



# Uplift and Phase 1

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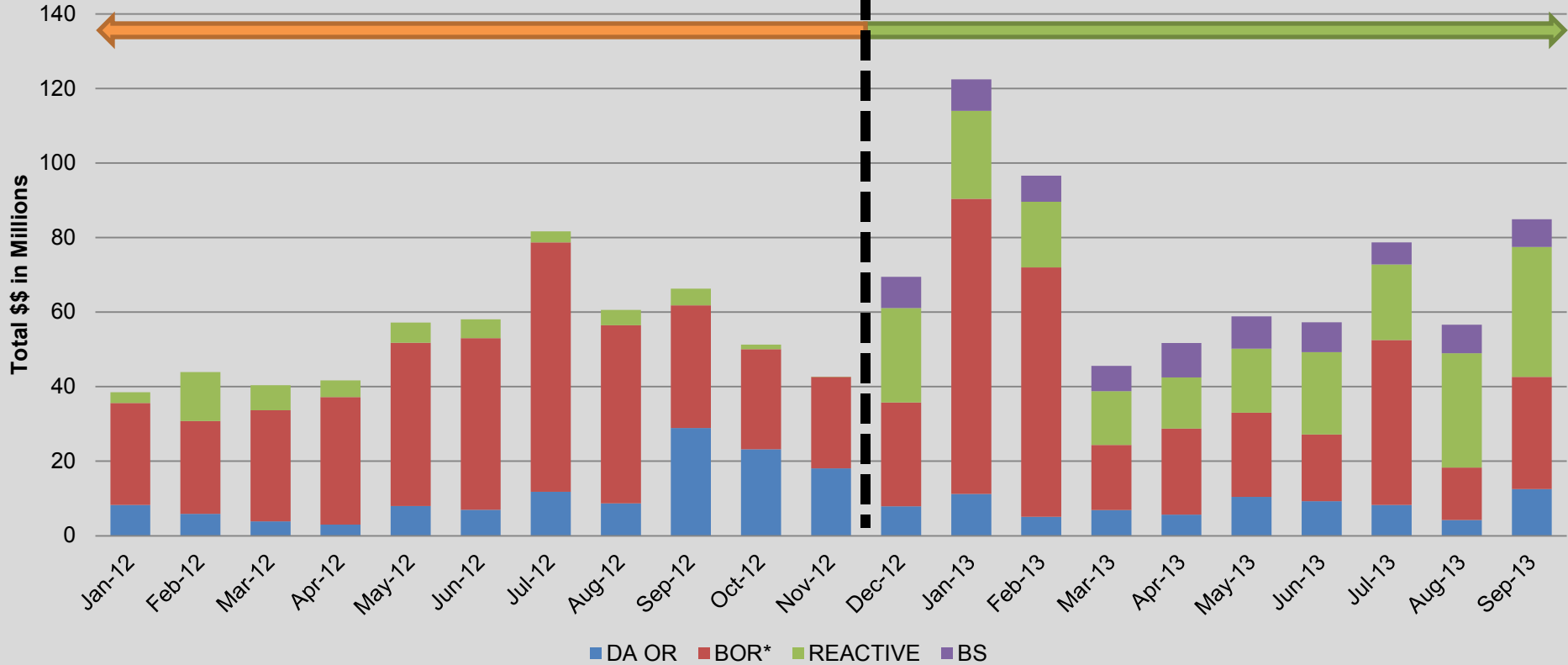


# Courtesy of the Q3 SOM...

Table 4-4 Monthly operating reserve charges: 2012 and 2013

	2012						2013					
	Day-Ahead	Balancing	Reactive Services	Synchronous Condensing	Black Start	Total	Day-Ahead	Balancing	Reactive Services	Synchronous Condensing	Black Start Services	Total
Jan	\$8,311,574	\$27,341,331	\$2,934,337	\$27,037	\$0	\$38,614,279	\$11,161,579	\$79,219,217	\$23,604,234	\$1,873	\$8,453,397	\$122,440,301
Feb	\$5,858,308	\$24,877,526	\$13,108,017	\$18,592	\$0	\$43,862,444	\$5,126,444	\$66,886,126	\$17,624,984	\$0	\$6,988,632	\$96,626,185
Mar	\$3,852,873	\$29,758,387	\$6,731,994	\$1,648	\$0	\$40,344,903	\$6,900,582	\$17,493,458	\$14,350,138	\$0	\$6,768,618	\$45,512,796
Apr	\$2,967,302	\$34,172,651	\$4,521,280	\$0	\$0	\$41,661,233	\$5,712,618	\$23,089,668	\$13,670,581	\$0	\$9,242,815	\$51,715,682
May	\$7,956,965	\$43,761,595	\$5,392,428	\$0	\$0	\$57,110,987	\$10,437,734	\$22,560,252	\$17,214,142	\$959	\$8,667,665	\$58,880,751
Jun	\$6,973,548	\$46,011,835	\$5,133,009	\$0	\$0	\$58,118,391	\$9,350,026	\$17,900,744	\$22,055,239	\$0	\$7,954,457	\$57,260,466
Jul	\$11,773,179	\$66,931,225	\$2,960,922	\$0	\$0	\$81,665,326	\$8,309,568	\$44,202,434	\$20,305,968	\$393,413	\$5,858,221	\$79,069,604
Aug	\$8,692,702	\$47,785,303	\$4,112,186	\$0	\$0	\$60,590,191	\$4,159,471	\$14,124,338	\$30,738,131	\$0	\$7,584,998	\$56,606,938
Sep	\$28,877,736	\$32,849,356	\$4,458,891	\$24,366	\$0	\$66,210,349	\$12,452,502	\$30,079,327	\$34,875,468	\$0	\$7,384,554	\$84,791,851
Oct	\$23,235,166	\$26,884,798	\$1,253,642	\$38,762	\$0	\$51,412,367						
Nov	\$18,077,440	\$24,488,338	\$120,820	\$0	\$0	\$42,686,598						
Dec	\$7,868,340	\$27,902,608	\$25,282,650	\$37,845	\$8,384,651	\$69,476,094						
<b>Total (Jan - Sep)</b>	<b>\$85,264,187</b>	<b>\$353,489,210</b>	<b>\$49,353,063</b>	<b>\$71,643</b>	<b>\$0</b>	<b>\$488,178,103</b>	<b>\$73,610,524</b>	<b>\$315,555,563</b>	<b>\$194,438,886</b>	<b>\$396,245</b>	<b>\$68,903,357</b>	<b>\$652,904,574</b>
Share (Jan - Sep)	17.5%	72.4%	10.1%	0.0%	0.0%	100.0%	11.3%	48.3%	29.8%	0.1%	10.6%	100.0%
Total	\$134,445,132	\$432,764,953	\$76,010,175	\$148,250	\$8,384,651	\$651,753,162						
Share	20.6%	66.4%	11.7%	0.0%	1.3%	100.0%						

## Uplift Per Month - 2012/2013



# What actually changed Dec 1, 2012?

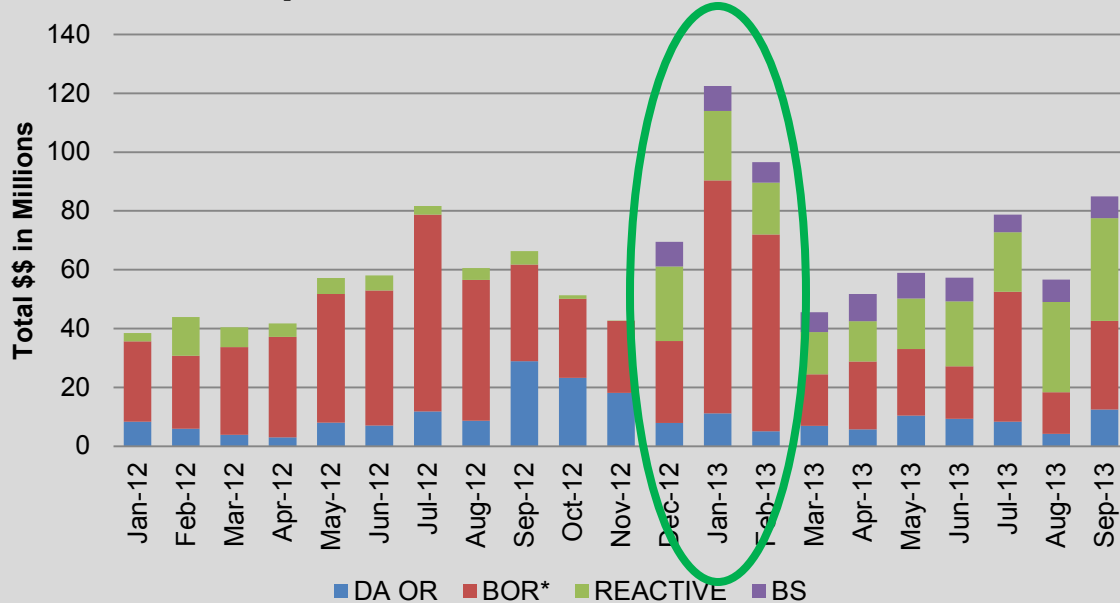
- Prior to 12/1/12
  - Cost to make a generator whole running for Blackstart or Reactive was done through DA OR/BOR and allocated through the BORCA flow chart
  - Only credits specifically for Blackstart or Reactive were allocated through those provisions
- Post 12/1/12
  - Cost to make a generator whole running for Blackstart or Reactive now allocated through these specific Tariff provisions, not through DA OR/BOR
  - Additional credits specifically for Blackstart or Reactive still allocated through those provisions

- Prior to 12/1/12
  - GEN A for local REACTIVE in DPL Zone (< 500 kV)
    - DA OR payment = \$50,000
    - Reactive Credits = \$1,500
  - \$50,000 allocated to all DA load + DECs + exports
  - \$1,500 allocated to DPL zonal load
- *Starting 12/1/12*
  - *GEN A for local REACTIVE in DPL Zone (< 500 kV)*
    - *DA OR payment = \$50,000*
    - *Reactive Credits = \$1,500*
  - ***\$50,000 + \$1,500*** allocated to DPL zonal load

# Did we get a matching decrease in BOR?

- There are outliers...

## Uplift Per Month - 2012/2013



- *Dec 12 – Feb 13*
- *Extremely high gas prices in Northern NJ*
- *Resources in this area run for reliability*
- *Account for > 50% of the total BOR charges since Dec 12*

# Net Change Since Dec 1, 2012

Time Period	DA OR	RT BOR	REACTIVE	BLACKSTART	TOTAL
Prior 10 Months	118.5	378	47.7	0	543.9
10 Months Since	<b>81.5</b>	<b>343.5*</b>	<b>219.8</b>	<b>77.5</b>	<b>722.3</b>
Difference	-37	-34	<b>172.1</b>	<b>77.5</b>	<b>178.4</b> ↑

\* Raw data

Time Period	DA OR	RT BOR	REACTIVE	BLACKSTART	TOTAL
Prior 10 Months	118.5	378	47.7	0	543.9
10 Months Since	<b>81.5</b>	<b>247**</b>	<b>219.8</b>	<b>77.5</b>	<b>625.6</b>
Difference	<b>-37</b>	<b>-131</b>	<b>172.1</b>	<b>77.5</b>	<b>81.65</b> ↑

\*\* January and February 2013 RT BOR values replaced with average of March through September to accommodate outliers.

- There was a net decrease in DA OR and BOR
  - Accounting for outliers... ~ \$170M
  - Actual... ~ \$71M
- Still there is a net increase
  - Accounting for outliers... ~ \$82M
  - Actual... ~ \$180M
- Uneconomic units are becoming less economic!



- Some statistics YTD 2013:
  - DA OR Top 10 = 60% of total DA OR
    - **Top 5 are 55% of total**
  - BOR Top 10 = 58% of total BOR
    - **Top 5 are 46% of total**
  - Reactive Top 10 = 62% of total Reactive

- Top 5 DA OR and BOR units are committed for local constraint relief but are not needed above min
  - Ineligible to set LMP if not dispatched above min
- For reactive there are specific sensitive areas  
<http://www.pjm.com/markets-and-operations/energy/~media/markets-ops/energy/real-time/transmission-outage-and-voltage-problem-zone-mapping.ashx>
  - BGE/PEP for APSOUTH/BED-BLA
  - Seneca area of PN
  - DPL actual high voltages
  - CLVLND Interface area of ATSI
- Same scenario for DA OR/BOR units

- DA OR, BOR and Reactive units are running day-after-day
- Most uplift is from covering incremental cost at min and no-load
- Start up may impact a single day at a time but is a smaller portion of the costs

- For Phase 1 to be successful we should look to address
  - Units sitting at min for either reactive or thermal constraint control
    - Incremental cost at a minimum
    - No-load would be nice but there are side-effects
  - Must maintain consistency between pricing and dispatch
    - Injection of fixed costs into LMP will jeopardize, if not violate, this

- Allowing units at min to set LMP will create additional congestion
- Break points between binding additional constraints and allowing uplift to be incurred
  - Lines need to be drawn clearly to eliminate ambiguity
- Impacts on FTRs
  - Need to be cognizant of this
  - May require FTR rule changes
    - Allocate less for these facilities?
    - Allocate underfunding on these facilities differently?

