

# Operating Reserves Educational Session Part C

Energy Market Uplift  
Senior Task Force  
September 17, 2013

Joseph Bowring  
Joel Romero Luna



Monitoring Analytics

# Operating Reserves

- **SOM 2013 Q2 Analysis**
  - **Generation made whole**
  - **Generation paid LOC**
  - **Charges allocation breakdown**
- **Operating Reserves vs. Net Costs**



# Generation Made Whole

**From Jan-13 through Jun-13:**

- **2.0 percent of all day-ahead generation received a day-ahead make whole payment.**
- **2.8 percent of all real-time generation received a balancing make whole payment.**
- **Units received a day-ahead make whole payment to cover an average of \$23 per MWh.**
- **Units received a balancing make whole payment to cover an average of \$17 per MWh.**



# Generation Made Whole

Energy Market	Total Generation	Generation Eligible for Operating Reserve Credits	Generation Eligible for Operating Reserve Credits Percentage
Day-Ahead	393,443	127,632	32.4%
Real-Time	387,313	121,273	31.3%

Energy Market	Generation Eligible for Operating Reserve Credits	Generation Receiving Operating Reserve Credits	Generation Receiving Operating Reserve Credits Percentage
Day-Ahead	127,632	7,756	6.1%
Real-Time	121,273	11,030	9.1%

# Generation paid LOC

**From Jan-13 through Jun-13:**

- **Pool-scheduled combustion turbines and diesels were scheduled for 5,125 GWh or 1.3 percent of all day-ahead generation.**
- **38.7% or 1,981 GWh of that generation was not called in real-time and received an LOC payment.**
- **Units scheduled in day ahead and not called in real time received an average of \$16 for each MWh not produced.**



# Generation paid LOC

	2012			2013		
	Day-Ahead Generation	Day-Ahead Generation Requested in Real Time	Day-Ahead Generation Not Requested in Real Time Receiving LOC Credits	Day-Ahead Generation	Day-Ahead Generation Requested in Real Time	Day-Ahead Generation Not Requested in Real Time Receiving LOC Credits
Jan	572	435	373	886	638	565
Feb	753	590	546	430	206	173
Mar	1,408	1,076	921	809	397	283
Apr	1,870	1,431	1,249	684	325	256
May	1,926	1,250	1,046	1,031	389	262
Jun	2,586	1,624	1,235	1,284	699	442
Jul	3,898	1,424	988			
Aug	2,356	1,383	1,122			
Sep	1,635	1,169	1,032			
Oct	1,079	895	797			
Nov	1,319	1,018	823			
Dec	851	678	625			
Total (Jan - Jun)	9,116	6,406	5,370	5,125	2,655	1,981
Share (Jan - Jun)	100.0%	70.3%	58.9%	100.0%	51.8%	38.7%
Total	20,254	12,973	10,757			
Share	100.0%	64.1%	53.1%			

# Charges Allocation (Jan – Jun 2013)

Category	Credits (MM\$)	Share
Day-Ahead	\$49	18%
Balancing	\$183	66%
LOC	\$45	16%
Total	\$276	



Allocation	Charges (MM\$)	Share
Day-Ahead Demand, Exports and DECs	\$49	18%
Real-Time Load and Exports	\$27	10%
Deviations	\$200	72%
Total	\$276	

# Charges Allocation Breakdown (Jan – Jun 2013)

Transaction	Type	Charges (MM\$)	Share
Load	Day-ahead	\$44	16%
	Real-time	\$27	10%
	Deviations	\$80	29%
Generators	Deviations	\$46	17%
Exports	Day-ahead	\$1	0%
	Real-time	\$1	0%
	Deviations	\$8	3%
Imports	Deviations	\$14	5%
Decrement Bids	Cleared	\$4	1%
	Deviations	\$14	5%
Increment Offers	Deviations	\$7	3%
Internal Bilateral Transactions	Deviations	\$4	1%
Financial Combination with Virtuals	Deviations	\$7	3%
Physical Combination with Virtuals	Deviations	\$11	4%
Combination without Virtuals	Deviations	\$6	2%
<b>Total</b>		<b>\$276</b>	



Transaction	Charges (MM\$)	Share
Load	\$152	55%
Generators	\$46	17%
Interchanges	\$24	9%
Virtuals	\$26	9%
Internal Bilateral Transactions	\$4	1%
Financial Combination with Virtuals	\$7	3%
Physical Combination with Virtuals	\$11	4%
Combination without Virtuals	\$6	2%
<b>Total</b>		<b>\$276</b>



**Monitoring Analytics, LLC**  
**2621 Van Buren Avenue**  
**Suite 160**  
**Eagleville, PA**  
**19403**

**(610) 271-8050**

**MA@monitoringanalytics.com**

**www.MonitoringAnalytics.com**

