CITY OF ST. CHARLES ILLINOIS • 1834	**AGENDA ITEM EXECUTIVE SUMMARY**	**Agenda Item number:** 5.C
	Title:	**Recommendation to Approve a Resolution to Authorize a Purchase Order to Electric Power Engineers, LLC for Electric Utility Ten Year Study and System Analysis**
	Presenter:	**Paul Hopkins**

Meeting: Government Services Committee	**Date:** November 27, 2023	
Proposed Cost: $ 198,000	**Budgeted Amount:** $ 80,000	**Not Budgeted:** ☐

The proposals received were all substantially above the budgeted amount, but Finance has stated the Electric Fund reserves are well positioned to cover the additional costs.

Executive Summary (if not budgeted, please explain)**:**

The Public Works department identified the need for professional services to evaluate the City's electric system, analysis, and identify needed improvements based on projected future load growth, service quality, infrastructure condition, and reliability. The City intends to use the study to improve existing operations and to develop a 10-Year plan for capital projects.

On August 11, 2023, the City issued a Request for Proposal (RFP) for an Electric Utility Study and System Analysis. The proposal was posted to the on-line bidding service, Demand Star. Each consultant had to provide approach to the Study, timeline, experience, and an example of similar study completed. The awarded consultant will provide an executive summary and detailed report with realistic recommendations for the most practical and economic means of serving existing and next 10 years loads, and the timely implementation of necessary equipment replacements and system improvements. A formal presentation will be made to the City Council based off the 95% draft of the report, for concurrence and approval.

On September 29, 2023, the City received proposals from three consultants. Their proposal costs are listed below:

Barr Engineering Co.	$186,500.00
BHMG Engineers, Inc	$189,500.00
Electric Power Engineers, LLC	$198,000.00

Staff has evaluated all proposals and supplemental reports/analysis and determined that best suitable consultant was Electric Power Engineers, LLC. The City has not previously utilized Electric Power Engineers, LLC. Staff conducted a reference review and based on positive reviews and similar project experience, staff is recommending the awarding of the work to Electric Power Engineers, LLC.

Attachments (please list)**:**

*Electric Power Engineers, LLC RFP Document *Supplemental Documents

Recommendation/Suggested Action (briefly explain)**:**

Recommendation to Approve a Resolution to Authorize issuing a Purchase Order to Electric Power Engineers, LLC for an Electric Utility Ten Year Study and System Analysis.

ELECTRIC POWER ENGINEERS

Electric Utility Study & System Analysis Request for Proposal (RFP)

September 2023

Proposal Presented to:

ST. CHARLES
SINCE 1834

September 29, 2023

Reference: Electric Utility Study and System Analysis RFP

Thank you for inviting Electric Power Engineers, LLC (EPE) to respond to your Electric Utility Study and System Analysis RFP. We are excited for the opportunity to collaborate with you and look forward to the opportunity to act as an extension of the City of St. Charles (City)'s team.

With over 50 years in the power and energy industry, EPE has a long history of providing quality consulting services to project developers, power generators, utilities, Independent System Operators, regulators, and financial institutions. Our primary areas of expertise are the study and analysis of electrical power systems for the generation, interconnection, transmission, and distribution of electric power, as well as NERC and regulatory compliance. Our team includes 200+ power systems consultants.

Please do not hesitate to call with any questions that you may have regarding this proposal. We will be glad to work with you and tailor our services to fit your exact needs.

Yours very truly,

Hugo E. Mena, P.E.
Executive Vice President, Business Development
Electric Power Engineers, LLC
Mobile: 512-771-0297
hmena@epeconsulting.com

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SERVICE PROVIDER RESPONSE REQUIREMENTS

EXPERIENCE AND CAPABILITIES

PROJECT EXPERIENCE

Key Fields	Description
Client Name:	Glendale Water & Power
Project Name:	5-Year Distribution Master Plan
Contact Person:	Hovsep Barkhordarian
Title:	Principal Engineer
Phone Number:	(818)-262-6713
Email:	hbarkhordarian@Glendaleca.gov
Completed Dates:	July 2023 – Ongoing
Key Personnel:	Steve Bye, Jeremy Spittle, Birat Gyawali
Project Description:	EPE was contracted to perform a powerflow analysis and load growth study for GWP's entire distribution network. This includes the development of a load forecast using historical load readings, SCADA, AMI and system models to determine the capital projects and work plan to prepare GWP's system for 5-years of development from increasing DER penetration and growing EV adoption within its service territory.

Key Fields	Description
Client Name:	PPL Electric Utilities
Project Name:	Load & Generation Interconnection Modeling
Contact Person:	Steve Hughes
Title:	Supervisor of Distribution Asset Planning
Phone Number:	484-633-3067
Email:	smhughes@pplweb.com

Key Fields	Description
Completed Dates:	February 2022 – Ongoing
Key Personnel:	Steve Bye, Birat Gyawali, Johnny Baez, Sarak Kammerdeiner, Ahmad Kazan,
Project Description:	EPE performs multiple load and generation interconnection studies on behalf of PPL Electric Utilities to determine the expected system impacts. Load interconnection studies are executed for applicants between 100 kW and 2MW of EV charging stations, and 25 kW to 5 MW of DER interconnections on 15kV class distribution circuits. For each application, EPE reviews all submitted technical documents for completeness and compliance with relevant PPL standards. EPE then screens the application for system impacts such as thermal overloads, reverse power flow through single-directional equipment, voltage issues, or other relevant criteria. For larger systems, the screening process includes developing CYME models for applicable boundary scenarios (e.g., peak and minimum load) and performing power flow studies. Once the study is completed, EPE documents the findings in a formal letter to the customer identifying any necessary system modifications.

Key Fields	Description
Client Name:	Navarro County Electric Cooperative
Project Name:	2021 – 2025 Work Plan
Contact Person	Billy Jones
Title:	General Manager
Phone Number:	903-874-7411
Email:	bjones@navarroec.com
Completed Dates:	December 2020
Key Personnel:	Hugo Mena, Cody Davis, Lawrence Rahmes
Project Description:	For this project, EPE developed a 4-year work plan for all circuits on Navarro's distribution system in accordance with the RUS requirements. The goal of the work plan was to identify current and potential future loading and voltage constraints and develop recommended cost-effective mitigation projects. First, EPE developed an accurate

Key Fields	Description
	engineering model in Windmill for the present year using Navarro's GIS data, historical SCADA data, and meter billing data. EPE then developed a four-year load forecast using historical peak load and load growth information in combination with known large load additions and identified high-growth areas. The resulting peak load data was used to build future year projection models. Using these models, EPE performed power flow analyses to identify distribution loading and voltage constraints and the expected year when they would occur. EPE then utilized the locations and timing of these constraints to develop system modification projects and insert them into the budget forecast. Specific recommendations were developed by evaluating the cost of all alternatives and the expected future load growth of the area, along with reliability concerns where applicable. This project concluded with the development and submission of the Work Plan Report and RUS Form 740C.

Key Fields	Description
Client Name:	Maine Public Utilities Commission
Project Name:	Investigation of the Design and Operation of Maine's Electric Distribution System
Contact Person	Nora Healy
Title:	Staff Attorney
Phone Number:	207-287-1384
Email:	Nora.Healy@maine.gov
Completed Dates:	2021 - 2022
Key Personnel:	Cody Davis, Preston Clark, Amin Dindar, Johnny Baez, Meisam Ansari, Jered Adams, Lawrence Rahmes
Project Description:	EPE was engaged by the Maine Public Utilities Commission through an RFP process to investigate the design and operation of the distribution system by the two investor-owned utilities operating within the state. This investigation resulted in a series of reports about current utility practices, public stakeholder input and perspective on distribution system needs, a gap analysis comparing current tools and practices to those likely to be necessary to meet future needs, and a roadmap

Key Fields	Description
	detailing key changes and investments to address the identified gaps. The investigation, public stakeholder feedback, gap analysis, and roadmap reports have been filed with the State of Maine under docket 2021-00039. EPE developed an investigation plan focused on five key areas with critical impact on future utility operations, especially with planned increases in electrification and distributed energy resource penetrations within the state of Maine. These areas are: • Software, Data, and Integrations • Forecasting, Planning, and Justification • DER Interconnection • Distribution Control Center EPE investigated the current practices of Versant and Central Maine Power in each of these areas by providing a written set of data requests for key elements within each topic area and engaging in a series of discussion sessions with key utility leaders and subject matter experts to understand both current capabilities and future plans in various stages of development and execution. The results of these discussions were consolidated into the Utility Investigation Reports. EPE then utilized public stakeholder feedback, gathered by a sub-contractor as part of the project scope, to develop a gap analysis report which focused on present and future needs for both the utilities and public stakeholders and compared them to current capabilities. Established best practices and leading-edge initiatives were also identified to provide context within the overall gap analysis report. Following the gap analysis, a comprehensive roadmap for each utility was developed, including recommendations and time horizons for specific process modifications and program implementations. The roadmaps were presented in a public webinar to the MPUC, the webinar to the MPUC, the utilities, and other interested public parties. During this webinar, all parties had the opportunity to review the presented materials and ask questions related to the content, intentions, and direction of each recommendation.

FINANCIAL STABILITY

Please refer to **Appendix A** for evidence of Financial Stability to fund this project and any and all continuing services this project may require throughout the standard life cycle.

Refer to **Appendix B** for a copy of our W-9.

STATEMENT OF EXPERIENCE

RELEVANT PROJECT EXPERIENCE

REGULATORY EXPERIENCE

Key Fields	Description
Client Name:	Ameren Illinois Company
Project Name:	Illinois Value of Distributed Generation to the Distribution System Testimony Development
Contact Person	Andy Parker, Manager, DER Integration Strategy & VO, AParker@ameren.com
Completed Dates:	2020-2021
Key Personnel:	Cody Davis, Tamer Rousan
Project Description:	EPE authored testimony and represented AIC as witnesses in the Illinois Value of Distributed Generation docket (20-0389), which defended AIC's position and proposed framework to generate highly granular location-specific customer DG rebate values in compliance with the Future Energy Jobs Act. The rebate values were generated based on a novel framework that attempts to capture the distribution system capacity and voltage improvement value provided by DER real power injection and smart inverter function support. This testimony included stating and defending AIC's positions and developing rebuttal arguments and testimony to technical claims and proposals made by witnesses representing other parties including Illinois Commerce Commission Staff and multiple stakeholder groups involved in the proliferation of renewable energy technologies.
Additional Information	EPE has personnel in its regional office located in Champaign, IL that have direct working experience with IL's regulatory framework. Due to the nature of our services, we have a working relationship with many stakeholders in Illinois such as ComEd, the City of Champaign, the University of Illinois, and some central Illinois electric cooperatives, all of which have given EPE staff a broad perspective and understanding of the regulatory framework in IL.

PROJECT TEAM

Key Personnel	Title	Man-hours dedicated to the project	Responsibilities
Steve Bye	Senior Engineering Manager	42.2	Project management, client relationship, technical expert, and oversight and review of project deliverables.
Stephen Fung	Senior Engineer	181.2	Project technical lead, powerflow analyses and distribution planning expertise.
Jeremy Spittle	Project Engineer	408.8	Powerflow analyses and planning criteria expertise
Birat Gyawali	Project Engineer	408.8	Load forecasting and powerflow analyses expertise
Yuxuan Yuan	Project Engineer	24	Load forecasting, data analytics, and powerflow analyses expertise
Hugo Mena, P.E.	Subject Matter Expert	16	P.E. Review and stamp

Refer to **Appendix C** – Team Resumes

PROJECT APPROACH AND SCOPE

EPE understands that the City seeks proposals from qualified firms with experience in evaluating the electric system, conduct analysis, and identify needed improvements based on projected load growth, service quality, infrastructure condition, and reliability.

EPE has developed a comprehensive project approach that ensures successful implementation and delivery. This approach consists of several key phases that collectively form a structured framework for project execution. The following sections explore each phase in detail to understand how our approach ensures an effective project journey.

TASK 1: PROJECT KICKOFF, DATA GATHERING, AND MEETINGS

EPE will facilitate the scheduling of meetings with the City's electric services to collect necessary data. Two days before the meeting, EPE will send out a meeting agenda, and afterward, share meeting minutes.

Deliverables:

- Meeting Agenda and Meeting Minutes
- Project status updates, action item tracker and follow-ups
- Additional deliverables upon request

TASK 2: LOAD REVIEW AND LOAD GROWTH FORECAST

EPE will utilize historical loading data and provided information about known upcoming load additions, including those at municipal facilities, to develop growth forecasts for each circuit. For circuits with significant existing DER penetration, the effects of such systems will be factored into the forecast analysis to ensure that growth projections are based on the actual magnitude of load operating on the system (i.e., "native load"). A five-year and ten-year growth forecast will be provided for each circuit which includes both the expected native load (which excludes any expected DER contributions) and the net load (which incorporates the offsetting effects of DER real power injection).

EPE will leverage historical weather data to weather normalize the historical minimum and peak loads so a regression analysis can be performed properly comparing historical loads to one another. Load projections and modeling assumptions will be shared with the City for review and approval to ensure the reasonableness of the five- and ten-year forecasts. As part of Task 6, EPE's load forecasts will include a sensitivity analysis around building electrification, EV adoption, DER penetration, etc.) to understand the range of effects different loading scenarios may have on the City's system.

EPE will put together a request for information to develop the load forecast and will request items such as:

- Historical load readings
- By-phase SCADA data for transformers and feeders (if available)
- AMI data for large load customers
- City electrification plans, strategies, or initiatives
- DER interconnection information
- Weather data (if available, otherwise regional data can be procured by the EPE team)
- Upcoming capital projects and known load additions over a 10-year horizon
- Any other city-developed five- and ten-year growth plans

Deliverables:

- Circuit Load Projections for all Distribution Circuits
- System Analysis Scenario's

TASK 3: EVALUATE SYSTEM PLANNING AND DESIGN CRITERIA

EPE will review the City's system planning and design criteria and provide recommendations or improvements to the City of St. Charles planning criteria and philosophy. EPE will work with the City to ensure their system planning design criteria meets the needs of the city and its citizens, and provides adequate reliability and power quality to its customers. Furthermore, EPE can provide benchmarking of the City's planning and design criteria against best utility practices and municipalities.

EPE will review the following City-provided materials:

- Loading criteria and design guidelines
- Voltage drop and voltage fluctuation criteria
- Schedule of improvements
- Switching plans for various contingency scenarios
- Reliability metrics and goals (SAIDI, SAIFI, CAIDI, CAIFI, etc.)

Deliverables:

- Detailed report documenting EPE's review and recommendations of the existing planning and design criteria.

TASK 4: SYSTEM EVALUATION

EPE will review the system information provided by the City and provide general system recommendations for potential improvements at the system level, including the identification of opportunities to enhance the reliability of the 34kV transmission system. This may include outage response switching capabilities, transfer schemes, protection schemes, or other critical elements highly impactful to the operation of the City's system.

EPE will analyze and validate the conditions of the City's electric system assets and equipment. This analysis will be based on the City's asset reports, operating configurations, and existing maintenance programs for their existing equipment.

The information provided will also be utilized to help EPE model the system for Task 5, in particular the equipment operating configurations.

Based on the review of the above reports, EPE will assess the conditions of existing assets and provide the following information:

- Recommended modifications to existing asset maintenance programs
- Equipment that requires immediate maintenance and refurbishment
- Equipment that requires immediate replacement
- Equipment forecast over the next 10 years identifying what equipment is to reach its end-of-life and require replacement

Deliverables:

- Distribution System Assessment Report
- Distribution System Asset Reports
- Equipment Maintenance Schedule Recommendations
- Equipment Refurbishment Forecasts

TASK 5: POWER FLOW ANALYSIS

Once the information in the RFI has been provided and meetings with municipal stakeholders have been completed, EPE will begin the circuit modeling process. In this process, EPE will start from the provided circuit models and will make any necessary changes to enable load allocation and power flow analyses for the most recent peak load period and minimum load period for all circuits to be studied. This will be referred to as the system base model.

EPE will use the feeder-level load forecasts developed in Task 2 to build system models for a 5-year and 10-year load growth projection. EPE will document system violations based on City approval acceptance criteria (thermal limits, voltage limits, system losses, etc.) and will note during which forecast year the violations occurred. EPE will develop mitigation plans and system upgrade recommendations for all system violations identified. EPE will deliver the power flow analysis results within a detailed report, and will provide base case and forecasted system models to the City.

EPE will also analyze contingency plans in the event of a failure at the substation or the feeder level. The plans will provide operational guidance for how to react to reenergize the stranded customers through alternate feeds, and proposing sectionalizing of feeders to reduce the impact to customers.

EPE will model the City's electric system and identify:

- Feeder voltage profiles
- Load imbalance
- Real and reactive power flows
- System losses as seen from the station bus

The analysis will look at various system configurations including:

- Normal Configuration – Peak Load
- Normal Configuration – Light Load
- Five Year Growth Case – Projected Peak Load and Cold Weather Conditions
- Ten Year Growth Case – Projected Peak Load and Cold Weather Conditions
- Loss-of-Substation Transformer contingency analyses
- Loss-of-Feeder contingency analyses

Deliverables:

- Base case and load forecast circuit models for all power flow scenarios
- Detailed reporting of all feeders/substations with power flow results and system upgrade recommendations

TASK 6: GRID INTEGRATION

EPE will leverage the base case models developed in Task 5 to performs a sensitivity analysis around the potential impacts of varying DER penetration levels, and electrification loading levels – including EV adoption for fleet customers, commercial vehicles, and residential installations. EPE will also perform a hosting capacity analysis for the City that details the DER hosting capacity for each feeder and substation, detailing the limitations of each circuit (such as voltage limited, thermal limited, or limitations from voltage fluctuation).

EPE will provide recommendations for the City to consider that can position the city's infrastructure to properly integrate high levels of DER penetration and handle electric vehicle growth. EPE's sensitivity analysis will provide an envelope for the long-term load profiles on each feeder so the City can adequately develop capital projects in anticipation of DER/EV growth. EPE will provide a forecast model where inputs to the sensitivity model can be adjusted to see how the load profile changes for that portion of the system.

EPE will evaluate the forecasted changes in loading and provide insight into the effects on the system feeder and impacts to operations. EPE will provide recommendations to accommodate the

boundary cases for EV and DER adoption, and provide cost estimates for those system upgrades, and document their associated benefits.

Deliverables:

- Sensitivity analyses reporting.
- Distribution system models with boundary load growth scenarios applied.

TASK 7: ADVANCEMENT METER INFRASTRUCTURE (AMI) AND SMART METER DEVELOPMENT

EPE has worked with AMI vendors and utility smart meter deployments and implementations and will leverage that expertise to provide the City with information and guidance on AMI options and estimated costs. EPE will meet with City stakeholders to determine the strategies and drivers behind smart meter deployment to understand their goals. EPE will then present on the current capabilities of the available smart meter technologies and identify which are most beneficial to the City. EPE will work with the City to determine the number and types of meters needed and will develop cost estimates for AMI deployments including meter hardware, communications infrastructure, data management, and ongoing maintenance.

Deliverables:

- Smart meter technology overview presentation.
- AMI deployment cost estimates.

TASK 8: CAPACITY FOR FUTURE GROWTH AND SYSTEM IMPROVEMENT

EPE will leverage the recommendations and system upgrades identified during Task 4, 5, and 6 to develop a five-year and ten-year distribution investment plan for the City. The distribution investment plans will document all the system upgrades recommended for the City and prioritize them according to the severity of the system violations they address, impact on customers, and cost. EPE will coordinate with the City to determine future available capital spending and priorities and will incorporate the city's budgets into the distribution investment plans.

Deliverables:

- Five-Year and Ten-Year Distribution Investment Plan.
- Other supporting deliverables as needed.

TASK 9: WRITTEN REPORT AND PRESENTATION

EPE will document all methodologies, assumptions, and findings from Tasks 1-8 within a comprehensive report. The final report will include:

- Documentation of references, gathered data and sources, planning criteria, load forecasts, related calculations, analysis techniques and reports.
- System evaluation and analysis, identified strengths and weaknesses, including alternative improvement options, and suggested areas to focus attention.
- System diagrams/maps and analysis plots showing the configurations and results, system improvement maps, and tabulated schedules of prioritized recommended system improvements.
- Prepare a summarization of recommendations and financial impacts, with construction schedules and budgetary cost estimates.
- Prepare a financial impact statement and include cash flow projections for proposed capital improvements.
- Alternatives and options, system diagrams and models, and supporting information.

In addition to the written report, EPE will also:

- Develop an Executive Summary of the report for board distribution which includes a brief outline of each section including recommendations, costs, and implementation schedule.
- Submit a 95% (Draft) Electric Utility Study integrating all of the previously reviewed sections. Meet with City Staff for final review, revisions, and concurrence on the Draft Plan.
- Make a formal presentation to City Council based on the 95% Draft for concurrence and approval.
- Submit a final Electric Utility Study integrating all City Council's comments/suggestions.

Deliverables:

- 95% and Final Report.
- Final Presentation.
- Final system models.
- Other supporting documentation as needed.

PRELIMINARY PROJECT SCHEDULE

The project is expected to be performed over approximately eight (8) months depending on the frequency of communication and exchange of data and information. EPE can adjust the project schedule according to the City's needs.

Month:	1	2	3	4	5	6	7	8
Task 1: Project Kickoff, Data Gathering								
Task 2: Load Review and Load Forecast								
Task 3: Evaluate Planning & Design Criteria								
Task 4: System Evaluation								
Task 5: Power Flow Analysis								
Task 6: Grid Integration								
Task 7: AMI and Smart Meter Development								
Task 8: Capacity for Future Growth and System Improvement								
Task 9: Written Report and Presentation								

SAMPLE OF PREVIOUS COMPLETED SYSTEM STUDY, SYSTEM ANALYSIS/REPORTS

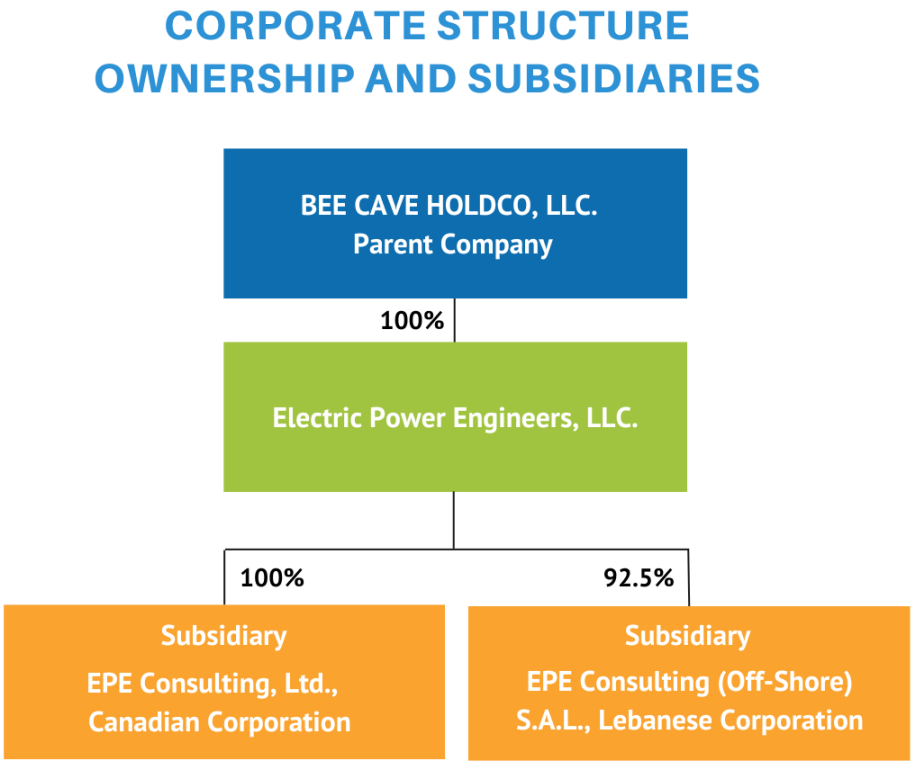
Refer to **Appendix D** - Electric System_Sample Plan_CONFIDENTIAL

COMPANY OWNERSHIP

Electric Power Engineers, LLC (EPE) is a prominent consulting firm established in 1968 and a pioneer in electricity network planning. EPE places particular emphasis on being an industry leader in providing a holistic approach to enable a clean energy transition and build the grid of the future. With over 200 team members, EPE has extensive experience in electrification, clean energy technologies, electric power system studies, renewable and DER integration on transmission and distribution systems, and power system design in the US as well as internationally.

Electric Power Engineers, LLC. (EPE) entered the renewables industry early and has seen significant growth in its power engineering consulting services. EPE has established a unique and well-respected position in the power industry as a leading expert in power grid and energy integration. EPE's experience in generation interconnection and electric grid studies extends across the United States and internationally. EPE has built a reputation of excellence and forward-thinking solutions with strong relationships with more than 300 clients.

OWNERSHIP AND SUBSIDIARIES



WHAT IS THE VALUE OF THE FIRM'S WORK: HAVE COMPLETED IN THE PAST 12 MONTHS? NOW UNDER CONTRACT?

Past 12 months (Aug 2022-July 2023)	All Project Status	Completed Project Status
$ Amount in last 12 months	$47,106,329	$27,537,545

WHAT IS THE NUMBER OF CLIENTS IN YOUR FIRM: SERVICED IN THE PAST 12 MONTHS? NOW UNDER CONTRACT?

Past 12 months (Aug 2022-July 2023)	All Project Status	Completed Project Status
# Clients Serviced in Past 12 Months	353	289

Past 12 months (Aug 2022-July 2023)	Total
# Clients Currently Under Contract (Active and Hold) Note: Does not include won work that has not yet started	252

WORK SPECIFIC KNOWLEDGE

PROFESSIONAL LICENSES

License Expires: 11/30/2017

SUBCONTRACTORS

EPE intends to perform the entirety of the scope of work without the use of subcontractors, ensuring that all the work is conducted in-house.

SAFETY RISK

Refer to **Appendix E** – Certificate of Insurance

A TIME YOUR ORGANIZATION FAILED TO COMPLETE A CONTRACT

EPE has maintained a flawless record of contract completion. The EPE team proactively forms Service Level Agreements (SLAs) with clients to promptly address any project-related issues or concerns, minimizing potential risks to project deliverables. In instances where challenges arise, EPE prioritizes consistent client communication to avert contract failures. This approach has significantly enhanced communication levels resulting in 100% success project achievement.

BANKRUPTCY OR REORGANIZATION

EPE has never been involved with bankruptcy or reorganizational processes in any capacity.

JUDGMENT CLAIMS OR LAWSUITS AGAINST THE FIRM: AWARDED AND PENDING WITHIN THE PAST FIVE (5) YEARS

EPE has maintained a clean record without any involvement in judgment claims or lawsuits against the firm in the past five (5) years.

CRITIQUE THE SCOPE OF WORK: WHAT WORKS, WHAT DELETIONS, CHANGES OR OPTIONS FOR ACHIEVING DESIRED OUTCOMES DO YOU RECOMMEND?

EPE finds the project scope to be thorough and applicable for the desired outcomes of quality system models and reporting of existing and projected system violations to determine a capital project plan for the next five to ten years. EPE would recommend considering AMI in greater detail in another project scope if the City is looking to develop a smart meter deployment plan or develop customer programs that require smart meters. EPE is also experienced with several consumer energy projects and can offer a suite of services related to interacting with electric customers.

DESCRIBE MORE DETAILED ALTERNATIVES THAT IMPACT QUALITY, TIME, PRICE, AND DELIVERABLES.

EPE finds that the quality of the data provided for this type of project scope highly influences the accuracy and meaningfulness of the project deliverables. From EPE's prior project experiences, data integrity and availability often lead to better project results, scheduling, and quality of overall deliverables. Where data is not available or lacks accuracy EPE can work with the City to determine reasonable assumptions that are mutually agreed upon to ensure quality deliverable in a timely manner.

PROPRIETARY INFORMATION

The information in this proposal and all related documents is proprietary and confidential information that belongs to EPE. Client agrees that the technical methods, techniques, specifications, and pricing information or all information contained in this proposal and all related documents submitted by EPE pertaining to this project are to be considered confidential and shall not be directly or indirectly released or otherwise made available to any third party without the expressed written consent of APE. Client acknowledges that disclosing confidential information without EPE's consent could cause harm, damages, loss of profit, and goodwill to EPE, in which case EPE shall be compensated and made whole.

Cover Page

Electric Utility Study and System Analysis
EL2023-37

Based on Addendum # _____

Proposal Prepared By:			
Firm Name	Electric Power Engineers, LLC	**Sales: Price, Quality and Service**	
DBA	Electric Power Engineers, LLC	Contact Name	Hugo Mena
Signature	DocuSigned by: 433B5B8FC2A1430...	Phone #	512-886-2122
Print Name	Grace Cuellar	E-Mail	hmena@epeconsulting.com
Position	Senior Proposal Manager	**Customer Service: Purchase Order, Invoicing, Payment**	
Phone #	714-857-4426	Contact Name	Lillian Rogers
E-mail Address	gcuellar@epeconsulting.com	Phone #	512-886-6700
Operations: Scheduling and Managing the Work		E-Mail	lrogers@epeconsulting.com
Contact Name	Tamer Rousan	Mailing Address for Payment via Check:	
Phone #	512-886-6700	13001 W Highway 71, Suite G100 Austin, TX 78738	
E-Mail	trousan@epeconsulting.com		

This business Firm is (check one) ☐ An Individual ☐ A Partnership ☐ A Corporation ☒ An LLC

Exceptions: (check one)

☐ This proposal meets and accepts all Requirements, Specifications, Terms and Conditions and Contract Language.

☒ We hereby take the following Exceptions to the Requirements, Specifications, Terms and Conditions and Contract Language *(reference section name and identifying reference)*:

Article 3: Term
A. Term.
b. Non-performance.

Article 5: Duties
G. Hold Harmless and Indemnification.
a. Patents and Copyrights.
b. Loss and Liability.

Article 8: Applicability
E. Governing Law.

Price Proposal Page

Electric Utility Study and System Analysis
EL2023-37

I (we) propose to furnish all services as specified in the attached solicitation documents at the below price. No additional charges over said pricing will be accepted by the City without an authorized change order and written approval by the Purchasing Division confirmed via purchase order amendment.

Total Lump Sum Cost for Electric Utility Study and System Analysis	**$** 198,000

Estimated Total Hours	1081

Please include a detailed summary of estimated man-hours and a Preliminary Project Schedule for completing the proposed project (upload as a separate document).

Fees, scope of services and schedules may be negotiated with the top ranked firm.

We accept payment via City of St. Charles credit card, **without additional** fees. ☐ Yes ■ No

We will allow a discount of 1 % if payment is received within 15 days of invoice.

City of St. Charles

REFERENCE FORM

Project: Electric Utility Study and System Analysis
EL2023-37

The following is a list of **FIVE (5)** references that have performed projects similar in size & scope within the last five (5) years.

1. Company Name and Address	**Scope of Work:**	EPE authored testimony and represented AIC as witnesses in the Illinois Valu
Ameren Illinois	**Date(s):**	2020-2021
	Amount:	Confidential
	Project Manager:	Andy Parker
	Telephone No:	N/A
	Email:	AParker@ameren.com
Comments: Reference Verified: Yes___No___		

2. Company Name and Address	**Scope of Work:**	EPE was contracted to perform a powerflow analysis and load growth study fo
Glendale Water & Power	**Date(s):**	July 2023 – Ongoing
	Amount:	Confidential
	Project Manager:	Hovsep Barkhordarian
	Telephone No:	(818)-262-6713
	Email:	hbarkhordarian@Glendaleca.gov
Comments: Reference Verified: Yes___No___		

3. Company Name and Address	**Scope of Work:**	EPE performs multiple load and generation interconnection studies on behalf
PPL Electric Utilities	**Date(s):**	February 2022 – Ongoing
	Amount:	Confidential
	Project Manager:	Steve Hughes
	Telephone No:	484-633-3067
	Email:	smhughes@pplweb.com
Comments: Reference Verified: Yes___No___		

4. Company Name and Address	**Scope of Work:**	For this project, EPE developed a 4-year work plan for all circuits on Navarro'
Navarro County Electric Cooperative	**Date(s):**	December 2020
	Amount:	Confidential
	Project Manager:	Billy Jones
	Telephone No:	903-874-7411
	Email:	bjones@navarroec.com
Comments: Reference Verified: Yes___No___		

5. Company Name and Address	**Scope of Work:**	EPE was engaged by the Maine Public Utilities Commission through an RFP
Maine Public Utilities Commission	**Date(s):**	2021 - 2022
	Amount:	Confidential
	Project Manager:	Nora Healy
	Telephone No:	207-287-1384
	Email:	Nora.Healy@maine.gov
Comments: Reference Verified: Yes___No___		

Company Name: Electric Power Engineers, LLC

Failure to complete and return this form may be considered sufficient reason for rejection of the submittal.