



# PJM Uplift Allocation Proposal

- Allocate uplift dollars as broadly as reasonably possible to the causing and benefiting parties
- Establish a known, fixed, flat rate for all paying parties
  - Rate is known prior to transacting
  - The same rate for all transacting parties per MWh if supported by anticipated volumes
  - Based on some historic average plus over-collection
  - No preferential treatment to any transaction type
- Use a deferred balance to offset spikes in uplift
- Monthly true-up when payouts are low for a month
- Strive for simplicity

- Regional allocation based on voltage level
- Various rates in favor of one
  - Today we have
    - DA rate
    - RT RTO Deviations
    - RT East Deviations
    - RT West Deviations
    - RT RTO Reliability
    - RT East Reliability
    - RT West Reliability

- Daily rate calculation in favor of monthly
- “Reliability versus Economic” distinction
- The inclusion of IBTs in the calculation or netting of deviations
- INC/DEC netting at any level higher than an individual node

- ***Structure:*** Single RTO-wide fixed rate with monthly true-up and deferred balance
- ***Rate Period:*** Monthly
- ***Unusual circumstances:*** Status quo for now but open to options

\*\* More detail on future slides

- Transactions that rate applies to (denominator):
  1. RTO Real-time Load + Exports
  2. Virtual bids (INCs/DECs/UTCs (as a single transaction))
  3. Pool scheduled generators deviating based on today's deviation rules
  4. All self-scheduled generators not scheduled DA
  5. Price-taking import transactions
  6. Wheels (as a single transaction)\*\*

\*\* More detail on future slides

- PJM's primary Phase 1 proposal includes the removal of DA uplift
- If DA uplift is not removed per the Phase 1 discussion, PJM proposes to include any DA uplift credits into the calculation of the single RTO-wide rate

*\*\* More discussion on future slides regarding DA uplift incurred by resources scheduled for either reactive or blackstart*

All uplift credits paid in real-time to generation, demand response, imports, etc. will be summed into the numerator

This includes things like:

LOC credits

CT LOC

Cancellation costs

Manning costs

Uplift payments



- Two paths:
  1. Continue with current allocations
    - Justifiable based on causing and benefiting parties
    - Adds complexity
    - Variable, unknown charge
  2. Lump into single rate
    - Loss of granularity in causing/benefiting parties
    - Simplifies and stabilizes cost allocation

- If DA OR is kept, all DA OR to these units can either be:
  - Allocated under today's mechanisms, or,
  - Included in the single rate.
- If DA OR is removed, real-time uplift credits to these units can be:
  - Allocated under today's mechanisms, or,
  - Included in the single rate.

- Status Quo.
- DASR has no uplift associated with it. All charges are paid through the market clearing prices.

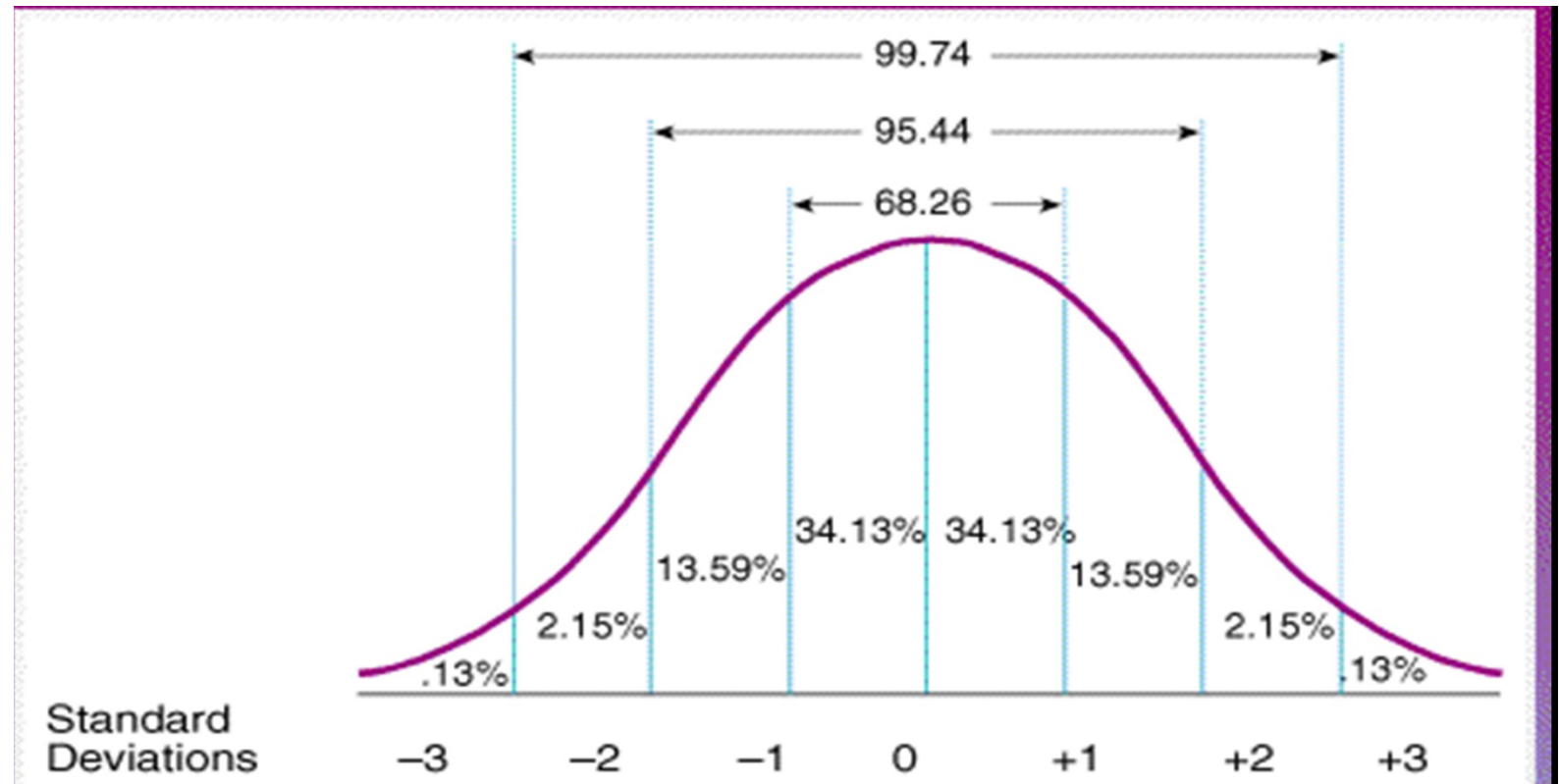
- All uplift credits paid to emergency demand response and emergency purchases are included in the numerator.

## 9. Netting or other Out-of-Market Charges

- Status quo.

- Use a rolling average to determine the base amount of credits that needs to be collected each month to cover uplift costs
  - Remove extreme outliers like January 2014
    - Months outside 1 or 2 standard deviations
- Rolling average can be calculated using any number of months
  - Shorter durations like 3-6 months may miss seasonal impacts on uplift
  - Longer durations like 12-24 months will include all seasons but may include “bad” months that are not outliers for longer than desired

- 68% of observations fall within 1 STD of the mean
- 95% fall within 2
- ~ 100% fall within 3



- Some multiple of the STD can be used as the deferred balance cap
- The higher the multiple
  - The more money held
  - The less probable the monthly collection + deferred balance does not contain sufficient funds
- The lower the multiple
  - The less money held
  - The more probable the monthly collection + deferred balance does not contain sufficient funds



Month	2013						
	DA OR	BOR	Reactive	Blackstart	LOC	UPLIFT (No reactive or blackstart)	TOTAL UPLIFT
Jan	\$5,928,134	\$67,758,162	\$23,604,234	\$8,453,397	\$11,481,334	\$85,167,630	\$108,771,865
Feb	\$4,980,867	\$62,395,543	\$17,624,984	\$7,134,209	\$4,730,617	\$72,107,027	\$89,732,012
Mar	\$6,302,475	\$10,288,210	\$14,350,137	\$6,768,618	\$7,127,313	\$23,717,998	\$38,068,135
Apr	\$5,712,618	\$17,635,540	\$13,670,581	\$9,242,815	\$5,781,873	\$29,130,031	\$42,800,612
May	\$5,403,220	\$14,006,295	\$17,214,142	\$8,667,583	\$8,518,338	\$27,927,853	\$45,141,995
June	\$6,584,357	\$10,816,722	\$22,055,238	\$7,952,100	\$7,029,836	\$24,430,915	\$46,486,153
July	\$8,306,004	\$23,655,288	\$19,633,772	\$5,858,221	\$19,492,274	\$51,453,566	\$71,087,338
Aug	\$4,159,470	\$8,819,526	\$27,827,070	\$7,584,998	\$5,683,959	\$18,662,955	\$46,490,025
Sept	\$6,005,482	\$19,918,883	\$27,534,906	\$7,384,554	\$10,974,087	\$36,898,452	\$64,433,358
Oct	\$2,473,705	\$9,505,540	\$41,721,300	\$6,708,931	\$3,085,323	\$15,064,568	\$56,785,868
Nov	\$2,799,522	\$15,565,028	\$42,743,907	\$6,685,965	\$2,144,870	\$20,509,420	\$63,253,327
Dec	\$5,224,275	\$34,868,398	\$43,464,829	\$4,403,179	\$1,108,575	\$41,201,248	\$84,666,078
	\$63,880,129	\$295,233,135	\$311,445,100	\$86,844,570	\$87,158,399	\$446,271,663	\$757,716,766

2014							
Month	DA OR	BOR	Reactive	Blackstart	LOC	UPLIFT (No reactive or blackstart)	TOTAL UPLIFT
Jan	\$35,826,983	\$486,477,754	\$3,773,749	\$4,037,517	\$77,478,333	\$599,783,070	\$603,556,818
Feb	\$9,492,506	\$44,584,342	\$1,043,326	\$883,414	\$11,465,139	\$65,541,987	\$66,585,314
Mar	\$5,672,743	\$46,693,305	\$2,682,504	\$2,635,547	\$12,826,397	\$65,192,445	\$67,874,950
Apr	\$4,185,011	\$6,706,531	\$5,272,525	\$2,812,795	\$2,991,466	\$13,883,008	\$19,155,533
May	\$6,450,097	\$7,565,556	\$5,278,711	\$1,819,676	\$12,774,196	\$26,789,849	\$32,068,560
June						\$0	
July							
Aug							
Sept							
Oct							
Nov							
Dec							
	\$61,627,340	\$592,027,488	\$18,050,815	\$12,188,949	\$117,535,531	\$771,190,359	\$789,241,175

- **MEANS** – Shows based on the stating rolling average how much would be collected per month
- **STD** (standard deviation) – Shows the standard deviation of the monthly totals. The higher the number the more volatile the month totals
- **MEAN + STD** – Shows the total money available each month to pay uplift if 1 STD is kept in deferred balance.
- **MEAN + 2STD** - Shows the total money available each month to pay uplift if 1 STD is kept in deferred balance.

	<i>DA OR + BOR + LOC (No Reactive/No BS)</i>			
Values (no Jan 14)	MEANS	STD	MEAN + 1STD	MEAN + 2STD
ROLL 3	\$35,288,434	\$21,791,956	\$57,080,390	\$78,872,347
ROLL 6	\$38,852,993	\$20,482,064	\$59,335,057	\$79,817,121
ROLL 12	\$33,963,022	\$17,544,288	\$51,507,310	\$69,051,598
ROLL 17*	\$38,604,935	\$21,728,527	\$60,333,461	\$82,061,988
	<i>ALL</i>			
Values (no Jan 14)	MEANS	STD	MEAN + 1STD	MEAN + 2STD
ROLL 3	\$39,699,681	\$20,608,589	\$60,308,270	\$80,916,859
ROLL 6	\$55,600,627	\$22,570,961	\$78,171,588	\$100,742,549
ROLL 12	\$55,335,708	\$17,441,730	\$72,777,438	\$90,219,168
ROLL 17*	\$58,962,570	\$22,268,149	\$81,230,719	\$103,498,869

- Need to compare methods for determining the numerator to the monthly payouts
  - If collecting for all...
    - Rolling 12 month + 1 STD collects enough money for all but 4 months
      - Jan, Feb, Dec 2013 & Jan 2014
    - Rolling 3 month + 1 STD collects enough money in half the months
  - If using 2 STD, all except rolling 3 month collect enough money for all months except January 2014

- Timing when using and replenishing the deferred balance will be critical
- If the deferred balance is depleted and needs to be replenished, the following month's rate will reflect this
  - Potential change to prompt month's rate to replenish deferred balance is also an option
- If the monthly collections + deferred balance are not enough to pay resources, there needs to be the flexibility to collect the required money quickly
  - This could be a trigger for the “unusual circumstances” collection

- Still performing analysis on various denominators to come up with some example rates
  - Denominator will vary month to month as bid activity and cleared quantities change
- Needs to be broad but remain rational

- PJM to further refine the proposal
  - Add analysis of various denominators and example rates
  - Center in on a proposed numerator
  - Add a component for ad hoc charges
    - Potentially as part of an “unusual circumstances” proposal