



Western energy imbalance market update

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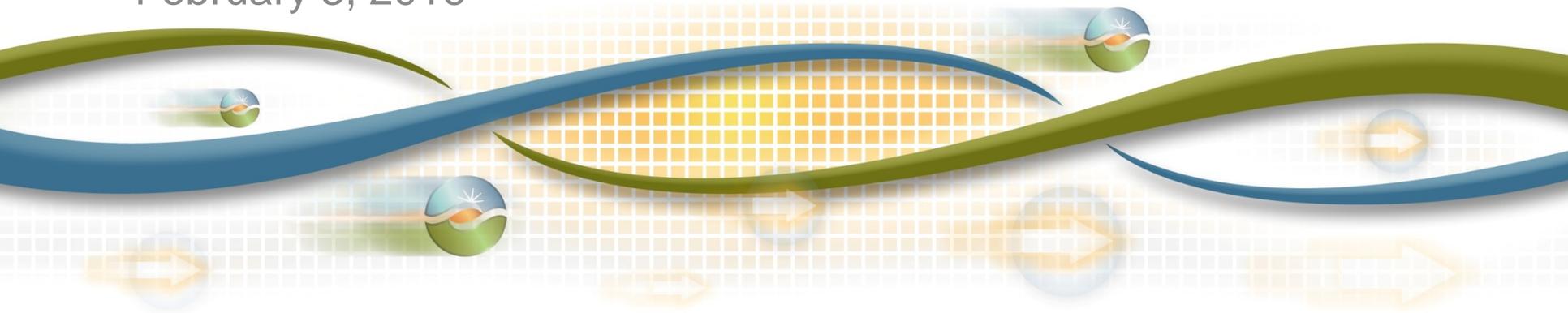
Stacey Crowley

Vice President, Regional and Federal Affairs

Board of Governors Meeting

General Session

February 3, 2016



EIM UPDATE

EIM update

- NV Energy participating in market since December 1.
 - Balancing test passed 96.67 percent of the hours.
 - Flex ramp sufficiency test passed 98.9 percent of the intervals.
 - Solution is feasible using available bids:
 - 99.7 percent of fifteen-minute interval
 - 99.6 percent of five-minute market intervals.
- FERC accepted the implementation agreement with Portland General Electric, effective January 20, 2016 for an October 2017 implementation.
- Arizona and Puget continue their respective implementation progress for an October 1, 2016 go live.

EIM benefits update

4th Quarter 2015 EIM Benefits

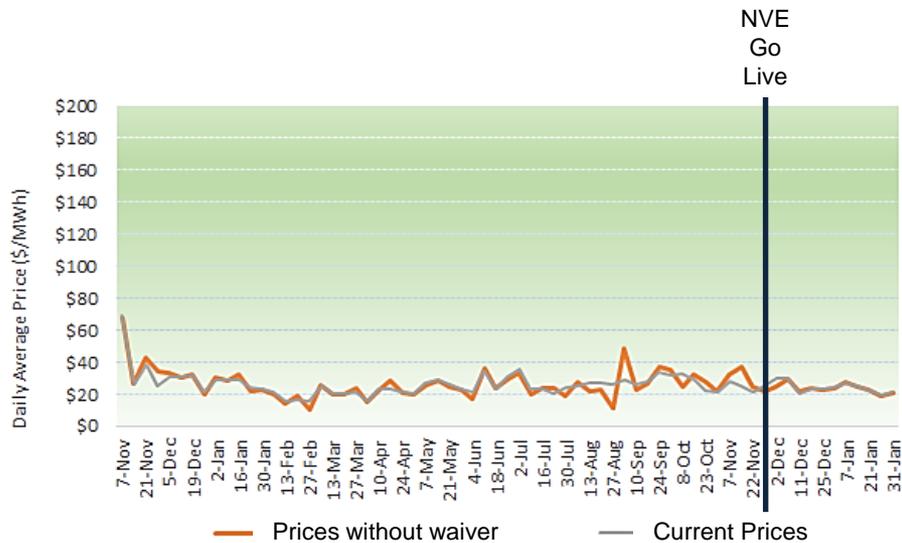
Region	October	November	December	Total
CAISO	1.27	1.30	2.70	5.28
NV Energy	n/a	n/a	0.84	0.84
PacifiCorp	1.24	2.19	2.75	6.17
Total	2.51	3.49	6.27	12.29

Shows the estimated gross benefits summary for the fourth quarter of 2015 in millions of dollars per EIM entity.

- Total benefits for year ending 2015 = \$45.69 million
- 17,776 Mwh curtailment avoided, displacing 7,521 metric tons of CO₂.

15-minute prices stable since December start of NV Energy

PACW

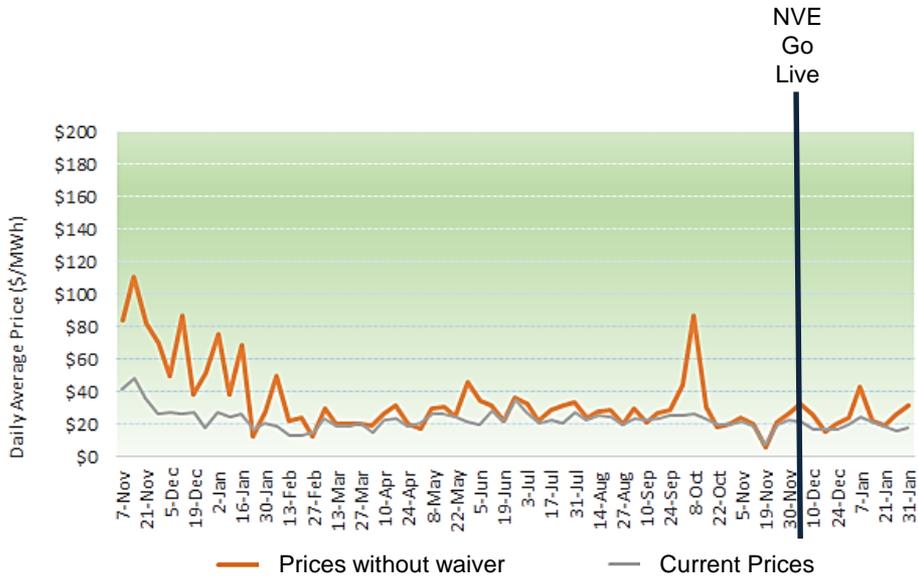


PACE

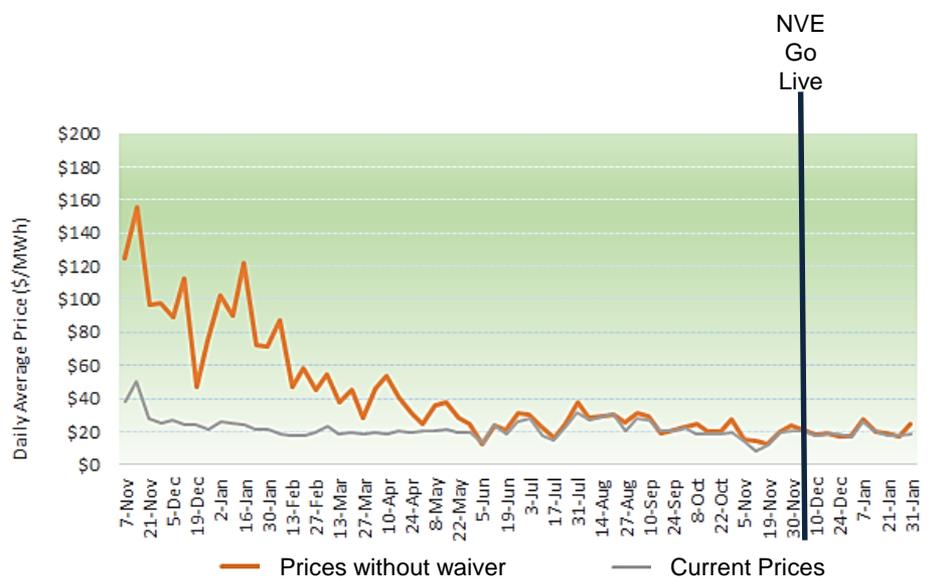


5-minute prices in PACW reflect hydro conditions, PACE stable since NV Energy start

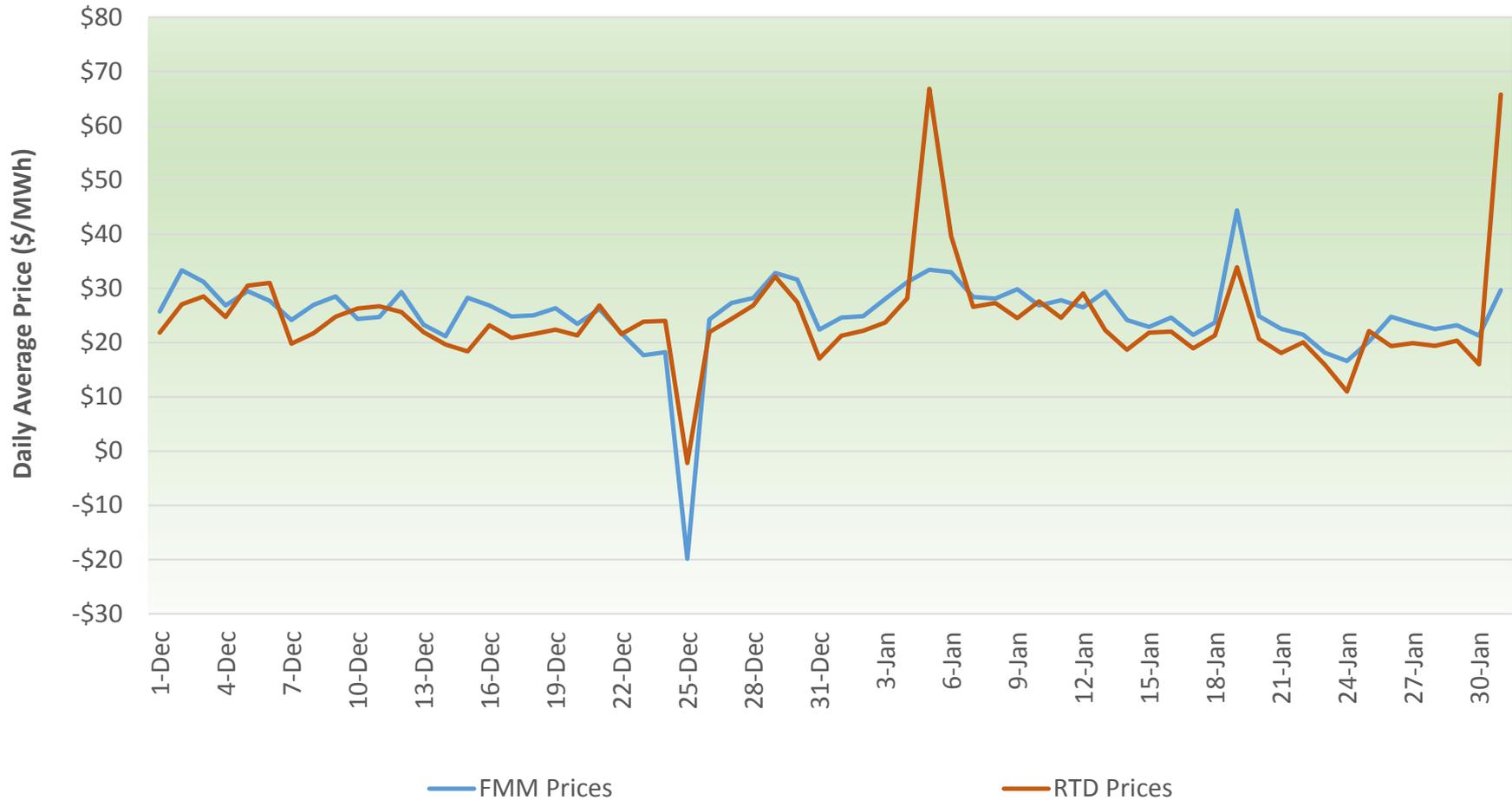
PACW



PACE

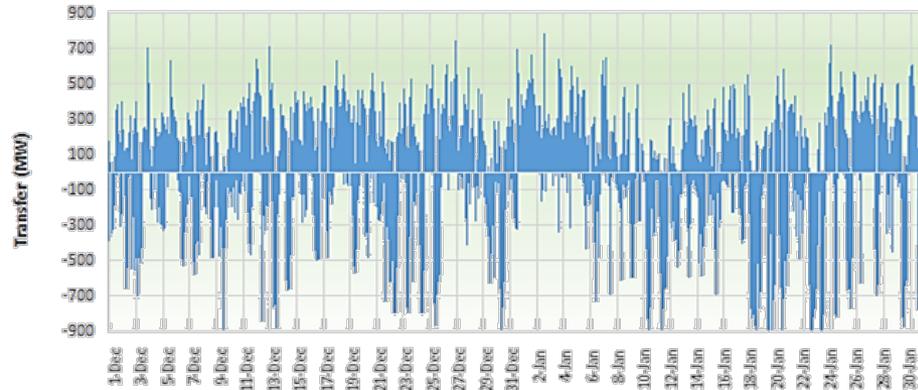


Prices in NV Energy reflect system conditions

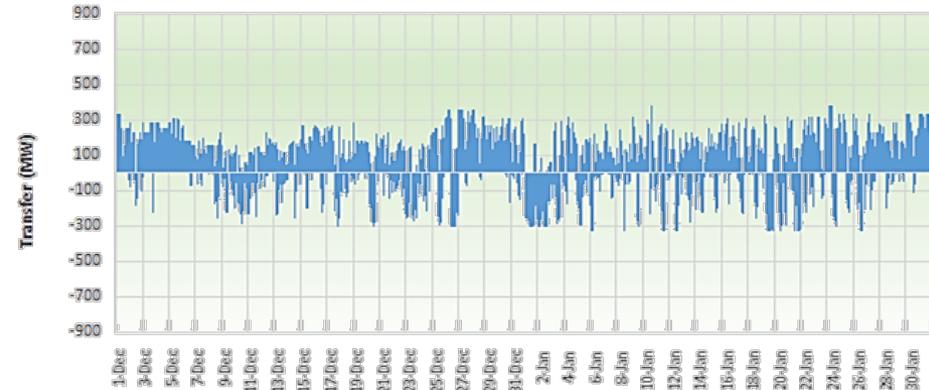


Robust bi-directional transfers observed with NV Energy

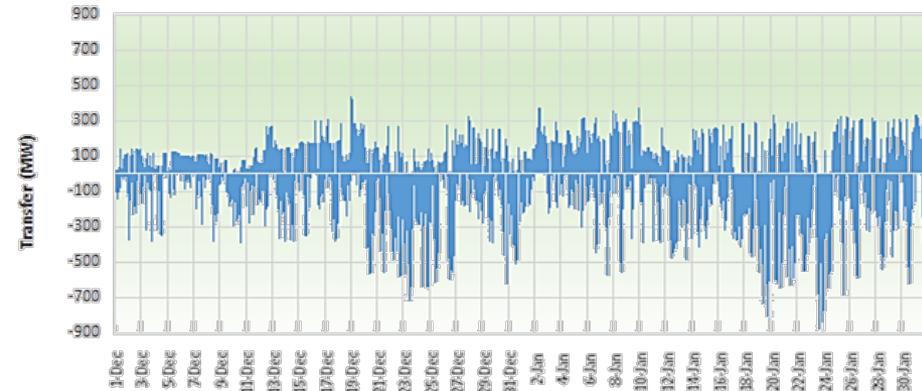
Transfers from Nevada to CAISO



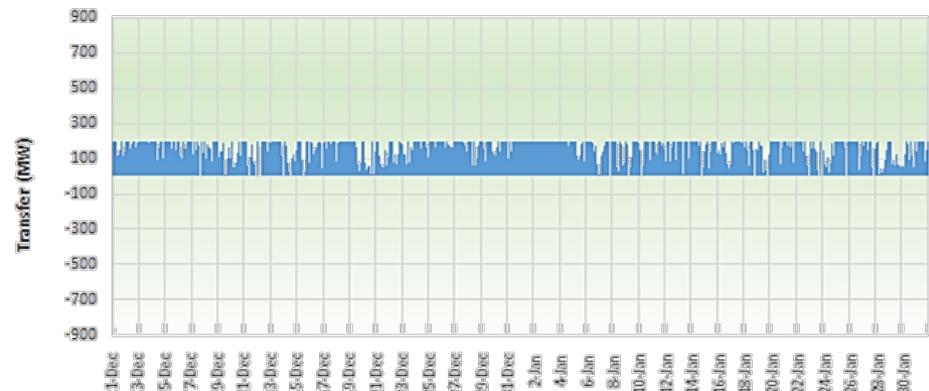
Transfers from PAC West to CAISO



Transfers from PAC East to Nevada



Transfers from PAC East to PAC West



Transfer into ISO by supporting resource type

Month	Coal (%)	Gas (%)	Non-Emitting (%)	Total
15-Jan	0.06%	6.04%	93.90%	100%
15-Feb	0.32%	88.89%	10.79%	100%
15-Mar	0.46%	99.54%	0.00%	100%
15-Apr	0.13%	65.48%	34.39%	100%
15-May	0.00%	84.37%	15.63%	100%
15-Jun	0.00%	72.95%	27.05%	100%
15-Jul	0.00%	65.16%	34.84%	100%
15-Aug	0.02%	86.48%	13.50%	100%
15-Sep	0.00%	92.27%	7.73%	100%
15-Oct	0.10%	99.90%	0.00%	100%
15-Nov	0.00%	25.25%	74.75%	100%
15-Dec	0.00%	15.79%	84.21%	100%

EIM GOVERNANCE

In December 2015, the Board approved corporate documents to support implementation of EIM governance.

Nominating committee is working with an executive search firm to identify qualified candidates.

Following interviews and discussion, committee will present slate of five candidates for Board consideration.

- Regional Issues Forum
 - sectors selecting liaisons, first Forum expected Q1 2016
- Body of State Regulators
 - led by WA Commissioner Ann Rendahl

EIM Governing Body Nominating Committee

Sector	Company/Organization	Name
<i>Voting Members</i>		
EIM Entities	PacifiCorp Transmission	Sarah Edmonds
Participating Transmission Owners	Southern California Edison	Eric Little
Suppliers and Marketers of Generation, ESPs	Calpine	Mark Smith
Publicly-Owned Utilities	Northern California Power Agency	Randy Howard
The Body of State Regulators	Arizona Corporation Commission	Doug Little
<i>Non-Voting Members</i>		
EIM Transitional Committee	Iberdrola Renewables	Kevin Lynch
ISO Board of Governors	New Energy Options, Inc.	Angelina Galiteva
Public Interest and Consumer Advocate Groups	Western Resource Advocates	Jennifer Gardner