**STF-DEA-2-20**

Question:

Please refer to p. 163 of the “2024 GA ITS Ten-Year Plan,” within the “2025 IRP Volume 3 TRADE SECRET,” regarding the Plant Yates Breaker and Half Station and respond to the following questions:

a. What operational and reliability benefits will the reconfiguration of the Yates 6 & 7 substation to a Breaker and Half configuration provide.

b. How will the project improve grid flexibility?

c. How will the new breaker and a half configuration impact fault isolation and system protection?

Response:

1. In a breaker and a half configuration, each circuit is connected to two breakers, which allows a breaker to be taken out of service for maintenance without interrupting power to the surrounding circuits, allowing more flexibility in switching operations. In the current ring bus configuration, the substation has a continuous loop of breakers connecting all circuits. If a breaker needs maintenance, it often requires opening adjacent breakers, which can disrupt service to multiple circuits. The rebuild of the Yates substation to a breaker and a half configuration provides additional bays to accommodate the generator tie lines for Yates #8, #9, and #10 combustion turbines (“CTs”), enhancing reliability and operational flexibility.
2. See the Company’s response to subpart (a).
3. In a breaker and a half configuration, each circuit is connected to two breakers therefore, under breaker failure or fault conditions, the circuit can still be cleared using the remaining breaker. This allows the rest of the substation to continue operating even if a breaker fails or requires maintenance. In the current ring bus configuration, the substation has a continuous loop of breakers connecting all circuits. While this provides some redundancy, a breaker failure can impact multiple circuits, potentially requiring the opening of more breakers to clear the fault.