

## **FALL 2022 REQUEST FOR PROPOSALS**

**Summary Proposal Deadline: Friday, November 11, 2022, 5:00 PM EST**

### **PURPOSE**

ELECTRI International invites summary proposals from research organizations, and/or individual researchers, consultants, and subject matter experts interested in studying topics relating to Electrical Construction (EC). The Foundation's interests include business aspects of running an electrical construction company, managing projects, supply chain management, field operations, and electrical systems design. The interests encompass all aspects of electrical construction from building systems, including low voltage systems, to transportation and infrastructure, to power generation, transmission, and distribution.

ELECTRI's agenda process, via proposal submission and review, is open to any qualified organization or researcher interested in expanding the knowledge of electrical construction. ELECTRI's goal is to have highly qualified researchers and industry experts addressing important topics that will add value to the electrical contracting industry and its stakeholders.

### **BACKGROUND**

Since 1901, the National Electrical Contractors Association (NECA) has represented electrical contractors, focusing its efforts on improving the contractor's ability to work efficiently and effectively. In December 1988, NECA established a separate, independent organization, **ELECTRI International - The Foundation for Electrical Construction Inc.** to serve as the guiding force in preparing the electrical contracting industry for the challenges of the 21<sup>st</sup> Century.

The Foundation promotes and advances the ability of electrical contractors to meet the demands of today and the challenges of the future. ELECTRI is an international organization through which leaders of NECA and other segments of the electrical contracting industry work together to fund, conduct, and coordinate the industry's most critical research and educational programs. The ELECTRI Council, made up of major contributors, directs ELECTRI's fund-raising and project development mission.

### **PROPOSAL TOPIC DEVELOPMENT AND RESEARCH METHODS**

Researchers/Research Organizations and industry experts may submit up to 3 proposals in total. The proposals should clearly designate the preferred research method for each proposal submitted.

Researchers are strongly advised to review the list of research projects that have received ELECTRI funding in the past (see <http://www.electri.org/content/funded-research-topics>) either to avoid repeating topics or to use a previously funded topic as the basis for a follow-on research proposal.

Researchers are encouraged to develop and submit a concept paper that you believe is relevant to the electrical construction industry. Several concepts may naturally combine under one project. **The Foundation's tendency is to encourage applied research.** Mail/e-mail surveys have proven to be less effective than interviews and/or company field visits. Research applied in companies has proven to be the most useful.

## RESEARCH METHODS AND AREAS OF INTEREST

For the Fall 2022 ELECTRI research cycle, the ELECTRI Council proposes three distinct research methods and has also recommended areas of interest to meet the present and future demands of the EC industry. ELECTRI International is confident the following three research methodologies will provide electrical contractors with the most relevant industry information in a format that is more consumable for all ECs.

### Proposed Research Methods:

**Traditional Research** – The selected researcher(s) will lead the project effort with support from an ELECTRI assigned task force. A mandatory three-page executive summary is required for all traditional research. ELECTRI expects the deliverable(s) from this type of research initiative to be submitted in final form no longer than six months following the award start date for the project.

**Focus Group with Moderator Research** – The focus group relies upon their industry knowledge to address areas of interest that require experience to best determine successful outcomes. It is the role of the moderator to propose processes that best engage the task force to produce quality deliverables that will benefit the industry. The moderator is responsible to guide and coordinate task force efforts and then produce final deliverables. Examples of final deliverables include (whitepapers, webinars, videos, etc.) ELECTRI expects the deliverable(s) from this type of research initiative to be submitted in final form no longer than three months following the award start date for the project.

**Subject Matter Expert Research** – The selected researcher(s) will each be recognized as a specialist in the proposed area of interest. The researcher(s) will work with an ELECTRI assigned task force to provide information that helps bring together research and its impact on electrical contractors. The final deliverables will include a whitepaper + educational webinar. ELECTRI expects the deliverable(s) from this type of research initiative to be completed no longer than three months following the award start date for the project.

**Suggested areas of interest were identified for each proposed research method. However, we are open to considering any research or methodology to help further our contractors and the industry (excluding safety topics) that are not listed below:**

### Traditional Research

- Opportunities for EC's Beyond Battery Storage Installation – Battery Plants, Costs of Replacement and recycling. Identify where contractors need to position themselves.
- Opportunities for EC's in regards to EV Chargers and Electric Vehicles – Recycling and disposal of batteries, augmentation of battery storage systems, alternatives to traditional battery storage (back feeding with EV, etc.). How do EC's position themselves to support this work.
- Key Performance Indicators (KPIs) – metric studies or best practices to help electrical contractors track business operations
- Micro Grids/Smart Grids/Smart Highways – study/update the impact of our future infrastructure with the growing demand for electric needs, i.e. electric chargers for vehicles
- The Future Impact of Alternative Fuel Sources (EV Charging, Hydrogen, etc.) – commercial fleet impacts, sustainability benefits, and factors to be aware of

**Focus Group with Moderator Research**

- Benefits of Selecting an Electrical Contractor at the Start of Design - what owners should consider during the design process, alleviate supply chain constraints
- Service Research - how to sell maintenance agreements, best practices for running a service department, maintaining customer data to protect your relationships, show the value that a service group can add to a company, supplement facility personnel attrition with a Turnkey Service Contract
- Onboarding Resources - develop onboarding resources for all NECA contractors that cover basic standard industry safety rules, HR items, incident reporting, etc.
- Best Practices/SOPs setting up the field for success - develop standard operating procedures, checklists, etc. to make sure jobs are set up for success in the field, a typical tool/consumable list that can be reviewed and ordered before jobs, and best practices for staging materials, offices, etc. on typical jobs

**Subject Matter Expert Research**

- Sustainability/ESG Planning - helping ECs better understand what this is and why it is becoming important to many customers. Layout steps ECs can take to make their business more sustainable in the eyes of their customers, how to calculate/represent aspects like carbon footprint, etc.
- Multi-trade Prefab – the impact that off-site integrators/installers can have on our ECs role in the industry
- Best Grounding Methods for Underground, URD Work, and Distributed Generation - outside line and inside work impacts
- Price Escalations – how have standard electrical components escalated in comparison with commodity indexes, identify correlations
- Digital Electrical Twin - explaining what it is, why it is relevant to ECs, and how it will affect the industry in the future
- Site Evaluation Form for EV Charging Installation – create a flowchart/questionnaire for ECs to ask the right questions in order to provide a quality work proposal
- Light Fidelity (Li-Fi) – explaining wireless optical networking technology and how it will impact our ECs, considerations around infrastructure, and the future of the electrical industry

## PROJECT COST

**Any overhead or travel cost to complete the proposed research should be included in the proposed budget for each project submitted.** A maximum of 10% may be charged for an indirect cost rate with proper documentation. ELECTRI expects to select up to ten projects to be identified and moved forward for full proposal consideration by the ELECTRI Council at its January meeting. Annual project funds will be categorized as “standard”, “special”, and “futurist.”

## CONTRACT TIME

Project duration is a critical part of the proposal. Topics are of essential importance to the EC industry and projects need to be completed expeditiously. Projects should be initiated as soon as possible after award of the contract (January 20, 2023) and must be completed according to the timing detailed in each of the three methodologies above. ELECTRI anticipates that each contract will be finalized within 30 days of the award notification. The researcher’s anticipated time frame for project execution should be clearly stated in the proposal.

## SUMMARY PROPOSAL

1. PLEASE note that the **proposal body must fit the one-page format, or it will not be accepted.** This one-page summary format allows the ELECTRI International Program Review Committee to evaluate the information more efficiently.
2. ELECTRI International will request submittal of full proposals based on project selections made by its Program Review Committee.
3. Clearly identify towards the top of the proposal which research method you are intending to use.
4. ELECTRI International will provide feedback on each summary proposal, upon request.
5. **Electronic submittals are required** and ELECTRI will provide a receipt confirmation by email. Please send your e-mail document as a Word (\*.doc, \*.docx) attachment to ELECTRI Administrator **Laura Holmes at [Laura.Holmes@electri.org](mailto:Laura.Holmes@electri.org)**. Please name the subject line as: **2022 Fall Summary Proposal**.
6. **Only summary proposals received by 5:00 PM EST on November 11, 2022,** will be accepted and included in the review process.
7. **Late submissions of summary proposals or those that do not follow submission guidelines will not be considered.**

## SUBMISSION FORMAT FOR SUMMARY PROPOSAL

### Cover page

Submit a cover page that includes the following information:

- For each participating researcher: Name, title, institution, address, e-mail address(es). Also provide the phone and fax numbers for Principal Investigator.
- Short summary of the Principal Investigator’s qualifications
- Identify which research method you are intending to use.
- Timeframe to complete the proposed research successfully. Clearly identify previous research in this topic area and any resulting publications.

### **Proposal Outline**

The summary proposal (**one page only**) should include brief descriptions of the following:

1. **Title of project *and* a single figure for the estimated total budget.** Details are not necessary, but the total should include administrative costs and any potential travel costs associated with research (Examples: focus group meetings, contractor site visits, jobsites, etc.).
2. **A letter of support,** from a NECA Contractor, NECA Chapter or ELECTRI Council member in promotion of the proposal.
3. **A three-minute video** submitted via **YouTube**.
4. **Purpose and justification:** Describe how the project is relevant and useful to the electrical contractor and define the intended audience of the final product (e.g., Electrical Contractor Executives, Project Managers, other organizations). Explain what conditions in the electrical contracting industry justify the need for this research.
5. **Outcome and dissemination:** Describe the format of the physical end product/publication (manual, video, online, or other) *and* how you think this product will be used by the intended electrical contracting audience at the time of publication and into the future 3, 5, or 10 years out. Indicate whether this research project is one that could be considered as a seminar to be taught through NECA Education in a live or on-line format. Offer any other options for disseminating these research results that can be used to reach the intended audience.
6. Clearly state whether this project is considered the first of a series or if it will be self-contained. Although it is recognized that future research opportunities are often identified as a project is carried out, **ELECTRI International discourages projects that will extend into follow-up phases unless a clear and strong justification is provided.**
7. **Brief description of work plan or method of research:** The Summary Page should also include related research projects completed by the proposed researcher or team. Please indicate if you plan to use undergraduate or graduate students in the research process. Additionally, since ELECTRI promotes applied research, a demonstration of the research in an industry setting is encouraged.
8. Clearly state your willingness to accept the terms of the ELECTRI Research Agreement.

**TIMELINE**

<b>DATE OF 2022 RFP:</b>	<b><u>FRIDAY, SEPTEMBER 23, 2022</u></b>
<b>Deadline Summary Proposal Submission:</b>	<b><u>Friday, November 11, 2022 - 5:00 pm EST</u></b>  A cover sheet, one-page summary, and three-minute video (on YouTube with closed captions) of the proposed project must be submitted electronically to <a href="mailto:laura.holmes@electri.org">laura.holmes@electri.org</a> with the subject heading: <b>2022 Fall Summary Proposal</b> .  Please review RFP information and format.
<b>Notification of Full Proposal Submission:</b>	<b><u>Friday, November 28, 2022</u></b>  Researcher will be notified if his/her proposal has been selected for further review and requires submission of a full proposal. See section on information for full proposals.
<b>Deadline Full Proposals Submission:</b>	<b><u>Friday, January 6, 2023 - 5:00 pm EST</u></b>  If requested, researcher must submit full proposal electronically along with 3-minute video proposal (include close captioning) summarizing the research to <a href="mailto:laura.holmes@electri.org">laura.holmes@electri.org</a> with the subject heading: <b>2022 Fall Final Proposal</b> .
<b>Announcement of Research Grant:</b>	<b><u>Friday, January 20, 2023</u></b> Research grant announcements will be confirmed electronically.

**GUIDELINES FOR THE FULL PROPOSAL**

Researchers will be notified by November 28, 2022, if ELECTRI requests a full proposal based on the summary proposal. In preparing the final proposal, please follow the outline below. The goal is to receive and review proposals that succinctly and clearly display project objectives.

**1. Cover Page (1 page maximum)**

- a. Applicant(s) (include name, mailing address, e-mail address, phone and fax of primary applicants and subcontractor).
- b. Title of project and method of research proposed.
- c. Project Summary (define the objective and final product and explain why it is needed).

**2. The Proposal (5-page maximum)**

- a. Introduction and Justification: Describe the problem or issue to be addressed, the construction industry conditions, and current practices related to this research, and specifically what is needed to address these issues.
- b. Goals and Objectives: Describe major product(s) or purpose of the project and how the product(s) will be used by electrical contractors and the electrical industry at publication and on into the future for 3, 5, or 10 years. Who specifically will be the intended audience of the research results?
- c. Work Plan: A detailed description of what deliverables will be produced and when they will be

completed. A schedule that includes completion and major milestone dates is very important. List the timing of any project task force meetings and the objectives of these meetings; list personnel who will be required and which segments of the electrical contracting and electrical industry allies will be included. **We encourage researchers to break down cost for your work plans.**

- d. Product Information Dissemination: Will the final product be introduced at seminars at the NECA national convention or other forums? Will articles be developed for industry press to define progress and results of the project? Is this product one that could be considered as a course to be taught through NECA Education in a live or on-line format? What other mechanisms could be used to disseminate the results to both contractors and to other members of the construction industry?
- e. Benefit to the Industry: Define direct benefits to contractors, distributors, utilities, manufacturers, or other industry allies at the time of publication and on into the future for 3, 5, or 10 years.

**3. Personnel (Half-page per researcher)**

Provide a short biography for each project researcher. Clearly indicate relevant qualifications and status of previous/current ELECTRI International research.

**4. Budget (Separate page – 1-page summary)**

It is not necessary to include budget notes unless ELECTRI requests further information on a specific item.

**5. Research Agreement**

State whether you are willing to accept the terms of the ELECTRI Research Agreement.

**FINAL PROPOSAL ELEMENTS, REVIEW, AND PROJECT MONITORING**

- 1. **Electronic submittals are required** and ELECTRI will return a receipt confirmation by email. Please send your e-mail document as a Word attachment to: Laura Holmes at [laura.holmes@electri.org](mailto:laura.holmes@electri.org) with the subject line: **2022 Fall Final Proposal**.
- 2. The total proposal, including cover and budget pages, shall not exceed eight (8) pages, unless there are more than two researchers, and the biographies require more than one page.
- 3. The final proposal must be submitted by **Friday, January 6, 2023, by 5:00 PM EST**.
- 4. A Task Force will be assigned to monitor each project.
- 5. **The products of all funded research projects become the property of ELECTRI International. All copyrights and royalties resulting from the final products of the funded proposal will become the exclusive property of the Foundation.**
- 6. The following limitations will apply to the budget:
  - a. Fringe benefit costs require proper documentation.
  - b. Automobile travel is to be calculated at the prevailing federal per mile rate for 2022.
  - c. A maximum of 10% may be charged for an indirect cost rate with proper documentation. This may be achieved by requesting a shared cost arrangement with a research entity.
- 6. A Research Agreement is available for your reference by contacting the ELECTRI International office.

## **PROPOSED PAYMENT SCHEDULE**

The schedule for payment of the negotiated budget will be as follows: 25% after the first phase of the project; 25% upon completion of the second phase of the project, as determined by the parties; 25% upon completion of the third phase of the project, as determined by the parties; and 25% upon acceptance of the final report/product by ELECTRI International. The payment schedule may be modified by mutual agreement. **IF THE ORIGINAL PROPOSAL WORK PLAN CHANGES AT ANY POINT, ELECTRI RESERVES THE RIGHT TO ADJUST THE RESEARCH BUDGET.**

## **PROPOSAL REVIEW PROCESS**

The ELECTRI Council is responsible for approval of project funding. If you are selected to submit a final proposal, you will be paired with a Task Force lead that will be responsible for presenting your proposal to the ELECTRI council during the winter meeting, January 6, 2023. Each final proposal will be reviewed by the ELECTRI Council. In addition to providing the final proposal researchers will be required to produce a 3-minute video summarizing your research proposal which will be shared along with you full proposal to the ELECTRI Council.

Proposals not selected for funding by the Foundation will not be returned to the applicant and may be considered for ELECTRI funding in 2023. Proposals of interest to the Foundation may be subject to revision and negotiation. Final acceptance of project results will be based on review and acceptance by the Task Force and ELECTRI International Staff. A contract detailing the scope of the work and the negotiated budget will be executed prior to the start of the project.

## **MONITORING FORMAT**

All projects selected for funding will be monitored on a by a Task Force on a monthly basis composed of members of the ELECTRI Council, technical experts according to project scope, and a Foundation executive staff member.

## **ELECTRI CONTACT INFORMATION**

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