



Market Pricing Working Group

Market Evolution Program

Meeting #10
October 20, 2004
8:30am - 12:00pm



Market Pricing Working Group

Market Evolution Program

Expected Price Impacts of the Different MIO Pricing Options for Different Demand Ramp Scenarios

Four Possible Demand Ramp Scenarios:

1) Ramp up with the demand ramp rate less than or equal to the ramp rate of the marginal unit(s):

In this case all the pricing techniques should produce a price equal to the price of the marginal unit.

2) Ramp up with the demand ramp rate greater than the ramp rate of the marginal unit(s) assuming the prices for the next units in the stack are close to the price of the marginal unit (operating in a relatively flat part of the supply curve):

No early ramp up action will be undertaken by MIO.
The prices will be as follows:

Ø12X ramp rate should be the cheapest and should be equal to the marginal unit price.

Ø1X ramp rate and the two MIO pricing options should be equal to the prices of the next units in the stack.

3) Ramp up with the demand ramp rate greater than the ramp rate of the marginal unit(s) assuming the prices for the next units in the stack are significantly higher than the price of the marginal unit (now operating near the end or steep part of the supply curve):

Early ramp up action will be undertaken by MIO.
The prices are expected to be as follows:

Ø 12X ramp rate will be the cheapest and will be equal to the marginal unit price, which will be approximately equal to the MIO incremental prices. Some form of PCG will be required for the units that ramp early.

Ø 1X ramp rate price for the interval will be the price of the next units in the stack, which can be very high. MIO highest slice price will be equal to the price of the ramping units and will be highest for the ramp up intervals. It will be approximately equal to the 12X ramp rate in the interval for which the units are ramping up.

4) Ramp down:

It is expected that all pricing techniques will produce approximately the same price.



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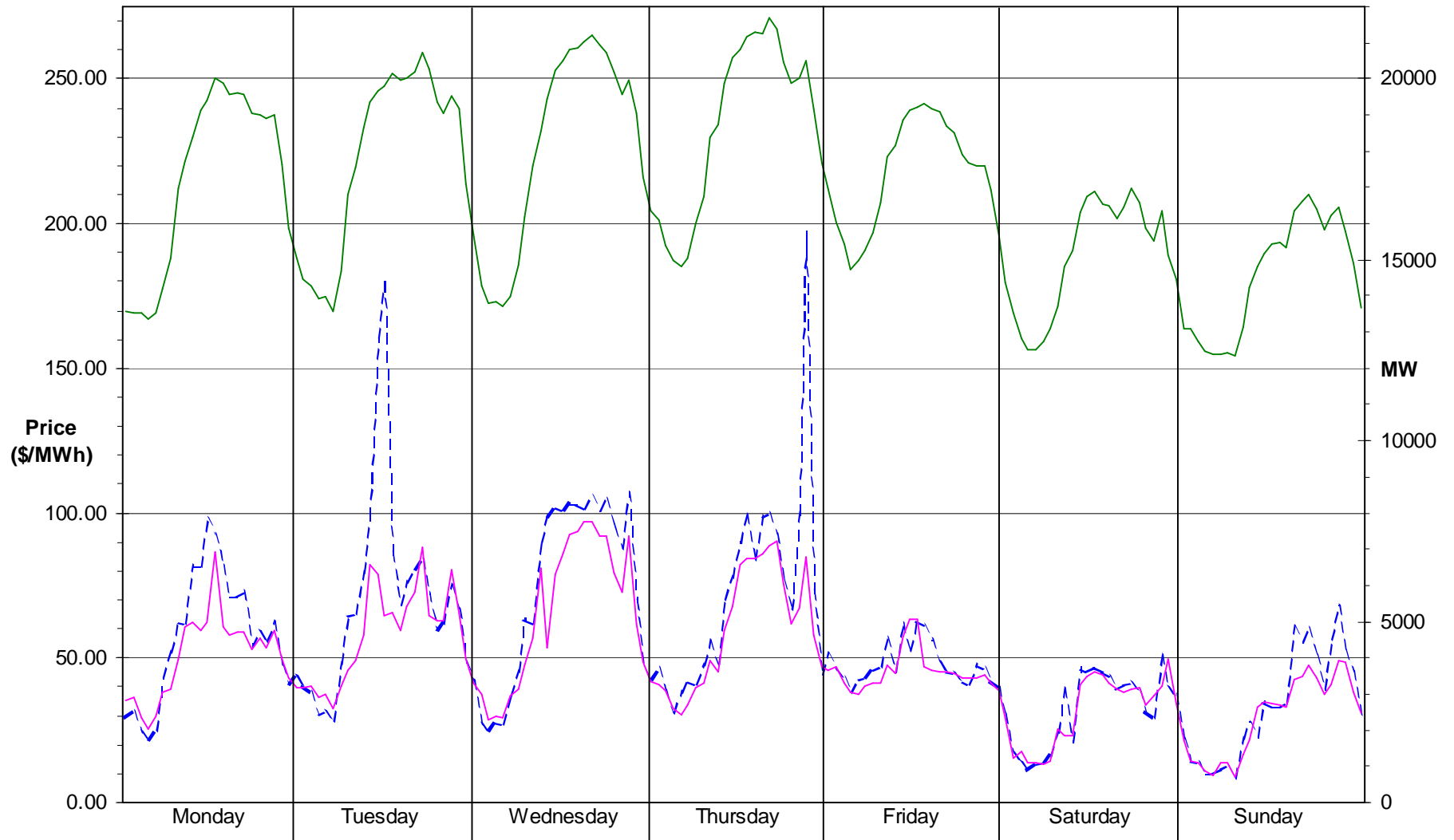
Price Analysis July 19, 2004 to July 25, 2004 (Post-MIO)



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Analysis of Prices for the week of July 19, 2004 to July 25, 2004

--- Richview LMP (\$) --- HOEP (\$) --- Ontario Market Demand Constrained (MW)

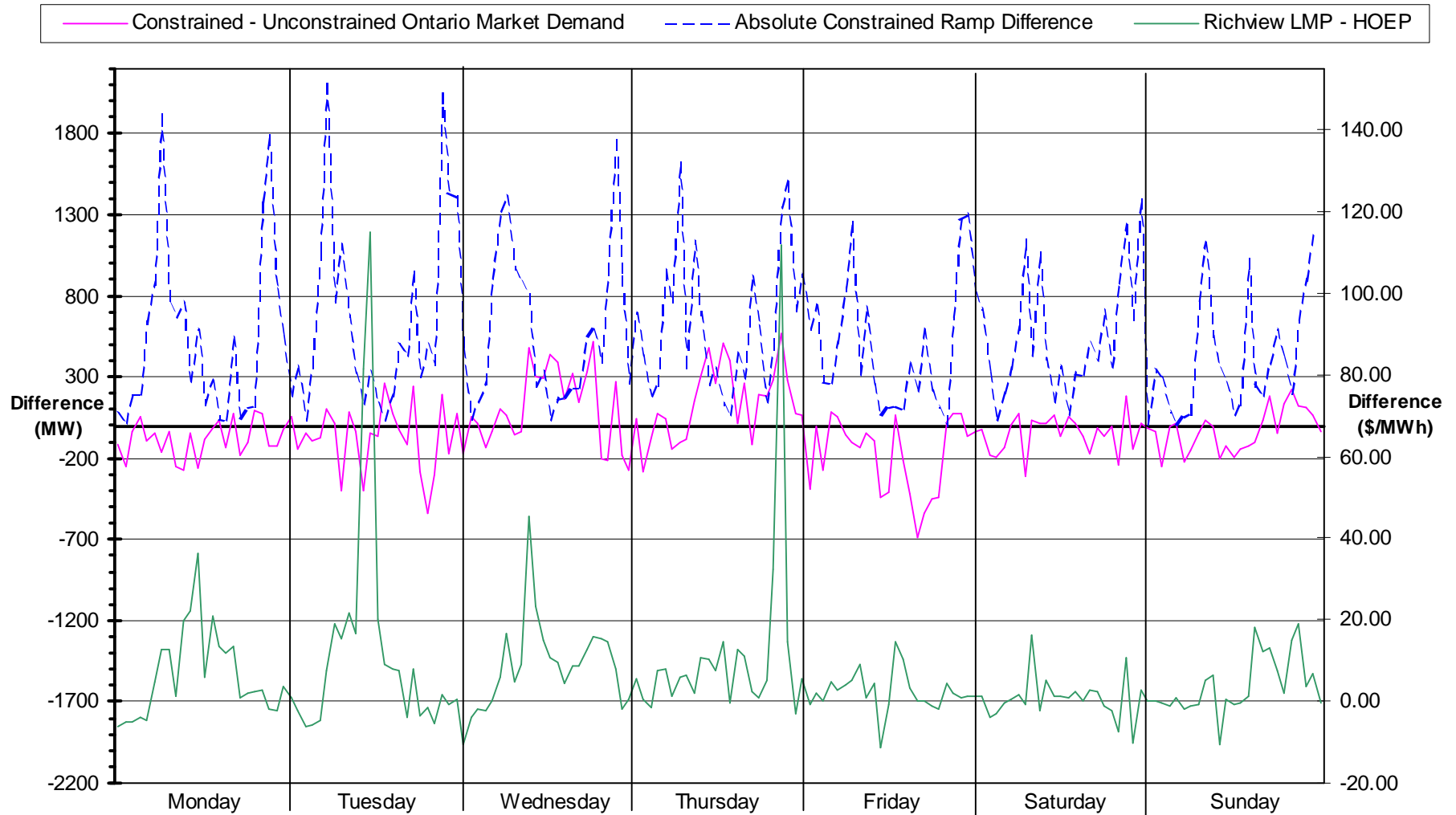


Hourly Interval from July 19, 2004 to July 25, 2004



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Comparison between Richview LMP & HOEP, Constrained & Unconstrained Ontario Market Demand, and Ramp Difference per Hour for July 19-25, 2004



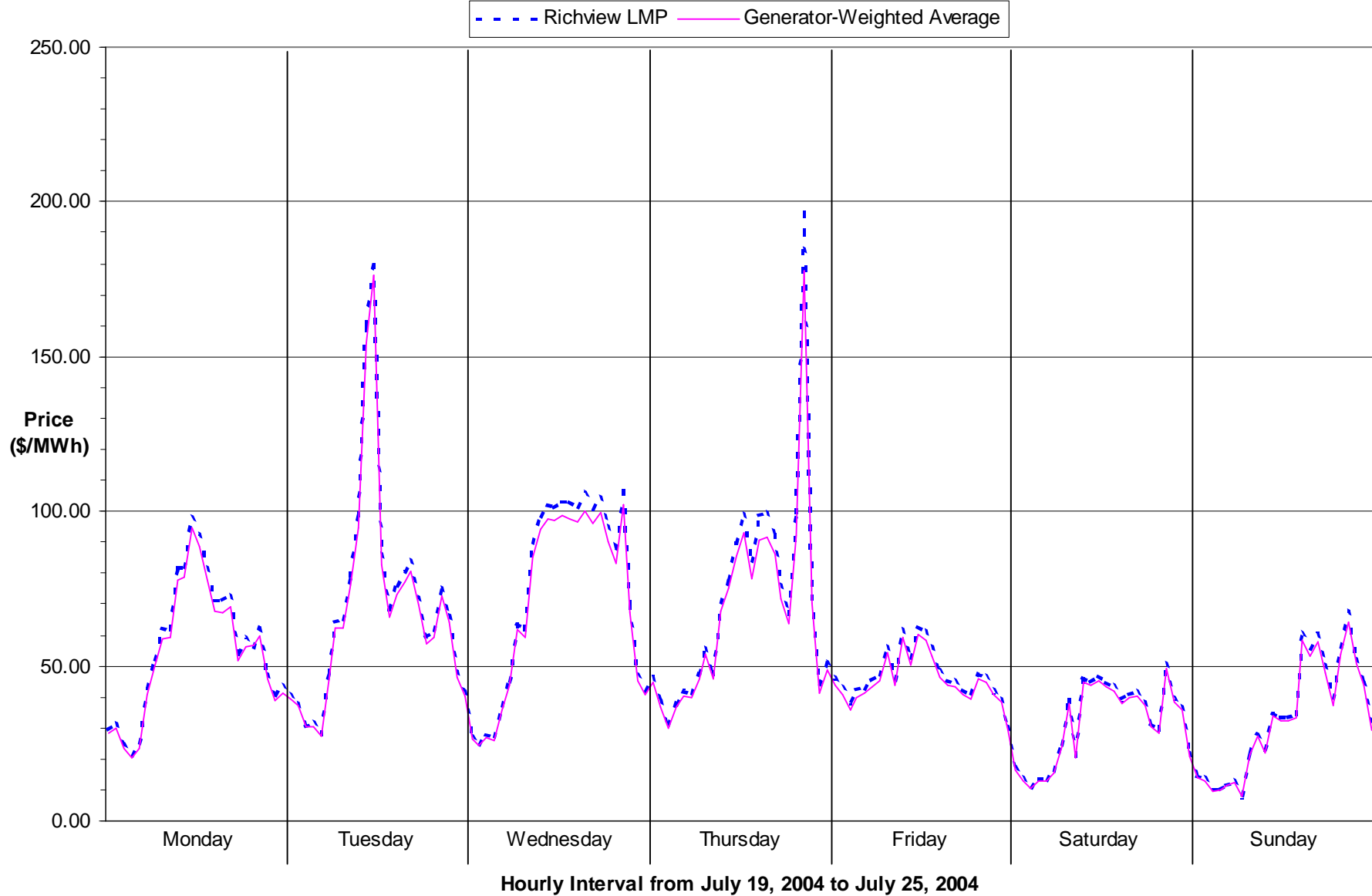
Hourly Interval from July 19, 2004 to July 25, 2004

GWA:	Arithmetic Avg \$52.62, Weighted Avg \$56.09
LMP:	Arithmetic Avg \$54.89, Weighted Avg \$58.57
HOEP:	Arithmetic Avg \$48.33, Weighted Avg \$51.14



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Comparison between Richview LMP and Generator Weighted Average for July 19-25, 2004





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Price Analysis

August 16, 2004 to August 22, 2004

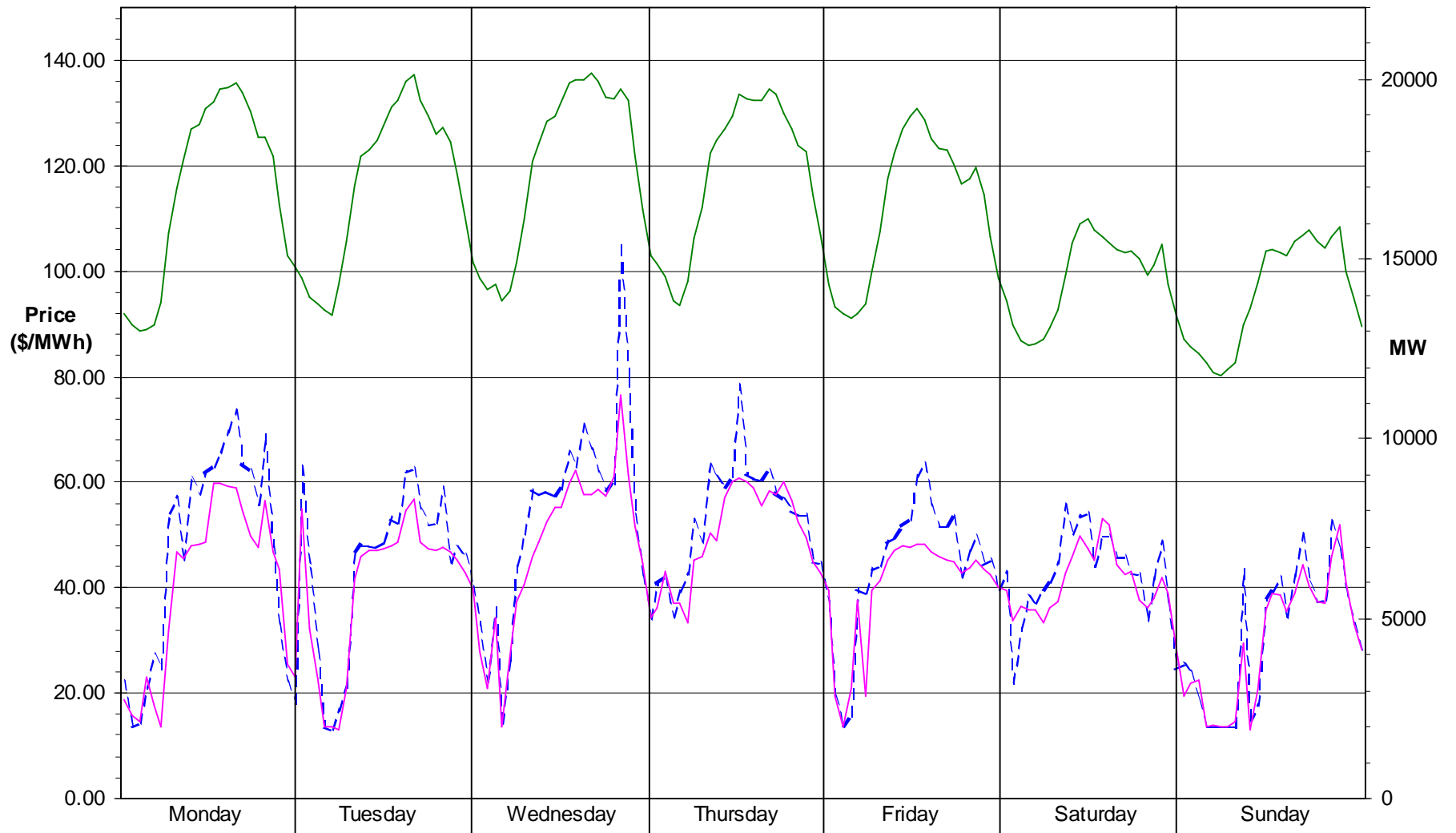
(Post-MIO)



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Analysis of Prices for the week of August 16, 2004 to August 22, 2004

--- Richview LMP (\$) --- HOEP (\$) --- Ontario Market Demand Constrained (MW)

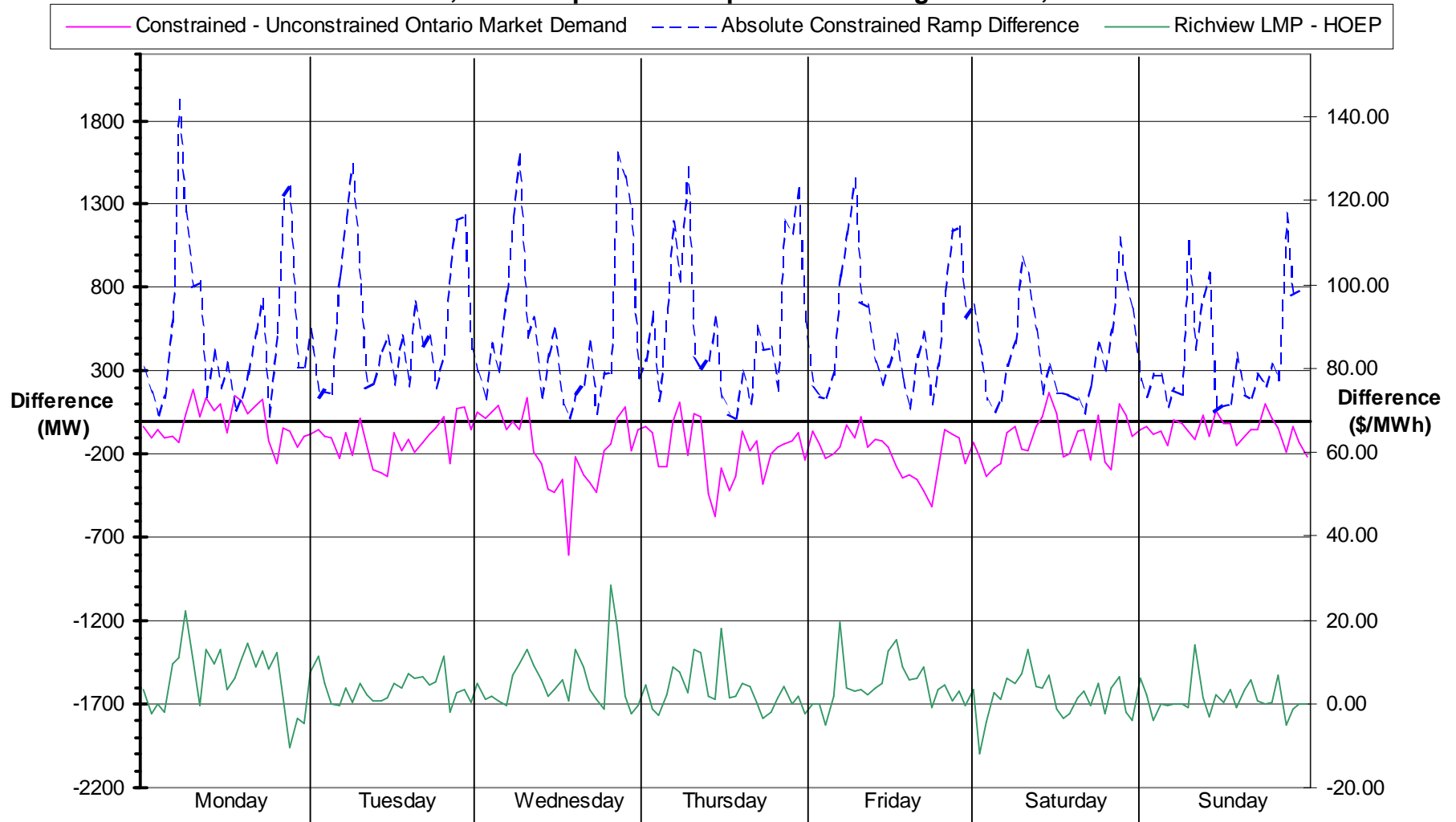


Hourly Interval from August 16, 2004 to August 22, 2004



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Comparison between Richview LMP & HOEP, Constrained & Unconstrained Ontario Market Demand, and Ramp Difference per Hour for August 16-22, 2004



Hourly Interval from August 16, 2004 to August 22, 2004

GWA:	Arithmetic Avg \$43.34, Weighted Avg \$45.22
LMP:	Arithmetic Avg \$44.81, Weighted Avg \$46.82
HOEP:	Arithmetic Avg \$41.08, Weighted Avg \$42.80



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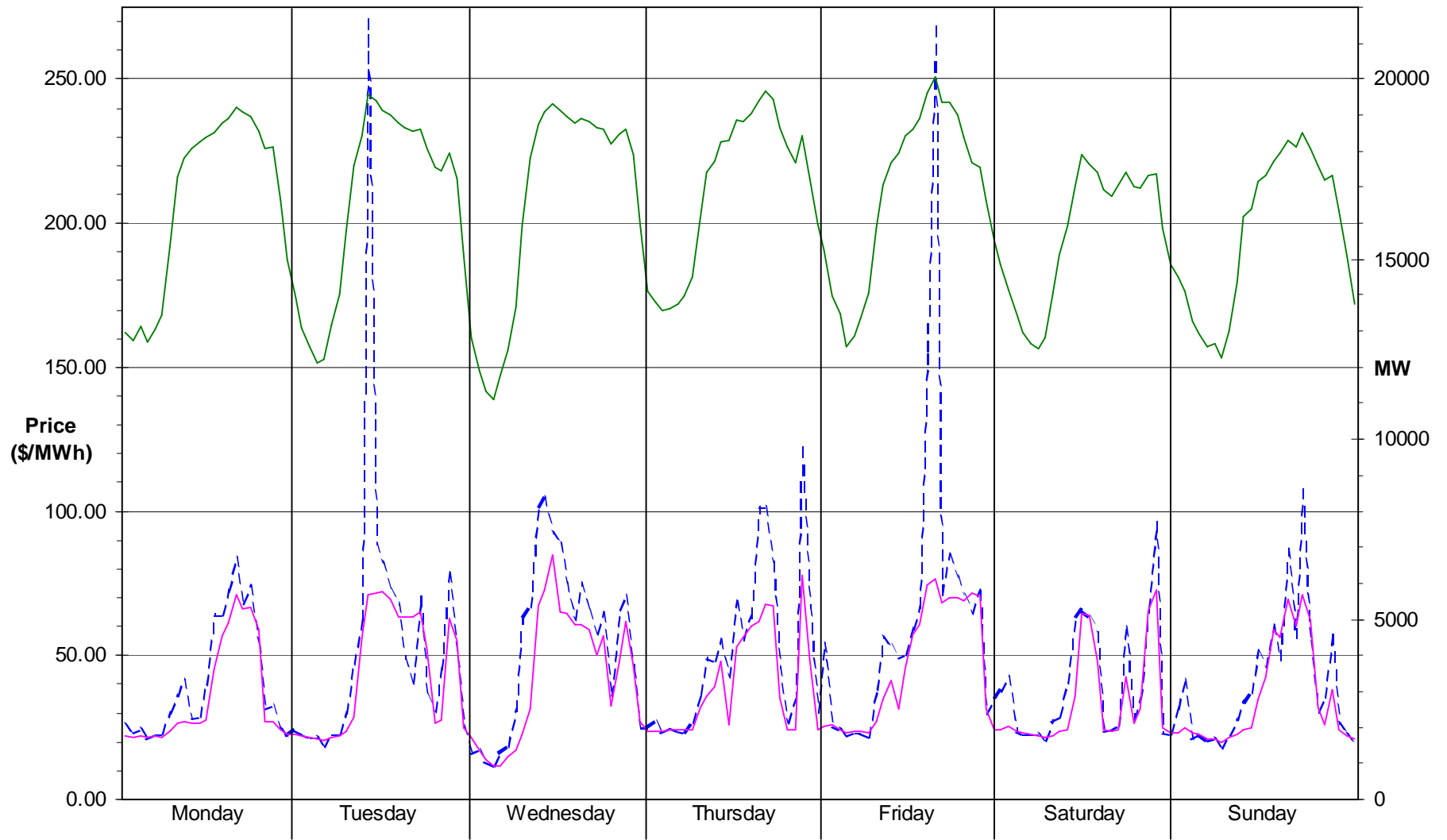
Price Analysis July 21, 2003 to July 27, 2003 (Pre-MIO)



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Analysis of Prices for the week of July 21, 2003 to July 27, 2003

Richview LMP (\$) HOEP (\$) Ontario Market Demand Constrained (MW)

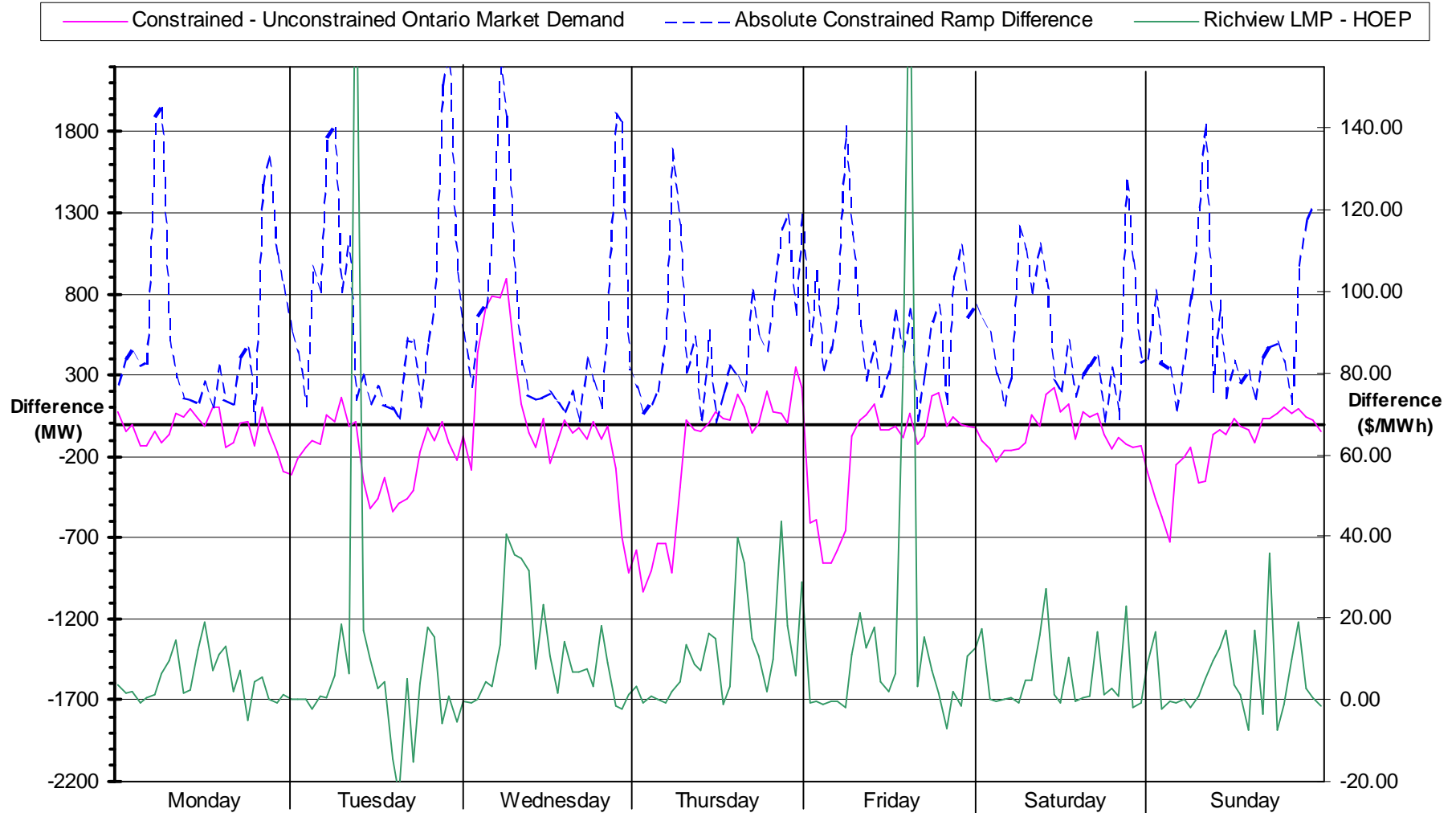


Hourly Interval from July 21, 2003 to July 27, 2003



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Comparison between Richview LMP & HOEP, Constrained & Unconstrained Ontario Market Demand, and Ramp Difference per Hour for July 21-27, 2003



Hourly Interval from July 21, 2003 to July 27, 2003

GWA:	Arithmetic Avg \$47.34, Weighted Avg \$50.36
LMP:	Arithmetic Avg \$48.49, Weighted Avg \$51.66
HOEP:	Arithmetic Avg \$39.25, Weighted Avg \$41.45



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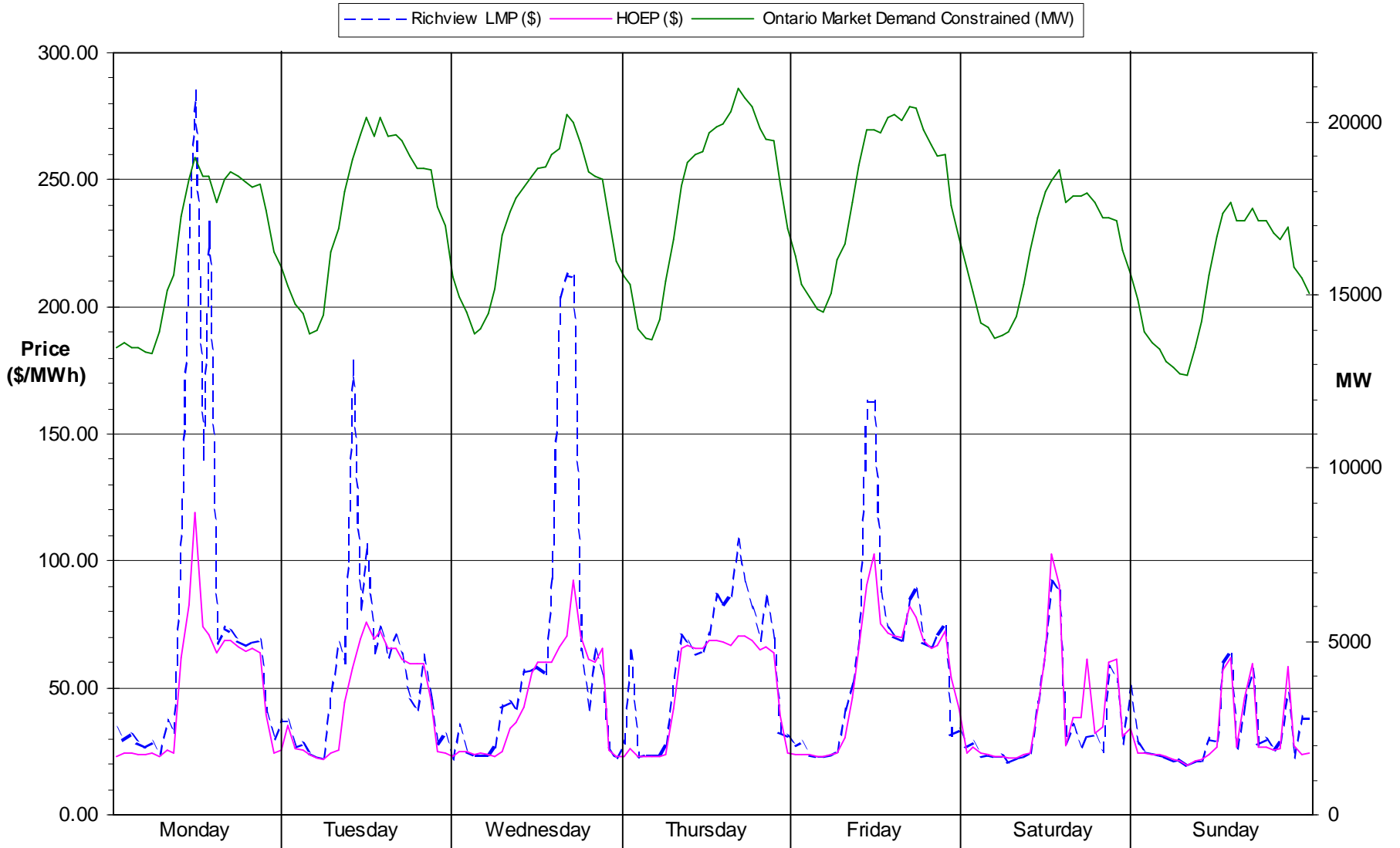
Price Analysis

August 4, 2003 to August 10, 2003
(Pre-MIO)



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Analysis of Prices for the week of August 4, 2003 to August 10, 2003

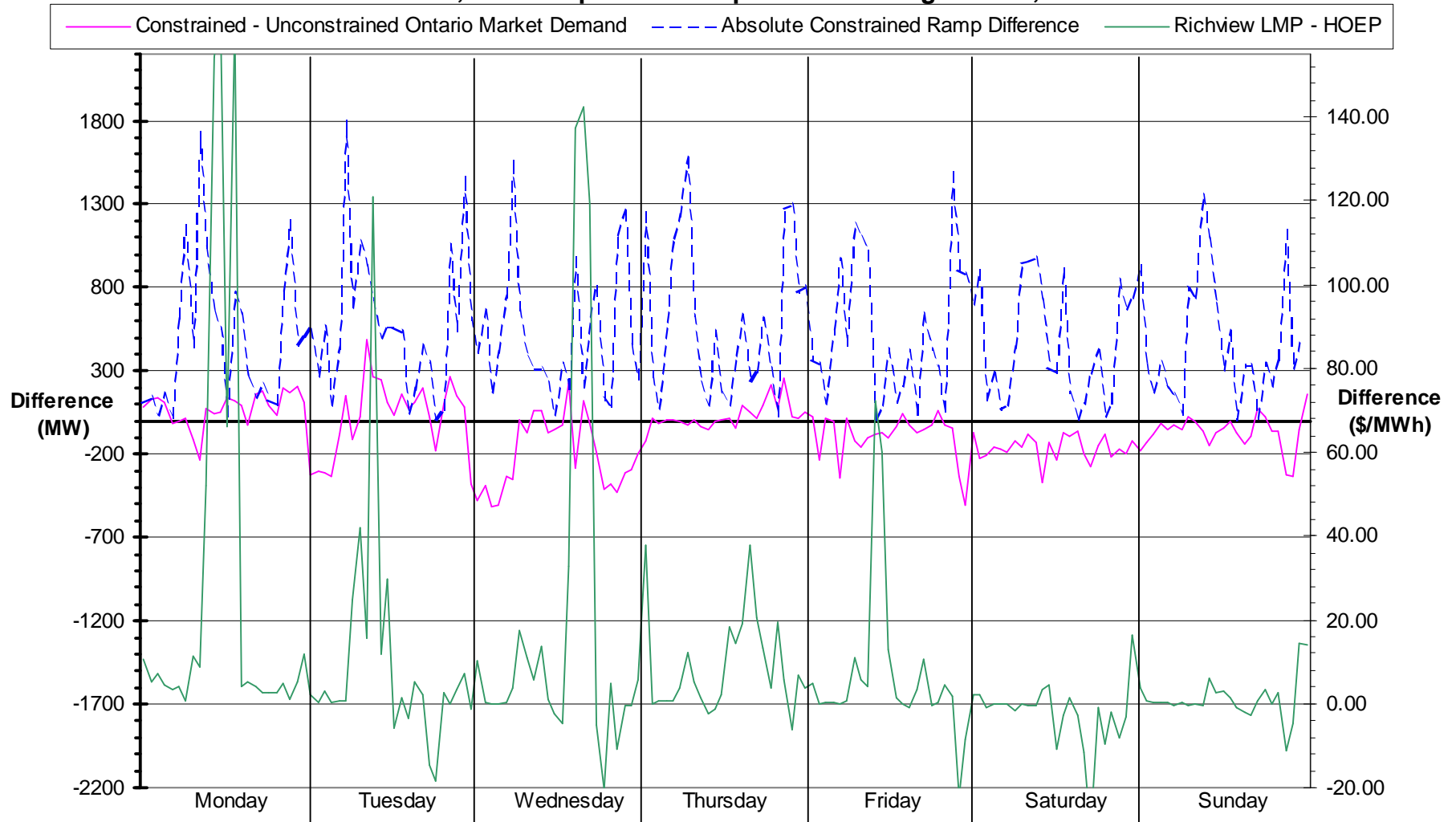


Hourly Interval from August 4, 2003 to August 10, 2003



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Comparison between Richview LMP & HOEP, Constrained & Unconstrained Ontario Market Demand, and Ramp Difference per Hour for August 4-10, 2003



Hourly Interval from August 4, 2003 to August 10, 2003

GWA:	Arithmetic Avg \$54.21, Weighted Avg \$57.44
LMP:	Arithmetic Avg \$55.37, Weighted Avg \$58.71
HOEP:	Arithmetic Avg \$44.97, Weighted Avg \$47.37



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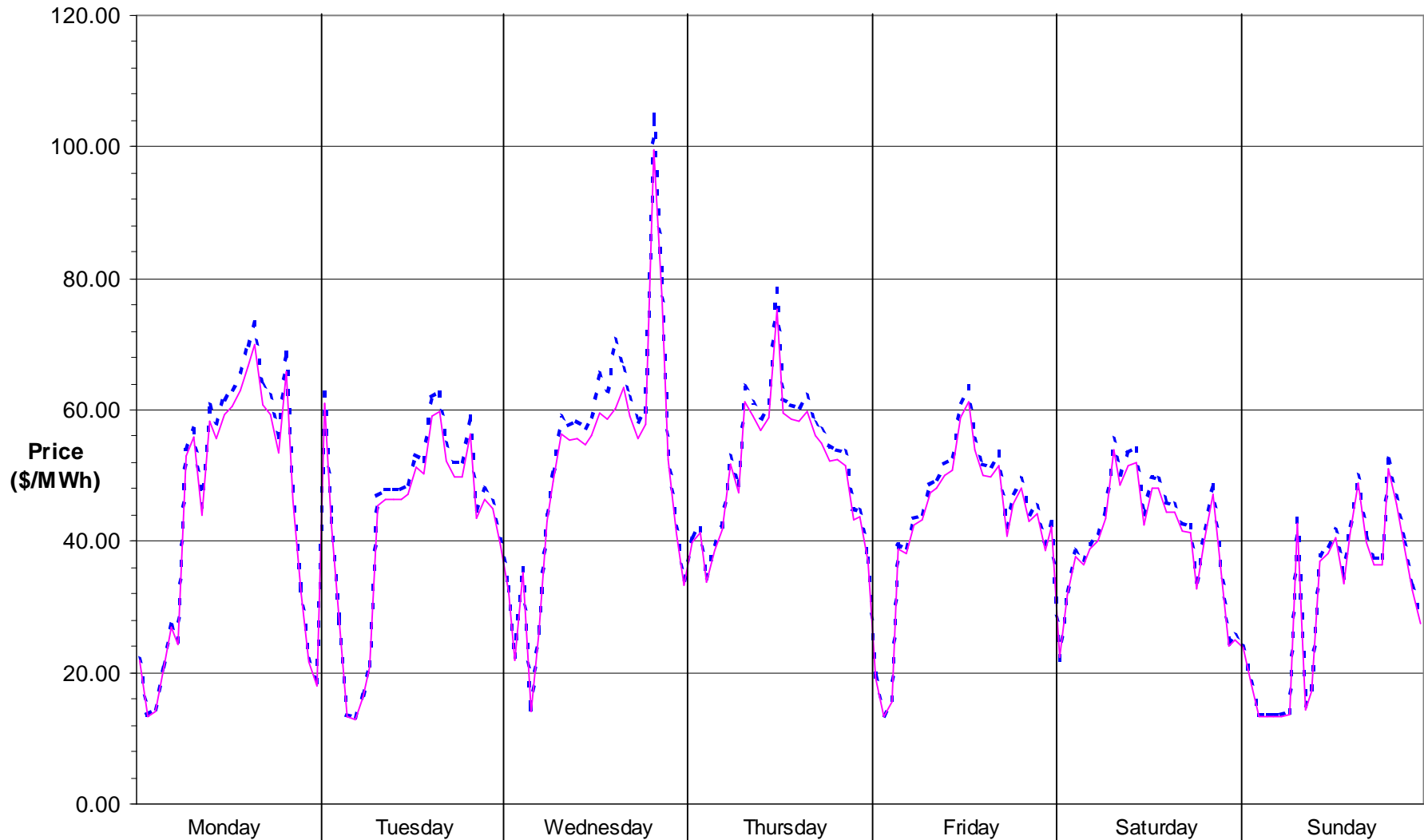
Supplemental Slides



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Comparison between Richview LMP and the Generator-Weighted Average for August 16-22, 2004

- - - Richview LMP — Generator-Weighted Average



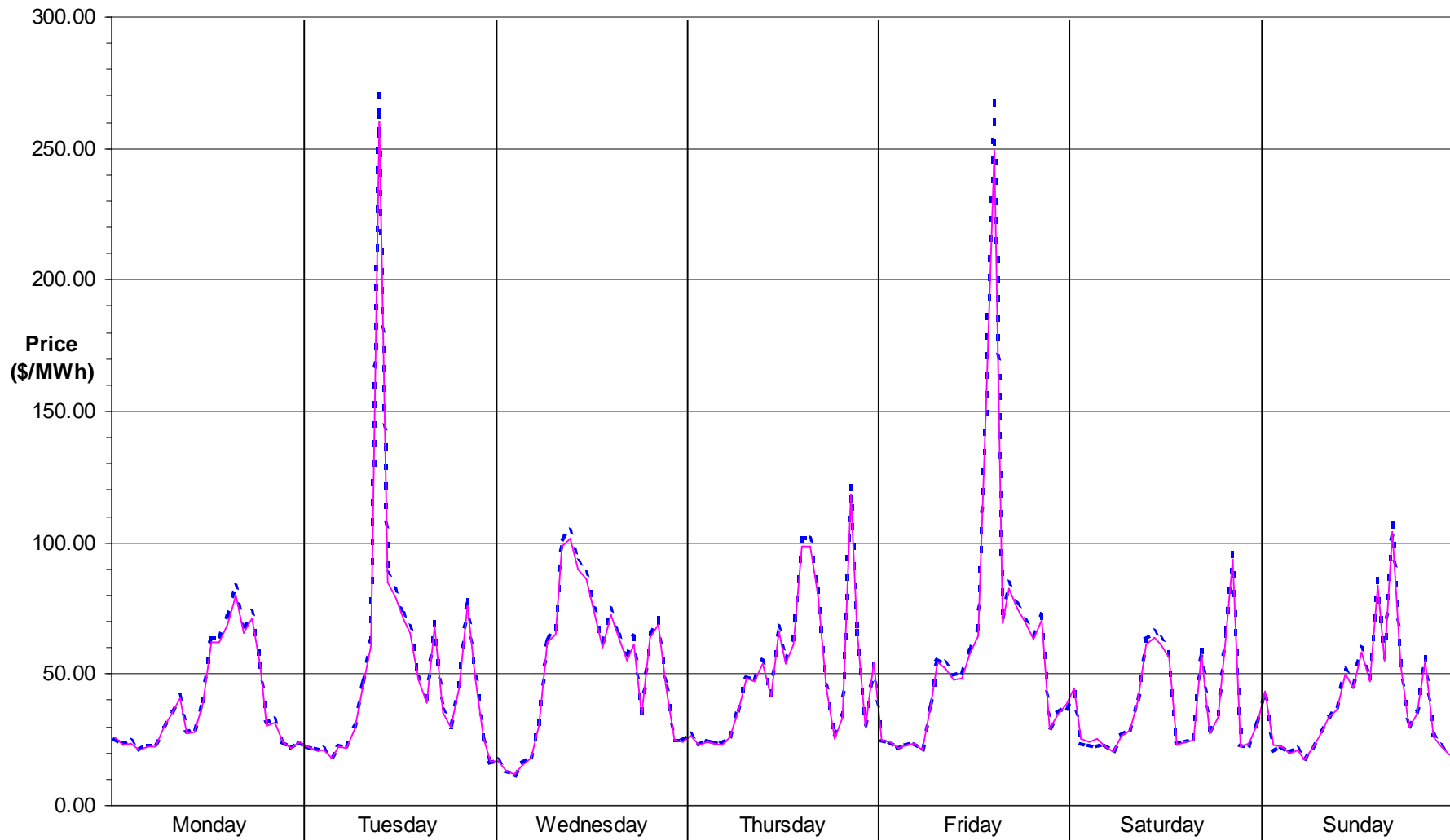
Hourly Interval from August 16, 2004 to August 22, 2004



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Comparison between Richview LMP and Generator Weighted Average for July 21-27, 2003

--- Richview LMP — Generator-Weighted Average



Hourly Interval from July 21, 2003 to July 27, 2003



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Comparison between Richview LMP and the Generator-Weighted Average for August 4-10, 2003

