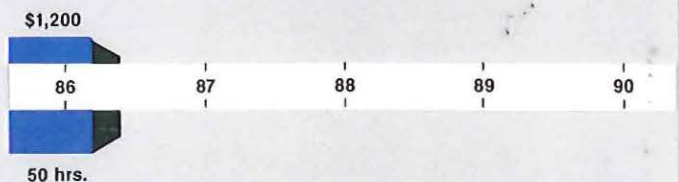
Estimated Human Resource Impact

1986	100 hr	Research and correspondence (5 people x 20 hours) for program development.
1987-90		No impact is anticipated.

Objective 19

Estimated Fiscal Resource Impact

1986	\$1,200	Professional staff and overhead (4 days x \$300) for program development.
1987-90		Impact cannot be assessed until program is developed.



Objective 19

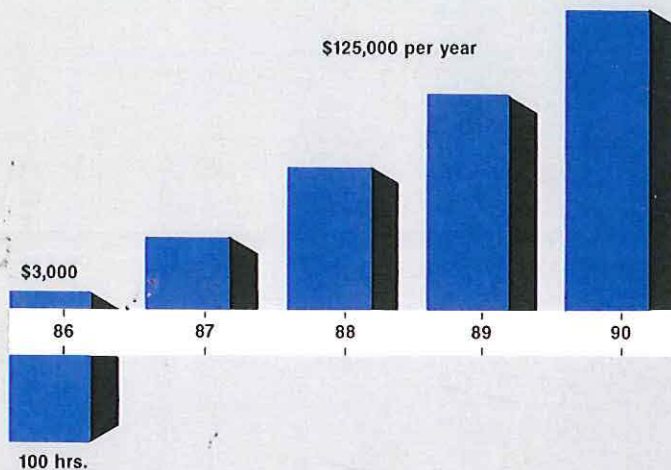
Estimated Human Resource Impact

1986	50 hr	Research and correspondence (5 people x 10 hours) for program development.
1987-90		Impact cannot be assessed until program is developed.

Objective 20

Estimated Fiscal Resource Impact

1986	\$ 3,000	Professional staff and overhead (10 days x \$300) for program development.
1987-90	\$125,000	Increased revenue each year to make the publishing program self-supporting in 1990.



Objective 20

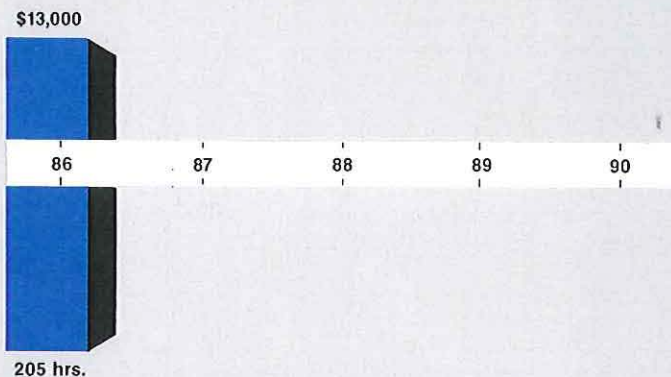
Estimated Human Resource Impact

1986	100 hr	Research and correspondence (5 people x 20 hours) for program development.
1987-90		No impact is anticipated.

Objective 21

Estimated Fiscal Resource Impact

1986	\$6,000	Professional staff and overhead (20 days x \$300) for plan development.
	\$3,000	Printing/postage for questionnaire.
	\$4,000	Transportation (5 people x \$400 x 2 meetings) for plan development.
1987-90		Impact cannot be assessed until plan is developed.



Objective 21

Estimated Human Resource Impact

1986	205 hr	Meetings (5 people x 8 hours x 2 meetings) and research/correspondence (5 people x 25 hours) for plan development.
1987-90		Impact cannot be assessed until plan is developed.

As part of the technology transfer program, needs of developing countries should be identified as well as government agencies and organizations through which needs can be met and transfer accomplished. Technology transfer may be provided in the form of consultation, technical advice, literature translation, and lectures.

Responsibility for developing a technology transfer program:

International Activities Committee

Communications

20. The publishing program will be self-supporting.

Dissemination of technical information through publishing is fundamentally how the Society meets its objective of technological advancement. ASHRAE's publishing program represents approximately 25 percent of the Society's operating budget. With the addition of electronic technical data base capability, the percentage of the operating budget could reach 30 or 35 percent.

Review of production costs, member service, pricing, and marketing potential will be used to determine how ASHRAE can support a broad-based publishing operation which meets the technological needs of the membership without unduly draining the financial resources of the Society. Opportunities for increased revenue through advertising and royalty arrangements will be considered.

Responsibility for developing a program to make publishing self-supporting:

Publishing Council (see Objectives 24 and 25)

Finance Committee (see Objectives 24 and 25)

21. Electronic access to Society technical material will be provided.

Today 9 million personal computers are in use in the U.S., and this figure is growing rapidly. Electronic access to ASHRAE literature — to both members and other interested professionals — gives ASHRAE an important opportunity to increase dissemination of knowledge. Members and the public will be able to review and to obtain copies of technical material in a much more rapid and selective manner.

While a significant amount of income may be generated by providing this service, substantial costs will also be incurred. These costs, the

potential of lost income in traditional publishing areas, piracy, and other problems related to the electronic transmission of data will be considered in program development, perhaps leading to a decision to forego implementation.

Responsibility for developing a plan for electronic access to technical material:

Joint Committee of Publishing and Technology Councils

22. Methods of transmitting news of Society activity to the membership will be improved.

Because ASHRAE is a membership organization which relies upon volunteer effort in the development of technology, establishment of policy and program implementation, communication of information about Society activity is vital to ASHRAE's long-term success. An informed membership promotes member participation and makes participation more effective in achieving the Society's aims and objectives.

A review of the purpose and scope of ASHRAE Journal and of the feasibility and desirability of producing an expanded newsletter on Society activity for total membership distribution will be part of the implementation study.

Responsibility for improving methods of Society news transmission to members:

Publishing Council

23. Use of electronic mail to transmit information to and from Society officers, council members and selected standing general committee members will be instituted.

Communication technology breakthroughs allow for more rapid flow of information to and from Society leaders and Headquarters. If electronic mail service is instituted, ASHRAE will be able to take important actions in a more timely fashion and those making decisions will have greater access to essential information.

Physical accomplishment can be as simple as entering "letters" in a file, providing an address list for each "letter," and dialing in periodically to check for mail receipt. Administration of the service would be more demanding if procedures are included to ensure receipt, avoid communication congestion, and avoid other transmission problems.

Need, technical methodology, economic feasibility, and access to communications equipment will be considered as part of the implementation study.

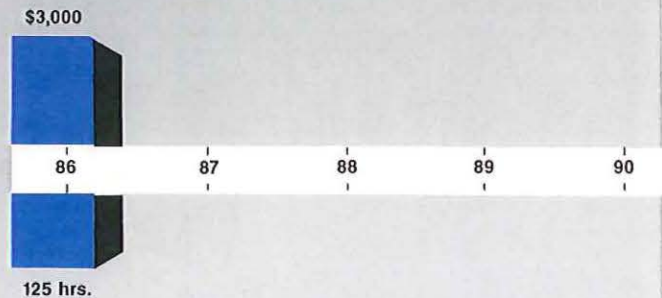
Responsibility for instituting electronic mail service to volunteer leaders:

Staff

Objective 22

Estimated Fiscal Resource Impact

1986	\$3,000	Professional staff and overhead (10 days x \$300) for study.
1987-90		Impact cannot be assessed until study is completed.



Objective 22

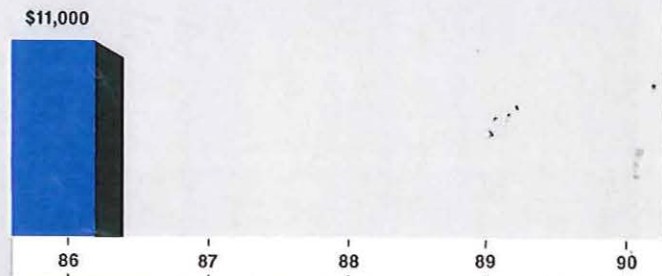
Estimated Human Resource Impact

1986	125 hr	Research and correspondence (5 people x 25 hours) for study.
1987-90		Impact cannot be assessed until study is completed.

Objective 23

Estimated Fiscal Resource Impact

1986	\$6,000	Professional staff and overhead (20 days x \$300) for implementation.
	\$5,000	Equipment.



Objective 23

Estimated Human Resource Impact

1987-90		Impact cannot be assessed until scope of program and savings from reduced use of current communication channels are determined.
1986-90		No impact is anticipated.

Objective 24

Estimated Fiscal Resource Impact

1986-90 Impact is considered in Objective 20 which makes the publishing program self-supporting.

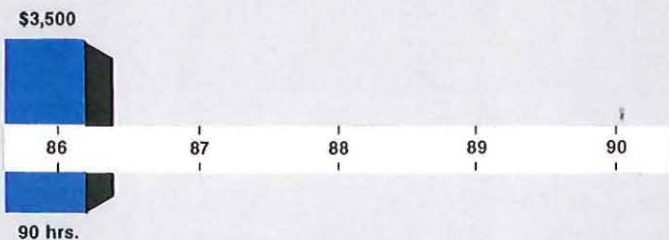
Estimated Human Resource Impact

1986-90 Impact for solicitation and approval is minimal. Impact for manual/special publication development cannot be assessed until recommendations are approved.

Objective 25

Estimated Fiscal Resource Impact

1986	\$1,500	Professional staff and overhead (5 days x \$300) for format development.
1987-90	\$2,000	Travel (5 people x \$400) for format development. Impact is considered in Objective 20 which makes the publishing program self-supporting.



Objective 25

Estimated Human Resource Impact

1986	90 hr	Meetings (5 people x 8 hours) and research/correspondence (5 people x 10 hours) for format development.
1987-90		No impact is anticipated.

24. A variety of manuals and special publications to supplement the technical material in the Handbook will be developed.

There is a need for supplemental technical information which can be distributed to the membership in addition to what is distributed through the Handbook.

Separate manuals and special publications provide information in greater depth than can the Handbooks, allow information to be made available in a more timely manner, and permit ASHRAE to meet needs of specific member audiences economically. The material they present can be considered for inclusion in Handbook revisions.

Responsibility for soliciting recommendations for manuals and special publications:

Research & Technical Committee

Responsibility for approving publication of recommended manuals and special publications:

Publishing Council (see Objective 20)

25. Technical information presented at ASHRAE meetings will be disseminated more broadly by offering it in multiple formats and by packaging it in technical interest categories.

Each year, from 300 to 400 presentations of technical information are presented at ASHRAE's semiannual meetings. These include approximately 80 technical papers, 120 papers presented in symposiums, 120 presentations made in seminars, and 30 forums. Research information is covered as well as application experiences.

These presentations represent by far the most extensive and current pool of technical information available to the engineering profession in the HVAC&R technologies.

Packaging material in technical interest areas and offering it to members by subscription meets the specialized needs of the membership and provides members with the opportunity to receive information that meets their technical interests.

In reaching a decision as to how to implement the objective, (1) current marketing and use of Transactions, (2) use of cassette recordings, (3) use of videotape, (4) publication of papers in ASHRAE Journal, (5) issuing of separate Journals by subject which include papers presented at meetings, and (6) electronic transmission of sessions by cable television will be studied.

Responsibility for developing multiple formats for technical information presented at meetings:

Joint Committee from the Program Committee and Publishing Council (see Objective 20)



ASHRAE

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