## Calpine Comments Revised Draft 2015 Stakeholder Initiatives Catalog

Dec 5, 2014

Section Number	Initiative	Grid Reliability	Improving Overall Market Efficiency	Desired by Stakeholders	Total Benefit Score	Market Participant Implementation (\$ and resources)	ISO Implementation (\$ and resources)	Total Feasib ility Score	Total Rank Score	Calpine Comments Ho Ho Ho
3.11	Generator Contingency Modeling	7	7	3	17	7	7	14	31	No Comment
3.40	Extend Look Ahead for Real Time Optimization	7	7	<mark>3</mark> 5	17	1 0	3	13	<mark>30</mark> 32	Very helpful to allow MSG transitions in RT, as 4.5 hour look ahead eliminates possible beneficial transitions
2.30	Multi-Day Unit Commitment in the Integrated Forward Market (IFM)	7	7	<mark>7</mark> 3	21	7	0	7	<mark>28</mark> 24	The days are numbered for long-start units. The interim solution (72-hour RUC) seems sufficient to commit and represent these resources in IFM.
11.14	Multiple Resource IDs per Generation Meter	3	7	3	13	7	7	14	27	No comment
2.40	Multi-Stage Generator Bid Cost Recovery (BCR)	3	3	7	13	7	7	14	27	No comment
3.20	DLAP-Level Proxy Demand Response	0	3	7	10	1 0	7	17	27	Might consider deferral pending Court action

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3.70	Hourly Bid Cost Recovery Reform	<mark>3</mark> 5	7	7	17	7	3	10	<mark>27</mark> 29	Should allow more liquidity in RT markets
5.20	Blackstart and System Restoration	3	7	<mark>7</mark> 3	17	7	3	10	<mark>27</mark> 23	Appears to be a small, but vocal group of advocates
11.10	PacifiCorp Related Tariff Changes	3	7	3	13	7	7	14	27	No Comment
10.7.1	Comprehensive Review Methodology for Determining Maximum Import Capability	<mark>3</mark> 0	3	<mark>7</mark> 3	13	7	7	14	<mark>27</mark> 20	Appears to be a small, but vocal group of advocates Does nothing to improve grid reliability
10.7.2	Reallocation of Maximum Import Capability Between Electrically Adjacent Import Paths to Achieve State Policy Objectives	<mark>3</mark> 0	3	<mark>7</mark> 3	13	7	7	14	27 20	Appears to be a small, but vocal group of advocates Does nothing to improve grid reliability

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10.7.3	Allocation of Maximum Import Capability Among Load Serving Entities	3	3	7	13	7	7	14	27	No Comment
12.70	Affected Systems	3	3	7	13	7	7	14	27	No comment
4.10	Consideration of Non-RA Import Energy in the RUC Process	3	7	3	13	1 0	3	13	26	No Comment
10.20	Active Power Control Interconnection Requirements for Variable Energy Resources	3	3	3	9	7	<mark>4</mark> Φ 6	17	<mark>26</mark> 22	Seems the ISO's systems to dispatch and control ramps would be costly and time consuming
10.30	Reactive Power Control Requirements	10	<mark>7</mark> 3	3	20	3	3	6	<mark>26</mark> 22	May very well affect reliability, but not sure there are efficiency benefits.
11.50	Combined Demand Response Product	3	7	7	17	7	0	7	24	Might consider deferral pending Court action and or Energy storage Roadmap

I – In progress; F – FERC-mandated N – Non-discretionary; D – Discretionary

	Comments		Improving		Total	tiatives Catalo Mark	1	c 5, 2014 <sub>Tot</sub>	Total	
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3.50	Extended Pricing Mechanisms	<mark>3</mark> 7	7 1 0	7	17	7	<mark>9</mark> 5	7	<mark>24</mark> 32	Allocating uplift costs to ramps would encourage liquidity and plant modifications. Pricing uplift into the market sends proper (efficient) price signals for consumption and supply. Phase 1 – in 2015 should be the inexpensive development of a white paper and evaluation of costs and benefits. Phase 2 implementation after 2015, if supported would have the higher costs envisioned in this ranking.
6.80	Review the CRR Clawback Rule	0	7	3	10	7	7	14	24	No Comment
2.50	Full Network Model Expansion - Phase 2	7	7	3	17	3	3	6	23	Let's figure out how phase 1 is working first!!
6.1	2014 CRR Modifications	<mark>3</mark> 0	7	3	13	7	3	10	<mark>23</mark> 20	Grid reliability benefit is suspect. If pursued, should be tied to outage reporting initiatives.
7.30	Implement Point- to-Point (PTP) Convergence Bids	3	7	7	17	3	3	6	23	No Comment

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10.10	2015 Interconnecti on Process Enhancement s	3	7	7	17	3	3	6	23	No comment
11.11	Rescheduled Outages	3	3	3	9	7	7	14	23	No Comment
2.60	Difference Bidding in Integrated Forward Market for Energy Storage Resources	3	3	3	9	7	7	14	23	No Comment
8.60	Multi-Year RA Import Allocation Process	7	3	3	13	7	3	10	23	No Comment
5.30	Fractional MW	3	3	3	9	7	7	14	23	No Comment
	Regulation Awards									No comment
7.40	Revie w of Convergen ce Bidding Uplift Allocation	0	3	7	10	7	3	10	20	No Comment

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6.70	Outage Notification Requirements	<mark>9</mark> 5	<b>3</b> 7	<mark>3</mark> 7	6	7	7	14	<mark>20</mark> 36	Better notification of both "pending" and "approved" outages will increase situational awareness and increase liquidity in CRR markets. Modifications to outage notification should be the with any CRR reallocation initiatives.
7.10	Allowing Convergenc e Bidding at CRR Sub- LAPs	0	3	3	6	7	7	14	20	No Comment
11.90	Integrated Optimal Outage Coordination	0	7	3	10	7	3	10	20	No comment
8.40	Simplified Reporting of Forced Outages	0	0	3	3	1 0	7	17	20	No comment
3.13	Price Formation at Interties	0	3	3	6	7	7	14	20	No Comment

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6.90	Congestion Revenue Rights Allocation	0	3	3	6	7	7	14	20	No comment
7.20	Convergence Bidding Clawback	0	3	3	6	7	7	14	20	No Comment
11.40	Aggregated Pumps and Pumped Storage	3	3	3	9	7	3	10	19	No Comment
5.60	Regulation Service Real-Time Energy Make Whole Settlement	3	3	3	9	7	3	10	19	No Comment
10.40	Transmission Interconnection Process	3	3	3	9	7	3	10	19	No comment
11.12	Storage Generation Plant Modeling	3	3	3	9	7	3	10	19	No Comment

Calpine (	Comments	Revised	Draft 201	15 Stakeho	older Ini	itiatives Catalo	og De	ec 5, 2014		
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6.20	Economic Methodology to Determine if a Transmission Outage Needs to be Scheduled 30 Days Prior to the Outage Month	0	<mark>3</mark> 0	3	6	7	3	10	<mark>16</mark> 11	The market need more, not less visibility on outages.
6.30	Flexible Term Lengths of Long Term CRRs	0	3	3	6	7	3	10	16	No comment
6.40	Insufficient CRR Hedging	0	3	3	6	7	3	10	16	No Comment
6.50	Long Term CRR Auction Sub- initiative 1: multiple rounds for a given annual auction	0	3	3	6	7	3	10	16	No Comment
6.60	Multi-period Optimization Algorithm for Long Term CRRs	0	3	3	6	7	3	10	16	No Comment

Calpine C	Comments	Revised	d Draft 201	15 Stakeho	older Ini	itiatives Catalo	og De	c 5, 2014		
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8.50	Clarify Energy Products Delivered on Interties	3	3	3	9	3	3	6	15	No comments