

Memorandum

To: ISO Board of Governors

From: Karen Edson, Vice President Policy & Client Services

Date: March 13, 2013

Re: Decision on Merced Irrigation District Transition Agreement

This memorandum requires Board action.

EXECUTIVE SUMMARY

Merced Irrigation District (Merced), a customer-owned electric cooperative based in the central valley, has taken the first step towards joining the California Independent System Operator Corporation's balancing authority area. On February 14, 2013, Merced and the ISO entered into a memorandum of understanding (MOU) that outlines activities necessary for Merced's 2015 transition into the ISO balancing authority (see Attachment 1). Under the MOU, Merced will become a participating generator effective July 2014 and a participating transmission owner, utility distribution company and load-serving entity in the ISO, effective as early as July 2015.

The MOU identifies a new 230 kV interconnection that will be built to connect Merced to the ISO. Merced has applied to PG&E for an interconnection study that is underway. This new interconnection will resolve transmission constraints that exist for Merced today and which limit its future opportunities for economic growth. The MOU also provides that Merced will bid its hydro facilities in the ISO market, which will provide revenues to Merced to the benefit of its customers. The hydro facilities will also help the ISO by providing flexible capacity to the system. Upon full implementation, the District's load will assume its share of ISO grid management and transmission access charges.

The memorandum of understanding addresses four key areas requiring action by the ISO and Merced:

- 1) **Treatment of Merced Hydro Facilities** - Merced owns hydro facilities that are connected to the PG&E system and sells its output to PG&E under a contract that expires on June 30, 2014. Merced intends to move these units, known as the

Exchequer and McSwain facilities, into the ISO market as of July 2014 when the contracts with PG&E expire.

- 2) **Transition Date and 230 kV transmission interconnection to PG&E** - Merced is currently part of the Turlock Irrigation District balancing authority area. Merced's transition to becoming a PTO, utility distribution company and load serving entity in the ISO is targeted for July 2015 (the "transition date") and is dependent on completion of the 230kV interconnection with PG&E.
- 3) **Resource adequacy and transfer of load and 115 kV facilities** - Merced must meet the resource adequacy requirements of the ISO tariff upon its transition to the ISO balancing authority area. Merced serves its load currently through transfers across the Turlock Irrigation District system. As an ISO participating transmission owner, Merced's load will be served by the ISO through an interconnection at the PG&E Wilson substation. Merced will be recognized as a non-CPUC jurisdictional entity and its own "local regulatory authority."
- 4) **Congestion revenue rights** - Merced will be eligible for an allocation of congestion revenue rights to serve its load, which is based on historic load data. The transition agreement contemplates special actions necessary in advance of the transition to facilitate Merced's participation in the Tier 1 congestion revenue rights allocation process.

The next step is for Merced and the ISO to enter into a transition agreement based on the MOU. This agreement will resolve any tariff issues, such as those associated with Merced's allocation of congestion revenue rights. The transition agreement terminates at the transition date in 2015 and at that time the ISO tariff will govern.

Management recommends the Board approve the following motion:

Moved, that the ISO Board of Governors authorizes Management to enter into a transition agreement with Merced Irrigation District consistent with the parties' Memorandum of Understanding dated February 14, 2013 and attached to the memorandum dated March 13, 2013; and

Moved, that the ISO Board of Governors authorizes Management to make all necessary and appropriate filings with the Federal Energy Regulatory Commission to implement the transition agreement, as described in the memorandum dated March 13, 2013.

BACKGROUND

Merced Irrigation District is a community-owned utility that provides retail electric service to approximately 8,000 customers. Merced presently operates within the Turlock Irrigation District Balancing Authority Area, and owns 34 miles of 115 kV transmission facilities. It owns 110 megawatts of installed generating capacity at the Exchequer and McSwain hydro facilities, located approximately 23 miles northeast of Merced, which are currently

connected to the ISO controlled grid. Merced's service territory has a peak load of approximately 98 MW. A map of Merced's service area is provided as Attachment 2.

In 2011, Merced approached the ISO to explore transitioning to the ISO balancing authority area and becoming a participating transmission owner. Merced's evaluation of its options was triggered at least in part by the expiration of generator contracts in 2014 and transmission contracts in 2015.

Merced and the ISO have worked to identify potential issues that must be addressed to facilitate the transition in July 2015. The proposed approaches and activities are included in the MOU entered into by Merced and the ISO. Because the transition activities must begin in January 2014, Management seeks Board authorization now to file the transition agreement and any other appropriate filings to obtain FERC approval by the end of 2013.

DISCUSSION AND ANALYSIS

There are four critical elements of the transition that require action by the ISO and Merced prior to the targeted transition date of July 2015. These elements are the focus of the MOU and will again be essential features of the transition agreement. Without a binding agreement and authorization from FERC, the parties would not be able to move forward in advance of the transition to address some critical requirements for Merced to fully participate. Accordingly, this section outlines the essential features in each of these four areas as described in the MOU.

Treatment of Merced hydro facilities

The Exchequer/McSwain generating facility is already interconnected to the ISO controlled grid, and no reliability or network upgrades are necessary for it to be fully deliverable. Merced will replace the expiring PG&E generation interconnection agreement with an ISO large generator interconnection agreement for Exchequer, and an ISO small generator interconnection agreement for McSwain. Merced will enter into a participating generator agreement and meter service agreement to manage the energy and ancillary services provided by these generators.

Transition date and 230 kV transmission interconnection to PG&E

The interconnection of the Merced 115 kV transmission and distribution systems to the ISO controlled grid will be accomplished through construction of a new 230 kV transmission interconnection between the Merced Lyons substation and the PG&E Wilson substation which are less than a mile apart. The interconnection is being processed in accordance with PG&E's transmission owner tariff, and the ISO is engaged in the ongoing study work to effectuate the interconnection. Merced will enter into a transmission interconnection agreement with PG&E. Prior to the transition date, Merced will execute the Transmission Control Agreement and apply to become a participating transmission owner consistent with that agreement. Lastly, Merced will assume responsibilities as a transmission operator and comply with all applicable WECC and NERC requirements.

Ultimately Merced will seek FERC approval for rate recovery for all facilities constructed above 200kV to connect to the Wilson substation and PG&E costs to upgrade and reinforce the Wilson substation that are charged to Merced, consistent with the ISO's high-voltage access charge methodology.

Resource adequacy and transition of load and 115 kV facilities

Ultimately at the transition date, Merced will enter into a utility distribution company agreement with the ISO. Merced must comply with the resource adequacy requirements of the ISO tariff. Merced may or may not have local resource adequacy requirements, which ISO engineers will assess not later than six months prior to the transition date. Merced may be able to estimate what its local resource adequacy requirement would be after transitioning to the ISO system, by doing its own local congestion study that follows the process to be specified by the ISO prior to the transition date. Through its scheduling coordinator, Merced will need to participate in the year-ahead and month-ahead demonstrations that it has met its resource adequacy requirements. Costs associated with Merced's 115 kV system will be paid by its customers consistent with the ISO's low-voltage access charge methodology.

Allocation of congestion revenue rights

As a load serving entity, it will be necessary to provide a transition mechanism for Merced to obtain congestion revenue rights that will be effective as of the transition date. The ISO's congestion revenue rights allocation process starts in the summer of every year and first allows entities to nominate their prior year congestion revenue rights for a priority renewal in the current year process. For the 2015 allocation process, the ISO will specify a hypothetical congestion revenue rights portfolio based on historical data that Merced can nominate for renewal. This will occur during the summer of 2014, with preparations beginning in the January-February 2014 timeframe.

Economic estimates

Merced's move into the ISO provides it with benefits by solving transmission issues that limit its opportunities for future growth. Merced's commitment to offer its hydro resources into the ISO market benefits the ISO by providing for renewable integration. Merced will also bring additional load into the ISO, which results in grid management and transmission access charge payments to the ISO, although they are not adequate to completely offset the cost to the ISO market. Annual estimated cost to ISO participants are shown on the following page:

	Annual Cost to ISO participants (\$ millions)
2015 – annual transmission revenue requirement estimate based on facilities required for interconnection	\$6.7-8.4
Merced Irrigation District contribution to ISO transmission access charge	(\$5.0)
Merced contribution to ISO grid management charge	(\$0.4)
Merced contribution to market uplift charges, e.g. real-time imbalance energy offset	(\$0.2)
Total estimate annual cost to ISO ratepayers	\$1.1 - 2.8

This cost is based on estimates for the required interconnection facilities that are currently under study. Impact on the transmission access charge paid by ISO ratepayers is expected to be less than 1 cent per MWh in the 2015 and 2016 timeframe which is less than one tenth of one percent. This cost will be somewhat offset by the added flexibility provided by the hydro units.

POSITIONS OF THE PARTIES

After the MOU execution on February 14, 2013, the ISO posted the memorandum of understanding on its website and issued a market notice on February 21, 2013.

Following the posting of the MOU, one participant asked questions regarding the network status of the facilities involved in the interconnection and the cost to ratepayers when Merced joins the ISO. The Merced interconnection is similar to several facilities within the ISO (on PG&E's and SCE's systems) that are within ISO operational control and operated as network facilities. The cost estimates appear above.

On February 28, the ISO hosted a call with stakeholders to explain the provisions and proposed transition process, and to answer questions. Approximately 32 participants were on the call. Following the presentation there were no questions from the participants.

MANAGEMENT RECOMMENDATION

Management recommends approval of this proposal to develop and file the Merced Irrigation District-ISO transition agreement with FERC as described above. The relationship between Merced and the ISO is an exciting new partnership that brings new benefits as described above.