

# Memorandum

**To:** ISO Board of Governors

**From:** Ben Arikawa, Senior Consultant  
Phil Leiber, Treasurer and Director, Financial Planning  
William J. Regan, Jr., Chief Financial Officer & Vice President, Corporate Services

**Date:** May 21, 2007

**Re:** Briefing on GMC under MRTU

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*This memorandum does not require Board action.*

## Executive Summary

With implementation of the Market Redesign and Technology Update project (MRTU), changes in market design and operations necessitate changes in the Grid Management Charge (GMC) rate structure. In 2006, the California ISO held stakeholder meetings to discuss the upcoming changes and their effect on GMC rate structure. Last fall, stakeholders agreed on the potential bill determinants and Charge Code configuration of the GMC under MRTU rate structure. Based on this structure, the California ISO developed configuration guides and began design of the GMC in the Settlements and Market Clearing system (SaMC). This spring the "GMC under MRTU process" continues with a discussion of the allocation of ISO costs to the various rate functions and the calculation method for GMC rates (including final selection of bill determinants). This process will involve distribution and discussion of confidential data and detailed analysis of bill impacts. In addition to the GMC under MRTU rate structure, an extension of the current GMC Settlement through MRTU implementation will be discussed. Despite potential challenges, Management is optimistic that agreement can be reached on most issues prior to bringing the issue to the Board for a decision in July. Upon Board approval, Management anticipates filing at the Federal Energy Regulatory Commission in early August for the new rate structure to be effective upon MRTU go-live on February 1, 2008.

## Brief Summary of Current GMC Rate Structure

The current GMC rate structure consists of three functions, various sub-functions and 14 Charge Types or rates, as summarized in Table 1. The three functions are Grid Reliability Services, Market Services and Settlements, Metering and Client Relations (SMCR). Grid Reliability Services contain the core functions of the ISO including managing internal and interchange transmission flows, ensuring reliability and meeting regulatory requirements. There are six rates associated with recovering Grid Reliability costs: two demand charges (on peak MW usage during the month) and four energy charges (on MWhs of energy). Market Services includes scheduling, administration of energy and Ancillary Services markets, and congestion management (which would not continue under MRTU). There are six charges

associated with the continuing Market Services: three based on numbers of schedules submitted and three on MWhs of activity in markets. Finally, under SMCR, the ISO 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.

Function	Sub-Function	Name	Bill Determinant	Charge Type
Grid Reliability Services	Core Reliability Services	CRS-Demand (peak)	Monthly Non-Coincident Peak HE07 – HE 22	4501
		CRS-Demand (off-peak)	Monthly Non-Coincident Peak all other hours	4502
		CRS-Energy Export	MWhs of exports	4503
	CRS/ETS	CRS/ETS-NE – Mohave Energy Export	MWhs of Mohave exports to Nevada Power and SRP	4504
	Energy Transmission Services	ETS-Net Energy	MWhs of Metered Control Area Load	4505
		ETS-Uninstructed Deviations	MWhs of net uninstructed deviations	4506
Market Services	Forward Scheduling	FS	Count of hourly schedules	4511
		FS-Inter SC trades	Count of hourly trades	4512
		FS-PGAB Inter-SC trades	Count of hourly trades for PGAB	4513
	Congestion Management	CONG	MWhs of net Hour Ahead Final Interzonal flows	4522
	Market Usage	Ancillary Services	MWhs of purchases and sales of Ancillary Services (Day Ahead and Hour Ahead)	4534
		Instructed Energy	MWhs of Instructed Energy	4535
		Net Uninstructed Deviations	MWhs of net uninstructed deviations	4536
Settlements, Metering, and Client Relations	Settlements, Metering, and Client Relations	Monthly customer charge	4575	

### Need for changes in the GMC under MRTU

The current GMC rate structure is a result of a settlement reached with stakeholders regarding CAISO's 2004 GMC filing (ER04-115-000, et. al.) at the Federal Energy Regulatory Commission (FERC) in 2004 and extended through 2007 (ER06-1281-000). Because MRTU will bring changes in some aspects of the California ISO market design, it is necessary to update the existing cost allocation and rate structure. These changes include management of congestion through Locational Marginal Price (LMP) rather than the current zonal approach and the addition of a Forward Energy Market. These changes require modification of existing rate categories. Additionally, apart from MRTU changes, certain stakeholders have also asked the California ISO to consider an accommodation for charges related to uninstructed deviations for renewable resources in the Participating Intermittent Resource Program.

Another issue to be discussed with stakeholders is an extension of the 2004 GMC Settlement into 2008. Under the Settlement, the California ISO has not been required to make a rate filing since the fall of 2003. The Settlement was to expire on the earlier of the implementation of MRTU or December 31, 2006. When MRTU implementation was delayed into 2007, the California ISO and stakeholders agreed to an extension of the Settlement until the earlier of December 31, 2007 or MRTU implementation<sup>1</sup>. With an additional delay in MRTU implementation to January 31, 2008, agreement on a further extension of the Settlement is needed. If agreement cannot be reached on an extension, the California ISO must make a rate filing for the period prior MRTU implementation in 2008.

### Summary of Potential Charges under MRTU

With the potential for changes in GMC rate structure, the California ISO convened a stakeholder process to discuss various aspects of these changes. The objective of the stakeholder process was to reach agreement or near agreement on the formulae that underlie each individual GMC Charge Code or rate. The stakeholder process formally began in September 2006 and continued into December. The result of these discussions was agreement on the overall rate categories and the list of potential bill determinants for each service<sup>2</sup>. This agreement allowed the California ISO to begin development of the GMC configuration guides and design in SaMC this spring.

The agreement resulted in a GMC configuration of 15 Charge Codes, spanning the same set of ISO functions as is listed in Table 1. Of the 15 Charge Codes, 5 are unchanged, 7 are modified with new bill determinants, and 3 are entirely new (see Table 2 below). Two of the existing Charge Types, CT4504 (related to Mohave Energy Exports) and CT4522 (Congestion Management), will be retired. The three new Charges Codes<sup>3</sup> are:

- Energy Transmission Services – Injections, CC 4507. Will be assessed on generation and import MWhs. Generation and imports benefit from the ISO monitoring and management of transmission flows. Currently only load and exports are assessed Energy Transmission Services.
- Market Usage – Forward Energy, CC 4537. Will be assessed on 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, CC 4546. In support of renewables, the deviations of Participating Intermittent Resources can be assessed on their deviations netted over the month, rather than over the ten-minute interval as is currently done.

Last fall, stakeholders and the California ISO agreed that a detailed analysis of the ISO's cost structure was a necessary prerequisite for determining the final calculations underlying the GMC rates. This detailed analysis of ISO costs (cost of service study) examines the nature of expenditures to determine how expenditures should be allocated to each of the ISO's functions. Each cost center is surveyed to determine how its activities relate to the defined ISO functions. Capital expenditures also are evaluated in order to determine their relationship to these functions. Preliminary results will be presented to stakeholders in late May.

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<sup>1</sup> The documents for this project can be found on the California ISO website at: <http://www.caiso.com/17a7/17a7885b484d0.html>. The FERC Docket No. for this project is ER06-1281-000.

<sup>2</sup> Documents for the stakeholder process can be accessed on the California ISO website at: <http://www.caiso.com/1872/18728fb96b370.html>. On May 10, 2007, the California ISO issued a status report on the GMC under MRTU. It is located at: <http://www.caiso.com/1bda/1bdaeb2b61e10.pdf>.

<sup>3</sup> Though there was agreement on the Charge Codes, there was not agreement on the potential level of the charge. If there is a consensus, a possible result of the stakeholder process is a zero rate for some Charge Codes.

Table 2 GMC Rate Structure Under MRTU Function, Sub-Function, Name, Bill Determinant and Charge Code Number (Changes in bold)				
Function	Sub-Function	Name	Bill Determinant	Charge Code
Grid Reliability Services	Core Reliability Services	CRS-Demand (peak)	Monthly Non-Coincident Peak HE07 – HE 22	4501
		CRS-Demand (off-peak)	Monthly Non-Coincident Peak all other hours	4502
		CRS-Energy Export	MWhs of exports	4503
	Energy Transmission Services	ETS-Net Energy	MWhs of Metered Control Area Load	4505
		ETS-Uninstructed Deviations	<b>MWhs of net uninstructed deviations, UIE1 and UIE2 (exception for PIRP resources)</b>	4506
		<b>ETS-Injections</b>	<b>MWhs of import and generation</b>	<b>4507</b>
Market Services	Forward Scheduling	FS	Count of hourly schedules <b>(including RUC schedules)</b>	4511
		FS-Inter SC trades	Count of hourly trades <b>(including trades of IFM uplift obligations)</b>	4512
		FS-PGAB Inter-SC trades	Count of hourly trades for PGAB	4513
	Market Usage	Ancillary Services	Day Ahead and Hour Ahead Scheduling Process and <b>Real Time MWhs</b>	4534
		Instructed Energy	MWhs of IE, <b>no longer includes UIE1</b>	4535
		Net Uninstructed Deviations	<b>MWhs of net uninstructed deviations, UIE1 and UIE2 (exception for PIRP resources)</b>	4536
		<b>Forward Energy</b>	<b>MWhs of Energy purchases and sales in Forward Energy Market</b>	<b>4537</b>
	<b>Grid Reliability Services/Market Services</b>	<b>ETS/MU</b>	<b>Monthly netted deviations for PIRP resources</b>	<b>MWhs</b>
Settlements, Metering, and Client Relations		Settlements, Metering, and Client Relations	Monthly customer charge	4575

Customers are concerned about the overall impact of changes in their GMC bills whenever charges are made in the rate structure. To this end, the California ISO developed a bill impact modeling tool, which was first used in the development of the 2004 GMC rate structure. The bill impact analysis will use the cost of service to provide a baseline for development of different rate structure scenarios. The bill impact analysis will show the potential impact on each Scheduling Coordinator's GMC bill that results from the different scenarios. This 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 may be necessary to refine the rate structure to mitigate some of the adverse impacts. The bill analysis allows discussion to be focused on more discrete issues and has facilitated discussion in the past.

Stakeholder comments were considered in the development of the GMC configuration shown in Table 2. Some of these comments are summarized in Table 3. To the extent an issue is set for further discussion, it will be addressed in the project going forward.

**Table 3  
GMC under MRTU  
Stakeholder Issues and Comments**

Issue	Comments
A 65 percent discount on CRS and ETS for Mohave exports to Nevada Power and Salt River Project.	Accommodation reached in the 2004 Settlement for Mohave exports has been removed as Mohave is no longer operating
A separate charge for administration of CRR auction	Charge not to be implemented on startup due to lack of data and implementation difficulties. Data to be collected and analyzed for consideration of this charge in future revisions.
A 65 percent discount on Forward Scheduling – Inter SC trades for PGAB Path 15 Facilitator inter SC trades	PG&E and its customers requested retention of this charge pending the results of ongoing discussions.
Assessment of deviations netted during the month for PIRP resources.	SCE and PG&E support this accommodation for PIRP resources. Set for further discussion.
Elimination of Energy Transmission Services – Deviations charge	SCE and PG&E support retention of the charge. Set for further discussion.
Increase in Settlements, Metering and Client Relations charge to \$1,000 monthly from \$500.	SCE supports the increase in the charge. MID not opposed to concept. Set for further discussion.
Eliminate Congestion Management charge	Agreement on elimination, but not on allocation of related costs.
Accounting for Day Ahead Energy Market volumes	Created Market Usage – Forward Energy charge to be assessed to Energy purchases or sales from Day Ahead market. Should include all energy in bill determinant (CDWR-SWP). Some costs may be assigned or allocated to ETS-Injections (ISO response).
Recovery of some portion of forward market costs from withdrawals as well as injections	To the extent forward market costs are due to managing control area reliability, these costs can be assigned to Energy Transmission Services for recovery. (WPTF)
Recovery of costs to manage injections portion of control area flows	Created Energy Transmission Services – Injections to be assessed on imports and generation. CDWR-SWP supports assessing injections.
Retention of discounts for Forward Scheduling and Inter SC Trade rates.	Set for further discussion.
Retention of the separate off-peak CRS demand charge set at 66 percent of the peak CRS demand charge.	CDWR-SWP supports separate off-peak CRS demand charge. Level of differential should be studied further. Set for further discussion.
Retention of the 35 percent reduction in CRS revenue requirement funded by a corresponding increase in the ETS revenue requirement.	Set for further discussion.
Retention of the 20 percent allocation of the Energy Transmission Services revenue requirement to Energy Transmission Services - Deviations	Set for further discussion.
Ancillary Services market prices frequently clear at or near the GMC rate for AS. Will ISO consider waiving the AS charge when the market price is low?	No, however, as there are separate charge codes for Market Usage, differential pricing can be implemented. Set for further discussion.
When will configuration guides be released?	Draft configuration guides were posted on May 11.

## Decision Criteria, Scope and Challenges

Among the criteria considered in the stakeholder process for developing a rate structure are:

- 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 California ISO costs in a stable, low risk manner without excessive volatility; and,
- The stakeholder process and the California ISO consideration of the comments and proposals received in that process.

The issues within the scope of this portion of the project are the extension of the GMC Settlement into 2008, changes to the GMC rate design consistent with the market design changes in MRTU, the type of GMC rates, and modifications of the cost allocations consistent with the criteria above. Issues not in the scope of this project are the California ISO Budget and revenue requirement for 2008<sup>4</sup>, MRTU costs and elements of the MRTU market design (except the extent to which they affect rate structure). The 2008 budget process which commences in June will provide opportunities for stakeholder input on CAISO’s proposed 2008 spending.

In any project subject to the FERC deliberative process, there are challenges. It is possible that the California ISO and market participants will not reach agreement on the final allocation of costs or the extension of the GMC Settlement. It is also possible that parties may request accommodations in the GMC rate structure that other parties or the California ISO may not find acceptable. In either case, there is the potential for expensive and time-consuming litigation at the FERC. With respect to timing of the proposed filing, Management intends to package the MRTU GMC filing with other MRTU related filings scheduled for August in order to provide adequate time for the FERC deliberative process to reach conclusion if there are protests. As this is 180 days prior to the effective date of MRTU, this will require a waiver of FERC 120 day notice requirement<sup>5</sup>. The California ISO has obtained this waiver from the FERC in the past with stakeholder assent, but there is no guarantee that this will occur in this instance.

## Conclusion

Changes in the GMC rate structure will be necessary with the implementation of MRTU. In anticipation of these changes, a stakeholder process was convened last year. Despite challenges, the stakeholders and the California ISO agreed on a set of Charge Codes that allowed configuration and design in SaMC to proceed. Stakeholders also agreed that a cost of service study, which would result in an allocation of California ISO costs to each rate function, was necessary to provide information prior to attempting to reach a consensus on the calculations underlying each Charge Code. The cost of service study is nearing completion and will be provided to stakeholders. To facilitate discussion, alternative rate structure scenarios will be developed and bill impacts analyzed.

Management is optimistic at this time that this stakeholder process will result in a consensus and that the GMC rate structure can be filed in August with minimal opposition. (Settlement or consensus have been reached on the GMC rate structure (or changes to the rate structure) and the Budget since 2002.) Management anticipates bringing the GMC under MRTU rate structure to the Board for a decision at the July Board meeting.

<sup>4</sup> Though the actual revenue requirement is not within the scope of this project, the extension of the GMC Settlement will likely require the California ISO to agree to a level of the revenue requirement, which, if exceeded, would trigger a full rate filing.

<sup>5</sup> Section 205 of the Federal Power Act (18 C.F.R. 35.3) sets the notice requirements on rate filings. A rate filing cannot be submitted more than 120 days or less than 60 days prior to the effective date without a waiver of the requirement.