

Mini Node LocalDay HourEndIn Cleared Ml Da Lump Rt Calc Mly Rt Lump RT Dispmin DA Dispmin Unit Cost Var O&M Total Var C FERC Form DA LMP M RT LMP MI DA cleared DA cleared DA cleared actual mwh All hours a DA paymer RT paymer MISO payr fuel costs var o&m o cost/bene 0 = benefit full cost full cost/ba FERC Var C FERC cost/ Cost-Rev DA Reg DA spin DA Supp RT Reg RT Spin RT Supp

[TRADE SECRET DATA BEGINS]

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Mini Node Local Day Hour end in Cleared M Da Lmp Rt Calc Mv Rt Lmp RT Disp in DA Disp in Unit Cost Var O&M Total Var C FERC Form DA LMP M RT LMP M DA cleared DA cleared DA cleared actual mva All hours a DA paymer RT paymer MISO payr fuel costs var o&m o cost/bene 0 = benefit full cost full cost/ba FERC Var C FERC cost/ Cost-Rev DA Reg DA spin DA Supp RT Reg RT Spin RT Supp

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[TRADE SECRET DATA BEGINS]

Summary MP Data by month (All Hours)

8760 Hours.

BOSWELL 3 FYE 17										
Row Labels	Average of Da Lmp	Average of Rt Lmp	Average of Unit Cost	Average of Var O&M	Sum of All hours actual MWh	Sum of MISO payment	Sum of cost/(benefit)	Sum of full cost	Sum of full cost/benefit	Sum of Cost>Rev

BOSWELL 3 FYE 18										
Row Labels	Average of Da Lmp	Average of Rt Lmp	Average of Unit Cost	Average of Var O&M	Sum of All hours actual MWh	Sum of MISO payment	Sum of cost/(benefit)	Sum of full cost	Sum of full cost/benefit	Sum of Cost>Rev

BOSWELL 4 FYE 17										
Row Labels	Average of Da Lmp	Average of Rt Lmp	Average of Unit Cost	Average of Var O&M	Sum of All hours actual MWh	Sum of MISO payment	Sum of cost/(benefit)	Sum of full cost	Sum of full cost/benefit	Sum of Cost>Rev

BOSWELL 4 FYE 18										
Row Labels	Average of Da Lmp	Average of Rt Lmp	Average of Unit Cost	Average of Var O&M	Sum of All hours actual MWh	Sum of MISO payment	Sum of cost/(benefit)	Sum of full cost	Sum of full cost/benefit	Sum of Cost>Rev

Only Looking at Fuel Cost:

Net cost/ben by month

		FYE 17		FYE 18	
Month	Bos 3	Bos 4	Bos 3	Bos 4	
Jul					
Aug					
Sep					
Oct					
Nov					
Dec					
Jan					
Feb					
Mar					
Apr					
May					
Jun					

		FYE 17		FYE 18	
Month	Bos 3	Bos 4	Bos 3	Bos 4	
Jul					
Aug					
Sep					
Oct					
Nov					
Dec					
Jan					
Feb					
Mar					
Apr					
May					
Jun					

Magnitude of cost/ben

		FYE 17		FYE 18	
Month	Bos 3	Bos 4	Bos 3	Bos 4	
Jul					
Aug					
Sep					
Oct					
Nov					
Dec					
Jan					
Feb					
Mar					
Apr					
May					
Jun					

Margin	Bos 3		Bos 4	
	FYE 17	FYE 18	FYE 17	FYE 18

MISO Payments
Net cost/ben
Margin

Including variable o&m

Net cost/ben by month

		FYE 17		FYE 18	
Month	Bos 3	Bos 4	Bos 3	Bos 4	
Jul					
Aug					
Sep					
Oct					
Nov					
Dec					
Jan					
Feb					
Mar					
Apr					
May					
Jun					

		FYE 17		FYE 18	
Month	Bos 3	Bos 4	Bos 3	Bos 4	
Jul					
Aug					
Sep					
Oct					
Nov					
Dec					
Jan					
Feb					
Mar					
Apr					
May					
Jun					

Magnitude of cost/ben

		FYE 17		FYE 18	
Month	Bos 3	Bos 4	Bos 3	Bos 4	

Margin	Bos 3		Bos 4	
	FYE 17	FYE 18	FYE 17	FYE 18

Boswell 3 FYE 17												
DA cleared = DA disp												1

Row Labels	Count of DA cleared > DA Disp min	Average of Da Lmp	Average of Rt Lmp	Average of Unit Cost	Average of Var O&M	Sum of All hours actual MWh	Sum of MISO payment	Sum of fuel costs	Sum of var o&m cost	Sum of cost/(benefit)	Sum of full cost	Sum of full cost/benefit
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Boswell 3 FYE 18												
DA cleared = DA disp												1

Row Labels	Count of DA cleared > DA Disp min	Average of Da Lmp	Average of Rt Lmp	Average of Unit Cost	Average of Var O&M	Sum of All hours actual MWh	Sum of MISO payment	Sum of fuel costs	Sum of var o&m cost	Sum of cost/(benefit)	Sum of full cost	Sum of full cost/benefit
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Boswell 4 FYE 17												
DA cleared = DA disp												1

Row Labels	Count of DA cleared > DA Disp min	Average of Da Lmp	Average of Rt Lmp	Average of Unit Cost	Average of Var O&M	Sum of All hours actual MWh	Sum of MISO payment	Sum of fuel costs	Sum of var o&m cost	Sum of cost/(benefit)	Sum of full cost	Sum of full cost/benefit
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Boswell 4 FYE 18												
DA cleared = DA disp												1

Row Labels	Count of DA cleared > DA Disp min	Average of Da Lmp	Average of Rt Lmp	Average of Unit Cost	Average of Var O&M	Sum of All hours actual MWh	Sum of MISO payment	Sum of fuel costs	Sum of var o&m cost	Sum of cost/(benefit)	Sum of full cost	Sum of full cost/benefit
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Chart T: Variable Cost (\$/MWh)		
	Boswell 3	Boswell 4

Bos 3 FYE 2017											
Row Labels	Average of Unit Cost	Average of Var O&M	Average of Total Var Cost	Average of FERC Form 1 Var Cost	Sum of All hours actual MWh	Sum of MISO payment	Sum of full cost	Sum of FERC Var Cost	Sum of cost/(benefit)	Sum of full cost/benefit	Sum of FERC cost/ben

Note: Reported Variable Costs include "unit cost" and "variable o&m" from compliance filing

Boswell 3 Cost/Benefit				
Month	Reported - FY17	Reported - FY18	FERC Form 1 - FY17	FERC Form 1 - FY18

Bos 3 FYE 2018											
Row Labels	Average of Unit Cost	Average of Var O&M	Average of Total Var Cost	Average of FERC Form 1 Var Cost	Sum of All hours actual MWh	Sum of MISO payment	Sum of full cost	Sum of FERC Var Cost	Sum of cost/(benefit)	Sum of full cost/benefit	Sum of FERC cost/ben

Bos 4 FYE 2017											
Row Labels	Average of Unit Cost	Average of Var O&M	Average of Total Var Cost	Average of FERC Form 1 Var Cost	Sum of All hours actual MWh	Sum of MISO payment	Sum of full cost	Sum of FERC Var Cost	Sum of cost/(benefit)	Sum of full cost/benefit	Sum of FERC cost/ben

Boswell 4 Cost/Benefit				
Month	Reported - FY17	Reported - FY18	FERC Form 1 - FY17	FERC Form 1 - FY18

Bos 4 FYE 2018											
Row Labels	Average of Unit Cost	Average of Var O&M	Average of Total Var Cost	Average of FERC Form 1 Var Cost	Sum of All hours actual MWh	Sum of MISO payment	Sum of full cost	Sum of FERC Var Cost	Sum of cost/(benefit)	Sum of full cost/benefit	Sum of FERC cost/ben

Chart E: MP Hours When Cost Exceeded Revenues in FY 17

Month	Total Hours in Month	Boswell 3	Boswell 4	Boswell 3 percent of hours	Boswell 4 percent of hours
Jul	744	241	209	32%	30%
Aug	744	208	246	40%	33%
Sep	720	301	401	42%	56%
Oct	744	358	368	21%	49%
Nov	721	483	448	67%	62%
Dec	744	320	321	43%	43%
Jan	744	247	252	33%	34%
Feb	672	367	357	55%	53%
Mar	743	340	355	46%	48%
Apr	720	235	251	33%	35%
May	720	430	396	57%	55%
Jun	744	391	377	53%	51%
Total	8760	3801	4043	43%	46%

Chart F: MP Hours When Cost Exceeded Revenues in FY 18

Month	Total Hours in Month	Boswell 3	Boswell 4	Boswell 3 percent of hours	Boswell 4 percent of hours
Jul	744	374	339	50%	48%
Aug	744	471	445	63%	60%
Sep	720	416	443	58%	62%
Oct	744	412	386	55%	54%
Nov	721	333	333	46%	46%
Dec	744	323	319	43%	43%
Jan	744	73	69	10%	9%
Feb	672	305	87	16%	13%
Mar	743	357	150	22%	20%
Apr	720	304	102	14%	14%
May	720	245	236	34%	33%
Jun	744	273	305	37%	41%
Total	8760	3296	3028	38%	35%

Chart A: Frequency of MP Self-Scheduled Hours in FY 17

Month	Total Hours in Month	Boswell 3	Boswell 4	Boswell 3 % of hours	Boswell 4 % of hours
Jul	744	241	209	32%	30%
Aug	744	208	246	40%	33%
Sep	720	301	401	42%	56%
Oct	744	358	368	21%	49%
Nov	721	483	448	67%	62%
Dec	744	320	321	43%	43%
Jan	744	247	252	33%	34%
Feb	672	367	357	55%	53%
Mar	743	340	355	46%	48%
Apr	720	235	251	33%	35%
May	720	430	396	57%	55%
Jun	744	391	377	53%	51%
Total	8760	3801	4043	43%	46%

Chart B: Frequency of MP Self-Scheduled Hours in FY 18

Month	Total Hours in Month	Boswell 3	Boswell 4	Boswell 3 % of hours	Boswell 4 % of hours
Jul	744	374	339	50%	48%
Aug	744	471	445	63%	60%
Sep	720	416	443	58%	62%
Oct	744	412	386	55%	54%
Nov	721	333	333	46%	46%
Dec	744	323	319	43%	43%
Jan	744	73	69	10%	9%
Feb	672	305	87	16%	13%
Mar	743	357	150	22%	20%
Apr	720	304	102	14%	14%
May	720	245	236	34%	33%
Jun	744	273	305	37%	41%
Total	8760	3296	3028	38%	35%

Chart E: MP net cost/benefit for self-scheduled hours, when including fuel costs only

Month	FY17	FY18	FY17	FY18

Chart L: MP net cost/benefit for all hours, when including fuel costs only

Month	FY17	FY18	FY17	FY18

Chart M: MP net cost/benefit for all hours, when including fuel and variable O&M costs

Month	FY17	FY18	FY17	FY18

Chart Q: MP net cost/benefit for self-scheduled hours, when including fuel and variable O&M costs

Month	FY17	FY18	FY17	FY18

Net Cost/Benefit: Fuel +Var O&M

Month	FY17	FY18	FY17	FY18

Chart P: Change to net cost/benefit when including variable O&M (all hours)

FY17	FY18	FY17	FY18

Net Cost/Benefit: SS Hours vs All Hours

Month	Box 3 (fuel only)	Box 3 (all var cost)	Box 4 (fuel only)	Box 3 (all var cost)	Box 3 (fuel only)	Box 3 (all var cost)

Net Cost/Benefit: SS Hours vs All Hours

Month	Box 4 (fuel only)	Box 4 (all var cost)	Box 4 (fuel only)	Box 4 (all var cost)	Box 4 (fuel only)	Box 4 (all var cost)

Net Cost/Benefit: SS Hours vs All Hours

Month	Box 3 (fuel only)	Box 3 (all var cost)	Box 3 (fuel only)	Box 3 (all var cost)	Box 3 (fuel only)	Box 3 (all var cost)

Net Cost/Benefit: SS Hours vs All Hours

Month	Box 4 (fuel only)	Box 4 (all var cost)	Box 4 (fuel only)	Box 4 (all var cost)	Box 4 (fuel only)	Box 4 (all var cost)

Net MRO Payment: SS Hours vs All Hours

Month	Box 3	Box 4	Box 3	Box 4

Net MISO Payment: 55 Hours vs All Hours					
FY 18	55 Hours			All Hours	
Month	Box 3	Box 4	Box 5	Box 3	Box 4