

Overcharging of Congestion in Interface Prices

JCM

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Monitoring Analytics

Monitoring Analytics Statements

Monitoring Analytics agrees with the PJM solution of modifying the Market Flow calculation

Monitoring Analytics does not agree that eliminating the congestion component for M2M constraints in the interface prices is the correct solution

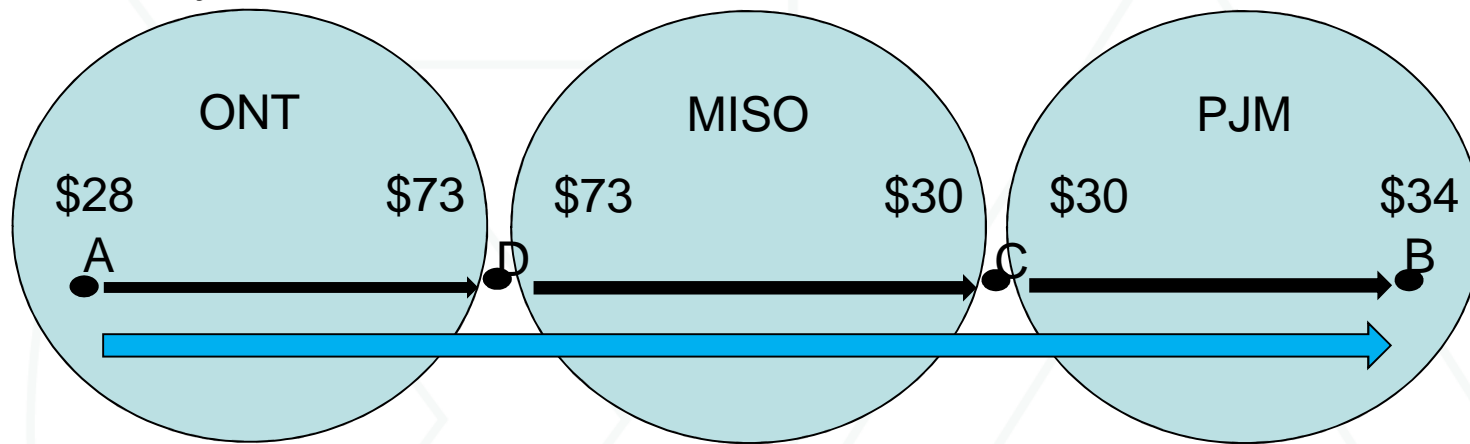
Monitoring Analytics agrees that the potential for overpayment of congestion exists in the wheeling example Potomac Economics presented

Monitoring Analytics believes that the non-contiguous nature of the ONT Interface pricing point is contributing to the issue



Interface Pricing

Buy from Bus A in ONT, sell to Bus B in PJM



Get paid \$34

Buy at \$28

Net position at C is zero:

Settlement = \$0

Net position at D is zero:

Settlement = \$0

Pay PJM congestion between B and C
($\$34 - \$30 = \$4$)

Pay MISO congestion between C and D
($\$30 - \$73 = -\$43$)

Pay ONT congestion between D and A
($\$73 - \$28 = \$45$)

Total Congestion between A and B is:

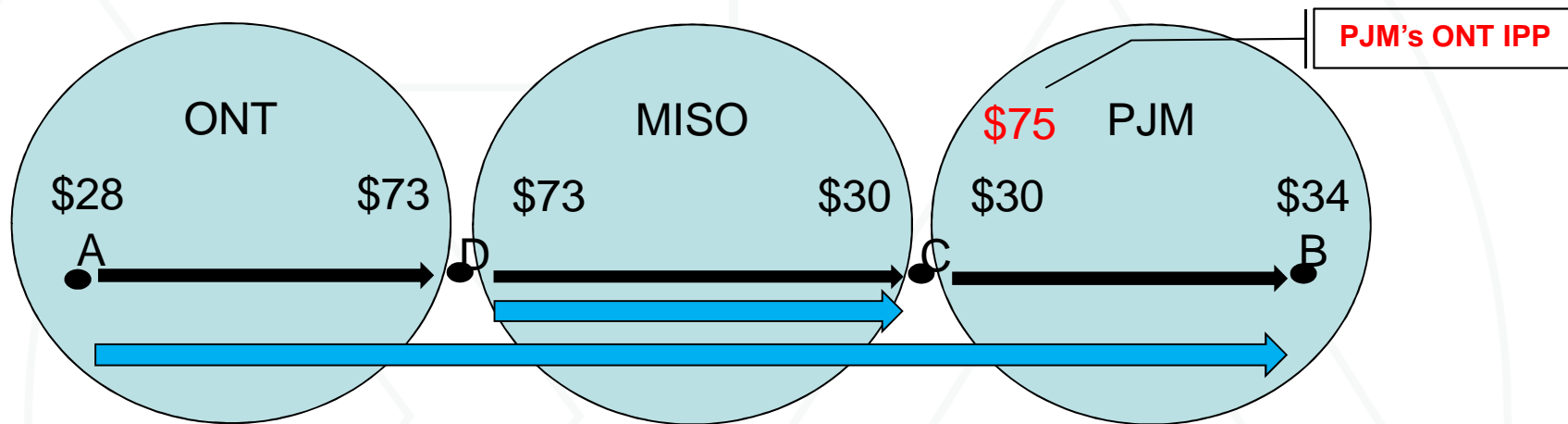
$\$4 + -\$43 + \$45 = \6

Net settlement is:

$\$34 - \$28 - \$6 = \0

Interface Pricing

Buy from Bus A in ONT, sell to Bus B in PJM



Get paid \$34
 Buy at \$28
 Net position at C is zero:
 Settlement = \$0
 Net position at D is zero:
 Settlement = \$0

Pay PJM congestion between B and A
 ($\$34 - \$75 = -\$41$)
 Pay MISO congestion between C and D
 ($\$30 - \$73 = -\$43$)
 Pay ONT congestion between D and A
 ($\$73 - \$28 = \$45$)
 Total Congestion between A and B is:
 $-\$41 + -\$43 + \$45 = -\39
Net settlement = $\$34 - \$28 - (-\$39) = \45

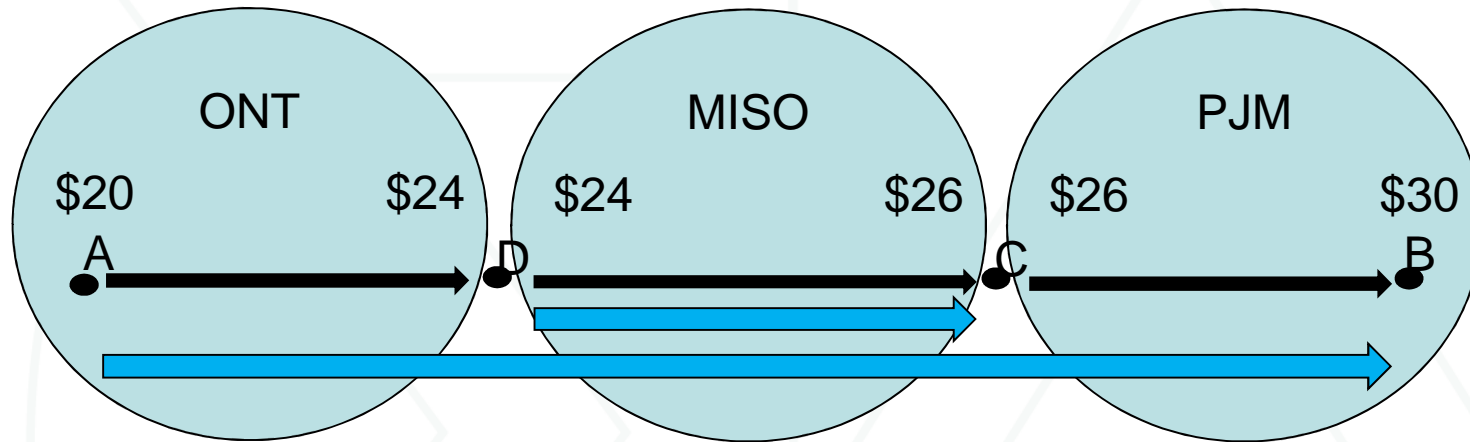
Interface Pricing

- **Even if PJM and MISO interface prices were completely converged, market participants may receive more than the value of congestion relief provided.**
 - **The excess payments come from the congestion dollars which support FTR funding.**



Interface Pricing

Buy from Bus A in ONT, sell to Bus B in PJM

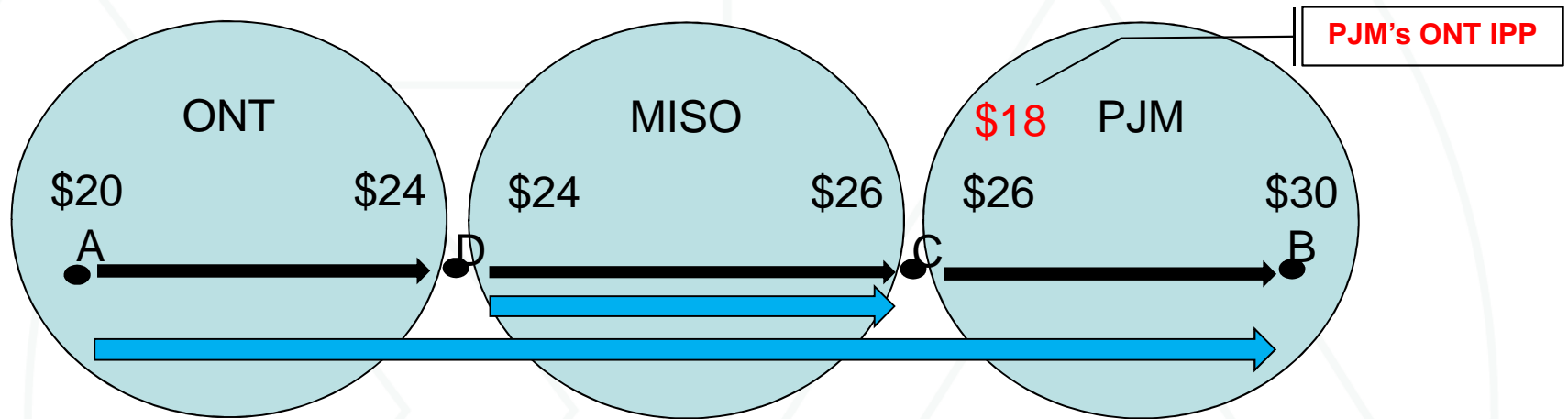


Get paid \$30
 Buy at \$20
 Net position at C is zero:
 Settlement = \$0
 Net position at D is zero:
 Settlement = \$0

Pay PJM congestion between B and C
 ($\$30 - \$26 = \$4$)
 Pay MISO congestion between C and D
 ($\$26 - \$24 = \$2$)
 Pay ONT congestion between D and A
 ($\$24 - \$20 = \$4$)
 Total Congestion between A and B is:
 $\$4 + \$2 + \$4 = \10
Net settlement = $\$30 - \$20 - (\$10) = \0

Interface Pricing

Buy from Bus A in ONT, sell to Bus B in PJM



Get paid \$30
 Buy at \$20
 Net position at C is zero:
 Settlement = \$0
 Net position at D is zero:
 Settlement = \$0

Pay PJM congestion between B and A
 ($\$30 - \$18 = \$12$)
 Pay MISO congestion between C and D
 ($\$26 - \$24 = \$2$)
 Pay ONT congestion between D and A
 ($\$24 - \$20 = \$4$)
 Total Congestion between A and B is:
 $\$12 + \$2 + \$4 = \18
Net settlement = $\$30 - \$20 - \$18 = -\8

Interface Pricing

- **The current Interface Pricing rules do not reflect how an LMP market should operate, when a non-contiguous interface is used.**
- **Market participants may double pay for congestion through MISO.**



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Interface Prices

Hourly IESO Price: 23.18

IESO Interface

LMP: \$23.47

MCC: \$7.42

MISO SMP: \$15.75

PJM Interface

LMP: \$25.80

MCC: \$10.00

MISO

IESO

NYISO

PJM

IESO Interface

LMP: \$26.78

MCC: \$1.22

PJM SMP: \$25.30

MISO Interface

LMP: -\$7.19

MCC: -\$31.13



Settlements: Export from PJM to ONT

Two Transactions PJM-MISO and MISO-ONT

PJM-MISO

Buy from PJM: -(-\$7.19)
Sell to MISO: +\$25.80
Net Settlement: \$32.99

MISO-ONT

Buy from MISO: -\$23.47
Sell to ONT: +\$23.18
Net Settlement: -\$0.29

TOTAL Settlement

$\$32.99 + -\$0.29 = \$32.70$

PROFIT

One Transaction PJM-MISO-ONT

ONT-MISO-PJM

Buy from PJM: -\$26.78
MISO Wheel IN: +\$25.80
MISO Wheel OUT: -\$23.47
Sell to ONT: +\$23.18
Net Settlement: -\$1.27

TOTAL Settlement

-\$1.27
LOSS



Settlements: Import from ONT to PJM

Two Transactions ONT-MISO and MISO-PJM

ONT-MISO

Buy from ONT: -\$23.18
Sell to MISO: +\$23.47
Net Settlement: \$0.29

MISO-PJM

Buy from MISO: -\$25.80
Sell to PJM: + - \$7.19
Net Settlement: -\$32.99

TOTAL Settlement

$\$0.29 + -\$32.99 = -\$32.70$
LOSS

One Transaction ONT-MISO-PJM

ONT-MISO-PJM

Buy from ONT: -\$23.18
MISO Wheel IN: +\$23.47
MISO Wheel OUT: -\$25.80
Sell to PJM: +\$26.78
Net Settlement: \$1.27

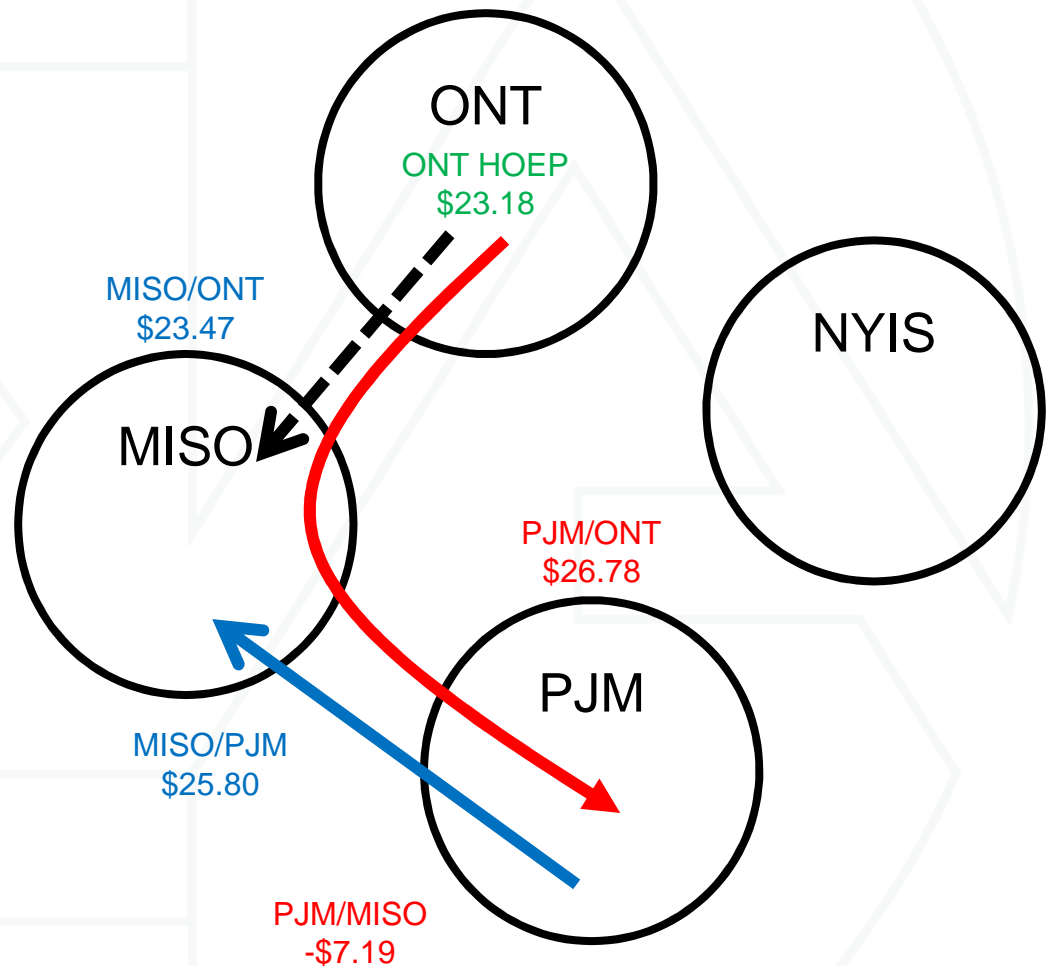
TOTAL Settlement

\$1.27
PROFIT

Sham Schedule

ONT-MISO-PJM with PJM-MISO

<u>ONT-MISO-PJM</u>	
Buy from ONT:	-\$23.18
MISO Wheel IN:	+\$23.47
MISO Wheel OUT:	-\$25.80
Sell to PJM:	+\$26.78
Net Settlement:	\$1.27
<u>PJM-MISO</u>	
Buy from PJM:	-\$7.19
Sell to MISO:	+\$25.80
Net Settlement:	\$32.99
<u>TOTAL Settlement</u>	
$\$32.99 + \$1.27 = \$34.26$	
PROFIT	



Sham Schedule Effect

- **The net effect of the two transactions is that ONT raises generation, and MISO lowers generation**
- **The predominant flows will be from ONT-MISO which further aggravates the constraint**
- **The market participant profits from this activity**

