BEFORE THE
LOUISIANA PUBLIC SERVICE COMMISSION

JEFFERSON DAVIS ELECTRIC COOPERATIVE, INC., EX PARTE	))	DOCKET NO. U-_____

In re: Application for Transmission Determination, Approval to Transfer Functional Control to MISO, and Expedited Consideration.

JEFFERSON DAVIS ELECTRIC COOPERATIVE, INC.'S APPLICATION FOR TRANSMISSION DETERMINATION, APPROVAL TO TRANSFER FUNCTIONAL CONTROL TO MISO, AND EXPEDITED CONSIDERATION

EXHIBIT "B"
Pre-filed Direct Testimony of Mr. Timothy Kopp
(Rule 12.1 Confidential/HSPM Version Removed From Public Version)

PUBLIC

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PRE-FILED DIRECT TESTIMONY OF TIMOTHY KOPP ON BEHALF OF JEFFERSON DAVIS ELECTRIC COOPERATIVE, INC.

October 2025

PUBLIC VERSION

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JEFFERSON DAVIS ELECTRIC COOPERATIVE, INC.,) DOCKET NO. U-_____
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In re: Application for Transmission Determination, Approval to Transfer Functional Control to MISO, and Expedited Consideration.

SUMMARY OF PREPARED PRE-FILED DIRECT TESTIMONY OF TIMOTHY KOPP ON BEHALF OF JEFFERSON DAVIS ELECTRIC COOPERATIVE, INC.

The prepared direct testimony of Mr. Timothy Kopp supports Jefferson Davis Electric Cooperative, Inc. ("JDEC") filing to request for a Transmission Determination for the certain transmission assets (referred "JDEC Facilities") and to transfer the control function of the requested JDEC Facilities to the Midwest Independent Transmission System Operator, Inc. (MISO), Regional Transmission Organization.

Mr. Kopp sponsors the following exhibits:

Exhibit No.	**Description**
JDEC-00001	Direct Testimony of Timothy Kopp
JDEC-00002	List of JDEC Facilities
JDEC-00003	JDEC One-Line Diagram
JDEC-00004	Electric Grouping of JDEC Facilities
JDEC-00005	Seven-Factor Test Final Determination for All JDEC Facilities
JDEC-00006	Map of JDEC Service Territory
JDEC-00007	Area Overlay of JDEC, and other electric service providers' Service Territories
JDEC-00008	Steps taken to update the base MISO power flow models to represent the JDEC Facilities in detail
JDEC-00009	Graphical representation of the JDEC Facilities using the MISO23 2025 Summer powerflow model with detailed modeling of the JDEC Facilities and showing power flows across the JDEC Facilities
JDEC-00010	Graphical representation of the JDEC Facilities using the MISO23 2028 Winter powerflow model with detailed modeling of the JDEC Facilities and showing power flows across the JDEC Facilities
JDEC-00011	Graphical representation of the JDEC Facilities using the MISO23 2028 Spring powerflow model with detailed modeling of the JDEC Facilities and showing power flows across the JDEC Facilities
JDEC-00012	Graphical representation of the JDEC Facilities using the MISO23 2028 Summer powerflow model with detailed modeling of the JDEC Facilities and showing power flows across the JDEC Facilities
JDEC-00013	JDEC One-Line Diagram showing location of bidirectional meters
JDEC-00014	Tim Kopp Vice President Curriculum Vitae

I. INTRODUCTION AND QUALIFICATIONS

Q. PLEASE STATE YOUR FULL NAME, POSITION AND BUSINESS ADDRESS.

A. My name is Timothy Kopp. I am a Vice President with Electric Power Engineers, LLC ("EPE"), an engineering consulting firm. My business address is 5301 Southwest Pkwy, Suite 150, Austin, TX 78735.

Q. ON WHOSE BEHALF ARE YOU TESTIFYING?

A. I am testifying on behalf of Jefferson Davis Electric Cooperative, Inc. ("JDEC"). JDEC is a Louisiana nonprofit cooperative corporation organized and existing under the laws of the State of Louisiana and domiciled in Jefferson Davis Parish, Louisiana. JDEC was incorporated on September 17, 1941, and provides electricity to approximately 9,690 active meters (residential, commercial, and industrial) in the rural areas of a five (5) parish area, namely, Allen, Calcasieu, Cameron, Jefferson Davis, and Vermilion Parishes. JDEC's members are both its owners and its customers. JDEC is a state regulated utility, is not currently a member of MISO, and currently does not own any transmission facilities in MISO.

Q. PLEASE SUMMARIZE YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND.

A. I earned a Bachelor of Science Degree in Electrical and Computer Engineering from the University of Minnesota Duluth and a Masters in Engineering Management from St. Cloud State University. I worked for ten years at Midcontinent Independent System Operator ("MISO") in various transmission planning functions, rising to the role of Principal Engineer. My responsibilities were to act as a technical subject matter expert on topics including generation interconnection, reliability analysis, long term planning,

economic analysis, resource adequacy, and Seven-Factor analysis to evaluate facilities as transmission or distribution assets. Upon joining EPE in 2019, I have performed a variety of functions, including conducting technical transmission analysis, acting as an internal and external subject matter expert regarding transmission planning, and growing the utility business at EPE. In my current role, I provide oversight for EPE's utility business and management of EPE's utility clients. My resumé is attached as Exhibit No. JDEC-00014.

Q. HAVE YOU TESTIFIED BEFORE THE FEDERAL ENERGY REGULATORY COMMISSION ("COMMISSION" OR "FERC") OR ANY OTHER REGULATORY AUTHORITIES?

A. Yes. In 2022, I submitted an affidavit on behalf of SPP to confirm that the restudy of Tenaska's Clear Creek Wind Project (the "Clear Creek Project") in FERC Docket No. EL21-77-000. My statements in the affidavit were meant to verify the accuracy of the restudy. In 2024, I submitted written direct testimony, written rebuttal testimony, and written supplemental rebuttal testimony on behalf of People's Electric Cooperative ("PEC") in FERC Docket ER22-1525-002. In addition to the written testimony, I also testified in-person before the administrative law judge overseeing the case. My direct and rebuttal testimonies provided engineering analysis of PEC's facilities under issue, including performing a 7-Factor analysis of those facilities, to determine if the facilities should be classified as transmission or distribution assets.

II. JDEC SYSTEM BACKGROUND

Prior to August 27, 2020, the date of landfall of Hurricane Laura in JDEC's service territory, JDEC served its members through 105 miles of transmission network and facilities. JDEC's

entire distribution system was decimated by Hurricane Laura. No section of JDEC's distribution system was left unscathed, and all 105 miles of its transmission network was destroyed, including its transmission facilities, which included 138 kV transmission towers and the 69 kV transmission towers that crossed the Intracoastal Waterway. Immediately following Hurricane Laura, JDEC started the process of rebuilding the 69 kV lines and evaluating the 138 kV line that traverses through the marsh across Cameron Parish. Approximately one month later, on October 4, 2020, Hurricane Delta made landfall in JDEC's service territory and devastated the same area that was decimated by Hurricane Laura.

Following Hurricane Delta, JDEC continued to repair its distribution system, but concurrently began discussions with the Federal Emergency Management Agency ("FEMA") and the Governor's Office of Homeland Security & Emergency Preparedness ("GOHSEP") to explore the use of Public Assistance Alternative Procedures ("PAAP") for the replacement and hardening of JDEC's old 69 kV loop and the 138 kV line. Specifically, JDEC seeks to replace the transmission system that was severely damaged by the 2020 hurricane season with a new 230 kV loop (the "New Transmission Loop"). This New Transmission Loop will largely track the path of JDEC's previous transmission system but will be built in accordance with new codes and standards, which include the use of steel poles, elevated substations, and other improvements that will harden JDEC's transmission infrastructure and provide for a more resilient electric system for the State of Louisiana.

III. SCOPE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR PREPARED DIRECT TESTIMONY?

A. The purpose of my testimony is twofold: (1) to demonstrate that the JDEC 230 kV Loop (the "Loop" or "JDEC Facilities") satisfies the FERC Seven-Factor Test and therefore qualifies as transmission, and (2) to explain how transferring functional control of these facilities to Midwest Independent Transmission System Operator, Inc. ("MISO") will enhance reliability, improve resiliency, and reduce costs not only for JDEC members but for all customers in the Entergy Louisiana pricing zone.

I include references to an analysis that the JDEC Facilities qualify as Transmission Facilities as outlined by the Commission in Order No. 888 for determining whether facilities should be classified as local distribution facilities, which is known as the "Seven-Factor Test."

Q. WHAT EXHIBITS ARE YOU SPONSORING IN CONNECTION WITH YOUR TESTIMONY?

A. Yes. I am sponsoring Exhibit Nos. JDEC-00001 through JDEC-00014, which consist of documents that were prepared by me or under my direct supervision, are publicly available, or produced by JDEC in the ordinary course of business.

IV. JDEC FACILITIES

Q. PLEASE DESCRIBE THE JDEC FACILITIES.

A. The JDEC Facilities are the facilities identified in Exhibit No. JDEC-00002. I have included below a simplified list of the JDEC Facilities, their respective voltage, status, and mileage, where applicable. A one-line diagram of the JDEC Facilities follows the simplified list in Figure 1A.

Table 1: JDEC Facilities[1]

Jefferson Davis Electric Cooperative, Inc. Facilities

Substations	Voltage	Status	Miles
Fulton Substation	230/13.2 kV	Under Construction	N/A
Holly Beach Switching Station	230 kV	Under Construction	N/A
Crown Substation	230 kV	Under Construction	N/A
Sturlese Substation	230/13.2 kV	Under Construction	N/A
Hacket Substation	230/24.9/13.2 kV	Under Construction	N/A
Manchester Substation	230/13.2 kV	Under Construction	N/A
Chalkley Substation	230 kV	Existing	N/A
Johnson Bayou	230/13.2 kV	Under Construction	N/A
Knight Substation	230/13.2 kV	Under Construction	N/A
Michigan-Wisconsin Substation	230/13.2 kV	Under Construction	N/A
Grand Chenier Substation	230 /13.2 kV	Under Construction	N/A

Transmission Lines	Voltage	Status	Miles
Holly Beach Switching Station to Fulton	230 kV	Under Construction	13.15
Holly Beach Switching Station to Crown	230 kV	Under Construction	24.00
Fulton to Sturlese	230 kV	Under Construction	12.30
Sturlese to Hackett	230 kV	Under Construction	14.50
Hackett to Manchester	230 kV	Under Construction	10.70
Manchester to Chalkley	230 kV	Under Construction	2.50
Johnson Bayou to Holly Beach	230 kV	Under Construction	10.00
Knight to Chalkley	230 kV	Under Construction	0.08
Sturlese to Michigan-Wisconsin Tap	230 kV	Under Construction	7.90
Michigan-Wisconsin Tap to Grand Chenier	230 kV	Under Construction	4.20
Michigan-Wisconsin Tap to Michigan-Wisconsin	230 kV	Under Construction	1.50

[1] *See* Exhibit No. JDEC-00002.

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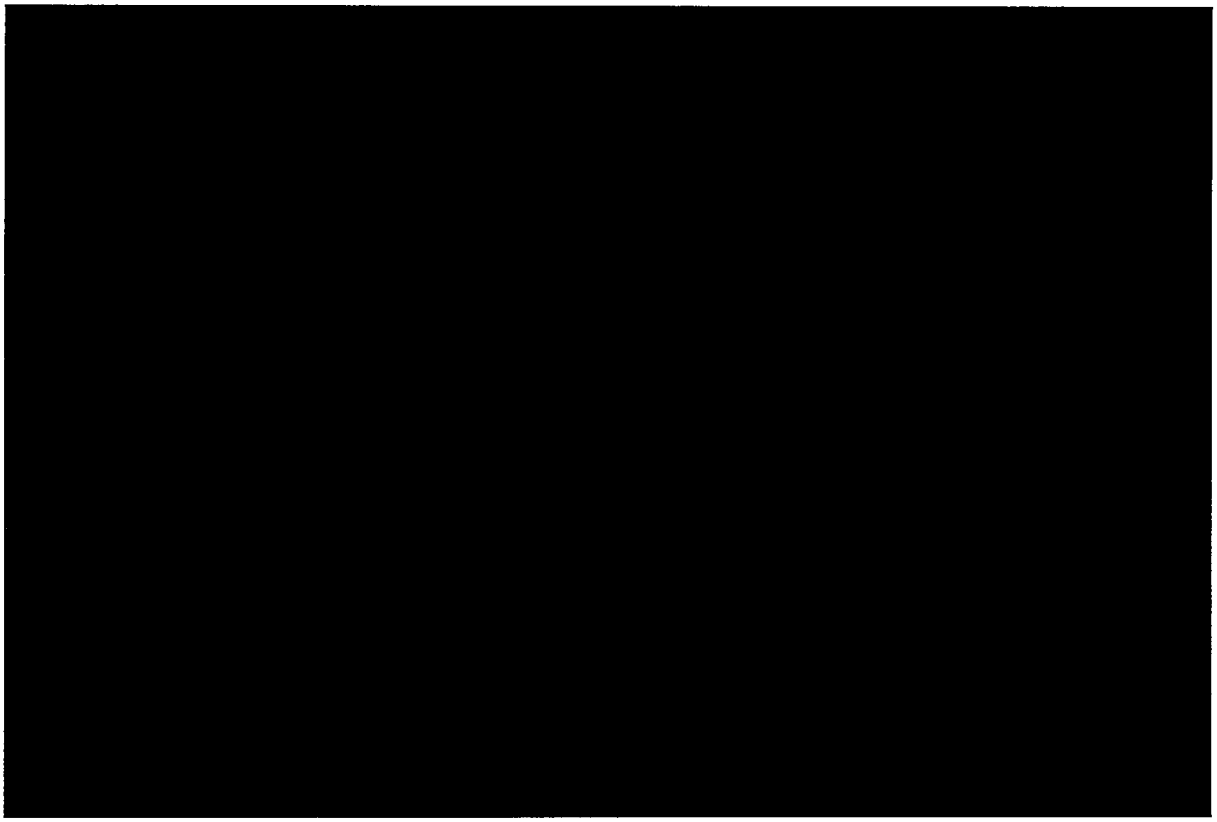
Figure 1A: One-Line Diagram of JDEC Facilities (Page 1)[23]



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V. THE SEVEN-FACTOR TEST

Q. WHAT IS THE SEVEN-FACTOR TEST?

A. The Seven-Factor Test adopted by FERC in Order No. 888, sets out seven indicators for determining whether facilities should be classified as local distribution or transmission. The seven indicators are as follows:

(1) Local distribution facilities are normally in close proximity to retail customers;

[2] *See* Exhibit No. JDEC-00003.

[3] The color green has been designated to represent facilities identified as transmission, while the color yellow signifies facilities categorized as distribution.

(2) Local distribution facilities are primarily radial in character;

(3) Power flows into local distribution facilities; it rarely, if ever, flows out;

(4) When power enters a local distribution system, it is not reconsigned or transported to some other market;

(5) Power entering a local distribution system is consumed in a comparatively restricted geographical area;

(6) Meters are based at the transmission / local distribution interface to measure flows into the local distribution system; and

(7) Local distribution systems will be of reduced voltage.

Q. DID THE COMMISSION PROVIDE ANY GUIDANCE IN ORDER NO. 888 REGARDING HOW TO INTERPRET EACH OF THE SEVEN FACTORS?

A. Unfortunately, FERC did not provide specific guidance as to how each factor should be applied or interpreted. However, since the issuance of Order No. 888 the FERC as well as other state commissions have analyzed the case-by-case application of the Seven-Factor Test in numerous instances. Where applicable, I rely on some of the FERC rulings to guide my interpretation of the seven factors as applied to the JDEC Facilities.

Q. PLEASE DESCRIBE YOUR METHODOLOGY FOR APPLYING THE SEVEN-FACTOR TEST.

A. When assessing the JDEC Facilities by applying the Seven-Factor Test, I considered and assessed the facilities under three scenarios: on a facility-by-facility and segment by segment basis, as groupings of Facilities that are connected to each other consecutively, and as a single grouping of all JDEC Facilities under evaluation.[4] The groupings of JDEC

[4] *See* Exhibit JDEC-00004.

Facilities that are connected to each other consecutively are represented below. Group A consists of facilities that form a U-loop configuration and are connected consecutively, indicating a looped topology. In contrast, Group B consists of facilities connected in a radial configuration, where each facility is connected along a single path without forming a loop.

Table 2: JDEC Facility Groupings[5]

JDEC Facilities Group A

Facility	Voltage	Status
Holly Beach Switching Station	230 kV	Under Construction
Fulton Substation	230/13.2 kV	Under Construction
Crown Substation	230 kV	Under Construction
Sturlese Substation	230/13.2 kV	Under Construction
Hacket Substation	230/24.9/13.2 kV	Under Construction
Manchester Substation	230/13.2 kV	Under Construction
Chalkley Substation	230 kV	Existing
• Holly Beach Switching Station to Fulton	230 kV	Under Construction
• Holly Beach Switching Station to Crown	230 kV	Under Construction
• Fulton to Sturlese	230 kV	Under Construction
• Sturlese to Hackett	230 kV	Under Construction
• Hackett to Manchester	230 kV	Under Construction
• Manchester to Chalkley	230 kV	Under Construction

JDEC Facilities Group B

Facility	Voltage	Status
Johnson Bayou	230/13.2 kV	Under Construction
Knight Substation	230/13.2 kV	Under Construction
Michigan-Wisconsin Substation	230/13.2 kV	Under Construction
Grand Chenier Substation	230 /13.2 kV	Under Construction
• Johnson Bayou to Holly Beach	230 kV	Under Construction
• Knight to Chalkley	230 kV	Under Construction
• Sturlese to Michigan-Wisconsin Tap	230 kV	Under Construction
• Michigan-Wisconsin Tap to Grand Chenier	230 kV	Under Construction
• Michigan-Wisconsin Tap to Michigan-Wisconsin	230 kV	Under Construction

[5] *See* Exhibit No. JDEC-00004.

Each factor of the Seven-Factor Test was evaluated independently of the other factors. A pass/fail determination was made for each of the JDEC Facilities associated with each factor, based on if the characteristics of JDEC Facilities are consistent with the factor being evaluated. The pass/fail determination of all seven factors were considered for each facility to make an overall determination for each JDEC Facility and if it passed or failed the Seven-Factor Test. Additionally, as I noted earlier, I reviewed Commission decisions on the case-by-case application of the Seven-Factor Test.

Q. WHAT IS YOUR ASSESSMENT OF THE JDEC FACILITIES UNDER THE SEVEN-FACTOR TEST?

A. The two tables that follow provide a summary of whether each of the JDEC Facilities passes or fails each factor.[6] Because the Seven-Factor Test is meant to determine whether a facility should be classified as a local distribution facility, a "Fail" indicates that the facility should be classified as a Transmission Facility for purposes of the particular factor.

[6] *See* Exhibit No. JDEC-00005.

Table 3: Seven-Factor Test Results Summary[7]

Substations									
Station Name	Voltage(s)	Factor #1: Proximity to Retail Customers	Factor #2: Radial	Factor #3: Power Rarely Flows Out	Factor #4: Re-Consignment or Transported to Other Markets	Factor #5: Consumed in Restricted Area	Factor #6: Meters based at T/D Interface	Factor #7: Reduced Voltage	Final Determination
Holly Beach Switching Station	230 kV	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail
Fulton Substation	230/13.2 kV	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail
Crown Substation	230 kV	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail
Sturlese Substation	230/13.2 kV	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail
Hacket Substation	230/24.9/13.2 kV	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail
Manchester Substation	230/13.2 kV	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail
Chalkley Substation	230 kV	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail

Transmission Lines									
Station Name	Voltage(s)	Factor #1: Proximity to Retail Customers	Factor #2: Radial	Factor #3: Power Rarely Flows Out	Factor #4: Re-Consignment or Transported to Other Markets	Factor #5: Consumed in Restricted Area	Factor #6: Meters based at T/D Interface	Factor #7: Reduced Voltage	Final Determination
Holly Beach Switching Station to Fulton	230 kV	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail
Holly Beach Switching Station to Crown	230 kV	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail
Fulton to Sturlese	230 kV	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail
Sturlese to Hackett	230 kV	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail
Hackett to Manchester	230 kV	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail
Manchester to Chalkley	230 kV	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail

Substations									
Station Name	Voltage(s)	Factor #1: Proximity to Retail Customers	Factor #2: Radial	Factor #3: Power Rarely Flows Out	Factor #4: Re-Consignment or Transported to Other Markets	Factor #5: Consumed in Restricted Area	Factor #6: Meters based at T/D Interface	Factor #7: Reduced Voltage	Final Determination
Johnson Bayou	230/13.2 kV	Fail	Pass	Pass	Pass	Pass	Fail	Fail	Pass
Knight Substation	230/13.2 kV	Fail	Pass	Pass	Pass	Pass	Fail	Fail	Pass
Michigan-Wisconsin Substation	230/13.2 kV	Fail	Pass	Pass	Pass	Pass	Fail	Fail	Pass
Grand Chenier Substation	230/13.2 kV	Fail	Pass	Pass	Pass	Pass	Fail	Fail	Pass

Transmission Lines									
Station Name	Voltage(s)	Factor #1: Proximity to Retail Customers	Factor #2: Radial	Factor #3: Power Rarely Flows Out	Factor #4: Re-Consignment or Transported to Other Markets	Factor #5: Consumed in Restricted Area	Factor #6: Meters based at T/D Interface	Factor #7: Reduced Voltage	Final Determination
Johnson Bayou to Holly Beach	230 kV	Fail	Pass	Pass	Pass	Pass	Fail	Fail	Pass
Knight to Chalkley	230 kV	Fail	Pass	Pass	Pass	Pass	Fail	Fail	Pass
Sturlese to Michigan-Wisconsin Tap	230 kV	Fail	Pass	Pass	Pass	Pass	Fail	Fail	Pass
Michigan-Wisconsin Tap to Grand Chenier	230 kV	Fail	Pass	Pass	Pass	Pass	Fail	Fail	Pass
Michigan-Wisconsin Tap to Michigan-Wisconsin	230 kV	Fail	Pass	Pass	Pass	Pass	Fail	Fail	Pass

Q. DOES PASSING ONE OR TWO FACTORS MEAN THAT A PARTICULAR FACILITY SHOULD BE CLASSIFIED AS A LOCAL DISTRIBUTION FACILITY?

A. No, it does not. FERC has stated that the Seven-Factor test is "not subject to formulaic application or categorical standards," but instead "requires comprehensive consideration of how the totality of the circumstances bears on each of the seven factors."[8] Based on the totality of the circumstances presented here, I conclude that below the JDEC Facilities

[7] *See* Exhibit No. JDEC-00005.

[8] *S. Cal. Edison Co.*, 153 FERC ¶ 61,384, at P 19 (2015); *see also* Opinion No. 579 at P 214.

should be classified as "Transmission Facilities".[9] I discuss below my assessment of the JDEC Facilities under each of the seven factors. The remaining JDEC Facilities "Pass" the Seven-Factor Test and hence, classified as "Distribution Facilities."

Table 4 Seven-Factor Test Results

Substations									
Station Name	Voltage(s)	Factor #1: Proximity to Retail Customers	Factor #2: Radial	Factor #3: Power Rarely Flows Out	Factor #4: Re-Consignment or Transported to Other Markets	Factor #5: Consumed in Restricted Area	Factor #6: Meters based at T/D Interface	Factor #7: Reduced Voltage	Final Determination
Johnson Bayou	230/13.2 kV	Fail	Pass	Pass	Pass	Pass	Fail	Fail	Pass
Knight Substation	230/13.2 kV	Fail	Pass	Pass	Pass	Pass	Fail	Fail	Pass
Michigan-Wisconsin Substation	230/13.2 kV	Fail	Pass	Pass	Pass	Pass	Fail	Fail	Pass
Grand Chenier Substation	230/13.2 kV	Fail	Pass	Pass	Pass	Pass	Fail	Fail	Pass

Transmission Lines									
Station Name	Voltage(s)	Factor #1: Proximity to Retail Customers	Factor #2: Radial	Factor #3: Power Rarely Flows Out	Factor #4: Re-Consignment or Transported to Other Markets	Factor #5: Consumed in Restricted Area	Factor #6: Meters based at T/D Interface	Factor #7: Reduced Voltage	Final Determination
Johnson Bayou to Holly Beach	230 kV	Fail	Pass	Pass	Pass	Pass	Fail	Fail	Pass
Knight to Chalkley	230 kV	Fail	Pass	Pass	Pass	Pass	Fail	Fail	Pass
Sturlese to Michigan-Wisconsin Tap	230 kV	Fail	Pass	Pass	Pass	Pass	Fail	Fail	Pass
Michigan-Wisconsin Tap to Grand Chenier	230 kV	Fail	Pass	Pass	Pass	Pass	Fail	Fail	Pass
Michigan-Wisconsin Tap to Michigan-Wisconsin	230 kV	Fail	Pass	Pass	Pass	Pass	Fail	Fail	Pass

[9] *See* Exhibit No. JDEC-00005.

VI. FACTOR 1 OF THE SEVEN-FACTOR TEST

Q. WHAT IS FACTOR 1?

A. Factor 1 states that "local distribution facilities are normally in close proximity to retail customers."

Q. WHAT DOES THE PHRASE "IN CLOSE PROXIMITY TO RETAIL CUSTOMERS" MEAN?

A. FERC interprets proximity "in the context of the purpose and customers that the facilities serve"[10] and whether the utility's facilities are "in close electrical-connection proximity to retail customers."[11]

Q. WHAT WAS YOUR METHODOLOGY TO DETERMINE WHETHER JDEC FACILITIES PASS OR FAIL FACTOR 1.

A. When considering proximity to retail customers, I examined the proximity of the JDEC Facilities in relation to the retail customers served. I started by reviewing one-line diagrams of the JDEC Planned Facilities.[12] I created a map of each of the JDEC Planned Facilities and service territory.[13] I also included service territories of other utilities in the area to identify additional overlapping territories.[14] In determining close electric-connection proximity, I relied upon Opinion No. 580, in which the presiding judge considered whether retail customers were served "by distribution facilities such as step-down transformers and distribution lines that are separate from Henderson's 69 kV and

[10] *Sw. Power Pool, Inc.*, Opinion No. 535, 149 FERC ¶ 61,051, at P 174 (2014).
[11] *Midcontinent Indep. Sys. Operator, Inc.*, Opinion No. 580, 181 FERC ¶ 61,056 at P 62 (2022), *reh'g*, Opinion No. 580-A, 182 FERC ¶ 61,095 (2023).
[12] *See* Exhibit JDEC-00003.
[13] *See* Exhibit JDEC-00006.
[14] *See* Exhibit JDEC-00007.

161 kV facilities [the facilities at issue], and [determined] that because [of] those intervening distribution facilities, none of the networked Henderson 69 kV and 161 kV facilities have electrical connections to or directly serve retail customers."[15] The Commission affirmed the presiding judge's finding that "because the Henderson Facilities are electrically remote from retail customers (e.g., Henderson's 69 kV and 161 kV transmission facilities are not in close electrical connection proximity to retail customers), the Henderson facilities qualify as transmission under Factor 1." I used the one-line diagrams to determine the electrical distances between customers and facilities. I also used this information to assess if the power was consumed near the points of delivery or was transported over a larger area.

Q. ARE ANY OF THE JDEC FACILITIES "IN CLOSE PROXIMITY TO RETAIL CUSTOMERS"?

A. The JDEC Facilities will not be in close electrical proximity to JDEC's retail customers and the JDEC Facilities in Group A will not be bound by JDEC's retail customers. As shown in the map below (Figure 2), the JDEC Planned Facilities in Group A will be utilized to transport power across multiple service territories for the purpose of delivering power to multiple wholesale entities serving retail customers extending beyond JDEC's own retail service territory.[16]

[15] Opinion No. 580 at P 52.

[16] *See* Exhibit No. JDEC-00007.

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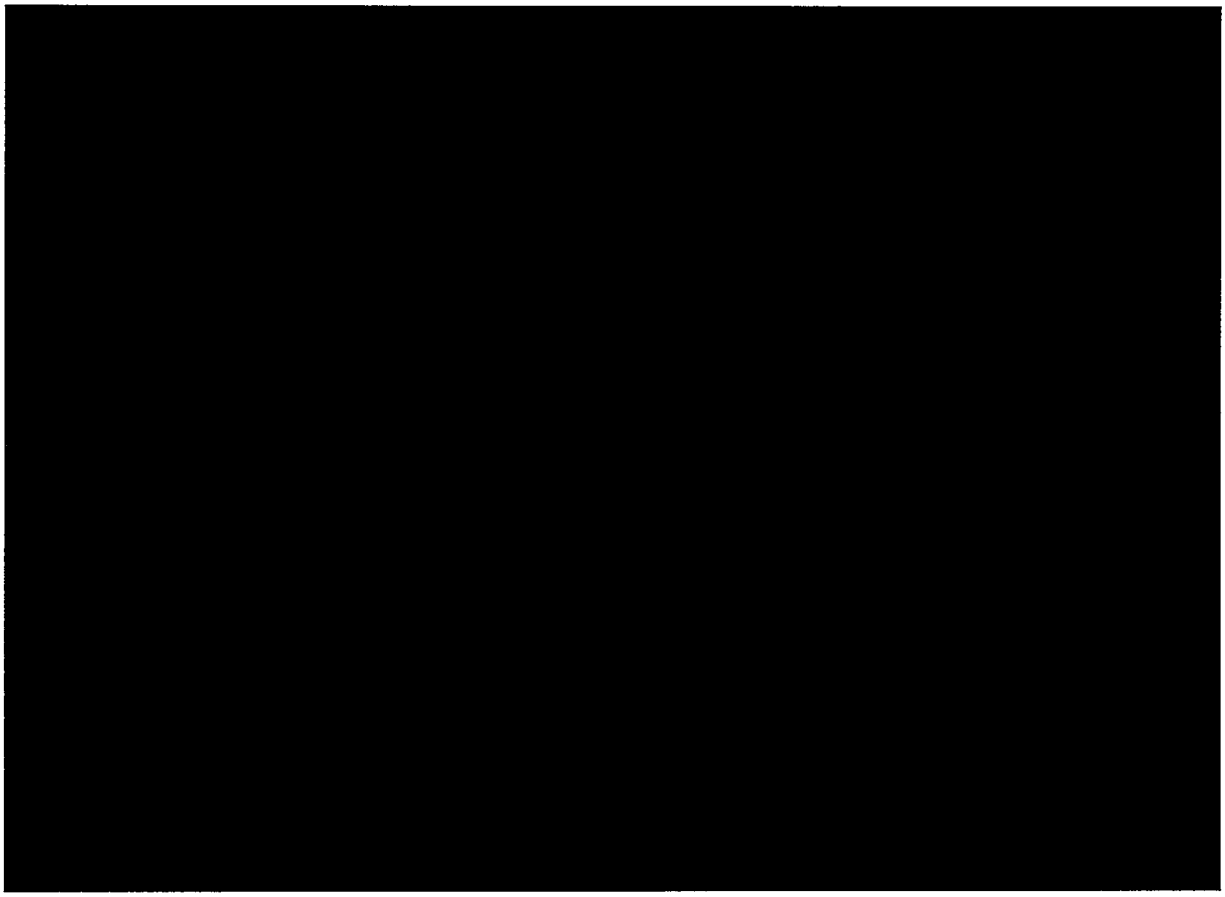
Figure 2: JDEC Facilities with Combined Overlay of JDEC, and Entergy's Service Boundaries



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The JDEC Facilities will cross the service territories of other utilities including Entergy and carry power from other service territories, through JDEC's service territory, and on to other service territories. JDEC's Facilities will be relied upon by the wholesale entities in the vicinity area to ensure that these entities are able to provide continuous and reliable retail service to end-use customers extending beyond JDEC's retail service boundaries. Based upon these findings, it is determined that the JDEC Facilities in Group A are not bound by JDEC's retail customers since the facilities provide power to multiple

wholesale entities, signifying the failure of Factor 1 and supporting the classification of the below JDEC Facilities as "Transmission".[17] As such, the Group A JDEC Facilities fail Factor 1, supporting classification as transmission facilities. The facilities in Group B, while bound by JDEC's retail customers, also fail Factor 1 due to electrical distance. Consistent with Opinion No. 580, there are multiple "step downs" from the JDEC facilities to the retail customers that are ultimately served. This includes stepping the power down through transformers from high voltage/extra high voltage 230 kV facilities to medium voltage distribution facilities and then stepped down again through transformers to be usable by resale customers. These significant steps down in voltage create electrical distance from the JDEC facilities and retail customers in all cases.

[17] *See* Exhibit No. JDEC-00005.

Jefferson Davis Electric Cooperative, Inc. Facilities

Substations	Voltage	Status	Miles
Fulton Substation	230/13.2 kV	Under Construction	N/A
Holly Beach Switching Station	230 kV	Under Construction	N/A
Crown Substation	230 kV	Under Construction	N/A
Sturlese Substation	230/13.2 kV	Under Construction	N/A
Hacket Substation	230/24.9/13.2 kV	Under Construction	N/A
Manchester Substation	230/13.2 kV	Under Construction	N/A
Chalkley Substation	230 kV	Existing	N/A
Johnson Bayou	230/13.2 kV	Under Construction	N/A
Knight Substation	230/13.2 kV	Under Construction	N/A
Michigan-Wisconsin Substation	230/13.2 kV	Under Construction	N/A
Grand Chenier Substation	230 /13.2 kV	Under Construction	N/A

Transmission Lines	Voltage	Status	Miles
Holly Beach Switching Station to Fulton	230 kV	Under Construction	13.15
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Manchester to Chalkley	230 kV	Under Construction	2.50
Johnson Bayou to Holly Beach	230 kV	Under Construction	10.00
Knight to Chalkley	230 kV	Under Construction	0.08
Sturlese to Michigan-Wisconsin Tap	230 kV	Under Construction	7.90
Michigan-Wisconsin Tap to Grand Chenier	230 kV	Under Construction	4.20
Michigan-Wisconsin Tap to Michigan-Wisconsin	230 kV	Under Construction	1.50

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VII. FACTOR 2 OF THE SEVEN-FACTOR TEST

Q. WHAT IS FACTOR 2?

A. Factor 2 states that "local distribution facilities are primarily radial in character."

Q. WHAT WAS YOUR METHODOLOGY TO DETERMINE WHETHER JDEC FACILITIES PASS OR FAIL FACTOR 2.

A. In order to assess Factor 2, I started by reviewing the one-line diagrams detailing the JDEC Facilities.[18] I reviewed to see if the JDEC Facilities, under normal operating conditions, created a contiguous path between two or more existing Transmission Facilities, creating a networked connection. Additionally, I examined if disconnecting facilities, one-by-one, would result in electrical isolation of one or more of the JDEC Facilities from the larger electrical network, which would confirm the radial nature of the facilities.

Q. ARE ANY OF THE JDEC FACILITIES PRIMARILY RADIAL IN NATURE?

A. Below listed JDEC Facilities will be operated radially due to the lack of a second electrical connection to the larger transmission system. Therefore, below JDEC Facilities pass the Factor 2[19], and classified as "Distribution Facilities".

[18] See Exhibit No. JDEC-00003.

[19] *See* Exhibit No. JDEC-00005

Facility	Voltage	Status
Johnson Bayou	230/13.2 kV	Under Construction
Knight Substation	230/13.2 kV	Under Construction
Michigan-Wisconsin Substation	230/13.2 kV	Under Construction
Grand Chenier Substation	230 /13.2 kV	Under Construction
• Johnson Bayou to Holly Beach	230 kV	Under Construction
• Knight to Chalkley	230 kV	Under Construction
• Sturlese to Michigan-Wisconsin Tap	230 kV	Under Construction
• Michigan-Wisconsin Tap to Grand Chenier	230 kV	Under Construction
• Michigan-Wisconsin Tap to Michigan-Wisconsin	230 kV	Under Construction

Q. WHAT WAS YOUR OUTCOME FOR THE REMAINING JDEC FACILITIES? DO THEY PASS OR FAIL FACTOR 2?

A. The remaining JDEC facilities as listed below will be looped and/or networked facilities. These facilities will be looped/networked with the grid such that they will have at least two connection points at any given time during normal operation conditions. In other words, below JDEC facilities are a part of a contiguous path between existing transmission systems. No single transmission line outage would result in interruption of power supply to the facilities below. Said differently, the below JDEC facilities can be disconnected one-by-one without disconnecting any substation from the rest of the system, following the characteristic of a looped/networked system. Therefore, the below JDEC facilities fail Factor 2, supporting classification as "Transmission".

Facility	Voltage	Status
Holly Beach Switching Station	230 kV	Under Construction
Fulton Substation	230/13.2 kV	Under Construction
Crown Substation	230 kV	Under Construction
Sturlese Substation	230/13.2 kV	Under Construction
Hacket Substation	230/24.9/13.2 kV	Under Construction
Manchester Substation	230/13.2 kV	Under Construction
Chalkley Substation	230 kV	Existing
• Holly Beach Switching Station to Fulton	230 kV	Under Construction
• Holly Beach Switching Station to Crown	230 kV	Under Construction
• Fulton to Sturlese	230 kV	Under Construction
• Sturlese to Hackett	230 kV	Under Construction
• Hackett to Manchester	230 kV	Under Construction
• Manchester to Chalkley	230 kV	Under Construction

VIII. FACTOR 3 OF THE SEVEN-FACTOR TEST

Q. WHAT IS FACTOR 3?

A. Factor 3 states that "power flows into local distribution facilities; it rarely, if ever, flows out."

Q. WHAT WAS YOUR METHODOLOGY TO DETERMINE WHETHER JDEC FACILITIES PASS OR FAIL FACTOR 3.

A. When determining if the JDEC Facilities passed or failed Factor 3, I conducted a comprehensive power flow assessment under different operating conditions. The power flow assessment I conducted aimed to examine the future power transactions from all the JDEC facilities to the broader MISO transmission system. I performed load flow analysis under both normal system (system intact) and contingency conditions to identify if power flow directions change at all under different system conditions when the JDEC Facilities will come online. Contingency conditions were subject to evaluation, given their deliberate planning by transmission service providers, thus precluding them as rare

occurrences. As a first step, model update files were prepared to modify the MISO base powerflow cases to model the JDEC Facilities in detail. A document was created to describe the step-by-step process of updating the power flow models.[20] Power flow models analyzed for Factor 3 represented system conditions that are not rare occurrences for the particular system, rather represent regularly occurring conditions.

Q. ARE THERE ANY JDEC FACILTIES THROUGH WHICH POWER NEVER FLOWS OUT?

A. Yes. Consistent with Factor 2, the JDEC Facilities in Group B that are radial in nature only have load connected to them and therefore never have power flowing out of them. Power only flows in one direction: from the networked 230 kV system to distribution facilities to retail customers.

Facility	Voltage	Status
Johnson Bayou	230/13.2 kV	Under Construction
Knight Substation	230/13.2 kV	Under Construction
Michigan-Wisconsin Substation	230/13.2 kV	Under Construction
Grand Chenier Substation	230 /13.2 kV	Under Construction
• Johnson Bayou to Holly Beach	230 kV	Under Construction
• Knight to Chalkley	230 kV	Under Construction
• Sturlese to Michigan-Wisconsin Tap	230 kV	Under Construction
• Michigan-Wisconsin Tap to Grand Chenier	230 kV	Under Construction
• Michigan-Wisconsin Tap to Michigan-Wisconsin	230 kV	Under Construction

Q. PLEASE EXPLAIN HOW YOU WERE ABLE TO DETERMINE THAT POWER NEVER FLOWS OUT OF THE PORTION OF THE JDEC SYSTEM SERVED BY THE JDEC FACILITIES.

[20] *See* Exhibit No. JDEC-00008.

A. I examined the one-line diagram[21] of the JDEC Facilities and identified that below listed 230 kV facilities cater to the 13.2kV downstream load only. These facilities do not have a connection with any other facilities and/or generator to serve the downstream load. In other words, these facilities are radial in the connection and opening the single main point on the transmission system would interrupt power supply to the downstream connected load. Considering these facilities do not have connection with any other generation facilities or second transmission facility, power that enters these facilities can never flow out; and hence, below JDEC facilities pass Factor 3 and classified as "Distribution".

Facility	Voltage	Status
Johnson Bayou	230/13.2 kV	Under Construction
Knight Substation	230/13.2 kV	Under Construction
Michigan-Wisconsin Substation	230/13.2 kV	Under Construction
Grand Chenier Substation	230 /13.2 kV	Under Construction
• Johnson Bayou to Holly Beach	230 kV	Under Construction
• Knight to Chalkley	230 kV	Under Construction
• Sturlese to Michigan-Wisconsin Tap	230 kV	Under Construction
• Michigan-Wisconsin Tap to Grand Chenier	230 kV	Under Construction
• Michigan-Wisconsin Tap to Michigan-Wisconsin	230 kV	Under Construction

Q. PLEASE EXPLAIN HOW YOU WERE ABLE TO DETERMINE THAT POWER CONSISTENTLY FLOWS OUT OF THE REMAINING PORTION OF THE JDEC FACILITIES.

A. I examined MISO-created power flow models, representing various load and dispatch levels, after applying updates to represent the JDEC Facilities in detail, to review power flow directionality. Power flow models were created using PSSE, a widely used power system simulation software, to provide a detailed representation of electrical networks,

[21] *See* Exhibit No. JDEC-00003.

enabling comprehensive analysis and assessment of the dynamic behavior of power systems under various operating conditions. In the power flow model snapshots attached with this testimony, real power flows are symbolized by green arrows, indicating the actual movement of electrical energy within the system. Similarly, reactive power flows are exhibited by orange arrows. Visual representation offers a clear and accessible way to understand the dynamics of power transactions and the interplay between real and reactive power in the system. In all MISO cases, *i.e.,* 2025 Summer, 2028 Winter, 2028 Summer and 2028 Spring Minimum Load models (depicted below in Figures 4 through 7), power flows into and out of each of the following JDEC Facilities independently under normal conditions or contingency conditions.

Facility	Voltage	Status
Holly Beach Switching Station	230 kV	Under Construction
Fulton Substation	230/13.2 kV	Under Construction
Crown Substation	230 kV	Under Construction
Sturlese Substation	230/13.2 kV	Under Construction
Hacket Substation	230/24.9/13.2 kV	Under Construction
Manchester Substation	230/13.2 kV	Under Construction
Chalkley Substation	230 kV	Existing
• Holly Beach Switching Station to Fulton	230 kV	Under Construction
• Holly Beach Switching Station to Crown	230 kV	Under Construction
• Fulton to Sturlese	230 kV	Under Construction
• Sturlese to Hackett	230 kV	Under Construction
• Hackett to Manchester	230 kV	Under Construction
• Manchester to Chalkley	230 kV	Under Construction

Additionally, Figures 4, 5, 6, and 7 [22] below shows that power flows through the JDEC Facilities into the broader MISO transmission system (Entergy). In the all cases analyzed, power flows into the Chalkley 230 kV Station, flows through the Group A facilities, and flows out from the Crown 230kV Station line into the MISO Transmission system. Considering the power flows consistently through the JDEC Facilities into the broader MISO transmission system under normal conditions in all MISO cases, it exceeds the "rare" threshold. The analyzed power flow models represented system conditions that are not rare occurrences for the particular system, rather they represent regularly occurring conditions. Additionally, after evaluating various contingencies, the same patterns of power flows were exhibited as seen in system intact cases. With that said, Holly Beach Switching Station 230 kV, Fulton Station 230/13.2 kV, Sturlese Station 230/13.2 kV, Hackett Substation 230/24.9/13.2 kV, Manchester Substation 230/13.2kV, Holly Beach Switching Station to Crown Substation 230kV line, Holly Beach Switching Station to Fulton Station 230 kV line, Fulton Station to Sturlese Station 230 kV Line, Sturlese Station to Hackett Substation 230 kV Line, and Hackett Substation to Manchester Substation 230kV Line facilities fail Factor #3 and classified as "Transmission".

[22] *See* Exhibit Nos. JDEC-00009, JDEC-00010, JDEC-00011, JDEC-00012.

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Figure 4: JDEC Facilities in the MISO23 2025 Summer Model [23]

[23] *See* Exhibit Nos. JDEC-00009.

Figure 5: JDEC Facilities in the MISO23 2028 Winter Model[24]

[24] *See* Exhibit Nos. JDEC-00010.

Figure 6: JDEC Facilities in the MISO23 2028 Spring Model[25]

[25] *See* Exhibit Nos. JDEC-00011.

Figure 7: JDEC Facilities in the MISO23 2028 Summer Model[26]

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[26] *See* Exhibit Nos. JDEC-00012.

Based on this analysis of Factor 3, it is evident that JDEC Facilities surpass the "rare" threshold. Each JDEC Facility in Group A independently exhibits power flowing into and out of the facility in all scenarios. Additionally, power that enters the Chalkley 230 kV station is transported across the other JDEC Facilities in Group A ("U Loop") and is transferred to the MISO Transmission system from the Crown 230 kV station. This is attributed to the power flowing through the JDEC Facilities into the broader MISO transmission system, both under normal conditions and in a contingency scenarios. Hence, these facilities fail Factor 3 and support classification as "Transmission".[27] The remaining JDEC Facilities did not exhibit bi-directional power flows or flows out of the JDEC system to the broader network that exceeded the "rare" threshold and thus passed Factor 3.

Facility	Voltage	Status
Holly Beach Switching Station	230 kV	Under Construction
Fulton Substation	230/13.2 kV	Under Construction
Crown Substation	230 kV	Under Construction
Sturlese Substation	230/13.2 kV	Under Construction
Hacket Substation	230/24.9/13.2 kV	Under Construction
Manchester Substation	230/13.2 kV	Under Construction
Chalkley Substation	230 kV	Existing
• Holly Beach Switching Station to Fulton	230 kV	Under Construction
• Holly Beach Switching Station to Crown	230 kV	Under Construction
• Fulton to Sturlese	230 kV	Under Construction
• Sturlese to Hackett	230 kV	Under Construction
• Hackett to Manchester	230 kV	Under Construction
• Manchester to Chalkley	230 kV	Under Construction

[27] *See* Exhibit No. JDEC-00005

IX. FACTOR 4 OF THE SEVEN-FACTOR TEST

Q. WHAT IS FACTOR 4?

A. Factor 4 states that "when power enters a local distribution system, it is not reconsigned or transported to some other market."

Q. IS THERE A REQUIREMENT FOR A *DE MINIMIS* AMOUNT OF POWER THAT MUST BE RECONSIGNED OR TRANSPORTED TO ANOTHER MARKET?

A. No, there is no *de minimis* amount of power that must be reconsigned or transported to other markets. In *Henderson*, the Commission affirmed the Presiding Judge's finding that "the factor is characteristic of transmission if any power flows from the facilities at issue."[28]

Q. WHAT WAS YOUR METHODOLOGY TO DETERMINE WHETHER JDEC FACILITIES PASS OR FAIL FACTOR 4.

A. When determining if power is reconsigned or transported on to some other market, I reviewed the one-line diagrams of the JDEC Facilities and analyzed the power flow models used for Factor 3 analysis to assess the JDEC Facilities.

Q. ARE THE JDEC FACILITIES USED TO RECONSIGN OR TRANSPORT POWER TO MARKETS OTHER THAN JDEC'S RETAIL LOAD?

A. Yes. For two of the JDEC Facilities, Chalkley 230 kV Station and Crown 230 kV Station, power flows both in from the MISO Transmission system and out to the MISO

[28] *Midcontinent Independent System Operator, Inc.*, 174 FERC ¶ 63,007 at P 156 (2021), *order on initial decision*, Opinion No. 580, 181 FERC ¶ 61,056, at PP 79 & 87 (2022), *reh'g*, Opinion No. 580-A, 182 FERC ¶ 61,095 (2023) ("*Henderson*").

Transmission System. In the summer 2025[29] and winter 2028[30] cases, the power flows into the Crown 230 kV Station from MISO's Sabine 230 kV station and out from Crown 230 kV Station to MISO's Mudlake 230 kV Station 230 kV, which means power flows through this facility from and to the broader MISO transmission system. In other words, the power is transported into the JDEC Market and back to another market (MISO). Similarly, in the spring 2028[31] and summer 2028[32] case, the power flows from MISO's Mudlake 230 kV Station to Crown Substation 230kV and out to MISO's Sabine 230kV Station. Similarly, in all the cases, the power flows from MISO's Goose Ferry 230 kV Station into Chalkley Substation 230kV and out to MISO's Solac 230kV Station. This means power is transported/reconsigned through the JDEC Facility.

For the remaining JDEC Facilities in Group A, there is an excess of power entering from MISO Transmission that is transported over the JDEC facilities and reconsigned back to the MISO market. This is shown by power entering the JDEC Facilities from MISO at the Chalkley 230 kV Station and flowing in a single direction to the Manchester 230 kV Station to the Hackett 230 kV Station to the Sturlese 230 kV Station to the Holly Beach 230 kV Station and to the Crown 230 kV Station. From the Crown 230 kV Station, power then enters the MISO system at either the Sabine 230 kV Station or the Mud Lake 230 kV Station (depending on the powerflow case). In all cases, there is power coming from MISO and transported across the JDEC facilities that is reconsigned back to the MISO system. This signifies the power transport to other markets (other than JDEC). Based on

[29] *See* Exhibit No. JDEC-00009.
[30] *See* Exhibit No. JDEC-00010.
[31] *See* Exhibit No. JDEC-00011.
[32] *See* Exhibit No. JDEC-00012.

this analysis of Factor 4, below JDEC Facilities support the reconsignment or the transport of power to other markets beyond the JDEC service territory, signifying the failure of Factor 4 and supporting the classification of those JDEC Facilities as "Transmission".[33] The remaining JDEC facilities (Group B) do not exhibit transportation or reconsignment of power to other markets are classified as "Distribution".

Facility	Voltage	Status
Holly Beach Switching Station	230 kV	Under Construction
Fulton Substation	230/13.2 kV	Under Construction
Crown Substation	230 kV	Under Construction
Sturlese Substation	230/13.2 kV	Under Construction
Hacket Substation	230/24.9/13.2 kV	Under Construction
Manchester Substation	230/13.2 kV	Under Construction
Chalkley Substation	230 kV	Existing
• Holly Beach Switching Station to Fulton	230 kV	Under Construction
• Holly Beach Switching Station to Crown	230 kV	Under Construction
• Fulton to Sturlese	230 kV	Under Construction
• Sturlese to Hackett	230 kV	Under Construction
• Hackett to Manchester	230 kV	Under Construction
• Manchester to Chalkley	230 kV	Under Construction

X. FACTOR 5 OF THE SEVEN-FACTOR TEST

Q. WHAT IS FACTOR 5?

A. Factor 5 states that "power entering a local distribution system is consumed in a comparatively restricted geographical area."

Q. WHAT IS A "COMPARATIVELY RESTRICTED GEOGRAPHICAL AREA"?

[33] *See* Exhibit No. JDEC-00005.

A. Factor 5 is meant to determine "whether the geographic territory in which the power is consumed is restricted by end-users or whether power also flows through the facilities to serve loads connected to other systems."[34]

Q. WHAT WAS YOUR METHODOLOGY TO DETERMINE WHETHER JDEC FACILITIES PASS OR FAIL FACTOR 5?

A. To determine if power entering JDEC Facilities passes or fails Factor 5, I examined one-line diagrams[35] and analyzed power flow models to assess if power entering the PEC Facilities was consumed within PEC's service territory. I was guided by the Commission's finding in *City of Pella* that facilities that served a substation beyond its service boundaries failed Factor 5.[36] I similarly took into account the Commission's finding in *Henderson* (Opinion 580) that the Henderson facilities qualified as transmission under Factor 5 because power flowing into that system was not necessarily consumed just within the system but could flow out under a variety of system conditions.

Q. ARE THERE ANY JDEC FACILITIES WHICH ALLOW POWER TO BE CONSUMED IN A COMPARATIVELY RESTRICTED GEOGRAPHICAL AREA?

Yes. The JDEC facilities listed below only serve the downstream loads within JDEC's geographical service territory under both normal operating conditions and contingency situations. Therefore, below JDEC Facilities pass the Factor 5[37], and are classified as "Distribution Facilities".

[34] Opinion No. 579 at P 185.
[35] *See* Exhibit No. JDEC-00003.
[36] 134 FERC ¶ 61,081 at PP 21, 73.
[37] *See* Exhibit No. JDEC-00005

Facility	Voltage	Status
Johnson Bayou	230/13.2 kV	Under Construction
Knight Substation	230/13.2 kV	Under Construction
Michigan-Wisconsin Substation	230/13.2 kV	Under Construction
Grand Chenier Substation	230 /13.2 kV	Under Construction
• Johnson Bayou to Holly Beach	230 kV	Under Construction
• Knight to Chalkley	230 kV	Under Construction
• Sturlese to Michigan-Wisconsin Tap	230 kV	Under Construction
• Michigan-Wisconsin Tap to Grand Chenier	230 kV	Under Construction
• Michigan-Wisconsin Tap to Michigan-Wisconsin	230 kV	Under Construction

Q. ARE THERE ANY JDEC FACILITIES WHICH DOES NOT ALLOW POWER TO BE CONSUMED IN A COMPARATIVELY RESTRICTED GEOGRAPHICAL AREA?

A. Yes. The JDEC Facilities listed below are relied upon to support the transport of power to the broader MISO transmission system extending beyond JDEC's retail service territory.[38] Following the same explanation provided under Factor 4, power flows both into and out of high-voltage facilities at the Crown 230kV Substation and the Chalkley 230kV Substation from the MISO transmission system. Additionally, power is transported from MISO across the other JDEC Facilities in Group A and back to MISO for consumption outside of the JDEC service territory. Power flowing through JDEC's Facilities will be relied upon by other load serving entities, such as Entergy, to ensure that these entities are able to provide continuous and reliable service to end-use customers extending beyond JDEC's service boundaries. Therefore, below JDEC Facilities fail Factor 5[39], and are classified as "Transmission Facilities".

[38] *See* Exhibit No. JDEC-00007.

[39] *See* Exhibit No. JDEC-00005.

Facility	Voltage	Status
Holly Beach Switching Station	230 kV	Under Construction
Fulton Substation	230/13.2 kV	Under Construction
Crown Substation	230 kV	Under Construction
Sturlese Substation	230/13.2 kV	Under Construction
Hacket Substation	230/24.9/13.2 kV	Under Construction
Manchester Substation	230/13.2 kV	Under Construction
Chalkley Substation	230 kV	Existing
• Holly Beach Switching Station to Fulton	230 kV	Under Construction
• Holly Beach Switching Station to Crown	230 kV	Under Construction
• Fulton to Sturlese	230 kV	Under Construction
• Sturlese to Hackett	230 kV	Under Construction
• Hackett to Manchester	230 kV	Under Construction
• Manchester to Chalkley	230 kV	Under Construction

Q. DOES THE TRANSPORT OF POWER THROUGH THESE FACILITIES BENEFIT CUSTOMERS OUTSIDE OF JDEC'S SERVICE TERRITORY?

A. Yes. The JDEC 230 kV Loop directly interconnects with Entergy Louisiana's transmission system and supports bulk power transfers across multiple service territories. This confirms that the facilities are not restricted to JDEC's local retail load but instead function as part of a regional transmission network. For this reason, they fail Factor 5 and should be classified as transmission.

I. FACTOR 6 OF THE SEVEN-FACTOR TEST

Q. WHAT IS FACTOR 6?

A. Factor 6 states that "meters are based at the transmission/local distribution interface to measure flows into the local distribution system."

Q. WHAT WAS YOUR METHODOLOGY TO DETERMINE WHETHER JDEC FACILITIES PASS OR FAIL FACTOR 6.

A. I reviewed the information provided by JDEC designating metering installations to determine if the metering will be installed at transmission/local distribution interfaces and/or if the meters are bidirectional in nature.[40]

Q. ARE THERE ANY JDEC FACILITIES THAT WILL HAVE METERS INSTALLED SUCH THAT THEY ARE AT THE TRANSMISSION/LOCAL DISTRIBUTION INTERFACE?

No. None of the meters are installed on the transmission/local distribution interface referenced in Factor 6 that would result in the JDEC facilities passing Factor 6. Meters that measure flow into distribution systems are installed on the distribution side of the interface, typically on the low side of a transformer. None of the JDEC facilities have meters installed consistent with this description. Additionally, meters installed on the JDEC Facilities are bidirectional in nature. In the City of Pella proceeding, FERC established that meters that measure bidirectional flows would fail Factor 6.[41] The meters to be installed on the JDEC Facilities include bidirectional meters on the Chalkley to Manchester 230 kV line and the Crown to Holly Beach 230 kV line.[42]

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[40] *See* Exhibit No. JDEC-00003.

[41] *City of Pella*, 134 FERC ¶ 61,081 at P 73

[42] *See* Exhibit No. JDEC-00013.

Jefferson Davis Electric Cooperative, Inc. Facilities

Substations	Voltage	Status	Miles
Fulton Substation	230/13.2 kV	Under Construction	N/A
Holly Beach Switching Station	230 kV	Under Construction	N/A
Crown Substation	230 kV	Under Construction	N/A
Sturlese Substation	230/13.2 kV	Under Construction	N/A
Hacket Substation	230/24.9/13.2 kV	Under Construction	N/A
Manchester Substation	230/13.2 kV	Under Construction	N/A
Chalkley Substation	230 kV	Existing	N/A
Johnson Bayou	230/13.2 kV	Under Construction	N/A
Knight Substation	230/13.2 kV	Under Construction	N/A
Michigan-Wisconsin Substation	230/13.2 kV	Under Construction	N/A
Grand Chenier Substation	230 /13.2 kV	Under Construction	N/A

Transmission Lines	Voltage	Status	Miles
Holly Beach Switching Station to Fulton	230 kV	Under Construction	13.15
Holly Beach Switching Station to Crown	230 kV	Under Construction	24.00
Fulton to Sturlese	230 kV	Under Construction	12.30
Sturlese to Hackett	230 kV	Under Construction	14.50
Hackett to Manchester	230 kV	Under Construction	10.70
Manchester to Chalkley	230 kV	Under Construction	2.50
Johnson Bayou to Holly Beach	230 kV	Under Construction	10.00
Knight to Chalkley	230 kV	Under Construction	0.08
Sturlese to Michigan-Wisconsin Tap	230 kV	Under Construction	7.90
Michigan-Wisconsin Tap to Grand Chenier	230 kV	Under Construction	4.20
Michigan-Wisconsin Tap to Michigan-Wisconsin	230 kV	Under Construction	1.50

II. FACTOR 7 OF THE SEVEN-FACTOR TEST

Q. WHAT IS FACTOR 7?

A. Factor 7 states that "local distribution systems will be of reduced voltage."

Q. WHAT WAS YOUR METHODOLOGY TO DETERMINE WHETHER JDEC FACILITIES PASS OR FAIL FACTOR 7.

A. To determine if the JDEC Facilities pass or fail Factor 7, I reviewed one-line diagrams of the JDEC Facilities to determine if the facilities under evaluation are consistent with other transmission or distribution facilities in the area. Based on the function of facilities of similar voltage as the JDEC Facilities connected directly to or electrically close to the JDEC Facilities, each facility was determined to be similarly classified.

Q. ARE JDEC FACILITIES AT A REDUCED VOLTAGE LEVEL?

A. Review of one-line diagrams and power flow models for JDEC and other utilities, such as Entergy, in the comparative area indicate distribution facilities operate at lower voltage levels than the 230 kV JDEC Facilities. Those distribution facilities typically operate at voltage level 69 kV or lower. In fact, JDEC also operates other distribution facilities in the area which operate at 13.2 kV level, which is at a significantly lower voltage level than the 230kV JDEC Facilities under evaluation. At 230 kV, the JDEC Facilities operate at a voltage level uniformly recognized as transmission, consistent with neighboring Entergy facilities. The facilities therefore fail Factor 7, supporting transmission classification.[43]

[43] See Exhibit No. JDEC-00005

Facility	Voltage	Status
Holly Beach Switching Station	230 kV	Under Construction
Fulton Substation	230/13.2 kV	Under Construction
Crown Substation	230 kV	Under Construction
Sturlese Substation	230/13.2 kV	Under Construction
Hacket Substation	230/24.9/13.2 kV	Under Construction
Manchester Substation	230/13.2 kV	Under Construction
Chalkley Substation	230 kV	Existing
Johnson Bayou	230/13.2 kV	Under Construction
Knight Substation	230/13.2 kV	Under Construction
Michigan-Wisconsin Substation	230/13.2 kV	Under Construction
Grand Chenier Substation	230 /13.2 kV	Under Construction
• Holly Beach Switching Station to Fulton	230 kV	Under Construction
• Holly Beach Switching Station to Crown	230 kV	Under Construction
• Fulton to Sturlese	230 kV	Under Construction
• Sturlese to Hackett	230 kV	Under Construction
• Hackett to Manchester	230 kV	Under Construction
• Manchester to Chalkley	230 kV	Under Construction
• Johnson Bayou to Holly Beach	230 kV	Under Construction
• Knight to Chalkley	230 kV	Under Construction
• Sturlese to Michigan-Wisconsin Tap	230 kV	Under Construction
• Michigan-Wisconsin Tap to Grand Chenier	230 kV	Under Construction
• Michigan-Wisconsin Tap to Michigan-Wisconsin	230 kV	Under Construction

III. CONCLUSION

Q. WHAT IS THE CONCLUSION OF THE SEVEN FACTOR ANALYSIS OF THE JDEC FACILITIES?

A. Based on the totality of the circumstances, the JDEC 230 kV Loop should be classified as transmission under FERC's Seven-Factor Test. Moreover, transferring functional control to MISO ensures these facilities are planned, operated, and cost-shared on a regional basis. This improves reliability, enhances hurricane resiliency, lowers congestion costs,

and prevents JDEC's members from bearing costs for facilities that benefit the broader Entergy Louisiana pricing zone. These outcomes advance the Commission's 1994 General Order and the public interest, and they strongly support approval of JDEC's Application.[44]

Table 5: Seven-Factor Test Results Summary

Substations									
Station Name	Voltage(s)	Factor #1: Proximity to Retail Customers	Factor #2: Radial	Factor #3: Power Rarely Flows Out	Factor #4: Re-Consignment or Transported to Other Markets	Factor #5: Consumed in Restricted Area	Factor #6: Meters based at T/D Interface	Factor #7: Reduced Voltage	Final Determination
Holly Beach Switching Station	230 kV	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail
Fulton Substation	230/13.2 kV	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail
Crown Substation	230 kV	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail
Sturlese Substation	230/13.2 kV	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail
Hacket Substation	230/24.9/13.2 kV	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail
Manchester Substation	230/13.2 kV	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail
Chalkley Substation	230 kV	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail

Transmission Lines									
Station Name	Voltage(s)	Factor #1: Proximity to Retail Customers	Factor #2: Radial	Factor #3: Power Rarely Flows Out	Factor #4: Re-Consignment or Transported to Other Markets	Factor #5: Consumed in Restricted Area	Factor #6: Meters based at T/D Interface	Factor #7: Reduced Voltage	Final Determination
Holly Beach Switching Station to Fulton	230 kV	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail
Holly Beach Switching Station to Crown	230 kV	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail
Fulton to Sturlese	230 kV	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail
Sturlese to Hackett	230 kV	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail
Hackett to Manchester	230 kV	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail
Manchester to Chalkley	230 kV	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail

Further, below JDEC facilities pass the Seven-Factor Test and hence, classified as Distribution Facilities.[45]

Substations									
Station Name	Voltage(s)	Factor #1: Proximity to Retail Customers	Factor #2: Radial	Factor #3: Power Rarely Flows Out	Factor #4: Re-Consignment or Transported to Other Markets	Factor #5: Consumed in Restricted Area	Factor #6: Meters based at T/D Interface	Factor #7: Reduced Voltage	Final Determination
Johnson Bayou	230/13.2 kV	Fail	Pass	Pass	Pass	Pass	Fail	Fail	Pass
Knight Substation	230/13.2 kV	Fail	Pass	Pass	Pass	Pass	Fail	Fail	Pass
Michigan-Wisconsin Substation	230/13.2 kV	Fail	Pass	Pass	Pass	Pass	Fail	Fail	Pass
Grand Chenier Substation	230/13.2 kV	Fail	Pass	Pass	Pass	Pass	Fail	Fail	Pass

Transmission Lines									
Station Name	Voltage(s)	Factor #1: Proximity to Retail Customers	Factor #2: Radial	Factor #3: Power Rarely Flows Out	Factor #4: Re-Consignment or Transported to Other Markets	Factor #5: Consumed in Restricted Area	Factor #6: Meters based at T/D Interface	Factor #7: Reduced Voltage	Final Determination
Johnson Bayou to Holly Beach	230 kV	Fail	Pass	Pass	Pass	Pass	Fail	Fail	Pass
Knight to Chalkley	230 kV	Fail	Pass	Pass	Pass	Pass	Fail	Fail	Pass
Sturlese to Michigan-Wisconsin Tap	230 kV	Fail	Pass	Pass	Pass	Pass	Fail	Fail	Pass
Michigan-Wisconsin Tap to Grand Chenier	230 kV	Fail	Pass	Pass	Pass	Pass	Fail	Fail	Pass
Michigan-Wisconsin Tap to Michigan-Wisconsin	230 kV	Fail	Pass	Pass	Pass	Pass	Fail	Fail	Pass

Q. BEYOND CLASSIFYING THESE FACILITIES AS TRANSMISSION, HOW DOES YOUR ANALYSIS SHOW THAT TRANSFERRING FUNCTIONAL

[44] *See* Exhibit No. JDEC-00005.

[45] *See* Exhibit No. JDEC-00005.

CONTROL TO MISO SERVES THE PUBLIC INTEREST UNDER THE COMMISSION'S 1994 GENERAL ORDER?

A. My analysis shows that the JDEC facilities will operate as a backbone network that benefits not just JDEC's members, but the entire Entergy Louisiana pricing zone. By connecting into MISO's regional transmission system:

- Power flows more efficiently across the grid, lowering congestion costs statewide.
- The looped design improves redundancy, supporting faster restoration after hurricanes and reducing the likelihood of forced load curtailments.
- Future upgrades will be planned and cost-shared regionally through MISO's stakeholder process, ensuring that JDEC members are not overburdened with costs for facilities that benefit others.

These outcomes advance the Commission's objectives under the 1994 General Order to promote safe, reliable, and affordable service, and they reinforce the public-interest case for granting JDEC's requests.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

PUBLIC

VERIFICATION

Pursuant to 28 U.S.C § 1746 (2012), I state under penalty of perjury that the foregoing testimony is true and correct to the best of my information, knowledge, and belief.

Executed this 06th day of October 2025.

/s/ Timothy Kopp

Timothy Kopp
Vice President
Electric Power Engineers, LLC

BEFORE THE
LOUISIANA PUBLIC SERVICE COMMISSION

JEFFERSON DAVIS ELECTRIC COOPERATIVE, INC.,) DOCKET NO. U-_____
EX PARTE)

In re: Application for Transmission Determination, Approval to Transfer Functional Control to MISO, and Expedited Consideration.

AFFIDAVIT OF WITNESS

STATE OF Wisconsin

PARISH/COUNTY OF St. Croix

I, _____, being duly sworn, depose that the Direct Testimony attached hereto in the matter identified therein, on behalf of Jefferson Davis Electric Cooperative, Inc., is true and correct to the best of my knowledge, information, and belief.

Timothy Kopp

SWORN TO AND SUBSCRIBED before me this 3rd day of October, 2025.

Amy Lessman
NOTARY PUBLIC

AMY LESSMAN NOTARY PUBLIC STATE OF WISCONSIN

Printed Notary Name: Amy Lessman

Notary/Bar Roll No.: 248776

My commission expires 8-2-26.