



memo

To: Planning Advisory Committee

From: Brent Oberlin

Date: January 26, 2022

Subject: VELCO's Asset Condition Project: K42 Transmission Line Replacement

At the January 20, 2022 Planning Advisory Committee (PAC) meeting, VELCO provided an update on the [K42 Transmission Line Replacement Project](#). This most recent presentation was a follow-up to VELCO's [initial presentation](#) to the PAC on September 22, 2021. As you may recall, in September VELCO explained the need to replace the existing K42 transmission line, which consists of 1272 ACSR, due to asset condition issues such as rotting poles, woodpecker damage, and splitting poles. VELCO's September presentation stated that it could replace the existing line using 1351 ACSS, but that it was also considering a double-conductor bundle, with two conductors per phase. Typically, for 115 kV asset condition replacement projects, the Participating Transmission Owner (PTO) replaces the existing conductor with the PTO's next largest standard conductor. VELCO's consideration of a double-bundled conductor is atypical. However, there was no stakeholder feedback provided during the September PAC meeting.

The ISO recognizes that a bundled 1272 ACSR configuration could potentially provide some localized benefit through reduced resistance and reactance, and that there could be long-term benefit from the higher line ratings if additional resources interconnect in this area with additional upgrades. The PAC's feedback in other contexts regarding increasing transmission system costs, however, raised concerns about VELCO's proposed double-bundled configuration. Therefore, since the September PAC meeting, the ISO has been in communication with VELCO regarding various methods they could use to quantify the benefits of going from the single conductor 1351 ACSS configuration to the double-bundled 1272 ACSR configuration. To that end, VELCO proposed a method of calculating the financial benefit that the double-bundled configuration could bring to the region, and the ISO provided its feedback for VELCO's consideration. Following additional information exchanges, the ISO supported VELCO's decision to engage in further discussions on the K42 asset condition project at the PAC in January 2022, for further consideration of the project in an open and transparent forum.

At the January PAC meeting, the ISO explained that there are a number of aspects that could be taken into account when considering an upgrade such as VELCO's proposed double-bundled configuration, and therefore VELCO and the ISO were seeking PAC input. At that meeting, PAC members expressed overwhelming support for using the double-bundled 1272 ACSR configuration, noting, in particular, the

potential for long-term benefit and the relatively small incremental cost of this configuration (\$6.39M on a \$42.59M base, an approximately 14% increase).

Given PAC's input at the January meeting, the ISO will support VELCO's proposal to replace the K42 line with 1272 ACSR in a double-bundled configuration. However, when the ISO contrasts the overwhelming stakeholder support for addressing the K42 line replacement project with a more expensive double-bundled configuration with concerns about transmission system cost expressed in the context of other PAC discussions about transmission projects, it is unclear how the ISO should approach requests for extra transmission system expenditures aimed at potential future needs in a consistent way. The ISO looks forward to future discussion at the PAC regarding considerations for preparing the system for the future.

Sincerely,

/s/ Brent Oberlin

Brent Oberlin