California Independent
System Operator Corporation

Memorandum

To: ISO Board of Governors

From: Ryan Seghesio, Chief Financial Officer and Treasurer

Date: May 11, 2011

Re: **Decision on FERC Order 741 – Credit Reforms in Organized Wholesale Electric Markets**

This memorandum requires Board action.

EXECUTIVE SUMMARY

The Federal Energy Regulatory Commission's Order 741 – Credit Reforms in Organized Wholesale Electric Markets, requires all Independent System Operators and Regional Transmission Operators to adopt certain market clearing and credit reforms that are designed to protect organized wholesale electric markets from default by a market participant.

The Commission has long been actively interested in the credit practices of the wholesale electric markets. Over time, ISOs and RTOs have developed their own individual credit practices through their own tariff revisions crafted through their stakeholder processes. This evolutionary process has led to varying credit practices among the organized markets. Because the activity of market participants is not confined to any one region or market and because the credit rules differ among markets, a default in one market could weaken that participant and have ripple effects in another market. In this way, the credit practices in all ISOs and RTOs may be only as strong as the weakest credit practice. Moreover, rapid market changes can quickly escalate the costs of the transmission and sale of electric energy.

For these reasons, and in light of recent experiences in both the broader economy and the organized wholesale electric markets, the Commission revisited the risk and credit procedures pertaining to the organized wholesale markets under its jurisdiction and, after issuing a Notice of Proposed Rulemaking and soliciting stakeholder comments, issued Order 741. One of the provisions of the order reduces the duration of the settlement period for which market participants have outstanding obligations. The shorter settlement period will reduce the amount of outstanding liabilities and will lower the cost of credit by reducing the amount of collateral necessary to back the outstanding

liabilities. In addition, the order places a cap on the amount of unsecured credit an ISO can grant a market participant, including corporate families, and places limitations on how unsecured credit can be used in the market. The order requires all ISOs and RTOs to submit tariff language that complies with these requirements by June 30, 2011 with an effective date of October 1, 2011.

Of the eight rules contained in Order 741, five were in the form of a directive and do not require Board action. Of the remaining three rules, one involving clarifying the status of the ISO as a party to market transactions is still under development and will be presented to the Board at a later time. This rule has a separate compliance filing deadline of September 30, 2011 with an effective date of January 1, 2012. The Commission requested stakeholder input on the remaining two rules – establishing minimum criteria for market participation and clarifying the circumstances for invoking a "material adverse change."

After conducting a stakeholder process, we propose minimum participation requirements that include an annual certification. This means that a market participant employs a comprehensive risk management framework, has operating procedures and the technical expertise to respond to ISO communications such as invoices and collateral requests, and meets certain minimum capitalization requirements. In addition, Management proposes to expand the ISO's existing material adverse change provisions to include certain forward-looking and other enhancements that will give the ISO the ability to reduce or terminate a market participant's unsecured credit limit in the event of a material adverse change to the market participant's financial condition. Management believes both of these policy enhancements will provide the ISO additional safeguards that should, consistent with Order 741, mitigate the risk and consequences of a payment default.

> ***Moved, that the ISO Board of Governors approves the proposed credit policy enhancement establishing minimum criteria for participation in the ISO, as described in the memorandum dated May 11, 2011; and***
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> ***Moved, that the ISO Board of Governors approves the proposed credit policy enhancement allowing the ISO to reduce or terminate a market participant's unsecured credit limit due to a material adverse change in the market participant's financial condition, as described in the memorandum dated May 11, 2011; and***
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> ***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 proposed tariff change.***

BACKGROUND

On October 21, 2010, FERC issued order 741 – *Final Rule Regarding Credit Reforms in Organized Wholesale Electric Markets* (http://www.ferc.gov/whats-new/comm-meet/2010/102110/E-3.pdf), as modified on rehearing, which requires each ISO and RTO to:

1) Shorten both the billing period and the period for payment to no more than seven days each;
2) Reduce the allocation of unsecured credit to no more than $50 million per market participant and corporate families;
3) Eliminate unsecured credit in all financial transmission rights or equivalent markets, including the California ISO's congestion revenue rights markets;
4) Clarify the ISO's status as a party to each transaction so as to eliminate any ambiguity or question as to its ability to net and manage defaults through the offset of market obligations;
5) Establish minimum criteria for market participation;
6) Clarify the circumstances for invoking a "material adverse change" under a tariff and demanding additional collateral from market participants;
7) Establish a two-day grace period for "curing" collateral calls; and
8) Apply the directives to all market participants except where specific exemptions are justified.

MINIMUM PARTICIPATION REQUIREMENTS

By requiring ISOs and RTOs to establish minimum eligibility requirements for participating in an organized wholesale electric market, the Commission recognizes the need to balance reducing unnecessary barriers to entry with protecting markets from risks posed by under-capitalized participants without adequate risk management procedures in place. The ISOs and RTOs collaborated in developing a framework, consistent with Order 741, that each ISO and RTO took to their respective stakeholders to ensure that each proposal met each market's unique requirements.

FERC suggested that minimum standards might address adequate capitalization, the ability to respond to ISO and RTO direction and expertise in risk management. To that end, the California ISO proposed the following minimum requirements to participate in the ISO market which, except as noted, is largely consistent with the approaches taken by the other ISOs and RTOs:

Requirement	ISO Proposed Credit Policy Enhancement	Alignment with Other ISOs / RTOs
Adequate Capitalization	A new participant must demonstrate sufficient financial ability to participate in the market by having $1 million of tangible net worth *or* $10 million of total assets *or* post $500,000 of a secured form of collateral that cannot be used for any other market activity. Market participants that are subject to a posting requirement, with at least six months of history with the ISO, may have their posting requirement reduced to $100,000 if their estimated liabilities during the preceding six months do not exceed $100,000. The ISO will conduct reviews on six month intervals, upon publication of new corporate financials or upon significant changes in a market participant's trading behavior. Although posted amounts cannot be used to satisfy an invoice or a collateral request, posted amounts are available to offset a payment default.	The $1 million tangible net worth and $10 million total assets are the same. Some variation exists with the posting amounts. The other ISOs and RTOs have largely adopted pre-defined posting amounts based on how an entity participants in the market (*e.g.*, $500,000 for congestion markets and $200,000 for energy and virtual markets) without the ability to adjust for entities with historically low levels of market obligations. The ISO's proposal allows for a posting requirement of $100,000 or $500,000 based on a market participant's level of activity in the market.
Ability to respond to ISO direction	Annual market participant officer attestation that the company has appropriate operating procedures and technical abilities to promptly and effectively respond to all	Largely the same

	ISO communications and direction (*e.g.*, invoices and collateral requests).	
Expertise in risk management	Annual market participant officer attestation that the company has written policies, procedures and controls, approved by the company's governing body, which provides an appropriate, comprehensive risk management framework that clearly identifies the range of risks that the company will be exposed to by participating in the ISO market. In addition, the attestation would include a statement that the market participant has satisfied congestion revenue rights training requirements as currently defined in the tariff.	With the exception of the training requirement, the approach is largely the same.

Stakeholders were largely in favor of the ISO's proposed minimum participation requirements. One stakeholder proposed setting higher capitalization requirements. However, Management feels it struck a proper balance by setting an alternative posting requirement of $100,000 or $500,000. Stakeholders subject to a posting requirement will have that requirement set in a way that is more in line with their market obligations and their individual risk to the market. Management's proposal has the added safety feature built in that would allow the ISO to adjust a market participant's posting requirement to the higher limit in the event that the market participant's estimated obligations unexpectedly increased over the $100,000 threshold.

Late in the stakeholder process, some stakeholders expressed concerns about this policy change being a barrier to entry. In addition, those stakeholders speculated that a loss of certain market participants would have an impact on market liquidity and would have potentially negative economic consequences for certain market participant's share of the ISO's grid management charge or market participants' allocated percentage of a payment default. While the Commission recognized that this policy could create a barrier to entry for some entities, the Commission felt it was necessary to reduce the risk of an under-capitalized entity disrupting the market.

The design of minimum participation requirements was intended to recognize that some market participants were truly small and that it was just and reasonable that their posting requirement should be reduced to be commensurate with their risk to the market. Setting the minimum threshold at $100,000 was intended to ensure these market participants maintained some level of capitalization in the market. It was also recognized that a truly small market participant could unexpectedly increase its trading behavior or find itself holding a portfolio of congestion revenue rights with increasing liabilities due to an unforeseen event. To mitigate this risk, a provision was included in the proposed minimum participation requirements that the posting requirement be based on the maximum of $100,000 or their highest level of obligations during the preceding six months.

The unintended consequence of basing the posting requirement on the highest level of obligations during the look-back period was that some market participants subject to the posting requirement have obligations substantially higher than the $500,000 posting threshold that the other ISOs adopted and would potentially result in financial hardships on market participants. It is unrealistic to believe that a market participant would be expected to post this amount over and above its existing collateral requirements. In addition, having posting requirements above $500,000 would far exceed the proposed minimum participation requirements of the other ISOs and RTOs. Therefore, Management recommends that the initial posting requirement for a new market participant remain at $500,000 and that a market participant with six months of market activity have its posting requirement reduced to $100,000 only if its highest estimated obligations during the six-month look-back period do not exceed $100,000. As a result, all market participants subject to a posting requirement under this policy enhancement will either post $100,000 or $500,000. The $500,000 posting requirement is consistent with the other ISOs' highest posting requirement while the $100,000 posting requirement provides a more just and reasonable requirement for smaller market participants.

New or existing market participants who do not satisfy the minimum participation requirements will be allowed thirty days to cure the deficiency or be denied entry to the market or be subject to existing ISO enforcement actions up to and including suspension or termination.

MATERIAL ADVERSE CHANGE

Market participants whose obligations are backed by an unsecured form of collateral (*i.e.*, unsecured credit limit or a corporate guaranty) may have their unsecured credit reduced or revoked in the case of a material adverse change in their financial condition. Material adverse change provisions provide the ISO the flexibility it needs to react to unforeseen events having a material impact on a market participant.

In Order 741 , the Commission recognized the proposed ISO / RTO Council (IRC) material adverse change language as a good start but noted that it generally included items that potentially lagged the events that constituted a material adverse change. The Commission encouraged the ISOs and RTOs, through their respective stakeholder processes, to identify more forward-looking criteria that would allow an ISO or RTO to request collateral before a market participant is in financial distress.

The ISO's existing material adverse change language is largely in line with IRC's recommended language. However, as suggested in the Final Rule, the ISO considered other forward-looking metrics such as significant changes in Moody's KMV estimated default frequency (EDF) and Moody's KMV resultant equivalent rating, significant increases in credit default swaps and certain liquidity ratios. At this time, due to the lack of industry-specific standards about acceptable thresholds for credit default swaps and liquidity ratios for the various types of entities participating in the ISO market, Management chose to enhance its existing language to include a Moody's KMV equivalent rating downgrade to be considered a material adverse change. Moody's KMV EDF is a measure of the probability that a firm will default over a specified period of time (typically one year). According to the Moody's KMV EDF model, a firm defaults when the market value of its assets (the value of the ongoing business) falls below its liabilities payable (the default point).

To remove any subjectivity, the ISO further clarified that a material adverse change would result from a "credit agency or Moody's KMV equivalent rating downgrade to below investment grade." Management remains open to develop any other forward-looking metric in another stakeholder forum. To that end, the ISO has already begun exploring the use of other Moody's KMV products that have the ability to "back in" to an EDF and equivalent rating based on credit default swaps.

In addition to including the Moody's KMV metric, Management further enhanced its existing policy by including restatement of prior-year financials and a default in another organized market as conditions for a material adverse change. Invoking a material adverse change due to restatement of prior-year financials recognizes the fact that an unsecured credit limit may have been set based on prior-year financials and that restatement of those financials may result in a condition requiring reduction of an unsecured credit limit. Because ISO market participants, or their affiliates, may participate in other ISOs and RTOs, a default in another market may trigger a similar event in the ISO. Therefore, it is prudent for the ISO to be aware of such an event and take any appropriate actions to mitigate a similar, potentially disruptive event in the ISO market.

During the course of the stakeholder process, stakeholders offered minor enhancements that were incorporated into the final draft proposal. Stakeholders are generally supportive of Management's proposal. Therefore, Management proposes that the following existing Business Practice Manual (BPM) for credit management language be included in the tariff (highlighted text is the proposed enhancement to existing BPM language):

Examples of Material Changes in Financial Condition may include but are not limited to:

a) Credit agency or Moody's KMV equivalent rating downgrades to below investment grade;

b) Being placed on a credit watch list by a major rating agency;

c) A bankruptcy filing;

d) Insolvency;

e) The filing of a material lawsuit that could significantly and adversely affect past, current or future financial results;

f) Restating one or more prior-year financial statements in a way that reduces the amount of unsecured credit that was previously granted;

g) A default in another organized market for which any cure period has expired; or

h) Any change in the financial condition of the Market Participant that exceeds a five percent (5%) reduction in the Market Participant's Tangible Net Worth or Net Assets for the Market Participant's preceding fiscal year, calculated in accordance with generally accepted accounting practices.

In addition to the above language, we will include additional tariff language that requires the ISO to provide written notification to a market participant when this material adverse change language is invoked. Should a market participant not respond to a collateral request resulting from a material adverse change within the prescribed collateral cure period, the market participant will be considered out of compliance with the ISO tariff and will be subject to enforcement actions up to and including suspension or termination.

POSITIONS OF THE PARTIES

The ISO conducted a stakeholder process over the past months made up of the following meetings and conference calls – each with a corresponding written comment period:

- On-site stakeholder meeting to discuss Issue Paper – February 11, 2011
- Web conference call to discuss the ISO's Straw Draft Proposal – March 28, 2011
- Web conference call to discuss the ISO's Final Draft Proposal – April 25, 2011

Papers, proposals and all other related stakeholder meeting materials are available on the ISO's Credit Policy Stakeholder Process webpage at http://www.caiso.com/docs/2003/04/21/2003042117001924814.html. A stakeholder matrix summarizing the position of a representative sample of stakeholders accompanies this memorandum in Attachment A.

Stakeholders generally supported Management's two proposals throughout the stakeholder process. However, late in the stakeholder process, certain stakeholders expressed concerns that the capitalization posting requirement may create a barrier to entry – particularly for new entrants bringing new technologies to the market (*e.g.*, demand response; smart grid) and small renewable entities. In addition, stakeholders feared these requirements could force certain market participants out of the market resulting in increased financial demands on remaining market participants due to increased pro-rata share of grid management charges and a market default. Management feels its proposal is reasonable and provides additional safeguards against a market disruptive default.

Although it would be difficult to predict the impact of the proposed minimum participation requirements on prospective and existing market participants, Management is taking steps to assess the impact of this proposal – and particularly the proposal's capitalization posting requirement – on existing market participants by first determining the number of market participants who may be subject to the posting requirement. From there, Management will be able to determine whether the applicable market participants may have sufficient available credit to meet the posting requirement without having to post new collateral. Those market participants that would be required to post new collateral would subsequently be considered at risk of leaving the market. Once market participants at risk can be determined, it will be easy to determine the amount of grid management charges and a market default allocation that would be at risk and subsequently spread across remaining market participants.

Finally, the ISO settlements team is engaged in a stakeholder process to make additional improvements to the ISO settlements timeline that supports FERC's directive to shorten the billing and payment period, but is not specifically required under Order 741. Management anticipates presenting these proposed improvements to the Board at its June meeting, with the intent to pair these settlements timeline improvements with the June 30, 2011 compliance filing, both with an effective date of October 1, 2011.

MANAGEMENT RECOMMENDATION

Management recommends the following credit policy enhancements be included in the ISO's June 30, 2011 compliance filing:

- Minimum participation requirements that include:
  - Capitalization requirements of $1 million of tangible net worth or $10 million of total assets or a posting requirement of $100,000 or $500,000 of secured collateral that cannot be used for any other market activity
  - Certification that market participant has appropriate operating procedures and technical abilities to respond to ISO communications and directives such as invoices and collateral requests
  - Certification that market participant has written policies, procedures and controls, approved by the company's governing body, which provides an appropriate, comprehensive risk management framework and has satisfied the ISO's training requirements as defined in the tariff
- Enhancements to the ISO's existing conditions for a material adverse change that include:
  - Moody's KMV equivalent rating of below investment grade
  - Restatement of prior-year financials
  - A default in another organized market