



# Memorandum

**To:** ISO Board of Governors

**From:** Ryan Seghesio, Chief Financial Officer

**Date:** July 19, 2017

**Re:** Briefing on grid management charge cost of service study results

*This memorandum does not require Board action.*

## EXECUTIVE SUMMARY

The ISO completed its scheduled tri-annual cost of service study<sup>1</sup> in accordance with Appendix F, Schedule 1 of the ISO tariff. The results of the study are used to update the percentage allocations used to determine the grid management charge (GMC) rates as summarized below:

Evolution of the GMC Rates						
Triannual Cost of Service Study's New GMC Percentages	X	Annual Revenue Requirement	/	Estimated GMC Volumes	=	GMC Rates

The GMC is the vehicle through which the ISO recovers its annual revenue requirement from the entities that use ISO services. Funding the annual revenue requirement ensures that the ISO recovers its administrative, operating and capital costs.

The updated cost of service study results indicate a shift of resources (time and dollars) from the system operations and congestion revenue rights (CRR) services cost categories to the market services cost category. The system operations and CRR services percentage allocations of the GMC will collectively decrease by 5% beginning with the 2018 GMC and the market services percentage will increase by 5%, as shown in the table on the following page:

<sup>1</sup> The 2016 Cost of Service Study can be found at [http://www.caiso.com/Documents/2016Cost\\_ServicesStudy\\_2018GMCUpdate.pdf](http://www.caiso.com/Documents/2016Cost_ServicesStudy_2018GMCUpdate.pdf).

<b>GMC</b>	<b>Old Percentages</b>	<b>New Percentages</b>	<b>Increase / (Decrease) in Percentages</b>
Market Services	27%	32%	5%
System Operations	70%	66%	-4%
CRR Services	3%	2%	-1%

This shift is primarily driven by the market changes brought on by FERC Order No. 764, which positions the ISO real time market to better support the participation of intermittent resources and additional market intervals. Another driver behind the shift in cost categories is the reduction of direct costs (primarily in the system operations category) due to process efficiencies implemented since the last cost of service study.

The updated cost of service study also amends the EIM percentage allocations which are used to determine the EIM administrative charges. EIM rates are determined by the real-time market and real-time dispatch portion of the market services activities and system operations activities.

<b>GMC</b>	<b>EIM Real Time Activity</b>	<b>Old Percentages</b>	<b>New Percentages</b>	<b>Increase / (Decrease) in Percentages</b>
Market Services	Real Time Market	61%	79%	19%
System Operations	Real Time Dispatch	45%	39%	-6%

The changes in the EIM percentage allocations are due to the same reasons affecting the GMC allocations. The implementation of the 15-minute market resulted in more market intervals, the enhancement of the real-time market desk, and ultimately a greater percentage of real-time market activities in the market services area. While process improvements led to cost savings in the real-time dispatch portion of system operations.

Finally, the cost of service study also amends the transmission ownership rights rate. Transmission ownership rights (TORs) represent transmission capacity on facilities that are located within the ISO balancing authority area that are either wholly or partially owned by an entity that is not a participating transmission owner. The TORs rate is determined by the system operations activities real-time operations, scheduling, and outage management.

Cost Category	2013 Study	2016 Study	Increase / (Decrease)
TOR Related Costs	\$ 44,121,880	\$ 61,961,200	\$ 17,839,320
TOR as a Percentage of Gross Volume	1.69%	1.00%	
TOR Costs to Collect	\$ 745,660	\$ 619,612	\$ (126,048)
TOR MWh	\$ 3,162,319	\$ 2,627,260	\$ (535,059)
TOR Fee per MWh	\$ 0.24	\$ 0.24	\$ -

Whereas the TORs related costs increased since the last study the rate will remain the same due to a decline in gross MWh.

The revised percentages for GMC and EIM, as well as the TORs rate, will become effective with the 2018 GMC and remain in effect until the next GMC update.

## BACKGROUND

The current GMC design was vetted through a comprehensive stakeholder process and approved by the ISO Board of Governors and FERC in 2011 to be effective on January 1, 2012. The structure contains three cost categories: market services, system operations and CRR services; and, percentages that are applied to the revenue requirement to determine the amount in the three cost categories upon which rates are set. The percentages are determined by a cost of service study that is based on the ISO's activity based costing structure that was fully implemented in 2010. The market services category is designed to recover costs the ISO incurs for running the markets. The system operations category is designed to recover costs the ISO incurs for reliably operating the grid in real time. The CRR services category recovers costs the ISO incurs for running the CRR markets.

In 2014, the Board approved minor amendments to the GMC design, including the requirement that the ISO conduct an updated cost of service study starting in 2017 and every three years thereafter. In conducting each cost of service study, the ISO recalculates the three service charge percentages and the rates for the fees and charges that constitute the GMC, EIM administrative charge, and TORs. As stated in the tariff, the ISO will submit tariff amendments to reflect any changes to the allocation percentages or level of fees and charges.

## COST OF SERVICE STUDY

The tri-annual cost of service study uses activity based costing to determine the percentages used to allocate the annual revenue requirement into the grid management charges (market services, system operations, and CRR services). 2016 data was used for the update and the hours associated with the activities are summarized below:

ABC Code	Level 1 ABC Activity	Number of Level 2 Activity Tasks	Number of Non-Administrative 2016 Hours Reported
<b>Direct</b>			
80001	Develop Infrastructure	9	85,174
80002	Develop Markets	9	61,237
80004	Manage Market & Reliability Data & Modeling	17	103,931
80005	Manage Market & Grid	11	203,020
80007	Manage Operations Support & Settlements	16	91,830
80010	Support Customers & Stakeholders	8	70,178
<b>Indirect</b>			
80003	Manage Human Capabilities	8	28,137
80008	Plan & Manage Business	16	63,648
80009	Support Business Services	46	448,587
<b>Totals</b>			
9		140	1,155,742

The cost of service study also tracks the shift in time and resources associated with the cost categories (also referred to as grid management charges) between studies.

## EIM ADMINISTRATIVE CHARGE

The western energy imbalance market relies on the ISO's existing real time portion of the market services activities and system operations activities. Real-time activities occur in market services for the real-time market and in system operations for real-time dispatch. Conceptually, energy imbalance market participants pay the same rate as existing customers, but only for their real-time market and real-time dispatch activities specifically related to the energy imbalance market.

To determine the EIM administrative charges in 2018, the ISO will first allocate the 2018 revenue requirement to the three GMC service categories using the new percentages as identified in this report, forecast volumes in these categories to determine the GMC rates, and then apply the new real-time cost proportions to the respective rates for market services and system operations. A draft of the 2018 revenue requirement and resulting GMC/EIM rates will be available publicly in October 2017 in preparation of the November 2017 stakeholder meeting in which stakeholder's will have any opportunity to provide comments on the revenue requirement. The final draft will be presented to the Board for decision in December 2017.

## TRANSMISSION OWNERSHIP RIGHTS

Transmission ownership rights (TORs) represent transmission capacity on facilities that are located within the ISO balancing authority area that are either wholly or partially owned by an entity that is not a participating transmission owner. Under the existing GMC, TORs are granted a discounted rate due to the limited ISO services they require and because they utilize ISO controlled grid facilities within the ISO balancing authority area.

The TORs rate is determined by the system operations activities real-time operations, scheduling, and outage management. The ISO provides support on an emergency basis for flows on TORs, in a manner similar to standby service. The ISO also provides check-outs with neighboring balancing authorities in order to schedule flows across boundaries, and provides for the scheduling and coordination of outages across the balancing authorities.

Whereas the TORs related costs increased since the last study the rate will remain \$0.24/MWh due to a decline in gross MWh.

## **POSITIONS OF THE PARTIES**

Numerous stakeholders participated in the May 24, 2017 stakeholder call to discuss the 2016 cost of service study results and impacts to the 2018 GMC, EIM, and TORs rates. There were no objections or concerns raised regarding the results.

## **CONCLUSION**

Management will file the necessary tariff amendment with FERC adjusting the relative percentage allocations in September 2017. The revised percentages for GMC and EIM, as well as the TORs rate, will become effective with the 2018 GMC and remain in effect until the next GMC update.