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Imperial Irrigation District (IID) Response to California Energy Commission Transmission-Related Data Request

Additional submitted attachment is included below.

December 2, 2022

Mark Hesters
Energy Assessments Divisions / Supply Analysis Office
California Energy Commission
715 P Street
Sacramento, CA 95814

RE: 2023 Integrated Energy Policy Report – Electric Transmission – Related Data Collection

Dear Mr. Hesters:

In accordance with the California Energy Commission's Instructions for Electric Transmission-Related Data Collection, Publication Number: CEC-200-2022-004, dated July 2022, Imperial Irrigation District (IID) provides the following statement:

Currently, Imperial Irrigation District does not have any power purchase agreements that require transmission upgrades. The district is in the process of updating the 2018 Integrated Resource Plan, which will be submitted to the CEC no later than April 4, 2024. Based on the modeling results of the plan update, transmission upgrades may be required to meet SB 100; however, those are yet to be determined.

The list of projects below are either planned or ongoing and are related to the increased production of renewables within IID's balancing authority.

230kV Salton Sea Transmission Expansion Project (~2026)

Projects proposing the utilization of available geothermal capabilities in the Salton Sea known geothermal region require new transmission infrastructure as the existing facilities have already accounted for their available capacity. To meet the needs of the submitted geothermal projects in IID's Interconnection queue, the following project is being proposed:

- A new 230kV Collector Switching Station to collect the new geothermal projects
- New single circuit 230kV transmission circuit that would leverage the right-of-way of an existing 161kV IID owned transmission line. The old single circuit 161kV infrastructure would be demolished and replaced with a double circuit steel monopole designed to carry both the new 230kV circuit and the existing 161kV circuit. This configuration would terminate at IID's 230kV Coachella Valley Substation.

- Plans for future-proofing include building out the double circuit mentioned in the bullet above to 230kV specification (insulation, clearances, etc.) for the 161kV circuit as well. This would allow for future use of the 161kV circuit as a 230kV circuit.
- New 230kV transmission from Coachella Valley (IID)-Ramon (IID) and Ramon (IID)-Devers (SCE)
- Conductor to be used is a double bundle 1033 ACSS "Curlew" TW HS285 with over 1200MVA of nominal capacity.
- Total length is estimated at 115 miles.

230kV North Gila – Imperial Valley #2 (~2026)

Imperial Valley – North Gila #2 (NGIV2) is a 500kV transmission project that is planning to provide operational redundancy to the South West Power Link (SWPL) under the only single circuit section, which is the 500kV North Gila - Imperial Valley. As a part of this project, there is a planned tie-in directly into IID's 230kV Highline substation via a new 500:230kV "Dune" substation. This tie-in would allow for additional import and export capabilities from the IID's Balancing Authority Area (BAA). The IID is currently evaluating a potential percentage of participation for the project but has not made a final determination. The project is owned and proposed by a third party, and any participation would require approval by the IID Board of Directors.

230kV Ramon - Mirage #2 (~2025)

The Ramon - Mirage #2 project is a short 230kV circuit between IID's 230kV Ramon substation and Southern California Edison's 230kV Mirage substation. The project's driver is system reliability, as it is labeled as part of the corrective action plan in IID's TPL 10-year assessment. While the main driver is system reliability, the additional circuit would further strengthen the WECC Path 42 facilities and allow for an increase in transfer capability from the IID BA into the CAISO BA via SCE's Mirage facility. This facility is planned to be added to the WECC rated Path 42 facilities.

92kV R-line upgrade (2024)

Due to a surge in renewable interconnection applications within a remote desert region under the IID's service territory, the 92kV R-line from Dixieland Substation – Anza Substation and Anza Substation – Salton City has been identified as a required upgrade due to the thermal limitations of the existing line. The current line is wood pole construction that hosts multiple types of conductors, limiting the thermal ratings of the entire facility with its MVA capacity bottlenecks. The proposed new construction is a hybrid steel and wood design that would allow for longer spans between poles, higher capacity conductors, and increased resilience to the adverse weather that impacts the region by way of monsoons on an annual basis. The shield wire would be a 48 pair OPGW to increase the telecommunications capabilities in the region. The new conductor to be used is a 900 kcmil "Canary" ACSS TW HS285. This new conductor would provide an estimated facility rating of 250MVA nominal and a 300MVA emergency rating. Most renewable projects interconnecting into the R-line are planned for export into the CAISO BAA.

92kV CN and CL line upgrade (2024)

The 92 kV CN & CL Lines Upgrade Project consists of reconstructing approximately five circuit miles of wood poles, the reinforcement of one mile of existing double circuit lattice towers, and the installation of seven miles of fiber optic cable. The five circuit miles of existing wood pole single circuit lines run parallel through the same right of way. They will be replaced with two single circuit wood pole construction using 1033 kcmil ACSS TW conductor. The one mile of reinforcements to the existing double circuit lattice towers carries two circuit miles which will be re-conductored as well with the same conductor. Between Coachella Valley Substation and Coachella Switching Station there are a total of seven circuit miles. The proposed conductor upgrade will increase the thermal capabilities of the line segment by 116MVA (+72%) under nominal conditions and 151MVA (+84%) under emergency conditions. Thermal issues with these circuits have caused numerous curtailments of renewable IPPs in the past.

If there are any questions or concerns regarding this information, please feel free to contact me.

Respectfully,

Jamie Asbury
Energy Manager