BEFORE THE STATE CORPORATION COMMISSION
OF THE STATE OF KANSAS

In the Matter of the Application of Sunflower Electric Power Corporation for a Transmission Rights Only Certificate of Convenience and Authority to Transact the Business of an Electric Public Utility in the State of Kansas.	))))))	19-SEPE-058-COC Docket No. 18-SEPE-058-COC

PREFILED DIRECT TESTIMONY OF

DR. ALA TAMIMI

ON BEHALF OF

SUNFLOWER ELECTRIC POWER CORPORATION

August 6, 2018

Q. Please state your name.

A. My name is Ala Tamimi.

Q. By whom are you employed?

A. I am employed by Sunflower Electric Power Corporation ("Sunflower").

Q. What employment positions have you held at Sunflower and what are your overall responsibilities?

A. I am Vice President of Transmission Planning and Policy for Sunflower.

Q. Please describe your educational background and professional experience.

A. I joined Sunflower in 2001 and was promoted to Vice President of Transmission Planning and Policy in 2015. My responsibilities include planning and designing transmission and distribution facilities to meet the needs of the Mid-Kansas, Sunflower and our Members' transmission and distribution systems. This includes planning for service to third-party users. I also focus on transmission and market policy issues that impact our system resources.

I hold a master's degree in electrical engineering from Wichita State University and a doctor of philosophy (Ph.D.) degree in electrical engineering from Kansas State University.

I am widely published in industry publications including the world's largest technical professional society, The Institute of Electrical and Electronics Engineers ("IEEE"). I am also a senior member of IEEE. I became a licensed professional engineer in June of 2005. I also serve on several Southwest Power Pool ("SPP") working groups and committees, including the Economic Studies Working Group ("ESWG"), Markets and Operations Policy Committee ("MOPC"),

Synchrophasor Task Force, Chair for the Generation Interconnection Improvement Task Force ("GIITF") and Chair for the High Priority Incremental Load Study ("HPILs") Task Force.

Q. Have you previously testified before the Commission?

A. Yes. I have provided testimony in Dockets 11-GIME-597-GIE, 17-KPPE-092-COM,18-MKEE-160-TAR, and 18-KPPE-343-COC.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to support Sunflower's request for a Transmission Rights Only Certificate of Convenience and Necessity as described in its Application in this proceeding. I will address the general need for the Project (as defined in the Application).

Q. As Vice President of Transmission Planning and Policy, what responsibility do you have for the transmission planning?

A. In the planning area, I am responsible for the transmission planning and distribution engineering departments and ensuring that transmission projects are identified, planned, approved, and implemented in support of our strategic goals. Additionally, I oversee the design of distribution level electrical systems and contribute as needed to the design of transmission level electric systems and ensure proper application of codes, standards, and guidelines to ensure compliance with regulatory requirements.

I and my teams also coordinate with applicable Regional Transmission Organizations ("RTO") to carry out studies to support transmission service

requests and regional transmission expansion plan development including the development of the overall interconnected network.

Q. As Vice President of Transmission Planning and Policy, what responsibility do you have for the planning the Sunflower transmission system?

A. As mentioned earlier, I manage the transmission planning department that handles the annual planning assessment for transmission facilities in the Sunflower transmission zone. I review planning criteria and approve the final report. Also, I am responsible for conducting planning studies on new interconnections to the Sunflower transmission system and the coordination with SPP in the AQ filing process for these new connections as well as modifications to existing delivery points.

Q. What role or function did you have with planning for the Project?

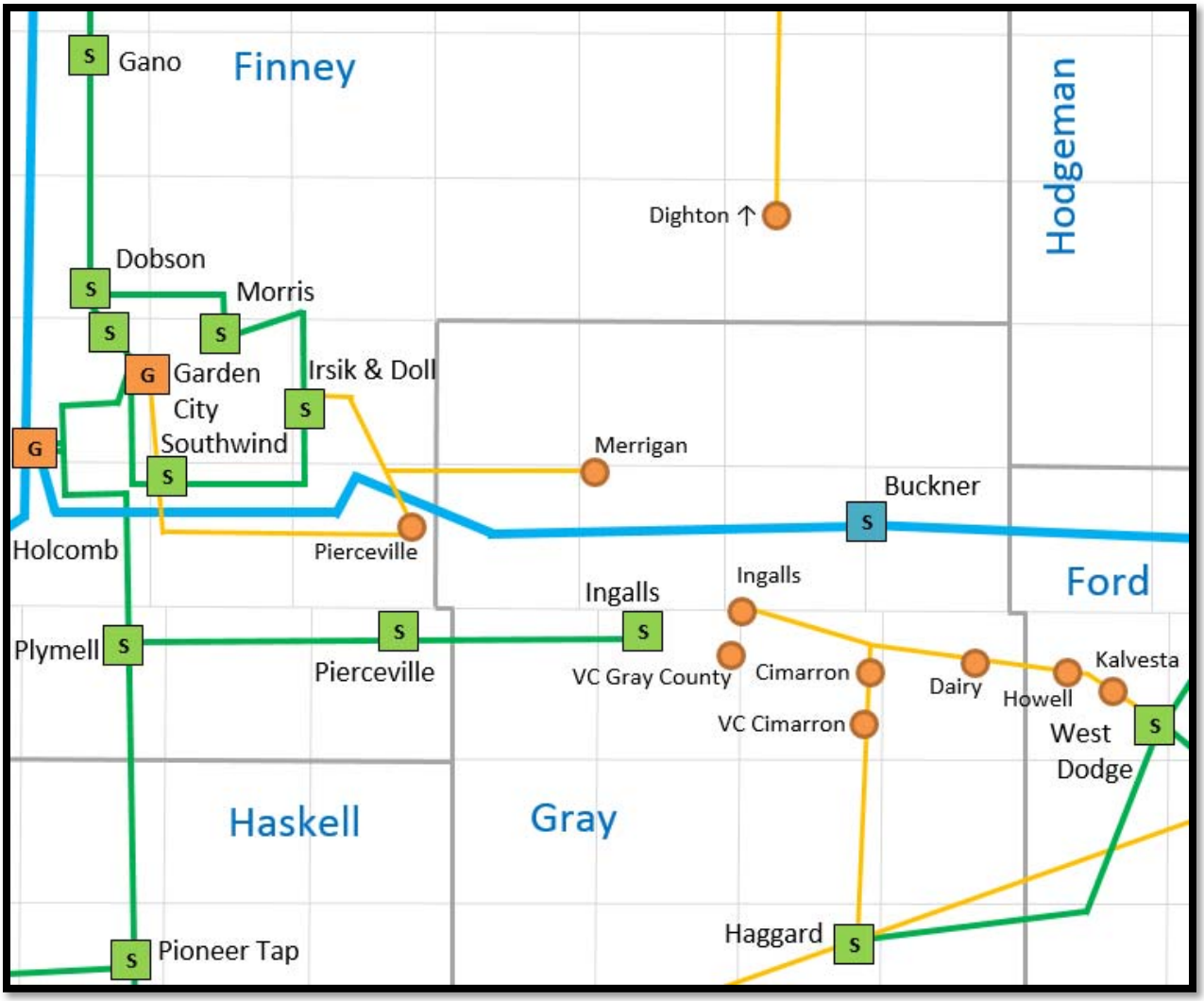
A. As with all transmission projects that are proposed to potentially solve transmission issues in the Sunflower zone, I reviewed both the issues and the Project as a solution to those issues.

Q. Please describe the current configuration of the transmission system in the area and any anticipated changes in load being served.

A. Three Sunflower members (The Victory Electric Cooperative Association, Inc. ("Victory"), Wheatland Electric Cooperative, Inc. ("Wheatland"), and Lane-Scott Electric Cooperative, Inc. ("Lane-Scott")) are expecting load growth in the area the Project will serve. Wheatland is anticipating approximate growth from 5MW to about 10MW at the Merrigan and Pierceville Substations, which are served by approximately 30 miles of 34.5kV lines. Victory is anticipating approximate

growth from 22MW to about 24.5MW at the Haggard Substation, which is served by approximately 30 miles of 34.5kV lines. Lane-Scott is anticipating approximate growth from 1MW to about 6MW at locations that depend on 38 miles of 34.5kV lines from the Dighton Substation. In total, that is an approximate load increase from about 27.9MW to about 40.5MW, served by a total of 98 miles of 34.5kV lines. Figure 1 below provides a depiction of the current configuration I just described. 34.5kV facilities are shown in orange.

Figure 1. Existing 34.5kV Circuits



Q. What are the transmission issues surrounding current configuration and anticipated load growth?

A. For Wheatland, service depends on nearly 30 miles of aging 34.5kV that will need to be replaced at some point, and there is limited line capacity for growth. For Victory, the Haggard to West Dodge 115kV line is radial, with no backup feed in the event of an outage. The Haggard north 34.5kV circuit is approaching load serving limit, and the Haggard transformer is approaching its maximum capacity limit. For Lane-Scott, the nearest source is Dighton, which is over 30 miles to the north. Additionally, there is no three-phase service available to Lane-Scott in the area. The Southwest Power Pool, Inc. ("SPP") has also issued a Notice to Construct ("NTC") for the installation of new 115kV capacitors at both the Santa Fe Substation and the Twin Springs Substation to support grid operations to maintain the entire system reliability in this area during peak conditions.

Q. What general benefits will the Project provide?

A. Generally, the Project will provide stronger and more reliable transmission service in the area to address the issues I just described by creating needed redundancy for transmission outages.

Q. Are there other benefits besides addressing the transmission service issues you have already described?

A. There are several additional benefits that the Project will provide. While providing redundancy, the Project also significantly reduces 34.5kV losses on the Victory and Wheatland systems, and will serve wholesale customers on the Victory system. In addition, it will offset the need for rebuilding the East Dodge to

Northwest Dodge 115kV line, which is reaching its thermal limits. A rough estimate of the cost savings of building the Project versus rebuilding the aforementioned transmission line yields a value of approximately $10 million. Further, the Project offsets the need to rebuild 30 miles of 34.5kV facilities in the Wheatland service territory. Not only is the Project the least-cost option and offsetting other transmission facility needs, but it will mitigate the loss of Holcomb Substation. Finally, it will serve current and future loads in underserved areas within Lane-Scott and Wheatland service territories and significantly reduce 34.5kV losses on the Victory and Wheatland systems.

Q. Did the Project go through Sunflower's local planning process?

A. Yes, the local planning process identified the Project as the least-cost option to solve the reliability problems I identified above.

Q. Do you believe that the granting by the Commission of a Transmission Rights Only Certificate of Convenience and Necessity for the Project is in the public interest?

A. Yes, for the reasons I have already described.

Q. Does that conclude your testimony?

A. Yes.

VERIFICATION

STATE OF KANSAS)
) ss:
COUNTY OF Sedgwick)

ALA TAMIMI, being first duly sworn, deposes and says that he is the ALA TAMIMI referred to in the foregoing document entitled "PREFILED DIRECT TESTIMONY OF ALA TAMIMI" before the State Corporation Commission of the State of Kansas and that the statements therein were prepared by him or under his direction and are true and correct to the best of his information, knowledge and belief.

Ala Tamimi

SUBSCRIBED AND SWORN to before me this 2nd day of August, 2018.

Notary Public

My Appointment Expires:
October 24, 2021

BARBARA NIDA
Notary Public, State of Kansas
My Appointment Expires
October 24, 2021