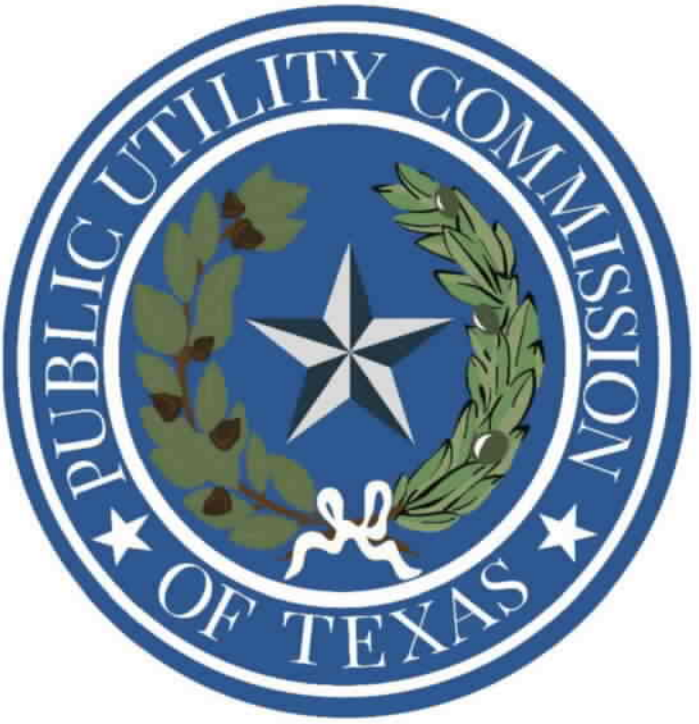

Filing Receipt

Filing Date - 2025-03-27 02:49:23 PM

Control Number - 55718

Item Number - 90

PUC PROJECT NO. 55718

RELIABILITY PLAN FOR THE PERMIAN BASIN UNDER PURA § 39.167	**§ § §**	**BEFORE THE PUBLIC UTILITY COMMISSION OF TEXAS**

LCRA TRANSMISSION SERVICES CORPORATION'S RESPONSE TO COMMISSION STAFF'S REQUEST FOR INFORMATION

COMES NOW LCRA Transmission Services Corporation (LCRA TSC) and files this, its Response to Commission Staff's Request for Information to transmission service providers (TSPs) assigned to design, construct, or operate an import path approved under the Permian Basin Reliability Plan at either 345-kV or 765-kV. LCRA TSC has endeavored to provide complete and responsive information in the limited time allowed to respond to this request for information. LCRA TSC agrees and stipulates that all parties may treat these responses as if the answers were filed under oath.

Respectfully submitted,

Emily R. Jolly
State Bar No. 24057022
Deputy General Counsel, Regulatory Affairs
Lower Colorado River Authority
P.O. Box 220
Austin, Texas 78767-0220
Telephone No.: (512) 578-4011
Facsimile No.: (512) 473-4010

Emily R. Jolly

PUC PROJECT NO. 55718

RELIABILITY PLAN FOR THE PERMIAN BASIN UNDER PURA § 39.167	**§ § §**	**BEFORE THE PUBLIC UTILITY COMMISSION OF TEXAS**

LCRA TRANSMISSION SERVICES CORPORATION'S RESPONSE TO COMMISSION STAFF'S REQUEST FOR INFORMATION

QUESTION STAFF 1-1:

Provide documentation related to cost estimate information for any import path to which the TSP has been assigned. The cost estimate information should be consistent with the format and categories of data provided to ERCOT in March 2025.

RESPONSE TO STAFF 1-1:

Please see Attachment 1 (Confidential) – PBRP Cost Estimates Request for 765-kV Plan and Attachment 2 (Confidential) – PBRP Cost Estimates Request for 345-kV Plan, for the requested cost information consistent with the format and categories of data previously provided to ERCOT.

LCRA TSC provides the requested preliminary cost estimate information subject to the following:

1. LCRA TSC has assumed 50/50 ownership share for lines/circuits where LCRA TSC share end points with another TSP.
2. Values submitted do not include any other TSP cost components.
3. All values are rough order magnitude (ROM) quality estimates and do not include uncertain factors that may be revealed during the course of performing routing studies and developing CCN-level cost estimates. Additionally, other factors that could affect projects costs are expected be identified during land acquisition and pre-construction activities following CCN approval.
4. Values submitted are subject to revision as additional information is revealed or if the data request is modified.
5. In the event assumptions to the parameters set by ERCOT are modified (e.g., alternate capacity ratings), cost estimates will vary from the information provided.

ATTACHMENTS:

Response to STAFF 1-1, Attachment 1 (Confidential) – PBRP Cost Estimates Request for 765-kV Plan, native Excel file.

Response to STAFF 1-1, Attachment 2 (Confidential) – PBRP Cost Estimates Request for 345-kV Plan, native Excel file.

Prepared By: Steve Sparling Title: Director, Transmission Estimating

Attachment Staff 1-1,
Attachment 1 is
CONFIDENTIAL
and will be provided in a
separate confidential filing and
in Native Excel format

Attachment Staff 1-1,
Attachment 2 is
CONFIDENTIAL
and will be provided in a
separate confidential filing and
in Native Excel format

PUC PROJECT NO. 55718

RELIABILITY PLAN FOR THE PERMIAN BASIN UNDER PURA § 39.167	**§ § §**	**BEFORE THE PUBLIC UTILITY COMMISSION OF TEXAS**

LCRA TRANSMISSION SERVICES CORPORATION'S RESPONSE TO COMMISSION STAFF'S REQUEST FOR INFORMATION

QUESTION STAFF 1-2:

To the extent available, provide any vendor commitment letters related to long lead technical equipment, such as autotransformers or circuit breakers, needed to construct and operate the import path.

RESPONSE TO STAFF 1-2:

The responses below are as of March 26, 2025, are subject to currently anticipated equipment design specifications and are contingent upon LCRA issuing PO commitments and funds by deadlines in March and May of 2025. Pricing is still under negotiation, is considered confidential and has been redacted from the documentation.

Of the five autotransformer manufacturers LCRA has inquired with, HD Hyundai Electric America Corporation has communicated they can deliver the anticipated autotransformers by December 2029 and HICO America has provided a proposal indicating they can deliver the anticipated autotransformers by December of 2029. Additional inquiries are outstanding.

Of the five circuit breaker manufacturers LCRA has inquired with, Hitachi Energy USA, Inc. has provided a proposal to LCRA indicating they can deliver the anticipated breakers in the timeframe of September 2028 through August 2029, HICO America has provided a proposal to LCRA indicating they can deliver the anticipated breakers by December 2028.

Of the four line switching reactor manufacturers LCRA has inquired with, HD Hyundai Electric America Corporation has communicated they can deliver the anticipated reactors by December 2029 and HICO America has provided a proposal indicating they can deliver the anticipated reactors by December 2029.

SAE Towers and Fabrimet, Inc. have communicated they are able to deliver the anticipated required quantity of lattice towers between October 2027 and June 2029.

Southwire Company has communicated they are able to deliver the required quantity of conductor 35 weeks after receipt of an order.

ATTACHMENTS:

Response to STAFF 1-2, Attachment 1 – HD Hyundai Production Reservation, 2 pages redacted.

Response to STAFF 1-2, Attachment 2 – HICO Production Reservation, 2 pages redacted.

Response to STAFF 1-2, Attachment 3 – HICO Production Schedule, 1 page.

Response to STAFF 1-2, Attachment 4 – Hitachi Delivery Proposal, 1 page.

Response to STAFF 1-2, Attachment 5 – SAE Lattice Delivery Proposal, 1 page.

Response to STAFF 1-2, Attachment 6 – Fabrimet Delivery Proposal, 1 page.

Response to STAFF 1-2, Attachment 7 – Southwire Production Lead Time, 1 page.

Prepared By: Matt Chavez Title: Senior Vice President, Supply Chain

A. Production Slot Reservations

Supplier agrees to guarantee production slots, defined as the date the transformer is delivered to Company's site, based on order quantities listed below:

Year	2029				2031	Total (2029 – 2032)
Month	Jul	Aug	Nov	Dec	Jun	
No. of 765kV Transformer Slots	4		4		4	12
No. of 765kV Reactor Slots		4		4	4	12
No. of reserved Slots for Large Auto, GSU and small-medium	Refer to the "Vendor PWT-Suppliers Production Space Reservation_Hyundai" spreadsheet					29

* Transformer Ratings: 750MVA

* Shunt Reactor Ratings: 100MVAR and above

Reservation Modification: Company shall have the right to modify the reserved slots for ratings or schedule, subject to the conditions outlined in this Agreement. Any modification to the reserved slots must be requested by Company in writing/email at least thirty-six (36) months prior to the scheduled slot time.

Supplier shall make reasonable efforts to accommodate Company's requested modifications, subject to availability.

Cancellation: In the event that Company wishes to cancel a reserved slot for 765kV, Company must provide written/email notice to Supplier. Supplier will provide the cancellation of the reserved slot free of charge if written notice was received at least thirty-six (36)) months prior to Delivery. Cancellations made after the specified notice period may be subject to cancellation fees as outlined in the table below:

Specification	Proposed delivery date	Cancellation Notice Need by date	PO need by date*	Cancellation Fee (USD)
765kV Transformer	07/30/2029	07/30/2026	09/30/2026	[redacted]
	11/30/2029	11/30/2026	01/31/2027	[redacted]
	06/30/2031	06/30/2028	08/30/2028	[redacted]
765kV Reactor	08/30/2029	08/30/2026	10/30/2026	[redacted]
	12/30/2029	12/30/2026	02/28/2027	[redacted]
	06/30/2031	06/30/2028	08/30/2028	[redacted]

*If the slot is canceled after 36 months prior to delivery or Purchase Order is not issued until 34 Months prior to Delivery, the reserved slot(s) will be released and the cancellation fee of [redacted] will be charged.

Notwithstanding the provisions set forth above, the 36 months requirement may be extended in alignment with the lead time of long lead items (e.g. bushings, tap changers), should such items necessitate a longer lead time.

Once mutually agreed upon, this agreement may be amended at any time for changes.

If a Purchase Order is canceled after it has been issued, at the convenience of the company, the following cancellation fee will be applied.

B. Cancellation Schedule:

Milestone	Cancellation Charge
After issuance of purchase order	[redacted] of Contract Amount
After submittal of approval drawings	[redacted] of Contract Amount
After completion of engineering (drawing approval)	[redacted] of Contract Amount
After placement of order for bushings and tap changers	[redacted] of Contract Amount
After receipt of bushings and tap changers	[redacted] of Contract Amount
After starting core and coil manufacturing	[redacted] of Contract Amount
After completion of core and coil assembly	[redacted] of Contract Amount
After completion of factory acceptance test	[redacted] of Contract Amount
After shipment	[redacted] of Contract Amount

HICO AMERICA
HYOSUNG HEAVY INDUSTRIES CORPORATION

Hyosung Heavy Industries Corporation
Three Penn Center West, Suite 300
Pittsburgh, PA 15276
Telephone: 412-787-1170
Facsimile: 412-787-2270
www.hicoamerica.com

HICO Response to 765kV Commercial Questions from LCRA:

We are pleased to provide the following commercial framework information for 765kV Products offered by HIICO. Please note that these products all have been designed and tested to IEEE/ANSI standards with a long operating history in the United States.

1.) Budget Pricing

Per 765kV-345kV 750MVA 1ph Autotransformer DDP Jobsite = $[redacted]* **(Delivery on pad, install, oil-fill and test on site included)**

Per 765kV 100MVAR 1ph Shunt Reactors DDP Jobsite = $[redacted]* **(Delivery on pad, install, oil-fill and test on site included)**

Per 800kV 5000A 63kA Dead Tank Beaker (3ph set) DDP Jobsite = $[redacted]* **(No site install or testing included)**

*Detailed pricing can be provided once a specification for each equipment item is received, reviewed and bid design generated.

2.) Production Space Reservation and Schedule Proposal

Please refer to the attached "LCRA 765kv Schedule_03.20.2025.xlsx" which includes a typical full schedule for each product needed and quantity. The intent is to provide both companies with an clear picture of the available production and deadline dates.

As you can see, we have included a [redacted] down payment schedule assuming an award by May 30, 2025. Then there are 3 months of time where LCRA and HICO can work out all technical and commercial items before we start detailed design on 9/1/2025 which carries another [redacted] payment. Within this 3-month period we suggest we "true-up" costs and a PO amendment can be issued.

The next critical date is 6/30/2026 at which time HICO will need to know whether we are proceeding further or not. If the project is cancelled this allows HICO enough time to fill the production space with other units and LCRA has clarity on commercial exposure limits.

We have 2 factories that can make the Autotransformers (Memphis TN and Changwon, S. Korea) and at this point, we ask for flexibility in production location but can be defined as we get closer to actual award date. The Shunt Reactors and Breakers currently must be manufactured in Changwon, S. Korea facility.

HICO AMERICA
HYOSUNG HEAVY INDUSTRIES CORPORATION

3.) Important notes and assumptions:

a. Pricing and schedule provided are subject to change after receiving detailed specifications and timing of award is known. This information is to facilitate a meaningful discussion between the 2 companies.
b. Terms and conditions are being reviewed. We are requesting a word version of latest terms on file with LCRA. We apologize but cannot locate the editable format of our latest terms.
c. Escalation/De-escalation formula for each product will need to be included in the terms and conditions given the volatility in the market as well as the long duration of project lifecycle. This is typical and applied to most projects.

If you have any other questions or need more information. Please contact Matt Schwach at 909-833-5398 or on his email at mschwach@hicoamerica.com.

Sincerely,

Matt Schwach
HICO America
Sales Manager

DDP Delivery From Memphis	DDP Delivery From Changwon	Quantity	Estimated PO Date for Reservation 10% Due	Engineering Start 10% Due	Notice to Proceed or Cancellation Notice	Long Lead Time Materials Ordered 20% Due	Manufacturing Start 20% Due	Factory Acceptance Testing Complete 30% Due	Delivery to Pad 10% Due	Memphis Orders Project Name	Changwon Orders Project Name	Comments
1ph TRANSFORMERS												
Sep-29		1	5/30/2025	9/1/2025	6/1/2026	6/30/2026	2/1/2029	8/1/2029	9/1/2029	LCRA 765kV Auto		
Sep-29		1	5/30/2025	9/1/2025	6/1/2026	6/30/2026	2/1/2029	8/1/2029	9/1/2029	LCRA 765kV Auto		
Oct-29		1	5/30/2025	9/1/2025	6/1/2026	6/30/2026	3/1/2029	9/1/2029	10/1/2029	LCRA 765kV Auto		
Oct-29		3	5/30/2025	9/1/2025	6/1/2026	6/30/2026	3/1/2029	9/1/2029	10/1/2029	LCRA 765kV Auto		
Nov-29		1	5/30/2025	9/1/2025	6/1/2026	6/30/2026	4/1/2029	10/1/2029	11/1/2029	LCRA 765kV Auto		
Nov-29		1	5/30/2025	9/1/2025	6/1/2026	6/30/2026	4/1/2029	10/1/2029	11/1/2029	LCRA 765kV Auto		
Dec-29		1	5/30/2025	9/1/2025	6/1/2026	6/30/2026	5/1/2029	11/1/2029	12/1/2029	LCRA 765kV Auto		
Dec-29		1	5/30/2025	9/1/2025	6/1/2026	6/30/2026	5/1/2029	11/1/2029	12/1/2029	LCRA 765kV Auto		
	1ph Shunt Reactors											
	Sep-29	1	5/30/2025	9/1/2025	6/1/2026	6/30/2026	11/1/2028	5/1/2029	9/1/2029		LCRA 765kV Reactor	
	Sep-29	1	5/30/2025	9/1/2025	6/1/2026	6/30/2026	11/1/2028	5/1/2029	9/1/2029		LCRA 765kV Reactor	
	Oct-29	1	5/30/2025	9/1/2025	6/1/2026	6/30/2026	12/1/2028	6/1/2029	10/1/2029		LCRA 765kV Reactor	This Schedule is a Typical schedule and can be modified after further discussion. HICO reserves the right to modify Autotransformer manufacturing location prior to award between Memphis and Changwon depending on optimal loading scenarios but the end delivery dates will meet the LCRA schedules
	Oct-29	1	5/30/2025	9/1/2025	6/1/2026	6/30/2026	12/1/2028	6/1/2029	10/1/2029		LCRA 765kV Reactor	
	Nov-29	1	5/30/2025	9/1/2025	6/1/2026	6/30/2026	1/1/2029	7/1/2029	11/1/2029		LCRA 765kV Reactor	
	Nov-29	1	5/30/2025	9/1/2025	6/1/2026	6/30/2026	1/1/2029	7/1/2029	11/1/2029		LCRA 765kV Reactor	
	Dec-29	1	5/30/2025	9/1/2025	6/1/2026	6/30/2026	2/1/2029	8/1/2029	12/1/2029		LCRA 765kV Reactor	
	Dec-29	1	5/30/2025	9/1/2025	6/1/2026	6/30/2026	2/1/2029	8/1/2029	12/1/2029		LCRA 765kV Reactor	
	3 poles Breakers											
	Sep-28	3	5/30/2025	9/1/2025	6/1/2026	6/30/2026	12/1/2027	5/1/2028	9/1/2028		LCRA 800kV Breaker	
	Oct-28	3	5/30/2025	9/1/2025	6/1/2026	6/30/2026	1/1/2028	6/1/2028	10/1/2028		LCRA 800kV Breaker	
	Nov-28	3	5/30/2025	9/1/2025	6/1/2026	6/30/2026	2/1/2028	7/1/2028	11/1/2028		LCRA 800kV Breaker	
	Dec-28	3	5/30/2025	9/1/2025	6/1/2026	6/30/2026	3/1/2028	8/1/2028	12/1/2028		LCRA 800kV Breaker	
	Jan-29	3	5/30/2025	9/1/2025	6/1/2026	6/30/2026	4/1/2028	9/1/2028	1/1/2029		LCRA 800kV Breaker	
	Feb-29	3	5/30/2025	9/1/2025	6/1/2026	6/30/2026	5/1/2028	10/1/2028	2/1/2029		LCRA 800kV Breaker	
	Mar-29	3	5/30/2025	9/1/2025	6/1/2026	6/30/2026	6/1/2028	11/1/2028	3/1/2029		LCRA 800kV Breaker	
	Apr-29	3	5/30/2025	9/1/2025	6/1/2026	6/30/2026	7/1/2028	12/1/2028	4/1/2029		LCRA 800kV Breaker	
	May-29	3	5/30/2025	9/1/2025	6/1/2026	6/30/2026	8/1/2028	1/1/2029	5/1/2029		LCRA 800kV Breaker	
	Jun-29	3	5/30/2025	9/1/2025	6/1/2026	6/30/2026	9/1/2028	2/1/2029	6/1/2029		LCRA 800kV Breaker	
	Jul-29	3	5/30/2025	9/1/2025	6/1/2026	6/30/2026	10/1/2028	3/1/2029	7/1/2029		LCRA 800kV Breaker	
	Aug-29	4	5/30/2025	9/1/2025	6/1/2026	6/30/2026	11/1/2028	4/1/2029	8/1/2029		LCRA 800kV Breaker	
		55										

From: William Dildine
To: Cara Jaramillo
Subject: FW: 765kV project CB"s
Date: Wednesday, March 26, 2025 3:18:00 PM

From: David Aldrich <David@hbiassociates.com>
Sent: Wednesday, March 26, 2025 3:15 PM
To: William Dildine <William.Dildine@LCRA.ORG>
Cc: Cara Jaramillo <Cara.Jaramillo@LCRA.ORG>
Subject: Re: 765kV project CB's

William,
According to the proposal from Hitachi Energy to LCRA for 765kV breakers, which is based on the general specifications provided, and for the requested quantities and types of breakers, Hitachi Energy can meet the proposed delivery timeline of 2028 through 2029. This is contingent on receiving and acceptance by Hitachi of a purchase order in full compliance with the proposal prior to the March 31st deadline.

Please let me know if you have any questions or concerns.

Thanks,
David Aldrich
CEO
HBI Energy Associates
210-622-7016

From: William Dildine
To: Cara Jaramillo
Subject: FW: Potential 765kV Transmission Line Project
Date: Wednesday, March 26, 2025 3:38:55 PM
Attachments: image001.png
image003.jpg

Cara,

Please see SAE's response to LCRA's inquiry of SAE's ability to meet delivery of lattice structures beginning October 1, 2027, through Q2 of 2029.

Thanks,
William

From: David Tung <David.Tung@LCRA.ORG>
Sent: Wednesday, March 26, 2025 11:40 AM
To: William Dildine <William.Dildine@LCRA.ORG>
Cc: Manny Garcia <Manny.Garcia@LCRA.ORG>
Subject: FW: Potential 765kV Transmission Line Project

FYI

Thank You,

David Tung
Lower Colorado River Authority | Sr. Category Manager - Transmission Line & Substation
O: 1-512-578-2130
David.Tung@LCRA.ORG

From: Jim Semian <jim.semian@saetowers.com>
Sent: Wednesday, March 26, 2025 11:35 AM
To: David Tung <David.Tung@LCRA.ORG>
Cc: Jose Hernandez <jose.hernandez@saetowers.com>; Francisco Dezen <francisco.dezen@saetowers.com>
Subject: RE: Potential 765kV Transmission Line Project

David,

On behalf of SAE, I would like to confirm that SAE is able to meet LCRA's required volume and

delivery requirements for your 765kV project. We look forward to LCRA benefiting from SAE's decades of experience working on Extra High Voltage projects. SAE/KEC, being the world's largest lattice tower manufacturer, can source from (6) SAE/KEC facilities to assure prompt delivery and excellent engineering services. In addition, with our (4) High Voltage Test facilities available, LCRA will not experience any delays verifying your new designs. SAE can also offer in-the-field on-site assistance during installation of the towers. Please feel free to contact us at SAE if you have any questions. We are excited about the opportunity to work together.
Sincerely,

JIM SEMIAN
Sales & Business Development Director

Cel: 832 353 9238
Email;jim.semian@saetowers.com

From: William Dildine
To: Cara Jaramillo
Subject: FW: Potential 765kV Lattice Tower Project
Date: Wednesday, March 26, 2025 3:40:00 PM
Attachments: image003.jpg

Cara,

Please see Fabrimet's response to LCRA's inquiry of Fabrimet's ability to meet delivery of lattice structures beginning October 1, 2027, through Q2 of 2029.

Thanks,
William

From: Tracy Davis <tracy@keasler.com>
Sent: Wednesday, March 26, 2025 11:27 AM
To: William Dildine <William.Dildine@LCRA.ORG>
Subject: FW: Potential 765kV Lattice Tower Project

FYI

Tracy Davis
Keasler Associates, Inc
Austin, TX 78747
512.806.4430
tracy@keasler.com
www.keasler.com

From: Gilbert Guerette <gilbertguerette@fabrimet.com>
Sent: Tuesday, March 4, 2025 12:45 PM
To: 'David Tung' <David.Tung@LCRA.ORG>
Cc: Eryn Wilson <eryn@keasler.com>; Tracy Davis <tracy@keasler.com>
Subject: RE: Potential 765kV Lattice Tower Project

Dear Mr. Tung,

Fabrimet is offering LCRA a budgetary proposal as follow for a Potential 765kV Lattice Tower Project;

- Prices and materials quoted are based on information provided in this request
- This proposal is budgetary
- Fabrimet can support LCRA in the design phases of the development of 765KV transmission tower
- Pricing range would be within $1.92 to $2.49 per pound of steel
- All steel would be predominantly procured in the USA
- This price does not include any US Government tariffs if applicable to our industry

This proposal, in addition to Fabrimet 's information provided by Keasler Associates Inc.in the two (2) below emails, confirms our leading position in the industry.

We stay available for any questions or comments you may have.

Thank you for this opportunity and let us know how we can help

Sincerely

Gilbert Guérette

-
Fabrimet Inc.
4375 Saint-Joseph Blvd.
Drummondville, QC
Canada J2B 1T8
819 472 1164 Ext: 313
gilbertguerette@fabrimet.com
www.fabrimet.com

-
** OUR TOWERS YOUR POWER **

-
Manufacturer of Electric Transmission Towers since 1960

From: Rhonda Torsiello
To: Cara Jaramillo
Cc: William Dildine
Subject: FW: [EXTERNALMAIL]Permian Basin Conductor Forecast Lead Time ***Respond by 2:00 CST
Date: Wednesday, March 26, 2025 1:31:45 PM

Please see below.

Rhonda Torsiello
Lower Colorado River Authority | Sr. Category Manager, Supply Chain
O 512-578-7997
Rhonda.Torsiello@lcra.org

From: Rico Jiles <Rico.Jiles@southwire.com>
Sent: Wednesday, March 26, 2025 1:28 PM
To: Rhonda Torsiello <Rhonda.Torsiello@LCRA.ORG>
Cc: Tyler Chapman <tylerchapman@usasotx.com>
Subject: Re: [EXTERNALMAIL]Permian Basin Conductor Forecast Lead Time ***Respond by 2:00 CST

Rhonda,

Current lead time is 35 weeks ARO for the Permian Basin project. Understanding we could not provide all 23.5M feet of conductor at one time, our intention would be to supply 86 reels(aka ~912k feet) per month for a period of 26 months. This allotted amount per month would allow us to still service your other ACSR demand without issue.

Note: Lead times on ACSR constructions are subject to change as the utility demand fluctuates.

Thank You,

Rico Jiles
Southwire Company
Regional Sales Manager – Energy
C 770.301.0604

> On Mar 26, 2025, at 10:55 AM, Rhonda Torsiello <Rhonda.Torsiello@lcra.org> wrote:

Gentlemen,

We recently discussed the Permian Basin forecast for 765 26/7 Str. ACSR Drake with a rough estimated quantity of 23.5 million feet. We also discussed the first delivery date as Q1 2028. Please confirm the lead time is 35 weeks ARO for the Permian Basin project. Also, please confirm other LCRA projects needing 765 26/7 Str. ACSR Drake during this timeline will not affect the Permian Basin project.

Kindly provide your response by 2:00 PM (CST) today.

Thank you,

Rhonda Torsiello
Lower Colorado River Authority | Sr. Category Manager, Supply Chain
O 512-578-7997
Rhonda.Torsiello@lcra.org

PUC PROJECT NO. 55718

RELIABILITY PLAN FOR THE PERMIAN BASIN UNDER PURA § 39.167	**§ § §**	**BEFORE THE PUBLIC UTILITY COMMISSION OF TEXAS**

LCRA TRANSMISSION SERVICES CORPORATION'S RESPONSE TO COMMISSION STAFF'S REQUEST FOR INFORMATION

QUESTION STAFF 1-3:

To the extent available, provide any vendor commitment letters related to engineering, procurement, and construction or other labor agreements associated with construction of the import path.

RESPONSE TO STAFF 1-3:

For the 345-kV import projects, LCRA's approved contractors have communicated that they will have staff and equipment resources available to perform engineering and construction of the Permian Basin projects in 2027, in addition to the other projects they will be completing for LCRA. Illustrative communication from Irby is included in response to this RFI.

For the 765-kV import projects, POWER Engineers, Inc. has communicated that they have the resources and experience to provide CCN support, 765-kV studies, specification development and standard development by various dates in 2025.

LCRA has an executed contract with Electric Power Research Institute, Inc. for completing corona performance testing and consultation to assist in development of standards and specifications for 765-kV.

ATTACHMENTS:

Response to STAFF 1-3, Attachment 1 – Irby Construction Commitment email, 1 page.

Response to STAFF 1-3, Attachment 2 – POWER Engineers Commitment email, 1 page.

Response to STAFF 1-3, Attachment 3 – EPRI Testing Agreement, 6 pages redacted.

Prepared By: Matt Chavez Title: Senior Vice President, Supply Chain

From: McGee, David
To: Cara Jaramillo; Laura Steadman; Matt Chavez
Subject: Permian Basin projects
Date: Wednesday, March 5, 2025 3:37:30 PM
Attachments: image001.png

All: Per our conversation :

Irby Construction Company feels that we will be able to handle the additional work that is to be performed for the Permian Basin projects in 2027 and able to complete our normal yearly workload that is assigned.

We currently have around 500 people working on the LCRA system and continue to grow our Texas Region & we will be able to support all of LCRA projects with the man power and equipment needed.

Some of the ways we are confident in achieving the man power requirements are:

1. We continue to build new crews each year in the Texas region to meet work demands.
2. Currently we are training people to advance in our company and over the next months and years continue this philosophy of having a contingency plan for all positions (who is going to take your place so you can advance) this results in building leader and in turn can start new crews.
3. We are blessed with having the Quanta Lineman school and we hand pick the individuals from those graduating class's each year that we believe will assist in fulfilling our needs.
4. The Sun-ZIA job in New Mexico/Arizona is coming to a close and we are interviewing up to 100 people for employment that have lattice steel experience.
5. With the two large 345 kV projects in west Texas (McCamey to Sandlake and Bearkat) we will be building strong experienced lattice steel crews that could roll over to the Permian Basin projects .

6. We will always have the backing of all the Quanta companies which included 55,000 line workers.
7. Irby also has access to close to 2000 Irby employees across the US that could be involved as needed
8. On equipment, Irby is always improving our fleet and knowing the needs ahead of time, allows time to procure new equipment and prepare for rental equipment as needed.

LCRA is Irby's best customer and we will always be our number one priority on providing resource's to meet project needs and we are here to provide solutions to what may seem like impossible tasks.

Please let me know if you need more information or have any comments.

Best Regards,

David McGee
Director of Operations / Commercial Operations, Texas Region
IRBY CONSTRUCTION COMPANY
601-983-8983

From:	nate.laughlin@powereng.com
To:	Chris Berry
Cc:	Brad Melnar; William Dildine; Cara Jaramillo; Ana BerryAnn; Dave Elliott; William Ulloa; Nina Williams; jacob.henry@powereng.com; keri.sprenger@powereng.com; naveed.afroze@powereng.com; roberto.gois@powereng.com; matt.phillips@powereng.com; griet.devriese@powereng.com; juan.barajas@powereng.com; matthew.guillory@powereng.com; kevin.wortmann@powereng.com; pushkar.gokhale@powereng.com; ryan.hann@powereng.com; ethan.fholer@powereng.com; josh.ridley@powereng.com; hector.sifuentes@powereng.com; Moody, Lori; jeff.larkin@wsp.com; doug.wickens@powereng.com
Subject:	RE: Response Request for 765-kV Engineering Services Preliminary SOW
Date:	Friday, March 7, 2025 3:32:32 PM
Attachments:	image001.jpg

Chris et al-

POWER Engineers is pleased to provide our response to LCRA's 765 kV Engineering Services Preliminary SOW in the attached file. In short, four discipline groups (SCADA and Analytical Studies, Structural Engineering, Substation Design and Lines Design) have identified staff that we can assign to this effort in the immediate future, and provided that we receive the inputs we need to start the studies, we can complete the initial batch of studies in 8-9 weeks from the issuance of a PO.

Though the resurgence of 765 kV development is a fairly new development in North America, POWER has been working with many of our clients on developing their 765 kV Lines and Substation standards in the last few years, and more broadly, we have a very deep bench of staff that have worked on EHV (that is, 500 kV and above, HVAC and HVDC) infrastructure over the last 20 years. The team we have formed for this effort includes POWER's designated 765 kV SME's in multiple disciplines, and much of our existing LCRA-focused personnel that have worked on some of your most high-profile projects. These experts have carried out 765 kV studies and standards development for our other clients that are very similar to LCRA's requested scope, and through that experience, they know how to execute what LCRA is asking for.

To strengthen our team further, POWER has formed an exclusive alliance with Power Grid Corporation of India, Ltd (PGCIL), who have developed over 30,000 miles of 765 kV transmission line and over sixty 765 kV substations in their system. We expect PGCIL to be very helpful in identifying best practices and lessons learned based on their experience with 765 kV infrastructure development, and are excited to be able to offer their accumulated wisdom as part of our team.

If you have any questions regarding our proposal, please reach out to me at 512-689-8231, or to Jacob Henry at 512-718-2992. We thank you for your consideration in this unprecedented and historic project.

Have a great weekend!

NATE LAUGHLIN, P.E., PMP
SR. PROJECT MANAGER
POWER DELIVERY

(512) 735-1829
(512) 689-8231 cell
nate.laughlin@powereng.com

POWER Engineers
Member of WSP
www.powereng.com

https://hubs.ly/Q034YgcQ0

From: Chris Berry <Chris.Berry@LCRA.ORG>
Sent: Friday, February 21, 2025 3:55 PM
Cc: Brad Melnar <Brad.Melnar@LCRA.ORG>; William Dildine <William.Dildine@LCRA.ORG>; Cara Jaramillo <Cara.Jaramillo@LCRA.ORG>; Ana BerryAnn <Ana.BerryAnn@LCRA.ORG>; Dave Elliott <Dave.Elliott@LCRA.ORG>; William Ulloa <William.Ulloa@LCRA.ORG>; Nina Williams <Nina.Williams@LCRA.ORG>
Subject: [EXTERNAL] Response Request for 765-kV Engineering Services Preliminary SOW

Good afternoon,

We are requesting a response to the following preliminary SOW.

Project Background: In 2023, the Texas Legislature enacted House Bill (HB) 5066 required the Public Utility Commission of Texas (PUCT) to direct Electric Reliability Council of Texas (ERCOT) to develop a reliability plan for the Permian Basin region to meet the 2030 and 2038 forecasted electric demand. To support this effort, ERCOT filed a reliability plan on July 30, 2024, that included proposed 765kV facilities within LCRA's transmission footprint.

In anticipation of the proposed 765-kV facilities, LCRA is seeking availability of resources to perform engineering services for the following projects:

- Bell East-Big Hill 765-kV Transmission Line Addition - 1032724
- Big Hill-Sand Lake 765-kV Transmission Line Addition -1032726
- Big Hill 765-kV Substation Addition – 1032725

Preliminary Scope of Work Overview: Provide CCN support, perform studies, develop specifications, and develop standards in the areas of designing, operating, and maintaining 765kV transmission and substation facilities.

Timeline: LCRA is preparing a full SOW and expects to provide that in mid-March. For planning purposes, please reference due dates in the preliminary scope of work sections.

Requested Response: LCRA requests acknowledgment if your firm has resources available to support this preliminary scope of work within the timelines listed below. If so, please describe your firm's experience with 765 kV, including previous project descriptions, staff you would allocate to these projects and their experience. Please submit response by **March 7, 2025.**

Note: This Preliminary SOW is used to gauge the engineering partner's expertise and capacity to support this scope of work. Confirming expertise or capacity does not guarantee the project will be awarded.

Preliminary T-Line Scope of Work:

1. **CCN Support**
    a. Preliminary structure spotting for all proposed route segments to develop cost estimates for prosed route network. – Due 10/15/25
    b. Coordinate with LCRA Engineering and Transmission Cost Estimating to develop a cost-estimating tool that provides the basis for evaluating 765 kV segment networks to help determine potential "best meets" end-to-end routes.
    c. Develop 50%-level design package, including IFPQ package, for LCRA-designated best-meets route. - Due 11/1/25
2. **Studies**
    a. Perform 765-kV studies, including:
        i. Transient Network Analysis (TNA) Study. – Due 5/15/25
        ii. Insulation Coordination study. - Due 5/15/25
        iii. TOV study to establish minimum approach distances. - Due 5/15/25
        iv. Conductor optimization study that establishes phase-phase spacing and sub conductor bundle spacing. - Due 5/15/25
        v. Perform a 765 kV structure selection study and recommend a preferred alternative. Options to include - Due 6/1/25
            1. Guyed lattice towers
            2. Self-supporting lattice towers
            3. Tubular steel structures
        vi. Perform desktop geotechnical study of the project area to aid foundation design. – Due 9/1/25
3. **Specification Development**
    a. Develop 765-Kv design criteria, including: - All due 5/15/25
        i. Audible noise limit at edge of ROW.
        ii. Radio Interference limit within and outside of ROW.
        iii. Max e-field within and at the edge of ROW.
        iv. Minimum clearances to vegetation.
        v. ROW width for 765 kV lines.
        vi. Insulator swing criteria for 765 kV.
        vii. Minimum insulation criteria for 765 kV, including creepage distance, CFO

values and dry arc distances.

viii. Develop combined 765 kV transmission line hardware and insulator specification

4. **Standard Development**
   a. Update LCRA Clearances Table L4101 to include 765 kV values. – Due 12/1/25
   b. Develop structure performance drawings for preferred alternative structure type. – Due 7/1/25
      i. If lattice towers are selected:
      1. Develop preliminary lattice tower drawings
      2. Update LCRA's lattice tower specification as appropriate.

Preliminary Substation Scope of Work:

1. **Electrical**
   a. Studies
      i. Perform 765-kV studies, including: - All Due 5/15/25
      1. Determination on breaker design, live tank vs dead tank and reactor line breakers.
      2. Determination of the insulation BIL at 765-kV.
      3. Determination of phase spacing and bus height for 765-kV substation bus configurations.
      4. Development of design criteria for 765-kV substation fault current.
      5. Development of design criteria parameters for 765-kV substation reactors for line charging current.
      6. Determination of substation fitting connectors to minimize corona.
   a. Specification Development – All Due 7/18/25
      i. Develop specifications for:
      1. 765-kV Circuit Breakers
      2. 765-kV Switches
      3. 765-kV Autotransformers
      4. 765-kV Reactors
      5. 765-kV Instrument transformers
      6. 765-kV bus insulators, to include:
         a. Creep distance
         b. Strike distance
         c. Configuration of bus insulators such as number of pieces and core shape to minimize voltage gradient.
   b. Standard Development
      i. Develop standard substation configuration drawings for 765-kV equipment listed in section b. – Due 9/19/25
2. **Structural**
   a. Studies – All Due 5/15/25
      i. Perform a 765-kV Dead-End structure selection study and recommend a preferred alternative. Options to include
      1. Self-supporting lattice towers

2. Tubular (vendor design/fabricated) steel structures

ii. Perform a 765-kV substation structure selection study and recommend a preferred alternative. Options to include:

1. Standard LCRA steel structure (using standard structural shapes, square tubes, and wide flanges)
2. Tubular (vendor design/fabricated) steel structures

iii. Perform studies, reports, and design services, associated with rigid bus design and analysis applicable to 765-kV electric facilities

b. Specification Development – Due 7/18/25

iv. Develop 765-kV design criteria, including:

1. Develop dead-end structure maximum design tensions and pull-off angles

c. Standard Development – All Due 9/19/25

v. Develop 765-kV dead-end structure performance drawings for preferred alternative structure type –

1. If lattice towers are selected (utilizing PLS Tower and AutoCAD):
    a. Develop preliminary lattice tower drawings
    b. Update LCRA's lattice tower specification as appropriate.
    c. Provide design criteria drawings including geometry and load tree
2. If tubular structures are selected:
    a. Provide structural design criteria for vendor designed and supplied structure
    b. Provide design criteria drawings including geometry and load tree

vi. Develop 765-kV substation structure performance drawings for preferred alternative structure types

1. If Standard LCRA steel structures (using standard structural shapes, square tubes, and wide flanges) are selected (utilizing RISA 3D and AutoCAD):
    a. Perform preliminary structural analysis and provide preliminary fabrication drawings for all bus supports and equipment stands
2. If tubular steel structures are selected:
    a. Develop drawings containing geometry and load tree requirements for all bus supports and equipment stands

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Billable Services Agreement No. 026809
EPRI Project ID No.: 01-200254
between
Electric Power Research Institute, Inc. ("EPRI")
and
Lower Colorado River Authority ("Funder")
Funder No. 10011558
Funder PO Number: 158681 (for Funder's internal reference only)

As of the Master Agreement Effective Date of 3/02/2023, the "Master Agreement for EPRI Participation" was executed between the Parties ("Master Agreement").

Attachment B, "Services," to the Master Agreement ("Attachment B"), Article B.1, "Engagement," provides that "*...each time Services are purchased by Funder, the specific Scope of Work, term, and Funding for each Project shall be documented and executed in a separate Billable Services Agreement..., which will be governed by this Master Agreement unless expressly stated otherwise in the BSA.*"

EPRI and Funder (collectively referred to as the "Parties" and individually as the "Party") agree that the terms and conditions of the Master Agreement, including specifically, but not limited to, Attachment B, are hereby incorporated into and govern all work under this this Billable Services Agreement No. 026809 Project ID No. 01-200254 ("BSA") except as the Master Agreement may be modified by this BSA below. The Parties will reference this BSA number in all correspondence related to this BSA.

1 Services: According to the terms of this BSA, which is effective as of the date of the last signature to the agreement (the "BSA Effective Date"), EPRI will provide the Services described in the Statement of Work "SOW") titled "*Electrical Design Evaluation and Testing Support for 765kV Transmission Line*" that is attached to this BSA as Exhibit 1 and made a part of this BSA by its reference.

2 Contacts: The Parties' technical and business contacts for this BSA are identified below. Any change to the Parties' Project Managers shall be made in writing.

Contact	Name	Phone/Fax	Email
Funder Technical Contact	Dave Elliott	512-730-5326	dave.elliott@lcra.org
Funder Contact – Additional	William Ulloa	512-730-8924	william.ulloa@lcra.org
Funder METT	Christy Yin	512-578-3004	christy.yin@lcra.org
EPRI Project Manager	Rachel Moore	704-595-2095	ramoore@epri.com
EPRI Contracts	Randy Beck	865-218-5943	rbeck@eori.com
EPRI Technical Advisor	Jeff Hlavac	972-556-6553	jhlavac@epri.com

3 Funding and Invoicing:

3.1 Funding: The Funding under this BSA shall be a firm fixed price of **US $**[redacted] unless amended as provided in Article 9.8 (Entire Agreement) of the Master Agreement. Payment will be made in accordance with the invoicing milestone payment table below. Funder may terminate the services under this project in accordance with Section B.7 of the Master Agreement. Notwithstanding anything to the contrary in the Master Agreement, Funder agrees that in the event of termination or suspension of the Services, Funder will be liable for payment in full of the current milestone payment in progress regardless of the number of tasks completed within that milestone."

3.2 Invoicing: To facilitate payments to EPRI, EPRI shall provide an invoice(s) to Funder at the address provided by Funder below based on the invoicing schedule depicted in the table provided in this Subparagraph below. EPRI's invoices will reference this BSA number. Invoices shall be submitted to Funder on the following schedule:

4 Milestone Payment No.	Milestone Description	Estimated Invoice Date	Invoice Amount*
1	Upon Execution of this Agreement	March 2025	[redacted]
2	Upon completion of Milestone 1 &2	Q2, 2025	[redacted]
3	Upon completion of Milestone 3	Q3 – Q4, 2025	[redacted]
4	Upon completion of the project		[redacted]
	Total Not to Exceed Amount:		[redacted]

*All monetary values are in US Dollars.

Accounts Payable Contact Email: invoice@lcra.org Phone/Fax: 512-578-4023

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5 Term: This BSA will commence on the BSA Effective Date and remain in effect until all the work as such is set forth in the SOW has been completed by EPRI and Funder has made payment in full.

IN WITNESS WHEREOF, the parties hereto have caused this BSA to be executed by their duly authorized representatives.

Electric Power Research Institute, Inc. ("EPRI")
3420 Hillview Avenue, Palo Alto, CA 94304-1338 USA
Negotiator for this Agreement Phone/Fax: 865-218-5943

Randy Beck
Randy Beck (Mar 20, 2025 11:33 EDT) 03/20/2025
Authorized Signature for EPRI Date

Randy Beck
Printed Name of EPRI's Authorized Signatory Title

Lower Colorado River Authority ("Funder")
3700 Lake Austin Blvd.
Austin, TX 78703
Phone/Fax: 512-657-6830

Jennifer Muhammad 03/20/2025
Authorized Signature for Funder Date

Jennifer Muhammad – Manager, Supply Management
Printed Name of Funder's Authorized Signatory Title

Please return executed contract via mail, fax or email to:
Electric Power Research Institute
Attn: Randy Beck
942 Corridor Park Blvd
Knoxville, TN 37932

Email.: rbeck@epri.com

EPRI

FUNDING STATEMENT OF WORK

Funder Name: Lower Colorado River Authority
EPRI Contract ID: 026809
Contract Title: "Electrical Design Evaluation and Testing Support for 765kV Transmission Line"
EPRI Project ID: 01-200254

Background and Objectives

Historically, the electrical design of transmission lines is largely based upon the results from high voltage testing performed as part of the development of conventional extra-high voltage (EHV) line designs. This historic test data was used as a basis for developing generalized equations and rules that can be used for estimating the dielectric strength of transmission lines.

It is however important to realize that the testing and validation of theoretically derived bundle configurations and tower top geometry becomes increasingly more important at higher voltage levels.

EPRI has a long-established history with the development and testing of 765-kV solutions and played an instrumental part in the development and introduction of 765-kV in the US grid. The high voltage (HV) laboratory at Lenox, MA, was specifically designed with this goal in mind, and is currently the largest facility of its type in the USA.

New Learning

These tasks intend to define the necessary resources for an efficient design of a new 765-kV transmission line; provide evaluation of the design using subject matter expertise; and provide guidance on non-standard tests to provide empirical evidence supporting the evaluation of the design. This project intends to evaluate a new 765-kV transmission line design to provide a safe and affordable transmission system for the public.

Tasks

1. **Develop Test Procedures for Corona Performance**

   EPRI intends to develop a test procedure for evaluating the corona performance of Funder's proposed 765-kV phase/bundle configuration that simulates the West Texas environment in which Funder intends to install these 765-kV facilities that includes representative median and heavy rain densities and appropriate levels of dust contamination. The test procedure intends to include requirements for the test facility itself, including the above sea level altitude of the facility that will provide most representative results.

   1.1. Research applicable standards

   1.2. Research environmental conditions that may affect the corona performance of the bundle

   1.3. Modeling three phase conductor bundle configuration and determine electric field levels

   1.4. Determine appropriate voltages for corona cage testing that simulate the three-phase electric field levels

   1.5. Develop test procedures for corona cage testing

2. **Perform Corona Performance Testing**

   EPRI intends to perform corona performance testing per the procedure described in Task 1 and develop a final report that details the results of those tests.

   2.1. Perform dry corona cage testing on conductor bundle provided by the Funder

   2.2. Perform wet corona cage testing on conductor bundle provided by the Funder

   2.3. Analysis and documentation of corona test results

   2.4. Provide webinar on analysis of results

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3. Provide Subject Matter Expertise on Corona Performance

EPRI intends to provide subject matter expertise in the interpretation of the corona performance test results and provide Funder guidance on potential modifications to its proposed phase/bundle configuration to improve corona performance.

4. Identify Non-Standard Specification Tests for 765-kV Equipment

EPRI intends to identify non-standard specification tests that need to be performed in addition to those that LCRA normally performs on overhead and substation assets to account for 765-kV system voltage. Tests will be identified and any special considerations will be listed. EPRI does not intend to develop step-by-step procedures for 765-kV equipment, including: Insulator assemblies

- Spacer dampers and other motion control hardware
- Transformers
- Circuit breakers
- Line reactors
- Switches
- Instrument transformers

5. Provide Guidance on Non-Specification Testing

Provide guidance on additional testing that may not be included in a specification which may inform Funder's decision making on selecting and specifying an asset. Through interviewing and literature surveys, EPRI will identify any publicly available testing results and any new testing that may need to be included.

6. Provide Expertise on Substation Bus Requirements

EPRI intends to interview current 765-kV owners and operators and utilize EPRI subject matter expertise to provide guidance on substation bus requirements, including: Phase to phase spacing

- Phase to ground spacing
- Insulator creep and strike distance
- Number of stacked insulators to reduce voltage gradient
- Potential transformer ferroresonance mitigation

7. Provide Expertise on Substation Jumpers and Connectors

EPRI intends to interview current 765-kV owners and operators and utilize EPRI subject matter expertise to provide guidance on substation jumpers and connectors to mitigate corona and additional electric field effects.

8. Provide Expertise on Control Cable Effectiveness

EPRI intends to interview current 765-kV owners and operators and utilize EPRI subject matter expertise to provide guidance on control cable effectiveness for signal and power cables under long distance applications.

9. Interpret Safety and Health Effects for EMF/Electric Fields/Corona

EPRI intends to provide interpretations of industry knowledge and completed research concerning safety and health effects for EMF (Electromagnetic Fields), electric fields, and corona for electrical workers and members of the public.

9.1. Evaluate strength of electromagnetic fields and corona discharge

9.2. Literature review of studies on the health effects of EMF/electric fields/corona on both humans and the environment (flora and fauna)

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9.3. Create a report and webinar covering:

- Health and safety summary including considerations and uncertainties
- Recommended exposure limits
- EMF results

Deliverables

1. Test Plan for Conductor Bundle Corona Cage Testing
2. Test Procedures for Conductor Bundle Corona Cage Testing
3. Conductor Bundle Corona Cage Test Report
4. Conductor Bundle Corona Cage Test Results Webinar
5. PowerPoint Report Identifying Non-Standard Specification Tests for 765 kV Equipment
6. PowerPoint Report Identifying Non-Specification Tests for 765 kV Equipment
7. PowerPoint Report Summarizing Utility Experience on Substation Bus Requirements
8. PowerPoint Report Summarizing Utility Experience on Substation Jumper and Connectors
9. PowerPoint Report Summarizing Utility Experience on Control Cable Effectiveness
10. Webinar Summarizing Deliverables 5-9
11. Safety and Health Effects Report
12. Safety and Health Effects Webinar

Estimated Period of Performance/Estimated Schedule

Estimated Period of Performance

The estimated period of performance will continue to December 31, 2027.

Estimated Schedule

The schedule is dependent on receipt of needed input outlined in 'Funder Obligations'.

Kickoff meeting will be held after contract signatures. Project update meeting cadence will be determined during kickoff meeting, initially EPRI proposed meeting bi-weekly.

Milestone Number	Task Number	Task Description	Milestone Timeline (from receipt of necessary input)
1	1	Develop Test Procedures for Corona Performance	3-months
2	1	Funder Provide Review of Test Procedures	4-months
3	2	Perform Corona Performance Testing	9-months
4	3	Provide Subject Matter Expertise on Corona Performance	12-months
5	3	Funder Provide Review on Corona Performance Report	13-months
6	4	Identify Non-Standard Specification Tests for 765 kV Equipment	9-months

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Milestone Number	Task Number	Task Description	Milestone Timeline (from receipt of necessary input)
7	5	Provide Guidance on Non-Specification Testing	9-months
8	6	Provide Expertise on Substation Bus Requirements	9-months
9	7	Provide Expertise on Substation Jumpers and Connectors	9-months
10	8	Provide Expertise on Control Cable Effectiveness	9-months
11	9	Interpret Safety and Health Effects for EMF/Electric Fields/Corona	9-months

Funder Obligations

Funder must provide design to initiate this project. Details include structure design and tower top configuration as well as conductor, insulation, and hardware selection.

Design drawings that outline parameters including, but not limited to:

- Detailed bundle and configuration dimensions
    - Conductor specifications
    - Bundle spacing
- Tower top geometry (dimensioning)
- Electrical loading including, but not limited to, voltage, current, and phasing (both max and everyday)
- Limits (such as electric field, magnetic field, audible noise, and radio interference) that are relevant for Funder territory
- Any environmental information obtained by the Funder
- Reference span configuration and dimensions for EMF model
- Conductor and associated hardware for testing to be delivered to the Lenox, MA, lab
- Participation in project update meetings.

PUC PROJECT NO. 55718

RELIABILITY PLAN FOR THE PERMIAN BASIN UNDER PURA § 39.167	**§ § §**	**BEFORE THE PUBLIC UTILITY COMMISSION OF TEXAS**

LCRA TRANSMISSION SERVICES CORPORATION'S RESPONSE TO COMMISSION STAFF'S REQUEST FOR INFORMATION

QUESTION STAFF 1-4:

Provide current import path construction timeline estimates necessary to meet the forecasted load requirements documented in the Permian Basin Reliability Plan. If the TSP intends to construct the import path faster than what would be required under Permian Basin Reliability Plan, please provide the relevant information.

RESPONSE TO STAFF 1-4:

Import Number	Project Name	Voltage	CCN Filing	Design Finish	Materials Acquired	Property Acquired	Construction Start	Construction Finish
765kV Import 2	PB BigHill-SandLk 765kV TLAdtn - 1032726	765kV	Q4 25	8/4/2027	10/14/2027	2/23/2027	10/18/2027	6/28/2030
765kV Import 2	PB Bell E-BigHill 765kV TLAdtn - 1032724	765kV	Q4 25	8/4/2027	10/14/2027	2/23/2027	10/18/2027	6/28/2030
765kV Import 2	PB Big Hill 765kV Sub Addition - 1032725	765kV	Q4 25	2/7/2027	12/30/2029	2/23/2027	5/10/2027	6/28/2030
345kV Import 2	PB Comanche Sw-TwinBts TL Adtn - 1032751	345kV	Q1 26	8/4/2027	10/14/2027	2/23/2027	10/18/2027	6/28/2030
345kV Import 2	PB King Mtn-TwinButtes TL Adtn - 1032752	345kV	Q2 26	8/4/2027	10/14/2027	2/23/2027	10/18/2027	6/28/2030
345kV Import 3	PB Buckhorn-N Hill TL Addition - 1032727	345kV	Q4 25	8/4/2027	10/14/2027	2/23/2027	10/18/2027	6/28/2030
345kV Import 3	PB Lynx 345kV Sub Addition - 1032728	345kV	Q2 26	2/7/2027	8/20/2029	2/23/2027	5/10/2027	6/28/2030
345kV Import 3	PB Nevill Rd-N Hill TL Addtn - 1032730	345kV	Q2 26	8/4/2027	10/14/2027	2/23/2027	10/18/2027	6/28/2030
345kV Import 3	PB Lynx-Nevill Rd TL Addition - 1032729	345kV	Q2 26	8/4/2027	10/14/2027	2/23/2027	10/18/2027	6/28/2030
345kV Import 3	PB North Hill Sub Addition - 1032731	345kV	Q2 26	2/7/2027	8/20/2029	2/23/2027	5/10/2027	6/28/2030

Please note the schedules above assume PUC approval of the CCN applications within 180 days of filing.

Prepared By: Sarah Wilson Title: Director, Project Management

PUC PROJECT NO. 55718

RELIABILITY PLAN FOR THE PERMIAN BASIN UNDER PURA § 39.167	**§ § §**	**BEFORE THE PUBLIC UTILITY COMMISSION OF TEXAS**

LCRA TRANSMISSION SERVICES CORPORATION'S RESPONSE TO COMMISSION STAFF'S REQUEST FOR INFORMATION

QUESTION STAFF 1-5:

If the TSP does not have responsive information to Staff 1-2 through Staff 1-4, provide an affidavit or sworn statement by the TSP's highest level official attesting to the TSP's preparedness to design, build, and energize the import path in time to meet the Permian Basin Reliability Plan load forecast irrespective of voltage level.

RESPONSE TO STAFF 1-5:

LCRA TSC has provided responsive information to Staff 1-2 through Staff 1-4 regarding LCRA TSC's preparedness.

Prepared By: Emily Jolly Title: Deputy General Counsel, Regulatory Affairs

PUC PROJECT NO. 55718

RELIABILITY PLAN FOR THE PERMIAN BASIN UNDER PURA § 39.167	**§ § §**	**BEFORE THE PUBLIC UTILITY COMMISSION OF TEXAS**

LCRA TRANSMISSION SERVICES CORPORATION'S RESPONSE TO COMMISSION STAFF'S REQUEST FOR INFORMATION

Question No. 1-6:

Provide any new data or information related to cost or timelines the TSP believes would assist the Commission`s final determination on the Permian Basin import paths.

Response No. 1-6

At this time, LCRA TSC does not have any additional data or information. LCRA TSC is available to respond to any further requests for information from the Commission.

Prepared By: Emily Jolly Title: Deputy General Counsel, Regulatory Affairs