



## **Electrical Contracting Innovation Challenge**

### **RULES AND REGULATIONS**

#### **2022 ELECTRI Competition for NECA Student Chapters**

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## **2022 Competition for NECA Student Chapters Electrical Contracting Innovation Challenge**

ELECTRI International and the National Electrical Contractors Association (NECA) are pleased to announce the **14th Annual ELECTRI/NECA Student Chapter Competition**. The Electrical Contracting Innovation Challenge (ECIC) provides university students and their faculty advisors with an engaging and fulfilling annual competition that helps foster meaningful interaction between students, their local NECA Chapter, and NECA member companies.

### **ECIC Scenario**

Each faculty advisor and student team will work with their local NECA chapters and contractors to deliver a detailed bid package to “Contractor X” for a new university student center that will be created using a Design-Bid-Build project delivery method. Upon registering for the challenge, each team will receive a set of construction documents from ELECTRI staff. These materials will be less than 100% complete and will provide each team with the resources they need to produce an initial electrical bid package that meets the requirements of Contractor X.

During the following weeks, the student teams will receive a 100% complete construction document package along with a proposed project schedule from Contractor X. At that time, student teams will have a limited amount of time in which to submit their request for information. Each team will then deliver a final bid package and the lowest qualified bid will be awarded the project.

### **All NECA Student Chapter teams will use the same contract documents and general scenario to complete the project.**

The student teams will work with their local NECA chapters and contractors to meet the project requirements of Contractor X by conducting interviews and scheduling office meetings (in the contractors’ bid/war rooms). The goal for each student team is to learn how electrical contractors have responded to similar past projects. These interactions can help the student teams identify common challenges faced by subcontractors, when submitting a bid package where the lowest qualified bidder is awarded the project.

Teams are highly encouraged to interact with their local NECA chapters and contractors for assistance. It is essential for the student teams to work closely with NECA electrical contracting partners to identify the means and methods that take into consideration real-world project parameters including schedule, cost, work force, weather, and other considerations unique to the local project. All interactions with NECA chapters and contractors should be documented in the final proposal. This includes web-based or in-person meetings, training sessions, organized tours, jobsites visits, etc.

## Competition Goals

- Engage members of NECA Student Chapters in a rewarding educational experience.
- Challenge Student Chapter teams to develop professional skills vital to careers in construction such as time management and oral/written communication.
- Foster an interest among NECA Student Chapters in opportunities for meaningful engagement with their local NECA contractors and NECA chapters.
- Provide a mechanism for NECA Student Chapters to create enthusiasm at their university about NECA student chapter membership and eventual careers in the electrical construction industry.

## Competition Format

Working with local NECA chapters and contractors, **student teams are challenged to submit an electrical bid package that provides “Contractor X” with a project schedule and a detailed estimate breaking down the project cost.** Student teams will need to provide additional supplemental information including bid/bond forms, statement of qualifications and any project allowances that should be considered while keeping in mind the project will be awarded to the most qualified low bid. In addition to exploring new products, students are encouraged to explore innovative means and methods of electrical installation that can help streamline the schedule and cost of the electrical system.

Team members are required to prepare a proposal while working closely alongside their NECA contracting partner. The proposal should include a detailed estimate of the proposed electrical system. Teams are advised to emphasize detailed methods for the way they plan to deliver the project to meet Contractor X’s schedule. **Teams should be prepared to encounter real-world scenarios throughout the course of the project, such as design changes and project addenda.** We highly encourage the student teams to be innovative in how they choose to deliver the proposed building’s electrical system.

This competition has been designed to help students gain valuable job skills and experience from local NECA contractors who can assist them in their future careers. ELECTRI anticipates that student teams will gain a new level of respect for the entire construction process and an understanding of the important role each project stakeholder plays during the design and construction phases of a project.

Each team’s written proposal will be judged by NECA contractor members and industry partners who will select the finalist teams to invite to attend the NECA 2022 Annual Convention in Austin, TX on October 15-18. At the Convention, the finalist teams will each make a 15-minute oral presentation followed by a maximum ten-minute question/answer session. A panel of judges enlisted by ELECTRI will determine the overall Electrical Contracting Innovation Challenge winner.

Each team entering the competition is encouraged to create a three-minute video that profiles the team's project and highlights the team members' engagement with their local NECA contractor partner. All videos will be shown at the ELECTRI International Summer Meeting where attendees will select three video finalists. These three videos will then be screened during the NECA National Convention and the winning video presentation will be selected by a vote of contractors in attendance.

In addition to the awards for best student team project and best student team video, ELECTRI International will present team awards of \$500 each, open to every team that submits a full proposal. These awards include Most Innovative Approach, Best Overall Project Estimate, and Most Influential Social Media Campaign.

### **2022 Competition Schedule**

November 11, 2021	Competition Rules and Regulations delivered to NECA Student Chapter Advisors
January 11, 2022	Webinar with ECIC jury and ELECTRI Staff who will answer students' questions regarding the 2022 Challenge
January 31, 2022	Final deadline for student teams to submit any questions about the competition to <a href="mailto:Laura.Holmes@electri.org">Laura.Holmes@electri.org</a>
<b>February 1, 2022</b>	<b>Competition registration deadline for NECA Student Chapter Teams</b> (11:59 PM in each US time zone)
February 9, 2022	Virtual Pre-bid Project Meeting
<b>April 29, 2022</b>	<b>Submission deadline for final proposals in PDF format</b> (11:59 PM in each US time zone)
<b>June 1, 2022</b>	<b>Video Submission deadline</b> (11:59 PM in each US time zone)
June-July 2022	Proposal review by the ECIC jury
July 30, 2022	Notification of review results and selection of finalists
<b>October 15, 2022</b>	<b>Oral presentations at NECA Convention and Award Ceremony</b> in Austin, TX. Top three teams: 15 minutes each + 10-minute Q/A

### **2022 ECIC Competition Scoring**

The top three teams (based on written proposal scoring) will be invited to the NECA Convention in Austin to give oral presentations of their ECIC proposals. The winner of the 2022 ELECTRI ECIC Competition will be the team with the highest composite written proposal and oral presentation score. The written proposal score and the oral presentation score will each represent 50% of each team's final score. Each finalist team's written proposal score will be published prior to the oral presentation segment of the competition.

**Example:**

	Team A	Team B	Team C
Written Proposal Score:	48	47	44
Oral Presentation Score:	45	47	48
<b>Final ECIC Score:</b>	<b>93</b>	<b>94</b>	<b>92</b>

**Team B** would be the NECA/ELECTRI ECIC Competition winner.

**2022 Competition Rules**

**Participation**

- All communications should be directed to **Laura Holmes**, [laura.holmes@electri.org](mailto:laura.holmes@electri.org)
- Student participation is limited to undergraduate students. Students who have graduated within six months prior to the NECA Convention will be eligible to take part in the team’s on-site presentation at the Convention.
- Student teams are expected to have four to six core team members and are encouraged to engage fellow students in supporting roles. A maximum of six team members can present the proposal at the NECA Convention.
- Each university team may submit only one entry and one video.
- All team members are expected to be NECA Student Chapter Members. Teams are encouraged to recruit students from other disciplines to join the chapter and the team.
- Faculty members are strongly encouraged to use the challenge problem as an assignment in an existing course with appropriate academic credit provided.

**External Input**

- Completed proposals must be original work prepared by the team members.
- Teams are expected and encouraged to gain input and feedback on the proposal from NECA contractors and chapter representatives, vendors, material suppliers, and faculty members.
- No team member is permitted to have earned wages for participating in the competition or wages for working on the project selected by the team.
- Much like real-life projects, students should be prepared to manage addenda and change orders throughout the challenge.

### Client Interaction/Outreach

- The project “organization” customer for each NECA Chapter Team must be a local representative who will be provided by ELECTRI.
- Student team members are expected to conduct themselves in a professional manner in all aspects of the competition.
- Student teams are expected to plan all meetings with their local NECA chapters and contractors. All interactions should be conducted in a professional manner that is not disruptive to anyone’s educational requirements.
- Teams are expected to represent accurately the goals and intent of the competition in any website and publication materials they use to develop sponsorship opportunities and outreach messages about their participation in the competition.

### Travel Costs/Sponsorship/Expenses

- Teams are encouraged to seek financial sponsorship to support their team’s travel costs to the Convention and other costs associated with the development of the proposal.
- ELECTRI International will provide a maximum of \$2,000 in travel support to each finalist team.
- Awards for winning presentations and videos will be made to the university department of the winning team.
- Prize money is to be used to support general NECA Student Chapter activities, at the discretion of the NECA Chapter Faculty Advisor.
- The Best Presenter will receive a financial award via a check made payable directly to the winning student.
- Schools will be presented with the financial awards (\$500 each) for Most Innovative Approach, Best Overall Project Estimate, and Most Influential Social Media Campaign. This portion of the competition is open to every team that submits a full proposal.

### 2022 Detailed Scoring

<b>Contractor/Design Qualification Statement</b>	<b>Total Possible Points</b>
<ul style="list-style-type: none"><li>• Written Executive Summary (10 POINTS), including mission statement (5 POINTS) and an explanation of the role each team member will perform (5 POINTS).</li></ul>	<b>20</b>
<ul style="list-style-type: none"><li>• Team resumes – 1-page max for each core team member (1 POINT), uniformity (2 POINTS) and professional appearance (2 POINTS).</li></ul>	<b>5</b>

<ul style="list-style-type: none"> <li>• Summary of the overall project. What did team members learn throughout the challenge and how will this impact them in their future careers? What are some of the key takeaways and lessons learned from the experience?</li> </ul>	<b>30</b>
<p><b>Technical Analysis: Project Qualifications &amp; Special Considerations</b></p>	
<ul style="list-style-type: none"> <li>• Explain why the team is qualified to take on this project. Teams need to produce a statement of qualification.</li> </ul>	<b>25</b>
<ul style="list-style-type: none"> <li>• Explain any allowances that should be considered on the project.</li> </ul>	<b>25</b>
<ul style="list-style-type: none"> <li>• Provide any bid alternatives that should be considered.</li> </ul>	<b>25</b>
<ul style="list-style-type: none"> <li>• Submit a bid form with their final proposal to ensure the team’s project meets financial requirements.</li> </ul>	<b>15</b>
<ul style="list-style-type: none"> <li>• Justify how the electrical system meets design requirements. Provide product data sheets (submittals) for equipment and controls that are to be installed. Teams are encouraged to highlight products that help save time, energy, and money. (Product data sheets should be placed in the appendix section of the proposal.)</li> </ul>	<b>25</b>
<p><b>Application of Means and Methods: Estimate, Schedule, and Other Construction Considerations</b></p>	
<ul style="list-style-type: none"> <li>• Develop a cost estimate for the proposed electrical system. Provide sufficient detailed information to demonstrate that the team’s estimate is thorough and inclusive of all cost areas: material, direct labor, indirect labor, labor escalation, trade contractors, general conditions, equipment, overhead, and profit. Line-item takeoff extension documents can be placed in the appendix, if necessary.</li> </ul>	<b>50</b>
<ul style="list-style-type: none"> <li>• Prepare a project schedule for the proposed work, based on the completion of work in a timeframe that meets Contractor X’s expectations. Provide a narrative of the schedule highlighting major project milestones, crew information, and any weather considerations that explain how the campus will be affected during the project.</li> </ul>	<b>40</b>

<b>Interaction with ELECTRI and NECA</b>	
<p><b>Teams are required to have at least one team member attend the following educational courses. The competition does not require that the same student must attend each course.</b></p> <p><u>Virtual Estimating Training:</u> Teams are required to attend a minimum of eight hours of online estimating training classes. ELECTRI will offer four two-hour estimating courses in addition to provided cloud-based software for students to use for the challenge. Attendance will be accepted for both live and on-demand viewing. Student teams can also work with their local NECA contractor/chapter to schedule additional estimating training courses. (40 POINTS)</p> <p><u>Participate in Monthly Construction Innovation Webinars:</u> Team members are required to participate in monthly webinars hosted by ELECTRI. Real-time participation is strongly encouraged, but recordings will be available if you cannot attend live. (20 POINTS)</p>	<p><b>60</b></p>
<p><b>Teams are required to partner and interact with one or more NECA contracting members as they develop and refine their Electrical Contracting Innovation Challenge proposals. Each team must</b></p> <ul style="list-style-type: none"> <li>○ Provide a summary of the interaction completed with its sponsoring NECA chapter and local NECA contractors. This may include online meetings, phone calls, tours of facilities and project sites, etc. (40 POINTS)</li> <li>○ Maintain a log of the team’s communication and interactions with the NECA contractors/chapter regarding the ECIC project and include it in the proposal’s appendix (10 POINTS).</li> </ul>	<p><b>50</b></p>
<b>Campus/Local Media Engagement</b>	
<ul style="list-style-type: none"> <li>• Teams are encouraged to publicize their participation in the Electrical Contractors’ Innovation Challenge in university/department newsletters, websites, social media, and local media. The submitted proposal should include at least one drafted or published article describing the team’s participation in the competition and summarizing the project. For each media outlet, be sure to use the hashtag #ECIC and tag ELECTRI International and NECA (@ELECTRI_org and @necanet</li> </ul>	<p><b>Max – 40</b></p>

<p>on Twitter). In addition, identify the NECA contractor who is supporting the team during the competition.</p> <p>Teams will be awarded two points for each LinkedIn, Twitter, Facebook, and Instagram post to a maximum of 20 points total for social media and 20 points total for magazine and e-publications. Include links to all additional published articles in the proposal's appendix.</p>	
<b>Format/Appearance</b>	
<ul style="list-style-type: none"> <li>• Each team is expected to submit a final proposal as though it would be presented to the customer for consideration. The proposal should be in PDF format and include a Table of Contents detailing each of the sections in the order they are listed on this scoring checklist.</li> <li>• Five points will be deducted each time content is not placed in the requested order. Omitting the Table of Contents will result in a score of zero out of 25 points for the Format/Appearance section.</li> <li>• Proposals are expected to be of professional quality—with no spelling or grammatical errors, a cohesive format throughout, and written in a uniform voice and style. Proposals should be a maximum of 40 pages and must be submitted in color. (15 POINTS)</li> <li>• An appendix may be added to provide additional material. The appendix may <u>only</u> include contractor engagement logs, media articles, product data sheets/cut sheets, and estimate backup documentation. There is no page limit on the appendix, but <u>each item</u> in the appendix <u>must</u> be cited in the proposal using the format: (See Appendix, page XXX). (10 POINTS)</li> </ul>	<b>25</b>
<b>MAXIMUM POTENTIAL POINTS</b>	<b>435</b>

**Oral Presentation**

ELECTRI International will provide the Rules and Regulations for the Oral Presentation to the three finalist teams selected by the competition jury.

## Video Presentation

Each team is encouraged to document digitally its ECIC proposal preparation, interactions with the organization and NECA contractors.

The video a team submits for the 2022 ELECTRI ECIC Video Competition must be a maximum of three minutes. It should include a summary of the team's experience in the first 30 seconds. The remaining 2.5 minutes should highlight the team's creativity necessary because of the challenges caused by current circumstances, closed campuses, and the inability to meet directly with NECA chapters, members, and community outreach services. The video can be set to music and/or narrated. **The more creative the better!**

All videos will be shown to the ELECTRI Council during its July 2022 meeting. The top three videos selected by the Council will be shown prior to the EC Innovation Challenge Oral Competition at the NECA Convention and some of the videos will be posted to the ELECTRI website. The final top three videos will be scored by contractors attending the Convention. Each finalist video will receive a financial award from ELECTRI International as detailed below.

## Awards

Three finalist teams will each receive a financial award for their respective university program, a plaque, and \$2,000 in travel support from ELECTRI International to attend the NECA Convention. The award for the Best Presenter goes directly to the student winning this category. The awards for most innovative electrical system, best project estimate and best social media post are open to every team that submits a competition proposal.

### Team Presentation

1<sup>st</sup> place \$4,000  
2<sup>nd</sup> place \$3,000  
3<sup>rd</sup> place \$2,000

### Video Competition

1<sup>st</sup> Place \$1,000  
2<sup>nd</sup> Place \$ 750  
3<sup>rd</sup> Place \$ 500

<i>Best Presenter</i>	\$500 (Awarded to Individual)
<i>Most Innovative Electrical System</i>	\$500 (Awarded to Student Team)
<i>Best Project Estimate</i>	\$500 (Awarded to Student Team)
<i>Best Social Media Post</i>	\$500 (Awarded to Student Team)

Every member of each finalist team and the team faculty advisor will receive complimentary registrations to the NECA Convention.