

NECA AS AN EDUCATIONAL INSTITUTION

THE BEGINNING

The formal educational programs of the National Electrical Contractors Association had their beginning at the 1948 National Convention in Miami Beach when then president Robert McChesney discussed his proposal for what he called "vestibule" training for the new employees of electrical contractors. He recognized that electrical contractors were hiring college graduates, usually from electrical engineering programs, and that these people, though well educated, had little knowledge of the electrical contracting business. He believed that NECA should provide some basic training in such things as estimating, job management, and job cost accounting, courses which were not available in college programs at that time. This would be their introduction to the electrical contracting business hence his reference to these programs as "vestibule" training. President McChesney stated that one of the problems facing electrical contractors was the satisfactory training of the management personnel. He pointed out that large business concerns had a practice of recruiting young engineering students just graduating from college and sending them to their own schools for special training to prepare them for positions in the engineering, sales, and management departments of their companies. However, electrical contractors, being small business concerns, were not able to individually set up their own schools, and the universities and technical schools in the country did not provide this specialized type of training. Therefore, it was a proper function of a business's trade association to provide its members with the management services they were unable to provide for themselves.

Based on the recommendation of President McChesney, NECA, at the direction of the Administrative Committee (the predecessor of the present Executive Committee) conducted a year-long study to determine the possibilities of instituting such a program with some centrally located university or technical school. Some preliminary investigation indicated that this was not practical. No college was interested in undertaking the preparation of the necessary courses. Also, they had no instructors capable of teaching most of the required subjects, and it was doubtful that there would be a sufficient number of students to underwrite the program's cost. The Administrative Committee then entered into a contract with the International Text Book Company and its subsidiary, the International Correspondence School, to conduct a survey and study and to submit its findings to the association. The International Text Book Company met with the NECA representatives in Washington and visited a number of contractors and chapter managers throughout the country. In his address to the national convention in 1949 in Houston, Executive Vice President Paul Geary reported on the results of this study. He stated that the International Text Book Company found that there was a need for sound principles and management methods in all phases of the electrical contractor's business operations and that specialized training for the industry should be established covering estimating, job

management, sales, engineering, and accounting. It further recommended that textbooks could be written and edited especially for the electrical contracting industry and that these could be available for nationally conducted correspondence school courses or for classroom instruction sponsored by any interested NECA chapter. The chapter would be required to make arrangements with a local educational institution and to appoint its own class instructors. This program was presented to the Board of Governors at its meeting in Houston and was approved. Vice President Geary, in reporting this action to the national convention, stated, "Education is the only sure-fire, and at the same time lawful, method of improving competition and preventing low-cost bidding."

This paper is intended to cover only the formal training programs of NECA. The association has been in the business of education from its very founding, in 1901. Most everything that NECA does is education. In fact, the Articles of Incorporation of the Association state that one of the objectives is "the fostering and conducting of educational courses and programs for the electrical contracting industry, its members, its employees, and the public." These Articles also state, "It shall be a non-profit, mutual improvement, and educational corporation." In Article 1 of the NECA Bylaws, it states, "—the Association shall undertake the following activities in the interest of the public: (1) Provide opportunity for meetings of electrical contractors for their mutual education.—(8) Promote establishment of sound business management practices through education and sponsorship and conducting of courses in business management, accounting, and estimating for electrical contractors and their employees."

NECA has carried out its educational mission in many ways: through the publication of its monthly magazine (which began in 1901), and weekly newsletter, in meetings at both the chapter and district levels, and at the national convention. The Academy of Electrical Contracting also participates in this mission. The purpose of the Academy is "to preserve and utilize for the benefit of the construction industry the wealth of experience and ability" of the Academy members. Emphasis should be placed on the word "utilize".

EARLY EDUCATION

There are many instances in the NECA history of activities that would probably not be considered formal training but which are educational. An outstanding example is the publication, *Electragist's Estimating Manual*. This volume was designed as a textbook on estimating, and was compiled in 1929 from a series of articles prepared for *The Electragist* magazine by Arthur L. Abbot, who at that time was technical director of the Association of Electragists International. For those not familiar with the term, NECA was known during the 1920's as the Association of Electragists International. Mr. Abbot gained his experience and

knowledge of the electrical contracting industry as an employee of an NECA electrical contractor in St. Paul, Minnesota. He later joined the staff of the National Electrical Manufacturers Association, was the editor of the first *Handbook on the National Electrical Code*, and published the first *Analysis of the National Electrical Code*. There was also an interesting article in the 1928 issue of *Electrical Contractor* magazine by John H. Kuhlmeier, a contractor member of the Chicago chapter on the subject of overhead recovery. Mr. Kuhlmeier presented his ideas in seminars around the country.

EDUCATIONAL COURSES

Getting back to the formal training programs, it was determined that perhaps the International Text Book Company was not the best route and that perhaps more satisfactory texts and programs could be developed directly by NECA. The first course developed and made available by the Association was "Accounting". This was developed by the national Association's auditing firm, Henry Owens and Company. As part of this program, there were included appropriate business, job costing, and other accounting forms, many of which are still in use and available through NECA. In fact, many of the forms which are available at this time to NECA members were developed as part of training programs including estimating, job management, business administration, sales activities, and accounting forms.

The next program available through NECA was the Estimating course. This program was developed and completely written by E. R. "Al" Cornish. Mr. Cornish was a NECA field representative on the Pacific Coast. He had practical experience in job management and estimating working for electrical contractors in the Oakland, California area. As a NECA field representative, he conducted workshops in estimating in a number of chapters in the west. He was brought into Washington to prepare the estimating course. This course was very complete and detailed and what might be considered the first full course in NECA's training program. It included such subjects as the estimator and his place in the firm, the estimator's workplace and his tools, an analysis of specifications and drawings, the types of building construction and how the electrical systems fit into the building, electrical construction methods, the take-off from drawings, the explosion of the take-off items, the listing of the materials and labor operations, the development and application of labor units, the preparation of the estimate summary, converting material items and labor units into dollars, and the application of direct job expense and overhead and bidding strategies. The course included a number of examination questions and answers, drawings and specifications for a number of different types of buildings and building construction. There was also one study unit devoted strictly to estimating for line construction.

The Estimating course, as well as those developed later by the association were made available to the membership through three options. The first and most popular was as a chapter-sponsored class. This included a plan and outline for the instructor and a set examination of questions and answers.

The course was also made available on a group correspondence basis and as an individual correspondence course. The same examination questions were used and the answers were submitted to the national association for correction and comments. The group correspondence had a limited acceptance and there was only one person who fully completed the individual correspondence course within the first ten years. There were many enrollments in the individual correspondence course and even though most of the enrollees did not complete the formal requirements and examinations, there is considerable evidence that they benefitted from the textbooks and their study.

The chapter-sponsored classes were popular and a number of chapters conducted courses in successive years, some of them for as many as ten years. The effectiveness of these course depended primarily on the promotion by the chapter officers and chapter manager and the effectiveness of the instructor. Some chapters engaged college professors, but because of their lack of an intimate knowledge of the electrical contracting business, they were not very successful. The best instructors came from the ranks of electrical contracting industry, especially those who had considerable experience in estimating. They included both estimators and electrical contractors. These classes generally lasted three hours, one night a week for two school semesters beginning in September and ending in May. Many of them had formal graduation ceremonies with the presentation of certificates signed by the national association and the local chapter. A basic week-long estimating course is still available from the national association.

The next full course developed and made available by the national association was Job Management. This was also developed and written by Al Cornish. It was as complete and detailed as the estimating course. It included estimating principles, purchasing, warehousing, the arrangement of a warehouse including the use of bins and carts, inventory and material control, and job organization and supervision. This course was never as popular as the estimating course, probably because of the broad subject matter covered. Some chapters chose to use just the parts on job organization and supervision as a foreman training program. These programs usually lasted for one semester and were the forerunner of the Effective Foremanship and Effective Supervision workshops now available from NECA.

Al Cornish also developed a course on business management which was somewhat similar to the job management course, but intended for administrative management rather than job management. This included a supplement on business insurance for electrical contractors based on material from several NECA chapters, especially the Inland Empire chapter and the Oklahoma chapter.

The sales engineering course which was originally recommended never came to being. Instead, a week-long training program was developed and called the "Sales Institute". This was prepared with the aid of outside consultants, but was presented by members of the NECA national staff. This popular course was conducted in a number of locations throughout the country.