

# Memorandum

**To:** ISO Board of Governors  
**From:** William J. Regan, Jr., Chief Financial Officer & Vice President, Corporate Services  
Ben Arikawa, Senior Consultant  
**Date:** December 4, 2007  
**Re:** Decision on GMC Rate Structure Under MRTU

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*This memorandum requires Board action.*

## Introduction

Changes in the Grid Management Charge (GMC) rate structure will be necessary with the implementation of Market Redesign and Technology Upgrade (MRTU). In anticipation of these changes, the California ISO (CAISO) convened a stakeholder process last year. Despite challenges, the stakeholders and the CAISO have reached consensus on most issues. Management's proposed MRTU GMC rate structure retains the essential elements of the current GMC, while making changes in response to stakeholder requests and as required for MRTU implementation. Management completed a cost of service study updating the allocation of CAISO costs to the new rate structure. To facilitate discussion, alternative rate structure scenarios were developed using the new cost of service. In response to past suggestions, the CAISO had previously built a bill impact model that can provide Management and stakeholders with potential GMC bill impacts. Using this model, aggregated GMC bill impacts were distributed to interested stakeholders and detailed GMC bill impacts were distributed to interested Scheduling Coordinators.

Management has worked cooperatively with stakeholders in an attempt to reach agreement on the appropriate structure for the GMC under MRTU. Management's proposal balances competing interests and meets the decision criteria for the project, which are listed below.

This memorandum outlines and summarizes Management's proposal, and the remaining stakeholder comments and issues. While most issues have been addressed and resolved in this process, stakeholders have raised several concerns that remain to be resolved. These concerns are highlighted in the outline of the stakeholder process in Attachment A.

The full proposal can be found in Attachments B and C, which contain discussions of the underlying cost of service support and the MRTU GMC rate structure.

## **MOTION**

**Moved,**

**That the ISO Board of Governors approves of the MRTU GMC rate design, as outlined in the memorandum dated December 4, 2007; and**

**That the ISO Board of Governors authorizes Management to make all necessary and appropriate filings with the Federal Energy Regulatory Commission to implement the proposed MRTU GMC rate design.**

### **Brief Summary of Current GMC Rate Structure**

The current GMC rate structure consists of 14 Charge Types or rates, as summarized in Table 1. Core Reliability and Energy Transmission Services contain the core functions of the CAISO, including managing internal and interchange transmission flows, ensuring reliability and meeting regulatory requirements. There are six rates associated with these services: two demand charges (on peak MW usage during the month) and four energy charges (on MWhs of energy). The CAISO market services include scheduling, administration of energy and Ancillary Services markets, and congestion management (which will not continue under MRTU). There are seven charges associated with these market services: three based on numbers of schedules submitted, one on interzonal flows and three based on MWhs of market activity. Finally, under Settlements, Metering and Client Relations, the CAISO maintains customer data, responds to customer inquiries, calculates charges and invoices, resolves disputes and provides training. There is one rate associated with SMCR, a charge of \$500 for any month in which there is settlement activity.

Table 1 California ISO Grid Management Charge Structure Effective January 1, 2007 to MRTU Startup Service, Name and Bill Determinant		
Service	Name	Bill Determinant
Core Reliability Services	CRS-Demand (peak)	Monthly Non-Coincident Peak HE07 – HE 22
	CRS-Demand (off-peak)	Monthly Non-Coincident Peak all other hours
	CRS-Energy Export	MWWhs of exports
CRS/ETS	CRS/ETS-NE – Mohave Energy Export	MWWhs of Mohave exports to Nevada Power and SRP
Energy Transmission Services	ETS-Net Energy	MWWhs of Metered Control Area Load
	ETS-Uninstructed Deviations	MWWhs of net uninstructed deviations
Forward Scheduling	FS	Count of hourly schedules
	FS-Inter SC trades	Count of hourly trades
	FS-PGAB Inter-SC trades	Count of hourly trades for PGAB
Congestion Management	CONG	MWWhs of net Hour Ahead Final Interzonal flows
Market Usage	Ancillary Services	MWWhs of purchases and sales of Ancillary Services (Day Ahead and Hour Ahead)
	Instructed Energy	MWWhs of Instructed Energy
	Net Uninstructed Deviations	MWWhs of net uninstructed deviations
Settlements, Metering, and Client Relations	Settlements, Metering, and Client Relations	Monthly customer charge

## History of Board Review

In previous memoranda provided in the May and September meeting materials, Management briefed the Board on the status of the MRTU GMC rate design. Management outlined the structure of the current GMC and the structure that would apply to the MRTU GMC. Management also outlined the MRTU GMC Stakeholder process. Management deferred a Board decision at both the July and October meetings in order to address stakeholder concerns. In response to concerns about the timing of a single filing to implement the MRTU GMC and an extension of the current GMC into 2008 prior to MRTU startup, Management agreed to split the filing. At the October meeting, Management requested and received Board authorization to file the extension of the current GMC rate structure into 2008. That request for an extension of the current GMC into 2008 was filed with FERC on October 31, 2007.

## MRTU GMC Stakeholder Process

The CAISO convened a stakeholder process in September 2006 to discuss the various aspects of changes to the GMC for MRTU. As shown in *Attachment A, Stakeholder Process and Open Issues*, the stakeholder process to date has consisted of 17 meetings or conference calls. Throughout the stakeholder process, the CAISO has

actively solicited stakeholder comments and questions and has attempted to address each one, as set forth below. In addition, the Market Surveillance Committee (MSC) was briefed early in the process on the potential changes for the MRTU GMC. The MSC saw no issues with the direction that the GMC process was taking.

### **1. Revisions to the GMC Under MRTU Filing Schedule**

Since the process began, the stakeholders have commented on the lack of time in the proposed schedule for deliberation. In response, the CAISO has revised the timeline and filing schedule repeatedly. Beginning in the fall of 2006, the schedule was adjusted to first focus stakeholder attention on critical details of the GMC rate structure that would be coded into the Settlements and Market Clearing (SaMC) system, allowing more time into 2007 for deliberation of cost allocation issues. The schedule was then modified in contemplation of a filing in October 2007 that would address both the extension of the current GMC into 2008 and the GMC under MRTU. Finally, as described above, the CAISO more recently revised the timeline by filing the pre-MRTU GMC extension request in October and scheduling a later GMC under MRTU filing in order to continue cost allocation and rate design discussions.

### **2. The Cost of Service Study**

Last fall, stakeholders and the CAISO agreed that a detailed analysis of the CAISO's cost structure, in the form of a cost of service study, was a necessary prerequisite for determining the final calculations underlying the GMC rates.<sup>1</sup> Preliminary results were presented to stakeholders in late May and updated in response to comments in October.

Once the preliminary results of the cost of service study were released, some stakeholders questioned the reasonableness of the results by comparing them to results of a cost of service study conducted in 2003. The CAISO considered these comments by reviewing the cost of service results and developing a high level comparison to show the reasons for these major changes. The CAISO also responded to questions about how specific cost centers or specific system applications were assigned to the CAISO functions. The most recent update of the detailed documentation on the cost of service study has been available since late October on the CAISO website and is attached hereto as Attachment B.

### **3. Accommodation for Participating Intermittent Resources**

The CAISO has been responsive to the need to support renewable energy providers as a matter of state policy. Previously, the operators of Participating Intermittent Resources argued that some mitigation should be applied to the GMC applicable to Uninstructed Imbalance Energy. Participating Intermittent Resources schedule to a CAISO forecast and are unable to change this schedule without losing certain benefits. The CAISO and other stakeholders have agreed to implement an accommodation for Participating Intermittent Resources in the form of netting their Uninstructed Imbalance Energy during the month. This accommodation was coded into SaMC and will be available at MRTU startup.

### **4. Cost of Service Results for Transmission Ownership Rights Holders**

In the ongoing MRTU proceeding at the Federal Energy Regulatory Commission and in the stakeholder process, Transmission Ownership Rights (TORs) holders have disputed the application of the GMC to flows on their TORs. In response, the CAISO reviewed the services provided to flows on TORs and updated the cost of service study to reflect the results of this analysis. The update cost of service shows that the flows on TORs received the many of the same services as flows on the CAISO Controlled Grid. However, the level of service provided is lower for some services. This provided a cost justification for a reduction in certain GMC rates to be applied to TORs.

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<sup>1</sup> This detailed analysis of CAISO costs examines the nature of expenditures to determine how expenditures should be allocated to each of the CAISO's functions. Each cost center is surveyed to determine how its activities relate to the defined CAISO functions. Capital expenditures also are evaluated in order to determine their relationship to these functions.

## 5. Bill Impact Analysis

Customers also are concerned about the overall impact of changes in their GMC bills whenever changes are made in the rate structure. To this end, the CAISO provided preliminary bill impact analysis to participants beginning in June 2007. Based on comments received, the CAISO reviewed the underlying assumptions and made several modifications in response. The bill impact analysis provides both stakeholders and Management with useful insight into potential impacts from the proposed rate structure changes. The bill impacts may show unexpected, adverse results or disproportionate impacts on certain Scheduling Coordinators. In certain circumstances, it was necessary to refine the rate structure to mitigate some of the adverse impacts. The bill analysis allowed discussion to be focused on more discrete issues and has facilitated discussion.

### Summary of MRTU GMC

The stakeholder discussions have resulted in a consensus on almost all of the rate design and allocation issues. The consensus results in a GMC configuration of 15 Charge Codes, spanning the same set of ISO functions as is listed in Table 1. Two of the existing Charge Types, CT4504 (related to Mohave Energy Exports) and CT4522 (Congestion Management), will be retired and three will be added (see Table 2 below). The three new Charges Codes are:

- Core Reliability Services/Energy Transmission Services – Transmission Ownership Rights. Will be assessed on Metered Control Area Load of Transmission Ownership Rights. This charge results from further analysis of the services offered to flows on Transmission Ownership Rights.
- Market Usage – Forward Energy. Will be assessed on net energy purchases and sales in the Forward Market, as balanced Day-Ahead schedules are no longer required. This is a new service provided under MRTU.
- Energy Transmission Services/Market Usage – Deviations of Participating Intermittent Resources. In support of renewables, the Uninstructed Imbalance Energy of Participating Intermittent Resources can be netted over the month, rather than over the ten-minute settlement interval as is currently done.

In addition to the new charges, the MRTU GMC incorporates other changes that include changes in bill determinants to align with MRTU. These changes are detailed in the attached MRTU GMC white paper (Attachment C).

<b>Table 2</b> <b>GMC Rate Structure Under MRTU</b> <b>Function, Rate Name and Bill Determinant</b>		
<b>Service</b>	<b>Rate Name</b>	<b>Bill Determinant</b>
Core Reliability Services	CRS-Demand (peak)	Monthly NCP HE07 – HE 22
	CRS-Demand (off-peak)	Monthly NCP all other hours
	CRS-Energy Export	MWhs of exports, excluding exports on TORs
Energy Transmission Services	ETS-Net Energy	MWhs of Metered Control Area Load, excluding Load on TORs
	ETS-Uninstructed Deviations	MWhs of Uninstructed Imbalance Energy netted over the Settlement Interval (except UIE associated with PIRP)
CRS/ETS	Transmission Ownership Rights	Metered Control Area Load MWhs – TORs
Forward Scheduling	FS	Count of hourly schedules (including Awarded RUC bids)
	FS-Inter SC trades	Count of hourly trades (including trades of IFM uplift obligations)
	FS-PGAB Inter-SC trades	Count of hourly trades for PGAB
Market Usage	Purchases and sales of Ancillary Services	Day Ahead and Hour Ahead Scheduling Process and Real Time MWhs
	Instructed Energy (Real Time)	MWhs of IE, no longer includes UIE1
	Net Uninstructed Deviations, (Real Time)	MWhs of Uninstructed Imbalance Energy netted over the Settlement Interval (except UIE associated with PIRP)
	Forward Energy	MWhs of net Energy purchases or sales in Day Ahead
ETS/MU	Monthly netted deviations – PIRP	MWhs of Uninstructed Imbalance Energy netted over the month for PIR
Settlements, Metering, and Client Relations	SMCR	Monthly customer charge

### Stakeholder Comments and Unresolved Issues

A consensus has been reached on most, but not all, issues. In early November, Management requested comments on the MRTU GMC rate proposal. On November 27, comments were received from PG&E, SDG&E, California Wind Energy Association (CalWEA), Modesto Irrigation District, and California Department of Water Resources-State Water Project (CDWR-SWP).

PG&E and CalWEA support the Management's GMC rate proposal without modification. Modesto Irrigation District finds Management's proposal with respect to the application of the GMC to TOR exports to be acceptable.

CDWR-SWP has suggested three changes to the GMC: (1) the inclusion of Unaccounted for Energy (UFE) in the calculation of Metered Control Area Load; (2) an exemption for pumping load for storage purposes from the Core Reliability Services Charge; and (3) an exemption for ETC flows from the portion of Energy Transmission Services Charge that is related to congestion management. Management does not recommend making these alterations to the GMC.

On the first issue, CDWR-SWP argues that UFE should be included in the calculation of Metered Control Area Load, which provides the basis for several of the billing determinants for Core Reliability Services and Energy Transmission Services. Management does not agree. The appropriate measure for recovery of GMC rates is Metered Control Area Load, as defined by the Tariff, without inclusion of UFE. UFE exists for a number of reasons, including estimation errors that are not the responsibility of any one SC. In addition, extensive stakeholder discussions were held in 2003 leading to the current definition of Metered Control Area Load. Implementing this change would shift the burden of GMC and likely be contentious.

On the second issue, CDWR-SWP argues that an exemption for pumping load for storage purposes logically flows from FERC Order No. 672. That Order directs that pumping load will be exempt from payment of Energy Reliability Organization (ERO) assessments. CDWR-SWP argues that, since the ERO establishes reliability standards, the CAISO costs of meeting reliability standards should also fall under this exemption. However, the Order itself does not speak to the applicability of the exemption to ISO/RTO reliability-related costs. Furthermore, implementing this exemption would only affect one party, CDWR-SWP. Since the exemption benefits no other parties and Order No. 672 does not extend the exemption to ISO/RTO costs, Management does not believe that the exemption has merit.

Similarly, there is not merit to the proposed exemption for ETC flows from Congestion Management costs to Energy Transmission Services. Under MRTU, interzonal congestion management will no longer exist. CDWR-SWP's reference to the existence of congestion management costs in Energy Transmission Services is misplaced. The service offered in Energy Transmission Services is for the monitoring and Real Time dispatching of resources to mitigate congestion, not the Day-Ahead management of congestion through the use of adjustment pricing. Under MRTU, the cost of managing congestion Day-Ahead will reside in Market Usage. To the extent that CDWR-SWP provides balanced self-schedules, CDWR-SWP will not be subject to the Market Usage – Forward Energy charge, which contains the cost of managing congestion Day-Ahead. However, to the extent that the CAISO must monitor and redispatch resources to mitigate congestion in Real Time, CDWR-SWP's ETC load has been and will continue to be subject to Energy Transmission Services.

SDG&E raised issues concerning the implementation of the Core Reliability Services/Energy Transmission Services – Transmission Ownership Rights (TOR) Charge. The CAISO proposal is to assess this charge volumetrically on MWh flows, which are exports, over the TOR. SDG&E believes that the charge is properly assessed on a demand or capacity basis, not on flows. Currently, Modesto Irrigation District, with regard to its relationship with the City and County of San Francisco's TOR, agrees with the CAISO that the charge should be on flows. Moreover, a volumetric charge is consistent with the way in which all other exports are treated. The other aspects of the SDG&E proposal would have the effect of limiting their GMC exposure, while potentially shifting the burden to other parties. Management believes that the CAISO GMC proposal on the TOR Charge fairly balances stakeholder concerns and does not support SDG&E's proposal.

## Conclusion

Management believes that the proposed GMC under MRTU rate structure and cost allocations, as developed through the stakeholder process, meet the following criteria:

- The FERC “just and reasonable and not unduly discriminatory or preferential” standard;
- The principle of cost-causation, which charges customers for the cost of services that they use or cause;
- The ease of administration (for CAISO and participants) and understandability (for participants);
- Avoiding adverse operational impacts;
- The recovery of CAISO costs in a stable, low risk manner without excessive volatility; and,
- The stakeholder process and the CAISO consideration of the comments and proposals received in that process.

## Management Recommendation

Accordingly, Management requests Board approval of the proposed MRTU GMC rate structure and authorization to file the Tariff changes necessary to implement this rate structure for MRTU startup.