

2025 Competition for NECA Student Chapters
Electrical Contracting Innovation Challenge
RULES AND REGULATIONS

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PROJECT OVERVIEW

ELECTRI International and the National Electrical Contractors Association (NECA) are pleased to announce the **17th Annual ELECTRI/NECA Student Chapter Competition**. The Electrical Contracting Innovation Challenge (ECIC) competition provides university students and faculty advisors with an engaging and fulfilling annual event that helps foster meaningful interaction among students, their local NECA Chapter, and NECA member companies.

ECIC Scenario:

Each faculty advisor and student team will work with their local NECA chapter and contractors to deliver a proposal containing information they learned about the electrical contractor's role when a project's delivery method is design build. Students are to put themselves in the position of an electrical contractor and are to perform various tasks related to the design of electrical systems in the project provided to them.

Teams will receive a narrative, a basic set of architectural and structural drawings, and a Revit model with just architectural and structural links included from ELECTRI staff at the time of registering for the challenge. These materials will provide the foundation for you to design and virtually construct the most innovative electrical system to meet Customer X's needs. The earlier teams register for the competition the sooner you will receive the documentation you need to start the competition.

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

Teams will take the information that is provided to them and will design the electrical scope of the building they are given. Teams will do this through interaction with their NECA partners, NECA chapter, faculty, and ELECTRI. These interactions can help the student team think of creative ideas and solutions that will best serve Customer X's needs.

Teams must create a detailed plan to engage with their local NECA chapters and contractors for assistance. It is essential for the student teams to work closely with a NECA electrical contracting partner to identify means and methods that take into consideration real-world project parameters including cost, work force and other considerations. All interactions with NECA chapters and contractors should be documented in the final proposal. This includes web or in-person meetings, training sessions, organized tours of fab shops and jobsites., etc.

Competition Goals

- Engage members of NECA Student Chapters in a rewarding educational experience.
- Challenge NECA Student Chapter teams to develop skills vital to careers in the electrical construction industry and professional skills in 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 student chapter membership and eventual careers in the electrical construction industry.

Competition Format

Working with your local NECA contractors' teams are challenged to design an electrical system that provides the assigned facility with an innovative solution that is both engaging and sustainable. Students are encouraged to explore new technologies that enhance the functionality of the building while also improving overall life cycle cost and environmental impact.

Team members are required to prepare a proposal. The proposal should include a detailed estimate of the proposed electrical system. Teams are advised to emphasize detailed technical solutions for the proposed systems including lighting controls, building automation controls, power, A/V, renewable energy, access controls, security systems, hands free controls and reduced life cycle cost features that respond to the unique needs of Customer X. Teams should be prepared to encounter real-world scenarios like design changes and project addendums throughout the course of the project.

We highly encourage the student teams to be creative and innovative in how they choose to design and construct the proposed building's electrical system. This competition will also help students gain valuable job skills and experience from local NECA contractors who can assist them in their future careers. ELECTRI anticipates the student teams will gain a new level of respect for the entire construction process and the important roles 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 2025 Annual Convention in Chicago, IL from September 12th through 15th. On site, the finalist teams will each make a 15-minute oral presentation followed by a question/answer session to a group of judges from the

electrical contracting industry who will determine the overall Electrical Contracting Innovation Challenge winner.

This year we are shifting to make all the online training courses to be available on-demand. We will release all the training courses on January 1st when registration opens for the competition. When student teams register, they will receive all the on-demand courses at that time. We will release a schedule of Q&A interactive online meetings to be hosted by the course instructors on January 10th. The online Q&A labs will be scheduled on Thursdays at 5PM ET between February 20th and April 24th.

In addition to the awards for best student team project, ELECTRI International will present team awards of \$500 each, open to **every team** that submits a full proposal: Most Innovative Energy Saving Solution, Most Complete & Detailed Estimate, and Best Social Media Campaign.

2025 COMPETITION SCHEDULE

August 27 th	Competition Rules and Regulations delivered to NECA Student Chapter Advisors
January 1st	Registration opens for ECIC 2025
January 10 th	Online Interactive Q&A Lab Dates Announced (Thursdays - 2/20 through 4/24 at 5PM ET)
January 22 nd	Webinar with ECIC jury and ELECTRI Staff who will answer questions regarding the 2025 Challenge.
February 7 th	Submit any questions regarding the proposal to Alisha Heath at aheath@ermco.com
February 13th	Competition registration deadline for NECA Student Chapter Teams (11:59 PM in each US time zone)
February 20 th	Virtual Kick Off Project Meeting
May 7th	Submission deadline for final PDF proposals (11:59 PM in each US time zone)
June-July	Proposals reviewed by the ECIC jury.
July 31 st	Notification of review results and selection of finalist teams
September 13th	Oral presentations at NECA Convention and Award Ceremony in Chicago, IL. Top three teams: 15 minutes each + 10-minute Q/A

2025 ELECTRI ECIC COMPETITION SCORING

The top three teams (based on written proposal scoring) will be invited to the NECA Convention in Chicago to give oral presentations on their ECIC proposals. The winner of the 2025 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
Final ECIC Score:	93	94	92

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

2025 COMPETITION RULES

Participation

- All project specific communications should be directed to **Alisha Heath**, ah Heath@ermco.com All registration and administrative questions should be directed to Laura Holmes, laura.holmes@electri.org
- Student participation is limited to undergraduate students. Students who have graduated within six months of 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 with 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 final proposal.
- 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.

External Input

- The completed proposal work must be original and 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.
- Teams can engage other industry experts to gain additional insights and perspective from other project stakeholders including but not limited to attorneys, general contractors, subcontractors, etc.
- Teams need to consider their use of Artificial Intelligence technology throughout this competition. If AI is being used by a NECA contractor for the benefit of the construction process, then be sure to document that usage in your final proposals. We will put your final proposals through a software program that will help us identify how much AI was used when creating the proposal. Judges will be notified of AI usage and provided percentages of content generated from AI solutions.

Client Interaction/Outreach

- Student teams 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 in outreach messages about their participation in the competition.
- Should student teams have issues engaging with local NECA chapters or NECA contractors, ELECTRI encourages you to notify Laura Holmes, laura.holmes@electri.org

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 travel support of up to \$2000 to each finalist team.
- Awards for winning presentations 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 winner will receive a financial award via a check made payable directly to the winning student.

Contractor/Design Qualification Statement	Total Possible Points
<ul style="list-style-type: none"> • Written Executive Summary (10 POINTS), including mission statement (5 POINTS) and an explanation of the role each team member will perform (5 POINTS). 	20
<ul style="list-style-type: none"> • Team resumes – 1-page max for each core team member (1 POINT), uniformity (2 POINTS) and professional appearance (2 POINTS). 	5
<ul style="list-style-type: none"> • 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? (30 POINTS) 	30
Technical Analysis: Design Scope / Electrical System Review	
<ul style="list-style-type: none"> • Overall assessment of the design for the proposed electrical system for the facility. Focus on sustainability, security and enhanced user experience. Use of innovative technologies (10 POINTS), systems controls (10 POINTS), and overall life cycle impact cost considerations (10 POINTS). 	10
<ul style="list-style-type: none"> • Ability to address project budget throughout the design process. What aspects of the design must be value engineered once the detailed estimate is finalized? Can the team justify added cost to be made up over the building life cycle? (10 POINTS). 	10
<ul style="list-style-type: none"> • Provide information that supports building life cycle cost savings based on the electrical system. Operations and maintenance cost in conjunction with potential energy savings should be taken into consideration. (10 POINTS) 	10
<ul style="list-style-type: none"> • Explain why the electrical system best suits the customer’s needs. Provide product data sheets (submittals) of new light fixtures for equipment and controls that are to be installed in the lighting retrofit recommendation. (Product data sheets should be placed in the appendix section of the proposal.) (10 POINTS). 	10

<ul style="list-style-type: none"> • Make a recommendation utilizing data (power and cost) to achieve a Net Zero Energy facility. (10 POINTS) *NOTE: What would be required if the customer asked how its project could meet the standard of a Net Zero Energy facility? 	10
<ul style="list-style-type: none"> • Provide a detailed summary of the team’s project that will convince the customer to install the proposed electrical system. (10 POINTS) <ul style="list-style-type: none"> ○ The report should address (at a minimum) the following questions: ○ What are the upfront costs of the proposed system? ○ What is the life cycle costs and advantages of operating and maintaining the electrical system? 	10
Application of Means and Methods: Estimate, Schedule, Revit Modeling, Construction Drawings, and other Construction Considerations	
<ul style="list-style-type: none"> • 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 including 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. (40 POINTS) 	40
<ul style="list-style-type: none"> • Using Revit model, the various elements of your team's electrical system design for the facility. Your model should include receptacles, light fixtures, light switches, fire alarm devices, distribution equipment, data devices, and equipment connections. Then create a set of construction documents. Documents should include the appropriate information to effectively communicate design intent that can used for takeoffs and bidding the job. Drawings should include (at a minimum) Manufacturer, Catalog Number, Fixture Description, Lamp Type, Input Watts, and Voltage. Drawing(s) should also include a symbol legend for control devices. (30 POINTS) 	40
<ul style="list-style-type: none"> • Prepare a Gantt chart schedule for the proposed work. It should be based on the completion of work in a timeframe that meets owner expectations. Provide a brief narrative of the schedule for the customer, highlighting major project milestones and crew information, to explain how the facility campus will be affected during the project. (30 POINTS) 	30

Interaction with ELECTRI and NECA	
<ul style="list-style-type: none"> Teams are required to partner and interact with one or more NECA contracting members in the development and refinement of their Electrical Contracting' Innovation Challenge proposals. Provide a summary of the interaction the team completed with its sponsoring NECA Chapter and local NECA contractors. (This may include online meetings, phone calls, and tours of facilities and project sites, of proposal feedback solicited from NECA members etc.) (40 POINTS) <ul style="list-style-type: none"> 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). 	50
<ul style="list-style-type: none"> Teams are encouraged to include underclassmen (Freshmen, Sophomores, & Juniors) in the development of the team's final proposal. We encourage these underclassmen to own specific areas of focus tied to the overall challenge and for their efforts to be clearly documented. Potential areas of focus for underclassmen would be creation of BIM, participating in online training courses, interactions with local contractors, etc. For each (Maximum of 3) underclassmen assisting in developing content for the final proposal, up to 25 points will be awarded to the team. Scoring will be based on documentation of the underclassmen's overall participation in the challenge. Teams may receive less than the 25-point maximum based on students' overall impact on the proposal (Maximum 75 Points). 	75
Campus/Local Media Engagement	
<ul style="list-style-type: none"> <u>Teams are encouraged to publicize participation in the Electrical Contracting Innovation Challenge in university/department newsletters, websites, social media, and local media.</u> 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 #ELECTRI-ECIC and tag ELECTRI International and NECA (@ELECTRI_org and @necanet on the social platform). Also, identify the NECA contractor who is supporting the team during the competition. Teams will be scored on their overall media campaign. Include links to all additional published articles in the proposal's appendix. (Maximum 40 Points). 	Max – 40

Format/Appearance	
<ul style="list-style-type: none"> • 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. • Five (5) 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 (0) out of 25 points for the Format/Appearance section. • Proposals are expected to be of professional quality—with no spelling or grammatical errors, cohesive formatting throughout, and written in a uniform voice and style. Proposals should be a maximum of 40 pages and submitted in color. (15 POINTS) • An appendix may be added to provide additional material. The appendix may 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) 	25
TOTAL POSSIBLE POINTS	415 MAX

Oral Presentation

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

Awards

Three finalist teams will 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 in Chicago. The award for the Best Presenter goes directly to the student winning this category. The awards for most detailed BIM, most innovative use of technology and best media campaign are open to every team that submits a final proposal.

Team Presentation

1 st place	\$4,000
2 nd place	\$3,000
3 rd place	\$2,000

Best Presenter - \$500 (Awarded to Individual)

Most Complete & Detailed Estimate - \$500 (Awarded to Student Team)

Most Innovative Energy Saving Solution - \$500 (Awarded to Student Team)

Best Media Campaign - \$500 (Awarded to Student Team)

Travel Support and Complimentary Registration for the NECA Convention

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