



## Memorandum

To: ISO Board of Governors  
From: James Detmers, Acting Vice President of Operations  
Armando J. Perez, Director of Grid Planning  
Steve Greenleaf, Director of Regulatory Policy  
cc: ISO Officers  
Date: March 23, 2001  
**Re: *Valley-Rainbow Transmission Project***

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***This memorandum requires Board action.***

### EXECUTIVE SUMMARY

The ISO recommends that the Board 1) review the direction given by the former Board to the ISO regard the Valley-Rainbow 500 kV transmission project (Valley-Rainbow Project) in light of new state priorities, 2) reaffirm the need for a project, and 3) determine whether or not to proceed with a competitive solicitation. In accordance with ISO practice, any Board approval of the Project should be as to the electrical configuration and components, but without determining the route and substation site. The route and substation site would be determined by the California Public Utilities Commission (CPUC) in the context of an application by San Diego Gas and Electric Company (SDG&E) for a Certificate of Public Convenience and Necessity (CPCN) for the project. The Board should encourage SDG&E to continue to explore alternative routes that minimize impacts on affected communities, including a route through Forest Service land. (See Attachment D for map.)

The Valley-Rainbow Project is necessary to reliably serve the growing electric demand in the San Diego area. In addition, the project is an important component of a comprehensive strategy to enhance access by consumers in San Diego and other parts of California to reasonably priced, efficient and environmentally superior generation. Because a transmission project is required to achieve these objectives, the ISO recommends that the Board reassess the motion passed on October 26, 2000 requiring the ISO to undertake a competitive solicitation for non-wires alternatives to the transmission project. A Board determination to dispense with a competitive solicitation process for non-wires alternatives would not preclude a review of non-wires alternatives by the CPUC. Nonetheless, if the Board determines that the ISO should proceed with a competitive solicitation, the ISO can expeditiously conclude the work it has initiated to do so.

If the Board determines that a competitive solicitation for non-wires alternatives should not be pursued, it could pass the following motion:

***MOVED, that the Board:***

- ***reaffirm the need for a 500 kV transmission project from Valley to Rainbow;***
- ***approve the Valley-Rainbow 500 kV Project as the preferred transmission alternative to address the identified reliability concerns on the San Diego and southern Orange County portion of the ISO Controlled Grid beginning in 2004, and to enhance access by consumers in San Diego and other parts of California to reasonably priced, efficient and environmentally superior generation; this approval is as to electrical configuration and components and without determining the route and substation site; route and substation site will be determined by the CPUC in the context of SDG&E's application for a CPCN for the project; and***
- ***direct SDG&E to proceed with design and licensing for the project, including the route and substation site selection process before the CPUC, and encourage SDG&E to continue to explore alternative routes include a route through Forest Service land; and***
- ***rescind its motions of May 25, 2000, August 1, 2000, and October 26, 2000, related to the Valley-Rainbow Project.***

## **BACKGROUND AND UPDATE**

As an extension to the San Diego Gas and Electric (SDG&E) 1999 Annual Grid Planning Assessment, SDG&E undertook a study to assess alternatives to address violations of the ISO Grid Planning Criteria expected to occur in 2004 as a result of serving the increasing load demand in San Diego County and southern Orange County. This study assessed four 500 kV transmission alternatives to meet the identified need and indicated that the preferred project is a 500 kV transmission line between Southern California Edison's existing Valley Substation and a new SDG&E substation at either Rainbow or Pala in northern San Diego County. The "Valley-Rainbow Project" was approved by the ISO Board on May 25, 2000, subject to a competitive solicitation to allow non-wires alternatives to compete with the project. On August 1, 2000, the Board passed a further motion directing ISO Management not to proceed with a competitive solicitation. On October 26, 2000, the Board rescinded the May and August motions and passed a motion approving a 500 kV project, such as Valley-Rainbow, and directing the ISO to undertake a competitive solicitation for non-wires alternatives in conjunction with the CPUC and for consideration by the CPUC in a Certificate of Public Convenience and Necessity (CPCN) process.

Since the October 26, 2000 motion was passed, developments in the electric industry in California have resulted in revised priorities by the state of California and the ISO to restore reliable service at reasonable cost to California consumers. For example, the ISO has been working with state agencies, including the Electricity Oversight Board, the CPUC and the California Energy Commission to: 1) expeditiously bring on line adequate, reasonably priced, efficient and clean new generation to meet the needs of California consumers; 2) identify and ensure prompt construction of the transmission upgrades necessary to ensure that consumers in California have access to new and existing generation; and 3) promote conservation and load management. In light of these new

priorities, it is appropriate for the Board to reaffirm its approval of the Valley-Rainbow Project and reconsider the need for a competitive solicitation.

While initially conceived to meet load growth in San Diego, the Valley-Rainbow Project should now be evaluated by the Board as part of a broad strategy by the state of California to put into place a robust transmission system to support reliable service to consumers. In this regard, the Valley-Rainbow Project provides benefits to consumers in San Diego and the rest of California. As noted in a recent SDG&E letter to the ISO, asking the ISO to reaffirm its support for the Valley-Rainbow Project (Attachment A), a substantial number of generation interconnection applications have been made within the San Diego load area. In addition, the ISO is aware of proposals to add significant additional generating resources in Northern Mexico, and in Arizona. The Valley-Rainbow Project is a key first phase of a larger and long-term transmission plan that would strengthen transmission links between Southern California and the desert southwest. Other phases being considered include completing the 500 kV circuit between Rainbow and Miguel substations and building a second 500 kV line between Southern California and Arizona. (See Attachment B: Statement of the California Independent System Operator Corporation Regarding Priority Transmission Projects.) As a result, San Diego would have access to California generation located north and south of the SDG&E service territory, as well as generation located in Arizona. Given this additional access, San Diego could reduce its current expenses for reliability services from generating units (currently under Reliability Must Run contracts) and use generation from new clean and efficient units that are developed north and south of San Diego and in Arizona.

These benefits could not be realized by use of generation or load management in lieu of the Valley-Rainbow Project. Without the Valley-Rainbow Project, load growth in San Diego would have to be met from a combination of inefficient existing units and new units developed in the area. There would be less ability to displace use of inefficient (and consequently more expensive to operate) older plants, with output from newer more efficient plants built in other areas of California and in Arizona and Mexico. Moreover, to ensure reliable service, San Diego consumers would likely have to pay significant sums for reliability services from new and existing units. Further, new generating units sited in the San Diego service area and Mexico would be limited in their ability to serve load in other parts of California. Finally, given that the proposed new units in the San Diego are predominantly gas fired, San Diego consumers could face some economic and reliability risk if gas availability does not increase to meet the additional demand from new plants.

The importance of the Valley-Rainbow Project was recently highlighted at a prehearing conference before the CPUC. Last November, the CPUC opened a proceeding to ensure, in consultation with the ISO, that necessary transmission upgrades are implemented in a timely manner as required by the new law AB 970. In a prehearing conference held March 13, 2001, to discuss the assessment of transmission projects necessary beyond summer 2001, the Valley-Rainbow Project was discussed by a number of parties as among the top three priority projects for the coming years.

In fact, in light of recent events, SDG&E recently reevaluated the timing of the need for the Valley-Rainbow Project. Assuming price elasticity and likely higher electric prices, SDG&E reduced its peak load forecast to 4635 MW from 4962 MW. In addition, SDG&E considered the impact of generation additions proposed in the San Diego load area. SDG&E concluded, and the ISO agrees, that notwithstanding these changes the Valley-Rainbow Project is needed in 2004, due in part to the benefits described above. In addition, SDG&E has indicated that the 2004 in service

date is important because there is uncertainty as to whether and when the generation that has been proposed in San Diego will be in service and whether and when the gas supplies required for its cost-effective and reliable operation will materialize.

The decision of the former Board to require a competitive solicitation was based to a significant degree on strong community opposition to the Valley-Rainbow Project from the citizens of the Temecula Valley. Since October 2000, additional information has emerged regarding a potential alternative route for the Valley-Rainbow Project, in association with a pumped storage project at Lake Elsinore. The project includes a transmission line that can be extended to connect Valley substation to the proposed Rainbow substation and would thus be functionally equivalent to the project proposed by SDG&E. While the ISO recently became aware that the sponsor of the Lake Elsinore project (Enron) has withdrawn, it is possible that the alternative route for the Valley-Rainbow Project through Forest Service land could still be used. The Forest Service might be persuaded that if the line is built, a pumped storage project on Lake Elsinore would become more feasible. (The Lake Elsinore project is favored by the Forest Service because it would help stabilize the level of Lake Elsinore, would aerate the lake and would improve the Forest Services' fire response capability.) Unlike the route proposed by SDG&E, the route associated with the Lake Elsinore project will have minimal impacts on residential communities. SDG&E can and should be encouraged to explore the Forest Service land alternative and other alternatives that would minimize impacts on affected communities.

In light of the emerging state priorities discussed above, the ISO considers that the Board should reassess the determination of the former Board that the ISO should proceed with a competitive solicitation for non-wires alternatives. It should be noted that a decision by the Board to dispense with a competitive solicitation for non-wires alternatives by the ISO does not preclude consideration of viable non-wires alternatives by the CPUC in the context of an SDG&E application for a CPCN for the Valley-Rainbow Project. Rather, in undertaking the requisite analysis under the California Environmental Quality Act (CEQA), the CPUC must consider feasible alternatives to the proposed project.

If the Board determines that the ISO should go forward with a competitive solicitation for non-wires alternatives, the ISO is in a position to move forward expeditiously to comply. In accordance with the October 26, 2000 motion, the ISO consulted with the CPUC and SDG&E and developed an approach for implementation of an RFP and initial ideas on ISO evaluation criteria that are set forth in a January 16, 2001 memorandum to the ISO Grid Reliability/Operations Committee (Attachment D). In addition, the ISO developed a rough draft of the RFP and circulated it to SDG&E and the CPUC. Thus, if the Board of Governors determines to proceed with an RFP for non-wires alternatives, the ISO would be in a position to expeditiously issue an RFP, and could consult with stakeholders and further refine ISO evaluation criteria for consideration by the Board in a subsequent meeting.

In sum, the Board of Governors should reaffirm the need for the Valley-Rainbow Project and reassess the directive of the former Board to undertake a competitive solicitation, in light of emerging priorities and new information. The Valley-Rainbow Project supports the state's goal of ensuring reliable, cost-effective service to all California users by strengthening transfer capability between the San Diego area and regions to the north, as well as access by San Diego to power from Arizona and access by northern California to generation in San Diego and Mexico. The

project would allow all California users to benefit from new, efficient and clean generation and to reduce reliance on older, relatively inefficient plants that are more expensive to operate. A non-wires alternative would not provide the same benefits. Nonetheless, if the Board considers that the ISO should go forward with a competitive solicitation for non-wires alternatives, the ISO can expeditiously complete the work it has already initiated to do. In any event, the Board should encourage SDG&E to continue to explore alternative routes that minimize the impacts on affected communities.

## **OPTIONS**

Option A: Reaffirm the need for a 500 kV transmission project from Valley to Rainbow; approve the Valley-Rainbow 500 kV Project as to electrical configuration and components and without determining the route and substation site which will be determined by the CPUC; and rescind former Board motions on the Valley-Rainbow Project.

Option B: Reaffirm the October 26, 2000 motion.

## **PROS AND CONS OF OPTIONS**

Option A: Reaffirm the need for a 500 kV transmission project from Valley to Rainbow; approve the Valley-Rainbow 500 kV Project as to electrical configuration and components and without determining the route and substation site which will be determined by the CPUC; and rescind former Board motions on the Valley-Rainbow Project.

### **Pros:**

As explained above, this approach supports the state's goal of ensuring reliable, cost-effective service to all California users by providing for optimized use of new, clean and efficient generation proposed within and outside California.

This approach is expected to provide greater reliability than a non-wires alternative in that it integrates San Diego with the rest of the Western Interconnection providing significant access to a wide variety of resources rather than being limited to the local area resources and the common concerns that they share, such as adequacy of gas supply.

The approach does not foreclose consideration of non-wires alternatives by the CPUC in the context of a CPCN application for the Valley-Rainbow Project by SDG&E. However, the approach allows the ISO to focus its resources on the myriad significant challenges facing the organization to maintain reliability during summer 2001 and thereafter, rather than pursuing an RFP for alternatives that are unlikely to meet new state priorities.

### **Cons:**

Some citizens may be disappointed by an ISO decision not to go forward with an RFP for non-wires alternatives. However, as noted earlier, such a decision would not preclude consideration of such alternatives by the CPUC. In addition, the adoption of a non-wires alternative is only expected to defer the project rather than eliminate it.

Option B: Reaffirm the October 26, 2000 motion and direct the ISO to undertake a competitive solicitation for non-wires alternatives.

Pros:

By proceeding with the RFP, the ISO would develop more concrete information about the availability of non-wires alternatives to the Valley-Rainbow Project for consideration by the CPUC.

Cons:

A non-wires alternative would not provide the access to new, efficient and clean generating resources to California consumers that would result from a transmission project. Clean, efficient generation from outside of San Diego would be less able to displace old and inefficient generation within San Diego.

A non-wires alternative would be a short-term solution (potentially a 5-year contract) for San Diego while the construction of transmission facilities will provide a benefit to San Diego that could easily last for a century.

## **MANAGEMENT RECOMMENDATION**

Management recommends option A for the reasons described in this memorandum. Management recommends the following motion:

***MOVED, that the Board:***

- ***reaffirm the need for a 500 kV transmission project from Valley to Rainbow;***
- ***approve the Valley-Rainbow 500 kV Project as the preferred transmission alternative to address the identified reliability concerns on the San Diego and southern Orange County portion of the ISO Controlled Grid beginning in 2004, and to enhance access by consumers in San Diego and other parts of California to reasonably priced, efficient and environmentally superior generation; this approval is as to electrical configuration and components and without determining the route and substation site; route and substation site will be determined by the CPUC in the context of SDG&E's application for a CPCN for the project; and***
- ***direct SDG&E to proceed with design and licensing for the project, including the route and substation site selection process before the CPUC, and encourage SDG&E to continue to explore alternative routes include a route through Forest Service land; and***
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