

California Independent System Operator Corporation

Report to the Audit Committee of the Board of Governors

Settlements System Audit



Folsom, CA

February 5, 2015

Agenda

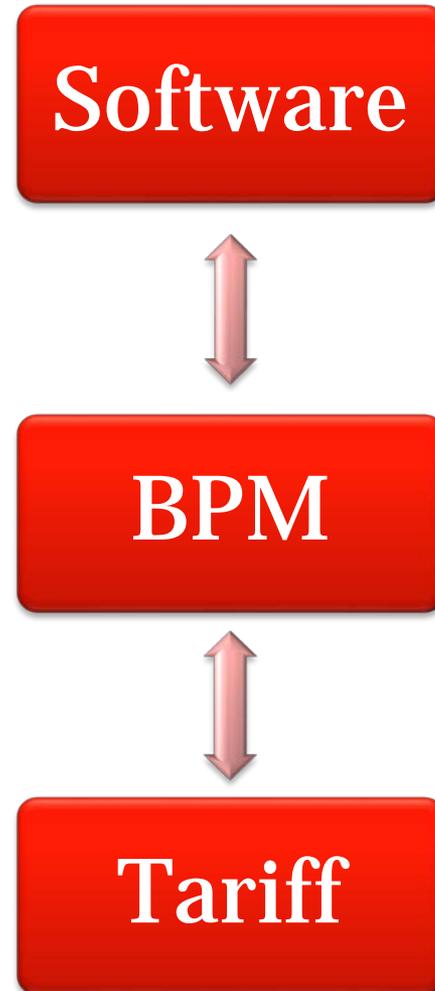
- **Project background**
- **Audit approach**
- **Settlements system audit scope**
- **Key audit factors**
- **Conclusions**

Project background

- Two significant market changes in 2014
 - ✓ FERC Order 764 – 15 minute scheduling
 - Implemented May 1, 2014
 - Associated changes – Renewable Integration Market and Product Review (RIMPR)
 - ✓ EIM expansion
- Issue – ISO desire to gain independent assurance associated with these consequential changes
- Action – PwC targeted independent audit of settlement system changes
- Conclusion – unqualified opinion issued on January 9, 2015 on Management Assertion related to charge codes subject to these market changes

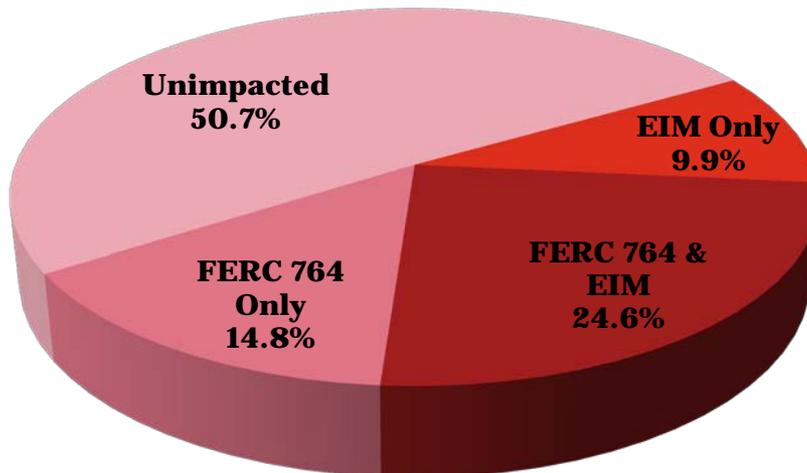
Audit approach

- Risk assessment - audit procedures calibrated by risk by charge code
- Core testing - two step process for each charge code – through the BPMs (publicly available)
- At go-live - Migration testing and updating procedures
- Reporting – assessed management assertion and supporting information



Settlements system audit scope

- We tested the Management Assertion that quantities and prices are calculated in accordance with the Tariff as approved in related FERC orders
- Targeted scope
 - ✓ includes 77 charge codes (CC)
 - ✓ includes 23 pre-calculations (PC)
 - ✓ excludes charge codes unaffected by these market changes



	<u>CC's</u>	<u>PC's</u>	<u>Total</u>
EIM Only	19	1	20
FERC 764 & EIM	31	19	50
FERC 764 Only	27	3	30
Impacted	77	23	100
Unimpacted	94	9	103
Total	171	32	203

203 Charge Codes & Pre-Calculations

Key audit factors

- **Tariff assessment procedures included:**
 - ✓ **Comparison of charge code formulas with relevant sections of Tariff**
 - ✓ **Development of test plan and requirements to test the charge code**
 - ✓ **Coordinated review with CAISO legal and settlements SMEs**
- **Software assessment procedures included:**
 - ✓ **Review of test work performed by CAISO Market Settlement Design & Configuration (MSDC) team**
 - ✓ **Re-performance testing of procedures completed by MSDC team**
 - ✓ **Independent testing of all higher risk charge codes and pre-calculations**

Key audit factors (continued)

- **Audit included review of hundreds of documents**
 - ✓ **Relevant Tariff sections**
 - ✓ **Business Process Manuals for each charge code**
 - ✓ **All CAISO testing documentation**
- **Extensive coordination with CAISO Legal and Settlements SMEs during the period from June through December**
- **Independent testing or re-performance of management testing for all medium and higher risk charge codes and pre-calculations**

Conclusions

- No deviations identified as part of PwC procedures
- Unqualified opinion issued on January 9, 2015, that Management Assertion is fairly stated in all material respects

Questions?

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