

**GENERAL SESSION MINUTES
BOARD OF GOVERNORS MEETING
March 21-22, 2018
ISO Headquarters
Folsom, California**

March 22, 2018

The ISO Board of Governors convened the general session meeting at approximately 10:30 a.m. and the presence of a quorum was established.

ATTENDANCE

The following members of the ISO Board of Governors were in attendance:

Dave Olsen, Chair
Angelina Galiteva, Vice Chair
Ash Bhagwat
Mark Ferron
Richard Maullin

The following members of the executive team were also present at times throughout the meeting: Steve Berberich, Keith Casey, Petar Ristanovic, Mark Rothleder, Eric Schmitt, Roger Collanton, Stacey Crowley, Ryan Seghesio and Jodi Ziemathis

GENERAL SESSION

The following agenda items were discussed in general session:

PUBLIC COMMENT

Mark Smith, on behalf of Calpine, provided an overview of the March 21 joint filing between Calpine, PG&E and the ISO to settle the reliability must-run cases.

DECISION ON GENERAL SESSION MINUTES

Governor Ferron moved for approval of the Board of Governors general session minutes for the February 15, 2018 meeting. The motion was seconded by Governor Galiteva and approved 5-0.

CEO REPORT

Steve Berberich, President and CEO, provided an overview of the following sections of his report: overall system conditions, reliability coordinator services, Powerex and Idaho Power EIM readiness, congestion revenue rights, and renewable energy production.

DECISION ON MARKET SURVEILLANCE COMMITTEE MEMBER REAPPOINTMENT

Mr. Berberich next informed the Board that Dr. James Bushnell has been a member of the Market Surveillance Committee since 2002, with his current term expiring on March 31. He described how Dr. Bushnell has provided invaluable expertise and advice to the Board, ISO Management and staff on numerous issues relating to the operation of the ISO market. Mr. Berberich requested that the Board reappoint Dr. Bushnell for a three-year term to end March 31, 2021. Brief discussion followed and the Board noted its appreciation for the work of the Market Surveillance Committee.

Motion

Governor Ferron:

Moved, that the ISO Board of Governors reappoint Dr. James Bushnell to the Market Surveillance Committee, an advisory committee to the ISO Board of Governors, for a three-year term to end March 31, 2021; and

Moved, that the Chief Executive Officer is authorized and directed to enter into an appropriate Consulting Agreement with Dr. James Bushnell to compensate him for his participation on the Market Surveillance Committee.

The motion was seconded by Governor Bhagwat and approved 5-0.

EIM GOVERNING BODY CHAIR REPORT

Doug Howe, Chair of the EIM Governing Body, provided highlights of the EIM Governing Body's meeting held on March 8 in Los Angeles, California. Mr. Howe provided an overview of recent outreach activities by members of the EIM Governing Body, including outreach to Southern California Edison and Los Angeles Department of Water and Power. Mr. Howe noted he would be providing comments later in the meeting on the EIM Governing Body's advisory opinion on the ISO's commitment costs and default energy bid enhancements proposal. Brief discussion followed regarding Mr. Howe's resignation from the EIM Governing Body and the Board noted its appreciation for his service and leadership on the Governing Body.

DECISION TO MODIFY EIM GOVERNING BODY COMPENSATION

Greg Fisher, Senior Counsel, provided an overview of Management's recommendation to increase the overall compensation for EIM Governing Body members. Mr. Fisher stated that a recent compensation survey reflected that the EIM Governing Body's current compensation was positioned below the 25th percentile of the market rate. Mr. Fisher provided an overview of Management's recommendation, including increasing the EIM Governing Body's annual retainer from \$20,000 to \$40,000, and to increase in-person meeting preparation and participation fees from \$750 to \$1,000. Brief discussion followed and the Board noted the importance of the EIM Nominating Committee being able to find candidates and retain members who were financially able to serve as a result of the extensive independence screening process.

There was no public comment.

Motion

Governor Galiteva:

Moved, that in accordance with Article IV, Section 6 of the bylaws, the ISO Board of Governors hereby modifies the compensation to EIM Governing Body members for their service to the EIM Governing Body, effective July 1, 2018 as follows:

- ***The standard annual retainer paid to a Governing Body member shall be \$40,000, paid in accrued quarterly installments, commencing with payment for the accrued quarterly installment for the 3rd quarter of 2018;***
- ***A fee of \$1,000 shall be paid for each day of participation at a noticed in-person Governing Body meeting, and a fee of \$500 shall be paid for each day of participation in a noticed teleconference Governing Body meeting;***
- ***A fee of \$1,000 for each meeting day shall be paid for time spent preparing for a noticed in-person Governing Body meeting, and a fee of \$500 for each meeting day shall be paid for time spent preparing for a noticed teleconference Governing Body meeting;***
- ***A fee of \$1,000 shall be paid to the Chair (or Chair's designee) for each day of participation at a noticed in-person Board of Governors meeting, and a fee of \$500 shall be paid for each day of participation in a noticed teleconference Board of Governors meeting;***
- ***A fee of \$1,000 for each meeting day shall be paid to the Chair (or Chair's designee) for time spent preparing for a noticed in-person Board of Governors meeting, and a fee of \$500 for each meeting day shall be paid for time spent preparing for a noticed teleconference Board of Governors meeting;***
- ***A fee of \$1,000 shall be paid for each day of in-person participation at ISO-***

sponsored stakeholder events where the Chief Executive Officer or Chair of the Board of Governors specifically requests the Governing Body member's attendance;

- ***A fee of \$1,000 shall be paid to new Governing Body members for each day of participation in the ISO's Governing Body member orientation process;***
- ***A fee of \$1,000 shall be paid to new Governing Body members for time spent preparing for each day of participation in the ISO's Governing Body member orientation process;***
- ***Reasonable expenses associated with in-person or teleconference meetings shall be reimbursed;***
- ***EIM Governing Body members who attend meetings or events as representatives of the EIM Governing Body, including ISO/RTO Council meetings and other electric utility or power industry meetings, at the request of the Chair of the EIM Governing Body or ISO Management in consultation with the Chair, are not eligible for compensation but shall be eligible for reimbursement of reasonable expenses, as deemed appropriate and approved by the Chair of the EIM Governing Body;***
- ***Governing Body members shall be eligible for conference fees and reasonable expenses associated with seminars, training and conferences related to corporate governance or best practices for Governing Boards, deemed appropriate and approved by the Chair of the EIM Governing Body; and***
- ***Reimbursements for reasonable expenses, as set forth above, shall be in compliance with the ISO Travel Policy for Governors.***

The motion was seconded by Governor Ferron and approved 5-0.

DECISION ON COMMITMENT COSTS AND DEFAULT ENERGY BID ENHANCEMENTS PROPOSAL

Roger Collanton, Vice President, General Counsel and Chief Compliance Officer, acknowledged public comment letters received from the following: Portland General Electric Company, Environmental Defense Fund, NV Energy and Powerex.

Keith Casey, Vice President – Market and Infrastructure Development, provided introductory comments regarding Management's proposal and noted the proposal went through an extensive stakeholder process. Dr. Casey informed the Board that concerns regarding the proposed local market power mitigation design remained among some stakeholders as well as the Department of Market Monitoring. He emphasized Management's commitment to thoroughly test the design throughout the implementation process. Dr. Casey also informed the Board that Management recently modified the proposal regarding the circuit breaker bid cap, and noted that Management will continue to monitor these new rules after their activation.

Brad Cooper, Manager – Market Design Policy, provided an overview of Management’s commitment costs and default energy bid enhancements proposal. Mr. Cooper provided a background overview and stated the current commitment cost bidding design prevented suppliers from accurately reflecting commitment costs. He described how the proposal would enhance suppliers’ ability to accurately reflect commitment costs. Mr. Cooper reviewed a diagram that depicted how the commitment costs local market power mitigation test would run in every market commitment process for every interval. He described how the proposal phases in bid caps for commitment cost bidding flexibility to ensure local market power mitigation functions properly. Mr. Cooper stated the proposal would allow suppliers to seek adjustments to their reference levels based on changes in documented costs. He provided an overview of the reference level adjustment process and described how the proposal was in compliance with FERC Order No. 831. Mr. Cooper provided an overview of the stakeholder process and noted stakeholders were divided on the balance between allowing suppliers to accurately reflect costs versus protecting against market power. He concluded his presentation by providing an overview of the benefits of the proposal.

EIM Governing Body advisory input

Doug Howe, Chair of the EIM Governing Body, provided comments and informed the Board that the EIM Governing Body endorsed Management’s proposal, under the Governing Body’s advisory authority, with the condition that ISO staff brief the EIM Governing Body and the Board of Governors at the conclusion of the twelve month pilot period and prior to the automatic increase that would take place at the eighteen-month mark. Mr. Howe provided further comments regarding the importance of Management being able to test the design in real time. Dr. Casey committed to providing the follow-up briefing and noted the motion had been modified recently to reflect that commitment.

Public comment

Partha Malvadkar, on behalf of Pacific Gas and Electric, provided comments opposing Management’s proposal and noted support for the proposal recommended by the Department of Market Monitoring. Mr. Malvadkar also expressed support for the EIM Governing Body’s request for a follow-up briefing at the conclusion of the twelve-month pilot period.

Ellen Wolfe, on behalf of the Western Power Trading Forum, provided comments in support of Management’s proposal and noted appreciation to ISO staff on the extensive stakeholder process.

Brian Theaker, on behalf of NRG Energy, provided generally supportive comments on Management’s proposal as opposed to the recommendation of DMM, but noted NRG Energy does not support Management’s proposed commitment cost bid cap.

Department of Market Monitoring

Eric Hildebrandt, Executive Director of Market Monitoring, provided highlights of the written comments DMM provided to the Board in opposition to the ISO's proposal and stated that while progress has been made on the ISO's proposal, gaps remained. Dr. Hildebrandt described how DMM continues to recommend that the ISO adopt a more dynamic approach, which would allow Management's proposed reasonableness thresholds to be adjusted by the ISO based on gas market trade data available at the start of each operating day. He described how the approach for determining reasonableness thresholds proposed by DMM would provide greater market efficiency, reliability and mitigation.

Market Surveillance Committee

Dr. James Bushnell, member of the Market Surveillance Committee, provided highlights of the Market Surveillance Committee opinion titled "Opinion on Commitment Costs and Default Energy Bid Enhancements," and noted the importance of moving forward with the proposal at this time. Dr. Bushnell stated that overall, the MSC supports Management's proposal to transition to commitment cost reference levels that can be based on negotiated values or supplier updated cost information, consistent with the changes that have been introduced in the overall market power mitigation design of other ISOs over the past 5-7 years. He stated the MSC also continues to support the efforts by the ISO and DMM to base offer price mitigation on updated gas price information where this is available and sufficiently reliable.

Motion

Governor Ferron:

Moved, that the ISO Board of Governors approves the proposal to implement the commitment costs and default energy bid enhancements described in the memorandum dated March 14, 2018; with the addition of Management's commitment to provide to both the ISO Board of Governors and the EIM Governing Body an update and assessment of the market following the first 12 months of implementation; and

Moved, that the ISO Board of Governors authorizes Management to make all necessary and appropriate filings with the Federal Energy Regulatory Commission to implement the commitment costs and default energy bid enhancements described in the memorandum dated March 14, 2018, including any filings that implement the overarching initiative policy but contain discrete revisions to incorporate Federal Energy Regulatory Commission guidance in any initial ruling on the proposed tariff amendment.

The motion was seconded by Governor Maullin and approved 5-0.

AUDIT COMMITTEE UPDATE

Governor Ferron provided an overview of the Audit Committee general session meeting held earlier in the day and requested that the Board accept the code of conduct certification process report as recommended by the Committee.

Motion

Governor Galiteva:

Moved, that the ISO Board of Governors, as recommended by the Audit Committee, accepts the Code of Conduct Certification Process Report issued on December 22, 2017 by PricewaterhouseCoopers LLP for the testing of the ISO's code of conduct certification procedures for 2017.

The motion was seconded by Governor Bhagwat and approved 5-0.

RECESSED

There being additional general session items to discuss, the session was recessed at approximately 12:00 p.m.

March 22, 2018

RECONVENED

The ISO Board of Governors reconvened the general session meeting at approximately 12:45 p.m. and the presence of a quorum was established.

ATTENDANCE

The following members of the ISO Board of Governors were in attendance:

Dave Olsen, Chair
Angelina Galiteva, Vice Chair
Ash Bhagwat
Mark Ferron
Richard Maullin

The following members of the executive team were also present at times throughout the meeting: Steve Berberich, Keith Casey, Petar Ristanovic, Mark Rothleder, Eric Schmitt, Roger Collanton, Stacey Crowley, Ryan Seghesio and Jodi Ziemathis

GENERAL SESSION

The following agenda items were discussed in general session:

DECISION ON CONGESTION REVENUE RIGHTS AUCTION EFFICIENCY PROPOSAL

Roger Collanton, Vice President, General Counsel and Chief Compliance Officer, acknowledged public comment letters received from the following: Valley Electric Association, Inc., Powerex, Southern California Edison (with additional joint signatories), Calpine Energy Solutions, Velocity American Energy, Load Serving Entities Auction Supporters, Amber Power and DC Energy.

Keith Casey, Vice President – Market and Infrastructure Development, provided introductory remarks and described why the proposed enhancements were an important first step, and noted that additional enhancements were on track for Board decision on June 21 as well as later this fall. Dr. Casey noted the importance of the need to address the congestion revenue rights auction shortfall in a thoughtful and timely manner in order to address concerns from all market participants.

Greg Cook, Director – Market and Infrastructure Policy, provided an overview of Management's congestion revenue rights auction efficiency proposal and described how congestion revenue rights are a fundamental element of competitive wholesale energy markets. Mr. Cook stated that all ISOs/RTOs have a mechanism that allows all market participants to hedge congestion cost risk. He described how sustained auction payment deficiencies signaled potential flaws in the auction design. Mr. Cook stated that Management conducted an extensive analysis to understand drivers of auction inefficiency resulting in a multi-tracked initiative to address auction efficiency issues. He provided an overview of the following two near-term proposed enhancements: (1) limit the allowable source and sink pairs in the auction to correspond to supply delivery, and (2) require planned outages to be submitted prior to the annual allocation and auction process.

Mr. Cook explained that allowing congestion revenue rights sourcing and sinking at non-supply delivery locations was a major driver of auction revenue shortfall. He provided an overview of the stakeholder process and noted that stakeholders were divided on the proposal to limit the allowable source and sink pair in the auction but that most stakeholders supported the earlier outage reporting requirement. Mr. Cook provided an overview of next steps and stated that Management is pursuing further enhancements for the 2019 auction process to be brought to the Board in early summer. Brief discussion followed.

Public comment

Jeffrey Nelson, on behalf of Southern California Edison, provided comments on Management's proposal and provided an overview of the written comments submitted to the Board, noting support for the recommendation of the Department of Market Monitoring.

Brief discussion followed and Mr. Nelson noted it was important to address the current structural issues with the auction prior to expansion of the day ahead market.

Ken Kohtz, on behalf of Silicon Valley Power, provided comments on Management's proposal and provided an overview of the written comments submitted to the Board as a joint signatory with Southern California Edison.

Tony Braun, on behalf of California Municipal Utilities Association, provided comments on Management's proposal and provided an overview of the written comments submitted to the Board as a joint signatory with Southern California Edison. Mr. Braun noted the importance of sending the right message to neighboring states in the west.

Diana Lee, on behalf of Office of Ratepayer Advocates, provided comments on Management's proposal. She noted support for these interim solutions, but noted a longer-term solution like the recommendation proposed by Southern California Edison and the Department of Market Monitoring was needed.

Partha Malvadkar, on behalf of Pacific Gas and Electric Company, provided comments on Management's proposal. He noted support for the interim solutions, but provided further comments concurring with the views of Southern California Edison and others and noted support for the alternate recommendation for a longer-term solution.

Kallie Wells, on behalf of load serving entities auction supporters, provided generally supportive comments on Management's proposal, and provided highlights of the written comments provided to the Board. Ms. Wells noted concerns remain regarding the modeling and outage reporting element of the proposal. Ms. Wells stated they opposed the alternative recommendation by Southern California Edison and the Department of Market Monitoring.

Sue Mara, on behalf of Alliance for Retail Energy Markets, provided comments on Management's proposal and requested the Board reject the proposal. Ms. Mara noted they strongly oppose the alternative recommendation by Southern California Edison and the Department of Market Monitoring.

Ellen Wolfe, on behalf of Western Power Trading Forum, provided generally supportive comments on Management's proposal and noted appreciation to the ISO for the extensive stakeholder process. Ms. Wolfe noted that concerns remain regarding limited access to congestion revenue rights in the auction.

Mark Smith, on behalf of Calpine, commented in support of Management's proposal and provided an overview Calpine's written comments to the Board. Mr. Smith noted the importance of addressing issues with the auction incrementally.

Brian Theaker, on behalf of NRG Energy, provided generally supportive comments on Management's proposal. Mr. Theaker noted that concerns remain regarding some

elements of the proposal concerning bid pairs. He noted they oppose the alternative recommendation by Southern California Edison and the Department of Market Monitoring.

Seth Cochran, on behalf of DC Energy, provided comments on Management's proposal and provided highlights of the written comments provided to the Board. Mr. Cochran noted the importance of incremental implementation and continued review and assessment at each phase.

Dr. Casey provided responsive comments and agreed that the current congestion revenue rights auction situation must change, and that it was critical to ensure the right regionalism messaging was in place. He discussed the importance of allowing continued access to congestion revenue rights at this time. He noted the importance of taking an incremental approach and stated that Management would continue to explore the alternative recommendation by Southern California Edison and the Department of Market Monitoring as part of the ongoing stakeholder process.

Department of Market Monitoring

Eric Hildebrandt, Executive Director of Market Monitoring, provided highlights of the written comments the Department of Market Monitoring provided to the Board in opposition to the ISO's proposal. Mr. Hildebrandt described why the Department of Market Monitoring recommended that the Board direct the ISO to develop an auction design based on willing buyers and sellers that addresses the fundamental auction design flaws, such as the proposal by Southern California Edison, as soon as possible. He described how the approach proposed by SCE was less complex to implement than the changes proposed by Management, and directly addressed the flaw in the congestion revenue rights auction design.

Market Surveillance Committee

Dr. James Bushnell, member of the Market Surveillance Committee, provided highlights of the Market Surveillance Committee opinion titled "Opinion on Congestion Revenue Rights Auction Efficiency." Dr. Bushnell stated the Market Surveillance Committee supported the ISO's proposal, but anticipated that further changes would be necessary to either supplement or supplant those proposed in the ISO's proposal. Dr. Bushnell recommended that several analyses be undertaken as part of the Track 2 process that could quantify the impact of these and other potential changes. Brief discussion followed and the Board requested that Management continue to evaluate whether the market needs a congestion revenue rights auction.

Motion

Governor Olsen:

Moved, that the ISO Board of Governors approves the proposal to implement the congestion revenue rights auction efficiency proposal described in the memorandum dated March 14, 2018; and

Moved, that the ISO Board of Governors authorizes Management to make all necessary and appropriate filings with the Federal Energy Regulatory Commission to implement the congestion revenue rights auction efficiency proposal described in the memorandum dated March 14, 2018, including any filings that implement the overarching initiative policy but contain discrete revisions to incorporate Federal Energy Regulatory Commission guidance in any initial ruling on the proposed tariff amendment.

The motion was seconded by Governor Galiteva and approved 5-0.

DECISION ON ISO 2017-2018 TRANSMISSION PLAN

Roger Collanton, Vice President, General Counsel and Chief Compliance Officer, acknowledged public comment letters received from the following: Alameda Municipal Power, Sierra Club and LS Power.

Neil Millar, Executive Director – Infrastructure Development, provided an overview of the proposed 2017-18 transmission plan. Mr. Millar explained that Board approval of the plan meant Board approval of the plan's determinations and recommendations. He next provided an overview of the transmission planning process. Mr. Millar next provided an overview of the 13 new reliability projects recommended for approval in the 2017-18 transmission plan. He also informed the Board that 18 previously approved local PG&E projects were no longer required, driven largely by changes to load forecast. He informed the Board that no policy-driven projects were recommended, but that four economic-driven projects were recommended for approval. He next provided an overview of other key findings of the transmission planning process. Mr. Millar reviewed a graph that projected the regional high-voltage transmission access charge. He next provided an overview of special study efforts conducted in 2017, and provided an overview of the feedback received during the stakeholder process. Brief discussion followed and Mr. Millar confirmed that no policy-driven projects had been cancelled or re-scoped as part of the planning process.

Public comment

Jim Caldwell, on behalf of CEERT, provided supportive comments, and requested that the Board adopt the proposed transmission plan and further commented on recommended next steps, including extending outreach to stakeholders on future transmission planning study processes.

Sandeep Arora, on behalf of LS Power, noted appreciation to the ISO's transmission planning staff. Mr. Arora provided highlights of LS Power's written comments to the Board regarding recommended improvements to the next planning process cycle. Brief discussion followed regarding congestion scheduling rights.

Brian Theaker, on behalf of NRG Energy, provided background comments on the Moorpark 230 kV circuit reliability-driven transmission project and raised concerns with the overall evolution of the ISO's planning for the Moorpark area, and the approval of the Moorpark-Pardee 4th circuit. Mr. Theaker noted the importance of the Puente project, in light of the impact recent fires, had to the transmission corridor.

Nico Procos, on behalf of Alameda Municipal Power, provided highlights of Alameda Municipal Power's written comments to the Board, and requested that the Board defer approval of the Oakland Clean Energy Initiative until after Alameda Municipal Power's concerns have been addressed.

Dave Gabbard and Roy Kuga, on behalf of Pacific Gas and Electric Company, provided comments in support of the draft transmission plan and requested the Board adopt the plan. Mr. Kuga provided additional comments regarding the Oakland Clean Energy Initiative. Brief discussion followed and Mr. Berberich noted his appreciation to PG&E and that he looked forward to continued collaboration on these matters.

Elizabeth Kirkley, on behalf of the City of Lodi, provided supportive comments regarding the Lockeford-Lodi Area development project, and discussed clarifications that were necessary on the published project diagram regarding load. Mr. Millar provided responsive comments and committed to working with Ms. Kirkley to ensure any remaining concerns are addressed.

Motion

Governor Ferron:

Moved, that the ISO Board of Governors approves the ISO 2017-2018 transmission plan attached to the memorandum dated March 14, 2018.

The motion was seconded by Governor Olsen and approved 5-0.

BRIEFING ON RENEWABLES AND RECENT GRID OPERATIONS

Clyde Loutan, Principle – Renewable Energy Integration, provided the Board a briefing on renewables and recent grid operations. Mr. Loutan provided a sampling of four operationally notable days that had high renewables production. He reviewed a graph that provided a comparison of load served by different combinations of resources. Mr.

Loutan provided an overview of a graph that reflected how ISO greenhouse gas emissions have been reduced by 23% since 2014. He informed the Board that the ISO's peak load of 50,116 MW was reached on Friday, September 1, 2017 at 15:58:24. Mr. Loutan described how actual net load and 3-hour ramps were about four years ahead of the ISO's original estimate, primarily due to under-forecasting rooftop solar PV installation. He described how the increasing trend of renewable curtailment varied with seasonal and hydro conditions. Mr. Loutan concluded his presentation by reviewing a summary of observations and noted that load reliability served by renewable resources continues to grow. Brief discussion followed.

INFORMATIONAL REPORTS

There were no comments or questions on the following informational reports: regulatory report, state, regional and federal affairs update, business practice manual change management report, Market Surveillance Committee update, master stakeholder engagement and release plans, market performance report, quarterly financial report, investment performance report, and the Transmission Maintenance Coordination Committee update.

ADJOURNED

There being no additional general session matters to discuss, the session was adjourned at approximately 3:30 p.m.