

WHAT NEMA WILL DO IN 1950

National Electrical Manufacturers Association

155 EAST 44th STREET

NEW YORK 17, N. Y.

INSTITUTE OF
INDUSTRIAL RELATIONS

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MAY 1 1950

WHAT NEMA WILL DO IN 1950

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WHAT NEMA WILL DO IN 1950

In Explanation: The following explanations and definitions will facilitate understanding of the allocation formulae, check list and several items:

Subdivisions NEMA Subdivisions may be either Divisions, Sections, Groups, Sub-Groups, or Voting Classifications.

When it is desired to speak of such organizational entities as a class, the term "subdivision" should be used.

Dues Center In allocating NEMA dues, the costs of the various projects are allocated to the interested dues centers. In every case, the dues center is a NEMA Section except that the Arc Welding Section and the Electrical Measuring Instrument Section each comprise more than one dues center.

Multiplier The costs of many NEMA projects are allocated among dues centers in whole or in part in proportion to sales or factored sales. Where the benefit to the various dues centers is not in direct proportion to sales, a multiplier is used to reflect this variance in degree of benefit.

The costs of such projects are then allocated to dues centers in direct proportion to the product of the multiplier and the sales volume for each dues center.

Check List The check list on the two center pages indicates what dues centers will be charged with part of the costs of each project as required by each allocation formula. In the case of job cost formulae, past experience is the criterion in the original allocation. In reallocating, actual costs for the fiscal

year are used. When multipliers apply, they are inserted in lieu of check marks.

Job Costs The term job costs, as it appears in allocation formulae, includes both direct and overhead costs. The formulae for allocating to subdivisions the cost of many NEMA projects are based in whole or in part upon job costs.

The terms "direct costs" and "overhead costs" as they appear in the 1950 budget data are defined as follows:

Direct Costs Comprise:

- (a) The amount of staff time devoted to a particular project is charged to the project on the basis of actual time reported by the staff member.
- (b) Other direct costs, such as printing, mailing, travel, long distance phone calls, etc., are charged as incurred on behalf of the project.

Overhead Costs Comprise:

- (a) Rent, light, air conditioning, and the use of work facilities are charged to the various projects in proportion to the direct costs outlined in (a) under above costs.
- (b) Supervision and legal counsel are divided among the various projects in proportion to the amount of such services required by such projects.

100. NEMA Standards

Codes and Standards Committee

Problem Anyone can write standards, but can everybody concerned live with them? Varying interests sometimes result in divergent standardization opinions, and it is obvious that standards are only as good as their degree of acceptability. Therefore NEMA must provide facilities for coordinating NEMA's standardization activities so that NEMA standards will be generally acceptable. Soundly conceived standards are of the greatest importance to the best interests of both customers and electrical manufacturers. There is, therefore, a real need for NEMA Standards dealing with such characteristics as rating, testing, performance, construction, tolerances, composition of electrical products or of their components. The existence of such standards facilitates and encourages the wider use and distribution of standard products, with attendant economies in production, inventory requirements, and improved customer understanding.

National Electrical Manufacturers Association Standards are adopted in the public interest and are designed to eliminate misunderstandings between the manufacturer and the purchaser and to assist the purchaser in selecting and obtaining the proper product for its particular need. Existence of a National Electrical Manufacturers Association Standard does not in any respect preclude any member or nonmember from manufacturing or selling products not conforming to the standard.

Project Provide effective guidance, committee organization and procedure whereby NEMA Sections may prepare, publish and promulgate standards for rating, testing, construction, tolerances, performance, etc.

1. Assist and coordinate the activities of NEMA Sections or Committees in the formulation, consideration and adoption of new standards or changes in existing NEMA Standards.

2. Compare proposed NEMA Standards with existing codes or standards, resolve differences directly or by organization of Joint Sections Committees.

3. Approve and publish NEMA Standards.

4. Supply on request technical information as to the application of NEMA Standards.

5. Facilitate the general acceptance and use of NEMA Standards by means of suitable notices, and by furnishing copies to interested member companies, to governmental agencies, to standardizing bodies and colleges and to technical libraries throughout the world.

Allocation Formula Job costs of special work done in the interest of any subdivision are charged to corresponding dues center.

The job costs of each of numerous sub-projects, each such sub-job cost being determined separately, are charged to the dues center embracing the products to which the standard applies. Where two or more subdivisions are directly interested, the sub-project costs are allocated in proportion to the sales volume of such subdivisions, unless a majority of such affected subdivisions favor allocation equally among such affected subdivisions.

Budget Data

1947 Actual Expense	\$13,422
1948 Actual Expense	14,660
1949 Budget	18,647
1950 Budget:	
Direct Costs	10,157
Overhead	9,593
Total	19,750

105. Joint Sections Committees

Codes and Standards Committee

Problem The development of standards is never entirely a unilateral process.

Invariably correlation is necessary. Sometimes this is between a NEMA Section and other Sections whose views are involved—perhaps similar, perhaps opposed. Occasionally, the joint relation assumes the producer-user form of relationship. In all joint relations, however, assuming that the amount of correlation is considerable, the formation of a Joint Sections Committee provides the logical means for assuring “all party at interest” participation. Such a committee, consisting of representatives from all of the Sections having an interest, can review and correlate all views and arrive at a mutually satisfactory conclusion.

Invariably these committees continue their existence until a conclusion is reached and a report is made, which is submitted to the contributing Sections for final review. If approved, the report is then recommended for formal adoption, usually as a NEMA Standard or as a recommendation to an interested outside body, as the case may be.

Project Organize and assist Joint Sections Committees in carrying out their assigned work.

1. Appoint representatives and acquaint them with the problem.

2. Furnish advisory services and, when requested, secretarial services to Joint Sections Committees.

3. Keep personnel adequately representative of those Sections participating in the work.

4. Render reports to interested Sections on the work and conclusions of these Committees and secure recommendations.

Allocation Formula Job costs of special work done in the interest of any subdivision are charged to corresponding dues center. Since two or more subdivisions are directly interested, the project costs are allocated in proportion to the sales volume of such subdivisions, unless a majority of such affected subdivisions favor allocation equally among affected subdivisions.

Budget Data

1947 Actual Expense	\$3,887
1948 Actual Expense	3,294
1949 Budget	2,870
1950 Budget:	
Direct Costs	4,753
Overhead	1,939
Total	6,692

110. National Electrical Code

Codes and Standards Committee

Problem “Let the Code Decide.” This slogan of the electrical inspectors refers to the National Electrical Code—the “Bible” for electrical construction, and it concerns every branch of the electrical industry. Certainly the well-being of both the public and the electrical industry makes necessary a code which, if followed, will provide a practical safeguarding against fire and accident hazards which electrical installations might otherwise create. Such code should be adequate but not unduly restrictive.

The National Electrical Code is the largest single factor in obtaining this objective.

A procedure must be maintained whereby manufacturers’ views for additions to or changes in the code may be considered by responsible code-making bodies. Because technical progress in electrical manufacturing is continuous the Code is continuously undergoing change to keep in step with the “development of the art.” Changes in materials used likewise affect Code changes.

Project Participate in the progressive development of the National Electrical Code.

1. Follow all developments of the National Electrical Code.
2. Call proposed revisions of the Code to the attention of NEMA members and Sections.
3. Assist Sections or members, upon request, in developing and presenting requests for amendment or interpretation of the Code; coordinate related requests of Sections.
4. Promote acceptance of the Code through financial support of the field work of the National Fire Protection Association.
5. Advise electrical inspectors and others with technical information concerning the rules contained in the Code.

Allocation Formula All costs, including 10% of the American Standards Association, Inc., fee, allocated in proportion to sales of products within the scope of each dues center weighted in accordance with the multipliers shown in the table at the center of this Program.

Budget Data

1947 Actual Expense	\$7,469
1948 Actual Expense	8,274
1949 Budget	14,729
1950 Budget:	
Direct Costs	13,517
Overhead	3,344
Total	16,861

115. National Electrical Safety Code

Codes and Standards Committee

Problem The National Electrical Safety Code, sponsored by the National Bureau of Standards, deals with the safe installation and operation of electrical equipment in power houses, transmission systems and distribution systems. It is "Volume II" of the electrical installation "Bible" and it applies to electricity supply systems. Its provisions affect all NEMA Sections whose products form component parts of the great system of generation, transmission and distribution of electrical energy.

Therefore, it is important for electrical manufacturers to be kept informed of its provisions and proposed changes and to participate in its development through a Sectional Committee of the American Standards Association, Inc.

As in the case of the National Electrical Code, it is essential that the views of manufacturers be expressed and that the necessary procedure be carried out in order to permit interested Sections to contribute their views and to review proposals for addition and change.

Project Participate in the progressive development of the National Electrical Safety Code.

1. Review proposals submitted for change in the National Electrical Safety Code.

2. Instruct NEMA representatives on voting in the ASA, Inc., Sectional Committee.

3. Provide secretarial services for some of the technical committees of the ASA, Inc., Committee.

Allocation Formula All costs, including 2% of the American Standards Association, Inc., fee, allocated in proportion to sales of products within the scope of each dues center weighted in accordance with the multipliers shown in the table at the center of this Program.

Budget Data

1947 Actual Expense	\$420
1948 Actual Expense	533
1949 Budget	1,792
1950 Budget:	
Direct Costs	1,119
Overhead	501
Total	1,620

120. Technical Provisions of State, County and City Electrical Codes

Codes and Standards Committee

Problem Intelligent action requires authoritative information. This project provides for the technical analysis of electrical codes for the use and guidance of the Regulatory Legislation Department. Many State laws, County, and City ordinances and codes cover electrical subjects by adoption of or other form of reference to the National Electrical Code. In contrast, a few states and a considerable number of cities prefer to adopt complete codes of their own. In the latter case it becomes necessary in the interests of maintaining a free and open market for all safe electrical products to develop and to submit detailed recommendations for the purpose of bringing these provisions, so far as practicable, into harmony with the National Electrical Code.

Project Develop and present recommendations concerning the technical content of proposed or existing State, County, and City Electrical Codes dealing with the construction, installation and use of elec-

trical products, with the purpose of avoiding, so far as practicable, the adoption of local regulations more restrictive than the National Electrical Code.

Allocation Formula (a) Job costs of special work in the interest of any subdivision are charged to corresponding dues center.

(b) All other costs are allocated in proportion to sales of products within the scope of each dues center weighted in accordance with the multiplier shown in the table at the center of this Program.

Budget Data

1947 Actual Expense	\$2,665
1948 Actual Expense	2,532
1949 Budget	3,653
1950 Budget:	
Direct Costs	1,118
Overhead	968
Total	2,086

125. Building Codes: State, County and City

Codes and Standards Committee; Regulatory Legislation Committee

Problem Building codes are, and are likely to be under fire from all directions. Proposed revisions and modernization of these codes throughout the country requires that NEMA be on the alert for proposals which might affect the electrical industry adversely. Building codes have become important to electrical manufacturers because they increasingly affect the use of electric welding, the installation of electric refrigeration and air conditioning, electric ranges and other electrically heated, operated, or controlled appliances or apparatus.

The Building Officials Conference of America is developing a Basic Building Code to be promoted for use as a model building code for municipalities

throughout the country. The draft of this Basic Building Code contains a number of requirements differing from the provisions of the National Electrical Code and other American Standards and Safety Codes. It is necessary to prepare analyses of these requirements and to develop technical data supporting the recognition of the National Electrical Code and other nationally recognized standards without modification.

Project Follow proposed and existing state, county and city building code proposals as they affect the electrical industry; follow the administration thereof; prepare recommendations for desirable

modifications, cooperate with other organizations and agencies by providing, on request, information regarding the electrical aspects of such codes.

NOTE: Members should keep NEMA informed regarding any revisions of local building codes.

Allocation Formula (a) Job costs of special work done in the interest of any subdivision are charged to corresponding dues center.

(b) All other costs, including 1% of the American Standards Association, Inc., fee, allocated in proportion to sales of products within the scope of

each dues center weighted in accordance with the multiplier shown in the table at the center of this Program.

Budget Data

1947 Actual Expense	\$749
1948 Actual Expense	882
1949 Budget	1,907
1950 Budget:	
Direct Costs	660
Overhead	558
Total	1,218

130. Commercial and Industrial Wiring Design Standards

Codes and Standards Committee; Sub-Committee on Interior Wiring Design

Problem Safe wiring may not necessarily be adequate to provide facilities for all of the electrical devices needed for adequate and desirable commercial and industrial applications. This project supplements those involving safety codes by providing adequacy standards.

Two sections of the "Handbook for Interior Wiring Design" have already been revised with the issuance of the "Handbook of Residential Wiring Design" and the "Handbook of Farmstead Wiring Design." The sections of the Handbook dealing with Commercial and Industrial Wiring are now undergoing revision in order that guidance may be available for the adequate wiring design for such installations.

Project Cooperate in the progressive development of technical features of Standards established for Adequate Wiring of commercial and industrial types of structures.

1. Maintain active membership on the Joint Industry Committee on Interior Wiring Design Practice, and assist in the revision of the sections of the

"Handbook for Interior Wiring Design" dealing with commercial and industrial wiring installations.

2. Provide effective means for reflecting the views of NEMA Sections in the preparation and approval of revisions of these sections of the Handbook.

3. Cooperate with other associations in promoting sales and distribution of the Handbook.

Allocation Formula Allocated in proportion to sales of products within the scope of each dues center weighted in accordance with the multiplier shown in the table at the center of this Program.

Budget Data

1947 Actual Expense	\$290
1948 Actual Expense	52
1949 Budget	529
1950 Budget:	
Direct Costs	196
Overhead	166
Total	362

131. Residential Wiring Design Standards

Codes and Standards Committee; Sub-Committee on Interior Wiring Design

Problem It is possible that substantial changes in the National Electrical Code may become effective with the 1950 National Electrical Code Supple-

ment. These changes may be based upon the published joint report of the Edison Electric Institute and the Association of Edison Illuminating Com-

panies, entitled "Branch Circuit Overcurrent Protection." If such changes are made, the existing "Handbook of Residential Wiring Design" will be obsolete and immediate revision should be initiated.

Project Cooperate in the progressive development of technical features of Standards established for Adequate Wiring of residences.

1. Maintain active membership on the Joint Industry Committee on Interior Wiring Design Practice, and assist in the revision of the sections of the "Handbook for Interior Wiring Design" dealing with residential wiring installations.

2. Provide effective means for reflecting the views of NEMA Sections in the preparation and approval of revisions of this section of the Handbook.

3. Cooperate with other associations in promoting sales and distribution of the Handbook.

Allocation Formula Allocated in proportion to sales of products within the scope of each dues center weighted in accordance with the multiplier shown in the table at the center of this Program.

Budget Data

1947 Actual Expense	—
1948 Actual Expense	—
1949 Budget	—
1950 Budget:	
Direct Costs	\$731
Overhead	466
Total	1,197

132. Farmstead Wiring Design Standards

Codes and Standards Committee

Problem It is possible that substantial changes in the National Electrical Code may become effective with the 1950 National Electrical Code Supplement. These changes may be based upon the published joint report of the Edison Electric Institute and the Association of Edison Illuminating Companies, entitled "Branch Circuit Overcurrent Protection." If such changes are made, the existing "Handbook of Farmstead Wiring Design" will be obsolete and immediate revision should be initiated.

Project Cooperate in the progressive development of technical features of Standards established for Adequate Wiring of farmstead types of structures.

1. Maintain active membership on the Joint Industry Committee on Interior Wiring Design Practice, and assist in the revision of the sections of the "Handbook for Interior Wiring Design" dealing with farmstead wiring installations.

2. Provide effective means for reflecting the views of NEMA Sections in the preparation and approval of revisions of this section of the Handbook.

3. Cooperate with other associations in promoting sales and distribution of the Handbook.

Allocation Formula Allocated in proportion to sales of products within the scope of each dues center weighted in accordance with the multiplier shown in the table at the center of this Program.

Budget Data

1947 Actual Expense	—
1948 Actual Expense	—
1949 Budget	—
1950 Budget:	
Direct Costs	\$731
Overhead	466
Total	1,197

135. Laboratories' Safety Testing Standardization

Codes and Standards Committee

Problem Laboratories engaged in testing for safety require as a necessary adjunct to their activities the continuous development of minimum product standards and standard test methods, and the solution of other problems concerned with testing and certification of electrical products. The successful handling of this work requires close and continuous contact, in many instances taking the form of Joint Committees between the other organization and NEMA.

All developments must be reviewed carefully by the interested Sections and any questions which arise must be taken up with the appropriate organization.

The provisions of these standards should be kept in line with current engineering practice and should not be restrictive to the sale of the products which they affect, beyond the needs of a reasonable safeguarding of the public.

Project Cooperate with electrical testing laboratories, such as the Underwriters' Laboratories, Inc., Canadian Standards Association, and the U. S. Bureau of Mines, etc., in the development of product standards and standard methods of test for wiring materials, wiring devices and utilization equipment.

1. Assist such organizations through conferences and by providing lists of member-representatives qualified to advise them.

2. Insure adequate attention to proposed safety standards and methods of test by NEMA Sections and members.

3. Coordinate and present the Sections' views to the sponsor organization.

Allocation Formula Job costs of special work done in the interest of any subdivision are charged to corresponding dues center.

The job costs of each numerous sub-projects, each such sub-job cost being determined separately, are charged to the dues center embracing the products to which the standard applies. Where two or more subdivisions are directly interested, the sub-project costs are allocated in proportion to the sales volume of such subdivisions, unless a majority of such affected subdivisions favor allocation equally among such affected subdivisions.

Budget Data

1947 Actual Expense	\$2,743
1948 Actual Expense	3,473
1949 Budget	3,699
1950 Budget:	
Direct Costs	1,564
Overhead	1,238
Total	2,802

140. American Standards

Codes and Standards Committee

Problem The American Standards Association, Inc., has accepted its full responsibility as the nationally recognized agency in the processing and coordination of industrial standards and safety codes. NEMA will play an important role in its expanding activities. Every NEMA member of course realizes the importance of this project, not only to himself but to the electrical manufacturing industry.

In particular, certain standards for electrical products, originating with NEMA or with others, by their nature, assume national significance. The con-

structive answer, therefore, is the adoption of such standards as American Standards under the procedure set up by the American Standards Association, Inc., which provides for participation by and consideration of the views of all interested parties. NEMA is frequently interested in proposed American Standards for nonelectrical products, such as materials required in the construction of electrical products or parts. It is important therefore, (1) that NEMA's views on these standards receive consideration in the American Standards Association, Inc.;

(2) that all NEMA Sections be afforded full opportunity to review and to participate in the development of American Standards, and likewise the opportunity to originate such standards.

Project Cooperate with the American Standards Association, Inc., in the development, approval and promotion of the use of American Standards, both those of an electrical nature and those which, although nonelectrical in character, are of interest to electrical manufacturers.

1. Appoint representatives to review proposals of, and instruct NEMA representatives on voting in some 70 project committees and 4 standing committees of ASA.

2. Publish American Standards for which NEMA is sponsor.

3. Provide secretarial services for certain ASA project committees in which NEMA has a special interest.

4. Provide financial support for the maintenance of the American Standards Association, Inc., without which the progress of national standardization on the present scale would be impossible.

Allocation Formula (a) Forty-five per cent of the annual fee paid to the American Standards Association, Inc., plus additional costs of activities relating generally to American Standards, are allocated in proportion to sales of products within the scope of each dues center weighted in accordance with the multiplier shown in the table at the center of this Program.

(b) Job costs of substantial special work done in the interest of one subdivision are charged to the corresponding dues center.

(c) Job costs of substantial special work done in the interests of two or several subdivisions are charged to the corresponding dues centers in proportion to the sales volumes of such subdivisions unless a majority of such affected subdivisions favor allocation equally among such affected subdivisions.

Budget Data

1947 Actual Expense	\$15,961
1948 Actual Expense	56,221
1949 Budget	29,188
1950 Budget:	
Direct Costs	26,875
Overhead	3,598
Total	30,473

145. Safety Codes Involving Electrical Equipment

Codes and Standards Committee

Problem While safety codes are essential, they must be practical. Careful and continuous attention is required in order that the views of electrical manufacturers as represented by NEMA Standards may have adequate consideration in the formulation and revision of safety codes which are developed by various code making bodies and by the American Standards Association, Inc. Such safety codes are those involving the installation and the use of electrically operated or controlled apparatus and which, therefore, have a direct application to the products of NEMA members. All of these codes, and any pending revisions, require careful analysis and the preparation of definite recommendations.

Project Develop, in cooperation with other organizations safety codes relating to the installation

of and the use of equipment which employs electrical devices and apparatus.

1. Participate in discussion or appoint representatives on committees of such organizations.

2. Review drafts of such proposed codes or revisions and reports and compare them with other rules to protect the proper interests of electrical manufacturers.

3. Refer drafts to affected NEMA Sections for recommendations.

While the emphasis shifts from year to year, some typical groups with which NEMA regularly cooperates are:

a. *American Standards Association, Inc.*: Numerous projects, such as safety code for mechanical refrigeration, for woodworking plants, for rubber

machinery, for conveyors and conveying machinery, and for coal and metal mines.

b. *National Fire Protection Association*: Several exhaust systems, signalling systems and thermostats, protection against lightning and fire pumps.

c. *National Safety Council*: Activities of the Electrical Section.

d. *Various municipalities and states*: State and municipal safety regulations, such as the Electrical Safety Orders of the Department of Industrial Relations of California, and building code requirements for welding of iron and steel.

(e) A few others of many diversified projects are: hazardous chemicals and explosives, safe practices for electric arc welding and finishing processes.

Allocation Formula (a) Job costs of substantial special work done in the interest of one subdivision are charged to the corresponding dues center.

(b) Job costs of substantial special work done in the interest of two or several subdivisions are

charged to the corresponding dues centers in proportion to the sales volumes of such subdivisions unless a majority of such affected subdivisions favor allocation equally among such affected subdivisions.

(c) Ten per cent of the American Standards Association, Inc., fee allocated in proportion to sales of products within the scope of each dues center weighted in accordance with the multipliers shown in the table at the center of this Program.

(d) All other costs are allocated to the subdivisions benefited in proportion to the sales volume of all benefited subdivisions.

Budget Data

1947 Actual Expense	\$1,642
1948 Actual Expense	1,923
1949 Budget	6,758
1950 Budget:	
Direct Costs	5,667
Overhead	828
Total	6,495

150. Materials, Products and Procedures Used in Product Manufacture

Codes and Standards Committee

Problem Now we take off the producer's hat and put on the consumer's hat. NEMA represents one of the greatest consumer groups of all sorts of materials.

Standards established for materials and component products entering into the construction of electrical products are important to the electrical manufacturer as a purchaser. Since he is a large and an important purchaser of raw materials his position is more effective if means are provided whereby he may have a part in the development of raw materials standards. He is especially interested:

1. In the standards of the American Society for Testing Materials, many of which are later submitted to the ASA, Inc., for approval as American Standards.

2. In standards for materials which are produced by members of certain NEMA Sections and

are purchased by members of other Sections, such as vulcanized fibre, laminated products, mica, varnished fabric, insulating varnish, etc.

Postwar conditions require a thorough review of many materials specifications.

In addition, practices used in manufacture form an important segment of the American Standards Association, Inc., standardization projects of concern to NEMA members.

Project Assist in the development of proposals for the establishment of specifications for materials and methods for testing materials entering into the construction of electrical products.

1. Cooperate with NEMA Sections which manufacture such materials in the development of standards.

2. Transmit all standards for materials originating with NEMA Sections or otherwise, to affected Sections for review and recommendation.

3. Instruct NEMA representatives on the committees of outside associations regarding their voting on materials standards.

NOTE: The work largely represents cooperation with the American Society for Testing Materials and the American Standards Association, Inc., in the development of standards for materials, products and practices of vital interest to the electrical manufacturer, such as insulating materials and magnetic materials, drafting room practices, gauges, etc.

Allocation Formula (a) Job costs of substantial special work done in the interest of one subdivision are charged to the corresponding dues center.

(b) Job costs of substantial special work done in the interests of two or several subdivisions are

charged to the corresponding dues centers in proportion to the sales volumes of such subdivisions unless a majority of such affected subdivisions favor allocation equally among such affected subdivisions.

(c) All other costs, including 30% of the American Standards Association, Inc., fee, are allocated to the subdivisions benefited in proportion to the sales volume of all benefited subdivisions.

Budget Data

1947 Actual Expense	\$1,376
1948 Actual Expense	1,553
1949 Budget	17,195
1950 Budget:	
Direct Costs	14,622
Overhead	779
Total	15,401

155. Technical Research

Committees of the Sections Concerned

Problem One of the major basic factors in the remarkable growth of the electrical industry has been its unceasing search for the "unknown". From the achievements of pioneers right down to the recent very rapid and widespread war-inspired improvements, technological advance has been and will continue to be a key to greater utilization of electricity and all that it means in advancing the standard of living, in providing employment opportunities, and in increasing the might of this great industrial nation.

The progress that can be gained by new and better electrical equipment is considerable and is clearly recognized by electrical manufacturers, many of whom, both large and small, have their own private research staffs. At the same time it is recognized that some research projects, especially where basic in nature, may often be most advantageously undertaken on a cooperative or joint basis, often through the employment of a particularly qualified research agency or institution.

Project

1. Follow progress of basic research and keep interested Sections informed.

2. Assist Sections or Groups in establishing or developing research projects.

3. Carry on technical research projects, such as the following:

a. **LAMINATED PRODUCTS.** To establish testing methods for quality and performance of laminated products and to provide a place where such tests could be made by a qualified disinterested laboratory, the Laminated Products Section has employed Johns Hopkins University to develop such tests and has provided equipment for making tests, such equipment being too expensive to be purchased by any one member.

b. **WELDING ELECTRODES.** To develop arc welding electrodes for special applications in cooperation with the Navy Department.

c. **MAJOR APPLIANCES.** To develop comparative

performance data for electric and gas ranges, water heaters, and refrigerators, in cooperation with the U. S. Department of Agriculture.

Allocation Formula (a) Job costs of special work done in the interest of any Subdivision are charged to corresponding dues center.

(b) All other costs will be financed by means of supplementary budgets of the interested dues centers.

Budget Data

1947 Actual Expense	\$262
1948 Actual Expense	324
1949 Budget	605
1950 Budget:	
Direct Costs	—
Overhead	339
Total	339

160. Power Systems and Equipment Standardization

Codes and Standards Committee

Problem Can electrical energy be generated, transmitted and distributed more cheaply? Manufacturers along with the power companies are striving for continuous affirmative answers to this ever present question.

One important phase of this objective requires full cooperation between the utility companies and the electrical manufacturers. This cooperation frequently takes the form of Joint Committees between the Electric Light and Power Group, and NEMA, the purpose of which is to reach an understanding on various standardization projects involving the design or the application of electrical apparatus. Any Section having questions requiring collaboration with the EEI or other organizations may ask for the formation of an appropriate joint committee with that body.

Project Cooperate with the Edison Electric Institute and the Association of Edison Illuminating Companies in joint efforts to develop standards for various electrical products used in the generation, transmission and distribution of electrical energy. Cooperate with the Electric Light and Power Group and Radio Manufacturers Association on problems of radio reception.

1. Review proposals developed in Joint Committees devoted to such standardization efforts.

2. Correlate the views of all interested Sections, and instruct NEMA representatives on Joint Committees.

3. Furnish secretarial services for Joint Committees on request.

4. Cooperate in the preparation and publication of joint reports and standards.

Allocation Formula Job costs of special work done in the interest of any subdivision are charged to corresponding dues center.

The job costs of each of numerous sub-projects, each such sub-job cost being determined separately, are charged to the dues center embracing the products to which the standard applies. Where two or more subdivisions are directly interested, the sub-project costs are allocated in proportion to the sales volume of such subdivisions, unless a majority of such affected subdivisions favor allocation equally among such affected subdivisions.

Budget Data

1947 Actual Expense	\$2,262
1948 Actual Expense	1,721
1949 Budget	2,669
1950 Budget:	
Direct Costs	875
Overhead	812
Total	1,687

165. AIEE Standards and Test Codes

Codes and Standards Committee

Problem Much highly technical work often forms the background of a relatively simple statement contained in a standard. It's in the AIEE that much of the purely technical and theoretical work is done and where discussions frequently clarify the issues for application to standardization work. In addition to forming the background for the development of AIEE standards, much of the work of the Institute affects NEMA standardization activities as well as national and international standardization work with which NEMA is concerned.

The American Institute of Electrical Engineers develops codes for methods of testing and standards which, after further study, are approved as AIEE Standards and as American Standards. All of these codes and standards affect products which are manufactured by NEMA members. Frequently NEMA is asked to review and to comment upon them before the AIEE takes the final steps of approval and publication.

Project Cooperate with the American Institute of Electrical Engineers in the development of test codes and standards.

1. Maintain contact with and keep informed of progress on all such projects.

2. Refer all proposed test codes and standards to interested NEMA Sections for review and recommendations.

3. Make recommendations to AIEE.

Allocation Formula Job costs of special work done in the interest of any subdivision are charged to corresponding dues center.

The job costs of each of numerous sub-projects, each such sub-job cost being determined separately, are charged to the dues center embracing the products to which the standard applies. Where two or more subdivisions are directly interested, the sub-project costs are allocated in proportion to the sales volume of such subdivisions, unless a majority of such affected subdivisions favor allocation equally among such affected subdivisions.

Budget Data

1947 Actual Expense	\$1,589
1948 Actual Expense	1,000
1949 Budget	753
1950 Budget:	
Direct Costs	281
Overhead	653
Total	934

170. Government Specifications

Codes and Standards Committee; Sub-Committee on Government Specifications

Problem Any member company which sells any of its electrical products to the Government is vitally interested in the purchase specifications adopted by the Government. It is essential that these specifications embody the latest principles of good manufacture. NEMA's assistance is frequently sought by governmental agencies in connection with the formulation of Government specifications. It is important that all such requests be referred promptly to the interested Sections of NEMA and contact committees organized for the purpose of de-

veloping specifications and cooperating with the governmental agency concerned.

Project Review proposals for government specifications relating to electrical products and furnish recommendations thereon to appropriate governmental agencies, such as the Electrical Supplies Committee, Department of Commerce, War Department, Navy Department, and REA, etc.

1. Review proposals developed by these governmental agencies, when submitted to NEMA, or pro-

posals developed by NEMA Sections in cooperation therewith, and advise interested Sections thereof.

2. Appoint representatives on joint committees to confer with governmental bodies in the writing or revision of specifications.

3. In some cases, provide secretarial services and arrange for conferences with the appropriate agencies.

Allocation Formula Job costs of special work done in the interest of any subdivision are charged to corresponding dues center.

The job costs of each of numerous sub-projects, each such sub-job costs being determined separately, are charged to the dues center embracing the prod-

ucts to which the specification applies. Where two or more subdivisions are directly interested, the sub-project costs are allocated in proportion to the sales volume of such subdivisions, unless a majority of such affected subdivisions favor allocation equally among such affected subdivisions.

Budget Data

1947 Actual Expense	\$1,604
1948 Actual Expense	1,883
1949 Budget	2,034
1950 Budget:	
Direct Costs	1,235
Overhead	915
Total	2,150

175. Miscellaneous Codes and Standards

Codes and Standards Committee

Problem Standardization projects must not monopolize this book, so a catch-all standardization project is included. Standardization is an extremely broad subject and a never-ending process. In addition to its major cooperative activities in this field, NEMA, being an electrical standardizing agency national in character, is continuously receiving various special requests for cooperation in working out problems affecting electrical apparatus and equipment. Many of these requests originate with bodies whose interest is basically electrical. In the case of others the electrical aspect occupies a secondary place.

International standardization is of increasing importance to the manufacturers of electrical equipment as a result of the organization of the International Organization for Standardization (ISO), the official international standardization body. The American Standards Association, Inc., represents the United States in this organization. The International Electrotechnical Commission functions as the correlating committee on electrical standardization matters under consideration actively in the development of international standards by this group.

Project

1. Provide facilities for handling miscellaneous

standardization activities as they arise. Contact some 70 associations and bodies for the purpose of co-operating in joint standardization projects of mutual interest, of which the following are prominent examples:

a. *International Electrotechnical Commission*: Through representation on the United States National Committee of the International Electrotechnical Commission and through representatives on the advisory Groups of the IEC, participate in the development of international standards.

b. *American Welding Society*: Qualification of welding operators.

c. *Diesel Engine Manufacturers Association*: Federal specifications for portable diesel electric sets.

d. *American Gear Manufacturers Association*: Standardization of gear motors.

e. *Hydraulic Institute*: Motor efficiency and shaft extension.

f. *National Machine Tool Builders Association*: (1) Provisions for wiring and control of motors for machine tools; (2) Standardization of motors and other electrical equipment as applied to machine tools; (3) Performance of motors on machine tools.

g. *American Iron & Steel Institute*: Standardization of conduit threads.

h. *Air Conditioning and Refrigerating Machinery Association*: Home and farm freezer units.

i. *Joint Electron Tube Engineering Council*: Electron tube standardization.

2. Keep interested Sections and members informed and make provision for their participation in such activities.

Allocation Formula (a) Job costs of substantial work in the interest of one Subdivision are charged to the corresponding dues center.

(b) Job costs of substantial special work done in the interests of two or several Subdivisions are charged to the corresponding dues centers in proportion to the sales volumes of such Subdivisions unless a majority of such affected Subdivisions favor allocation equally among such affected Subdivisions.

(c) One per cent of the American Standards Association, Inc. fee allocated in proportion to sales of products within the scope of each dues center weighted in accordance with the multipliers shown in the table at the center of this Program.

(d) All other costs are allocated to the subdivisions benefited in proportion to the sales volume of all benefited subdivisions.

Budget Data

1947 Actual Expense	\$3,077
1948 Actual Expense	4,065
1949 Budget	3,715
1950 Budget:	
Direct Costs	1,733
Overhead	1,162
Total	2,895

180. Municipal Signalling and Traffic Engineering Standardization

Codes and Standards Committee

Problem The International Municipal Signal Association, the Institute of Traffic Engineers and the American Standards Association, Inc., develop specifications and standards covering signalling equipment and component parts. Because these standards and specifications affect products manufactured by members of a number of NEMA Sections, NEMA is interested in cooperating in their development.

Project Cooperate with the International Municipal Signal Association, the Institute of Traffic Engineers and the American Standards Association, Inc., in the development of electrical product specifications and operating standards by:

1. Keeping informed of progress and proposals on all such projects.

2. Referring proposed specifications and standards to interested NEMA Sections for review and recommendations.

3. Making recommendations and providing information to IMSA and ITE and the American Standards Association, Inc.

Allocation Formula (a) Contributions to municipal organizations shall be allocated to the interested Sections by agreement between the Sections.

(b) Job costs of special work done in the interests of any subdivision are charged to corresponding dues center.

(c) All other costs, including one per cent of the American Standards Association, Inc., fee, allocated in proportion to sales of products within the scope of each dues center weighted in accordance with the multiplier shown in the table at the center of this Program.

Budget Data

1947 Actual Expense	\$1,023
1948 Actual Expense	1,824
1949 Budget	2,415
1950 Budget:	
Direct Costs	1,211
Overhead	29
Total	1,240

185. Aircraft Electrical Systems

NEMA Codes and Standards Committee

Problem The unique advantages which electrical equipment provides to military and to commercial aircraft has brought aviation to the front as a market for electrical products. These factors developed a situation confused by divergent technical information, parallel lines of official responsibility and constantly changing operating requirements. To meet such a situation requires a central organization which can clarify the issues involved in the design, application and standardization of aircraft electrical equipment, and apply to the solution of old problems in new surroundings the experience and the facilities of NEMA and its affiliated companies.

An aircraft electrical system is a coordinated combination of electrical devices, the complete success of whose operation is a function of the performance of the weakest component. It is essential, therefore, that manufacturers cooperate in all proper ways in raising the performance of every item in the system. This undertaking also calls for a suitable cooperative agency in the form of a Joint Sections Committee representing all interested Sections.

Project For the benefit of electrical manufacturers, aircraft manufacturers, the Armed Forces, and the air transport industry, through the agency of the Aeronautical Electrical Equipment Coordinating Committee:

1. Maintain active contacts with the technical and standardizing organizations representing the Armed Forces, the aircraft manufacturers, and the air transport industry and with other organizations.
2. Facilitate the development and prompt coordination of specifications, especially where the

specifications for different components are necessarily inter-related.

3. Provide reliable information about manufacturing and performance requirements for aircraft electrical equipment.

4. Emphasize the wisdom of keeping electrical products technically abreast of the aviation industry and its needs.

5. Stimulate the development of new electrical devices for the entire range of aircraft applications, opening the way for larger, and, consequently, even more economical electrical systems.

Allocation Formula Job costs of special work done in the interests of any subdivision are charged to corresponding dues center. The job costs of each of numerous sub-projects, each such sub-job cost being determined separately, are charged to the dues center embracing the products benefited by such sub-project. Where two or more subdivisions are directly interested, the sub-project costs are allocated in proportion to the sales volume of such subdivisions, unless a majority of such affected subdivisions favor allocation equally among such affected subdivisions.

Budget Data

1947 Actual Expense	\$297
1948 Actual Expense	146
1949 Budget	666
1950 Budget:	
Direct Costs	—
Overhead	29
Total	29

190. Correlation of Engineering Activities

Codes and Standards Committee

Problem Each member knows what's going on in his own field, but does he know what the fellow on the other side of the fence is doing that may affect his product? This activity is aimed at keeping

all members well informed. It is essential for the NEMA Sections at all times to know what is taking place in outside organizations on technical matters which have an influence on the products manufac-

tured by NEMA members. Frequently situations develop which make it necessary to present to these organizations recommendations, technical data, and information originating with several NEMA Sections, which have to be correlated into a single comprehensive proposal. Conversely, data developed by these outside organizations have to be analyzed and distributed to those Sections which have an interest.

Steps must be taken to carry out the action of Section and Groups on technical matters so that there will be full correlation between all related events whether they take place within the NEMA Sections or outside.

The information obtained through these activities is coordinated in the Codes and Standards Committee and is of assistance to that committee in guiding NEMA representatives on committees of other organizations in their work on standardization and code development.

Project Assist NEMA Sections or Committees in their work of an engineering or technical nature not specifically provided for in other projects:

1. Cooperate with outside organizations, such as International Association of Electrical Inspectors, National Fire Protection Association, National Safety Council, and American Society for Testing Materials, etc., for the interchange of information on codes and standards.

2. Provide information on electrical standards, on component parts standards and on the status of standardization projects.

3. Analyze articles in trade, technical publica-

tions, governmental reports and technical information from other sources, in order to keep Sections and Committees informed of developments of interest; prepare technical articles covering NEMA products.

4. Analyze Section minutes and initiate action required on technical matters contained in them.

5. Facilitate exchange of available information between members within product Groups and between product Groups.

6. Provide engineering service to NEMA staff such as Adequate Wiring Bureau, Farm Electrification, etc.

7. Provide Engineering Bulletins on matters of interest and concern to members.

Allocation Formula (a) Job costs of special work done in the interest of any subdivision are charged to corresponding dues center.

(b) Allocated to each dues center in proportion to its total dues charges for all other engineering projects, except those for membership in and contributions to American Standards Association, Inc., and to the International Municipal Signal Association and to the Institute of Traffic Engineers.

Budget Data

1947 Actual Expense	\$12,326
1948 Actual Expense	15,658
1949 Budget	15,131
1950 Budget:	
Direct Costs	12,120
Overhead	5,169
Total	17,289

II. REGULATORY LEGISLATION PROJECTS

200. Inspection Legislation

Regulatory Legislation Committee

Problem Will the local Electrical inspection ordinance in Oshkosh permit the inspector to approve the use of all suitable wiring materials in electrical installations or is it unduly restrictive? That is what this project is all about—soundly con-

ceived electrical inspection laws and ordinances that avoid unnecessary restrictions on the use of wiring materials and methods.

To guide and help local groups in drafting reasonable inspection legislation which conforms to rea-

sonable standards of safety and protection, NEMA has developed drafts of a State Electrical Inspection Law and a Municipal Electrical Inspection Ordinance.

These drafts recognize the National Electrical Code as the criterion for practical safety of installations and approval of Underwriters' Laboratories, Inc., as the practical criterion for the safety of electrical products.

Restrictive requirements that some groups feel are necessary for safety increase costs, retard progress and business development and do not necessarily increase safety. Furthermore, confusion sometimes exists between consideration of adequacy and safety. Much can be accomplished in clarification of thinking on this problem through education and the presentation of factual information. This, NEMA aims to do.

Project

1. Follow state, county and municipal legislative bills, laws and ordinances which provide for the adoption of electrical codes and for their enforcement by means of inspection:

a. Cooperate with other organizations and agencies in seeking to insure that such laws and ordinances as may be adopted may not be contrary to the public interest or unnecessarily handicap the growth of the electrical industry.

b. Follow the administration and results thereof.

2. Oppose the adoption of unnecessarily restrictive ordinances, codes or rules and regulations.

Allocation Formula (a) Job costs of special work in the interest of any subdivision are charged to corresponding dues center.

(b) All other costs are allocated in proportion to sales of products within the scope of each dues center weighted in accordance with the multiplier shown in the table at the center of this program.

Budget Data

1947 Actual Expense	\$16,471
1948 Actual Expense	25,725
1949 Budget	23,843
1950 Budget:	
Direct Costs	17,394
Overhead	8,201
Total	25,595

210. Sales Control Legislation

Regulatory Legislation Committee

Problem "Submit my products to testing laboratories in every principal city in the United States for test approval? . . . Impossible!" . . . says a prominent manufacturer of electrical equipment.

But not entirely impossible when regulatory legislation trends and thoughts in this direction are analyzed. Electrical manufacturers can thank their lucky stars for an efficient and effective Underwriters' Laboratories, Inc., organization. Acceptance of Underwriters' Laboratories', Inc., approvals stand between the electrical manufacturer, and just such a possibility.

Yet there is a growing tendency for municipalities and some states to make it unlawful to sell electrical products unless they have state or municipal approval for sale and use.

Carelessly drawn legislation frequently provides

that electrical products which are purchased under the guidance of competent electrical engineers must have the same approval as products sold over the counter to the general public. Frequently such products are of so diverse a nature as to render approval of them impracticable. Therefore, the administration of such legislation may be spotty and unjust, as well as unnecessary.

NEMA believes that any legislation of this type should be designed only to protect the general public, which has a very limited knowledge of electrical equipment, from the purchase and use of unsafe products. However, where such legislation is enacted, it is highly important that approval shall in every case be based on conformity with a single set of nationally recognized standards. Otherwise, the industry might be faced with the impossible condi-

tion of having to manufacture to different sets of standards promulgated by different cities or states, each with its own testing laboratory and methods of test. In the past, attempts have been made to set up such conditions in three important cities and one state.

Recently sales control legislation has been actively promoted in some areas and the draft of a proposed ordinance which would cover practically all products falling within the scope of NEMA has been circulated. Adoption of such municipal ordinances is spreading rapidly.

Project

1. Follow state, county and municipal legislative bills, laws, resolutions and ordinances which provide that certain classes of electrical products shall not be sold at retail unless approved as conforming with standards of safety.

2. Follow the administration and effects thereof and cooperate with other organizations and agencies by providing information and by seeking to have such laws, resolutions and ordinances, if adopted, in acceptable form, as represented by a NEMA draft.

Allocation Formula Allocated in proportion to sales of products within the scope of each dues center weighted in accordance with the multiplier shown in the table at the center of this Program.

Budget Data

1947 Actual Expense	\$4,470
1948 Actual Expense	5,376
1949 Budget	6,095
1950 Budget:	
Direct Costs	4,711
Overhead	2,688
Total	7,399

220. Contractor Registration and Licensing

Regulatory Legislation Committee

Problem Does contractor licensing assure proper installation of your electrical products?

Does contractor licensing reduce the costs of electrical installations?

Where licensing of electrical contractors has been advocated the argument is usually advanced that it will assure safe installations of electric wiring and equipment. Since errors of judgment and mistakes in execution of work can happen regardless of whether the contractor is licensed or not, it is obvious that proper inspection of completed installations is necessary to assure safe installations.

Since any system of licensing contractors involves expense for administration, it also is obvious that the cost of such administration must be covered in the costs of the installations and thus becomes an added burden on the consumer.

Furthermore, licensing can tend to limit competition by imposing unreasonable requirements, excessive fees, and other forms of interference with the free entry of competitors into the market.

NEMA believes that inspection of electrical installations provides a practical safeguarding of the public without the necessity for registration or licensing of electrical contractors. NEMA also believes that such registration or licensing is contrary to the best interests of the public and of the electrical industry.

Project Follow state, county and municipal legislative bills, laws and ordinances which provide for the registration or licensing of electrical contractors.

1. Cooperate with other organizations and agencies by providing them with information, general and specific, regarding proposed laws and ordinances (including proposed modifications of existing laws, etc.) that may be contrary to the public interest or that may handicap the growth of the electrical industry.

2. Follow the administration and results of such laws and ordinances that may be in effect or that may be adopted.

3. Oppose the adoption of licensing laws, ordinances and regulations.

Allocation Formula Allocated in proportion to sales of products within the scope of each dues center weighted in accordance with the multiplier shown in the table at the center of this Program.

Budget Data

1947 Actual Expense	\$9,648
1948 Actual Expense	10,814
1949 Budget	11,204
1950 Budget:	
Direct Costs	8,170
Overhead	3,084
Total	11,254

230. Professional Engineers Licensing

Regulatory Legislation Committee

Problem Does a manufacturer's Chief Engineer need a beautifully framed license certificate hanging over his desk to prove to his employer that he is a competent engineer? The trend seems to be for "the law" to require just that. At the present time, 47 out of 48 states require that professional engineers be licensed.

These in general define the practice of professional engineering as "any professional service for hire to the public or in public employment, such as consultation, investigation, evaluation, planning, design, or responsible supervision of construction or operation, in connection with any structures, buildings, machines, equipment, processes, works or projects, wherein the safeguarding of life, health or property is concerned or involved, when such professional service requires the application of engineering principles and data."

The object of professional engineering laws is to protect the public against the evils which might result from the work of unqualified or dishonest consulting engineers. Naturally, such a law should be limited to this objective and not be used to require the licensing of those engineers employed by private manufacturing companies who are not "for hire to the public." However, the definition of a professional engineer is so broad there is always present the danger that some administrative board may construe it to apply to the latter. This has been particularly true as to those engineers engaged in installation, repair or maintenance work.

In order to avoid the difficulty and embarrassment to private engineers in the usual installation, repair or maintenance work, the following clause

should be included in all professional engineering laws as one of the exemptions:

"Professional engineering not offered for hire to the public or not involved in the design, construction, operation or maintenance of public works. Engineering work and services performed by employees of manufacturers involved in the design, production, sale, installation and maintenance of manufactured products."

The tendency towards requiring professional engineers' licenses for engineers in the employ of manufacturers or central stations is increasing.

Project Follow state legislative bills and laws which provide for the licensing of professional engineers.

1. Cooperate with other organizations and agencies in seeking to insure that such laws as may be adopted shall not apply to engineers employed by manufacturing companies and whose services are "not for hire by the public."

2. Follow the administration and results thereof.

Allocation Formula Allocated in proportion to sales of products within the scope of each dues center.

Budget Data

1947 Actual Expense	\$502
1948 Actual Expense	859
1949 Budget	871
1950 Budget:	
Direct Costs	1,179
Overhead	462
Total	1,641

240. Radio Interference Legislation

Regulatory Legislation Committee

Problem Electrical equipment is apt to cause some interference with radio reception. The purpose of this project is to attempt to keep such regulations as may be proposed reasonable and practical.

Many of the ordinances which have thus far been adopted to regulate radio interference are open to serious objections. In general, such objections result from the fact that no established noise level standards are available, and that consequently the degree of interference becomes a matter of judgment. Whenever members learn of proposed regulations of this sort they should call on the NEMA Regulatory Legislation Department for information and assistance.

Project Follow proposed and existing state, county and city regulatory legislation relating to interference with radio reception and cooperate with

other organizations and agencies by providing information on how such laws or ordinances, if adopted, would affect the electrical industry and the public; oppose the adoption of such regulations unless they are in proper form.

Allocation Formula Allocated in proportion to sales of products within the scope of each dues center weighted in accordance with the multiplier shown in the table at the center of this Program.

Budget Data

1947 Actual Expense	\$69
1948 Actual Expense	627
1949 Budget	589
1950 Budget:	
Direct Costs	583
Overhead	139
Total	722

250. Refrigeration Safety Legislation

Regulatory Legislation Committee

Problem Much the same type of problem that affects the installation of electrical equipment through local electrical inspection laws and ordinances also affects the installation of refrigeration equipment through state laws and municipal ordinances relating to refrigeration.

Restrictive provisions included in refrigeration laws and ordinances tend to result in unnecessary increased cost of installations and thereby erect barriers to a free and open market for the use of safe refrigeration equipment. The Joint Refrigeration Industry Committee which operated prior to the war has been reactivated and is now known as the Refrigeration Industry Safety Advisory Committee. Through the interests of the manufacturers of refrigeration equipment in NEMA, participation in this activity is resumed. The principal objective of RISAC is the promotion of understanding and acceptance of the ASA, Inc., Safety Code for Mechanical Refrigeration, B9, as the installation code for mechanical refrigeration equipment.

Project Participate in the activity of RISAC and follow state, county and municipal laws and ordinances which provide for the adoption of refrigeration codes and which otherwise affect the installation of refrigeration equipment.

Provide supervision and office facilities for the RISAC staff.

Allocation Formula Costs are allocated in proportion to sales of products within the scope of each dues center weighted in accordance with the multiplier shown in the table at the center of this Program.

Budget Data

1947 Actual Expense	—
1948 Actual Expense	—
1949 Budget	\$5,477
1950 Budget:	
Direct Costs	4,000
Overhead	801
Total	4,801

260. Plumbing Legislation Affecting Electrical Products

Regulatory Legislation Committee

Problem Household electrical equipment, such as water heaters and waste disposal units, require plumbing connections. Many state laws and municipal ordinances are in existence and others are being proposed at more frequent intervals which tend to restrict the use of such appliances through unduly restrictive plumbing regulations.

It is important that NEMA members be informed of proposed legislation of this nature and that attempts be made to assure reasonableness of the laws and ordinances as passed.

Project 1. Follow state, county and municipal legislative bills, laws and ordinances which provide for the regulation of the water and waste connections to electrical equipment.

a. Cooperate with other organizations and agencies in seeking to insure that such laws and ordinances as may be adopted may not be contrary to the public

interest or unnecessarily handicap the growth of the electrical industry.

b. Follow the administration and results thereof.

2. Oppose the adoption of unnecessarily restrictive ordinances, codes or rules and regulations.

Allocation Formula Job costs of special work in the interest of any subdivision are charged to corresponding dues center.

Budget Data

1947 Actual Expense	—
1948 Actual Expense	—
1949 Budget	\$2,828
1950 Budget:	
Direct Costs	590
Overhead	368
Total	958

270. Miscellaneous Legislation Affecting Specific Electrical Products

Regulatory Legislation Committee

Problem There appears to be a reflected trend on the part of local governments toward regulation of almost anything. This requires that NEMA be on its toes and ready for action in any direction. For example, the trend toward Government control of the use of X-ray and physical therapy equipment, together with the lack of general understanding of the conditions surrounding the operation thereof, make it essential that NEMA members keep themselves closely informed of current legislative developments in this field.

In addition, state and local governmental legislative bodies and regulatory commissions have proposed a number of laws, ordinances or regulations which would restrict, regulate or limit the use of a number of general classes or specific types of electrical equipment. Such legislation has been introduced which would affect the use of welding equip-

ment, regulate the construction and application of water heaters and refrigerators, and apply minimum standards for illumination of certain types of buildings and to street lighting.

It is important that NEMA members inform NEMA and be informed of such proposed legislation and that every effort be made to assure that the best interests of the public and of the electrical industry is served by such legislation.

Project 1. Follow proposed state or municipal electrical regulatory legislation or regulations affecting the interests of any product groups in NEMA.

2. Cooperate with other organizations by providing technical information regarding the effects of proposed or existing legislation to assure that such laws, ordinances or regulations as may be adopted may not be contrary to the public interest or unneces-

sarily handicap the growth of the electrical industry.

3. Follow the administration of and results thereof.

4. Oppose the adoption of unnecessarily restrictive laws, ordinances or regulations.

Allocation Formula Job costs of special work done in the interest of any subdivision are charged to corresponding dues center.

Budget Data

1947 Actual Expense	\$703
1948 Actual Expense	3,033
1949 Budget	2,660
1950 Budget:	
Direct Costs	1,047
Overhead	449
Total	1,496

III. BUSINESS INFORMATION & SERVICE PROJECTS

300. Section and Group Statistics

Statistical Committee

Problem The information made available through the established statistical projects provide manufacturers with up-to-date indicators of the progress being made by the industry. These data also assist the manufacturer in comparing his progress with that of the industry. More specifically, such information provides current trends in business for very specific lines of products.

To be of greatest value, Section statistical programs must be based on an analysis of the particular problems of the Section or Group.

Project Provide a central confidential agency for the gathering and compiling of periodic statistical data on sales, orders, production, inventories, geographic distribution, etc., for individual Sections and Groups. This work is divided into two parts:

1. Collect, compile and disseminate current data on electrical products. In October, 1949, there were 100 of such monthly, quarterly, semiannual, or annual statistical series. For example, nine individual activities were conducted for the Household Refrigeration Section, three for the Electric Housewares

Section, and two for the Arc Welding Section.

2. Confer with members of Sections and Groups on statistical problems regarding (a) increased use and value of statistical activities being conducted, and (b) the formulation of new activities where none exist at present.

Allocation Formula All costs of this project are allocated to the appropriate dues center for subdivisions having such statistical activities on the basis of job costs, taking into account postage, costs of reproducing charts, frequency of report, number of items in report, calculation of percentages, cumulative totals, mailing of statistical forms and summaries, and other elements affecting the job costs.

Budget Data

1947 Actual Expense	\$14,986
1948 Actual Expense	17,599
1949 Budget	16,438
1950 Budget:	
Direct Costs	15,832
Overhead	5,104
Total	20,936

305. Semiannual Sales Statistics

Statistical Committee

Problem The NEMA semiannual sales statistics provide data on domestic sales for most of the products in the electrical manufacturing industry. Many NEMA Sections, which do not conduct more frequent and more detailed statistical activities, depend on these semiannual total sales figures. This project, therefore, fills the need of these Sections and, at the same time, (a) acts as an overall check on the adequacy and accuracy of the monthly and quarterly activities of other Sections, (b) provides basic comparable data for all products in the scope of the Association, (c) fills in the gaps in the Census of Manufactures data on sales for most of the products in the electrical manufacturing industry and (d) provides data used in the determination and allocation of NEMA dues charges.

Project 1. Collect, compile and distribute, semi-annually, statistics on net domestic sales of products embraced within the scope of each Section and Group in NEMA.

2. Analyze these data in such a manner as to

indicate the volume and trend in the industry by major product classifications.

3. Prepare, for the NEMA Accounting Department, sales data on a Subdivision basis, as well as on an individual company basis, for use in determining NEMA dues charges.

Allocation Formula Allocated on the basis of job costs, taking into account (a) number of companies reporting sales of products in the scope of each dues center; (b) number of product items on which statistics are reported; (c) number and extent of changes in product scope of each dues center.

Budget Data

1947 Actual Expense	\$5,560
1948 Actual Expense	8,460
1949 Budget	8,989
1950 Budget:	
Direct Costs	7,789
Overhead	2,034
Total	9,823

310. Special Statistical & Economic Studies & Services

Statistical Committee; Industrial Relations Committee

Problem The requirements of all NEMA members, NEMA Sections and Groups, and NEMA Committee for specific statistical and economic information must be met. Queries for information concerning the electrical manufacturing industry received from governmental agencies, business organizations, trade magazines, the press and the public, must be satisfied.

To meet this need, special surveys and studies must be made, adequate files of sources of information must be kept, and charting services must be ready and capable of presenting and portraying the facts accurately. The statistical information which has been collected and compiled on a product-by-

product basis must be welded intelligently together to form comparable indexes of activity for various branches of the electrical manufacturing industry and for the industry as a whole.

Project Maintain adequate facilities for conducting special statistical and economic studies (1) of general character; (2) of specific character for a particular Section or Group; (3) of specific character for NEMA Committees, as required.

Provide staff assistance to:

1. Statistical and market analysis committees, industrial relations committees and economic committees of individual Sections for the formulation of desired programs.

2. Develop statistical methods and questionnaires as required for special studies, such as those used for Section wage surveys, etc.

3. Conduct wage surveys for NEMA subdivisions or groups of subdivisions.

4. Provide various NEMA Committees with statistical service upon request.

5. Answer specific statistical inquiries from member companies.

6. Provide governmental agencies with any statistical information which may be requested.

7. Develop and maintain accurate lists of all known manufacturers of each class of electrical products.

8. Develop electrical manufacturing industry product definitions and classifications, encourage the use thereof by other agencies in preparing statistical data applicable to the industry.

9. Maintain an adequate file of the sources of statistical information on products in, or of interest to, the electrical manufacturing industry.

10. Maintain a charting service for the graphic presentation of statistical data.

11. Compile and release monthly or quarterly index series on as many branches of the industry as the available data will permit, for example, NEMA

indexes on orders received for motors and generators, on sales of electrical insulating materials, and on sales of major electrical appliances.

12. Review important publications, articles, press releases, etc., in the field of economics and statistics, bearing upon the electrical manufacturing industry and provide members with brief digests of those which are outstanding.

Allocation Formula (a) Job costs of special work done in the interest of any subdivision are charged to corresponding dues center.

(b) All other costs are allocated 50% in proportion to sale of products within the scope of each dues center and 50% in proportion to number of companies reporting sales of products within the scope of each dues center.

Budget Data

1947 Actual Expense	\$9,098
1948 Actual Expense	10,742
1949 Budget	12,970
1950 Budget:	
Direct Costs	11,801
Overhead	3,132
Total	14,933

315. Financial and Operating Ratios

Industry Accounting Committee

Problem The degree of financial success and progress of an organization can be determined best by a comparison of its performance with the performance of other similar organizations. Composite financial and operating ratios provide data against which interested companies can measure the results of their own operations. Further, there is a need for the promotion of interest in uniform accounting methods, procedures, and terminology, and for the development of helpful guides for the use of operating management.

Project 1. Compile and distribute composite financial and operating ratios and related data for companies in the electrical manufacturing industry segregated by net worth groups as well as by product group classifications.

2. Provide comparisons with other related industries as well as trends over a period of years.

Allocation Formula (a) Job costs of special work done in the interest of any subdivision are charged to corresponding dues center.

(b) All other costs are allocated in proportion to number of companies reporting sales of products within the scope of each dues center.

Budget Data

1947 Actual Expense	\$1,964
1948 Actual Expense	2,474
1949 Budget	3,258
1950 Budget:	
Direct Costs	1,867
Overhead	587
Total	2,454

320. Collaboration with Government Departments on Statistical Matters

Census and Standard Commodity Classification Committee; Foreign Trade Statistical Committee; Statistical Committee

Problem The general pattern of governmental statistical activities is undergoing considerable change. Interwoven in this change are:

1. Development of a Standard Commodity Classification enveloping all products produced in the United States;
2. Development of a Standard Industrial Classification enveloping all industries in the United States;
3. General reorganization of the statistical programs of the Bureau of the Census;
4. Continuance of the activities of the Division of Statistical Standards of the Bureau of the Budget, whereby all governmental statistical activities are reviewed from the standpoint of the need for the information, overlapping activities, burdensome questionnaires, etc.;
5. Reorganization of the activities of a number of other Federal agencies such as the Bureau of Labor Statistics and the Department of Agriculture.

During this transition, there is a constant demand for advisory service by NEMA on those aspects of the programs dealing with the electrical manufacturing industry.

It is highly desirable that the electrical manufacturing industry, through NEMA, cooperate to the fullest extent with all governmental agencies in order that such statistical activities as the Government may conduct will not be unduly burdensome upon the industry and will provide the maximum of useful information for the expenditures involved. In many instances, it is only through the technical contributions made by industry either directly or through its trade association that many important phases of governmental work can be carried out successfully; for example, the establishment of a Standard Commodity Classification.

Project 1. Cooperate with the Division of Statistical Standards of the Bureau of the Budget in its review of governmental questionnaires dealing with electrical products.

2. Cooperate with the Bureau of the Census in its various statistical activities affecting the electrical manufacturing industry, such as the Quinquennial Censuses of Manufactures and of Business, the Decennial Census of Population and Housing, export and import statistical programs, the current industry statistics programs and others.

3. Cooperate with the Bureau of the Budget in the establishment of a Standard Commodity Classification and a Standard Industrial Classification, reflecting the desires of the industry, as represented in NEMA, for the proper classification of electrical products.

4. Cooperate with other governmental departments in any statistical projects bearing upon the electrical manufacturing industry.

5. Cooperate with other industry organizations working on governmental statistical programs, such as the Chamber of Commerce of the U. S. A., the Advisory Council on Federal Reports, the National Industrial Council, and the Business Research Advisory Committee to the Bureau of Labor Statistics.

6. Transmit to Government departments generally any specific recommendations which NEMA Sections and Groups may wish to make in regard to any of the programs conducted by the Government.

Allocation Formula (a) Job costs of special work done in the interest of any subdivision are charged to corresponding dues center.

(b) All other costs are allocated in proportion to number of companies reporting sales of products within the scope of each dues center.

Budget Data

1947 Actual Expense	\$4,545
1948 Actual Expense	3,992
1949 Budget	7,961
1950 Budget:	
Direct Costs	6,785
Overhead	3,090
Total	9,875

ALLOCATION FORMULA INFORMATION

PROJECT NUMBERS																	PROJECT NUMBERS																									
100	105	110	115	120	125	130	131	132	135	140	145	150	160	165	170	175	DUES CENTERS										180	185	200	210	220	240	250	260	300	340	345	365	380	400	405	410
																	1. APPLIANCES																									
	x	100		100	100	50		11	x	25	50	x				25	Commercial Cooking Equipment Section			x	50	50	50							69	25	x	x		11	50						
x	x	80		80	80	50	23	17	x	25	50	x	x			25	Electric Fan Section				10	100	10					x	69	25		x	23	17	75							
x	x	100		100	100		1.8	17	x	50	50	x	x			50	Electric Housewares Section				10	100	10					x	69	25		x	1.8	17	100							
x	x	100		100	100		16	100	x	50	50	x	x			50	Electric Range Section				50	50	50					x	69	75	x	x	16	100	100							
x	x	100		100	100		23	100	x	50	50	x	x			50	Electric Water Heater Section				50	50	50					x	69	75	x	x	23	100	100							
x	x	50		50	50		2.7	42	x	35	50	x	x			35	Farm and Home Freezer Section				10	40				100		x	70	25	x		2.7	42	25							
x	x	50		50	50		1.4	42	x	35	50	x	x			35	Household Refrigeration Section				10	40	10			100		x	70	25	x	x	1.4	42	50							
x	x	100		100	100		1.2	8	x	50	50	x	x			35	Household Sink Units Section				10	50	10				x	x	81	25	x	x	1.2	8	100							
																	2. ILLUMINATING EQUIPMENT																									
x											25	50				x	25	Aviation Ground Lighting Section				10		10				x	64	75												
x		10		10	10			7			25	50				x	25	Floodlighting Section			x	20	40	20				x	64	75				7	20							
	x	100		100	100	100		8	x	25	55					25	Industrial & Commercial Light'g Equip't Sec.				50	100	50						100	100				8	100							
			10	10	10						25	50		x	x	25	Street Lighting Section			90		10		10				x	64	75					75							
																	3. SIGNALLING & COMMUNICATION EQUIPMENT																									
x		100	40	100	100	25		4	x	25	50	x				x	25	Signalling Apparatus Section			50	50	50						51	100				4	10							
		10	30	25	10						25	50	x				25	Telephone Equipment Section				10		10						77	75											
																	4. INDUSTRIAL APPARATUS																									
x	x										25	50				25	Carbon Section			x	5		5					x	38	25					10							
x	x					50		8	x	50	50	x				x	50	Welding Machine				30	10	30	100			x	92	50				8	10							
x	x					50		8		50	50	x				x	50	Welding Wire										x	36	50					8	10						
	x	25		75	75					x	40	50		x	x		40	Electronics Section				20	20	20	100			x	77	50					10							
x	x	100	30	100	100	50	.2	8	x	100	100	x	x	x	x	100	Industrial Control Section			x	50	40	50	100					73	75		.2	8	50								
x	x	75	30	75							25	50				25	Induction & Dielectric Heating Apparatus Sec.				20		5	100			x	50	25					10								
		50		50	50	50		8		25	50	x				25	Industrial Heating Units & Devices Sec.			x	20	10	20						64	25				8	40							
x	x	75	15	75		50			x	100	50	x	x	x	x		Metallic Rectifier Section				20	20	20					x	75	75				10								
x	x		30								50	60				50	Mining Belt Conveyor Section											x	92	25												
x	x		30								50	60	x			50	Mining & Industrial Elec. Locomotive Sec.											x	92	25												
x	x	100	15	100	100	40	.5	31	x	100	100	x	x	x	x	100	Motor and Generator Section			x	50	40	50	100				x	93	50		.5	31	50								
x	x									25		x				25	Renewal Parts Section			x									x	92	25				10							
																	5. BUILDING EQUIPMENT AND SUPPLIES																									
x	x	100		100	100	100	53	19	x	25	50	x				x	25	Conduit Fittings, Outlet & Switchbox Sec.			x	100	75	100					58	100			53	19	20							
x	x	100		100	100	20	46	30	x	25	50					x	25	Fuse Section			x	100	100	100				x	51	75			46	30	20							
x	x	100	15	100	100	100	34	19	x	25	75	x	x	x	x	25	Knife and Enclosed Switch Section			x	100	75	100					x	100	100			34	19	20							
x	x	100	15	100	100	100	1.1	8	x	25	50	x				x	25	Panelboard & Distribution Board Section				100	50	100					100	100			1.1	8	20							
x		100		100	100	100	18			25	50	x				x	25	Plastic Outlet & Switchbox Section				100	75	100					58	100			100	18	10							
x	x	100	5	100	100	20	33	26	x	25	50	x				x	25	Small Air Circuit Breaker Section			x	100	75	100					100	100			33	26	30							
		100		100	100		15	26	x	25	50	x				x	25	Standard Electrical Porcelain Section				100	75	100					38	100			15	26	10							
x	x	100		100	100	100	24	30	x	25	50	x				x	25	Wiring Device Section			x	100	85	100					100	75			24	30	30							
																	6. INSULATING MATERIALS																									
x	x	25		25	25	10					25	50	x			x	25	Electrical Glass Insulation Section				5		5					38	25					10							
x	x	25		25	25	10					25	50	x			x	25	Electrical Insulating Varnish Sec.			x	5						x	38	25					10							
x		25		25	25	10					25	50	x			x	25	Laminated Products Section			x	5		5					x	38	25					10						
x		25		25	25	10					25	50	x				25	Manufactured Electrical Mica Section			x	5		5					x	38	25					10						
	x	25		25	25	10			x	25	55	x				x	25	Special Dry Process Elec'l Porcelain Sec.			x	5		5					x	38	25					10						
x	x	25		25	25	10				25	50	x				x	25	Varnished Fabric and Paper Section			x	5		5					x	38	25					10						
x	x	25		25	25	10				25	50	x				x	25	Varnished Tubing & Saturated Sleeving Sec.			x	5		5						38	25					10						
x		25		25	25	10				25	50	x				25	Vulcanized Fibre Section				5		5							38	25					10						
																	7. WIRE AND CABLE																									
x	x	100		100	100	100	63	4	x	25	60	x				x	25	Armored Cable Section			x	100	75	100					32	100			63	4	20							
x	x	20	40	20	20	100	.2	2	x	25	60	x				x	25	Asbestos Insulated Power Cable Section			x	20	10	20					24	25			.2	2	10							
x	x	100		100	100	100	9	11	x	25	60	x				x	25	Building Wire and Cable Section				100	50	100					41	100			9	11	20							
x	x	100		100	100	25	.4	17	x	25	60	x				x	25	Flexible Cord and Cord Set Section			x	30	85	30					x	61	50			.4	17	30						
x	x	25		25	25	10				25	60	x				x	25	Magnet Wire Section				5		5						x	49	25				10						
x	x	100		100	100	100	53	56	x	25	60	x				x	25	Non-Metallic Sheathed Cable Section			x	100	75	100					42	100			53	56	20							
x	x	10	20	10	10	10	4.1	2	x	25	60	x				x	25	Paper Cable Section				20		20					12	50			4.1	2	10							
x	x	50		50	50	100	22	6	x	25	60	x				x	25	Rubber Power Cable Section			20	30	10	30					37	50			22	6	10							
x	x	50	20	50	50	100	.2	11	x	25	60	x				x	25	Rubber Sheathed Cord & Cable Section			x	30	30	30					43	25			.2	11	10							
x	x	50	20	50	50	100	1.6	2	x	25	60	x				x	25	Varnished Cambric Cable Section			x	30	10																			

325. Industry Accounting and Cost Studies

Industry Accounting Committee

Problem 1. The importance of an accounting system which is adequate and complete, in terms of company needs, is well recognized.

If, in addition, the system is uniform for the industry of which the concern is a part, then its value to the concern is substantially increased, since it provides for data which is both reliable and comparable with that of other similar concerns. Resulting figures reflect actual differences in cost, not differences due merely to varying methods of compilation.

2. From time to time important special accounting problems arise. It may be important for a competent committee to be ready to develop and express the viewpoint of the industry to appropriate government officials or to provide certain information or assistance to the industry or to some Section.

Project 1. Promote the knowledge and use of uniform accounting methods, procedure and terminology, through the development of uniform accounting manuals by the NEMA Industry Accounting Committee.

The latest such manual is the Seventh Edition of the NEMA Uniform Accounting Manual which represents a revision of the Sixth Edition published in August, 1931 and reflects the latest changes and developments in accounting principles and procedures.

The Seventh Edition also includes a Section on "Accounting for Costs," and another on "Analysis of Cost Variances."

2. Stand ready (a) to assist any Section in carrying through a cost comparison project for one or more of its products, or (b) to deal with important special accounting problems as the need may arise, or (c) to hold area conferences for the purpose of providing an exchange of information on accounting matters which might be helpful to NEMA members.

Allocation Formula (a) Job costs of special work done in the interest of any subdivision are charged to corresponding dues center.

(b) All other costs are allocated in proportion to number of companies reporting sales of products within the scope of each dues center.

Budget Data

1947 Actual Expense	\$1,978
1948 Actual Expense	4,060
1949 Budget	3,131
1950 Budget:	
Direct Costs	1,257
Overhead	668
Total	1,925

340. Industrial Relations

Industrial Relations Committee

Problem The importance of keeping adequately informed at least as to the principal developments in the field of employer-employee relations has greatly increased.

Employer-employee relations apparently will continue to change rapidly, as they have during the past decade. The effects of the Walsh-Healey Public Contracts Act, the Fair Labor Standards Act, the National Labor Relations Act, and the growth of unionism have changed employer-em-

ployee relations more drastically in recent years than ever before in American history.

The Labor Management Relations Act likewise has evidently changed the pattern in a major manner.

Some of the regulations under the Fair Labor Standards Act have been altered and many of them will be revised again after completion of Congressional amendment of the Act, which will probably have been completed during the 1949 session of the

Congress, with an increase in the minimum wage to \$.75 an hour and changes in the coverage of the Act.

The problems involved are of a more pressing nature than ever before.

Project In the field of employer-employee relations:

1. Follow developments of interest particularly to the electrical manufacturing industry and furnish information to members thereon.

2. Accumulate industry information for presentation to administrative or other authorities; represent or arrange for representation of NEMA or any Section or Group thereof at hearings and conferences.

3. Maintain a file of up-to-date collective bargaining agreements of member companies, and provide for the exchange of collective bargaining agreements among members of particular Sections.

4. Collect and maintain a file of up-to-date pension and other employee benefit plans of member companies.

5. Furnish members, upon request, with information on current employer-employee policies and practices which will be of assistance to them in meeting their own problems.

6. Issue bulletins relating to recent developments in employer-employee relations, particularly regarding new publications available and where and how they may be secured.

7. Provide members, on request, and continuously if so requested, with copies of regulations issued by Federal agencies under existing, revised or new statutes applying to industry generally.

8. As needs of members indicate, arrange self-financing conferences for discussion of important and current employer-employee topics.

9. Collaborate with similar committees of the Chamber of Commerce of the United States, the National Association of Manufacturers, and similar organizations.

Allocation Formula (a) Job costs of special work done in the interest of any subdivision are charged to corresponding dues center.

(b) All other costs are allocated in proportion to sales of products within the scope of each dues center weighted in accordance with the multiplier shown in table at center of this program, the multipliers being based upon the average labor cost per thousand dollars of sales.

Budget Data

1947 Actual Expense	\$16,879
1948 Actual Expense	21,219
1949 Budget	16,008
1950 Budget:	
Direct Costs	9,515
Overhead	6,784
Total	16,299

345. Secondary Boycotts

Anti-Secondary Boycotts Committee

Problem Secondary boycotts of electrical products had been spreading both geographically and by product line for the past decade or more. This trend was intensified after the decision of the Supreme Court in the case of *Allen-Bradley Co. et al Local No. 3 IBEW*. A secondary boycott by one union brought retaliation by other unions. The problem has been one of great concern to all electrical manufacturers, wholesalers, dealers and ultimate customers of the industry and the employees of all of them.

With the enactment of the Labor-Management

Relations Act of 1947 and its declaration of public policy that the interest of the public is paramount in any labor dispute, certain of these secondary boycotts have been outlawed. While to the extent that it has been applied it has helped to deter secondary boycotts, nevertheless, in some areas, secondary boycotts are still being strongly enforced and in other areas are being reactivated.

Project NEMA will continue to make every effort to find proper means of providing an effective solution to the secondary boycott problem including

education of American business and the public regarding the all pervasive damage to business and consumers which accrue from such secondary boycotts. When necessary or advisable briefs or recommendations will be presented to appropriate Congressional committees, Administrative Agencies, or other governmental authorities.

An information bulletin service will be provided to members regarding developments under the Taft-Hartley Act and under State laws including complaints filed, injunctions issued, court decisions and results thereof.

Allocation Formula Allocated in proportion

to sales of products within the scope of each dues center weighted in accordance with the multipliers shown in table at center of this Program.

Budget Data

1947 Actual Expense	\$13,250
1948 Actual Expense	4,905
1949 Budget	5,609
1950 Budget:	
Direct Costs	11,636
Overhead	7,099
Total	18,735

355. Shows and Exhibits Information Service

Shows and Exhibits Information Service Committee

Problem Every year thousands of shows and exhibitions for trade groups, professional organizations and the general public are promoted throughout the country. These shows cover practically every field of activity and range in size from those of national character to those affecting only the smallest localities. Their promotion is sponsored and, in some cases, underwritten by associations, societies and other responsible organizations on a non-profit basis, and in other cases by individuals as purely commercial ventures.

While many shows are constructive and participation in them is profitable to the exhibitor, others are of little or no value. While only a relatively few exhibitions held each year offer any real or potential benefits to electrical manufacturers, nevertheless NEMA members are constantly being solicited for participation in them. Because of the lack of unbiased data and analysis, such members are often placed in an embarrassing position with customers and prospective customers. Factual data of unbiased origin will assist members in selecting those shows in which participation will be profitable and in avoiding shows which offer little or no return commensurate with their cost.

Project Establish procedures for providing and provide factual data to members which will assist them in evaluating the prospective benefits to them of participation in various shows and exhibits.

Allocation Formula (a) Job costs of special work done in the interest of any subdivision are charged to corresponding dues center.

(b) All other costs are allocated 50% in proportion to sale of products within the scope of each dues center and 50% in proportion to number of companies reporting sales of products within the scope of each dues center.

Budget Data

1947 Actual Expense	\$929
1948 Actual Expense	547
1949 Budget	1,612
1950 Budget:	
Direct Costs	1,073
Overhead	481
Total	1,554

365. Sales Financing

Sales Financing Committee

Problem Installment selling is an important part of the American system of distribution of goods and largely used by the electrical manufacturing industry, particularly in the sales of refrigerators, ranges, water heaters, farm and home freezers, and also some types of industrial and commercial equipment.

It is important for interested electrical manufacturers to be kept informed concerning new developments in sales financing plans and government regulations affecting them.

Project 1. Analyze sales finance plans, and disseminate information thereon to interested member companies.

2. Confer with finance companies, banks and other sponsors regarding their sales finance plans and make recommendations for their modification or improvement:

3. Prepare a statement of principles of sound

sales finance plans for electrical products, particularly major appliances, for the information of interested member companies.

4. Maintain all authorized contacts with other organizations, including government agencies, dealing with sales financing.

Allocation Formula Allocated to a small group of dues centers, particularly appliances, as indicated in the chart at the center of this Program, in proportion to sales volume of products included in the scope of the corresponding subdivisions.

Budget Data

1947 Actual Expense	\$1,719
1948 Actual Expense	1,050
1949 Budget	1,062
1950 Budget:	
Direct Costs	353
Overhead	573
Total	926

370. Tariff, Trade Agreements, Imports

Tariff and Customs Committee

Problem As the electrical manufacturing industry or any branch thereof is concerned with tariff or other import restrictions on the free entry into the domestic markets of competing foreign products, it should (a) keep informed on developments in this field and (b) be ready to take prompt, effective action if advisable.

This includes such matters as tariffs, customs, reciprocal trade agreements and imports. Among the problems which, in particular, may require attention are:

1. Further cuts in American tariffs were made in the Geneva Trade Agreement, participated in by 23 countries, and in the agreement negotiated at Anancy, France, under which 10 additional countries acceded to the Geneva Trade Agreement. The rates of duty on some electrical products have been re-

duced to as low as 10%. The effect of these reductions upon the domestic market for electrical products will become apparent as these countries seek markets for their products in the United States. NEMA briefs were presented to the Committee for Reciprocity Information, prior to the negotiation of these agreements.

2. The President's authority to negotiate trade agreements has been extended to June 12, 1951. The President is thus empowered to reduce import duty rates to within 50% of the rates of duty in effect on January 1, 1945. Further reductions on some electrical products can still be made within this authority.

3. NEMA members will wish to keep informed on devaluations of foreign currencies. These devaluations can contribute to the intensification of foreign

competition in the domestic markets for electrical products. Devaluations generally bring about price reductions on imported articles and price reductions on imported articles reduce any ad valorem duty rates applicable to such articles.

4. Under Executive Order 9832, the Executive Department has set forth policies controlling the negotiation and administration of trade agreements. Among other provisions, this Executive Order requires that all trade agreements contain "escape clauses"; whereby, concessions granted on one or more articles may be withdrawn from a trade agreement if domestic producers of similar articles are threatened with serious injury. Various segments of the industry will wish to review negotiated trade agreements, and subsequent to their review, may submit briefs to the U. S. Tariff Commission recommending the use of "escape clauses" with respect to concessions granted on one or more of their products.

Project Follow developments in the field of tariff, customs and reciprocal trade agreements which are of direct concern to the electrical manufacturing industry or sections thereof, and recommend such action as may be deemed proper and appropriate, such as:

1. Analyze all trade agreements, as proposed or approved, and advise Sections or members of any action affecting them.
2. Prepare and present briefs, where advisable, in behalf of electrical manufacturers or any group thereof.

3. Cooperate with and present to appropriate governmental agencies information with respect to such matters as affect the interests of the industry or any Section thereof.

4. Follow national legislation, including the administration thereof, on tariff and customs or other matters relating to the import or export of electrical products; take appropriate action within the scope of the Tariff and Customs Committee with respect thereto.

5. To the extent that information is available, keep members informed regarding imports of electrical products.

6. Take appropriate action in matters involving interpretation or dispute in connection with the administrative features of tariff legislation.

Allocation Formula (a) Job costs of special work done in the interest of any subdivision are charged to corresponding dues center.

(b) All other costs are allocated in proportion to sales of products within the scope of each dues center.

Budget Data

1947 Actual Expense	\$3,574
1948 Actual Expense	5,031
1949 Budget	4,062
1950 Budget:	
Direct Costs	1,391
Overhead	1,487
Total	2,878

375. Exports

Exports Committee

Problem A variety of problems in the export field are of considerable concern to the electrical manufacturing industry, such as (1) how much and what governmental controls will be maintained over exports, (2) how rapidly normal export markets will open up and on what basis, (3) how further legislation, regulations or other governmental action (including the trade agreement program), will affect export possibilities and prospects, (4) what opportunities postwar export markets afford which would

aid in maintaining high levels of employment in the industry, (5) what foreign trade barriers have a particularly adverse effect on the export of American electrical products?

It is important, as to any phase of such export problems which are of particular concern to the industry or to any branch thereof, (1) to be ready to deal effectively with such problems and (2) to keep interested members informed of major developments.

Project Follow developments in the field of export matters of interest to electrical manufacturers:

1. Keep interested members informed (a) by continuing the export bulletin service. (Note: *Sent regularly on request only*) and (b) through other suitable means.

2. Prepare and present to the Tariff and Customs Committee of NEMA any desirable recommendations for securing more favorable treatment under the reciprocal trade agreement program for American electrical products going into foreign markets.

3. Take whatever steps that may be possible to promote the adoption and use of American electrical standards, including adoption of 60-cycle generating equipment, in as many instances as possible.

4. Stand ready to take appropriate action on any

matters in the protection or furtherance of the best interests of the industry.

Allocation Formula (a) Job costs of special work done in the interest of any subdivision are charged to the corresponding dues center.

(b) All other costs are allocated in proportion to latest available export sales data.

Budget Data

1947 Actual Expense	\$4,098
1948 Actual Expense	6,952
1949 Budget	5,378
1950 Budget:	
Direct Costs	1,490
Overhead	1,403
Total	2,893

380. Manufacturers' Excise Taxes

Excise Tax Committee

Problem The present war-inspired excise taxes of 10 per cent upon sales of electric household appliances at the manufacturer's level will, if continued, sooner or later seriously deter the growth of electrical-utilization and sales of such appliances. Desired employment levels in the production and distribution of electric appliances can be obtained only by continually broadening the market in the lower income groups and by facilitating the most economical production and distribution that can be achieved. Artificial cost factors, such as excise taxes, nullify equivalent cost reductions achieved through efficient production and distribution and thereby limit the market.

Project Through a committee of representatives of the Household Refrigeration, Electric Range, Electric Water Heater, Electric Housewares, Electric Fan and Commercial Cooking Equipment Sections:

Take appropriate steps designed to secure removal of excise taxes on electric refrigerators, electric ranges, electric water heaters, electrical house-

wares, commercial electric cooking equipment and electric fans.

Allocation Formula (a) Job costs of special work done in the interest of any subdivision are charged to corresponding dues center.

(b) All other costs are allocated to the benefited subdivisions (chiefly appliance subdivisions) indicated in the chart at the center of this Program, in proportion to sales of products within the scope of each dues center.

Budget Data

1947 Actual Expense	\$4,881
1948 Actual Expense	3,334
1949 Budget	4,254
1950 Budget:	
Direct Costs	2,518
Overhead	14,496
Total	17,014

385. Miscellaneous Federal Regulations

Board of Governors

Problem The number of Federal Acts which affect the conduct of business has been steadily increasing. Many of these laws provide for administrative bodies or boards with authority to issue rules and regulations to facilitate the operation of such laws. This adds to the regulations and restrictions with which business must be familiar and must comply.

From time to time, also, opportunities arise to submit suggestions on behalf of the electrical manufacturing industry or of particular Sections, with respect to the nature of such regulations or their interpretation.

Project As to Federal Acts which are of particular interest and concern to the electrical manufacturing industry:

1. Where of sufficient importance, distribute helpful information to members as to the nature of such Acts, including rules and regulations of interest issued thereunder.

2. Where advisable, present industry briefs or recommendations concerning the administration of such Acts, the regulations issued thereunder, or the interpretations thereof, to the appropriate administrative agencies.

Allocation Formula (a) Job costs of special work done in the interest of any subdivision are charged to corresponding dues center.

(b) All other costs are allocated in proportion to sales of products within the scope of each dues center.

Budget Data

1947 Actual Expense	\$1,631
1948 Actual Expense	2,911
1949 Budget	3,989
1950 Budget:	
Direct Costs	527
Overhead	2,655
Total	3,182

390. National Legislation-Miscellaneous

Board of Governors

Problem Occasionally the viewpoint of the industry regarding pending national legislation which is of particular concern to it should be presented to members of Congress or Congressional committees. Members expect NEMA to be ready to act on behalf of the industry or of particular Sections in these matters.

Project As to types of measures introduced in Congress which are of particular interest and concern to the electrical manufacturing industry other than those referred to under other projects, particularly legislation relating to Excise Taxes, Exports, Trade, Tariffs, and Reciprocal Trade Agreements, Industrial Relations, Secondary Boycotts, Sales Financing, Federal Government Statistics and Electrical Inspection Legislation:

1. Follow the progress of such legislation.
2. Where of sufficient importance, distribute information to members such as will keep them informed and provide a factual basis for them to make

their own views known to their representatives in Congress or to Congressional committees.

3. Where advisable, present industry briefs or recommendations to appropriate Congressional committees and others.

Allocation Formula (a) Job costs of special work done in the interest of any subdivision are charged to corresponding dues center.

(b) All other costs are allocated in proportion to sales of products within the scope of each dues center.

Budget Data

1947 Actual Expense	\$1,105
1948 Actual Expense	680
1949 Budget	—
1950 Budget:	
Direct Costs	494
Overhead	861
Total	1,355

IV. BUSINESS DEVELOPMENT PROJECTS

400. Adequate Wiring Program

Manufacturing Members of the Executive Committee of the National Adequate Wiring Bureau; NEMA Adequate Wiring Committee

Problem Expansion of markets for electrical goods is hampered by the small amounts of electric wiring habitually installed in residences which do not permit complete or convenient utilization of electric products. Kilowatt-hour consumption is thereby impeded, and in turn, this limits full development of capital goods markets for electrical manufacturers.

Project A continuing program of promotion and education designed to increase the habitual levels of home wiring design, is carried on by the National Adequate Wiring Bureau. The Bureau encourages establishment of "home town" adequate wiring bureaus, or their equivalent and licenses such Bureaus to certify homes in which the wiring meets accepted standards of adequacy. The National Bureau develops materials for use at the local level, and provides field service to assist the opera-

tion of local adequate home wiring campaigns. Working at the national level, it disseminates educational and promotional materials on the subject, directed toward home owners, architects, home financing agencies, builders, educators and electrical industry employees.

Allocation Formula Allocated in proportion to sales of products within the scope of each dues center weighted in accordance with the multiplier shown in the table at the center of the Program.

Budget Data

1947 Actual Expense	\$79,544
1948 Actual Expense	114,765
1949 Budget	119,560
1950 Budget:	
Direct Costs	96,409
Overhead	12,866
Total	109,275

405. Farm and Rural Market Development

Farm and Rural Market Committee

Problem One of the electrical industry's largest potential markets for household and commercial appliances, and for electrical power utilization equipment is rapidly developing in farm and rural areas. These areas lie beyond the territory into which gas is piped and, therefore, are of special interest to both power suppliers and the electrical manufacturers.

They embrace millions of old, new and potential customers of electricity. All are prospective purchasers of new and additional electrical equipment for use in farm and rural homes, on farmsteads and in small town business establishments.

Factors favorable to the increased sale of electrical equipment in the farm and rural market in-

clude the general prosperity of farm and small town residents, a pent-up demand for electrical equipment among potential consumers of electricity and the growing appreciation among farm and small town residents of the versatility, efficiency, reliability and service of electrical products. Over 4,000,000 farms now have electric service, and additional thousands are being added each month.

To realize on such encouraging market potentials, NEMA must vigorously promote greater use of electrical products by farm and rural families. It also will be necessary for NEMA members to protect their interests against aggressive competition from those now engaged in promoting the use of fuels, other than electricity, for the operation of equipment and appliances in the farm and rural market.

Project To continue to conduct a soundly organized program to demonstrate to farm and rural residents, and to those segments of the electrical industry serving them, the economic value and social benefits accruing through the use of electrical equipment for production, household and commercial use. Such a program, carried on, consistently and continuously, in coordination with efforts of individual NEMA members, should assure the industry its rightful share of business which otherwise might be lost to those industries conducting aggressive sales and merchandising campaigns to stimulate interest in the purchase and use of competitive nonelectrical products.

1. Conduct a program of informative publicity through twice-monthly releases, special magazine and newspaper articles and cooperate with directors of radio programs aimed at farm and rural audiences.

2. Gather and distribute to interested NEMA member companies data concerning (a) farm and rural sales outlets for electrical products and (b) marketing trends having an effect on the electrical business in agricultural communities.

3. Conduct a program designed to (a) focus attention of farmers, builders, power suppliers, contractors and others on the needs and value of farmstead wiring adequacy and (b) cooperate with the National Adequate Wiring Bureau in promoting adequate home wiring in small towns.

4. Provide manufacturers of farm equipment

with sources of information about the best means of electrifying such machinery, as can properly and profitably be operated by electricity.

5. Cooperate in planning and holding an Annual National Farm Electrification Conference.

6. Cooperate with NEMA Sections in the production of electrical information booklets for use as teaching aids, primarily by vocational agriculture instructors.

7. Prepare and distribute informational and sales-stimulating material in a continuing program to further usage of "All-Electric" farm and home equipment.

Allocation Formula (a) Job costs of special work done in the interest of any subdivision are charged to corresponding dues center.

(b) All other costs are allocated in proportion to sales of products within the scope of each dues center, weighted in accordance with the multipliers shown in the table at the center of the Program.

Budget Data

1947 Actual Expense	\$72,959
1948 Actual Expense	39,363
1949 Budget	37,975
1950 Budget:	
Direct Costs	29,502
Overhead	7,895
Total	37,397

410. Electrical League Cooperation

NEMA Committee on Relations with Electrical Leagues

Problem To obtain larger markets for electrical products and to meet the keen competition that can be expected from manufacturers of nonelectrical products, it is incumbent upon the electrical manufacturing industry that every available sales tool be utilized. Among such sales tools are electrical leagues, which provide a focus for coordinated industry effort in the communities in which they are located. NEMA, by reason of its close association with the Electrical League movement, recognizes that it is in the best interests of electrical manufacturers

and the public that these local groups should be strong and active.

Project To strengthen and broaden the already well-established liaison between the electrical manufacturers acting through NEMA and the electrical leagues which represent all branches of the industry — utilities, wholesalers, contractors, dealers, manufacturers' representatives — in their community.

1. Keep the leagues informed regarding na-

tional programs of an educational and promotional nature in which they would have an interest.

2. Arrange for an interchange among the leagues so the end that the experience obtained in individual communities may be available to others.

3. Put to constructive use the experience of these local groups in the development and operation of national programs.

4. Aid in organizing and conducting the annual conference of the International Association of Electrical Leagues through which league managers are provided with an opportunity to hear speakers of national prominence and to exchange experiences about the detailed operation of various programs.

5. Provide information to enable industry groups, contemplating the organization of a league, to do so expeditiously and in a manner which has already proved its soundness in operation.

6. Consider requests from electrical leagues for Certificate of Approval from NEMA as (a) an indication of the practical nature of their particular operations and (b) an aid to their obtaining necessary financial support.

Allocation Formula Allocated in proportion to sales of products within the scope of each dues center weighted in accordance with the multiplier shown in the table at the center of this Program.

Budget Data

1947 Actual Expense	\$5,011
1948 Actual Expense	4,638
1949 Budget	5,355
1950 Budget:	
Direct Costs	4,288
Overhead	1,240
Total	5,528

415. Business Development Planning

Business Development Policy Committee

Problem Business development and sales promotion activities in some number and variety are carried on and financed, both by NEMA as a whole and by individual Sections, in the interest of enlarging the market for electrical products generally or for particular electrical products.

Consistency of policy in the planning, financing, organization and execution of such activities is essential in order that such activities shall not conflict, duplicate each other or the work of other organizations, and in order that they may be most effective.

It is recognized that the promotional efforts and consequent growth of one branch of the electrical manufacturing industry benefit many other branches of the industry, and that the promotional efforts of each branch of the electrical industry and consequent growth of the industry benefit other branches of the industry.

Project Develop and keep current policies relating to operation of business development and sales

promotion activities of NEMA, including those in which other electrical industry groups have a complementary interest.

Allocation Formula (a) Job costs of special work done in the interest of any subdivision are charged to corresponding dues center.

(b) All other costs are allocated to each dues center in proportion to its total dues charges for all other general association business development projects.

Budget Data

1947 Actual Expense	\$3,480
1948 Actual Expense	3,416
1949 Budget	2,710
1950 Budget:	
Direct Costs	418
Overhead	2,390
Total	2,808

430. Public Information Program

Officers Committee

Problem Newspapers, magazines and other media have come to regard NEMA as a source of information about the electrical manufacturing industry, what products it makes, what it is doing for America, what progress it is making, and other trends in the industry.

Within the available resources of the Association, it is both necessary and desirable to service requests for such information.

Project On request, provide information to newspaper, magazine and other writers regarding trends and developments in the electrical manufacturing industry.

1. Prepare and issue news releases, particularly year-end reviews, upon various phases of the electrical manufacturing industry.

2. Answer inquiries made by newspaper, magazine and other writers for information about the industry.

3. As necessary, anticipate or correct, through press releases or otherwise, erroneous statements regarding the industry.

4. Provide speakers on request of technical societies, customer industry associations, and other organizations.

5. On request, prepare articles for publication in the electrical trade press and other publications.

Allocation Formula (a) Job costs of special work done in the interest of any subdivision are charged to corresponding dues center.

(b) All other costs are allocated 33-1/3% in proportion to the number of companies reporting sales of products within the scope of each dues center and 66-2/3% in proportion to the sales of products within the scope of each dues center.

Budget Data

1947 Actual Expense	\$33,347
1948 Actual Expense	25,211
1949 Budget	6,034
1950 Budget:	
Direct Costs	1,091
Overhead	3,023
Total	4,114

440. Street and Traffic Safety Lighting Program

Street and Traffic Safety Lighting Bureau Executive Committee

Problem Benefits obtained from the installation of adequate street and highway lighting equipment have been demonstrated in many cities and surrounding localities. Reduction of night traffic accidents and crime as well as the contribution which modern lighting equipment makes to community developments and civic pride are results which will probably be of special interest during 1948. 1950.

In many communities, lack of information on the benefits to be obtained makes the equipment manufacturer's sales problem unnecessarily difficult. First, electric service companies in some cases are not yet convinced they should promote improved lighting. Second, municipal, county and state officials,

who are concerned with traffic safety, public works and community development, often are not sufficiently aware of the advantages of improving their lighting facilities. Third, the public should be educated further regarding benefits to be gained from modernized lighting installations.

Project Street Lighting Section members have found that some promotional work can be accomplished more efficiently on a group cooperative basis than by individual efforts, and therefore, through the Street and Traffic Safety Lighting Bureau, the Section will continue to promote interest in improved lighting by such means as:

1. Sponsor advertising in trade journals read

by executives of electric service companies and state and local government officials.

2. Distribute direct-mail leaflets among electric service companies and government officials.

3. Mail monthly newsletters to utility executives, municipal, state and county officials, trade journals and others.

4. Prepare articles, booklets, etc., reporting on studies and surveys which demonstrate the value of better street and highway lighting for appropriate distribution.

5. Distribute especially written articles, photo-

graphs, cartoons and other original material to magazines, newspapers and radio stations concerning the need for better lighting. By direct-mail campaigns, stimulate interest among publishers, broadcasters and organizations to devote more attention to this subject.

6. Provide general information service covering all aspects of street lighting.

Allocation Formula The costs of the program are financed entirely by supplementary budget of the Street Lighting Section.

445. Electric Range Program

Sales Committee and Advertising and Sales Promotion Committee of Electric Range Section

Problem Some types of market development and promotional activities can be performed better and more economically by Section-sponsored advertising and publicity than by the efforts of individual members. For example:

1. The demand should be satisfied for information and teaching aids on electric cooking equipment to home economics teachers as an incentive to schools to modernize electrically their cooking laboratories.

2. Information should be available to architects, builders and prospective home owners, on the advantages of cooking electrically.

3. It is helpful if the promotional plans of electric range manufacturers and electric service suppliers are coordinated for the development of local promotional campaigns in the interest of the electric home and the All-Electric Kitchen.

Project 1. Continue advertising programs reaching teachers and home economists, to encourage them to seek better electric home economics laboratories for the schools.

2. Supply a Visual-aids Program to home economics teachers to help teach the advantages of cooking electrically.

3. Furnish the Visual-aids Program to utilities and others in a position to extend its use in schools, or utilize it in conjunction with their own consumer educational programs.

4. Continue advertising to architects, builders, and prospective new home buyers, to ensure the widest possible provision of adequate service entrance wiring and range circuits in new homes and those undergoing modernization.

5. Using the cartoon continuity strip type of advertisement, provide general educational and training information on its products to appliance marketing personnel.

6. Continue to promote the distribution and the use by local utilities of various booklets, folders and other material on the advantages of the electric range.

Allocation Formula The costs of the program are financed entirely by supplementary budget of the Electric Range Section.

450. Electric Water Heater Program

Sales Committee and Advertising and Sales Promotion Committee of Electric Water Heater Section

Problem The rapid growth of domestic electric water heating requires that the industry use every means at its disposal to promote acceptance of its product. Since the opportunities for electric water heater sales in any particular territory are dependent upon the attitude of the local service company and of the local architects, builders and sales outlets, many forms of water heater education and promotion are best handled by group activity.

Project To increase the interest in and promotion of the use of electric water heating for household use by architects, builders, dealers, utilities, plumbers and lending agencies, the Section Program in 1949 will include:

1. Continued advertising in national builders and architectural magazines to show the growth of dom-

estic electric water heating, and the current public demand for this modern hot water service.

2. Continued and expanded advertising in national plumbers magazines designed to develop the interest of plumbers and plumbing wholesalers in electric water heater sales.

3. Continued advertising in appliance and hardware trade publications to develop the interest of such dealers in electric water heater sales by pointing out the growth and importance of this business.

4. Securing widest possible distribution of the brochure, "The Modern Automatic Electric Water Heater," and other informative materials on the subject of automatic Electric Water Heating.

Allocation Formula The costs of the program are financed entirely by supplementary budget of the Electric Water Heater Section.

455. Farm and Home Freezer Program

Sales Committee and Advertising and Sales Promotion Committee of the Farm and Home Freezer Section

Problem The rapid expansion of the Farm and Home Freezer business and public interest in frozen foods, their packaging, and preparation, require that the industry use every means at its disposal to disseminate knowledge and promote acceptance of its product. Since the job to be done is primarily of an educational nature, this educational activity can be performed to the best advantage as a Section-sponsored supplement to the efforts of the individual manufacturers.

Project To interpret specifically the service rendered by freezers and to create generally an acceptance of the product, the Section's Program in 1950 will consist of:

1. Continue the 1949 program reaching teachers and home economists to encourage them in teaching the use of the home freezer as a part of their regular curriculum.

2. Continue to promote the distribution and the use of the authoritative booklet, "How to Enjoy Better Meals with an Electric Farm and Home Freezer," prepared and sponsored by the Section, which stresses the advantages and describes in detail, the best methods of using the freezer.

3. Develop and provide to utilities and others, by a series of "Freezer Facts" bulletins, basic promotional ideas for freezer schools and consumer instruction groups.

4. Make available advertising aids such as, newspaper mats and 24-sheet posters, to utilities and other local power supplying agencies.

Allocation Formula The costs of the program are financed entirely by supplementary budget of the Farm and Home Freezer Section.

460. Commercial Cooking Equipment Program

Sales Promotion Committee of the Commercial Cooking Equipment Section

Problem Increasing interest in electric commercial food preparation and cooking, together with the active promotion of competing fuels, necessitates an intensive promotional program to supplement the promotional efforts on the part of the individual members of this Section. Such a program should bring to the attention of all operators of commercial eating establishments and institutions the wide acceptability that has already been gained for this method of preparing and cooking foods.

Project To increase the interest in and promote the use of electric commercial food preparation and cooking equipment by means of various publicity methods and an advertising program in national trade magazines read by commercial food service and institutional operators.

Allocation Formula The costs of the program are financed entirely by supplementary budget of the Commercial Cooking Equipment Section.

465. Electric Fan Program

Merchandising Committee of Electric Fan Section

Problem To create new markets for the products of the Electric Fan Section, it will be necessary to develop public consciousness of the desirability and effectiveness of air in motion and its essentiality to comfortable modern living. The installation of centrally powered ventilating systems in office buildings and commercial establishments in connection with air conditioning has curtailed the historic markets for ceiling fans and desk and bracket fans. To replace this business and further extend its market, the industry will now focus attention on the multiple use of its products in the home.

Acceptance and demand for new products must be developed. The public must be made conscious of

the importance of ventilation in the home, office and workroom.

Project Prepare data and information on the health and comfort aspects of ventilation and the importance of air in motion in daily living and working, to be implemented by a "dual-purpose" educational manual available for:

- a. instruction purposes in the public schools.
- b. distribution as a dealer and consumer educational piece.

Allocation Formula The costs of the program are financed entirely by supplementary budget of the Electric Fan Section.

470. Industrial and Commercial Lighting Equipment Program

Promotion Committee and Exposition Operating Committee of Industrial and Commercial Lighting Equipment Section

Problem The postwar building and remodeling of industrial, commercial and school buildings are well underway. It is essential in such building and remodeling that adequate consideration be given to the most-up-to-date forms of lighting equipment suitable for the particular type of occupancy in-

volved. Since the war, lighting equipment manufacturers have developed new designs and technics in lighting equipment.

Project 1. Carry on a comprehensive program of market development toward planned lighting by

means of various promotional and educational activities designed to expand the demand for lighting equipment through cooperative action of all members of the Industrial and Commercial Lighting Equipment Section.

2. The Section initiated a market survey and marketing research project in a typical city, with the cooperation of the local electric league. This research project will serve as a pattern for use by

electric leagues in other cities in determining the market potential and in stimulating and promoting the demand for Planned Lighting in their particular areas.

Allocation Formula The costs of the program are financed entirely by supplementary budget of the Industrial and Commercial Lighting Equipment Section. ~~The exposition will be self-financing.~~

475. Special Dry Process Electrical Porcelain Program

Sponsoring Members of Special Dry Process Electrical Porcelain Section

Problem To provide economy of production in meeting the demand for special porcelain shapes, and to encourage the use of the product wherever it is applicable. The special porcelain manufacturers will continue their developmental program to assure that porcelain will keep pace with design progress.

Project For the purpose of educating engineers,

designers and assemblers, through joint action, the sponsors will run a series of advertisements in electrical trade magazines, listing sponsors' names and addresses and offering further information and help.

Allocation Formula The costs of the program are financed by contributions of the sponsors.

480. Armored Cable Program

Advisory Committee of Armored Cable Section

Problem Several types of wiring methods or systems have long been recognized in the National Electrical Code which provides definite rules governing their specific applications in terms of conditions of location, of building construction, of occupancy and use.

Enforcement of these rules and regulations by electrical inspection authorities having jurisdiction has not been uniform due to a divergence of views and preferences, varying climatic conditions in local territories, service records, etc., with the result that special rules of an unduly restrictive character have become more and more common in local ordinances.

Resistance to the use of armored cable was aggravated during the war by the prohibition of manufacture for a time. A continuing and comprehensive educational program is required to develop the acceptance and widest utilization of this product.

Project Carry on a research, educational and technical program designed to promote greater interest in and acceptance of armored cable and flexible metallic conduit and in particular to:

1. Disseminate technical information and data to electrical inspectors, electrical contractors, electric leagues and similar groups by means of talks, motion pictures and informative material.

2. Keep utility engineers, electrical inspection departments and similar groups informed of developments in the industry.

3. Obtain widest possible distribution and showing of the new motion picture which describes proper methods of installing the product and the improved construction feature incorporated in the new bonded armored cable.

4. Create an ever-expanding re-wiring market in old homes by wide distribution and showing of a second film which illustrates proper methods of wiring old buildings with armored cable.

5. Continue close contact with trade, technical and vocational schools and colleges which utilize the

two motion pictures and descriptive booklets in courses for training apprentice wiremen.

Allocation Formula The costs of the program are financed entirely by supplementary budget of the Armored Cable Section.

485. Flexible Cord and Cord Set Program

Flexible Cord and Cord Set Section

Problem In the thirties, an aggressive program was sponsored by the Section to the end that the safety of cordage bearing Underwriters' labels was recognized generally by industry and the public, and the demand created for inspected and labeled cord.

Since the war, it has become apparent that labeled cordage is not enough to ensure the safety of cord sets and power supply cords, and a new educational program was needed to create demand for Underwriters' labeled complete power supply cords and cord sets.

Project In cooperation with Underwriters' Laboratories, Inc., and the International Association of Electrical Inspectors, the Section has developed, and there is being carried on, a program for industry-wide education and promotion.

Underwriters' Laboratories, Inc., has approved a new and distinctive type of "flag label," applied to the cord set or power supply cord after assembly, which denotes that the whole assembly — cord, fittings and workmanship — meet minimum safety requirements.

A Safe Electrical Cord Committee has been

formed, with membership open to all manufacturers of cordage who support the program by pro rata contributions based on the numbers of labels purchased. The Committee has published a brochure, "Electrical Safety in Every Room," sponsored by IAEI, and is promoting the widest possible distribution through the schools, fire departments, American Red Cross accident prevention program, and insurance companies. The electric service companies will be organized to spearhead local activities and sponsor cooperative city and area programs. The activity is directed by a field man, domiciled at NEMA headquarters, who maintains contact with the many interested agencies, and coordinates their efforts.

Allocation Formula The costs of the program are financed as follows:

(a) Direct costs of the program, such as costs of printing, advertising, etc., and costs of travel done entirely on account of the Program are financed entirely by contributions of participants in the Safe Electrical Cord Committee.

(b) All other costs are met by the Flexible Cord and Cord Set Section as a part of Section Service Costs.

490. Motor and Generator Publicity

Publicity Committee of Motor and Generator Section

Problem During the past several years many new NEMA Standards for motors and generators have been developed, including standards of rating and performance for subfractional, fractional and integral horsepower sizes; and standards developed for motors particularly suited to the products of specific

user industries. The acceptance, and consequently the effectiveness, of the standards is limited by the extent to which knowledge and understanding of them has permeated industry. The Motor and Generator Section, therefore, is faced with the problem of promoting such acceptance of its standards.

Project A section-sponsored project has been established, designed:

1. To promote knowledge of the benefits which may be derived from the use and acceptance of NEMA Motor and Generator Standards.
2. To inform business of the achievements and problems of the motor and generator industry.
3. To rearrange and present, in the manner most useful to user industries, the NEMA Motor and Generator Standards, and to publicize their availability and usefulness.
4. To promote further the motorization of the

tools of industry, agriculture and the American home.

The program for attaining these objectives includes the preparation of feature articles for business and industry periodicals, newspaper releases, special articles describing the benefits which motor standardization has brought to particular industries or products and direct-mail contacts with users of motors. As new standards are developed, they are introduced and explained through press conferences, user industry meetings, general releases and special articles for selected publications.

Allocation Formula The costs of the program are financed entirely by supplementary budget of the Motor and Generator Section.

495. Electric Housewares Program

Sales Promotion Committee of Electric Housewares Section

Problem The annual dollar sales of electric housewares (small electric appliances) in the scope of the Electric Housewares Section of NEMA is greater than the annual dollar sales of products in the scope of any other appliance Section, except refrigerators. Distributors and retailers, however, tend to think of these products as unrelated lines—flat-irons, toasters, roasters, heaters, mixers, etc. Consequently, electric housewares do not receive the merchandising attention their volume warrants.

In department stores, for example, these small appliances are lost among the thousands of items sold in the Housewares Department. Even the trade magazines fail to group them in their statistical and editorial approach. They are treated as separate lines, and the industry fails to think of electric housewares as a most important appliance classification, although total sales of electric housewares exceeded \$600,000,000 in 1948.

The Electric Housewares Section has decided

that it must take the lead in developing industry appreciation of the potential market for these smaller electric appliances.

Project In order to initiate an effective program to secure proper recognition of the electric housewares business, the Section proposes:

1. To publicize and promote the widest use of "electric housewares" as the industry designator.
2. To prepare and publish a "Sales Training Manual" for dealer and department store salesmen.
3. To prepare and publish an "Electric Housewares Department Operating Manual."
4. To promote industry-wide support and the observance annually of "Electric Housewares Week," as a coordinated business building activity.

Allocation Formula Costs of the program financed entirely by supplementary budget of the Electric Housewares Section.

V. RESERVE FOR POTENTIAL EMERGENCY PROJECTS

VI. SECTION SERVICE PROJECTS

600. Section Service

Officers Committee

Problem Since the major part of NEMA activity is carried on in the Sections, it is essential that the staff, in addition to attending meetings, taking notes and writing minutes, provide all the make-ready and follow-up services which will help members get the job done with economy of member time and expense. Such services help materially to:

1. Make certain that members of the Section obtain maximum benefits from their NEMA membership. Many staff services are available and recording secretaries direct members to other staff associates who are experts in various fields.

2. Reduce the time required of members for their attendance at meetings and lessen the load on individual members and committees involved in carrying out Section assignments.

3. Promote better attendance at meetings, more complete and better organized agenda including the anticipation of policy or legal questions and obtaining of authoritative answers in advance of the meeting, and prompt follow-through on actions taken.

Experience has shown that Sections can carry on their work more effectively and efficiently with the help of carefully trained recording secretaries who, usually serving a number of different groups, are, therefore, familiar with the methods of dealing with all sorts of problems.

Project To provide for more efficient and effective operation of NEMA Sections, provide staff recording secretaries to:

1. Prepare agenda, attend, and issue minutes of subdivision meetings.

2. Assist in the formulation of section activities in such fields as: engineering specifications, standards, research, consumer education and advertising, as well as projects involving relations with government agencies and other industry groups.

3. Plan and help conduct well-attended section meetings that are brief, business-like, cover all items of interest, and are properly recorded.

4. Guide Section activities to the end that NEMA policies are observed.

5. Assist Sections in profiting by the experience of other NEMA Sections that have had similar problems in formulation and conduct of Section programs.

6. Provide generally to committees and subdivisions of Sections the same recording secretarial services as are provided for the major subdivisions.

NOTE: This description of staff services, while far from complete, does suggest the advantages that have led All NEMA subdivisions to avail themselves of staff recording secretarial service.

The acceptance of staff recording secretaries, financed under the general association budget, has become so general that all but one or two Sections which formerly financed special secretarial service, through supplementary budgets, now have staff recording secretaries all financed under the general association budget.

Allocation Formula All costs of this project are charged on a job cost basis to all dues centers.

Budget Data

1947 Actual Expense	\$125,336
1948 Actual Expense	190,024
1949 Budget	213,076
1950 Budget:	
Direct Costs	170,164
Overhead	66,420
Total	236,584

VII. ADMINISTRATIVE PROJECTS

700. NEMA General Meetings

Board of Governors, Officers Committee

Problem In NEMA operations, it is essential that the program for each year and the budget involved in carrying out the program should be subject to careful review by the entire membership.

The election of members to the NEMA Board of Governors must be held in such a manner as to provide a maximum number of the members an opportunity to vote.

Many representatives of NEMA are affiliated with more than one subdivision and should be provided with an opportunity to attend meetings of subdivisions with a minimum amount of travel, hotel expense and use of time.

The various NEMA Committees should be provided an opportunity for presenting, to a general meeting or to a subdivision meeting, timely reports directly to interested members and to afford opportunity to the members to discuss such reports, and to make comments which will be helpful in guiding each Committee's future activities.

The significance of awards to outstanding members and to veterans of the industry is enhanced by public presentation at Association meetings.

Project Hold general meetings of NEMA.

1. The Annual Meeting in November in the East.
 - a. At this meeting, the proposed program and

the budget involved therein is submitted to the membership in detail and the items which are approved become the program and budget for the ensuing year.

b. The report of the Nominating Committee is submitted and incoming members of the Board of Governors are elected.

c. The McGraw Award for electrical manufacturers, if any, is awarded and also Certificates of Fifty-year Service in the industry, if any.

d. Timely reports of various NEMA Committees are received and discussed, and other necessary Association business is conducted.

e. Meetings of subdivisions are held.

2. Midwest Meeting in March in Chicago.

a. Meetings of various subdivisions are held.

b. Meetings of many NEMA Committees are held.

Allocation Formula Costs of (a) holding Association business or general meetings (as distinguished from subdivision meetings), holding meetings of Board of Governors, Officers Committee, Budget and similar administrative Committees, and (b) that part of the expense of maintaining conference rooms at NEMA headquarters for Board and administrative committee meetings, are all allo-

cated in proportion to sales of products within the scope of each dues center.

All other costs of maintaining conference rooms at NEMA headquarters, exclusive of Section Service costs, Project 600, are allocated in proportion to number of meetings held by each dues center, including subdivision committee meetings, exclusive of those held during Association meeting weeks.

Budget Data

1947 Actual Expense	\$14,622
1948 Actual Expense	17,542
1949 Budget	20,860
1950 Budget:	
Direct Costs	12,699
Overhead	12,631
Total	25,330

710. NEMA Program

Board of Governors, Annual Business Meeting

Problem Members require full information as to what activities and services NEMA will undertake, in order:

1. To have an informed voice in helping to decide what these activities shall be.
2. To visualize, evaluate and obtain the maximum value from the activities and services which have been approved.

Project Prepare, publish, and submit to members, prior to the next Annual Meeting, and for action thereat, a program describing the proposed activities of NEMA for the ensuing year, and estimated costs thereof.

Allocation Formula Allocated to each dues center in proportion to its total dues charges for all other projects.

Budget Data

1947 Actual Expense	\$2,907
1948 Actual Expense	3,652
1949 Budget	5,347
1950 Budget:	
Direct Costs	4,117
Overhead	1,812
Total	5,929

720. NEMA Publicity

Officers Committee

Problem The problem of publicity about NEMA is twofold:

1. Members want to know what is going on in their Association and about developments of particular interest and concern to them. It is a convenience if as much information of this sort as possible can be presented in a single publication, a procedure which also reduces the number of general mailing pieces to members.
2. Some of the activities carried on by an industry through its trade organizations are newsworthy. For this sort of news about NEMA, the electrical trade press, business papers and dailies

regularly contact NEMA for information or for special articles. While NEMA does not seek publicity, it does cooperate in furnishing legitimate news items. Such cooperation is in the interests of the industry and of the public.

Project Provide news and information about NEMA and its activities.

1. Through NEMA NEWS, keep members informed as to (a) what is being done to protect and promote their interests; (b) developments of particular interest and concern to them.
2. Provide trade journals, newspapers, etc.,

with suitable information on activities of NEMA; assist Sections, on request, in preparing and issuing such information on Section activities.

3. Interchange information with other industry associations.

Allocation Formula (a) Job costs of special work done in the interest of any subdivision are charged to corresponding dues center.

(b) All other costs are allocated in proportion

to number of companies reporting sales of products within the scope of each dues center.

Budget Data

1947 Actual Expense	\$9,218
1948 Actual Expense	10,395
1949 Budget	11,645
1950 Budget:	
Direct Costs	9,181
Overhead	3,409
Total	12,590

730. Membership Records and Manual

Officers Committee

Problem In an Association having the size and complexity of NEMA, it is necessary that accurate records of the membership, as regards both companies and representatives, shall be kept.

In order to determine the eligibility of each company for membership in the various subdivisions of NEMA, it is necessary that records be kept concerning products which each member company manufactures and sells in the open market.

Records must also be kept showing all the representatives of each of the member companies, as the number of company's representatives is one element in the allocation of dues among the subdivisions.

Not only must this information be available at headquarters, but it also must be distributed to all members of the Association in order to facilitate the work of the Association and its subdivisions.

Project

1. Keep an orderly, accurate record of the membership of the Association, its organization into

Committees, Divisions, Sections, Groups, together with their scopes, and the affiliation of the various member companies and their representatives.

2. Issue this information at appropriate times in convenient pamphlet form. In response to specific requests, concerning changes occurring during the year.

Allocation Formula Allocated 50% in proportion to the number of companies and 50% in proportion to number of executive and associate representatives affiliated with each subdivision.

Budget Data

1947 Actual Expense	\$7,069
1948 Actual Expense	11,511
1949 Budget	12,990
1950 Budget:	
Direct Costs	9,224
Overhead	3,987
Total	13,211

740. Membership Maintenance and Promotion

Officers Committee

Problem The effectiveness of any industry association is greatly enhanced if its membership includes as many of the branches of the industry and also of the various companies falling within those branches as possible.

Owing to the fact that trade association membership is entirely voluntary, it is essential that prospective or new members shall understand the operation of the Association and the responsibilities and privileges involved therein.

It is also essential that, in the subdivisions of the Association and among members, there shall be a minimum of misunderstandings which develop into complaints. Such situations develop dissatisfied members and, sometimes resignations. In such cases a complete exploration of the actual facts often maintains harmony and promotes continuation of membership by what would be, otherwise, dissatisfied units in the industry.

Each new Section or member provides a wider base for the distribution of the Association's operating expense and thus tends somewhat to reduce the dues of all the members. Also, the vitalization of members or subdivision interest insures the continuance of the necessary income and provides continuous opportunity for helpful cooperative activity on the part of such subdivisions or companies.

Industry records involving nonmembers must be kept at least to the extent that these records may facilitate the promotion and maintenance of NEMA membership through the maintenance of an adequate list of NEMA member prospects.

Project Conduct activities with the objective of securing new members and retaining present members in NEMA.

1. Solicit new members by correspondence and by personal contact, in cooperation with the subdivision officers and committees.
2. Secure cooperation of interested members in procuring new members and in placating disaffected members.
3. Distribute informative literature to nonmembers.
4. Determine the advisability of organizing, through the instrumentality of a NEMA subdivision,

manufacturers of products not currently within the scope of the Association.

5. Contact prospective members to study their needs which may be solved cooperatively, and to obtain their applications for membership.

6. Carry on organization work with respect to such new Sections.

7. Survey such problems of particular NEMA subdivisions, whether new or established, as are within the scope of NEMA activities, and ascertain the views of their members as to the proper method of solution.

8. Assist NEMA subdivisions to develop and conduct comprehensive, effective and proper programs of activity.

9. Place at the disposal of NEMA subdivisions the experience and knowledge gained by and from other sections of the industry, as to the proper and effective methods of solving industry problems.

10. Maintain a record of nonmember electrical manufacturers sufficient in scope to facilitate the promotion of NEMA membership.

Allocation Formula Allocated to each dues center in proportion to its total dues charges for all other projects.

Budget Data

1947 Actual Expense	\$11,804
1948 Actual Expense	18,156
1949 Budget	22,571
1950 Budget:	
Direct Costs	13,960
Overhead	12,021
Total	25,981

750. Product Scopes Definitions

Product Scopes Committee; Officers Committee

Problem The electrical manufacturing industry continues to develop and in the course of development it is essential that the product scopes of the various subdivisions keep pace with the developments in the industry.

An accurate and up-to-date record of scope is essential as it governs the activities of the particular subdivision, determines the eligibility of prospective new members, guides members in reporting sales

statistics, and forms the basis of allocating expenses to subdivisions.

The definitions of products scope covering each subdivision should be so clear that there will be no doubt concerning the inclusion or exclusion of any particular product and, above all, such definitions should not be written in such a way that the same product is included in more than one subdivision.

Project Maintain, and revise as required, a comprehensive definition of the electrical manufacturing industry as represented by the NEMA subdivisions.

1. Review and correlate product scope definitions submitted by subdivisions.
2. Adjust conflicts in product scope by holding conferences between subdivisions.
3. Publish interim revisions in NEMA NEWS.

4. Publish annually in the NEMA Manual a complete set of product scope definitions of NEMA subdivisions.

5. Make recommendations which will encourage and facilitate the adoption of precise scope definitions by subdivisions.

Allocation Formula Allocated in proportion to the number of companies reporting sales of products within the scope of each dues center.

Budget Data

1947 Actual Expense	\$827
1948 Actual Expense	910
1949 Budget	1,219
1950 Budget:	
Direct Costs	781
Overhead	515
Total	1,296

760. Association Accounting and Auditing

Officers Committee

Problem Accurate accounts, summaries and budget comparisons promptly available are as essential to economical operation of a trade association as of any other business.

In addition, they are essential to an equitable application of the cost-of-service basis of determining NEMA dues allocation. They account each year in considerable measure for substantial economies in NEMA operation.

Project Carry on the accounting and auditing work of the Association as follows:

1. Prepare the annual budget of the Association.
2. Maintain the cost-of-service system of accounts whereby, in the most equitable manner possible, the charges to NEMA subdivisions and the dues of member companies are determined.
3. Prepare dues bills, and record and deposit subsequent receipts.
4. Approve, record and pay invoices against the Association.
5. Maintain the Association books of account; prepare monthly financial statements and budget comparisons.

6. Prepare departmental, project and total budget comparisons monthly.

7. Report to each subdivision, early in each year, the estimated costs of service and charges to it and, after the end of the year, the actual costs and charges to it.

8. Publish and distribute to members the annual financial report, with explanation.

Allocation Formula (a) The costs of accounting for trustee funds, including funds raised by supplementary budget of subdivisions, are charged to such subdivisions on the basis of job costs.

(b) All other costs are allocated in proportion to number of companies reporting sales of products within the scope of each dues center.

Budget Data

1947 Actual Expense	\$27,020
1948 Actual Expense	33,937
1949 Budget	34,124
1950 Budget:	
Direct Costs	29,203
Overhead	6,606
Total	35,809

770. Allowance for Contingencies

Board of Governors

Problem Based on long experience, it has proved wise to provide a small amount for contingencies, including allowance for uncollectible dues.

Allocation Formula Allocated to each dues center in proportion to its total dues charges for all other projects.

Budget Data

1947 Actual Expense	\$8,545
1948 Actual Expense	24,319
1949 Budget	15,000
1950 Budget:	
Direct Costs	15,000
Overhead	—
Total	15,000

(See pages 54, 55 for tabulation of Project Cost Budget covering all Projects for 1950.)

1950 Project Cost Budget with Comparisons

Project	1947 Budget	1948 Budget	1949 Budget	1950 Budget
I. ENGINEERING PROJECTS				
100. NEMA Standards	\$ 13,778	\$ 17,060	\$ 18,647	\$ 19,750
105. Joint Sections Committees	2,018	2,905	2,870	6,692
110. National Electrical Code	9,366	12,653	14,729	16,861
115. National Electrical Safety Code	836	1,089	1,792	1,620
120. Technical Provisions of State, County & City Electrical Codes	2,756	4,071	3,653	2,086
125. Building Codes: State, County, City	860	949	1,907	1,218
130. Commercial & Industrial Wiring Design Standards	953	1,015	529	362
131. Residential Wiring Design Standards	—	—	—	1,197
132. Farmstead Wiring Design Standards	—	—	—	1,197
135. Laboratories Safety Testing Standardization	2,723	2,427	3,699	2,802
140. American Standards	15,915	15,556	29,188	30,473
145. Safety Codes Involving Electrical Equipment	1,549	1,922	6,758	6,495
150. Materials Products & Procedures Used in Product Manufacture	2,925	3,281	17,195	15,401
155. Technical Research	633	696	605	339
160. Power Systems & Equipment Standardization	1,900	1,120	2,669	1,687
165. AIEE Standards & Test Codes	542	863	753	934
170. Government Specifications	2,877	3,429	2,034	2,150
175. Miscellaneous Codes & Standards	2,002	2,066	3,715	2,895
180. Municipal Signalling & Traffic Engineering Stand'n	1,251	2,036	2,415	1,240
185. Aircraft Electrical Systems	806	903	666	29
190. Correlation of Engineering Activities	8,433	10,511	15,131	17,289
	<u>\$ 72,123</u>	<u>\$ 84,552</u>	<u>\$128,955</u>	<u>\$132,717</u>

II. REGULATORY LEGISLATION PROJECTS

200. Inspection Legislation	\$ 13,569	\$ 18,168	\$ 23,843	\$ 25,595
210. Sales Control Legislation	5,493	7,206	6,095	7,399
220. Contractor Registration & Licensing	9,387	11,030	11,204	11,254
230. Professional Engineers Licensing	1,068	1,481	871	1,641
240. Radio Interference Legislation	416	590	589	722
250. Refrigeration Safety Legislation	—	—	5,477	4,801
260. Plumbing Legislation Affecting Electrical Products	—	—	2,828	958
270. Miscellaneous Legislation Affecting Specific Electrical Products	1,657	2,374	2,660	1,496
	<u>\$ 31,590</u>	<u>\$ 40,849</u>	<u>\$ 53,567</u>	<u>\$ 53,866</u>

III. BUSINESS INFORMATION & SERVICE PROJECTS

300. Section and Group Statistics	\$ 13,583	\$ 15,341	\$ 16,438	\$ 20,936
305. Semiannual Sales Statistics	5,991	6,199	8,989	9,823
310. Special Statistical & Economic Studies & Services	8,031	9,741	12,970	14,933
315. Financial & Operating Ratios	1,219	2,529	3,258	2,454
320. Collaboration with Governmental Departments on Statistical Matters	4,388	5,650	7,961	9,875
325. Industry Accounting & Cost Studies	805	3,536	3,131	1,925
340. Industrial Relations	17,000	24,470	16,008	16,299
345. Secondary Boycotts	9,922	10,706	5,609	18,735
355. Shows & Exhibits Information Service	2,893	1,596	1,612	1,554

1950 Project Cost Budget with Comparisons

Project	1947 Budget	1948 Budget	1949 Budget	1950 Budget
III. BUSINESS INFORMATION & SERVICE PROJECTS (Continued)				
365. Sales Financing	1,162	1,391	1,062	926
370. Tariff, Trade Agreements, Imports	3,849	3,826	4,062	2,878
375. Exports	3,921	4,391	5,378	2,893
380. Manufacturers' Excise Taxes	1,687	5,935	4,254	17,014
385. Miscellaneous Federal Regulations	5,229	2,780	3,989	3,182
390. National Legislation—Miscellaneous	1,542	2,255	—	1,355
	<u>\$ 81,222</u>	<u>\$100,346</u>	<u>\$ 94,721</u>	<u>\$124,782</u>
IV. BUSINESS DEVELOPMENT PROJECTS				
400. Adequate Wiring Program	\$ 91,332	\$131,179	\$119,560	\$109,275
405. Farm & Rural Market Development	60,488	56,425	37,975	37,397
410. Electrical League Cooperation	4,998	4,675	5,355	5,528
415. Business Development Planning	2,603	12,239	2,710	2,808
420. Producers' Council	1,569	—	—	—
430. Public Information Program	48,483	32,076	6,034	4,114
440. Street and Traffic Safety Lighting Program	—	—	—	—
445. Electric Range Program	—	—	—	—
450. Electric Water Heater Program	—	—	—	—
455. Farm and Home Freezer Program	—	—	—	—
460. Commercial Cooking Equipment Program	—	—	—	—
465. Electric Fan Program	—	—	—	—
470. Industrial and Commercial Lighting Equipment Program	—	—	—	—
475. Special Dry Process Electrical Porcelain Program	—	—	—	—
480. Armored Cable Program	—	—	—	—
485. Flexible Cord and Cord Set Program	—	—	—	—
490. Motor and Generator Publicity	—	—	—	—
495. Electric Housewares Program	—	—	—	—
	<u>\$209,473</u>	<u>\$236,594</u>	<u>\$171,634</u>	<u>\$159,122</u>
VI. SECTION SERVICE PROJECT				
600. Section Service	<u>\$121,115</u>	<u>\$174,021</u>	<u>\$213,076</u>	<u>\$236,584</u>
VII. ADMINISTRATIVE PROJECTS				
700. NEMA General Meetings	\$ 10,360	\$ 16,285	\$ 20,860	\$ 25,330
710. NEMA Program	5,548	5,198	5,347	5,929
720. NEMA Publicity	11,308	10,783	11,645	12,590
730. Membership Records & Manual	8,838	11,216	12,990	13,211
740. Memberships Maintenance & Promotion	10,975	14,897	22,571	25,981
750. Product Scopes Definitions	1,356	707	1,219	1,296
760. Association Accounting & Auditing	25,780	31,567	34,124	35,809
770. Allowance for Contingencies	10,000	40,000	15,000	15,000
	<u>\$ 84,165</u>	<u>\$130,653</u>	<u>\$123,756</u>	<u>\$135,146</u>
TOTALS	<u><u>\$599,688</u></u>	<u><u>\$767,015</u></u>	<u><u>\$785,709</u></u>	<u><u>\$842,217</u></u>

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