ELECTRI INTERNATIONAL
Research and Education for the Electrical Construction Industry

ELECTRI 2024 Summer Council Meeting
Recap of Education Sessions

Overview of Boston's Climate Initiatives with Brian Swett, Boston's Chief Climate Officer

Brian emphasized the need to upgrade the grid to reach Boston's goal to be net carbon neutral. Decarbonization, resilience, and energy transition are their priorities of climate action driving this. They found that 5% of their buildings emit 40% of emissions. That 5% of buildings is the focus to get to net zero. Increased demand is making them think differently for new buildings and existing.

Boston is electrifying to reduce emissions while keeping the grid resilient. The city is learning to take advantage of existing infrastructure, but with capacity constraints, they are thinking about geothermal and new technologies to accomplish this.

The city's struggle is the same as ours: we don't have enough labor to perform the work. Brian admitted that what keeps him up at night is not if they have the policies in place, but the labor to perform the work for the grid transformation. Tens of thousands of jobs are needed for decarbonization alone.

Collaboration is needed between the city and utilities to accomplish this goal of net zero by 2050. The city is a large purchaser of electricity. They are focused first on low income neighborhoods for retrofits because they benefit most from affordable energy.

For geothermal, they are performing pilots on apartment complexes and schools.

Boston has a Green New Deal Dashboard- funding tracker, projects, and RFPs, everything related to climate and sustainability.

Boston requires 8-12 new substations but determining where to put them is the factor. They will prioritize low income, and then critical corridors and constrain points.

There are a lot of incentives and rebates available, which means big opportunities for ECs.

View the Boston's Climate Initiatives Presentation here.

Grid Modernization and Sustainability with Jim Hunt (Eversource Energy) and Nicola Medalova (National Grid)

Eversource Energy covers Massachusetts, Connecticut, and New Hampshire, which is a high energy cost region in the U.S. They anticipate households to double or triple their energy use

with electrification. They are working to convert heat pumps away from delivered fuels like oil. Because solar power is not an option in the winter and only has 13% capacity factor in New England, they are working to meet the demand another way. Jim outlined Cambridge, MA as the location for a new project for an underground substation.

National Grid is a global company that voers Norway, Denmakr, Netherlands, and the UK, so they are able to learn from other parts of the world and can apply those methods to Boston. The European governments have pushed much faster for decarbonization, and Boston is forward-thinking in a similar way.

They are anticipating a 2.5 increase in the amount of demand between now and 2050. There isn't space for this increased load, so we need new innovations and technologies. Nicola cautioned that it can't be more poles, wires, and substations only, we have to consider more innovative options to be different.

Load growth is the key is reliability. Power outages are a bigger factor when everything in the house is electric. It is life-threatening at that point so reliability is critical. $75 Billion is committed to be spent in five years for energy transition in the U.S. across transmission and distribution. They have developed a preferred contractors list and increased visibility to the business plans. The goal is strategic relationships with contractors to invest in tools and people to know what work is coming.

Siting and permitting will be critical to success. We need everyone's policies to align. It's about people, from labor, to engineers, to policymakers. The transition needs to make sense in terms of cost and the work needed to make it happen. There are more stakeholders than ever before, so we need to get involved in communities to make this happen.

NECA and IBEW Working Together in Boston with NECA Boston's Kristen Gowin and Local 103's Lou Antonellis

NECA's Boston Chapter and IBEW Local 103 are two good teams that work well together with highly functional relationships. NECA's success is IBEW's success and vice versa.

NECA and IBEW take the city's challenges and looks for solutions together to be industry leaders.

They focus on business development to be aware of and tackle new opportunities. They are proactive instead of reactive. They work to help the city achieve its goals and be a partner to deliver success.

The Boston Chapter's staff includes a business development, DEI, and lobbying. They ensure they are part of the city's conversations with policymakers and make sure pro labor policies are injected into the state legislature's policies.

In terms of Prefab, they were outsourcing it because customers were requiring it for cost and productivity. Previously, a lot of the prefab work was nonunion and out of state work. They wanted to work together to bring prefab in house with union labor. The problem was inside journeyman in prefab shops was expensive, so they created prefab language saying it has to use union labor but it's a CW rate (35% of wage). It is now cost effective to use union labor for prefab in their MLU. They also wanted to communicate this with the customers, so they knew about the agreement and how labor and contractors worked together to find a cost-effective solution.

In terms of networking technician and Systems Integration, Massachusetts is a license state, meaning contractors, electricians and technicians are licensed. Systems integration was hard to identify to put into their telecommunications agreement. They had a year-long task force that determined that a network technician is outside of the telecom and inside agreement, because training is different so the apprenticeship program is not needed. Working hours are different to "meet the needs of the client" and the referral is different. They determined that the general foreman technician rate is what the networking technician rate is.

NECA Boston and Local 103 received a $600,000 grant to upgrade their wind turbine at the training center so they can train their apprentices on it and do that work that's coming to the area.

Branching into Mechanical with Egan Company's James Ford, Thompson Solutions Group's Skip Perley, and The Brandt Companies' Craig Whaley

The panel outlined that the majority of projects are electrically driven, especially megaprojects. Electrical is driving mechanical in schedule and scope and dollars.

When it comes to who the customer is that they are trying to get closer to? Their answer was Industrial. Customers there can't keep maintenance and engineering staff, so if your staff can create continuity and build that relationship by knowing the facility better than the customer, then it puts you in a good position.

Skip referenced one of their customers, the Blue Bunny Ice cream plant. It has heavy metal and industrial piping and plumbing needs and was looking for someone they trust, and they had that trust with Thompson. This encouraged them to transition to full MEP projects so the customer deals with less people.

Craig saw more existing buildings than new buildings, so more opportunity in that existing building market and retrofits, which encouraged Brandt to get into that work.

Only 20% of Egan's multi-trade customers they actually approach with multi-trade options. Usually they are hired for one part of the job, and make a good relationship, then are asked to do the rest of the work. It is more difficult to approach a customer with all the solutions because they don't always want to put all their eggs in one basket. If you over-perform on the electrical side, the next one they will want you for mechanical too. It is market driven. 50% of GCs are open to the design build approach.

They have experienced initial pushback from GCs saying it can't be one price, and requiring them to bid separately. But then typically what happens is the Project Managers from that same GC will ask for you to be brought in on full design build MEP jobs with that same GC just six months later.

The warranty exposure is lowered on MEP jobs because you own the risk across the board, which results in significant risk reduction.

They cautioned that even when the customer sees us as one company, culturally internally they are still separate. For example, Electrical will put in a change order, but that doesn't work now with them all being under the same company.

Who is the PM and who is the contact with the GC on these MEP jobs?

- Consider how the GC wants us to perform the work and what staff will meet their requirements. MEP Project Executives run those jobs with a development training program.
- Electrical or mechanical will be the relationship owner and then the other will be a PM so you can measure individual productivity and share the savings.
- Most GCs want one individual to talk to for both, that's the benefit of MEP.

Multi-trade prefab and BIM is what they are heading toward. Their CWs and helpers want to work across MEP, not just electrical.

Does it help you promote design assist better? The customer has to ask for it. The value is there but the market has to want that. Flip design build to design assist and the value is there.

Can you remain small and be multitrade? No, you have to have some level of scale. If you can financially cover it and take on that risk, you can get there but it is harder. Your company has to have the ability to eb and flow with the risk.

When it comes to Building Automation Solutions and the service component, technology in that area is moving fast and the ability to control those components remotely is very product driven. Having purchasing power with those partners is a key advantage. Once you're in the building, it's hard to get out because they need you to run it with that technology.

Preventative maintenance vs. service is being more proactive. Building turnover makes this tough but it's a critical piece of the service business. NFPA70B will bring that business to us. If the customer does not want to do preventative maintenance, they offer a bank of service hours that can be applied. That's more sales and a critical piece.

Advice? Take the time to survey the market and just do it.

NECA CEO Update with David Long

David announced NECA's partnership with NEMA and NEMRA on supply chain. They are all working together to face the labor shortage and pressure from tech companies on manufacturing and distribution. They are also aligning on political affairs to deal with critical issues on Capitol Hill together.

Data centers and chip plants are creating a new dynamic. Over 600 data centers are either being built, in permitting, financed or in design. They consume so much energy so the infrastructure going along with them is massive. It's going to require manufacturing like never before. This work is not slowing down. The only sector slowing down is commercial construction due to remote work. Nuclear power is going to be crucial. Transmission lines need to be built and that work isn't stopping.

The impact on our contractors is that big contractors are getting bigger. Because of the electrical transformation, there is a massive amount of money to be made so companies are getting larger, but with that comes risk. Even massive companies have cash constraints because their jobs are huge jobs with lots of employees to pay. Many companies are being approached to be acquired because the big companies need their people.

We need more IBEW workers and to adjust the ratios to address this new work. Portability and prefab continue to be part of the conversation with IBEW. An Acquisitions and Mergers agreement is also in discussion.

He highlighted the importance of mental health and the concerns with increased suicide in construction. He encouraged attendees to utilize and share the suicide prevention hotline and protect your employees by providing outreach and support.

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The Impact of the Better Buildings Challenge with Department of Energy's Maria Vargas

In 2011, the problem was the U.S. spend $800 billion a year to power buildings, plants, and homes, and 20% of that energy was wasted. The goal was to eliminate that energy waste to save costs. There were a lot of opportunities around this so a goal was set to make our buildings 20% more efficient in ten years, and to create American jobs, improve energy security, and protect the environment.

Energy efficiency is the path to decarbonization of buildings. This created the Better Climate Challenge, a portfolio-wide reduction in emissions of at least 50% over 10 years. There are no offsets, and the baseline has to be no more than 5 years ago.

The Department of Energy (DOE) is working in partnership with the market to see where organizations are succeeding and where they are stuck in the process of decarbonization. The first step is determining where the majority of your energy use is. The DOE has a Better Buildings Solutions Center to see how others are doing it.

Maria acknowledged that workforce challenges are hitting this program as well. There was historic investment in infrastructure with the Bipartisan infrastructure Law and Inflation Reduction Act, with $80 billion in federal funding announced so far. Manufacturing is a huge focus, with a strong American supply chain as the goal. She stressed the importance of the electrical industry, with a need for electricians increasing by 7% in the next eight years.

ECs are strategically positioned to help their customers be successful in achieving these goals of decarbonization. They are in the best position to educate building owners about the energy transition and instill confidence in electrification. DOE is developing strategies to achieve this with their partners. The focus on decarbonizations means greater electrification. ECs are critical and in demand to expand their influence.

View the Impact of the Better Buildings Challenge Presentation here.

2025 Connection Summit

Kellie Holland and James MacDonald announced that we are considering Bergamo, Italy for the 2025 Connection Summit and partnering with ABB to explore their Experience Center and eMobility lab. Keep an eye out for dates and additional information in the next few months. The goal is to provide you with the tools and education you need to provide your customers with these new opportunities.

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Board of Trustees Update

Kellie Holland announced that the Board of Trustees approved a change to the cost structure of joining the ELECTRI Council, to begin on January 1, 2025. All existing Council members are grandfathered into the current payment structure. This change was decided based on the increased demand for research and education from ELECTRI, as well as the increased costs since the cost to join the ELECTRI Council was established in 1989.

Beginning on January 1, 2025, any new chapter or company who joins the ELECTRI Council will join with the options below. This structure only applies to new commitments to join the Council, not to any chapter or company that is increasing their commitment to another level.

	One-Time Payment	3 Years (3%)	5 Years (5%)	10 Years (10%)	15 Years (15%)	20 Years (20%)
Annual Payment	$150,000	$51,500	$31,500	$16,500	$11,500	$9,000
Total Paid	$150,000	$154,500	$157,500	$165,000	$172,500	$180,000

Industry Partners have the One-Time and 3 Year Option

Large Contractors (over $100M) have up to the 5 Year Option

Kellie also encouraged current Council members (who are not impacted by this change), who may have paid off their initial commitment to ELECTRI, to consider increasing their commitment to ELECTRI. You can view our current Council members and their current levels here.

If you have any questions about this change, please contact Jessica Cardenas at jc@necanet.org.

ELECTRI Research Voting Results

The ELECTRI Council was presented with nine research projects and voted to fund the following projects:

- Forecasting Absenteeism in the Electrical Construction Industry Through Historical Data Analysis and Proactive Employee Engagement - Ashrant Aryal
- Examining the 4x10 Work Week: Benefits, Challenges, and Data Insights - Hala Nassereddine
- Managerial Strategies for Improving Project Level Cash Flow and Payment Terms - John Killingsworth

If you'd like to join a task force for one of the research projects, click here to SIGN UP or please reach out to Amanda Harbison at Amanda@electri.org.

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2024 Wendt Award Winner Announced

Josh Bone announced that Kellie Holland is the recipient of the 2024 Wendt Award. Kellie will be honored at the NECA Convention in San Diego. The Council and ELECTRI team thank Kellie for all of her hard work as ELECTRI Chair and the exciting initiatives she has spearheaded in the last two years.

Project Management Apprenticeship Update with American Apprenticeships Work's Nick New and Charlie Cornish and Miller Electric's Patty Keenan

ELECTRI is awaiting approval from the Department of Labor for the National Project Management Apprenticeship. Approval is expected in the next week.

The goal of American Apprenticeships Work (AAW) is to make this process as easy as possible for our contractors to hire apprentices and get involved in this program. They have been working with Miller Electric and their apprenticeship program for several years and are well equipped to walk our contractors through this process.

90% of the apprenticeship is on-the-job training. It is tailored learning from your company. 10% is technical instruction and weekly coaching appointments.

The curriculum includes PM 101 from start to finish with NECA and ETA classes and training. Apprentices will also learn the company's specific processes with the software used by the company. PMI courses are included to learn best practices in scheduling, communicating, and relationship building. Courses are included in AI and productivity skills to utilize in Project Management. The learning process will be engaging but also fit into the flow of work.

AAW has a team working in Success Management who will work with the apprentices to support them through the process and help them apply what they learn. This is a competency-based program, so there are no exams. They must perform the work and prove to the contractor that they can do the job.

Miller Electric utilizes the PM apprentices to amplify the NECA/IBEW Trade Apprenticeship. The electrical apprenticeship works because there is so much support, and that's what the PM apprenticeship will also do.

Miller Electric focuses on amplifying talent and on developing the talent they already have so their employees see career growth and want to stay in the industry. This is going to be critical going forward for all of our contractors to keep their employees growing in our industry.
View the Project Management Apprenticeship Presentation here.

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ELECTRI Business Coaching Network Launch

ELECTRI is excited to announce the launch of the Business Coaching Network. This is a new initiative that connects contractors looking to diversify, grow or expand their business, improve operations or cash flow, or receive guidance on a new market, with contractors who have experience in those areas. ELECTRI will facilitate an initial meeting between the coach and client and then if both decide to move forward, coaching hours can be purchased for $250/hour.

If you'd like to sign up to receive coaching or to be a coach for this program, please fill out the appropriate form on the Business Coaching website.

You can view our current coaches available here: https://electri.org/electri-business-coaching-network/

If you have questions on this program, please reach out to Jessica Cardenas at jc@necanet.org

View the ELECTRI Business Coaching Presentation here.

Current Research Updates with Miller Electric's James MacDonald and Amanda Harbison

For our ongoing research projects, we have requests for information for several projects:

Incentive Pay- we need information from contractors who are using incentive pay and can show data on absenteeism, turnover and productivity. We need actual data, not opinion on this topic. We also need contractors who are not using incentive pay, but can speak to the adverse effects and the impact.

Risk logs- examples from our contractors they can share on risk logs, and performance matrix of subcontractors in PID projects specifically.

We need task force members for our approved research projects. Please sign up, or volunteer someone from your company, who can attend task force meetings and aid in the research.

There are 22 ongoing research projects in various stages of progress with many projects being completed soon.

View the Current Research Updates Presentation here.

2024 Partnership for Career Advancement (PCA) Update

The Council voted to approve the two PCA finalists for 2024. The goal of the program is to educate the researchers on our industry so they can be better researchers for us in the future.

Sooin Kim – Wayne State University

Deniz Besiktepe – Purdue University

2023 PCA Awardee Presentation with Amelia Celoza, PhD

Amelia's program was focused on MEP Contractors and GCs: What is the Cost of Inexperience? Her task force comprised of Council members has worked to educate Amelia on our industry and helped guide her through the project.

Her research verified that the workforce is aging, with 41% of construction workers retiring by 2031 and 93% of construction firms have job openings.

She completed discovery interviews with contractors in our industry, and reviewed academic literature. She learned there is not a lot of current research on specialty trades, as it is mainly on general contracting. She also completed a design thinking workshop to create a common understanding of what processes are currently in place, what's going wrong, and where do we need to go as an industry. She is also conducting case study interviews to understand what could be done right now to try to address the impacts of inexperience.

Current challenges include inexperience in design, scheduling, purchasing, and installation. Amelia highlighted the common problems and identified the root causes of those. We have to inject construction knowledge into the new tools available for it to work smoothly together. The goal is to bring the trades in during the design process with the engineering and GC teams.

The path forward includes Lean project delivery, early contractor involvement, metrics and transparency, collaboration, and learning and training.

View the Cost of Inexperience Presentation here.

BREAK OUT SESSION SUMMARIES

Go or No Go—When to Say Yes or No to a Project

The session addressed several key topics, including contract negotiations, project selection criteria, local hire requirements, contract language, change orders, and project partnerships. The discussion focused on ensuring alignment with company strategy and core values, securing favorable contract terms, addressing challenges with local hires and change orders, and enhancing decision-making and communication strategies in project management. Action items from the meeting included implementing a standardized go/no-go checklist, negotiating better contract terms, creating a standardized change order program, and educating staff on new change order procedures.

Contract Negotiations and Project Evaluation

- Contract negotiations can extend for months to achieve the best terms.
- Client funding may cause pushback on numbers.
- Projects are evaluated based on alignment with the company's strategy and core values.
- Preference for repetitive business and avoiding projects with more than three bidders.
- Focus on clients where the company can provide significant value.

Project Selection Criteria

- Alignment with company strategy and core values is crucial.
- Emphasis on repetitive business and limited bidders.
- Importance of favorable contract terms and shared risk.
- High value placed on vendor partnerships.
- Preference for direct relationships with end users.

Local Hire Requirements and Challenges

- Certain projects require local hires from specific zip codes.
- Union involvement in meeting local hire requirements.
- Challenges in meeting local hire quotas in certain areas.
- Importance of documenting efforts to meet local hire requirements.

Contract Language and Risk Management

- Careful review of contract language, especially regarding liquidated damages.
- Limiting liquidated damages to a percentage of contract value or profit.
- Importance of daily reports and documentation.

- Strategies for negotiating favorable contract terms.

Change Orders and Profit Margins

- Challenges with change order markups in public contracts.
- Strategies for incorporating additional costs in change orders.
- Importance of understanding contract limitations on change order pricing.
- Using NECA manual for labor units in change orders.

Project Partnerships and Decision Making

- Evaluating potential partnerships based on core values and past experiences.
- Importance of documenting directives and evaluating cost impacts.
- Strategies for handling unexpected project changes.
- Emphasis on communication and documentation in project management.

Sample Go or No Go Forms

- Christenson Electric – GNG
- Collins Electric – GNG Step 1
- Collins Electric – GNG Step 2

Christenson
GNG

Collins Electric
GNG 1

Collins Electric
GNG 2

AI in Practice—Where to Start?

The ELECTRI breakout session on AI in Practice—Where to Start? Was led by Red Top Electric's Mike Curran, Big State Electric's Jared Christman, and E.M. Duggan's Jeff Elwell.

To get started in AI, find a champion in your company. It's not a part time job if you want to dedicate your company to AI and its applications. Processes and workflows must be in place for your AI to work for you. That means data and standardized processes.

AI can benefit companies small and large, but the execution will be different depending on resources available. AI is just another tool we can use to move the industry forward. It gets rid of erroneous and bulky tasks, taking the place of administrative work.

The person using AI should not use it as a crutch, but instead as a tool to better perform their work. We need to provide SOPs to guide through those processes. Education is key to your employees. The ones who know what to ask in the right way are using it correctly. You can't pretend that the AI knowledge is your knowledge, instead use it to bolster your knowledge. Estimating a job is a great way to learn the project, and we don't want to lose that by using AI.

You can use AI to explain contracts or review invoices, but you have to have that knowledge yourself to use it properly.

AI will transform estimating in the future, resulting in everyone having the same estimates because it will be so specific. We will need new ways to bid jobs and find work and will need to work together as an industry.

Power BI can be a useful tool in predicting safety concerns because it can track employees' days of work, age, overtime, etc. to predict and prevent safety issues.

There are a lot of new AI software to be on the lookout for: Microsoft Copilot, GitHub Copilot, Chat GTP-4o, Perplexity, Myaidrive, Procore Copilot, Augmenta, and more.

You can clean up administrative tasks with AI by uploading your SOPs into the copilot to ensure your company's standard is followed. We want the software to adapt to our processes because our processes are what made us successful.

In terms of safety, My OSHA assistant is a great tool for safety.

In terms of security, nothing is safe with AI. One way to combat this is to set up your own internal AI so it's more secure and only pulls data from places you trust.

Useful Chat GTP Prompts (reference the slides). You can create your own AI tool for your company that pulls from your own information. You can tell it to pull from the National Electrical Code and your city code, which it can pull from the outside world and compare to your internal information. You can tell it to pull the answer only from your internal data, not to go outside and try to find an answer to ensure that the responses are useful and accurate.

This can only be done with the paid version of Chat GTP, which costs $20/month.
Go to:

- My GTPs

- Create GTP
- Fill out form to create it.
- Upload your files for it to pull from.
- Uncheck the box that says “use conversation data in your GPT to improve our models”.

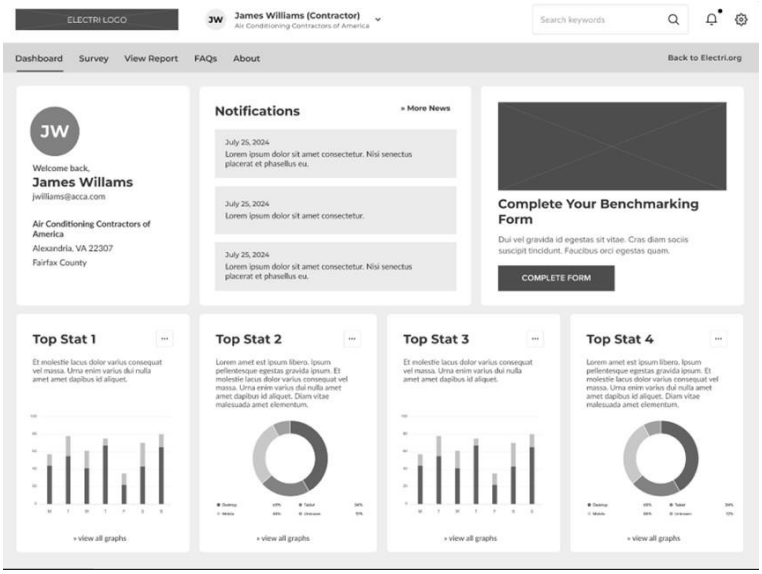
Pelles.ai is working on AI technology to upload drawings and get takeoffs. Pelles is trying to understand models and drawings to learn PDFs and what the symbols mean and doing the takeoffs for you based on your numbers, write RFIs, etc. They are concentrating on MEP, unlike other tools, so keep an eye out.

View the PowerPoint slides from this session.

KPIs – What Metrics are Driving Profits, Productivity & Growth

During the breakout session on KPIs – What Metrics are Driving Profits, Productivity & Growth, discussion leaders Justin Kohlman, Mica Ashmore, and Tony Waters guided participants through a comprehensive review of the new ELECTRI International KPI website and the associated KPI research. The session aimed to address key questions regarding the new platform and its metrics. Initially, the leaders shared a list of 18 KPIs, seeking input from the group on which metrics they considered most critical. This discussion helped in identifying the most vital metrics for different business contexts.

An update on the KPI website was provided by Amanda Harbison, highlighting its current status and future plans for leveraging the platform to enhance industry standards and practices. A significant part of the discussion revolved around understanding which industry metrics could provide the most benefit. Participants explored ways to increase buy-in and participation with the ELECTRI KPIs. Emphasis was placed on the need for security and privacy to gain contractors' trust, detailing the precautions ELECTRI is taking to ensure data security. Contractors were reassured that their data would remain secure and accessible only to them, with only aggregated data being used in main reports.



The importance of benchmarking was another critical topic, with discussions on how contractors can benchmark against their peers using the 18 KPIs. It was suggested that data filters by size, area, and work type (e.g., industrial, commercial) could enhance the benchmarking process. To encourage participation, the group proposed that contractors be required to input their data by a specific date to receive their reports. Additionally, showcasing the website's wireframe at the national convention could help contractors understand the data input process.

A list of contractors willing to test the KPI website was compiled and if anyone else would like to participate please reach out to the ELECTRI staff. Graybar's generous donation to the project was acknowledged, along with discussions on the potential benefits of KPIs for the industry. Potential partnerships with organizations such as NAED and CFMA were considered to leverage similar KPIs and benchmarking reports.

Finally, future KPIs were discussed, with suggestions for new metrics that could further enhance the platform's utility. These included revenue per employee, change orders vs. claims, positions planned vs. positions filled, hit rate, excess material, profit per manhour, and value of bids vs. revenue. This session provided valuable insights and collaborative ideas to advance the effectiveness and adoption of the future ELECTRI International KPI website.

View the Top KPIs for Electrical Contractors PDF here

The Future of Offsite Construction—Shifting from Prefab to Manufacturing

The Strategy and Planning Meeting on "Prefab to Manufacturing" focused on the challenges and opportunities within the prefab industry. Key points included the need for collaboration between various stakeholders, market trends, manufacturing challenges, business strategies, union relations, collaboration, and future educational strategies. Action items included developing educational materials, creating a playbook for pricing, and estimating prefab components, and increasing stock to build volume. Discussion emphasized the importance of

educating stakeholders on market trends, standardization, and the benefits of prefab to stay competitive in the industry.

Prefab Challenges and Opportunities:

- Discussed the need for collaboration between contractors, IBEW, and NECA
- John shared experience with Local 14 in Wisconsin, creating new classifications for fabricators and assemblers.
- Highlighted the strategic decision to work with Local 14 due to lower wages.
- Discussed shipping challenges and tax implications of prefab across state lines.

Market Trends and Prefab Applications:

- Explored prefab trends in commercial, data center, and medical sectors.
- Discussed jurisdictional issues and challenges with shipping prefab across union boundaries.
- Identified the struggle to transition from prefabrication to true manufacturing processes.
- Highlighted the importance of standardization in prefab processes.

Manufacturing Challenges and Solutions:

- Discussed the need for a shift from high mix, low volume to low mix, high volume in manufacturing.
- Explored challenges with managing fluctuations in fab shop workload.
- Highlighted the threat of non-union modular companies entering the market.
- Discussed the need to educate IBEW on market trends and opportunities in prefab/manufacturing.

Business Strategies and Union Relations:

- Explored strategies for partnering with other trades and contractors for multidisciplinary prefab.
- Discussed the importance of educating estimators and project managers on the benefits of prefab.
- Highlighted the need for better communication and standardization in the prefab process.
- Discussed challenges with union agreements and the need for more flexible workforce classifications.

Collaboration and Market Positioning:

- Explored opportunities for contractors to specialize in different prefab components.
- Discussed the need for better marketing and online presence for prefab products.
- Highlighted the importance of educating smaller contractors on the benefits of prefab.
- Discussed the trend of larger companies getting bigger through mergers and acquisitions.

Education and Future Strategies:

- Emphasized the need to educate IBEW and business managers on market trends and opportunities.
- Discussed strategies for addressing fears and resistance to change within unions.
- Highlighted the importance of focusing on cost savings rather than just price in prefab.
- Discussed the need for a balanced approach in working with general contractors and maintaining union labor standards.

Action items:

- Develop educational materials on the cost savings and value of prefab for IBEW and contractors.
- Create a playbook for pricing and estimating prefab components.
- Develop strategies for increasing stock and sell components to build volume.
- NECA MLUs updates for Prefab.