



**Comments of NGIV2, LLC on
Draft 2019-2020 Transmission Planning Process Study Plan and
Economic Planning Study Request
March 14, 2019**

NGIV2, LLC appreciates the opportunity to provide comments on the CAISO's draft 2019-2020 Transmission Planning Process (TPP) Study Plan. NGIV2, LLC is also submitting an Economic Planning Study Request to the CAISO for the 2019-20 Transmission Plan. In the 2018-2019 TPP cycle, CAISO evaluated the North Gila Imperial Valley #2 (NGIV2) project with certain base assumptions in the production cost models that NGIV2, LLC believes are infeasible or result in inaccurate simulations of future market operations. Therefore, NGIV2, LLC hereby submits this request for the CAISO to perform an economic analysis of the NGIV2 project, revising certain assumptions currently included in the production cost models, and also considering other benefits provided by the project that were not included in the CAISO's analysis in previous planning cycles. These include public policy benefits such as facilitating achievement of California's RPS requirements, and operational flexibility benefits, including reduced reliance on Remedial Action Schemes (RAS) and operating solutions.

Comments on Draft TPP Study Plan

NGIV2, LLC has previously expressed concerns that applying the 2000 MW net export limit from California in the CAISO's economic analysis results in unrealistic dispatch scenarios in the production cost models. This mismatch limits the usefulness of the economic studies in quantifying potential project benefits under likely system and operational conditions, and calls their results into question. As discussed further below, the economic study request we are submitting requests that the CAISO eliminate the net export limit in its economic analysis of the NGIV2 project. However, we respectfully suggest that the CAISO reconsider application of the net export limit within its economic studies more generally.

The CAISO's stated focus for the 2019-20 Transmission Plan will be the internal California transmission system, and as such, the CAISO has indicated that it does not plan to perform any interregional transmission system analyses. However, NGIV2, LLC respectfully requests that the CAISO consider performing an evaluation of the neighboring systems east and northeast of the West of River Path to assess the feasibility of delivering the output of renewable resources from



the rest of the western U.S. to the CAISO region. In the Southern CA portfolio reliability assessment performed as part of the Policy-Driven Need Assessment in the 2018-19 Transmission Plan, severe transmission constraints were observed in the Southern Nevada, Eldorado and Mountain Pass areas and additional constraints further east are likely. The evaluation recommended herein, which would complement the study performed for the Northwest area in the 2018-19 TPP, could identify needs and appropriate solutions that may be placed in service in time to enable renewable resources to contribute to meeting California's increasing RPS requirements at a lower cost than limiting the amount of exports in order to prioritize in-state resources. Benefits from increased California access to non-California renewable resources could also result in direct savings to participants in the Western Energy Imbalance Market.

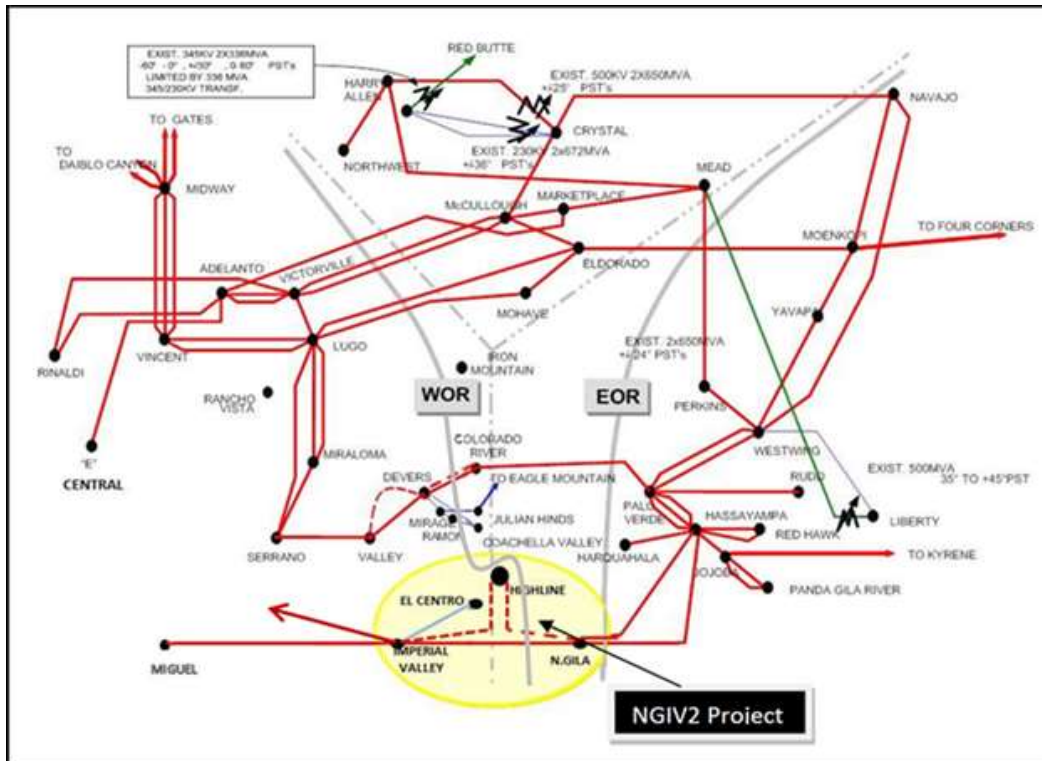
Economic Planning Study Request

NGIV2, LLC is hereby submitting this request for the CAISO to study the NGIV2 project as an economic project, while also considering reliability and public policy benefits provided by the project, in the 2019-20 Transmission Planning Process cycle. NGIV2 is comprised of a new 500kV line from North Gila to Dunes 500kV, Dunes 500/230kV, 230kV connection to the existing IID Highline 230kV, and Highline – Imperial Valley 500kV. [Note: the Dunes 500/230kV substation was formerly known as the Highline 500/230kV substation.] Additional details regarding the NGIV2 project were provided in the Interregional Transmission Project submission package for NGIV2 in March 2018.

The NGIV2 project will be a major intertie expansion between the southern Arizona area and southern California area. It will become an additional component of the West of Colorado River (WOR) Path, or WECC Path 46, and is expected to reduce congestion on the existing Southwest Power Link (SWPL) under high transfers and contingencies, thereby increasing reliability for loss of the existing SWPL, and increasing the interregional transfer capability between Arizona and load centers in southern California. The project is also anticipated to increase transfer capability on the East of Colorado River (EOR) Path, or WECC Path 49. The Hassayampa-North Gila #2 Project is now in-service but limited to only 500MW of scheduling capability, with an incremental 100MW planned with the addition of the APS Orchard Project. With NGIV2, an incremental 600MW of scheduling capacity could be realized on the EOR Path. The NGIV2 project in relation to the interregional transmission system is shown below.



North Gila Imperial Valley #2 TRANSMISSION LINE



NGIV2 in relation to the WOR and EOR inter-regional system

The NGIV2 project will also provide a major interregional transmission export path for renewable energy delivered from the solar and geothermal rich areas of Imperial County, and will create a new CAISO delivery point at the proposed Dunes 500/230kV substation [formerly known as the Highline 500/230kV substation], with an interconnection to the IID Highline 230kV substation.

NGIV2, LLC's economic study request is for the CAISO to evaluate the economic benefits of the NGIV2 project – including analyzing congestion relief in the LA Basin and San Diego areas due to improvements in transfer capability between Arizona and Southern California, and assessing Local Capacity Requirement reductions in the Imperial Valley area – while also considering reliability, operational flexibility, and public policy benefits of the project in its analysis. As part of the WECC Three-Phase Rating Process, the NGIV2 project is anticipated to have an Accepted Rating by Q2 2019 (**1,250 MW**), and to increase the rating of Path 46 (WOR) to **12,450 MW**. As such, the CAISO should include this incremental capacity on Path 46, and its



associated benefits for relieving constraints, in its economic analysis of the project, and set the binding constraint for Path 46 to 12,450 MW for the post-NGIV2 economic case.

For its economic study of the NGIV2 project, the CAISO should also revise certain assumptions that are currently included in the base production cost models. First, the CAISO should eliminate the 2000 MW net export limit from California, or at a minimum, include a sensitivity eliminating the net export limit, in order to more accurately simulate market operations based on the expected near- and long-term system conditions in the production cost models. Second, the analysis should revisit the current methodology for determining the hourly dispatch of the HVDC ties in the models; specifically, the Pacific DC Intertie (PDCI) and the Intermountain Power Project DC line (IPPDC), since the CAISO does not have functional control of these lines.

The regional economic benefits provided by NGIV2 are significant. Economic benefits of the project have been determined by the CAISO in previous economic assessments to be as high as **\$279M**. The following potential benefits of the NGIV2 project should be considered by the CAISO as part of its economic study of the project:

- 1) Provides CAISO additional access to export/import from generation resource zones in the Imperial Valley area of southern California, where limited transmission access exists
- 2) Increases diversity of the interregional energy resource zones
- 3) Makes efficient use of existing available transmission corridors
- 4) Provides additional capacity benefit under normal and emergency conditions for the southern portion of the CAISO system
- 5) Reduces Local Capacity Requirements for the San Diego/Imperial Valley area

In addition to the economic benefits that the CAISO calculates from energy savings, congestion reduction, and reduced Local Capacity Requirements, we respectfully request that the CAISO consider other benefits, such as increased operational flexibility, including elimination or reduction in the use of operational procedures under normal or N-1 conditions; ancillary services benefits such as reduced operating reserve requirements and frequency reserve margins, and a lower incidence of scarcity events; and policy-driven benefits.

From a policy perspective, the NGIV2 project is expected to enable additional renewable output to be delivered to regional load, thereby facilitating movement toward California's increasing RPS goals. The project could also substantially improve renewable energy export capability from the Imperial Valley area. By doing so, it has the potential to spark new development in that



area, creating economic growth and jobs for a disadvantaged community. In terms of operational flexibility, the NGIV2 project could eliminate a number of existing RAS and operating solutions. In addition, the CAISO's 2018-19 Transmission Plan indicates that increased RPS requirements will adversely impact the financial viability of natural gas-fueled resources that have previously been relied upon for mitigation measures; consequently, the project could also provide an alternative to future operating solutions. Moreover, NGIV2 would substantially lower the risk of reliability issues for the southern WECC area for loss of the existing North Gila to Imperial Valley line, reducing the likelihood of a system event similar to the September 8, 2011 event that left most of San Diego and the surrounding regions without power.

In conclusion, NGIV2 thanks the CAISO for considering these comments and the associated request to study the NGIV2 project. We look forward to working with CAISO staff on the 2019-20 TPP study plan, and on performing economic and other studies of the NGIV2 project.