

California ISO

**2012 Grid Management Charge
Customer Bill Comparison Analysis**

December 2, 2010

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Executive Summary

The Customer Comparison Analysis is the next step in the process of designing the 2012 Grid Management Charge. Building upon on the development of billing determinants reported in the November 11, 2010 straw proposal and the cost of service study functionalization and cost allocation steps discussed in the October 8, 2010 Cost of Service discussion paper, this analysis uses the proposed new GMC design and applies it to the revenue requirements and participant activities for the period from June 2009 to May 2010 to develop estimated aggregate impacts of the new design on major customer types. The analysis follows the guiding principles and the framework for allocating ISO costs to the new GMC cost buckets, the specification of billing determinants based on customer activities (i.e., cost causation factors), the rate design produced by applying the billing determinants and some hypothetical, aggregated bill impacts. The October 8 discussion paper detailed the process the ISO followed to utilize its activity based costing system to allocate the costs of its activities into three main GMC cost categories or buckets (market services, system operations, and CRR services), and four transaction fees (bid segment fees for market bids and for CRR nominations and auction bids, inter SC trade fee, and SCID fee).

The November 11 straw proposal offers significant improvements to the current GMC structure by increasing the amount and the accuracy of direct cost allocations to buckets, reducing forecasting errors through rate simplification, reducing the number of charge codes, and simplifying the calculations of the charge codes. The ISO is proposing that the three GMC charge categories be allocated based on gross MW per hour (capacity and CRR holdings) and MWh (energy). The market services category includes awards of ancillary services, energy schedules, and dispatch instructions of generation, imports, load, and exports. The system operations category includes all flow (metered) quantities for generation, load, imports, and exports. The CRR category includes the total MW quantity of CRR holdings for each trading hour awarded through both the allocation process and auction.

In the November 11 straw proposal the ISO proposed to allocate the charges as follows to each user of the ISO's services. The market services charge will be applied to the scheduling coordinator's gross absolute value of awarded MWh of energy (cleared schedules and dispatch instructions) and MW of AS in the day-ahead and real time markets. The system operations charge will be applied to the scheduling coordinator's gross absolute value of actual MWh of real time energy flows. The CRR charge will be applied to each scheduling coordinator's total MW holdings of CRR that are applicable to each hour. The four administrative charges will be applied to each scheduling coordinator based on their use of the associated transactions.

The ISO will hold a stakeholder meeting on December 13, 2010 to discuss bill comparisons and potential impacts associated with the proposed 2012 GMC rate structure.

Guiding Policy and Ratemaking Principles

The ISO is using the following guiding principles to conduct its cost of service study and develop the framework for the new 2012 GMC structure:

- 1) **Cost Causation** – Costs will be properly allocated to the correct GMC buckets and charged to those who benefit from or utilize those services.
- 2) **Focus on use of ISO services, not market behavior** – The new GMC design should reflect its primary purpose as a vehicle for recovering the ISO's revenue requirements based on each user's use of the ISO's services, not as a tool for shaping incentives based on market or operating behavior. Incentives such as these are appropriately addressed through the design of the market structure and market rules. The ISO believes that this principle is fully consistent with SCE's comment on the October 8, 2010 discussion paper that: "there should always be a final check on GMC rates, and a continuous monitoring, to ensure that GMC rates are not unduly negatively affecting market outcomes." The ISO agrees that a properly designed GMC should seek to do no harm, i.e., should not create perverse behavioral incentives or negatively affect market outcomes. The point of this principle is simply

that the GMC design should not be used as a substitute for effective market rules to incent appropriate participant behavior and ensure efficient market outcomes, but should more narrowly provide a mechanism to recover ISO revenue requirements in a manner consistent with the other principles identified here.

- 3) **Transparency** – Costs and billing determinants will be clear, visible, and understandable to all market participants.
- 4) **Predictability** – Market participants will be able to determine in advance what their GMC costs will be depending on their activity.
- 5) **Forecastability** – The rates should utilize billing determinants that can be easily forecasted by both the ISO and market participants. This should result in fewer rate adjustments during the year.
- 6) **Flexibility** – The new GMC structure should easily accommodate future market enhancements without excessive complexity or disruption to the overall structure.
- 7) **Simplicity** – Simplify the current GMC structure to reduce the amount of varying bill determinants and the number of charge codes.

The steps included in conducting a cost of service study are:

- 1) Functionalization - The process by which various ISO activities are defined and sorted into service categories (functions and sub-functions) to reflect the different services provided by the ISO.
- 2) Cost Allocation - The process by which the costs of providing services are allocated to the service categories (functions and sub-functions).
- 3) Classification - The determination of billing determinants based on the customer cost causation factors.
- 4) Rate Design - The process for deriving rates that divides the revenue requirement for each service category by the total of the applicable billing determinants.
- 5) Bill Impacts Analysis - An evaluation of the impacts that the rate design will have on individual customer bills.

The ISO has completed the functionalization and cost allocation steps in accordance with these fundamental ratemaking principles and described the results in the October 8, 2010 discussion

paper. In the November 11, 2010 straw proposal, the ISO proposed a classification methodology (customer billing determinants) that can be used to allocate the costs in each service category. This paper presents a detailed rate design and bill comparison analysis. Additionally an appendix of billing determinants definitions was prepared and posted to the ISO's website at: <http://www.caiso.com/281a/281ac7f165ad0.html>

Rate Design

The October 8, 2010 discussion paper described the allocation of ISO costs to the three service categories in order to determine the revenue requirement for each category. The billing rate for each service category is then derived by dividing the revenue requirement for that service category by the total of that category's billing determinants. To develop examples and to calculate the bill comparison analysis the ISO used the 2010 GMC revenue requirement and, for the billing determinants, actual transactions data for the twelve month period from June 2009 through May 2010. The costs allocated to each of the three buckets are as follows:

2010 Revenue Requirement	Market Services	System Operations	CRR Services	Total
Percent	27%	69%	4%	100%
Amount	\$52,756,000	\$134,883,000	\$7,456,000	\$195,095,000

The actual GMC invoiced to customers for the twelve month period was \$195,110,642. To ensure comparability, the additional cost of \$15,642 (\$195,110,642 less \$195,095,000) will be added to the revenue requirement to make it equal to the actual GMC invoiced while preserving the percentage distribution shown above. The resulting cost are allocated in the following table:

GMC to recover	Market Services	System Operations	CRR Services	Total
2010 revenue requirement \$	\$52,756,000	\$134,883,000	\$7,456,000	\$195,095,000
2010 revenue requirement %	27%	69%	4%	100%
Excess GMC to allocate				\$15,642
Allocate excess to buckets	\$4,230	\$10,814	\$598	\$15,642
Revised GMC requirement	\$52,760,230	\$134,893,814	\$7,456,598	\$195,110,642

The next step is to calculate the fees and charges using the actual quantities of transactions for the twelve month period.

Fee or Charge	Transactions for period from Jun-09 to May-10	Rate per transaction or per month for SCID charge	Fee and charge revenue
Market bid segment fee	26,893,996	\$0.005	\$134,470
CRR auction bid fee	480,276	\$1.00	\$480,276
Inter-SC trade fee	3,854,538	\$1.00	\$3,854,538
SCID charge	177 scids	\$1,000	\$2,124,000

The fee and charge revenue is deducted from the revised GMC revenue requirement to which the billing determinants are applied to develop the net costs to be recovered through the rates for each service category.

Revised GMC requirement for Jun-09 to May-10	Market Services	System Operations	CRR Services	Total to Recover
Revised GMC requirement	\$52,760,230	\$134,893,814	\$7,456,598	\$195,110,642
Allocate fees and charges to buckets				
Market bid segment fee	(\$134,470)			(\$134,470)
CRR auction bid fee			(\$480,276)	(\$480,276)
Inter-SC trade fee	(\$3,854,538)			(\$3,854,538)
SCID charge	(\$2,124,000)			(\$2,124,000)
Costs of service to recover	\$46,647,222	\$134,893,814	\$6,976,322	\$188,517,358

The rates for each bucket are calculated by using the actual volumes for the twelve month period.

Service Category	Service category cost to recover	Transactions for period from Jun-09 to May-10	Transaction type	Service category rate
Market services	\$46,647,222	519,946,950	MW of awards	\$0.089715
System operations	\$134,893,814	475,167,832	MW of flows	\$0.283887
CRR services	\$6,976,322	591,726,863	MW of congestion	\$0.011790

Combining all the charges in a single table, the final rates to be applied to the volumes of each SC are as follows:

Service Category and Fees and Charge	Service category cost or revenue	Transactions Jun-09 to May-10	Transaction type	Service category or fee rate
Market services	\$46,647,222	519,946,950	MW of awards	\$0.089715
System operations	\$134,893,814	475,167,832	MW of flows	\$0.283887
CRR services	\$6,976,322	591,726,863	MW of congestion	\$0.011790
Market bid segment fee	\$134,470	26,893,996	# of bid segments	\$0.005
CRR auction bid fee	\$480,276	480,276	# of auction bids	\$1.00
Inter-SC trade fee	\$3,854,538	3,854,538	# of trades	\$1.00

SCID charge	\$2,124,000	177 scids	Per month	\$1,000
Total	\$195,110,642			

This design is also detailed in a worksheet in Exhibit 1 posted to the website at

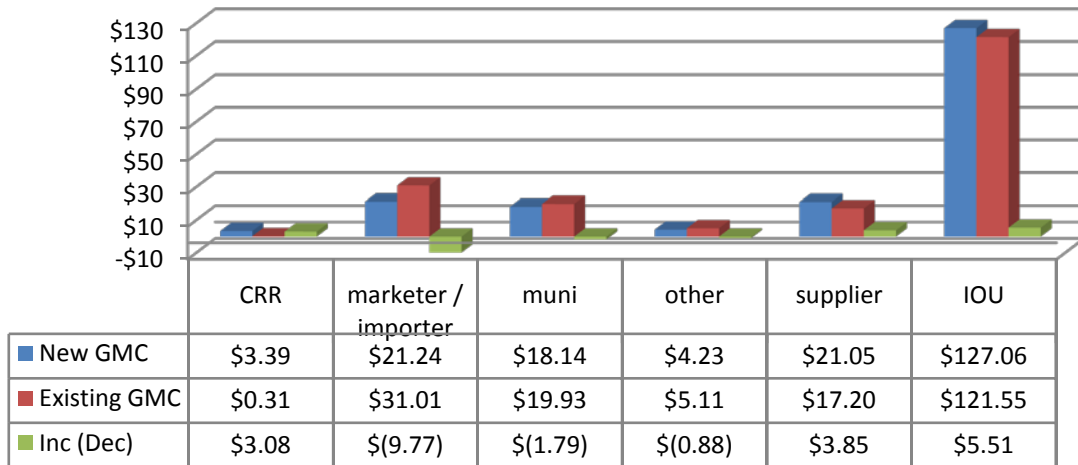
<http://www.caiso.com/281a/281ac7f165ad0.html>

Please note that no differentiation has been made with respect to TORs. TOR volumes are included in the above determinants. The ISO is considering alternative treatment for TORs within the proposed GMC structure. It will be the subject of a future meeting.

Bill Impact Process

The ISO will provide a confidential bill comparison for each SCID to the appropriate ISO participant, using data for the period from June 1, 2009 to May 31, 2010 as described above and comparing the existing against the proposed GMC rate design. To provide estimates of the impacts of the new structure, the ISO developed hypothetical billing rates using the 2010 budgeted revenue requirement amount and allocated those dollars to charge categories as described above. The billing determinants used to calculate the rates came from market data from the twelve month period. The ISO applied the rates for each category to each SCID's volumes using the billing determinants listed above to determine the costs the SC would have been charged if the proposed GMC structure had been in place. The following graph illustrates the overall comparison analysis by customer type:

Comparison of New GMC (Gross supply & demand for both Award & Flow) vs Existing GMC (\$ in millions)



Notes to Graph:

- The first column contains those participants for which CRRs make up 90% or more of their GMC charge. CRR charges are applied to customers in the other columns as well but the charges do not make up as significant percentage of their GMC liability.
- Supplier refers to those customers in the balancing authority that primarily supply generation but are not included in munis or IOUs.
- Others are those customers not fitting into one of the other categories. May be load serving entities but not IOUs and munis.

Next Steps

The stakeholder process for the 2012 GMC Cost of Service Study will continue with the following timeline:

- Early December – distribute historical GMC data and what if bill comparisons to individual SC's. SC's should submit the email address for their primary contact to the ISO at gmc@caiso.com
- December 13, 2010 – in person meeting at ISO
- January 20, 2010 – in person meeting at ISO (new headquarters building)
- Additional meetings will be scheduled as needed.