

Morgan Lewis

William D. Kissinger

Partner
+1.415.442.1480
monica.schwebs@morganlewis.com

May 17, 2022

Business Practice Manual Change Management
California Independent System Operator Corporation
250 Outcropping Way
Folsom, CA 95630

Re: Comments on Proposed Revision Request 1432
Relating to Business Practice Manual on Market Operations Section 4.6.1
Concerning Regulation Certification and Testing Requirements

To Whom It May Concern:

I am writing on behalf of Sentinel Energy Center, LLC ("Sentinel") regarding Proposed Revision Request 1432 ("PRR") which concerns a proposed revision to the California Independent System Operator's ("CAISO's") Business Practice Manual ("BPM") for Market Operations, Section 4.6.1 - Regulation Certification and Testing Requirements. This section concerns the CAISO's "pay for performance" mechanism to provide incentives for accurate performance of Regulation services. See CAISO Tariff Section 8.2.3.1.1. Under this mechanism, if a resource does not meet the minimum performance threshold, the resource will be decertified and cannot provide Regulation services until recertified. *Id.*

Sentinel appreciates the efforts of the CAISO staff to attempt to improve this section of the BPM. As discussed below, the proposed PRR provides an interim patch for the longstanding problem associated with Section 4.6.1. As discussed below, it may lessen the frequency that generation like Sentinel will be obliged to recertify its generating facilities, but it does not solve the fundamental mismatch between the performance standard and the ability of resources to meet those standards when dispatched by the CAISO under automatic generation control ("AGC") for very short periods. A new approach and a new PRR are needed to address the problems with the CAISO's current version of Section 4.6.1. Alternatively, the CAISO could begin a stakeholder proceeding to make changes to the underlying CAISO pay for performance tariff provisions.

The Sentinel Power Plant is located in Riverside County, CA. It is comprised of eight LMS 100 fast-start engines which the CAISO routinely relies upon to provide ancillary services, including spin/non spin reserve and reg up/reg down service. Sentinel's engines have provided Regulation services to the CAISO since they first entered service in 2013. Over the years, Sentinel's generating facilities have been tested many times to make sure they meet CAISO's standards for providing Regulation service and have never failed a test in almost nine years of operations.

The current version of the BPM prescribes procedures that are interfering with the ability of generation operated by Sentinel to provide Regulation services to the CAISO. The current version

Morgan, Lewis & Bockius LLP

One Market
Spear Street Tower
San Francisco, CA 94105-1596
United States

T +1.415.442.1000
F +1.415.442.1001

of Section 4.6.1 leads to erroneous warning notices, the need to recertify, and occasional decertifications which are entirely a function of the way in which the CAISO records performance and not because of any actual operational shortcoming of the generating facilities. In the process, the current version of Section 4.6.1 is needlessly interfering with the ability of Southern California Edison ("SCE"), the scheduling coordinator and off-taker of the Sentinel Power Plant's output, as well as the CAISO, to make full use of the resource.

This is not the first time that Sentinel has communicated with the CAISO regarding the problems with BPM for Market Operations Section 4.6.1. On August 21, 2019, Sentinel sent a letter to the CAISO General Counsel about the problems it was experiencing with the procedures set out in Section 4.6.1, which resulted in meetings with the CAISO staff and adoption of PRR 1210 on February 19, 2020.¹ PRR 1210 made it clear that if generating facilities receive a warning notice and immediately recertify they will not be decertified.² After more erroneous warning notices, Sentinel crafted another letter to the CAISO with our own proposed PRR and sent it to SCE for input. Ultimately this letter was not sent to the CAISO because SCE wanted to attempt to work with CAISO staff to come up with a PRR to improve Section 4.6.1. We assume that PRR 1432 is the result of these efforts.

As discussed below, Sentinel views PRR 1432, at best, as a stopgap measure that may somewhat reduce the frequency of how often the power plant will need to be recertified. However, it in no way resolves the fundamental problems with the methodology the CAISO currently uses to issue warning notices and then decertify resources. Without belaboring the point here, neither the BPM nor the proposed PRR takes into account how gas-fired generation with spinning mass and inertia cannot respond to the extremely short duration reg-up and reg-down dispatches that come when dispatched on AGC by the CAISO to provide Regulation. As a result, generation units like Sentinel will continue to be issued warning notices and be at risk of decertification even after adoption of PRR 1432 because it does not address this mismatch. This is an issue that has been raised by Sentinel and others in prior correspondence but which the CAISO has not attempted to address to date.³ Sentinel believes that the CAISO should do so, either by way of a further revision of the BPM or, if need be, by a formal amendment of the tariff.

¹ A copy of Sentinel's August 21, 2019, correspondence is included with this letter.

² Information concerning PRR 1210 is available at <https://bpmcm.caiso.com/Pages/ViewPRR.aspx?PRRID=1210&IsDlg=0>

³ Both PG&E and SCE have filed PRR requests intended to mitigate the effects of having a flawed methodology. See PRR 860 (filed by PG&E in 2015), available at <https://bpmcm.caiso.com/pages/viewpr.aspx?IsDlg=1&PRRID=860> ; PRR 861 (filed by SCE in 2015), available at <https://bpmcm.caiso.com/pages/viewpr.aspx?IsDlg=1&PRRID=861>. SCE also provided comments on PRR 1095 that discuss the problems with the methodology, available at <https://bpmcm.caiso.com/Pages/ViewPRR.aspx?PRRID=1095&IsDlg=0>. Unfortunately, these PRR requests and comments did not cause the CAISO to change its methodology. Subsequently, SCE and Sentinel have studied why the methodology causes the CAISO to issue warning notices to Sentinel. They have found that the current methodology is an unreliable performance indicator, particularly when the CAISO dispatches only a small amount of generation for a short period of time (*i.e.*, in "short bursts"). Sentinel has also found that some warning notices are based on incorrect data.

In the meantime, PRR 1432 does provide something of a stop gap measure in at least one respect. Under the current BPM, the generating unit will be decertified if it fails to meet the performance standard in either of the two successive months following receipt of the warning notice. Under the current BPM, if the unit is not dispatched by the CAISO in either or both of those months, it will be deemed to have failed to meet the performance standard during those months and be automatically decertified. That has been a problem for Sentinel in the past because it is relatively seldom dispatched to provide Regulation services. As a result, in the past it has risked decertification following a warning notice because it was not dispatched at all in a subsequent month.

PRR 1432 ameliorates this issue by no longer requiring decertification of units that were not dispatched at all in either or both of the two successive months following the warning notice. Instead, PRR 1432 would only count successive months during which the unit has been dispatched to provide the relevant Regulation service for at least 15 intervals during that month. This will eliminate the risk of decertification during months when the Sentinel generating facilities are not dispatched at all. This is certainly an improvement on the status quo although it will require the generator operator to monitor how many times in a given month the generating facility is dispatched for Regulation services after receipt of a warning notice. Despite the additional administrative burden, Sentinel supports this change being made as a small step forward.

That said, it is not clear that PRR 1432 will really reduce the current need for frequent unnecessary testing following receipt of a warning notice. As noted, the changes to BPM Section 4.6.1 made by PRR 1210 provide that following receipt of a warning notice, the resource can proactively recertify the unit and avoid the risk of decertification. Thus, even if a resource owner is inclined to do the work necessary to track whether the generating unit has hit the 15 interval threshold in a given month following receipt of a warning notice, the generating facility will not necessarily know whether the resource met the performance test in the two months with the requisite number of intervals. Thus, prudent resource owners will likely still use the existing option of contacting the CAISO to schedule another certification test to avoid possible decertification.

In light of that fact, while Sentinel does not oppose the CAISO's adoption of PRR 1432, it urges it to take the necessary step of convening a stakeholder working group to revamp the BPM for Market Operations Section 4.6.1 and/or recommend tariff changes to address the problems associated with the CAISO methodology for enforcing the pay for performance rules. Sentinel would be pleased to meet with representatives of the CAISO to discuss these comments.

Sincerely,

William D. Kissinger

William D. Kissinger

Attachment

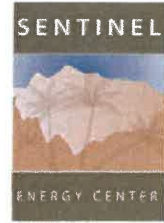
California Independent System Operator Corporation
May 17, 2022
Page 4

cc: Andrew Ulmer, CAISO
Cristina Bowen, SCE
Mark McDaniels, Sentinel Energy Center, LLC
Dennis Johnson, Sentinel Energy Center, LLC

**Comments of Sentinel Energy Center, LLC on
Proposed Revision Request 1432
Dated May 17, 2022**

ATTACHMENT

RECEIVED
JH Aug 22 REC'D
LEGAL & REGULATORY DEPT.



August 21, 2019

Roger E. Collanton
General Counsel
California Independent System Operator Corporation
250 Outcropping Way
Folsom, CA 95630

Re: Erroneous Decertification of Ability to Provide Ancillary Services

Dear Mr. Collanton:

I am writing to you on behalf of Sentinel Energy Center, LLC ("Sentinel"), the owner of the 800 MW Sentinel power plant in Riverside County, CA. The power plant has eight LMS-100 fast-start engines which the California Independent System Operator ("CAISO") routinely relies upon to provide ancillary services, including spin/non spin reserve and reg up/reg down. I am writing to alert you to a problem with the CAISO's process for decertifying units for the ability to provide ancillary services.

While erroneous measurement of performance has led to frequent unnecessary testing of ancillary services capabilities for many years, it appears the recent addition of Section 4.6.1 to the CAISO's *Business Practice Manual for Market Operations*, Ver. 60 ("BPM for Market Operations") has made the problem worse. Earlier this year Sentinel had one of its units erroneously decertified for the ability to provide ancillary services for reasons that are unclear, but it appears the CAISO is interpreting language in the new section to permit decertification in the absence of a failed performance audit or test. This directly contradicts CAISO Operating Procedure 5370, "*Resource Performance Verification*," Ver. 6.2, Section 3.4. This operating procedure permits decertification only if, after a warning is issued, a resource "fails a performance audit or unannounced compliance test." *Id.*

Erroneous decertification of the ability to provide ancillary services has already had serious adverse consequences for Sentinel. More generally, erroneous decertification may also be a problem for CAISO since the CAISO has recently been forced to frequently declare ancillary services scarcity events which may be the result of erroneous decertification.

I would like to request a meeting as soon as possible with representatives of the CAISO, and Sentinel's Scheduling Coordinator, Southern California Edison ("SCE"), to discuss how the CAISO intends to address the problem.¹

I. On-Going Problems with Decertification for Ancillary Services

It is well known that Sentinel's LMS-100 engines are fully capable of providing ancillary services to the CAISO. In fact, none of Sentinel's eight LMS-100s has ever failed an ancillary services test administered by the CAISO.

Although the LMS-100 engines are a reliable source of ancillary services for the CAISO, there are significant problems with the CAISO's performance accuracy measurement techniques and its methodology for maintaining ancillary services certification. As a result, the CAISO has often informed Sentinel that there is a need to retest Sentinel's engines to confirm that they meet the ancillary services performance standard, resulting in frequent and unnecessary compliance testing. Sentinel has been required to conduct re-testing an average of three to four times every year and sometimes when the re-testing is done Sentinel has had to retest more than one unit. It is Sentinel's understanding that the operators of other power plants which use LMS 100 engines have also been required to frequently re-test their units.

We know that the CAISO is aware of these problems since Sentinel's Scheduling Coordinator, SCE, has been attempting for quite a while to get the CAISO to address these problems. For instance, in October 2018, when the CAISO issued Proposed Revision Request ("PRR") 1095, relating to the new process for decertification of the ability to provide ancillary services, SCE submitted a long set of comments.² These comments do a good job of outlining the problems and are attached as Appendix A. Unfortunately, however, the CAISO adopted PRR 1095 and made it Section 4.6.1 of the BPM for Market Operations without addressing SCE's concerns.³

II. New Problems Stemming from Improper Interpretation of Section 4.6.1 of the BPM for Market Operations

The ongoing problems Sentinel has had with periodically having to recertify its engines have recently become significantly worse because of the addition of Section 4.6.1 to the BPM for Market Operations. In particular, it appears the CAISO is erroneously interpreting language in the new section in a way which contradicts CAISO Operating Procedure 5370, "Resource Performance Verification," which permits decertification only if, after a warning is issued, a unit fails a performance audit or unannounced compliance test.

While at this time the improper interpretation has only resulted in erroneous decertification of CAISO Resource ID SENTNL_2_CTG1 ("Unit 1"), one of Sentinel's eight engines, for several

¹ Terms with initial capital letters which are not defined herein are defined in the CAISO tariff.

² See Comments of SCE on PRR 1095, October 19, 2018, available at <https://bpmcm.caiso.com/Pages/ViewPRR.aspx?PRRID=1095&IsDlg=0>.

³ See CAISO Response to SCE Comments on PRR 1095, October 29, 2018, available at <https://bpmcm.caiso.com/Pages/ViewPRR.aspx?PRRID=1095&IsDlg=0> (indicating that SCE concerns should be addressed in other CAISO forums).

weeks and may result in a settlement dispute, Sentinel is contesting this improper interpretation to avoid further erroneous decertifications and associated settlement disputes.

Set out below are: (1) a summary of the relevant facts relating to decertification of Unit 1; (2) excerpts from the BPM for Market Operations and CAISO Operating Procedure 5370; and (3) an analysis of whether the CAISO acted properly in decertifying Unit 1.

1. Summary of Relevant Facts

The emails from which the facts are drawn are set forth in Appendix B.

- On January 16, the CAISO provided a Warning Notice indicating that Unit 1 did not meet the performance criteria for certification for regulation up service in December 2018. *See Appendix B.1.*
- On February 5, 2019, the CAISO tested Unit 1 and found it passed the test for providing regulation services. *See Appendix B.2a and B.2b.*
- On April 22, 2019, the CAISO sent an email to SCE indicating that it was decertifying Unit 1 for failure to meet minimum performance thresholds and provided the table below:

| Resource ID | Regulation Service Decertified | Decertification Effective Date | Q4 PFPR Failure | Evaluation Month | Accuracy RegUp % | Accuracy RegDwn % | Notes |
|---------------|--------------------------------|--------------------------------|--------------------|------------------|------------------|-------------------|---|
| SENTNL_2_CTG1 | Reg up | 4/29/2019 | Reg Up in Dec 2018 | Feb 2019 | - | 63.4% | SENTNL_2_CTG1 provided no intervals of Reg Up during the month of Feb 2019. |
| | | | | Mar 2019 | 67.88% | 73.26% | |

The email is in Appendix B.1.

- Sentinel does not know why the CAISO apparently had no data to confirm the accuracy of its reg up capabilities in February. It appears possible, however, that the CAISO simply did not request reg up services. When the CAISO needs an ancillary service, the CAISO does not inform Sentinel of what ancillary service it needs, it simply provides notice by activating a Supervisory Control and Data Acquisition (“SCADA”) Alarm and puts the unit in ISO mode which is the required mode for providing ancillary services. Sentinel does know that in February Unit 1 was placed into ISO mode eight times and the unit followed the Automated Dispatch System (“ADS”) signal accurately.

- On June 7, Sentinel was first informed by SCE that its settlement amount under its PPA may be reduced because of the decertification of Unit 1 for ability to provide ancillary services. *See Appendix B.3.*
- Sentinel has not been informed that Unit 1 has been re-certified to provide ancillary services.

B. Relevant CAISO Rules

1. BPM for Market Operations, Section 4.6.1

The BPM provides:

If a resource fails to meet the minimum performance threshold, the CAISO will provide a warning notice to the resource’s Scheduling Coordinator of the resource’s failure to meet the minimum performance threshold in the month immediately following the end of the calendar quarter in which the performance failure occurred. Calendar quarter is defined as the periods January-March, April-June, July-September, and October-December. After providing notice to the resource’s Scheduling Coordinator, the CAISO will then evaluate the resource’s performance in the last two months of the quarter in which the failure notification is provided. *If the resource meets the minimum performance threshold requirement for both months evaluated, then the warning notice will expire and the resource will be re-certified for the service.* During the recertification period, if a resource does not provide the respective regulation service during a calendar month the CAISO will consider that the resource did not meet the minimum performance threshold for that month. Decertification resulting from this process does not preclude resources from undertaking certification testing pursuant to the ISO tariff.

BPM for Market Operations, Section 4.6.1 (emphasis added).

2. CAISO Operating Procedure 5370, “Resource Performance Verification”

CAISO Operating Procedure 5370, Section 3.4, sets forth the procedures for decertification. Specifically, this section makes it clear that a necessary predicate is a failed audit or test:

If a Spin, Non-Spin, Regulation, or RUC capacity resource fails a performance audit or unannounced compliance test during the period when a warning notice for that resource is in effect, the ISO will immediately begin the decertification process.

CAISO Operating Procedure 5370, Section 3.4 (emphasis added). If this necessary prerequisite is met, then the process the CAISO Resource Administrator is to follow is:

1. Send email to ISO Management stating the resource is subject to immediate decertification (attach relevant resource information from the Resource Performance Verification Database).
2. Upon receiving approval from ISO Management,

- Decertify the resource (complete the remaining actions below).
 - Send a letter to the Scheduling Coordinator for the resource, the resource owner/operator, and the Scheduling Coordinator's ISO Client Representative stating that the ISO has initiated the decertification process for the resource for the affected service, along with the performance audit or compliance test results.
3. In the Resource Performance Verification Database,
 - Enter the date on which the resource was issued the letter.
 4. Open a Change Request, requesting that the AS Service Flag for the resource in Master File be set to "No".
 5. Once Master File has been updated (AS Service Flag = No),
 - Update the Resource Performance Verification Database with the date on which the resource was decertified.

Id.

3. Analysis

It appears that what the CAISO has done is inconsistent with the BPM on Market Operations and the CAISO's Operating Procedure 5370 on Resource Performance Verification. With respect to the BPM on Market Operations, since the Warning Notice was issued in January of 2019 the CAISO was supposed to evaluate whether the minimum performance threshold was met for February and March. For February, the requirement was met with test results proving Unit 1 met the minimum performance threshold and in March the requirement was met with actual performance data. The BPM for Market Operations states: "If the resource meets the minimum performance threshold requirement for both months evaluated, then the warning notice will expire and the resource will be re-certified for the service." BPM on Market Operations, Section 4.6.1. Thus, the warning notice for Unit 1 should have expired. Instead, however, Unit 1 was decertified.

The email from the CAISO sent on April 22, 2019, announcing the decertification does not provide a reason for decertification. *See* Appendix B.1. It appears, however, that since the CAISO only had the successful results of an ancillary services compliance test for February, not actual performance data February, the CAISO relied upon new language in Section 4.6.1 which provides "During the recertification period, if a resource does not provide the respective regulation service during a calendar month the CAISO will consider that the resource did not meet the minimum performance threshold for that month." If so, it is not clear why the CAISO did not view the successful completion of a compliance test as proof the minimum performance threshold was met. Moreover, it is not clear why the CAISO did not follow its own operating procedures. Under Operating Procedure 5370 on Resource Performance Verification, the decertification process is only supposed to begin if a "resource fails a performance audit or unannounced compliance test during the period when a warning notice for that resource is in effect." With respect to Unit 1, there was no failure, only a compliance test which showed Unit 1 was in compliance.

III. Adverse Consequences for CAISO Stakeholders and Ratepayers

The CAISO's erroneous interpretation of its rules has had adverse consequences. The erroneous decertification of Unit 1 has already caused both Sentinel and SCE to expend considerable staff time to sort out the issues and may well result in a financial settlement dispute with the CAISO which will also affect CAISO staff. It is likely that unless the CAISO makes changes quickly to prevent erroneous decertification, more representatives of resources, scheduling coordinators, and CAISO staff will also have to sort out the consequences.

Perhaps more importantly, however, erroneously decertifying resources for providing ancillary services has adverse consequences for CAISO ratepayers. In particular, the CAISO has declared many ancillary service scarcity events in recent months.⁴ This has resulted in having to use the capacity procurement mechanism to ensure that adequate ancillary services are available, driving up costs for CAISO ratepayers.⁵ To the extent to which ancillary services scarcity is caused by erroneous decertification of resources, CAISO ratepayers end up paying the costs of the CAISO's errors.

Conclusion

As soon as possible Sentinel would like to meet with representatives of the CAISO and SCE to discuss the issues raised in this letter. To follow up on this request, please contact me at 760-514-7277 or by sending an email to mmcdaniels@cpv.com. We have been informed by SCE that it is willing to participate in this discussion and that the person to contact at SCE is Scott Wiedermann who can be reached at 626-302-3353 or by sending an email to Scott.Wiedermann@sce.com.

Sincerely,



Mark McDaniels
Authorized Representative of Sentinel
15775 Melissa Lane
North Palm Springs, CA 92258

c.c. S. Wiedermann, SCE

⁴ CAISO, *Q1 Report on Market Issues and Performance*, June 28, 2019, at 27. ("The number of intervals with scarcity pricing increased during the first quarter of 2019, particularly from the shortage of regulation down and regulation up.") Report is available at <http://www.caiso.com/Documents/2019FirstQuarterReportOnMarketIssuesAndPerformance.pdf>.

⁵ *Id.* at 28 ("Costs for ancillary services increased during the first quarter to about \$45 million, compared to about \$27 million in the previous quarter and \$35 million during the same quarter in 2018.").

From: Christopher Leisgang <Christopher.Leisgang@sce.com>
Sent: Friday, June 7, 2019 12:09 PM
To: Paul Sharpe <psharpe@cpv.com>
Cc: Van Nguyen <vnnguyen@cpv.com>; Ken Meringolo <kmeringolo@cpv.com>; Scott Wiedermann <Scott.Wiedermann@sce.com>; Michele Walker <Michele.Walker@sce.com>
Subject: RE: (External):CPV Sentinel May 2019 Invoice

Thanks, Paul!

FYI.....SCE currently has internal discussions ongoing regarding the de-certification of RegUp for Unit 1. Settlements recently learned that the CAISO de-certified Unit 1 for RegUp starting 4/29 (PPA may be needed), and most likely through the entire month of May, as a CAISO Master-File freeze prevented SCE from updating the A/S certification test results until June 5th . We will document our findings, and include the results in the May-2019 payment which may include an A/S Capacity Reduction PPA for April 29th and 30th . I wanted to give you advance notice of this, but please discuss with your team and let us know if you have any questions or concerns.

I will reach out to you later next week for the variances found in the May-2019 invoice.

Thanks!

Chris Leisgang



Resource Test Results Form

The Scheduling Coordinator shall submit an RDT update request to reflect any new or revised values based on the test results. Please refer to the RDT update instructions posted on the CAISO website at <http://www.caiso.com/market/Pages/NetworkandResourceModeling/Default.aspx>.

| | | | |
|---------------------------|---------------|--------------|---|
| Resource ID | SENTNL_2_CTG1 | Notes | 0 |
| Date Tested | 02/05/19 | | |
| Test Administrator | 0 | | |

Test Results

| Service | Configuration | Approved MW (Pmin/PIMax and Spin/NonSpin) | Approved Range (Regulation Only) | Approved Ramp Rate* (Regulation and Spin/Non Spin) |
|-----------------|---------------|---|----------------------------------|--|
| Regulation Up | 1X1 | 0.00 | 46.73 | 9.26 |
| Regulation Down | 1X1 | 0.00 | 93.00 | 9.26 |
| | 0 | 0.00 | 0.00 | 0.00 |
| | 0 | 0.00 | 0.00 | 0.00 |
| | 0 | 0.00 | 0.00 | 0.00 |

* For Spinning Reserve and Non-Spinning Reserve a single ramp rate value is accepted for these two fields. For Regulation, the ISO will accept two ranges; however, only a single ramp rate will be accepted. The single Regulation ramp rate value is separate from the Spinning/Non-Spinning Reserve ramp rate value.

Test Details

| Service | Configuration | Test Start Time | Test Start MW | Ramp End Time | Ramp End MW | Test End Time | Test End MW | Tested MW Value | Tested Ramp Rate MW/min |
|-----------------|---------------|-----------------|---------------|---------------|-------------|---------------|-------------|-----------------|-------------------------|
| Regulation Up | 1X1 | 09:20:05 | 46.57 | 09:25:06 | 93.00 | | | | 9.26 |
| Regulation Down | 1X1 | 09:14:32 | 93.02 | 09:19:26 | 46.73 | | | | 9.45 |
| | | | | | | | | | |
| | | | | | | | | | |



Resource Test Results Form

The Scheduling Coordinator shall submit an RDT update request to reflect any new or revised values based on the test results. Please refer to the RDT update instructions posted on the CAISO website at <http://www.caiso.com/market/Pages/NetworkandResourceModeling/Default.aspx>.

| | |
|---------------------------|---------------|
| Resource ID | SENTNL_2_CTG1 |
| Date Tested | 02/05/19 |
| Test Administrator | 0 |
| | Notes |
| | 0 |

Test Results

| Service | Configuration | Approved MW (Pmin/PMMax and Spin/NonSpin) | Approved Range (Regulation Only) | Approved Ramp Rate* (Regulation and Spin/Non Spin) |
|-----------------|---------------|---|----------------------------------|--|
| Regulation Up | 1X1 | 0.00 | 46.73 | 93.00 |
| Regulation Down | 1X1 | 0.00 | 93.00 | 46.73 |
| | 0 | 0.00 | 0.00 | 0.00 |
| | 0 | 0.00 | 0.00 | 0.00 |
| | 0 | 0.00 | 0.00 | 0.00 |
| | 0 | 0.00 | 0.00 | 0.00 |

* For Spinning Reserve and Non-Spinning Reserve a single ramp rate value is accepted for these two fields. For Regulation, the ISO will accept two ranges; however, only a single ramp rate will be accepted. The single Regulation ramp rate value is separate from the Spinning/Non-Spinning Reserve ramp rate value.

Test Details

| Service | Configuration | Test Start Time | Test Start MW | Ramp End Time | Ramp End MW | Test End Time | Test End MW | Tested MW Value | Tested Ramp Rate MW/min |
|-----------------|---------------|-----------------|---------------|---------------|-------------|---------------|-------------|-----------------|-------------------------|
| Regulation Up | 1X1 | 09:20:05 | 46.57 | 09:25:06 | 93.00 | | | | 9.26 |
| Regulation Down | 1X1 | 09:14:32 | 93.02 | 09:19:26 | 46.73 | | | | 9.45 |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Schwebs, Monica Astrid

From: Scott Wiedermann <Scott.Wiedermann@sce.com>
Sent: Tuesday, April 23, 2019 2:26 PM
To: Dennis Johnson
Cc: Mark McDaniels - CPV; Larry Wilson; Rhett Nichol; Constantine Louie; David Coher; Eric Lopez; Robert E Palutzke
Subject: RE: (External):FW: (External):SCE_2018_Q4 Decertification Notice Regarding Minimum Performance Threshold for Regulation Service

Dennis, please note that there are new CAISO provisions that took effect Jan 1, 2019. Here's an excerpt from their notice that's applicable here:

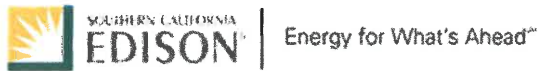
"Resources undertaking certification testing during the evaluation period will still face decertification if they do not meet the minimum performance threshold during the evaluation period."

Thanks,

Scott

Scott Wiedermann
Power Marketing, Sr Advisor
Energy Procurement & Management
T. 626-302-3353 | M. 949-309-8996

2244 Walnut Grove Ave, Quad 1C – 166P | Rosemead, CA 91770-3714



From: Dennis Johnson [mailto:d.johnson@dgc-ops.com]
Sent: Tuesday, April 23, 2019 10:13 AM
To: Scott Wiedermann <Scott.Wiedermann@sce.com>
Cc: Mark McDaniels - CPV <mmcdaniels@cpv.com>; Larry Wilson <l.wilson@dgc-ops.com>
Subject: (External):FW: (External):SCE_2018_Q4 Decertification Notice Regarding Minimum Performance Threshold for Regulation Service

Scott,

This notice is in error. Attached are the results from Unit 1's successful regulation test performed 02/05/2019.

Dennis Johnson
Plant Manager
Sentinel Energy Center, LLC
Office: 760-288-7901
Cell: 213-712-6605
Fax: 760-288-7908

From: Mark McDaniels [mailto:mmcdaniels@cpv.com]
Sent: Tuesday, April 23, 2019 9:59 AM
To: Dennis Johnson; Larry Wilson

Subject: FW: (External):SCE_2018_Q4 Decertification Notice Regarding Minimum Performance Threshold for Regulation Service

From: Scott Wiedermann <Scott.Wiedermann@sce.com>

Sent: Tuesday, April 23, 2019 9:58 AM

To: Mark McDaniels <mmcdaniels@cpv.com>

Cc: Rhett Nichol <Rhett.Nichol@sce.com>; Constantine Louie <Constantine.Louie@sce.com>; David Coher <David.Coher@sce.com>; Eric Lopez <Eric.Lopez@sce.com>; Robert E Palutzke <Robert.Palutzke@sce.com>

Subject: FW: (External):SCE_2018_Q4 Decertification Notice Regarding Minimum Performance Threshold for Regulation Service

Mark, please see the CAISO email forwarded below. Sentinel Unit 1 will be decertified for Reg Up beginning April 29. This resource will need to be recertified to provide that A/S going forward.

Thanks,

Scott

Scott Wiedermann

Power Marketing, Sr Advisor

Energy Procurement & Management

T. 626-302-3353 | M. 949-309-8996

2244 Walnut Grove Ave, Quad 1C – 166P | Rosemead, CA 91770-3714



SOUTHERN CALIFORNIA
EDISON

Energy for What's Ahead™

From: MS Compliance [<mailto:MSCompliance@caiso.com>]

Sent: Monday, April 22, 2019 4:05 PM

To: Rhett Nichol <Rhett.Nichol@sce.com>

Cc: Constantine Louie <Constantine.Louie@sce.com>; Eric Lopez <Eric.Lopez@sce.com>; Robert E Palutzke <Robert.Palutzke@sce.com>; Attisani, Diana <dattisani@caiso.com>; Dainard, Steven <SDAINARD@caiso.com>; Cuccia, Thomas <tcuccia@caiso.com>

Subject: (External):SCE_2018_Q4 Decertification Notice Regarding Minimum Performance Threshold for Regulation Service



Rhett Nichol

Southern California Edison Company

RE: Decertification Notice regarding minimum performance threshold for regulation service – ISO tariff section 8.2.3.1.1

Pursuant to the BPM for Market Operations section 4.6.1 and the Warning Notice previously provided, the California Independent System Operator Corporation (ISO) provides this notice that the resource(s) identified below will be decertified from providing the service(s) indicated

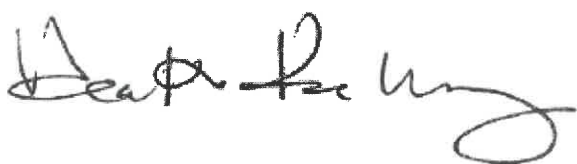
The resource(s) which did not meet the minimum performance threshold are summarized in the table below:

| Resource ID | Regulation Service Decertified | Decertification Effective Date | Q4 PFPR Failure | Evaluation Month | Accuracy RegUp % | Accuracy RegDwn % | Notes |
|---------------|--------------------------------|--------------------------------|--------------------|------------------|------------------|-------------------|---|
| SENTNL_2_CTG1 | Reg Up | 4/29/2019 | Reg Up in Dec 2018 | Feb 2019 | - | 63.4% | SENTNL_2_CTG1 provided no intervals of Reg Up during the month of Feb 2019. |
| | | | | Mar 2019 | 67.88% | 73.26% | |

If you wish to continue providing the identified Ancillary Service, you must certify the resource. Please contact ASNotifications@caiso.com and follow the process in ISO Operating Procedure 5330 to schedule a regulation certification test.

Please direct any questions you may have to your ISO Client Representative.

Respectfully,



Heather Kelley
Director, Market Services

Cc:
Constantine Louie, Southern California Edison Company
Eric Lopez, Southern California Edison Company
Robert Palutzke, Southern California Edison Company
Diana Attisani, ISO Customer Services
Steve Dainard, ISO Customer Services
Tom Cuccia, ISO Account Manager

From: MS Compliance
Sent: Wednesday, January 16, 2019 12:47 PM
To: Nichol (Southern California Edison), Rhett <Rhett.Nichol@sce.com>
Cc: 'constantine.louie@sce.com' <constantine.louie@sce.com>; Lopez (SCE.COM), Eric <Eric.Lopez@SCE.com>; Palutzke (SCE.COM), Robert <Robert.Palutzke@sce.com>; Attisani, Diana <dattisani@caiso.com>; Dainard, Steven <sdainard@caiso.com>; Cuccia, Thomas <tcuccia@caiso.com>
Subject: SCE_2018_Q4 Warning Notice Regarding Minimum Performance Threshold for Regulation Service



Rhett Nichol
Southern California Edison Company

RE: Warning Notice regarding minimum performance threshold for regulation service

The California Independent System Operator Corporation (ISO) provides this warning notice that the resource(s) identified below did not meet the minimum performance threshold for regulation up, regulation down, or both, during the calendar months of October through December 2018. Pursuant to tariff section 8.2.3.1.1, the ISO uses a monthly accuracy measurement for resources providing regulation services that reflects a weighted average of 15-minute accuracy measurements, using instructed mileage as the weight. The minimum monthly accuracy measurement for resources providing regulation services is 25%.

The resource(s) which did not meet the minimum performance threshold are summarized in the table below:

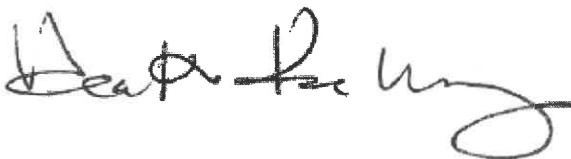
| Resource ID | SCID | Month | Accuracy RegUp % | Accuracy RegDwn % |
|---------------|------|----------|------------------|-------------------|
| SENTNL_2_CTG1 | SCE1 | Dec 2018 | 18.72% | 25.66% |
| SENTNL_2_CTG2 | | | 2.68% | 76.59% |

The ISO will evaluate the resource's performance during the next two months of this quarter. If the resource meets the minimum performance threshold for both months being evaluated, then this warning notice will expire and the resource will be recertified for the service. If the resource falls below the minimum performance threshold for the service(s) identified above for either of the two months evaluated, the resource will be decertified from providing the service. Resources undertaking certification testing during the evaluation period will still face decertification if they do not meet the minimum performance threshold during the evaluation period.

The ISO provides data in CMRI so that Scheduling Coordinators can proactively monitor their resource performance accuracy.

Please direct any questions you may have to your ISO Client Representative via phone or by submitting a CIDI inquiry ticket.

Respectfully,



Heather Kelley
Director, Market Services

Cc:
Constantine Louie, Southern California Edison Company
Eric Lopez, Southern California Edison Company
Robert Palutzke, Southern California Edison Company
Diana Attisani, ISO Customer Services
Steve Dainard, ISO Customer Services
Tom Cuccia, ISO Account Manager

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Stakeholder comments on Proposed Revision Request 1095

| Submitted by | Company | Date Submitted |
|----------------|----------------------------|------------------|
| Aditya Chauhan | Southern California Edison | October 19, 2018 |

Southern California Edison (SCE) offers the following comments on the California Independent System Operator (CAISO) Proposed Revision Request (PRR) 1095¹. SCE appreciates the CAISO's work on the Regulation decertification and performance accuracy measurement problem. While the collaboration between the CAISO and stakeholders has led to progress in addressing the problem, much remains to be done. SCE remains concerned that an excessive focus on CMRI data provision will not lead to ultimately addressing the problem, even if CMRI data has no accuracy issues associated with it.

While the PRR is an improvement, several items remain unaddressed

1. The performance metric does not require a minimum sample size. Hence, there can be great variance in the number of samples in the data. A resource can be awarded a lot or a little – this is completely dependent on the CAISO market results. A small number of awards can greatly skew any performance determination. Thus, the lack of any standard in sample size leads to a non-robust measurement.
2. Further, telemetry latency issues exist, these being the CAISO's responsibility. Leading and trailing intervals of a dispatch tend to show resource underperformance. This problem further aggravates the accuracy of the performance metric due to inconsistency in measurement.
3. The process for requesting the underlying data used in the performance metric calculation and the process for disputing the results of the calculation need to be defined.

¹ <https://bpmcm.caiso.com/Pages/ViewPRR.aspx?PRRID=1095&IsDlg=0>

4. Finally, SCE has observed Regulation awards that have a magnitude outside the governor's precision, such as 0.01MW. It is unreasonable for the CAISO to expect a resource to meet an award that is beyond the resource's own ability to control.

How does the CAISO specifically propose that SCs use CMRI data to proactively monitor unit performance?

There are several issues with this CAISO suggestion, including:

1. SCE has observed frequently incorrect or missing CMRI data. This also relates to the CAISO's claim to not use lost data. However, incorrect data is much more likely to fail a resource's performance than is lost data.
2. The data is only available for query by a single day at a time.
3. There is no opportunity to interact with the CAISO to gauge the accuracy of their calculations.
4. Specifically how can the SC use the data to improve a resource's performance? When the awards are less than the governor's precision, the CMRI data is unactionable. When the unit is awarded for only one interval during the entire evaluation period, the CMRI data is untimely.
5. How should the SC use the data to mimic the ISO's performance metric calculation? Simple average? What should the SC do when data is missing from CMRI?
6. All of the underlying data input and measurement problems cited earlier in these comments still apply.

There are more efficient and effective opportunities to help SCs improve performance

1. SC's are not able to independently verify in real time if the ISO systems "think" a resource is providing regulation. The ISO currently uses a 3-factor test to determine if a resource is providing regulation. This 3-factor test is impossible for an SC to mimic. Mismatches commonly occur whereby the SC believes that the resource is providing regulation while the ISO does not. If the SC was provided the data used in the 3-factor test (or even the output of the 3-factor test) then the SC could react in real time to determine and rectify the cause of the mismatch.
2. The AGC "Y/N" flag in ADS is consistently incorrect. Correcting this problem would allow resources to use this flag to verify/improve regulation performance.

The above issues highlight that, at the core, the CAISO's existing regulation performance monitoring, evaluation, and reporting does not work. The process of validating data and associated calculations is cumbersome and inefficient. Any verification requires SCs to use a CIDI request. This is followed by a manual process of extraction and an additional delay if there is a dispute. Throughout this, more time has been lost for recertification, leaving the resource with fewer options.