GS<u>ENERGY</u>

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September 30, 2004

RCEVEL

SEP 3 n 2004

PUBLIC SERVICE COMMISSION

Elizabeth O'Donnell Executive Director Kentucky Public Service Commission 211 Sower Boulevard Frankfort, Kentucky 40602-0615

RE: Investigation Into The Membership of Louisville Gas and Electric Company and Kentucky Utilities Company In The Midwest Independent Transmission System Operator, Inc. – Case No. 2003-00266

Dear Ms. O'Donnell:

Enclosed please find an original and ten (10) copies of pages of Appendix A and Appendix B to Exhibit MJM-2, Mathew J. Morey's Supplemental Cost-Benefit Analysis. These pages were inadvertently omitted from Mr. Morey's Supplemental Testimony filed on September 29, 2004.

Also enclosed please find an original and ten (10) copies of Michael S. Beer's notarized verification.

Should you have any questions concerning the enclosed, please do not hesitate to contact me directly at 502-627-2573.

Sincerely,

Kent WB lale

Kent W. Blake Director, Regulatory Initiatives

cc: Parties of Record

| | | r | I | Т | |
|---|---------|----------|----------|----------|----------|
| Revenues | | | | | |
| Transmission Revenues | | | | | |
| Transmission Revenues | - | (28.04) | (28.04) | (28.04) | (28.04) |
| Subtotal | - | (28.04) | (28.04) | (28.04) | (28.04) |
| Off-system Sales Revenue | | (10.91) | (10.91) | (73.84) | 1.87 |
| FTRs | | | | | |
| FTR Revenues (as offset to congestion payments) | | (74.64) | (74.64) | (74.64) | (74.64) |
| Share of Net Revenue from FTR Auction | 1.58 | (8.91) | (8.91) | (8.91) | (8.91) |
| Subtotal | 1.58 | (83.54) | (83.54) | (83.54) | (83.54) |
| Miscellaneous Revenues | - | - | - | - | - |
| Total Revenues | 1.58 | (122.49) | (122.49) | (185.42) | (109.72) |
| Difference in Net Recurring Cost | (2.35) | 21.92 | 50.85 | 28.73 | 59.90 |
| Non-recurring Cost (Exit Fee) | (24.81) | (24.81) | (24.81) | (24.81) | (24.81) |

Table A.3 Annual and PV of Costs and Revenues: MISO Base Case (millions of dollars; present value to 2003, 2005-2010) (Positive numbers are costs; Negative numbers are revenues)

| Category | PV 2005 - 2010 (million \$ 2003) | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|--|---|--------|--------|--------|----------|--------|----------|
| Administrative Costs | | | | | | | |
| Implementation & Administration | 64.79 | 15.14 | 14.86 | 14.89 | 14.75 | 14.30 | 12.88 |
| Ancillary Services Market Administration | 0.89 | | | 0.28 | 0.28 | 0.28 | 0.28 |
| Other Administrative Costs | - | | - | - | ~ | - | |
| Subtotal | 65.56 | 15.14 | 14.86 | 15.17 | 15.03 | 14.58 | 13.16 |
| Operations Costs | | | | | | | |
| Generation Costs | | | | | | | |
| A&G Costs Associated with RTO Status | 6.20 | 1.31 | 1.35 | 1.38 | 1.41 | 1.45 | 1.49 |
| Native Load | | | | | | | |
| Fuel Costs | 2,752.05 | 525.33 | 610.41 | 635.90 | 648.48 | 647.18 | 668.33 |
| Fixed O&M Costs | 293.56 | 61.62 | 61.80 | 63.86 | 67.43 | 70.13 | 73.50 |
| Variable O&M Costs | 101.19 | 18.64 | 19.31 | 21.24 | 22.71 | 25.65 | 31.57 |
| Emission Credit Costs | 415.16 | 103.01 | 106.10 | 99.91 | 94.26 | 72.56 | 75.15 |
| Market Purchases | 130.34 | 19.54 | 20.70 | 26.24 | 36.78 | 41.03 | 36.59 |
| Subtotal | 3,692.30 | 728.14 | 818.33 | 847.15 | 869.66 | 856.56 | 885.14 |
| Off-system Sales | | | | | | | |
| Fuel Costs | 423.63 | 114.28 | 104.65 | 86.52 | 84.80 | 80.14 | 93.97 |
| Variable O&M Costs | 12.85 | 3.34 | 2.70 | 2.35 | 2.55 | 2.78 | 3.64 |
| Emission Credit Costs | 54.83 | 18.46 | 14.81 | 11.05 | 10.59 | 7.86 | 8.66 |
| Market Purchases | - | - | - | - | - | - | - |
| Subtotal | 491.30 | 136.08 | 122.16 | 99.92 | 97.94 | 90.78 | 106.26 |
| Transmission System Operation Costs | | | | | | | |
| A&G Costs Associated with RTO Status | 6.20 | 1.31 | 1.35 | 1.38 | 1.41 | 1.45 | 1.49 |
| Reliability Coordinator and OASIS Services | ~ | _ | - | | _ | - | - |
| Subtotal | 6.20 | 1.31 | 1.35 | 1.38 | 1.41 | 1.45 | 1.49 |
| Transmission Usage Costs | | | | | | | |
| Transmission Payments | 24.60 | 6.96 | 6.02 | 5.45 | 4.73 | 4.71 | 4.71 |
| Transmission Congestion Payments | 78.56 | 16.65 | 17.06 | 17.49 | 17.93 | 18.37 | 18.83 |
| Subtotal | 103.16 | 23.61 | 23.08 | 22.94 | 22.65 | 23.08 | 23.54 |
| Uplift Charges | | | | | | | |
| Schedule 21 Uplift Charges | 3.86 | 0.81 | 0.83 | 0.86 | 0.89 | 0.91 | 0.93 |
| Miscellaneous Uplift Costs | 2.23 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 |
| Subtotal | 6.09 | 1.31 | 1.33 | 1.36 | 1.39 | 1.41 | 1.43 |
| Legal, Regulatory & Transaction Costs | 3.78 | 0.80 | 0.82 | 0.84 | 0.86 | 0.88 | 0.91 |
| Total Costs | 4,374.59 | 907.71 | 983.27 | 990.14 | 1,010.36 | 990.20 | 1,033.42 |
| Revenues | | | | | | | |

| Transmission Revenues | - | | | | | | |
|---|----------|----------|----------|----------|----------|----------|----------|
| Transmission Revenues | (46.82) | (12.10) | (10.50) | (10.30) | (9.90) | (9.90) | (9.90) |
| Subtotal | (46.82) | (12.10) | (10.50) | (10.30) | (9.90) | (9.90) | (9.90) |
| Off-system Sales Revenue | (728.60) | (217.41) | (180.48) | (142.51) | (140.87) | (129.40) | (154.14) |
| FTRs | | | | | | | |
| FTR Revenues (as offset to congestion payments) | (74.64) | (15.81) | (16.21) | (16.61) | (17.03) | (17.46) | (17.89) |
| Share of Net Revenue from FTR Auction | (8.91) | (2.00) | (2.00) | (2.00) | (2.00) | (2.00) | (2.00) |
| Subtotal | (83.54) | (17.81) | (18.21) | (18.61) | (19.03) | (19.46) | (19.89) |
| Miscellaneous Revenues | | | | | | | |
| Total Revenues | (858.96) | (247.33) | (209.19) | (171.42) | (169.80) | (158.76) | (183.93) |
| Net Recurring Cost | 3,515.63 | 660.38 | 774.08 | 818.72 | 840.56 | 831.44 | 849.49 |
| Exit Fee | - | - | r. | - | - | - | |

Table A.4Annual and PV of Costs and Benefits: PJM RTO Case(millions of dollars; present value to 2003, 2005-2010)

(Positive numbers are costs; Negative numbers are revenues)

| Category | PV 2005 - 2010 (million \$ 2003) | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|--|--------|--------|---------|--------|--------|--------|
| Administrative Costs | | | | | | | |
| Implementation & | 75.59 | 17.12 | 16.45 | 15.99 | 16.79 | 17.45 | 18.32 |
| Administration Administration | * | - | | | | - | - |
| Other Administrative Costs | - | | - | | | | - |
| Subtotal | 75.59 | 17.12 | 16.45 | 15.99 | 16.79 | 17.45 | 18.32 |
| Operations Costs | | | | | | | |
| Generation Costs | | | | | | | |
| A&G Costs Associated with | 6.20 | 1 2 1 | 1.35 | 1.38 | 1.41 | 1.45 | 1.49 |
| RTO Status | 6.20 | 1.31 | 1.55 | 1.30 | 1.41 | 1.45 | 1.47 |
| Native Load | 2,752.05 | 525.33 | 610.41 | 635.90 | 648.48 | 647.18 | 668.33 |
| Fuel Costs Fixed O&M Costs | 2,732.03 | 61.62 | 61.80 | 63.86 | 67.43 | 70.13 | 73.50 |
| Variable O&M Costs | 101.19 | 18.64 | 19.31 | 21.24 | 22.71 | 25.65 | 31.57 |
| Emission Credit Costs | 415.16 | 103.01 | 106.10 | 99.91 | 94.26 | 72.56 | 75.15 |
| Market Purchases | 130.34 | 19.54 | 20.70 | 26.24 | 36.78 | 41.03 | 36.59 |
| Subtotal | 3,692.30 | 728.14 | 818.33 | 847.15 | 869.66 | 856.56 | 885.14 |
| Off-system Sales | 3,052.50 | | 010000 | 0,,,,,0 | | | |
| Fuel Costs | 423.63 | 114.28 | 104.65 | 86.52 | 84.80 | 80.14 | 93.97 |
| Variable O&M Costs | 12.85 | 3.34 | 2.70 | 2.35 | 2.55 | 2.78 | 3.64 |
| Emission Credit Costs | 54.83 | 18.46 | 14.81 | 11.05 | 10.59 | 7.86 | 8.66 |
| Market Purchases | - | - | | _ | - | - | - |
| Subtotal | 491.30 | 136.08 | 122.16 | 99.92 | 97.94 | 90.78 | 106.26 |
| | | | | | | | |
| Transmission System Operation Costs | | | | | | | |
| A&G Costs Associated with RTO Membership | 6.20 | 1.31 | 1.35 | 1.38 | 1.41 | 1.45 | 1.49 |
| Reliability Coordinator and OASIS Services | - | - | - | | _ | - | |
| Subtotal | 6.20 | 1.31 | 1.35 | 1.38 | 1.41 | 1.45 | 1.49 |
| Transmission Usage Costs | | | | | | | |
| Transmission Payments | 24.60 | 6.96 | 6.02 | 5.45 | 4.73 | 4.71 | 4.71 |
| Transmission Congestion | 78.56 | 16.65 | 17.06 | 17.49 | 17.93 | 18.37 | 18.83 |
| Payments | 103.16 | 23.61 | 23.08 | 22.94 | 22.65 | 23.08 | 23.54 |
| Subtotal | 105.10 | 23.01 | 23.08 | 22.94 | | 23.08 | 23.34 |
| Uplift Charges | | _ | | | | | |
| Schedule 21 Uplift | - | - | - | - | - | - | |

| Charges(MISO Case Only) | | | | | | | |
|---|----------|----------|----------|----------|----------|----------|----------|
| Miscellaneous Uplift Costs | - | - | - | - | - | - | - |
| Subtotal | _ | - | - | | - | _ | - |
| Legal, Regulatory & Transaction Costs | 3.78 | 0.80 | 0.82 | 0.84 | 0.86 | 0.88 | 0.91 |
| Total Costs | 4,403.33 | 936.78 | 983.52 | 989.60 | 1,010.73 | 991.65 | 1,037.15 |
| Revenues | | | ····· | | | | |
| Transmission Revenues | | | | | | | ··· |
| Transmission Revenues | (46.82) | (12.10) | (10.50) | (10.30) | (9.90) | (9.90) | (9.90) |
| Subtotal | (46.82) | (12.10) | (10.50) | (10.30) | (9.90) | (9.90) | (9.90) |
| Off-system Sales Revenue | (728.60) | (217.41) | (180.48) | (142.51) | (140.87) | (129.40) | (154.14) |
| FTRs | | | | | | | |
| FTR Revenues (as offset to congestion payments) | (74.64) | (15.81) | (16.21) | (16.61) | (17.03) | (17.46) | (17.89) |
| Share of Net Revenue from FTR Auction | (10.49) | (2.33) | (2.34) | (2.35) | (2.37) | (2.38) | (2.39) |
| Subtotal | (85.13) | (18.14) | (18.54) | (18.97) | (19.40) | (19.84) | (20.28) |
| Miscellaneous Revenues | | | | | | | |
| Total Revenues | (860.54) | (247.65) | (209.53) | (171.77) | (170.17) | (159.14) | (184.32) |
| Net Recurring Cost | 3,517.98 | 660.73 | 774.00 | 817.83 | 840.56 | 832.52 | 852.83 |
| Exit Fee | 24.81 | 28.40 | - | - | | - | - |

Table A.5

Annual and PV of Costs and Revenues: SPP RTO Case (millions of dollars; present value to 2003, 2005-2010) (Positive numbers are costs; Negative numbers are revenues)

| Category | PV 2005 - 2010 (million \$ 2003) | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|--|--|--------|--------|--------|--------|--------|--------|
| Administrative Costs | | | | | | | |
| Implementation & Administration | 30.44 | 6.43 | 6.48 | 6.62 | 6.95 | 7.22 | 7.58 |
| Ancillary Services Market Administration | - | - | - | - | - | - | r |
| Other Administrative Costs | 0.03 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Subtotal | 30.47 | 6.43 | 6.49 | 6.62 | 6.95 | 7.23 | 7.59 |
| , | | | | | | | |
| Operations Costs | | | | | | | |
| Generation Costs | | | | | | | |
| A&G Costs Associated with SPP RTO Status | 4.21 | 0.89 | 0.92 | 0.94 | 0.96 | 0.99 | 1.01 |
| Native Load | | | | | | | |
| Fuel Costs | 2,759.89 | 525.49 | 612.50 | 638.55 | 651.47 | 648.98 | 669.38 |
| Fixed O&M Costs | 293.56 | 61.62 | 61.80 | 63.86 | 67.43 | 70.13 | 73.50 |
| Variable O&M Costs | 101.28 | 18.66 | 19.33 | 21.25 | 22.72 | 25.70 | 31.57 |
| Emission Credit Costs | 416.30 | 102.84 | 106.32 | 100.37 | 94.92 | 72.82 | 75.35 |
| Market Purchases | 120.17 | 19.22 | 18.18 | 22.97 | 33.11 | 38.30 | 35.15 |
| Subtotal | 3,691.21 | 727.83 | 818.13 | 846.99 | 869.66 | 855.94 | 884.94 |
| Off-system Sales | | | | | | | |
| Fuel Costs | 420.88 | 113.06 | 104.19 | 86.06 | 84.45 | 79.72 | 93.28 |
| Variable O&M Costs | 12.77 | 3.31 | 2.68 | 2.33 | 2.54 | 2.77 | 3.62 |
| Emission Credit Costs | 54.54 | 18.25 | 14.76 | 11.02 | 10.59 | 7.84 | 8.63 |
| Market Purchases | - | - | - | - | - | - | - |
| Subtotal | 488.19 | 134.62 | 121.62 | 99.42 | 97.57 | 90.33 | 105.53 |
| Transmission System Operation Costs | | | • | | | | |
| A&G Costs Associated with RTO Status | 3.80 | 0.42 | 0.92 | 0.94 | 0.96 | 0.99 | 1.01 |
| Reliability Coordinator and OASIS Services | - | | - | - | - | - | |
| Subtotal | 3.80 | 0.42 | 0.92 | 0.94 | 0.96 | 0.99 | 1.01 |
| Transmission Usage Costs | | | | | | | - |
| Transmission Payments | 9.45 | 1.34 | 1.34 | 1.86 | 2.72 | 3.17 | 2.75 |
| Transmission Congestion Payments | | - | - | _ | - | _ | - |
| Subtotal | 9.45 | 1.34 | 1.34 | 1.86 | 2.72 | 3.17 | 2.75 |
| Uplift Charges | | | 7 | | | | |
| Schedule 21 Uplift Charges(MISO Case Only) | - | - | - | - | - | - | - |
| Miscellaneous Uplift Costs | - | - | - | | - | - | - |
| Subtotal | - | _ | - | - | - | - | |
| Legal, Regulatory & Transaction Costs | 2.83 | 0.60 | 0.62 | 0.63 | 0.65 | 0.66 | 0.68 |

| Total Costs | 4,254.98 | 900.54 | 950.03 | 957.40 | 979.48 | 959.30 | 1,003.51 |
|---|----------|----------|----------|----------|----------|----------|----------|
| | | | | | | | |
| Revenues (note revenues will be negative numbers) | | | | | | | |
| Transmission Revenues | | | | | | | |
| Transmission Revenues | (18.78) | (5.10) | (4.00) | (4.00) | (4.00) | (4.00) | (4.00) |
| Subtotal | (18.78) | (5.10) | (4.00) | (4.00) | (4.00) | (4.00) | (4.00) |
| Off-system Sales Revenue | (717.69) | (213.14) | (178.25) | (140.43) | (139.18) | (127.51) | (152.04) |
| FTRs | | | | | | | |
| FTR Revenues (as offset to congestion | - | - | - | - | - | - | |
| payments)Share of Net Revenue from FTR Auction | - | - | - | | ~ | - | |
| Subtotal | - | - | ~ | - | - | - | |
| Miscellaneous Revenues | - | - | - | - | - | - | - |
| Total Revenues | (736.47) | (218.24) | (182.25) | (144.43) | (143.18) | (131.51) | (156.04) |
| Net Recurring Cost | 3,493.71 | 653.89 | 767.78 | 812.97 | 836.29 | 827.79 | 847.48 |
| Exit Fee | 24.81 | 28.40 | - | - | - | - | |

Table A.6Annual and PV of Costs and Revenues: TORC Baseline Scenario
(millions of dollars; present value to 2003, 2005-2010)
(Positive numbers are costs; Negative numbers are revenues)

| Category | PV 2005 - 2010 (million \$ 2003) | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|--|--|--------|--------|--------|--------|--------|------------|
| Administrative Costs | | | | | | | |
| Implementation & Administration | - | - | - | - | - | - | - |
| Ancillary Services Market Administration | - | - | - | - | | - | |
| Other Administrative Costs | - | - | - | ** | - | - | - |
| Subtotal | - | - | - | - | | - | |
| Operations Costs | | | | | | | |
| Generation Costs | | | | | | | |
| A&G Costs Associated with RTO Status | 4.21 | 0.89 | 0.92 | 0.94 | 0.96 | 0.99 | 1.01 |
| Native Load | | | | | | | |
| Fuel Costs | 2,759.89 | 525.49 | 612.50 | 638.55 | 651.47 | 648.98 | 669.38 |
| Fixed O&M Costs | 293.56 | 61.62 | 61.80 | 63.86 | 67.43 | 70.13 | 73.50 |
| Variable O&M Costs | 101.28 | 18.66 | 19.33 | 21.25 | 22.72 | 25.70 | 31.57 |
| Emission Credit Costs | 416.30 | 102.84 | 106.32 | 100.37 | 94.92 | 72.82 | 75.35 |
| Market Purchases | 120.17 | 19.22 | 18.18 | 22.97 | 33.11 | 38.30 | 35.15 |
| Subtotal | 3,691.21 | 727.83 | 818.13 | 846.99 | 869.66 | 855.94 | 884.94 |
| Off-system Sales | | | | | | | |
| Fuel Costs | 420.88 | 113.06 | 104.19 | 86.06 | 84.45 | 79.72 | 93.28 |
| Variable O&M Costs | 12.77 | 3.31 | 2.68 | 2.33 | 2.54 | 2.77 | 3.62 |
| Emission Credit Costs | 54.54 | 18.25 | 14.76 | 11.02 | 10.59 | 7.84 | 8.63 |
| Market Purchases | - | - | - | - | - | - | 9 6 |
| Subtotal | 488.19 | 134.62 | 121.62 | 99.42 | 97.57 | 90.33 | 105.53 |
| Transmission System Operation Costs | | | | | | | |
| A&G Costs Associated with RTO Status | 3.80 | 0.42 | 0.92 | 0.94 | 0.96 | 0.99 | 1.01 |
| Reliability Coordinator and OASIS Services | 2.48 | 0.53 | 0.54 | 0.55 | 0.57 | 0.58 | 0.59 |
| Subtotal | 6.28 | 0.95 | 1.45 | 1.49 | 1.53 | 1.57 | 1.60 |
| Transmission Usage Costs | | | | | | | |
| Transmission Payments | 9.45 | 1.34 | 1.34 | 1.86 | 2.73 | 3.17 | 2.75 |
| Transmission Congestion Payments | | - | - | - | _ | _ | - |
| Subtotal | 9.45 | 1.34 | 1.34 | 1.86 | 2.73 | 3.17 | 2.75 |
| Uplift Charges | | | | | | | |
| Schedule 21 Uplift Charges(MISO Case Only) | - | | | | | - | - |
| Miscellaneous Uplift Costs | - | | - | | - | - | - |
| Subtotal | - | | - | - | - | - | - |
| Legal, Regulatory & Transaction Costs | 1.89 | 0.40 | 0.41 | 0.42 | 0.43 | 0.44 | 0.45 |
| Total Costs | 4,226.05 | 894.43 | 943.87 | 951.12 | 972.88 | 952.43 | 996.29 |

| Revenues (note revenues will be negative numbers) | | | | | | | |
|---|----------|----------|----------|----------|----------|----------|----------|
| Transmission Revenues | | | | | | | |
| Transmission Revenues | (18.78) | (5.10) | (4.00) | (4.00) | (4.00) | (4.00) | (4.00) |
| Subtotal | (18.78) | (5.10) | (4.00) | (4.00) | (4.00) | (4.00) | (4.00) |
| Off-system Sales Revenue | (717.69) | (213.14) | (178.25) | (140.43) | (139.18) | (127.51) | (152.04) |
| FTRs | | | | | | | |
| FTR Revenues (as offset to congestion | - | - | - | - | - | | - |
| payments)Share of Net Revenue from FTR Auction | - | _ | - | _ | - | - | - |
| Subtotal | - | ** | - | - | - | - | - |
| Miscellaneous Revenues | _ | - | - | - | - | - | - |
| Total Revenues | (736.47) | (218.24) | (182.25) | (144.43) | (143.18) | (131.51) | (156.04) |
| Net Recurring Cost | 3,464.78 | 647.78 | 761.63 | 806.69 | 829.70 | 820.92 | 840.26 |
| Exit Fee | 24.81 | 28.40 | | - | | | |

Table A.7 Annual and PV of Costs and Revenues: TORC Low-Transfer Scenario (millions of dollars; present value to 2003, 2005-2010) (Positive numbers are costs; Negative numbers are revenues)

| Category | PV 2005 - 2010 (million \$ 2003) | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|--|--|--------|--------|--------|--------|--------|--------|
| Administrative Costs | | | | | | | |
| Implementation & Administration | - | - | - | - | - | | - |
| Ancillary Services Market Administration | _ | - | | - | - | - | - |
| Other Administrative Costs | | - | | - | - | - | - |
| Subtotal | | - | - | - | - | - | |
| Operations Costs | | | | | | | |
| Generation Costs | | | | | | | |
| A&G Costs Associated with RTO Status | 4.21 | 0.89 | 0.92 | 0.94 | 0.96 | 0.99 | 1.01 |
| Native Load | | | | | | | |
| Fuel Costs | 2,760.66 | 525.55 | 612.61 | 638.58 | 651.68 | 649.33 | 669.72 |
| Fixed O&M Costs | 293.56 | 61.62 | 61.80 | 63.86 | 67.43 | 70.13 | 73.50 |
| Variable O&M Costs | 101.46 | 18.91 | 19.46 | 21.29 | 22.71 | 25.57 | 31.45 |
| Emission Credit Costs | 412.85 | 101.30 | 105.41 | 100.02 | 94.08 | 72.30 | 75.10 |
| Market Purchases | 120.21 | 19.28 | 18.20 | 22.98 | 33.01 | 38.35 | 35.15 |
| Subtotal | 3,688.75 | 726.66 | 817.48 | 846.72 | 868.91 | 855.68 | 884.92 |
| Off-system Sales | | | | | | | |
| Fuel Costs | 388.29 | 100.20 | 96.61 | 82.92 | 78.26 | 73.19 | 86.84 |
| Variable O&M Costs | 11.80 | 2.98 | 2.51 | 2.25 | 2.34 | 2.52 | 3.35 |
| Emission Credit Costs | 49.77 | 15.99 | 13.58 | 10.59 | 9.70 | 7.12 | 7.99 |
| Market Purchases | | | - | - | - | - | - |
| Subtotal | 449.86 | 119.17 | 112.70 | 95.77 | 90.30 | 82.83 | 98.18 |
| Transmission System Operation Costs | | | | | | - | |
| A&G Costs Associated with RTO Status | 3.80 | 0.42 | 0.92 | 0.94 | 0.96 | 0.99 | 1.01 |
| Reliability Coordinator and OASIS Services | 2.48 | 0.53 | 0.54 | 0.55 | 0.57 | 0.58 | 0.59 |
| Subtotal | 6.28 | 0.95 | 1.45 | 1.49 | 1.53 | 1.57 | 1.60 |
| Transmission Usage Costs | | | | | | | |
| Transmission Payments | 9.45 | 1.34 | 1.34 | 1.86 | 2.72 | 3.17 | 2.75 |
| Transmission Congestion Payments | | | - | - | - | - | - |
| Subtotal | 9.45 | 1.34 | 1.34 | 1.86 | 2.72 | 3.17 | 2.75 |
| Uplift Charges | | | | | | | |
| Schedule 21 Uplift Charges(MISO Case | _ | - | | - | - | - | - |
| Only) Miscellaneous Uplift Costs | - | - | | - | - | - | • |
| Subtotal | | | | - | - | - | |
| Legal, Regulatory & Transaction Costs | 1.89 | 0.40 | 0.41 | 0.42 | 0.43 | 0.44 | 0.45 |
| Total Costs | 4,185.25 | 877.81 | 934.30 | 947.20 | 964.86 | 944.67 | 988.92 |

| Revenues | | | | | | | |
|---|----------|----------|----------|----------|----------|----------|----------|
| Transmission Revenues | | | | | | | |
| Transmission Revenues | (18.78) | (5.10) | (4.00) | (4.00) | (4.00) | (4.00) | (4.00) |
| Subtotal | (18.78) | (5.10) | (4.00) | (4.00) | (4.00) | (4.00) | (4.00) |
| Off-system Sales Revenue | (654.76) | (188.51) | (163.50) | (133.16) | (127.09) | (115.49) | (140.47) |
| FTRs | | | | | | | |
| FTR Revenues (as offset to congestion payments) | - | - | - | _ | _ | - | - |
| Share of Net Revenue from FTR Auction | - | | - | - | | - | - |
| Subtotal | - | - | - | ** | - | - | |
| Miscellaneous Revenues | - | - | - | - | - | | |
| Total Revenues | (673.54) | (193.61) | (167.50) | (137.16) | (131.09) | (119.49) | (144.47) |
| Net Recurring Cost | 3,486.90 | 655.80 | 766.80 | 810.04 | 833.76 | 825.18 | 844.45 |
| Exit Fee | 24.81 | 28.40 | - | - | - | - | |

Table A.8Annual and PV of Costs and Revenues: TORC High-Transfer Scenario
(millions of dollars; present value to 2003, 2005-2010)
(Positive numbers are costs; Negative numbers are revenues)

| Category | PV 2005 - 2010 (million \$ 2003) | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|--|--|----------|--------|--------|--------|--------|----------|
| Administrative Costs | | | | | | | į |
| Implementation & Administration | | - | - | - | - | - | - |
| Ancillary Services Market Administration | - | | - | - | - | - | |
| Other Administrative Costs | - | - | ~ | - | - | ~ | - |
| Subtotal | - | | - | - | - | - | |
| Operations Costs | | | | | | | |
| Generation Costs | | | | | | | |
| A&G Costs Associated with RTO Status | 4.21 | 0.89 | 0.92 | 0.94 | 0.96 | 0.99 | 1.01 |
| Native Load | | | | | | | |
| Fuel Costs | 2,752.07 | 525.30 | 610.52 | 635.85 | 648.41 | 647.22 | 668.36 |
| Fixed O&M Costs | 293.56 | 61.62 | 61.80 | 63.86 | 67.43 | 70.13 | 73.50 |
| Variable O&M Costs | 101.20 | 18.64 | 19.31 | 21.23 | 22.70 | 25.68 | 31.57 |
| Emission Credit Costs | 415.19 | 102.92 | 106.07 | 99.89 | 94.39 | 72.61 | 75.18 |
| Market Purchases | 129.87 | 19.48 | 20.49 | 26.19 | 36.78 | 40.80 | 36.52 |
| Subtotal | 3,691.90 | 727.97 | 818.20 | 847.02 | 869.72 | 856.44 | 885.12 |
| Off-system Sales | | | | | | | |
| Fuel Costs | 422.85 | 114.11 | 104.45 | 86.21 | 84.69 | 80.27 | 93.59 |
| Variable O&M Costs | 12.84 | 3.34 | 2.69 | 2.34 | 2.55 | 2.79 | 3.63 |
| Emission Credit Costs | 54.77 | 18.43 | 14.79 | 11.02 | 10.60 | 7.88 | 8.65 |
| Market Purchases | | - | - | | - | - | - |
| Subtotal | 490.46 | 135.88 | 121.94 | 99.57 | 97.83 | 90.94 | 105.88 |
| Transmission System Operation Costs | | | | | | | |
| A&G Costs Associated with RTO Status | 3.80 | 0.42 | 0.92 | 0.94 | 0.96 | 0.99 | 1.01 |
| Reliability Coordinator and OASIS Services | 2.48 | 0.53 | 0.54 | 0.55 | 0.57 | 0.58 | 0.59 |
| Subtotal | 6.28 | 0.95 | 1.45 | 1.49 | 1.53 | 1.57 | 1.60 |
| Transmission Usage Costs | | | | | | | |
| Transmission Payments | 10.23 | 1.35 | 1.51 | 2.12 | 3.03 | 3.37 | 2.86 |
| Transmission Congestion Payments | | - | - | - | - | - | |
| Subtotal | 10.23 | 1.35 | 1.51 | 2.12 | 3.03 | 3.37 | 2.86 |
| Uplift Charges | | | | | | | |
| Schedule 21 Uplift Charges(MISO Case | | | | - | | - | <u> </u> |
| Only) Miscellaneous Uplift Costs | | | - | - | - | - | - |
| Subtotal | - | <u> </u> | - | - | - | | - |
| Legal, Regulatory & Transaction Costs | 1.89 | 0.40 | 0.41 | 0.42 | 0.43 | 0.44 | 0.45 |
| Total Costs | 4,229.78 | 895.84 | 944.43 | 951.56 | 973.51 | 953.74 | 996.93 |

| Revenues | | | | | | | |
|---|----------|----------|----------|----------|----------|----------|----------|
| Transmission Revenues | | | | | | | |
| Through and Out Revenues | | - | - | | | | |
| Transmission Revenues | (18.78) | (5.10) | (4.00) | (4.00) | (4.00) | (4.00) | (4.00) |
| Subtotal | (18.78) | (5.10) | (4.00) | (4.00) | (4.00) | (4.00) | (4.00) |
| Off-system Sales Revenue | (730.46) | (217.64) | (180.98) | (142.65) | (141.55) | (130.24) | (154.32) |
| FTRs | | | | | | | |
| FTR Revenues (as offset to congestion payments) | - | - | - | - | - | ~ | |
| Share of Net Revenue from FTR Auction | - | - | - | - | - | - | - |
| Subtotal | - | - | - | - | - | - | - |
| Miscellaneous Revenues | - | - | - | - | - | - | - |
| Total Revenues | (749.24) | (222.74) | (184.98) | (146.65) | (145.55) | (134.24) | (158.32) |
| Net Recurring Cost | 3,455.73 | 644.70 | 759.45 | 804.91 | 827.96 | 819.49 | 838.61 |
| Exit Fee | 24.81 | 28.40 | - | - | - | - | - |

2

Appendix B Work Papers to Accompany the Supplemental Investigation

7

VARIOUS INPUTS USED IN THE COST BENEFIT STUDY

| 7.0% 2.5% 2003 | |
|--|--|
| Discount Rate Inflation Rate Base Year | |

16 20

MISO Rate Sensitivity Case 10%

FTR Revenue Shortfall % 5%

Average Growth Rate of Combined Companies forecast

2.04%

09/25/2004

| Administrative Charges | (\$/MWh) 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|------------------------------|------------------|------|------------|-------------|-------------|-------------|-------------|-------------|
| Schedule 10 | | | 0.15 | 0.15 | 0.15 | 0.148 | 0.134 | 0.13 |
| Schedule 16 | | | 0.058 | 0.059 | 0.059 | 0.056 | | 0.046 |
| Schedule 17 | | | 0.077 | 0.073 | 0.072 | 0.069 | | 0.056 |
| All Schedules | | | 0.285 | 0.282 | 0.281 | 0.273 | | 0.232 |
| JM (w/o mktintegration) | 0.5 | 0.54 | 0.56 | 0.53 | 0.53 | 0.54325 | 0.55(| 0.570752031 |
| JM (w/ mkt integration) | 0.5 | 0.54 | 0.42 | 0.41 | 0.4 | 0.41 | 0.42 | 0.43 |
| SPP (all nominal dollars) | 0.15 | 0.15 | 0.15759375 | 0.161533594 | 0.165571934 | 0.169711232 | 0.173954013 | 0.178302863 |

integration means expansion of PJM footprint to include AEP, ComEd, DP&L and Dominion

rates exclude FERC fees

SPP rate grows with inflation

PJM w/o integration grows with inflation after 2007

PJM w integration grows with inflation after 2007

MISO schedules drawn from Response to Interrogatory Question No. 8 Note: SPP currently has a cap on administrative charges of 20 cents/MWh

| 2010 | 0.5 |
|---|--------------------------------------|
| 2009 | 0.5 |
| 2008 | 0.5 |
| 2007 | ons 2004\$) 0.5 |
| 2006 | (milli) 0.5 |
| 2005 | 0.5 |
| Reliability Coordination and OASIS Services Costs | applicable to Standalone option only |

Load and Energy Forecasts, LG&E, KU and Combined

Combined Annual Peak Load Forecast

| Year Year 003 2004 2005 2006 2007 20 6.532 6,696 6,811 6,951 20 20 | | | | | | | | | |
|--|-------------------|------------------------------------|-------|-------|-------|-------|-------|-------|-------|
| 003 2004 2005 2006 2007 20 6.532 6,696 6,811 6,951 20 | | | | | Year | | | | |
| 6,532 6,696 6,811 6,951 5,896 5,816 5,896 | | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| 5 542 5 754 5 896 | Summer Peak MW | need actual 2003 | 6,532 | 6,696 | 6,811 | 6,951 | 7,125 | 7,272 | 7,383 |
| | Winter Peak MW | Winter Peak MW need actual 2003 | 5,513 | 5,647 | 5,754 | 5,896 | 5,974 | 6,142 | 6,223 |

Source: Merged 2005 Forecast.xls provided by the Companies, August 6 2004

weather normalized forecasts

| | | | 2.04% |
|--|------|--------|--------|
| | 2010 | 38,121 | 1.76% |
| | 2009 | 37,462 | 1.81% |
| | 2008 | 36,797 | 2.34% |
| | 2007 | 35,954 | 2.31% |
| Year | 2006 | 35,143 | 1.96% |
| L | 2005 | 34,468 | 2.31% |
| ecast | 2004 | 33,689 | 1.82% |
| Combined Annual Net Energy for Load Fore | 2003 | 33,087 | |
| Com | | GWh | %delta |

source: Merged 2005 Forecast.xls

LG&E Annual Peak Load Forecast

| | | | L | Year | | | | |
|-------------------|------------------------------------|-------|-------|-------|-------|-------|-------|-------|
| | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| Summer Peak MW | Summer Peak MW need actual 2003 | 2,579 | 2,629 | 2,673 | 2,705 | 2.756 | 2,800 | 2,850 |
| Winter Peak MW | Winter Peak MW need actual 2003 | 1,770 | 1,805 | 1,835 | 1,857 | 1,892 | 1,922 | 1,957 |

KU Annual Peak Load Forecast

| | | | 1 | | | | | |
|-------------------|------------------------------------|-------|-------|-------|-------|-------|-------|-------|
| | | | | Year | | | | |
| | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| Summer Peak MW | Summer Peak MW need actual 2003 | 3,967 | 4,067 | 4,153 | 4,275 | 4,387 | 4,472 | 4,549 |
| Winter Peak MW | Winter Peak MW need actual 2003 | 3,747 | 3,842 | 3,923 | 4,039 | 4,145 | 4,225 | 4,297 |

| | 2010 | 13,722 | |
|--|------|------------------|--|
| | 2009 | 13,478 | |
| | 2008 | 13,266 | |
| | 2007 | 13,024 | |
| Year | 2006 | 12,870 | |
| L | 2005 | 12,657 | |
| orecast | 2004 | 12,417 | |
| LG&E Annual Net Energy for Load Forecast | 2003 | need actual 2003 | |
| | | GWh | |

| | | | L | | | | | |
|-----|--|--------|--------|--------|--------|--------|--------|--------|
| | KU Annual Net Energy for Load Forecast | cast | | Year | | | | |
| | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| GWh | need actual 2003 | 21,273 | 21,812 | 22,273 | 22,930 | 23,530 | 23,983 | 24,399 |
| | | | | | | | | |

MISO Statistics

| Ten Year Projection Act | on Actua | | | | | | | | |
|-------------------------|----------|---------|---------|---------|---------|---------|---------|---------|---------|
| Peak Hr Demar | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| Summer-MW | | 111,000 | 112,887 | 114,806 | 116,758 | 118,743 | 120,761 | 122,814 | 124,902 |
| | | | | | | | | | |

• 1.70% assumed growth rate

| | | 008 |
|---|------------|------------------|
| | | 2008 |
| | | a protection and |
| | | 2007 |
| | | |
| | | 2006 |
| | | |
| | is) | 05 |
| | charge | 2005 |
| | dule 10 | |
| | n Sche | 2004 |
| | uding ii | |
| , | s of inclu | 2003 |
| | urposes | |
| | d (for pi | 2002 |
| | or Loac | |
| | hergy fu | ; |
| | Net Er | |
| | | |

2010

2009

641,914,002 629,327,453 616,987,699 604,889,901 593,029,314 581,401,289 570,001,263 Ancillary Market Administration Service Charges

| 2010 | 0.28 | |
|--------------------------|------|--|
| 2009 | 0.28 | |
| 2004 2005 2006 2007 2008 | 0.28 | |
| 2007 | 0.28 | |
| 2006 | | |
| 2005 | | |
| 2004 | | |
| 2003 | | |
| 2002 | | |

Note: ancillary market administration service costs adopted from previous study, left unchanged

Source for MISO Net Energy for Load all years Attachment to LGE/KU #44: Witness Holstein, page 25, Total Midwest ISO Projection, Total for computing Schedule 10 charges

| | 003 2004 2005 2006 2007 2007 2008 2009 2010 | 717,144,243 731,487,128 746,116,870 761,039,208 776,259,992 791,785,192 807,620,896 |
|-------------|---|---|
| | 33 | 717,144, |
| otals | 200 | |
| Absolute To | 2002 | |

Source for MISO Net Energy for Load all years Attachment to LGE/KU #44: Witness Holstein, page 25, Total Midwest ISO Projection, Absolute Totals

PJM Statistics

| Assumed Net | t Revenue fr | om FTR Auctions | (million \$) | | |
|-------------|--------------|-----------------|--------------|------|------|
| 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| 25 | 25 | 25 | 25 | 25 | 25 |

| | Peak Load | | | | | | |
|-----------|-----------|---------|---------|---------|---------|---------|---------|
| Γ | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| WN Summ | 65,200 | 66,478 | 67,654 | 68,787 | 69,935 | 71,015 | 72,178 |
| Γ | 2003-04 | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 |
| WN Winter | 52,687 | 53,622 | 54,453 | 55,272 | 56,082 | 56,879 | 57,700 |
| | | | | | | | |

1.7% summer growth rate assumed:

http://www.pjm.com/planning/res-adequacy/downloads/2004-load-report.pdf 1.5% winter growth rate assumed

http://www.pjm.com/planning/res-adequacy/downloads/2004-load-report.pdf

Net Energy for Load (GWh)

| [| 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|-------------|---------|---------|---------|---------|---------|---------|---------|
| 325171 | 330,898 | 335,792 | 341,083 | 346,199 | 351,719 | 356,142 | 361,306 |
| growth rate | 0.018 | 0.015 | 0.016 | 0.015 | 0.016 | 0.013 | 0.014 |

1.4% overall growth rate

http://www.pjm.com/planning/res-adequacy/downloads/2004-load-report.pdf

| | SPP Statistics Annual Membership Fees | (million S) 0.006 | | | | |
|---------------|--|-----------------------------|---------------|------------------|---|-------------------------|
| | SPP Statistics Summer Demand | Winter Demand Annual Energy | Annual Energy | Admi | Administrative Costs | osts |
| | (MM) | (MM) | (GWh) | Opera (millio | Operating Costs Capital c (million \$) (million \$ | Capital c (million 3 |
| 1998 (4-1-99) | 37.724 | 27,847 | 183,102 | 2004 | 39.00 | ** |
| 1999 (4-1-00) | | 27,963 | 179,409 | 2005 | 42.00 | 4 |
| 2000 (4-1-01) | | 30,576 | 193,661 | 2006 | 44.00 | ¥ |
| 2001 (4-1-02) | | 29,614 | 193,590 | 2007 | 45.10 | ¥ |
| 2002 (4-1-03) | 39.688 | 30,187 | 196,103 | 2008 | 46.23 | ÷ |
| W/Vear | 1.25% | 2.0% | 1.50% | 2009 | 47.38 | ÷ |
| | | | | 0,00 | 10 51 | * |

| | Operating Costs Capital costs Total Costs | Capital costs | Total Costs | Implied |
|------|---|---------------------|-------------------|--|
| | (million S) | (million S) | (million \$) | Rate: S/MWh |
| 2004 | 39.00 | 15.00 | 54.00 | 0.2665 |
| 2005 | 42.00 | 16.00 | 58.00 | 0.2806 |
| 2006 | 44.00 | 13.00 | 57.00 | 0.2756 |
| 2007 | 45.10 | 13.33 | 58.43 | 0.2767 |
| 2008 | 46.23 | 13.66 | 59.89 | 0.2784 |
| 2009 | 47.38 | 14.00 | 61.38 | 0.2800 |
| 2010 | 48.57 | 14.35 | 62.92 | 0.2830 |
| | operating and capita | il costs after 2006 | i assumed to grov | operating and capital costs after 2006 assumed to grow at 2.5% per annum |

| | Feh | Mar | Aor | Mav | June | July | Aug | Sept | Oct | Nov Dec | |
|---------|---------|---------|-------------|---------|-----------------------------------|------------|---------|--|------------|------------|--|
| 29 556 | 2995 72 | - | 26.228 | 31,896 | | 40,848 | 40,889 | 36,648 | 28,298 | 26,673 | |
| 16 785 | 14.989 | | 14.278 | 15,759 | 18,547 | 21,607 | 21,113 | 17,231 | 15,198 | 14,968 | |
| | | | | | | | | | | | |
| 2002 | 2003 | 3 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | |
| 39688 | 40564 | 4 41345 | 41826 | 42158 | 43012 | 43855 | 44736 | 45606 | 46500 | 47361 | |
| | | 0.0192 | 0.011633813 | | 0.007937646 0.02025713 0.01959918 | 0.01959918 | | 0.020088929 0.01944742 0.01960268 0.01851613 | 0.01960268 | 0.01851613 | |
| 002/03 | 2003/04 | 2004/05 | 2005/06 | 2006/07 | 2007/08 | 2008/09 | 2009/10 | 2010/11 2011/12 | | 2012/13 | |
| 30.187 | 29,891 | 30,555 | 31,069 | 31,366 | 31,998 | 32,663 | 33,048 | 33,989 | 34,625 | 35,228 | |
| | | | | | | | | | | | |
| 2002 | 2003 | 3 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | |
| 194.876 | 199,475 | 202 | 206,712 | 206,849 | 211,165 | 215,140 | 219,190 | 222,337 | 225,889 | 360,237 | |

| Energy and Load Sha | res for Cha | nge Cases | | | | | |
|---------------------|-------------|---------------|--------|--------|--------|--------|--------|
| | | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| Summer Peak Load S | hares: Com | bined Compani | es | | | | |
| Base Case: MISO | LG&E/KU | 5.83% | 5.83% | 5.85% | 5.90% | 5.92% | 5.91% |
| | | | | | | | |
| Change Case 1: PJM | LG&E/KU | 9.15% | 9.15% | 9.18% | 9.25% | 9.29% | 9.28% |
| | [| | | | | | |
| Change Case 2: SPP | LG&E/KU | 13.80% | 13.91% | 13.91% | 13.98% | 13.98% | 13.93% |

| | [| 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|--------------------|------------|--------|--------|--------|--------|--------|--------|
| Energy Shares: Com | bined Comp | anies | | | | | |
| Base Case: MISO | LG&E/KU | 5.93% | 5.93% | 5.81% | 5.83% | 5.95% | 5.94% |
| | | | | | | | |
| Change Case 1: PJM | LG&E/KU | 9.31% | 9.34% | 9.41% | 9.47% | 9.52% | 9.54% |
| | | | | | | | |
| Change Case 2: SPP | LG&E/KU | 14.29% | 14.52% | 14.55% | 14.61% | 14.60% | 14.64% |
| | | | | | | | |

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---------------------|-------------|-------|-------|-------|-------|-------|
| Summer Peak Load Si | nares: LG&E | | | | | |
| Base Case: MISO | 2.29% | 2.29% | 2.28% | 2.28% | 2.28% | 2.28% |
| | | | | | | |
| Change Case 1: PJM | 3.80% | 3.80% | 3.78% | 3.79% | 3.79% | 3.80% |
| | | | | | | |
| Change Case 2: SPP | 5.91% | 5.96% | 5.92% | 5.91% | 5.89% | 5.88% |

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---------------------|-------|-------|-------|-------|-------|-------|
| Energy Shares: LG&E | | | | | | |
| Base Case: MISO | 2.18% | 2.17% | 2.15% | 2.15% | 2.14% | 2.14% |
| | | | | | | |
| Change Case 1: PJM | 3.42% | 3.42% | 3.41% | 3.41% | 3.42% | 3.44% |
| _ | | | | | | |
| Change Case 2: SPP | 5.25% | 5.32% | 5.27% | 5.27% | 5.25% | 5.27% |
| - | | | | | | |

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | | | | |
|---------------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|------------------------------|--|--|--|--|
| Summer Peak Load Shares: KU | | | | | | | | | | |
| Base Case: MISO | 3.54% | 3.56% | 3.60% | 3.63% | 3.64% | 3.64% | | | | |
| | | | | | | | | | | |
| Change Case 1: PJM | 5.77% | 5.78% | 5.85% | 5.90% | 5.92% | 5.93% | | | | |
| | | | | 0.000 | | | | | | |
| Change Case 2: SPP | 8.86% | 8.97% | 9.04% | 9.09% | 9.09% | 9.07% | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | | | | |
| Energy Shares: KU | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | | | | |
| Energy Shares: KU Base Case: MISO | 2005 3.75% | 2006 3.76% | 2007 3.79% | 2008 3.81% | 2009 3.81% | 2010 3.80% | | | | |
| U | | | | | I | | | | | |
| U | | | | | I | | | | | |
| Base Case: MISO Change Case 1: PJM | 3.75% 5.89% | 3.76% 5.92% | 3.79% 6.00% | 3.81% | 3.81% 6.09% | <u>3.80%</u> <u>6.11%</u> | | | | |
| Base Case: MISO | 3.75% | 3.76% | 3.79% | 3.81% | 3.81% | 3.80% | | | | |

| | Admin & General | Costs | | | | | | | |
|-----------|-----------------|-------------|----------|----------|----------|----------|----------|----------|--------------|
| | | PV 2005 - | | | | | | | |
| | | 2010 | | | | | | | |
| | | (million \$ | | | | | 1 | | |
| | | 2003 | | | | | | | |
| | | | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | (millions\$) |
| | | | | | | | | | Inputs |
| RTO | Generation A&G | 6.20 | 1.313281 | 1.346113 | 1.379766 | 1.41426 | 1.449617 | 1.485857 | 1.25 |
| RTO | Trans A&G | 6.20 | 1.313281 | 1.346113 | 1.379766 | 1.41426 | 1.449617 | 1.485857 | |
| Standalor | Generation A&G | 4.21 | 0.893031 | 0.915357 | 0.938241 | 0.961697 | 0.985739 | 1.010383 | 0.85 |
| Standalor | n Trans A&G | 3.80 | 0.42025 | 0.915357 | 0.938241 | 0.961697 | 0.985739 | 1.010383 | 0.4 |
| | | | | | | | | | Note: |

.

| Net Congestion Payment (\$million) (| from spread | sheet Genera | tion_Load_LN | IP_Base.xls) | | |
|--------------------------------------|-------------|--------------|--------------|--------------|-------|-------|
| 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| \$ 15.84 | 16.65 | 17.06 | 17.49 | 17.93 | 18.37 | 18.83 |

Legal Regulatory and Transaction Costs

All other costs assumed to rise at rate of inflation

| | NPV 2005 - 2010 (million \$ 2003) | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|-------------------|--|------|------|------|------|------|------|
| MISO Base Case | | | | | | | |
| FERC Fees | \$4.10 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 |
| Other Costs | \$4.04 | 0.8 | 0.82 | 0.84 | 0.86 | 0.88 | 0.91 |
| Total | \$8.14 | 1.66 | 1.68 | 1.70 | 1.72 | 1.74 | 1.77 |
| Standalone Option | | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 |

| FERC Fees | \$3.19 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 |
|-------------|--------|------|------|------|------|------|------|
| Other Costs | \$2.02 | 0.4 | 0.41 | 0.42 | 0.43 | 0.44 | 0.45 |
| | | | | | | | |

Total

Note

FERC fees not included in analysis this round.

| Estimation of LG&E/KU Exit Fee | Effective E | xit 12/31/20 | 004 |
|-------------------------------------|--------------|--------------|--|
| | Latest Fig | ures from N | IISO July Information Filing for Market Startup Costs |
| | This cove | rs schedule | 16 & 17 Capital costs (in \$ million) |
| \$ 270 | \$ | 270 | |
| \$ 15 | \$ | 15 | assumed additional capital expenses to comply with FERC TEMT order |
| \$ 285 | \$ | 285 | |
| Capital Expenditures for Schedule 1 | 0 Capital Ex | penditures | for Schedule 10 |
| 18 | 0 | . 180 | |
| 1 | 5 | 15 | assumed additional capital expenses to comply with FERC TEMT order |
| 7 | • | 7 | assumed additional for joint and common market |
| 20 | 2 | 202 | |
| \$ 487 | \$ | 487 | Total |
| | | 28.40 | LGE pro rata share |
| | | 20,40 | |

Estimation of Schedule 10, 16 and 17 Charges for the Period 2005-2010

| | ENERGY (G | WH) | | | |
|------|-----------|--------|-------|----------|--------|
| | KU | LG&E | OSS | Combined | KU+LGE |
| | | | | | |
| 2005 | 21,812 | 12,657 | 6,302 | 40,770 | 34,468 |
| 2006 | 22,273 | 12,870 | 4,975 | 40,118 | 35,143 |
| 2007 | 22,930 | 13,024 | 4,014 | 39,968 | 35,954 |
| 2008 | 23,530 | 13,266 | 4,143 | 40,939 | 36,797 |
| 2009 | 23,983 | 13,478 | 4,064 | 41,525 | 37,462 |
| 2010 | 24,399 | 13,722 | 4,416 | 42,537 | 38,121 |

| Summer CPeak Load (MW) | | | | | | | | | |
|------------------------|-------|-------|----------|--|--|--|--|--|--|
| | KU | LG&E | Combined | | | | | | |
| 2005 | 4,067 | 2,629 | 6,696 | | | | | | |
| 2006 | 4,153 | 2,673 | 6,826 | | | | | | |
| 2007 | 4,275 | 2,705 | 6,980 | | | | | | |
| 2008 | 4,387 | 2,756 | 7,143 | | | | | | |
| 2009 | 4,472 | 2,756 | 7,228 | | | | | | |
| 2010 | 4,549 | 2,850 | 7,399 | | | | | | |

| Miscellaneous Uplift Charge | es (millions of dollars) |
|-----------------------------|--------------------------|
|-----------------------------|--------------------------|

| 2005 | 0.5 |
|------|-----|
| 2006 | 0.5 |
| 2007 | 0.5 |
| 2008 | 0.5 |
| 2009 | 0.5 |
| 2010 | 0.5 |
| ale | |

Totals

| | Yea | | | Sch. 10 | | Sch. 16 | | Sch. 17 | |
|--------|------|----------|------|------------|----|-------------|------|-----------|------------------|
| | | 2005 | | 0.15 | | 0.058 | | 0.077 | |
| | | 2006 | | 0.15 | | 0.059 | | 0.073 | |
| | | 2007 | | 0.15 | | 0.059 | | 0.072 | |
| | | 2008 | | 0.148 | | 0.056 | | 0.069 | |
| | | 2009 | | 0.134 | | 0.056 | | 0.068 | |
| | | 2010 | | 0.13 | | 0.046 | | 0.056 | |
| | Sch | edule 1 | 0 0 | harges | | | | | |
| | | Rate | | ĸu | | LG&E | | OSS | COMBINED |
| 2 | 2005 | 0.15 | \$ | 3,271,735 | \$ | 1,898,513 | \$ | 945,240 | \$ 6,115,487 |
| 2 | 2006 | 0.15 | \$ | 3,340,977 | \$ | 1,930,474 | \$ | 746,225 | \$ 6,017,675 |
| 2 | 2007 | 0.15 | \$ | 3,439,464 | \$ | 1,953,624 | \$ | 602,048 | \$ 5,995,136 |
| 2 | 2008 | 0.148 | \$ | 3,482,473 | \$ | 1,963,431 | \$ | 613,105 | \$ 6,059,009 |
| 2 | 2009 | 0.134 | \$ | 3,213,782 | \$ | 1,806,065 | \$ | 544,544 | \$ 5,564,391 |
| 2 | 2010 | 0.13 | \$ | 3,171,893 | \$ | 1,783,890 | \$ | 574,063 | \$ 5,529,846 |
| | Tota | al | \$ | 19,920,323 | \$ | 11,335,997 | \$ | 4,025,224 | \$ 35,281,544 |
| | Sch | edule 1 | | Charges | 95 | % FTR Annua | al P | eak | |
| | | Rate | | - KU | | LG&E | | OSS | COMBINED |
| 2 | 2005 | 0.058 | \$ | 1,963,043 | \$ | 1,268,955 | | 0 | \$ 3,231,998 |
| 2 | 2006 | 0.059 | \$ | 2,039,115 | \$ | 1,312,438 | | | \$ 3,351,552 |
| 2 | 2007 | 0.059 | \$ | 2,099,016 | \$ | 1,328,150 | | | \$ 3,427,166 |
| 2 | 2008 | 0.056 | \$ | 2,044,482 | \$ | 1,284,384 | | | \$ 3,328,867 |
| 2 | 2009 | 0.056 | \$ | 2,084,095 | \$ | 1,284,384 | | | \$ 3,368,479 |
| 2 | 2010 | 0.046 | \$ | 1,741,412 | \$ | 1,091,014 | | | \$ 2,832,426 |
| | Tot | al | \$ | 11,971,164 | \$ | 7,569,325 | \$ | - | \$ 19,540,489 |
| | Sch | nedule ' | 17 (| Charges | | | | | |
| | F | Rate | | KU | | LG&E | | OSS | COMBINED |
| 2 | 2005 | 0.077 | \$ | 3,358,981 | \$ | 1,949,140 | \$ | 485,223 | \$ 5,793,344 |
| : | 2006 | 0.073 | \$ | 3,251,884 | \$ | 1,878,994 | \$ | 363,163 | \$ 5,494,041 |
| 2 | 2007 | 0.072 | \$ | 3,301,885 | \$ | 1,875,479 | \$ | 288,983 | \$ 5,466,347 |
| 1 | 2008 | 0.069 | \$ | 3,247,171 | \$ | 1,830,767 | \$ | 285,839 | \$ 5,363,777 |
| 2 | 2009 | 0.068 | \$ | 3,261,749 | \$ | 1,833,021 | \$ | 276,336 | \$ 5,371,106 |
| : | 2010 | 0.056 | \$ | 2,732,708 | \$ | 1,536,890 | \$ | 247,289 | \$ 4,516,886 |
| | Tot | al | \$ | 19,154,378 | \$ | 10,904,292 | \$ | 1,946,832 | \$ 32,005,502 |
| | | Total | | KU | | LG&E | | OSS | COMBINED |
| : | 2005 | | \$ | 8.59 | \$ | 5.12 | \$ | 1.43 | \$ 15.14 |
| : | 2006 | | \$ | 8.63 | \$ | 5.12 | \$ | 1.11 | \$ 14.86 |
| : | 2007 | | \$ | 8.84 | \$ | 5.16 | \$ | 0.89 | \$ 14.89 |
| : | 2008 | | \$ | 8.77 | \$ | 5.08 | \$ | 0.90 | \$ 14.75 |
| 1 | 2009 | | \$ | 8.56 | \$ | 4.92 | \$ | 0.82 | \$ 14.30 |
| | 2010 | | \$ | 7.65 | \$ | 4.41 | \$ | 0.82 | \$ 12.88 |
| Totals | | | \$ | 51.05 | \$ | 29.81 | \$ | 5.97 | \$ 86.83 |

MISO's Rates MISO Response to LG&E/KU 8/18/04 Data Request Item No.8.

| | | | ensitivity Case SO Rates Are | 10º/ + | han 2 | 004 projectio | ns, beginning 2006 |
|--------------|-----------------------|----------------|---------------------------------|------------------|---------|---------------|----------------------|
| Sch 10 Ba: \ | | . 1711 | SC Rales Ale | Sch. 16 | 11011 2 | Sch. 17 | ns, beginning 2000 |
| 0.15 | 2005 | | 0.15 | 0.0580 | | 0.0770 | |
| 0.165 | 2006 | | 0.15 | 0.0649 | | 0.0803 | |
| 0.165 | 2007 | | 0.15 | 0.0649 | | 0.0792 | |
| 0.1628 | 2008 | | 0.15 | 0.0616 | | 0.0759 | |
| 0.1474 | 2009 | | 0.15 | 0.0616 | | 0.0748 | |
| 0.143 | 2010 | | 0.14 | 0.0506 | | 0.0616 | |
| | Schedule 1 | | | | | <u></u> | |
| • | Rate | | KU | LG&E | | OSS | COMBINED |
| 2005 | 0.15 | \$ | 3,271,735 | \$ | \$ | 945,240 | \$ 6,115,487 |
| 2006 | 0.15 | | 3,340,977 | \$ | \$ | 746,225 | \$ 6,017,675 |
| 2007 | 0.15 | \$ | 3,439,464 | \$ | \$ | 602,048 | \$ 5,995,136 |
| 2008 | 0.15 | \$ | 3,529,533 | \$ 1,989,964 | \$ | 621,390 | \$ 6,140,888 |
| 2009 | 0.1474 | \$ | 3,535,161 | \$ 1,986,672 | \$ | 598,998 | \$ 6,120,831 |
| 2010 | 0.143 | \$ | 3,489,082 | \$ 1,962,279 | \$ | 631,469 | \$ 6,082,831 |
| | Total | \$ | 20,605,951 | \$ 11,721,525 | \$ | 4,145,370 | \$ 36,472,846 |
| | Schedule ' | | | FTR Annual F | | | |
| | Rate | | KU | LG&E | | OSS | COMBINED |
| 2005 | 0.058 | \$ | 1,963,043 | \$ 1,268,955 | | 0 | \$ 3,231,998 |
| 2006 | 0.0649 | | 2,243,026 | \$ 1,443,681 | | | \$ 3,686,708 |
| 2007 | 0.0649 | | 2,308,918 | \$ 1,460,965 | | | \$ 3,769,883 |
| 2008 | 0.0616 | \$ | 2,248,931 | \$ 1,412,823 | | | \$ 3,661,753 |
| 2009 | 0.0616 | \$ | 2,292,505 | \$ 1,412,823 | | | \$ 3,705,327 |
| 2010 | 0.0506 | \$ | 1,915,553 | \$ 1,200,116 | | | \$ 3,115,669 |
| | Total | \$ | 12,971,976 | \$ 8,199,362 | \$ | - | \$ 21,171,338 |
| | Schedule [•] | 17 C | Charges | | | | |
| | Rate | | KU | LG&E | | OSS | COMBINED |
| 2005 | 0.077 | | 3,358,981 | \$ 1,949,140 | \$ | 485,223 | \$ 5,793,344 |
| 2006 | 0.0803 | | 3,577,072 | \$ 2,066,894 | \$ | 399,479 | \$ 6,043,445 |
| 2007 | 0.0792 | | 3,632,074 | \$ 2,063,027 | \$ | 317,881 | \$ 6,012,982 |
| 2008 | 0.0759 | | 3,571,888 | \$ 2,013,844 | \$ | 314,423 | \$ 5,900,155 |
| 2009 | 0.0748 | | 3,587,924 | \$ 2,016,324 | \$ | 303,969 | \$ 5,908,217 |
| 2010 | 0.0616 | | 3,005,979 | \$ 1,690,579 | \$ | 272,018 | \$ 4,968,575 |
| | Total | \$ | 20,733,917 | \$ 11,799,807 | \$ | 2,092,993 | \$ 34,626,718 |
| | Total | | KU | LG&E | • | OSS | COMBINED |
| 2005 | | \$ | 8.59 | \$ 5.12 | \$ | 1.43 | \$ 15.14 • 15.75 |
| 2006 | | \$ | 9.16 | \$ 5.44 | \$ | 1.15 | \$ 15.75 |
| 2007 | | \$ | 9.38 | \$ 5.48 | \$ | 0.92 | \$ 15.78 \$ 15.70 |
| 2008 | | \$ | 9.35 | \$ 5.42 | \$ ¢ | 0.94 | \$ 15.70 \$ 15.72 |
| 2009 | | \$ \$ \$ \$ \$ | 9.42 | \$ 5.42 | \$ | 0.90 | \$ 15.73 \$ 14.17 |
| 2010 | | \$ | 8.41 | \$ 4.85 | \$ | 0.90 | <u>\$ 14.17</u> |
| Totals | | \$ | 54.31 | \$ 31.72 | \$ | 6.24 | \$ 92.27 |

| IN- MISO | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | | | |
|--------------|---------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|--------|
| XM Payment | 7.0 | 6.0 | 5.5 | 4.7 | 4.7 | 4.7 | | | |
| XM Revenue | 12.1 | 10.5 | 10.3 | 9.9 | 9.9 | 9.9 | | | |
| | | | | | | | | | |
| IN PJM | | | | | | | | | |
| XM Payment | 7.0 | 6.0 | 5.5 | 4.7 | 4.7 | 4.7 | | | |
| XM Revenue | 12.1 | 10.5 | 10.3 | 9.9 | 9.9 | 9.9 | | | |
| | | | | | | | | | |
| IN SPP | Tx payments | and revenu | es listed he | | | | 2: SPP Low-T | ranster Ca: | |
| XM Payment | 1.34 | 1.34 | 1.86 | 2.72 | 3.17 | 2.75 | | | |
| XM Revenue | 5.1 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | | |
| | | | | | | | | | |
| Standalone | Tx payments | and revenu | es listed he | | | | 2: TORC Low | -Transfer Sce | nai |
| XM Payment | 1.34 | 1.34 | 1.86 | 2.72 | 3.17 | 2.75 | | | |
| XM Revenue | 5.1 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | | |
| | | | | | | | | | |
| IN SPP | Tv navments a | and revenues | associated v | vith I GF Sta | ff Case #3: I | Baseline Case | used for SPP | and TORC Bas | eline) |
| XM Payment | | 1 34 | 1.86 | 2.73 | 3.17 | 2 75 | ` | | |
| XM Revenue | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | | |
| XIII Kevenue | | | | | | | | | |
| Standalone | | | | | | | | | |
| XM Payment | 1.34 | 1.34 | 1.86 | 2.73 | 3.17 | 2.75 | | | |
| XM Revenue | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | | |
| XWINCVCINC | 1 | | | | | | | | |
| | | | | | | | | | |
| Standalone | Tx payments | and revenu | les associa | ted with LG | E Staff Cas | se #4: High-T | ransfer Scenr | ar | |
| XM Payment | | 1.51 | 2.12 | 3 03 | 3.37 | 2.86 | | | |
| XM Revenue | | 4.0 | 4.0 | 4.0 | 40 | 4.0 | | | |
| | 1 | | | | | | | | |

Transmission Payments and Revenues

Notes

Used wheeling cost \$ from PROSYM as the XM expense in all four cases

For the In-MISO and In-PJM cases this PROSYM wheeling represent the cost to make sales to TVA

Gross-up by 55% to reflect gross cost of transmission (PROSYM assumes net)

For the In-SPP and Standalone cases this PROSYM wheeling represents the cost to make purchases from RTO No gross-up needed as cost is paid 100% with no return

Calculate XM revenues based on existing projections of GFA revenue, 3rd party RTO revenues and partial return of the XM expense For the In-SPP and Standalone case the revenue is only the projected GFA revenue

| | PV 2005 - 2010 (million \$ | | | | | | |
|-----------------------|-------------------------------|------|------|------|------|------|------|
| | 2003) | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| MISO Misc Uplift Cha | r 5.14 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| MISO Sch 21 Uplift Cl | | 0.81 | 0.83 | 0.86 | 0.89 | 0.91 | 0.93 |
| | | | | | | | |
| PJM Uplift Charges | ÷ | - | - | - | - | - | - |

| # | FERC Docket | IPP Owner | IPP ID | nual RR \$000) | MW Output | State | \$ /MW |
|---|----------------|-----------------|-------------|-----------------------|--------------|-------|-------------|
| 1 | ER03-1396 | Troy Energy | | \$ 1,500 | 620 | Ohio | \$ 2,419 |
| 2 | ER04-652 | First Energy Se | Sumpter | \$ 3,000 | 340 | Ohio | \$ 8,824 |
| 3 | ER04-1110 | Reliant | Zeeland | \$ 1,660 | 864 | Mich | \$ 1,921 |
| 4 | ER04-1075 | Holland Energy | у | \$ 1,129 | 650 | IL | \$ 1,737 |
| 5 | ER04-717 | Reliant | Orion | \$ 2,192 | 1310 | Ohio | \$ 1,673 |
| 6 | ER04-1055 | Calpine | Riverside | \$ 1,525 | 600 | Wisc | \$ 2,542 |
| 7 | ER04-1059 | Calpine | Rockgen | \$ 947 | 475 | Wisc | \$ 1,994 |
| 8 | ER04-992 | Dynegy | Renaissance | \$ 1,309 | 780 | Mich | \$ 1,678 |
| | Total | | | \$ 13,262 | 5639 | | \$ 2,352 |

| LGE | Share | |
|-----|-------|--|
| | | |
| | | |

| 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | | | | |
|------|------|------|------|------|------|--|--|--|--|
| | | | | | | | | | |
| 0.81 | 0.83 | 0.86 | 0.89 | 0.91 | 0.93 | | | | |

Note

based on load ratio share

| In RTO Case with MIDAS Prices | 2004 NPV | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|---|--|---|---|--|---|---|
| RTO Case, \$000 Native Load | 2004 NF V | 2005 | 2000 | 2007 | 2000 | 2000 | 2010 |
| Fuel Costs | 2,681,829.58 | 525,327.26 | 610,409.91 | 635,897.47 | 648,483.71 | 647,182.32 | 668,333.37 |
| Fixed O&M Costs | 286,159.11 | 61,619.81 | 61,802 84 | 63,856.43 | 67,431.06 | 70,128.89 | 73,497.19 |
| Variable O&M Costs | 98,119.74 | 18,642.53 | 19,308.17 | 21,239.52 | 22,708.39 | 25,648.51 | 31,571.71 |
| Emission Costs | 408,247.41 | 103,007.14 | 106,100.34 | 99,908.04 | 94,258.12 | 72,564.66 | 75,148.60 |
| Market Purchase Costs | 125,844.99 | 19,539 82 | 20,704.29 | 26,243.78 | 36,780 54 | 41,032.16 | 36,589.55 |
| Wheeling Costs | - | - | - | - | - | 9EC EEC EA | 885,140.42 |
| Total Native Load Costs | 3,600,200.83 | 728,136 56 | 818,325.55 | 847,145.24 | 869,661.82 | 856,556.54 | 005,140.42 |
| Off Suptom Salas | | | | | | | |
| Off-System Sales Fuel Costs | 416,102.64 | 114,277.91 | 104,649.29 | 86,522.97 | 84,798,43 | 80,141.14 | 93,965.04 |
| Variable O&M Costs | 12,552.21 | 3,341.63 | 2,695.63 | 2,349.61 | 2,550.43 | 2,778.72 | 3,638.66 |
| Emission Costs | 54,331.82 | 18,463 79 | 14,812.77 | 11,052.25 | 10,586.32 | 7,861 55 | 8,660.93 |
| Market Purchase Costs | - | - | - | - | - | - | - |
| Wheeling Costs | 13,324.13 | 3,830.97 | 3,306.78 | 3,004.90 | 2,603.88 | 2,590.77 | 2,593.19 |
| Total Off-System Sales Costs | 496,310.80 | 139,914.30 | 125,464 47 | 102,929.73 | 100,539.06 | 93,372.18 | 108,857.83 |
| Off Ductory Color Devenue | (747 446 70) | (217 412 20) | (180,483.82) | (142,505.49) | (140,870.35) | (129,404.03) | (154,137.35) |
| Off-System Sales Revenue | (717,446.79) 3,379,064.83 | (217,412.30) 650,638.56 | 763,306.20 | 807,569.48 | 829,330.53 | 820,524.69 | 839,860.89 |
| Total Costs (Net of Revenue) | 3,379,004.03 | 000,000.00 | 100,000.20 | 001,000.10 | 020,000/00 | 020,021.00 | , |
| TORC Case: Low-Transfer Scen | ario | | | | | | |
| TORC Case, \$000 | 2004 NPV | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| Native Load | | | | | | | |
| Fuel Costs | 2,690,167.30 | 525,547.27 | 612,609.69 | 638,582.02 | 651,676.71 | 649,334.78 | 669,724.75 |
| Fixed O&M Costs | 286,159.11 | 61,619.81 | 61,802.84 | 63,856.43 | 67,431.06 22,713.61 | 70,128.89 25,568.01 | 73,497.19 31,454.70 |
| Variable O&M Costs | 98,408.58 | 18,905 19 101,303 59 | 19,461.31 105,406.88 | 21,287.40 100,017.44 | 94,080.52 | 72,301.94 | 75,095 96 |
| Emission Costs Market Purchase Costs | 405,893.67 116,036.19 | 19,284.93 | 18,196.95 | 22,977.93 | 33,012.12 | 38,350.05 | 35,151.11 |
| Wheeling Costs | 9,103.85 | 1,339.73 | 1,341.83 | 1,861.20 | 2,721.49 | 3,167.29 | 2,751.51 |
| Total Native Load Costs | 3,605,768.70 | 728,000.53 | 818,819.50 | 848,582.42 | 871,635.51 | 858,850.96 | 887,675.22 |
| | | | | | | | |
| Off-System Sales | | | | | | | |
| Fuel Costs | 381,148.53 | 100,196.03 | 96,614.61 | 82,921.85 | 78,257.53 | 73,190.10 | 86,838.01 3,347.01 |
| Variable O&M Costs | 11,530.22 | 2,983.26 | 2,507.57 | 2,253.89 10,589.78 | 2,342.11 9,701.09 | 2,517.90 7,120.19 | 7,990.76 |
| Emission Costs | 49,270.89 | 15,985.82 ~ | 13,581.57 | 10,569.76 | 9,701:05 | 7,120.15 | - |
| Market Purchase Costs Wheeling Costs | - | - | - | - | - | - | - |
| Total Off-System Sales Costs | 441,949.64 | 119,165.11 | 112,703.75 | 95,765.52 | 90,300.73 | 82,828.19 | 98,175.78 |
| Total off System sales soots | | | | | | | |
| Off-System Sales Revenue | (644,354.91) | (188,509.02) | (163,500 20) | (133,161.48) | (127,094.84) | (115,493.24) | (140,472.48) |
| Total Costs (Net of Revenue) | 3,403,363.42 | 658,656.61 | 768,023.05 | 811,186.46 | 834,841.40 | 826,185.91 | 845,378 52 |
| | | | | | | | |
| | | | | | 0000 | 2009 | 2010 |
| TORC Case: Baseline Scenario | 2004 NPV | 2005 | 2006 | 2007 | 2008 | | |
| (Up XM) Case, \$000 | 2004 NPV | 2005 | 2006 | 2007 | 2008 | 2003 | 2010 |
| (Up XM) Case, \$000 Native Load | 2004 NPV 2,689,438 19 | 2005 525,487.69 | 2006 612,495.13 | 2007 638,548.66 | 2008 651,473.97 | 648,981.30 | 669,375.31 |
| (Up XM) Case, \$000 | | | | 638,548.66 63,856.43 | 651,473.97 67,431.06 | 648,981.30 70,128.89 | 669,375.31 73,497.19 |
| (Up XM) Case, \$000 Native Load Fuel Costs | 2,689,438.19 286,159.11 98,205.05 | 525,487.69 61,619.81 18,664.99 | 612,495.13 61,802.84 19,327.49 | 638,548.66 63,856.43 21,245.56 | 651,473.97 67,431.06 22,722.74 | 648,981.30 70,128.89 25,703.92 | 669,375.31 73,497.19 31,572.03 |
| (Up XM) Case, \$000 Native Load Fuel Costs Fixed O&M Costs Variable O&M Costs Emission Costs | 2,689,438 19 286,159.11 98,205.05 409,344.04 | 525,487.69 61,619.81 18,664.99 102,836.14 | 612,495.13 61,802.84 19,327.49 106,317.94 | 638,548.66 63,856.43 21,245.56 100,369.08 | 651,473.97 67,431.06 22,722.74 94,919.89 | 648,981.30 70,128.89 25,703.92 72,824.03 | 669,375.31 73,497.19 31,572.03 75,348.47 |
| (Up XM) Case, \$000 Native Load Fuel Costs Fixed O&M Costs Variable O&M Costs Emission Costs Market Purchase Costs | 2,689,438 19 286,159.11 98,205.05 409,344.04 115,995.47 | 525,487.69 61,619.81 18,664.99 102,836.14 19,217.69 | 612,495.13 61,802.84 19,327.49 106,317.94 18,183.28 | 638,548.66 63,856.43 21,245.56 100,369.08 22,971.59 | 651,473.97 67,431.06 22,722 74 94,919.89 33,110.58 | 648,981.30 70,128.89 25,703.92 72,824.03 38,303.02 | 669,375.31 73,497.19 31,572.03 75,348.47 35,148.31 |
| (Up XM) Case, \$000 Native Load Fuel Costs Fixed O&M Costs Variable O&M Costs Emission Costs Market Purchase Costs Wheeling Costs | 2,689,438 19 286,159.11 98,205.05 409,344.04 115,995.47 9,106.59 | 525,487.69 61,619.81 18,664.99 102,836.14 19,217.69 1,335.42 | 612,495.13 61,802.84 19,327.49 106,317.94 18,183.28 1,341.45 | 638,548.66 63,856.43 21,245.56 100,369.08 22,971.59 1,862.17 | 651,473.97 67,431.06 22,722.74 94,919.89 33,110.58 2,730.96 | 648,981.30 70,128.89 25,703.92 72,824.03 38,303.02 3,165.17 | 669,375.31 73,497.19 31,572.03 75,348.47 35,148.31 2,753.45 |
| (Up XM) Case, \$000 Native Load Fuel Costs Fixed O&M Costs Variable O&M Costs Emission Costs Market Purchase Costs | 2,689,438 19 286,159.11 98,205.05 409,344.04 115,995.47 | 525,487.69 61,619.81 18,664.99 102,836.14 19,217.69 | 612,495.13 61,802.84 19,327.49 106,317.94 18,183.28 | 638,548.66 63,856.43 21,245.56 100,369.08 22,971.59 | 651,473.97 67,431.06 22,722 74 94,919.89 33,110.58 | 648,981.30 70,128.89 25,703.92 72,824.03 38,303.02 | 669,375.31 73,497.19 31,572.03 75,348.47 35,148.31 |
| (Up XM) Case, \$000 Native Load Fuel Costs Fixed O&M Costs Variable O&M Costs Emission Costs Market Purchase Costs Wheeling Costs | 2,689,438 19 286,159.11 98,205.05 409,344.04 115,995.47 9,106.59 | 525,487.69 61,619.81 18,664.99 102,836.14 19,217.69 1,335.42 | 612,495.13 61,802.84 19,327.49 106,317.94 18,183.28 1,341.45 | 638,548.66 63,856.43 21,245.56 100,369.08 22,971.59 1,862.17 | 651,473.97 67,431.06 22,722.74 94,919.89 33,110.58 2,730.96 | 648,981.30 70,128.89 25,703.92 72,824.03 38,303.02 3,165.17 | 669,375.31 73,497.19 31,572.03 75,348.47 35,148.31 2,753.45 887,694.77 |
| (Up XM) Case, \$000 Native Load Fuel Costs Fixed O&M Costs Variable O&M Costs Emission Costs Market Purchase Costs Wheeling Costs Total Native Load Costs | 2,689,438 19 286,159.11 98,205.05 409,344.04 115,995.47 9,106.59 | 525,487.69 61,619.81 18,664.99 102,836.14 19,217.69 1,335.42 | 612,495.13 61,802.84 19,327.49 106,317.94 18,183.28 1,341.45 | 638,548,66 63,856,43 21,245,56 100,369,08 22,971,59 1,862,17 848,853,49 86,064,84 | 651,473,97 67,431.06 22,722 74 94,919,89 33,110.58 2,730 96 872,389 20 84,447.73 | 648,981.30 70,128.89 25,703.92 72,824.03 38,303.02 3,165 17 859,106.32 79,724.35 | 669,375.31 73,497.19 31,572.03 75,348.47 35,148.31 2,753.45 887,694.77 93,279.80 |
| (Up XM) Case, \$000 Native Load Fuel Costs Fixed O&M Costs Variable O&M Costs Emission Costs Market Purchase Costs Wheeling Costs Total Native Load Costs Off-System Sales | 2,689,438 19 286,159.11 98,205.05 409,344.04 115,995.47 9,106.59 3,608,248.44 413,387.24 12,472.14 | 525,487,69 61,619,81 18,664,99 102,836,14 19,217,69 1,335,42 729,161,75 113,063,24 3,312,26 | 612,495.13 61,802.84 19,327.49 106,317.94 18,183.28 1,341.45 819,468.13 104,187.28 2,682.33 | 638,548.66 63,856.43 21,245.56 100,369.08 22,971.59 1,862.17 848,853.49 86,064.84 2,332.88 | 651,473.97 67,431.06 22,722 74 94,919.89 33,110.58 2,730.96 872,389.20 84,447.73 2,535.31 | 648,981.30 70,128.89 72,824.03 38,303.02 3,165.17 859,106.32 79,724.35 2,766.34 | 669,375.31 73,497.19 31,572.03 75,348.47 35,148.31 2,753.45 887,694.77 93,279.80 3,617.78 |
| (Up XM) Case, \$000 Native Load Fuel Costs Fixed O&M Costs Variable O&M Costs Emission Costs Market Purchase Costs Wheeling Costs Total Native Load Costs Off-System Sales Fuel Costs Variable O&M Costs Emission Costs | 2,689,438 19 286,159.11 98,205.05 409,344.04 115,995.47 9,106.59 3,608,248 44 413,387.24 12,472.14 54,038 58 | 525,487,69 61,619,81 18,664,99 102,836,14 19,217,69 1,335,42 729,161,75 113,063,24 3,312,26 18,249,14 | 612,495.13 61,802.84 19,327.49 106,317.94 18,183.28 1,341.45 819,468.13 104,187.28 2,682.33 14,755.11 | 638,548.66 63,856.43 21,245.56 100,369.08 22,971.59 1,862.17 848,853.49 86,064.84 2,332.88 11,021.07 | 651,473.97 67,431.06 22,722 74 94,919.89 33,110.58 2,730.96 872,389.20 844,447.73 2,535.31 10,590.78 | 648,981.30 70,128.89 72,824.03 38,303.02 3,165.17 859,106.32 79,724.35 2,766.34 7,837.57 | 669,375.31 73,497.19 31,572.03 75,348.47 35,148.31 2,753.45 887,694.77 93,279.80 3,617.78 8,634.04 |
| (Up XM) Case, \$000 Native Load Fuel Costs Fixed O&M Costs Variable O&M Costs Emission Costs Market Purchase Costs Wheeling Costs Total Native Load Costs Off-System Sales Fuel Costs Variable O&M Costs Emission Costs Market Purchase Costs | 2,689,438 19 286,159,11 98,205.05 409,344.04 115,995.47 9,106.59 3,608,248 44 413,387.24 12,472.14 54,038 58 | 525,487,69 61,619,81 18,664,99 102,836,14 19,217,69 1,335,42 729,161,75 113,063,24 3,312,26 18,249,14 | 612,495.13 61,802.84 19,327.49 106,317.94 18,183.28 1,341.45 819,468.13 104,187.28 2,682.33 14,755.11 | 638,548.66 63,856.43 21,245.56 100,369.08 22,971.59 1,862.17 848,853.49 86,064.84 2,332.88 11,021.07 | 651,473.97 67,431.06 22,722 74 94,919.89 33,110.58 2,730.96 872,389.20 84,447.73 2,535.31 10,590.78 | 648,981.30 70,128.89 72,824.03 38,303.02 3,165.17 859,106.32 79,724.35 2,766.34 | 669,375.31 73,497.19 31,572.03 75,348.47 35,148.31 2,753.45 887,694.77 93,279.80 3,617.78 8,634.04 |
| (Up XM) Case, \$000 Native Load Fuel Costs Fixed O&M Costs Variable O&M Costs Emission Costs Market Purchase Costs Wheeling Costs Total Native Load Costs Off-System Sales Fuel Costs Variable O&M Costs Emission Costs Market Purchase Costs Wheeling Costs | 2,689,438 19 286,159 11 98,205.05 409,344.04 115,995.47 9,106.59 3,608,248 44 413,387.24 12,472.14 54,038 58 | 525,487.69 61,619.81 18,664.99 102,836.14 19,217.69 1,335.42 729,161.75 113,063.24 3,312.26 18,249.14 | 612,495.13 61,802.84 19,327.49 106,317.94 18,183.28 1,341.45 819,468.13 104,187.28 2,682.33 14,755.11 | 638,548.66 63,856.43 21,245.56 100,369.08 22,971.59 1,862.17 848,853.49 86,064.84 2,332.88 11,021.07 | 651,473.97 67,431.06 22,722.74 94,919.89 33,110.58 2,730.96 872,389.20 84,447.73 2,535.31 10,590.78 | 648,981.30 70,128 89 25,703.92 72,824.03 38,303.02 3,165.17 859,106.32 79,724.35 2,766.34 7,837.57 | 669,375.31 73,497.19 31,572.03 75,348.47 35,148.31 2,753.45 887,694.77 93,279.80 3,617.78 8,634.04 |
| (Up XM) Case, \$000 Native Load Fuel Costs Fixed O&M Costs Variable O&M Costs Emission Costs Market Purchase Costs Wheeling Costs Total Native Load Costs Off-System Sales Fuel Costs Variable O&M Costs Emission Costs Market Purchase Costs | 2,689,438 19 286,159,11 98,205.05 409,344.04 115,995.47 9,106.59 3,608,248 44 413,387.24 12,472.14 54,038 58 | 525,487,69 61,619,81 18,664,99 102,836,14 19,217,69 1,335,42 729,161,75 113,063,24 3,312,26 18,249,14 | 612,495.13 61,802.84 19,327.49 106,317.94 18,183.28 1,341.45 819,468.13 104,187.28 2,682.33 14,755.11 | 638,548.66 63,856.43 21,245.56 100,369.08 22,971.59 1,862.17 848,853.49 86,064.84 2,332.88 11,021.07 | 651,473.97 67,431.06 22,722 74 94,919.89 33,110.58 2,730.96 872,389.20 84,447.73 2,535.31 10,590.78 | 648,981.30 70,128.89 72,824.03 38,303.02 3,165.17 859,106.32 79,724.35 2,766.34 7,837.57 | 669,375.31 73,497.19 31,572.03 75,348.47 35,148.31 2,753.45 887,694.77 93,279.80 3,617.78 8,634.04 |
| (Up XM) Case, \$000 Native Load Fuel Costs Fixed O&M Costs Variable O&M Costs Emission Costs Market Purchase Costs Wheeling Costs Total Native Load Costs Off-System Sales Fuel Costs Variable O&M Costs Emission Costs Market Purchase Costs Wheeling Costs Total Off-System Sales Costs | 2,689,438 19 286,159 11 98,205.05 409,344.04 115,995.47 9,106.59 3,608,248 44 413,387.24 12,472.14 54,038 58 | 525,487,69 61,619,81 18,664,99 102,836,14 19,217,69 1,335,42 729,161,75 113,063,24 3,312,26 18,249,14 | 612,495.13 61,802.84 19,327.49 106,317.94 18,183.28 1,341.45 819,468.13 104,187.28 2,682.33 14,755.11 | 638,548.66 63,856.43 21,245.56 100,369.08 22,971.59 1,862.17 848,853.49 86,064.84 2,332.88 11,021.07 | 651,473.97 67,431.06 22,722.74 94,919.89 33,110.58 2,730.96 872,389.20 84,447.73 2,535.31 10,590.78 | 648,981.30 70,128 89 25,703.92 72,824.03 38,303.02 3,165.17 859,106.32 79,724.35 2,766.34 7,837.57 | 669,375.31 73,497.19 31,572.03 75,348.47 35,148.31 2,753.45 887,694.77 93,279.80 3,617.78 8,634.04 |
| (Up XM) Case, \$000 Native Load Fuel Costs Fixed O&M Costs Variable O&M Costs Emission Costs Market Purchase Costs Wheeling Costs Total Native Load Costs Off-System Sales Fuel Costs Variable O&M Costs Emission Costs Market Purchase Costs Wheeling Costs | 2,689,438 19 286,159.11 98,205.05 409,344.04 115,995.47 9,106.59 3,608,248.44 413,387.24 12,472.14 54,038.58 | 525,487.69 61,619.81 18,664.99 102,836.14 19,217.69 1,335.42 729,161.75 113,063.24 3,312.26 18,249.14 | 612,495 13 61,802 84 19,327 49 106,317 94 18,183 28 1,341 45 819,468 13 104,187 28 2,682 33 14,755 11 | 638,548.66 63,856.43 21,245.56 100,369.08 22,971.59 1,862.17 848,853.49 86,064.84 2,332.88 11,021.07 | 651,473.97 67,431.06 22,722 74 94,919.89 33,110.58 2,730.96 872,389.20 84,447.73 2,535.31 10,590.78 | 648,981.30 70,128.89 25,703.92 72,824.03 38,303.02 3,165.17 859,106.32 79,724.35 2,766.34 7,837.57 | 669,375.31 73,497.19 31,572.03 75,348.47 35,148.31 2,753.45 887,694.77 93,279.80 3,617.78 8,634.04 |
| (Up XM) Case, \$000 Native Load Fuel Costs Fixed O&M Costs Variable O&M Costs Emission Costs Market Purchase Costs Wheeling Costs Total Native Load Costs Off-System Sales Fuel Costs Variable O&M Costs Emission Costs Market Purchase Costs Wheeling Costs Total Off-System Sales Costs Off-System Sales Revenue | 2,689,438 19 286,159.11 98,205.05 409,344.04 115,995.47 9,106.59 3,608,248 44 413,387.24 12,472.14 54,038.58 - - 479,897.96 (706,644.09) | 525,487,69 61,619,81 18,664,99 102,836,14 19,217,69 1,335,42 729,161,75 113,063,24 3,312,26 18,249,14 | 612,495.13 61,802.84 19,327.49 106,317.94 18,183.28 1,341.45 819,468.13 104,187.28 2,682.33 14,755.11 | 638,548.66 63,856.43 21,245.56 100,369.08 22,971.59 1,862.17 848,853.49 86,064.84 2,332.88 11,021.07 | 651,473.97 67,431.06 22,722 74 94,919.89 33,110.58 2,730.96 872,389.20 84,447.73 2,535.31 10,590.78 97,573.82 (139,182.54) | 648,981.30 70,128.89 25,703.92 72,824.03 38,303.02 3,165.17 859,106.32 79,724.35 2,766.34 7,837.57 | 669,375.31 73,497.19 31,572.03 75,348.47 35,148.31 2,753.45 887,694.77 93,279.80 3,617.78 8,634.04 |
| (Up XM) Case, \$000 Native Load Fuel Costs Fixed O&M Costs Variable O&M Costs Emission Costs Market Purchase Costs Wheeling Costs Total Native Load Costs Off-System Sales Fuel Costs Variable O&M Costs Emission Costs Market Purchase Costs Wheeling Costs Total Off-System Sales Costs Off-System Sales Revenue Total Costs (Net of Revenue) TORC Case: High-Transfer Sce | 2,669,438 19 286,159.11 98,205.05 409,344.04 115,995.47 9,106.59 3,608,248.44 413,387.24 12,472.14 54,038.58 - - 479,897.96 (706,644.09) 3,381,502.32 | 525,487,69 61,619,81 18,664,99 102,836,14 19,217,69 1,335,42 729,161,75 113,063,24 3,312,26 18,249,14 134,624,64 (213,143,66) 650,642,72 | 612,495 13 61,802 84 19,327,49 106,317 94 18,183,28 1,341,45 819,468 13 104,187 28 2,682 33 14,755 11 121,624,72 (178,246,83) 762,846.02 | 638,548,66 63,856,43 21,245,56 100,369,08 22,971,59 1,862,17 848,853,49 86,064,84 2,332,88 11,021,07 | 651,473,97 67,431.06 22,722 74 94,919,89 33,110.58 2,730.96 872,389.20 84,447.73 2,535.31 10,590.78 97,573.82 (139,182.54) 830,780.48 | 648,981.30 70,128.89 25,703.92 72,824.03 38,303.02 3,165 17 859,106 32 79,724 35 2,766 34 7,837 57 90,328 27 (127,509.06) 821,925 53 | 669,375.31 73,497.19 31,572.03 75,348.47 35,148.31 2,753.45 887,694.77 93,279.80 3,617.78 8,634.04 |
| (Up XM) Case, \$000 Native Load Fuel Costs Fixed O&M Costs Variable O&M Costs Emission Costs Market Purchase Costs Wheeling Costs Total Native Load Costs Off-System Sales Fuel Costs Variable O&M Costs Emission Costs Market Purchase Costs Wheeling Costs Total Off-System Sales Costs Off-System Sales Revenue Total Costs (Net of Revenue) TORC Case: High-Transfer Sce RTO XM Case + Hurdle Rates, \$ | 2,669,438 19 286,159.11 98,205.05 409,344.04 115,995.47 9,106.59 3,608,248.44 413,387.24 12,472.14 54,038.58 - - 479,897.96 (706,644.09) 3,381,502.32 | 525,487,69 61,619,81 18,664,99 102,836,14 19,217,69 1,335,42 729,161,75 113,063,24 3,312,26 18,249,14 | 612,495.13 61,802.84 19,327.49 106,317.94 18,183.28 1,341.45 819,468.13 104,187.28 2,682.33 14,755.11 | 638,548.66 63,856.43 21,245.56 100,369.08 22,971.59 1,862.17 848,853.49 86,064.84 2,332.88 11,021.07 | 651,473.97 67,431.06 22,722 74 94,919.89 33,110.58 2,730.96 872,389.20 84,447.73 2,535.31 10,590.78 97,573.82 (139,182.54) | 648,981.30 70,128.89 25,703.92 72,824.03 38,303.02 3,165.17 859,106.32 79,724.35 2,766.34 7,837.57 | 669,375.31 73,497.19 31,572.03 75,348.47 35,148.31 2,753.45 887,694.77 93,279.80 3,617.78 8,634.04 |
| (Up XM) Case, \$000 Native Load Fuel Costs Fixed O&M Costs Variable O&M Costs Emission Costs Market Purchase Costs Wheeling Costs Total Native Load Costs Off-System Sales Fuel Costs Variable O&M Costs Emission Costs Market Purchase Costs Wheeling Costs Total Off-System Sales Costs Off-System Sales Revenue Total Costs (Net of Revenue) TORC Case: High-Transfer Sce RTO XM Case + Hurdle Rates, S Native Load | 2,689,438 19 286,159.11 98,205.05 409,344.04 115,995.47 9,106.59 3,608,248 44 413,387.24 12,472.14 54,038.58 - - 479,897.96 (706,644.09) 3,381,502.32 | 525,487,69 61,619,81 18,664,99 102,836,14 19,217,69 1,335,42 729,161,75 113,063,24 3,312,26 18,249,14 134,624,64 (213,143,66) 650,642,72 2005 | 612,495.13 61,802.84 19,327.49 106,317.94 18,183.28 1,341.45 819,468.13 104,187.28 2,682.33 14,755.11 121,624.72 (178,246.83) 762,846.02 2006 | 638,548.66 63,856.43 21,245.56 100,369.08 22,971.59 1,862.17 848,853.49 86,064.84 2,332.88 11,021.07 | 651,473.97 67,431.06 22,722 74 94,919.89 33,110.58 2,730.96 872,389.20 84,447.73 2,535.31 10,590.78 97,573.82 (139,182.54) 830,780.48 | 648,981.30 70,128.89 25,703.92 72,824.03 38,303.02 3,165.17 859,106.32 79,724.35 2,766.34 7,837.57 | 669,375.31 73,497.19 31,572.03 75,348.47 35,148.31 2,753.45 887,694.77 93,279.80 3,617.78 8,634.04 |
| (Up XM) Case, \$000 Native Load Fuel Costs Fixed O&M Costs Variable O&M Costs Emission Costs Market Purchase Costs Wheeling Costs Total Native Load Costs Off-System Sales Fuel Costs Variable O&M Costs Emission Costs Market Purchase Costs Wheeling Costs Total Off-System Sales Costs Off-System Sales Revenue Total Costs (Net of Revenue) TORC Case: High-Transfer Sce RTO XM Case + Hurdle Rates, S Native Load Fuel Costs | 2,689,438 19 286,159.11 98,205.05 409,344.04 115,995.47 9,106.59 3,608,248 44 413,387.24 12,472.14 54,038.58 2 479,897.96 (706,644.09) 3,381,502.32 control 50001 2004 NPV 2,681,854.24 | 525,487,69 61,619,81 18,664,99 102,836,14 19,217,69 1,335,42 729,161,75 113,063,24 3,312,26 18,249,14 | 612,495.13 61,802.84 19,327.49 106,317.94 18,183.28 1,341.45 819,468.13 104,187.28 2,682.33 14,755.11 | 638,548.66 63,856.43 21,245.56 100,369.08 22,971.59 1,862.17 848,853.49 86,064.84 2,332.88 11,021.07 - - 99,418.79 (140,430.71) 807,841.57 2007 635,854.82 | 651,473.97 67,431.06 22,722 74 94,919.89 33,110.58 2,730.96 872,389.20 84,447.73 2,535.31 10,590.78 97,573.82 (139,182.54) 830,780.48 2008 648,412.37 | 648,981.30 70,128.89 25,703.92 72,824.03 38,303.02 3,165.17 859,106.32 79,724.35 2,766.34 7,837.57 90,328.27 (127,509.06) 821,925.53 2009 647,219.83 | 669,375.31 73,497.19 31,572.03 75,348.47 35,148.31 2,753.45 887,694.77 93,279.80 3,617.78 8,634.04 |
| (Up XM) Case, \$000 Native Load Fuel Costs Fixed O&M Costs Variable O&M Costs Emission Costs Market Purchase Costs Wheeling Costs Total Native Load Costs Off-System Sales Fuel Costs Variable O&M Costs Emission Costs Market Purchase Costs Wheeling Costs Total Off-System Sales Costs Off-System Sales Revenue Total Costs (Net of Revenue) TORC Case: High-Transfer Sce RTO XM Case + Hurdle Rates, S Native Load Fuel Costs Fixed O&M Costs | 2,689,438 19 286,159.11 98,205.05 409,344.04 115,995.47 9,106.59 3,608,248 44 413,387.24 12,472.14 54,038.58 2 479,897.96 (706,644.09) 3,381,502.32 cmario 5001 2004 NPV 2,681,854.24 286,159.11 | 525,487,69 61,619,81 18,664,99 102,836,14 19,217,69 1,335,42 729,161,75 113,063,24 3,312,26 18,249,14 | 612,495.13 61,802.84 19,327.49 106,317.94 18,183.28 1,341.45 819,468.13 104,187.28 2,682.33 14,755.11 | 638,548.66 63,856.43 21,245.56 100,369.08 22,971.59 1,862.17 848,853.49 86,064.84 2,332.88 11,021.07 | 651,473,97 67,431.06 22,722,74 94,919,89 33,110.58 2,730,96 872,389.20 84,447.73 2,535,31 10,590.78 97,573.82 (139,182,54) 830,780,48 2008 648,412,37 67,431.06 | 648,981.30 70,128 89 25,703.92 72,824.03 38,303 02 3,165 17 859,106.32 79,724.35 2,766.34 7,837 57 90,328 27 (127,509.06) 821,925 53 2009 647,219.83 70,128 89 | 669,375.31 73,497.19 31,572.03 75,348.47 35,148.31 2,753.45 887,694.77 93,279.80 3,617.78 8,634.04 |
| (Up XM) Case, \$000 Native Load Fuel Costs Fixed O&M Costs Variable O&M Costs Emission Costs Market Purchase Costs Wheeling Costs Total Native Load Costs Off-System Sales Fuel Costs Variable O&M Costs Emission Costs Market Purchase Costs Wheeling Costs Total Off-System Sales Costs Off-System Sales Revenue Total Costs (Net of Revenue) TORC Case: High-Transfer Sce RTO XM Case + Hurdle Rates, S Native Load Fuel Costs Fixed O&M Costs Variable O&M Costs | 2,669,438 19 286,159.11 98,205.05 409,344.04 115,995.47 9,106.59 3,608,248.44 413,387.24 12,472.14 54,038.58 - - 479,897.96 (706,644.09) 3,381,502.32 mario \$001 2004 NPV 2,681,854.24 286,159.11 98,128.26 | 525,487,69 61,619,81 18,664.99 102,836,14 19,217,69 1,335,42 729,161,75 113,063,24 3,312,26 18,249,14 134,624,64 (213,143,66) 650,642,72 2005 525,302,74 61,619,81 18,640,49 | 612,495 13 61,802 84 19,327,49 106,317 94 18,183,28 1,341,45 819,468,13 104,187 28 2,682 33 14,755 11 121,624,72 (178,246,83) 762,846,02 2006 610,520,86 61,802 84 19,311 92 | 638,548,66 63,856,43 21,245,56 100,369,08 22,971,59 1,862,17 848,853,49 86,064,84 2,332,88 11,021,07 | 651,473,97 67,431.06 22,722 74 94,919,89 33,110.58 2,730.96 872,389.20 84,447.73 2,535.31 10,590.78 97,573.82 (139,182.54) 830,780.48 2008 648,412.37 67,431.06 22,700.82 | 648,981.30 70,128.89 25,703.92 72,824.03 38,303.02 3,165.17 859,106.32 79,724.35 2,766.34 7,837.57 90,328.27 (127,509.06) 821,925.53 2009 647,219.83 | 669,375.31 73,497.19 31,572.03 75,348.47 35,148.31 2,753.45 887,694.77 93,279.80 3,617.78 8,634.04 |
| (Up XM) Case, \$000 Native Load Fuel Costs Fixed O&M Costs Variable O&M Costs Emission Costs Market Purchase Costs Wheeling Costs Total Native Load Costs Off-System Sales Fuel Costs Variable O&M Costs Emission Costs Market Purchase Costs Wheeling Costs Total Off-System Sales Costs Off-System Sales Revenue Total Costs (Net of Revenue) TORC Case: High-Transfer Sce RTO XM Case + Hurdle Rates, S Native Load Fuel Costs Fixed O&M Costs | 2,689,438 19 286,159.11 98,205.05 409,344.04 115,995.47 9,106.59 3,608,248 44 413,387.24 12,472.14 54,038.58 2 479,897.96 (706,644.09) 3,381,502.32 cmario 5001 2004 NPV 2,681,854.24 286,159.11 | 525,487,69 61,619,81 18,664,99 102,836,14 19,217,69 1,335,42 729,161,75 113,063,24 3,312,26 18,249,14 | 612,495.13 61,802.84 19,327.49 106,317.94 18,183.28 1,341.45 819,468.13 104,187.28 2,682.33 14,755.11 | 638,548.66 63,856.43 21,245.56 100,369.08 22,971.59 1,862.17 848,853.49 86,064.84 2,332.88 11,021.07 | 651,473,97 67,431.06 22,722,74 94,919,89 33,110.58 2,730,96 872,389.20 84,447.73 2,535,31 10,590.78 97,573.82 (139,182,54) 830,780,48 2008 648,412,37 67,431.06 | 648,981.30 70,128.89 25,703.92 72,824.03 38,303.02 3,165 17 859,106 32 79,724 35 2,766 34 7,837 57 90,328 27 (127,509.06) 821,925 53 2009 647,219.83 70,128.89 25,679 47 | 669,375.31 73,497.19 31,572.03 75,348.47 35,148.31 2,753.45 887,694.77 93,279.80 3,617.78 8,634.04 |

| Wheeling Costs | 9,854.96 | 1,353.93 | 1,511.48 | 2,122.71 | 3,033.78 | 3,371.16 | 2,860.73 |
|---|--|---|---|--|--|--|---|
| Total Native Load Costs | 3,599,799.35 | 727,968.50 | 818,195.19 | 847,016.65 | 869,719.72 | 856,437.41 | 885,122.84 |
| Off-System Sales Fuel Costs Variable O&M Costs Emission Costs Market Purchase Costs Wheeling Costs Total Off-System Sales Costs | 415,341.20 12,541.98 54,274.94 - - 495,772.54 | 114,108.87 3,338.17 18,431.37 - - 139,819.43 | 104,452.44 2,693.44 14,793.83 - - 125,334.81 | 86,206 68 2,342.08 11,019.93 - - 102,580.03 | 84,688.40 2,548.09 10,595.33 - - 100,502.65 | 80,266.13 2,787.47 7,882.07 - - 93,598.96 | 93,593.18 3,632.55 8,649.64 - - 108,506.93 |
| Off-System Sales Revenue | (719,255.70) | (217,638.80) | (180,977.61) | (142,649.07) | (141,546.80) | (130,243.20) | (154,321.51) |
| Total Costs (Net of Revenue) | 3,376,316.18 | 650,149.12 | 762,552.39 | 806,947.61 | 828,675.57 | 819,793.17 | 839,308 26 |

MISO Base Case Annual Summary MISO RTO Base Case

| 2010 (million \$ | | | | | | |
|------------------|---|--|--|--|--|--|
| 2003) | 2005 | 2006 | 2007 | 2008 | 2009 | 201 |
| - | - | - | - | | - | - |
| | | | | | | |
| | 15.14 | 14.86 | | | | 12.88 |
| 0.89 | | | 0.28 | 0.28 | 0.28 | 0.2 |
| - | - | - | - | - | - | • |
| 65.56 | 15.14 | 14.86 | 15.17 | 15.03 | 14.58 | 13.10 |
| | | | | | | |
| | | | | | | |
| 6.20 | 1.31 | 1.35 | 1.38 | 1.41 | 1.45 | 1.4 |
| | | | | | | |
| 2,752.05 | 525.33 | 610.41 | 635.90 | 648.48 | 647.18 | 668.3 |
| 293.56 | 61.62 | 61.80 | 63.86 | 67.43 | 70.13 | 73.5 |
| 101.19 | 18.64 | 19.31 | 21.24 | 22.71 | 25.65 | 31.5 |
| 415.16 | 103.01 | 106.10 | 99.91 | 94.26 | 72.56 | 75.1 |
| 130.34 | 19.54 | 20.70 | 26.24 | 36.78 | 41.03 | 36.5 |
| | | | | 869.66 | | 885.1 |
| | | | | | | |
| 473.63 | 114.28 | 104.65 | 86.52 | 84.80 | 80.14 | 93,9 |
| | | | | | | 3.6 |
| | | | | | | 8.6 |
| | 10.40 | 14.01 | | 10.59 | | |
| | 12(08 | 122.16 | | 07.04 | | 106.2 |
| 491.30 | 130.08 | 122.10 | 99.92 | 97.94 | 90.78 | 100.2 |
| | | | | | | |
| 6.20 | 1.31 | 1.35 | 1.38 | 1.41 | 1.45 | 1.4 |
| - | - | - | - | - | - | |
| 6.20 | 1.31 | 1.35 | 1.38 | 1.41 | 1.45 | 1.4 |
| | | | | | | |
| 24.60 | 6.96 | 6.02 | 5.45 | 4.73 | 4.71 | 4.7 |
| 78.56 | 16.65 | 17.06 | 17.49 | 17.93 | 18.37 | 18.8 |
| 103.16 | 23.61 | 23.08 | 22.94 | 22.65 | 23.08 | 23. |
| | | | | | | |
| 3.86 | 0.81 | 0.83 | 0.86 | 0.89 | 0.91 | 0.9 |
| | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0. |
| | | | | | | 1. |
| 3.78 | 0.80 | 0.82 | 0.84 | 0.86 | 0.88 | 0. |
| 4,374,59 | 907.71 | 983.27 | 990.14 | 1,010.36 | 990.20 | 1,033.4 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| (46.82) | (12.10) | (10,50) | (10.30) | (9,90) | (9,90) | (9.9 |
| (46.82) | (12.10) | (10.50) | (10.30) | (9.90) | (9.90) | (9.9 |
| (728.60) | (217.41) | (180.48) | (142,51) | (140.87) | (129.40) | (154.1 |
| | | | | | | |
| (74.64) | (15.81) | (16.21) | (16.61) | (17.03) | (17.46) | (17.8 |
| | | | | | | (2.0 |
| | | | | | | (19.8 |
| (05,54) | (17,01) | (10.21) | (10.01) | (19,05) | (17.40) | (12.0 |
| (858.06) | (2.17.33) | (200.10) | (171 (2)) | (169.80) | (158 76) | (183.9 |
| 3.515 63 | 660.38 | 774.08 | 818.72 | 840.56 | 831.44 | 849.4 |
| | 2003) 64.79 0.89 65.56 2.752.05 293.56 101.19 415.16 130.34 3,692.30 423.63 12.85 54.83 | $\begin{array}{ c c c c c c c c c c c c c c c c c c c$ | $\begin{array}{ c c c c c c c c c c c c c c c c c c c$ | $\begin{array}{ c c c c c c c c c c c c c c c c c c c$ | $\begin{array}{ c c c c c c c c c c c c c c c c c c c$ | $\begin{array}{ c c c c c c c c c c c c c c c c c c c$ |

all figures on this summary page would be $\ensuremath{\text{pv}}$ to 2003 for the study period 2005-2010

discount rate will be 7.0 %

inflation rate assumed to be 2 5%

Change Case 2 Annual Summary

| | PV 2005 - | | | | | | |
|---|-----------------|----------|----------|----------|----------|----------|----------|
| | 2010 (million S | | | | | 1 | |
| Category (negative numbers are revenues) | 2003) | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| Exit Fee | 24.81 | 28.40 | - | - | - | - | - |
| Administrative Costs | | | | | | | |
| Implementation & Administration | 75.59 | 17.12 | 16.45 | 15.99 | 16.79 | 17.45 | 18.32 |
| Ancillary Services Market Administration | - | - | - | - | - | - | - |
| Other Administrative Costs | - | - | - | - | - | - | - |
| Subtotal | 75.59 | 17.12 | 16.45 | 15.99 | 16.79 | 17.45 | 18.32 |
| Operations Costs | | | | | | | |
| Generation Costs | | | | | | | |
| A&G Costs Associated with RTO Membership | 6.20 | 1.31 | 1.35 | 1.38 | 1.41 | 1.45 | 1.49 |
| Native Load | | | | | | | |
| Fuel Costs | 2,752.05 | 525.33 | 610.41 | 635.90 | 648.48 | 647.18 | 668.33 |
| Fixed O&M Costs | 293.56 | 61.62 | 61.80 | 63.86 | 67.43 | 70.13 | 73.50 |
| Variable O&M Costs | 101.19 | 18.64 | 19.31 | 21.24 | 22.71 | 25.65 | 31.57 |
| Emission Credit Costs | 415.16 | 103.01 | 106.10 | 99.91 | 94.26 | 72.56 | 75.15 |
| Market Purchases | 130.34 | 19.54 | 20.70 | 26.24 | 36.78 | 41.03 | 36.59 |
| Subtotal | 3,692.30 | 728.14 | 818.33 | 847.15 | 869.66 | 856.56 | 885.14 |
| Off-system Sales | | | | | | | ******** |
| Fuel Costs | 423.63 | 114.28 | 104.65 | 86.52 | 84.80 | 80.14 | 93.97 |
| Variable O&M Costs | 12.85 | 3.34 | 2.70 | 2.35 | 2.55 | 2.78 | 3.64 |
| Emission Credit Costs | 54.83 | 18.46 | 14.81 | 11.05 | 10.59 | 7.86 | 8.66 |
| Market Purchases | - | - | ~ | - | - | - | - |
| Subtotal | 491.30 | 136.08 | 122.16 | 99.92 | 97.94 | 90.78 | 106.26 |
| Transmission System Operation Costs | | | | | | | |
| A&G Costs Associated with RTO Membership | 6.20 | 1,31 | 1.35 | 1.38 | 1.41 | 1.45 | 1.49 |
| Reliability Coordinator and OASIS Services | | | | | | | |
| Subtotal | 6.20 | 1.31 | 1.35 | 1.38 | 1.41 | 1.45 | 1.49 |
| Transmission Usage Costs | | | | | | | |
| Transmission Payments | 24.60 | 6.96 | 6.02 | 5.45 | 4.73 | 4.71 | 4.71 |
| Transmission Congestion Payments | 78.56 | 16.65 | 17.06 | 17.49 | 17.93 | 18.37 | 18.83 |
| Subtotal | 103.16 | 23.61 | 23.08 | 22.94 | 22.65 | 23.08 | 23.54 |
| Uplift Charges | | | | | | | 20101 |
| Schedule 21 Uplifi Charges(MISO Case Only) | | | | - | | | _ |
| Miscellaneous Uplift Costs | | | | - | | | |
| Subtotal | | - | | | | | |
| Legal, Regulatory & Transaction Costs | 3.78 | 0.80 | 0.82 | 0.84 | 0.86 | 0.88 | 0.91 |
| Total Costs | 4,403.33 | 936.78 | 983.52 | 989.60 | 1.010.73 | 991.65 | 1,037.15 |
| | | | | | | | |
| Revenues (note revenues will be negative numbers) | | | | | | | |
| Transmission Revenues | | | | | | | |
| Transmission Revenues | (46.82) | (12.10) | (10.50) | (10.30) | (9.90) | (9.90) | (9.90 |
| Subtotal | (46.82) | (12,10) | (10.50) | (10.30) | (9.90) | (9.90) | (9.90 |
| Off-system Sales Revenue | (728.60) | (217.41) | (180.48) | (142.51) | (140.87) | (129.40) | (154.14 |
| FTRs | | | | | | | |
| FTR Revenues (as offset to congestion payments) | (74.64) | (15.81) | (16.21) | (16.61) | (17.03) | (17.46) | (17.89 |
| Share of Net Revenue from FTR Auction | (10.49) | (2.33) | (2.34) | (2.35) | (2.37) | (2.38) | (2.39 |
| Subtotal | (85.13) | (18.14) | (18.54) | (18.97) | (19.40) | (19.84) | (20.28 |
| Miscellaneous Revenues | | | | | | / | |
| Total Revenues | (860.54) | (247.65) | (209.53) | (171.77) | (170,17) | (159.14) | (184.32 |
| | 3,542.79 | 689.13 | 774.00 | 817.83 | 840.56 | 832.52 | 852.83 |
| Net Cost (Revenue) Including Exit Fee | 1 5,342.791 | 089.131 | //4.00 1 | 817.851 | D4U10 J | 837771 | |

all figures on this summary page would be pv to 2003 for the study period 2005-2010 discount rate will be 7.0 %

inflation rate assumed to be 2 5%

Change Case 2 Annual Summary

| SPP R | TO Case | |
|-------|---------|--|
|-------|---------|--|

| SPP RIU Case | DIV 2007 | | | | T | | |
|---|---------------|----------|----------|----------|----------|----------|---------|
| | PV 2005 - | | | | | 1 | |
| | 2010 (million | | | | 1 | | |
| | \$ 2003) | 2005 | 2006 | 0007 | 2000 | | |
| Category (negative numbers are revenues) | | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| Exit Fee | 24.81 | 28.40 | | - | | | - |
| Administrative Costs | | | | | | | |
| Implementation & Administration | 30.44 | 6.43 | 6.48 | 6.62 | 6.95 | 7.22 | 7.58 |
| Ancillary Services Market Administration | | | - | | | | - |
| Other Administrative Costs | 0.03 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Subtotal | 30.47 | 6.43 | 6.49 | 6.62 | 6.95 | 7.23 | 7.59 |
| | | | | | | | |
| Operations Costs | | | | | | | - |
| Generation Costs | | | | | | | |
| A&G Costs Associated with SPP RTO Membership | 4.21 | 0.89 | 0.92 | 0.94 | 0.96 | 0.99 | 1.01 |
| Native Load | | | | (20.55 | | <u> </u> | |
| Fuel Costs | 2,759.89 | 525.49 | 612.50 | 638.55 | 651.47 | 648.98 | 669.38 |
| Fixed O&M Costs | 293.56 | 61.62 | 61.80 | 63.86 | 67.43 | 70.13 | 73.50 |
| Variable O&M Costs | 101.28 | 18.66 | 19.33 | 21.25 | 22.72 | 25.70 | 31.57 |
| Emission Credit Costs | 416.30 | 102.84 | 106.32 | 100.37 | 94.92 | 72.82 | 75.35 |
| Market Purchases | 120.17 | 19.22 | 18.18 | 22.97 | 33.11 | 38.30 | 35.15 |
| Subtotal | 3,691.21 | 727.83 | 818.13 | 846.99 | 869.66 | 855.94 | 884.94 |
| Off-system Sales | | | | | | | |
| Fuel Costs | 420.88 | 113.06 | 104.19 | 86.06 | 84.45 | 79.72 | 93.28 |
| Variable O&M Costs | 12.77 | 3.31 | 2.68 | 2.33 | 2.54 | 2.77 | 3.62 |
| Emission Credit Costs | 54.54 | 18.25 | 14.76 | 11.02 | 10.59 | 7.84 | 8.63 |
| Market Purchases | | | | - | - | | |
| Subtotal | 488.19 | 134.62 | 121.62 | 99.42 | 97.57 | 90.33 | 105.53 |
| | | | | | | | |
| Transmission System Operation Costs | | | | | | | |
| A&G Costs Associated with SPP RTO Membership | 3.80 | 0.42 | 0.92 | 0.94 | 0.96 | 0.99 | 1.01 |
| Reliability Coordinator and OASIS Services | | | | | | | |
| Subtotal | 3.80 | 0.42 | 0.92 | 0.94 | 0.96 | 0.99 | 1.0 |
| Transmission Usage Costs | | | | | | | |
| Transmisison Payments | 9.45 | 1.34 | 1.34 | 1.86 | 2.72 | 3.17 | 2.7 |
| Transmission Congestion Payments | | | | | | - | |
| Subtotal | 9.45 | 1.34 | 1.34 | 1.86 | 2.72 | 3.17 | 2.75 |
| Uplift Charges | | | | | | | |
| Schedule 21 Uplift Charges(MISO Case Only) | | - | | | | | |
| Miscellaneous Uplift Costs | | - | - | | - | - | |
| Subtotal | | | | | | | |
| Legal, Regulatory & Transaction Costs | 2.83 | 0.60 | 0.62 | 0.63 | 0.65 | 0.66 | 0.6 |
| m + 1 - 0 | 1251.00 | 000 54 | 050.02 | 057.40 | 979.48 | 0.00.20 | 1 002 6 |
| Total Costs | 4,254.98 | 900.54 | 950.03 | 957.40 | 979.48 | 959.30 | 1,003.5 |
| Revenues (note revenues will be negative numbers) | | | | | | | |
| Transmission Revenues | | | | | | | |
| Transmission Revenues | (18.78) | (5.10) | (4.00) | (4.00) | (4 00) | (4.00) | (4.00 |
| Subtotal | (18.78) | (5,10) | (4.00) | (4.00) | (4.00) | (4.00) | (4.00 |
| Off-system Sales Revenue | (717 69) | (213.14) | (178.25) | (140.43) | (139.18) | (127.51) | (152.04 |
| | | | | | | | |
| FTRs | | | | | | | |
| FTR Revenues (as offset to congestion payments) | - | | - | - | - | - | |
| Share of Net Revenue from FTR Auction | - | - | - | - | _ | - | |
| Subtotal | - | - | - | - | - | ~ | - |
| Miscellaneous Revenues | - | - | | - | - | - | |
| Total Revenues | (736,47) | (218.24) | (182.25) | (144.43) | (143.18) | (131.51) | (156.04 |
| Net Cost (Revenue) Including Exit Fee | 3,518.52 | 682.30 | 767.78 | 812.97 | 836.29 | 827.79 | 847.48 |
| Net Cost (Revenue) Excluding Exit Fee | 3,493.71 | 653.89 | 767.78 | 812.97 | 836.29 | 827.79 | 847.48 |

all figures on this summary page would be pv to 2003 for the study period 2005-2010 discount rate will be 7 0 % inflation rate assumed to be 2 5%

Change Case 3 Annual Summary TORC Baseline Case

| TORC Baseline Case | | | | | | | |
|---|-----------------|----------|----------|----------|----------|----------|---------|
| | PV 2005 - | | | | | | |
| | 2010 (million S | | | | | | |
| Category (negative numbers are revenues) | 2003) | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| Exit Fee | 24.81 | 28.40 | - | - | - | - | - |
| Administrative Costs | | | | | | | |
| Implementation & Administration | - | | - | | | - | |
| Ancillary Services Market Administration | | | | | | | |
| Other Administrative Costs | | | | | | | |
| Subtotal | |]· | | | | | |
| Subtotai | | | | | | | |
| 0 | | | | | | | |
| Operations Costs | | | | | | | |
| Generation Costs | | | | | | | |
| A&G Costs Associated with RTO Status | 4.21 | 0.89 | 0.92 | 0.94 | 0.96 | 0.99 | 1.01 |
| Native Load | | | | | | | |
| Fuel Costs | 2,759.89 | 525.49 | 612.50 | 638.55 | 651.47 | 648.98 | 669.38 |
| Fixed O&M Costs | 293.56 | 61.62 | 61.80 | 63.86 | 67.43 | 70.13 | 73.50 |
| Variable O&M Costs | 101.28 | 18.66 | 19.33 | 21.25 | 22.72 | 25.70 | 31.57 |
| Emission Credit Costs | 416.30 | 102.84 | 106.32 | 100.37 | 94.92 | 72.82 | 75.35 |
| Market Purchases | 120.17 | 19.22 | 18.18 | 22.97 | 33.11 | 38.30 | 35.15 |
| Subtotal | 3,691.21 | 727.83 | 818.13 | 846.99 | 869.66 | 855.94 | 884.94 |
| Off-system Sales | | | | | | | |
| Fuel Costs | 420.88 | 113.06 | 104.19 | 86.06 | 84.45 | 79.72 | 93.28 |
| Variable O&M Costs | 12.77 | 3.31 | 2.68 | 2.33 | 2.54 | 2.77 | 3.62 |
| Emission Credit Costs | 54.54 | 18.25 | 14.76 | 11.02 | 10.59 | 7.84 | 8.63 |
| | 54.54 | 10.25 | 14.70 | | | | |
| Market Purchases | 488.19 | 134.62 | 121.62 | 99.42 | 97.57 | 90.33 | 105.53 |
| Subtotal | 488.19 | 134.02 | 121.02 | | | | 103.33 |
| | | | | | | | |
| Transmission System Operation Costs | | | | | | | |
| A&G Costs Associated with RTO Status | 3.80 | 0.42 | 0.92 | 0.94 | 0.96 | 0.99 | 1.01 |
| Reliability Coordinator and OASIS Services | 2.48 | 0.53 | 0.54 | 0.55 | 0.57 | 0.58 | 0.59 |
| Subtotal | 6.28 | 0.95 | 1.45 | 1.49 | 1.53 | 1.57 | 1.60 |
| Transmission Usage Costs | | | | | | | |
| Transmisison Payments | 9.45 | 1.34 | 1.34 | 1.86 | 2.73 | 3.17 | 2.75 |
| Transmission Congestion Payments | * | - | - | - | - | - | |
| Subtotal | 9.45 | 1.34 | 1.34 | 1.86 | 2.73 | 3.17 | 2.75 |
| Uplift Charges | | | | | | | |
| Schedule 21 Uplift Charges(MISO Case Only) | | - | | - | - | - | |
| Miscellaneous Uplift Costs | - | - | - | - | - | - | ett- |
| Subtotal | - | - | - | | | - | |
| Legal, Regulatory & Transaction Costs | 1.89 | 0.40 | 0.41 | 0.42 | 0.43 | 0.44 | 0.4 |
| Legal, Regulatory & Transaction Costs | | | | | | | |
| Total Costs | 4,226.05 | 894.43 | 943.87 | 951.12 | 972.88 | 952.43 | 996.29 |
| | 4,220.05 | 0,4,45 | 745.87 | | 772.00 | | ····· |
| | | | | | | | |
| Revenues (note revenues will be negative numbers) | | | | | | | |
| Transmission Revenues | | | | | | | |
| Transmission Revenues | (18,78) | (5.10) | (4.00) | (4.00) | (4.00) | (4.00) | ().00 |
| Subtotal | (18.78) | (5.10) | (4.00) | (4.00) | (4.00) | (4.00) | (4.00 |
| Off-system Sales Revenue | (717.69) | (213.14) | (178.25) | (140.43) | (139.18) | (127.51) | (152.04 |
| | | | | | | | |
| FTRs | | | | | | | |
| FTR Revenues (as offset to congestion payments) | - | - | ~ | - | - | - | |
| Share of Net Revenue from FTR Auction | - | - | - | - | - | - | |
| Subtotal | - | - | - | - | | - | |
| Miscellaneous Revenues | | - | | - | | | |
| Total Revenues | (736.47) | (218.24) | (182.25) | (144.43) | (143.18) | (131.51) | (156.04 |
| Net Cost (Revenue) Including Exit Fee | 3,489.59 | 676.19 | 761.63 | 806.69 | 829.70 | 820.92 | 840.26 |
| | | | | | | 820.92 1 | |

all figures on this summary page would be pv to 2003 for the study period 2005-2010

discount rate will be 7.0 %

inflation rate assumed to be 2 5%

Change Case 3 Annual Summary: Sensitivity Case 1

| Change Ca | ase 3 Annual Summary: Sensitivity | Gas |
|-----------|-----------------------------------|-----|
| TORC Cas | se: Low-Transfer Scenario | |

| | PV 2005 - | | T | | 1 | 1 | |
|---|-----------------|----------|----------|----------|----------|----------|---------|
| | 2010 (million S | | | | | | |
| Category (negative numbers are revenues) | 2003) | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| Exit Fee | 24.81 | 28,40 | | - | - | - | |
| Administrative Costs | | | | | | | |
| Implementation & Administration | | | | | | | |
| Ancillary Services Market Administration | | | | | | | |
| Other Administrative Costs | | | | | | | |
| Subtotal | | | | | | | |
| Subtern | | | | | | | |
| Operations Costs | | | | | | | |
| Generation Costs | | | | | | | |
| A&G Costs Associated with RTO Status | 4.21 | 0.89 | 0.92 | 0.94 | 0.96 | 0.99 | 1.0 |
| Native Load | | | | | | | |
| Fuel Costs | 2,760.66 | 525.55 | 612.61 | 638.58 | 651.68 | 649.33 | 669.73 |
| Fixed O&M Costs | 293.56 | 61.62 | 61.80 | 63.86 | 67.43 | 70.13 | 73.50 |
| Variable O&M Costs | 101.46 | 18.91 | 19.46 | 21.29 | 22.71 | 25.57 | 31.4 |
| Emission Credit Costs | 412.85 | 101.30 | 105.41 | 100.02 | 94.08 | 72.30 | 75.10 |
| Market Purchases | 120.21 | 19.28 | 18.20 | 22.98 | 33.01 | 38.35 | 35.1 |
| Subtotal | 3,688.75 | 726.66 | 817.48 | 846.72 | 868.91 | 855.68 | 884.9 |
| Off-system Sales | | | | | | | |
| Fuel Costs | 388.29 | 100.20 | 96.61 | 82.92 | 78.26 | 73.19 | 86.8 |
| Variable O&M Costs | 11.80 | 2.98 | 2.51 | 2.25 | 2.34 | 2.52 | 3.3 |
| Emission Credit Costs | 49.77 | 15.99 | 13.58 | 10.59 | 9.70 | 7.12 | 7.9 |
| Market Purchases | | | - | - | | - | |
| Subtotal | 449.86 | 119.17 | 112.70 | 95.77 | 90.30 | 82.83 | 98.1 |
| Subiotai | 49.00 | | 112.70 | | 10.00 | | ,,,,,, |
| Transmission System Operation Costs | | | | | | | |
| A&G Costs Associated with RTO Status | 3.80 | 0.42 | 0.92 | 0.94 | 0.96 | 0.99 | 1.0 |
| Reliability Coordinator and OASIS Services | 2.48 | 0.53 | 0.54 | 0.55 | 0.57 | 0.58 | 0.5 |
| Subtotal | 6.28 | 0.95 | 1.45 | 1.49 | 1.53 | 1.57 | 1.6 |
| Transmission Usage Costs | | | | | | | |
| Transmisison Payments | 9.45 | 1.34 | 1.34 | 1.86 | 2.72 | 3.17 | 2.7 |
| Transmission Congestion Payments | - | - | | - | - | | |
| Subtotal | 9.45 | 1.34 | 1.34 | 1.86 | 2.72 | 3.17 | 2.7 |
| Uplift Charges | | | | | | | |
| Schedule 21 Uplift Charges(MISO Case Only) | - | - | - | - | - | - | |
| Miscellaneous Uplift Costs | - | - | - | - | - | - | |
| Subtotal | - | - | - | - | - | - | |
| Legal, Regulatory & Transaction Costs | 1.89 | 0.40 | 0.41 | 0.42 | 0.43 | 0.44 | 0.4 |
| Total Costs | 4,185.25 | 877.81 | 934.30 | 947.20 | 964.86 | 944.67 | 988.9 |
| | | | | | | | |
| Revenues (note revenues will be negative numbers) | | | | | ļ. | | |
| Transmission Revenues | | | | | | | |
| Transmission Revenues | (18,78) | (5.10) | (4.00) | (4.00) | (4,00) | (4.00) | (4.00 |
| Subtotal | (18.78) | (5.10) | (4.00) | (4,00) | (4.00) | (4.00) | (4.00 |
| Off-system Sales Revenue | (654.76) | (188.51) | (163.50) | (133.16) | (127.09) | (115.49) | (140.47 |
| FTRs | | | | | | | |
| FTR Revenues (as offset to congestion payments) | | | - | - | | - | |
| Share of Net Revenue from FTR Auction | _ | | | | | | |
| Subtotal | <u> </u> | - | - | <u> </u> | - | _ | |
| Miscellaneous Revenues | | | | | | | |
| Total Revenues | (673.54) | (193.61) | (167.50) | (137.16) | (131.09) | (119.49) | (144.4 |
| | 3,511.71 | 684.20 | 766.80 | 810.04 | 833.76 | 825.18 | 844.4 |
| Net Cost (Revenue) Including Exit Fee | 3,486.90 | 684.20 | 766.80 | 810.04 | 833.76 | 825.18 | 844.45 |

all figures on this summary page would be pv to 2003 for the study period 2005-2010

discount rate will be 7.0 %

inflation rate assumed to be 2.5%

Change Case 3 Annual Summary: Sensitivity Case 2

| TORC Case: High Transfer Scenario | | | | | | | |
|---|-----------------|----------|--------------------|----------|----------|----------|----------|
| | PV 2005 - | | | | | | |
| | 2010 (million S | | | | | | |
| Category (negative numbers are revenues) | 2003) | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| Exit Fee | 24.81 | 28.40 | - | - | - | - | - |
| Administrative Costs | | | | | | | |
| Implementation & Administration | - | - | - | - | - | - | |
| Ancillary Services Market Administration | - | - | - | - | - | - | |
| Other Administrative Costs | - | - | - | - | - | - | |
| Subtotal | - | - | - | - | - | - | |
| Operations Costs | | | | | | | |
| | | | | | | | |
| Generation Costs | 4.21 | 0.89 | 0.92 | 0.94 | 0.96 | 0.99 | 1.0 |
| A&G Costs Associated with RTO Status | 4.21 | 0.89 | 0.92 | 0.94 | 0.96 | 0.99 | 1.0 |
| Native Load | | | | | | | |
| Fuel Costs | 2,752.07 | 525.30 | 610.52 | 635.85 | 648.41 | 647.22 | 668.3 |
| Fixed O&M Costs | 293.56 | 61.62 | 61.80 | 63.86 | 67.43 | 70.13 | 73.5 |
| Variable O&M Costs | 101.20 | 18.64 | 19.31 | 21.23 | 22.70 | 25.68 | 31.5 |
| Emission Credit Costs | 415.19 | 102.92 | 106.07 | 99.89 | 94.39 | 72.61 | 75.1 |
| Market Purchases | 129.87 | 19.48 | 20.49 | 26.19 | 36.78 | 40.80 | 36.5 |
| Subtotal | 3,691.90 | 727.97 | 818.20 | 847.02 | 869.72 | 856.44 | 885.1 |
| Off-system Sales | | | | | | | |
| Fuel Costs | 422.85 | 114.11 | 104.45 | 86.21 | 84.69 | 80.27 | 93.5 |
| Variable O&M Costs | 12.84 | 3.34 | 2.69 | 2.34 | 2.55 | 2.79 | 3.6 |
| Emission Credit Costs | 54.77 | 18.43 | 14.79 | 11.02 | 10.60 | 7.88 | 8.6 |
| Market Purchases | | | | | | | 0.0 |
| Subtotal | 490.46 | 135.88 | 121.94 | 99.57 | 97.83 | 90.94 | 105.8 |
| Subiotal | 490.40 | 155.00 | 121.94 | 39.57 | 97.85 | | 105.8 |
| | | | | | | | |
| Transmission System Operation Costs | | 0.42 | 0.92 | 0.94 | 0.96 | 0.99 | |
| A&G Costs Associated withRTO Status | 3.80 | | | | | | 1.0 |
| Reliability Coordinator and OASIS Services | 2.48 | 0.53 | 0.54 | 0.55 | 0.57 | 0.58 | 0.5 |
| Subtotal | 6.28 | 0.95 | 1.45 | 1.49 | 1.53 | 1.57 | 1.6 |
| Transmission Usage Costs | | | | | | | |
| Transmisison Payments | 10.23 | 1.35 | 1.51 | 2.12 | 3.03 | 3.37 | 2.8 |
| Transmission Congestion Payments | - | - | - | - | - | - | |
| Subtotal | 10.23 | 1.35 | 1.51 | 2.12 | 3.03 | 3.37 | 2.8 |
| Uplift Charges | | | | | | | |
| Schedule 21 Uplift Charges(MISO Case Only) | - | - | - | - | - | - | |
| Miscellaneous Uplift Costs | - | | - | - | - | - | |
| Subtotal | - | - | - | - | - | - | - |
| Legal, Regulatory & Transaction Costs | 1.89 | 0.40 | 0.41 | 0.42 | 0.43 | 0.44 | 0.4 |
| Total Costs | 4,229.78 | 895.84 | 944.43 | 951.56 | 973.51 | 953.74 | 996.9 |
| | | | | | | | |
| Revenues (note revenues will be negative numbers) | | ~ | | | | | |
| Transmission Revenues | J | | | | | | |
| Through and Out Revenues | | | | . 1.022 | | | |
| Transmission Revenues | (18.78) | (5.10) | (4.00) | (4.00) | (4.00) | (4.00) | (4.00 |
| Subtotal | (18.78) | (5.10) | (4,00) (180,98) | (4.00) | (4.00) | (4.00) | (4.00 |
| Off-system Sales Revenue | (750.40) | (#17.04) | (100.20) | (192.00) | (cerer) | (100.24) | (1.94.3. |
| FTRs | | | | | | | |
| FTR Revenues (as offset to congestion paymen | 4 | | - | | - | - | |
| Share of Net Revenue from FTR Auction | - | - | - | - | - | - | |
| Subtotal | - | - | - | - | - | - | - |
| Miscellaneous Revenues | - | - | - | - | - | - | |
| Total Revenues | (749.24) | (222.74) | (184.98) | (146.65) | (145.55) | (134.24) | (158.3) |
| Net Cost (Revenue) Including Exit Fee | 3,480.54 | 673.10 | 759.45 | 804.91 | 827.96 | 819.49 | 838.61 |
| the set (nor one) meruding with the | 3,455.73 | | <u> </u> | | 827.96 | | 838.61 |

all figures on this summary page would be pv to 2003 for the study period 2005-2010

discount rate will be 7.0 %

inflation rate assumed to be 2 5%

| Present Value Summary | (all numbers are | PV to 2003, 200 | (all numbers are PV to 2003 , 2005 - 2010 , million $\$$) | () |
|---|------------------------|-------------------------------------|--|---------------------------|
| | - | | | |
| Category (negative numbers are revenues) | Base Case: MISO RTO | Base Case: MISO RTO PJM RTO Case | SPP RTO Case | TORC Baseline Scenario |
| Exit Fee | 1 | 24.81 | 24.81 | 24.81 |
| Administrative Costs | | | | |
| Implementation & Administration Charges | 64.79 | 75.59 | 30.44 | 2 |
| Ancillary Services Market Administration | 0.89 | | 3 | 8 |
| Other Administrative Costs | • | 9 | 0.03 | 8 |
| Subtotal | 65.56 | 75.59 | 30.47 | E |
| | | | | |
| Operations Costs | | | | |
| Generation Costs | | | | |
| A&G Costs Associated with RTO Membership Status | 6.20 | 6.20 | 4.21 | 4.21 |
| Native Load | | | | |
| Fuel Costs | 2,752.05 | 2,752.05 | 2,759.89 | 2,759.89 |
| Fixed O&M Costs | 293.56 | 293.56 | 293.56 | 293.56 |
| Variable O&M Costs | 101.19 | 101.19 | 101.28 | 101.28 |
| Emission Credit Costs | 415.16 | 415.16 | 416.30 | 416.30 |
| Market Purchases | 130.34 | 130.34 | 120.17 | 120.17 |
| Subtotal | 3,692.30 | 3,692.30 | 3,691.21 | 3,691.21 |
| Off-system Sales | | | | |
| Fuel Costs | 423.63 | 423.63 | 420.88 | 420.88 |
| Variable O&M Costs | 12.85 | 12.85 | 12.77 | 12.77 |
| Emission Credit Costs | 54.83 | 54.83 | 54.54 | 54.54 |
| Market Purchases | 1 | ł | 1 | ŀ |
| Subtotal | 491.30 | 491.30 | 488.19 | 488.19 |
| | | | | |
| Transmission System Operation Costs | | - | | |
| A&G Costs Associated with RTO Membership | 6.20 | 6.20 | 3.80 | 3.80 |
| Reliability Coordinator and OASIS Services | 1 | , | ł | 2.48 |
| Subtotal | 6.20 | 6.20 | 3.80 | 6.28 |
| Transmission Usage Costs | | | | |
| Transmisison Payments | 24.60 | 24.60 | 9.45 | 9.45 |
| Transmission Congestion Payments | 78.56 | 78.56 | 1 | 1 |

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| APPENDIX B: Wor |

| Subtotal | 103.16 | 103.16 | 9.45 | 9.45 |
|---|----------|----------|----------|----------|
| Uplift Charges | | | | I |
| Schedule 21 Uplift Charges | 3.86 | | ß | 1 |
| Miscellaneous Uplift Costs | 2.23 | - | 1 | I |
| Subtotal | 6.09 | 1 | * | I |
| Legal, Regulatory & Transaction Costs | 3.78 | 3.78 | 2.83 | 1.89 |
| b | | | | 1 |
| Total Costs | 4,374.59 | 4,403.33 | 4,254.98 | 4,226.05 |
| | | | | 2 |
| Revenues (note revenues will be negative numbers) | | | | 1 |
| Transmission Revenues | | | | I |
| Transmission Revenues | (46.82) | (46.82) | (18.78) | (18.78) |
| Subtotal | (46.82) | (46.82) | (18.78) | (18.78) |
| Off-system Sales Revenue | (728.60) | (728.60) | (717.69) | (717.69) |
| | | | | ł |
| FTRs | | | | t |
| FTR Revenues (as offset to congestion payments) | (74.64) | (74.64) | I | L |
| Share of Net Revenue from FTR Auction | (8.91) | (10.49) | I | t |
| Subtotal | (83.54) | (85.13) | 1 | 1 |
| Miscellaneous Revenues | I | 1 | 1 | k |
| Total Revenues | (858.96) | (860.54) | (736.47) | (736.47) |
| Net Cost (Revenue) Including Exit Fee | 3,515.63 | 3,542.79 | 3,518.52 | 3,489.59 |
| Net Cost (Revenue) Excluding Exit Fee | 3,515.63 | 3,517.98 | 3,493.71 | 3,464.78 |

| Drasant Value Summary, Differences | | | | | |
|---|-------------------------|------------------------|--|---------------------------|----------------------|
| I I ESCIIL Y AIUC SUITIMALY. DIMALS | | | | | |
| | MISO Base | MISO Base | MISO Base Case minus | PJM minus | SPP minus |
| Cotocorvi (noccotivo numbors one honefite of MISO RTO) | Case minus P.IM Case | Case minus SPP Case | TORC Baseline TORC Baseline Baseline Scenario Scenario Scenario | TORC Baseline Scenario | Baseline Scenario |
| Cartgory (inclaute numbers are benefits or fixed and of | (24.81) | (24.81) | (24.81) | I | 1 |
| Administrative Costs | | | | | |
| Implementation & Administration (Sch. 10, 16, 17) | (10.80) | 34.34 | 64.79 | 75.59 | 30.44 |
| Ancillary Services Market Administration | 0.89 | 0.89 | 0.89 | 1 | I |
| Other Administrative Costs | I | (0.03) | 00.0 | - | 0.03 |
| Subtotal | (10.03) | 35.09 | 65.56 | 75.59 | 30.47 |
| | | | | | |
| Operations Costs | | | | | |
| Generation Costs | | | | | |
| A&G Costs Associated with RTO Membership Status | 3 | 1.98 | 1.98 | 1.98 | I |
| Native Load | | | | | |
| Fuel Costs | 1 | (7.84) | (7.84) | (7.84) | 1 |
| Fixed O&M Costs | 1 | 1 | 0.00 | 1 | 1 |
| Variable O&M Costs | | (0.09) | (60.0) | (0.0) | 1 |
| Emission Credit Costs | • | (1.15) | (1.15) | (1.15) | r |
| Market Purchases | 1 | 10.17 | 10.17 | 10.17 | 1 |
| Subtotal | | 1.09 | 1.09 | 1.09 | 1 |
| Off-system Sales | | | | | |
| Fuel Costs | - | 2.74 | 2.74 | 2.74 | |
| Variable O&M Costs | 1 | 0.08 | 0.08 | 0.08 | |
| Emission Credit Costs | 1 | 0.29 | 0.29 | 0.29 | 1 |
| Market Purchases | 1 | 1 | 0.00 | J | ł |
| Subtotal | | 3.11 | 3.11 | 3.11 | 1 |
| | | | | | |
| Transmission System Operation Costs | | | | | |
| A&G Costs Associated with RTO Membership | 1 | 2.40 | 2.40 | 2.40 | 1 |
| Reliability Coordinator and OASIS Services | ** | I | (2.48) | (2.48) | |
| Subtotal | 1 | 2.40 | (0.08) | (0.08) | (2.48) |
| Transmission Usage Costs | | | | | |
| Transmisison Payments | 1 | 15.15 | 15.14 | 15.14 | (00.0) |
| Transmission Congestion Payments | t | 78.56 | 78.56 | 78.56 | I |

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| Subtotal | 1 | 93.71 | 93.71 | 93.71 | (00.0) |
|---|---------|----------|----------|----------|--------|
| Uplift Charges | | | | | |
| Schedule 21 Uplift Charges | 3.86 | 3.86 | 3.86 | 1 | 1 |
| Miscellaneous Uplift Costs | 2.23 | 2.23 | 2.23 | ł | - |
| Subtotal | 6.09 | 60.9 | 6.09 | | - |
| Legal, Regulatory & Transaction Costs | 3 | 0.94 | 1.89 | 1.89 | 0.94 |
| | | | | | |
| Total Costs | (28.75) | 119.61 | 148.53 | 177.28 | 28.93 |
| | | | | | |
| Revenues (note revenues will be negative numbers) | | | | | |
| Transmission Revenues | | | | | |
| Transmission Revenues | | (28.04) | (28.04) | (28.04) | t |
| Subtotal | 1 | (28.04) | (28.04) | (28.04) | ł |
| Off-system Sales Revenue | 3 | (10.91) | (10.91) | (10.91) | 3 |
| | | | | | |
| FTRs | | | | | |
| FTR Revenues (as offset to congestion payments) | • | (74.64) | (74.64) | (74.64) | I |
| Share of Net Revenue from FTR Auction | 1.58 | (8.91) | (8.91) | (10.49) | I |
| Subtotal | 1.58 | (83.54) | (83.54) | (85.13) | 1 |
| Miscellaneous Revenues | 1 | 1 | 1 | 1 | 1 |
| Total Revenues | 1.58 | (122.49) | (122.49) | (124.08) | 1 |
| Net Cost (Benefit) of MISO RTO Including Exit Fee | (27.16) | (2.89) | 26.04 | 53.20 | 28.93 |
| Net Cost (Benefit) of MISO RTO Excluding Exit Fee | (2.35) | 21.92 | 50.85 | 53.20 | 28.93 |

| Present Value Summary: Additional Scenarios | | | |
|--|------------------------|----------------------|-------------|
| | | TORC: Low- | TORC: High- |
| | TORC Baseline Transfer | Transfer Scenario | Transfer |
| Category (negative numbers are revenues) | 74.81 | 74.81 | 24.81 |
| balt fee Administrative Costs | 10.1.2 | | 1 |
| Implementation & Administration (Sch 10, 16, 17) | 1 | | - |
| Ancillary Services Market Administration | 1 | I | t |
| Other Administrative Costs | 1 | t | t |
| Subtotal | 1 | - | • |
| | | - | 1 |
| Operations Costs | | | ŝ |
| Generation Costs | | | |
| A&G Costs Associated with RTO Membership Status | 4.21 | 4.21 | 4.21 |
| Native Load | | 3 | 1 |
| Fuel Costs | 2,759.89 | 2,760.66 | 2,752.07 |
| Fixed O&M Costs | 293.56 | 293.56 | 293.56 |
| Variable O&M Costs | 101.28 | 101.46 | 101.20 |
| Emission Credit Costs | 416.30 | 412.85 | 415.19 |
| Market Purchases | 120.17 | 120.21 | 129.87 |
| Subtotal | 3,691.21 | 3,688.75 | 3,691.90 |
| Off-system Sales | | | ł |
| Fuel Costs | 420.88 | 388.29 | 422.85 |
| Variable O&M Costs | 12.77 | 11.80 | 12.84 |
| Emission Credit Costs | 54.54 | 49.77 | 54.77 |
| Market Purchases | 1 | 1 | I |
| Subtotal | 488.19 | 449.86 | 490.46 |
| | | F | ſ |
| Transmission System Operation Costs | | ŧ | ı |
| A&G Costs Associated with RTO Membership | 3.80 | 3.80 | 3.80 |
| Reliability Coordinator and OASIS Services | 2.48 | 2.48 | 2.48 |
| Subtotal | 6.28 | 6.28 | 6.28 |
| Transmission Usage Costs | | E | I |
| Transmisison Payments | 9.45 | 9,45 | 10.23 |
| Transmission Congestion Payments | - | 1 | • |

| Subtotal | 9.45 | 9.45 | 10.23 |
|---|----------|----------|----------|
| Uplift Charges | | ı | H |
| Schedule 21 Uplift Charges | - | | - |
| Miscellaneous Uplift Costs | - | 1 | |
| Subtotal | - | 1 | I |
| Legal, Regulatory & Transaction Costs | 1.89 | 1.89 | 1.89 |
| | 1 | | |
| Total Costs | 4,226.05 | 4,185.25 | 4,229.78 |
| | | | |
| Revenues (note revenues will be negative numbers) | | | |
| Transmission Revenues | | | |
| Transmission Revenues | (18.78) | (18.78) | (18.78) |
| Subtotal | (18.78) | (18.78) | (18.78) |
| Off-system Sales Revenue | (717.69) | (654.76) | (730.46) |
| | | | - |
| FTRs | | - | |
| FTR Revenues (as offset to congestion payments) | | | ļ |
| Share of Net Revenue from FTR Auction | 1 | 8 | 1 |
| Subtotal | | . 1 | ŗ |
| Miscellaneous Revenues | • | I | - |
| Total Revenues | (736.47) | (673.54) | (749.24) |
| Net Cost (Revenue) Including Exit Fee | 3,489.59 | 3,511.71 | 3,480.54 |
| Net Cost (Revenue) Excluding Exit Fee | 3,464.78 | 3,486.90 | 3,455.73 |

| Scenarios |
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| t Sce |
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| | | MISO Base | MISO Base |
|--|------------------------|------------|------------|
| | MISO Base | Case minus | Case minus |
| | Case minus | TORC Low- | TORC High- |
| | TORC Baseline Transfer | Transfer | Transfer |
| Category (negative numbers are benefits of MISO RTO) | Scenario | Scenario | Scenario |
| Exit Fee | (24.81) | (24.81) | (24.81) |
| Administrative Costs | | | |
| Implementation & Administration (Sch. 10, 16, 17) | 64.79 | 64.79 | 64.79 |
| Ancillary Services Market Administration | 0.89 | 0.89 | 0.89 |
| Other Administrative Costs | • | 1 | 1 |
| Subtotal | 65.56 | 65.56 | 65.56 |
| | | | |
| Operations Costs | | | |
| Generation Costs | | | |
| A&G Costs Associated with RTO Membership | 1.98 | 1.98 | 1.98 |
| Native Load | | | |
| Fuel Costs | (7.84) | (8.61) | (0.02) |
| Fixed O&M Costs | 1 | 1 | 1 |
| Variable O&M Costs | (0.09) | (0.27) | (0.01) |
| Emission Credit Costs | (1.15) | 2.31 | (0.04) |
| Market Purchases | 10.17 | 10.13 | 0.47 |
| Subtotal | 1.09 | 3.55 | 0.40 |
| Off-system Sales | | | |
| Fuel Costs | 2.74 | 35.34 | 0.78 |
| Variable O&M Costs | 0.08 | 1.04 | 0.01 |
| Emission Credit Costs | 0.29 | 5.06 | 0.06 |
| Market Purchases | 1 | F | 3 |
| Subtotal | 3.11 | 41.45 | 0.84 |
| | | | |
| Transmission System Operation Costs | | | |
| A&G Costs Associated with RTO Membership | 2.40 | 2.40 | 2.40 |
| Reliability Coordinator and OASIS Services | (2.48) | (2.48) | (2.48) |
| Subtotal | (0.08) | (0.08) | (0.08) |
| Transmission Usage Costs | | | |
| Transmistson Payments | 15.14 | 15.15 | 14.37 |
| Transmission Congestion Payments | 78.56 | 78.56 | 78.56 |

| Subtotal | 93.71 | 93.71 | 92.93 |
|--|----------|----------|---------|
| Uplift Charges | | | |
| Schedule 21 Uplift Charges | 3.86 | 3.86 | 3.86 |
| Miscellaneous Uplift Costs | 2.23 | 2.23 | 2.23 |
| Subtotal | 60.9 | 60.9 | 60.9 |
| Legal, Regulatory & Transaction Costs | 1.89 | 1.89 | 1.89 |
| | | | |
| Total Costs | 148.53 | 189.34 | 144.80 |
| | | | |
| Revenues (note revenues will be negative numbers) | | | |
| Transmission Revenues | | | |
| Transmission Revenues | (28.04) | (28.04) | (28.04) |
| Subtotal | (28.04) | (28.04) | (28.04) |
| Off-system Sales Revenue | (10.01) | (73.84) | 1.87 |
| | | | |
| FTRs | | | |
| FTR Revenues (as offset to congestion payments) | (74.64) | (74.64) | (74.64) |
| Share of Net Revenue from FTR Auction | (8.91) | (8.91) | (8.91) |
| Subtotal | (83.54) | (83.54) | (83.54) |
| Miscellaneous Revenues | P | | E |
| Total Revenues | (122.49) | (185.42) | (109.72 |
| Net Cost (Benefit) of MISO RTO w/ Exit Fee | 26.04 | 3.92 | 35.09 |
| Net Cost (Benefit) of MISO Membership w/o Exit Fee | 50.85 | 28.73 | 59.90 |

| Short Present Value Summary | | | | |
|---|------------------|-------------------|----------|----------|
| | | | | |
| | | | | TORC |
| | MISO Base | | | Baseline |
| Category (negative numbers are revenues) | Case | PJM Case SPP Case | SPP Case | Scenario |
| Exit Fee | - | 24.81 | 24.81 | 24.81 |
| Administrative Costs | 65.56 | 75.59 | 30.47 | |
| Operations Costs | | | | |
| A&G Costs Associated with RTO Membership Status | 12.40 | 12.40 | 8.02 | 8.02 |
| Generation Costs | | | | |
| Native Load | 3,692.30 | 3,692.30 | 3,691.21 | 3,691.21 |
| Off-system Sales | 491.30 | 491.30 | 488.19 | 488.19 |
| Transmission System Operation Costs | | I | 4 | 2.48 |
| Transmission Usage Costs | 103.16 | 103.16 | 9.45 | 9.45 |
| Uplift Charges | 60.9 | 1 | I | |
| Legal, Regulatory & Transaction Costs | 3.78 | 3.78 | 2.83 | 1.89 |
| Total Costs | 4,374.59 | 4,403.33 | 4,254.98 | 4,226.05 |
| | | | | |
| Revenues (revenues will be negative numbers) | | | | |
| Transmission Revenues | (46.82) | (46.82) | (18.78) | (18.78) |
| Off-system Sales Revenue | (728.60) | (728.60) | (717.69) | (717.69) |
| FTRS | (83.54) | (85.13) | 1 | ł |
| Total Revenues | (858.96) | (860.54) | (736.47) | (736.47) |
| Net Cost (Revenue) with Exit Fee | 3515.63 | 3542.79 | 3518.52 | 3489.59 |
| Net Cost (Revenue) without Exit Fee | 3,515.63 | 3,517.98 | 3,493.71 | 3,464.78 |

| Short Summary of Present Value Differences | | | | | |
|--|------------------|------------|----------------------------|-------------------------------|---------------|
| | | | | | |
| | MISO Base | MISO Base | MISO Base Case | MISO Base Case PJM Case minus | |
| | Case minus | Case minus | minus TORC | TORC Baseline | TORC Baseline |
| Category (negative numbers are benefits) | PJM Case | SPP Case | Baseline Scenario Scenario | Scenario | Scenario |
| Exit Fee | (24.81) | (24.81) | (24.81) | I | P |
| Administrative Costs | (10.03) | 35.09 | 65.56 | 75.59 | 30.47 |
| Operations Costs | | | 0.00 | | |
| A&G Costs Associated with RTO Membership Status | 1 | 4.38 | 4.38 | 4.38 | 1 |
| Generation Costs | | | 0.00 | | |
| Native Load | • | 1.09 | 1.09 | 1.09 | E |
| Off-system Sales | 1 | 3.11 | 3.11 | 3.11 | |
| Transmission System Operation Costs | 1 | • | (2.48) | (2.48) | (2.48) |
| Transmission Usage Costs | 1 | 93.71 | 93.71 | 93.71 | (0.00) |
| Uplift Charges | 60.9 | 6.09 | 6.09 | 1 | 1 |
| Legal, Regulatory & Transaction Costs | 1 | 0.94 | 1.89 | 1.89 | 0.94 |
| Total Costs | (28.75) | 119.61 | 148.53 | 177.28 | 28.93 |
| | | | 00.0 | | |
| Revenues (revenues will be negative numbers) | | | 0.00 | | |
| Transmission Revenues | • | (28.04) | (28.04) | (28.04) | J |
| Off-system Sales Revenue | ı | (10.91) | (10.91) | (10.91) | |
| FTRS | 1.58 | (83.54) | (83.54) | (85.13) | J |
| Total Revenues | 1.58 | (122.49) | (122.49) | (124.08) | I |
| Net Cost (Benefit) of the MISO Option Including Exit Fee | (27.16) | (2.89) | 26.04 | 53.20 | 28.93 |
| Net Cost (Benefit) of the MISO Option Excluding Exit Fee | (2.35) | 21.92 | 50.85 | 53.20 | 28.93 |
| | | | | | |

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| Short Present Value Summary | | | |
|---|---------------|-----------|------------------------|
| | | | |
| - | TODC Basalina | TORC Low- | TORC High- Tranefer |
| Category (negative numbers are revenues) | Scenario | Scenario | Scenario |
| Exit Fee | 24.81 | 24.81 | 24.81 |
| Administrative Costs | 1 | | 1 |
| Operations Costs | | | |
| A&G Costs Associated with RTO Membership Status | 8.02 | 8.02 | 8.02 |
| Generation Costs | | | |
| Native Load | 3,691.21 | 3,688.75 | 3,691.90 |
| Off-system Sales | 488.19 | 449.86 | 490.46 |
| Transmission System Operation Costs | 2.48 | 2.48 | 2.48 |
| Transmission Usage Costs | 9.45 | 9.45 | 10.23 |
| Uplift Charges | • | 1 | æ |
| Legal, Regulatory & Transaction Costs | 1.89 | 1.89 | 1.89 |
| Total Costs | 4,226.05 | 4,185.25 | 4,229.78 |
| | | | |
| Revenues (revenues will be negative numbers) | | | |
| Transmission Revenues | (18.78) | (18.78) | (18.78) |
| Off-system Sales Revenue | (717.69) | (654.76) | (730.46) |
| FTRs | | I | ł |
| Total Revenues | (736.47) | (673.54) | (749.24) |
| Net Cost (Revenue) Including Exit Fee | 3,489.59 | 3,511.71 | 3,480.54 |
| Net Cost (Revenue) Excluding Exit Fee | 3,514.40 | 3,536.52 | 3,505.35 |

| Short Summary of Present Value Differences | | | |
|--|----------------------------|---------------------------|------------------------|
| | | | MISO Base |
| | | MISO Base Case Case minus | Case minus |
| | MISO Base Case minus TORC | minus TORC | TORC High- Transfer |
| Category (negative numbers are benefits) | Baseline Scneario Scenario | Scenario | Scenario |
| Exit Fee | (24.81) | (24.81) | (24.81) |
| Administrative Costs | 65.56 | 65.56 | 65.56 |
| Operations Costs | | | |
| A&G Costs Associated with RTO Membership Status | 4.38 | 4.38 | 4.38 |
| Generation Costs | | | |
| Native Load | 1.09 | 3.55 | 0.40 |
| Off-system Sales | 3.11 | 41.45 | 0.84 |
| Transmission System Operation Costs | (2.48) | (2.48) | (2.48) |
| Transmission Usage Costs | 93.71 | 93.71 | 92.93 |
| Uplift Charges | 60.9 | 60.9 | 60.9 |
| Legal, Regulatory & Transaction Costs | 1.89 | 1.89 | 1.89 |
| Total Costs | 148.53 | 189.34 | 144.80 |
| | | | |
| Revenues (revenues will be negative numbers) | | | |
| Transmission Revenues | (28.04) | (28.04) | (28.04) |
| Off-system Sales Revenue | (10.91) | (73.84) | 1.87 |
| FTRS | (83.54) | (83.54) | (83.54) |
| Total Revenues | (122.49) | (185.42) | (109.72) |
| Net Cost (Benefit) of MISO Option Including Exit Fee | 26.04 | 3.92 | 35.09 |
| Net Cost (Benefit) of MISO Option Excluding Exit Fee | 50.85 | 28.73 | 59.90 |

Simple Payback Period Estimates MISO Base

| | Case | Sta | ndalone Bas | eline | Stand | alone Low Tr | ansfer |
|------------|-----------|-----------|-------------|------------|-----------|--------------|------------|
| | | | Non- | Break Even | | Non- | Break Even |
| Year | Recurring | Recurring | Recurring | Point | Recurring | Recurring | Point |
| 2005 | 660.38 | 647.78 | 24.81 | (12.21) | 655.80 | 24.81 | (20.22) |
| 2006 | 774.08 | 761.63 | | 0.25 | 766.80 | | (12.94) |
| 2007 | 818.72 | 806.69 | | 12.28 | 810.04 | | (4.26) |
| 2008 | 840.56 | 829.70 | | 23.13 | 833.76 | | 2.54 |
| 2009 | 831.44 | 820.92 | | 33.65 | 825.18 | | 8.80 |
| 2010 | 849.49 | 840.26 | | 42.88 | 844.45 | | 13.84 |
| PV to 2003 | 3,515.63 | 3,464.78 | | | 3,486.90 | | |

1

| Stand | lalone High 1 | Fransfer | 1 | PJM RTO Cas | se | : | SPP RTO Cas | e |
|-----------|---------------|------------|-----------|-------------|------------|-----------|-------------|------------|
| | Non- | Break Even | | Non- | Break Even | | Non- | Break Even |
| Recurring | Recurring | Point | Recurring | Recurring | Point | Recurring | Recurring | Point |
| 644.70 | 24.81 | (9.13) | 660.73 | 24.81 | (25.15) | 653.89 | 24.81 | (18.32) |
| 759.45 | | 5.50 | 774.00 | | (25.07) | 767.78 | | (12.02) |
| 804.91 | | 19.32 | 817.83 | | (24.18) | 812.97 | | (6.27) |
| 827.96 | | 31.91 | 840.56 | | (24.18) | 836.29 | | (2.01) |
| 819.49 | | 43.86 | 832.52 | | (25.26) | 827.79 | | 1.64 |
| 838.61 | | 54.74 | 852.83 | | (28.60) | 847.48 | | 3.65 |
| | | | | | | | | |

Exit Fee (nominal dollars) 24.81

24.81

Extended Study Period Question MISO Base Case Annual Summary

| MISO Base Case Annual Summary MISO RTO Base Case | | | | | | | | every category held constant at 2010 values for 2011 to 2019 | ry held con: | stant at 2010 |) values for ; | 2011 to 201 | 6 | | | |
|---|--------------|----------|----------|----------|----------|----------|----------|--|--------------|---------------|----------------|-------------|----------|----------|----------|----------|
| Category (negative numbers are revenues) | | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
| Exit Fee | 1 | , | ' | - | ' | , | ' | + | - | , | | ' | ' | ' | ' | - |
| Administrative Costs | | | | | | | | | | | | | | | | |
| Implementation & Administration (Sch. 10, 16, 17) | S117.04 | 15.14 | 14.86 | 14.89 | 14.75 | 14.30 | 12.88 | 12.88 | 12.88 | 12.88 | 12.88 | 12.88 | 12.88 | 12.88 | 12.88 | 12.88 |
| Ancillary Services Market Administration | \$2.19 | | | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 |
| Other Administrative Costs | • | • | • | · ! | | - | • | - - - | • | - | | - | | | | |
| Subtotal | \$118.95 | 15.14 | 14.86 | 15.17 | 15.03 | 14.58 | 13.16 | 13.16 | 13.16 | 13.16 | 13.16 | 13,16 | 13.16 | 13.16 | 13.16 | 13.16 |
| Oncerting Costs | | | T | | | | | | | | | | | | | |
| | | | | | | | | | | | ſ | | | | | T |
| | C 4 7 33 | 1 31 | 1 35 | 1 28 | 1 11 | 1 15 | 1 40 | 1 10 | 1 10 | 1 40 | 1 40 | 1 49 | 1 49 | 1 49 | 1 49 | 1 49 |
| Add Loxis Associated with RTO Memourship Materia Load | C7.716 | 10.1 | P.C. 1 | 00.1 | t. | 24 | 24 | 01.1 | 27. | 01. | 04. | 21. | 27 | 21- | 21. | 21. |
| Find Crete | \$5.463.72 | 525.33 | 610.41 | 635 90 | 648 48 | 647.18 | 668.33 | 668.33 | 668.33 | 668.33 | 668.33 | 668.33 | 668.33 | 668.33 | 668.33 | 668.33 |
| Fired O&M Costs | S591.77 | 61.62 | 61.80 | 63.86 | 67.43 | 70.13 | 73.50 | 73.50 | 73.50 | 73.50 | 73.50 | 73.50 | 73.50 | 73.50 | 73.50 | 73.50 |
| Variable O.M. Corte | S229.29 | 18.64 | 19.31 | 21 24 | 22.71 | 25.65 | 31.57 | 31.57 | 31.57 | 31.57 | 31.57 | 31.57 | 31.57 | 31.57 | 31.57 | 31.57 |
| Function Cradit Casts | S720.06 | 103.01 | 106.10 | 99.91 | 94.26 | 72.56 | 75.15 | 75.15 | 75.15 | 75.15 | 75.15 | 75.15 | 75.15 | 75.15 | 75.15 | 75.15 |
| Market Purchases | \$278.80 | 19.54 | 20.70 | 26.24 | 36.78 | 41.03 | 36.59 | 36.59 | 36.59 | 36.59 | 36.59 | 36.59 | 36.59 | 36.59 | 36.59 | 36.59 |
| Sultated | S7 283 63 | 728.14 | 818.33 | 847.15 | 869.66 | 856.56 | 885.14 | 885.14 | 885.14 | 885.14 | 885.14 | 885.14 | 885.14 | 885,14 | 885.14 | 885.14 |
| Off-system Sales | | | | | | | | | | | | | | | | |
| Fuel Casts | \$804.88 | 114.28 | 104.65 | 86.52 | 84.80 | 80.14 | 93.97 | 93.97 | 93.97 | 93.97 | 93.97 | 93.97 | 93.97 | 93.97 | 93.97 | 93.97 |
| Variable O&M Costs | \$27.61 | 3.34 | 2.70 | 2.35 | 2.55 | 2.78 | 3.64 | 3.64 | 3.64 | 3.64 | 3.64 | 3.64 | 3.64 | 3.64 | 3.64 | 3.64 |
| Emission Credit Costs | \$89.97 | 18.46 | 14.81 | 11.05 | 10.59 | 7.86 | 8.66 | 8.66 | 8.66 | 8.66 | 8.66 | 8.66 | 8.66 | 8.66 | 8.66 | 8.66 |
| Market Purchases | • | • | - | - | , | , | • | • | , | , | , | | • | • | | ' |
| Subtotal | \$922.46 | 136.08 | 122.16 | 99.92 | 97.94 | 90.78 | 106.26 | 106.26 | 106.26 | 106.26 | 106.26 | 106.26 | 106.26 | 106.26 | 106.26 | 106.26 |
| | | | | | | | | | | | | | | | | |
| I ransmission System Operation Costs | C 12 23 | 1 31 | 1 35 | 1 28 | 1 41 | 1 45 | 1 49 | 1 40 | 1 49 | 1 49 | 1 49 | 1 49 | 1 49 | 1 49 | 1 49 | 1 49 |
| P.F. F.R. C. T. J. C.R. C. T. J. C.R. C. T. C. S. C. T. C. S. C. T. C. S. C. S. C. S. | 00.02 | 10.1 | 00 | 22. | | 21. | 2 | 24-1 | 2 | 2 | | | 2 | 2 | | |
| Kenabuly: Coordinator and UAMA Scryces Subtour | \$17.73 | 131 | 1 35 | 1 38 | 1 41 | 1 45 | 1 49 | 1 49 | 1 49 | 1 49 | 1 49 | 1 49 | 1 49 | 1 49 | 1 49 | 1 49 |
| Ternemieetin 1 leura Caste | 24:41.2 | 5 | 2 | 221 | | | | | | 2 | | | 2 | 2 | | |
| | \$43.70 | 96.9 | 6.02 | 5.45 | 4.73 | 4.71 | 4.71 | 4.71 | 4.71 | 4.71 | 4.71 | 4.71 | 4.71 | 4.71 | 4.71 | 4.71 |
| Transmission Convestion Payments | S154.98 | 16.65 | 17.06 | 17.49 | 17.93 | 18.37 | 18.83 | 18.83 | 18.83 | 18.83 | 18.83 | 18.83 | 18.83 | 18.83 | 18.83 | 18.83 |
| Subtotal | \$198.68 | 23.61 | 23.08 | 22.94 | 22.65 | 23.08 | 23.54 | 23.54 | 23.54 | 23.54 | 23.54 | 23.54 | 23.54 | 23.54 | 23.54 | 23.54 |
| Uplift Charges | | | | | | | | | | | | | | | | |
| Schedule 21 Uplift Charges | \$7.64 | 0.81 | 0.83 | 0.86 | 0.89 | 0.91 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Miscellaneous Uplift Casts | \$4.26 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 |
| Subtotal | \$11.90 | 1.31 | 1.33 | 1.36 | 1.39 | 1.41 | 1.43 | 1.43 | 1.43 | 1.43 | 1.43 | 1.43 | 1.43 | 1.43 | 1.43 | 1.43 |
| Legal, Regulatory & Transaction Costs | | 0.80 | 0.82 | 0.84 | 0.86 | 0.88 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Total Costs | SB 567 53 | 907.71 | 983.27 | 990.14 | 1.010.36 | 990.20 | 1.033.42 | 1.033.42 | 1.033.42 | 1.033.42 | 1.033.42 | 1.033.42 | 1.033.42 | 1.033.42 | 1.033.42 | 1.033.42 |
| | | | | | | | | | | | | | | | | |
| Revenues (note revenues will be negative numbers) | | | | | | | | | | | | | | | | |
| Transmission Revenues | 100 2007 | 101 017 | 110 E01 | 105 017 | 100.07 | 100 07 | 100 07 | 100 0/ | 100 07 | 100 0/ | 100 0/ | 100 0/ | 100 0/ | 10 0/ | 100 0/ | 10 00 |
| I rensmission Kevenues | 166,000 | (12 10) | 1002011 | 10.201 | (06.6) | 106.6) | 102.2 | (02.6) | (00.0) | | | | (00 0) | 100.01 | (05.5) | (06.6) |
| Off-system Sales Revenue | (\$1,353.99) | (217.41) | (180.48) | (142.51) | (140.87) | (129.40) | (154.14) | (154.14) | (154.14) | (154.14) | (154.14) | (154.14) | (154.14) | (154.14) | (154.14) | (154.14) |
| | | | | | | | | | | | | | | | | |
| FTRs | | | | | | | | | | | | | | | | |
| FTR Revenues (as offset to congestion payments) | (S147.23) | (15.81) | (16.21) | (16.61) | (17.03) | (17.46) | (17.89) | (17.89) | (17.89) | (17.89) | (17.89) | (17.89) | (17.89) | (17.89) | (17.89) | (17.89) |
| Share of Net Revenue from FTR Auction | (\$17.02) | (2.00) | (2.00) | (2.00) | (2.00) | (2.00) | (2.00) | (2:00) | (2.00) | (2.00) | (2.00) | (2.00) | (2.00) | (2.00) | (00.2) | (2,00) |
| Subtotal | (\$164.25) | (17.81) | (12.81) | (19.81) | (19.03) | (19.46) | (19.89) | (19.89) | (19.85) | (19.81) | (19.85) | (19.85) | (19.02) | (12.22) | (19.95) | (13.83) |
| MISCELLENCOUS ACVENUES | (\$1 605 23) | 1247 331 | (209 19) | 1121 421 | (169 RU) | (15R 76V | (183 93) | (183 93) | (183 93) | (183 93) | (183 93) | (183 93) | (183 93) | (183.93) | (183.93) | (183 93) |
| Not Cost (Bergine) | SE 962 30 | 66038 | 774 08 | 818 72 | 840.56 | 831 44 | 849 49 | 67 678 | R49.49 | 849.49 | 849.49 | 849.49 | 849.49 | 849.49 | 849.49 | 849.49 |
| | | 1 | | | | 1 | | 1 1 1 2 1 2 | | | | | | | | |

| Category (negative numbers are revenues) | | | | | | | | |
|---|---------|--------------|---|---|---|---|---|-----|
| Exit Fee | \$24.81 | S24.81 28.40 | • | - | - | • | - | |
| Administrative Costs | | | | | | | | |
| Implementation & Administration (Sch. 10, 16, 17) | , | , | • | 1 | • | - | , | |
| Ancillary Services Market Administration | • | 1 | • | • | • | • | 1 | |
| Other Administrative Costs | - | 1 | • | , | 1 | 1 | ł | |
| Subtotal | - | • | • | - | - | | 1 | |
| | | | | | | | | |
| Operations Costs | | | | | | | | - 1 |
| Committee Control | | | | | | | | |

TORC Case: Baseline Scenario

| Catchely (negative numbers are returned) | | | | | | | | | | | | | | | | |
|---|-------------|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|-------------|----------|----------|----------|
| Exit Fee | S24.81 | 28.40 | , | ' | - | - | - | , | • | ' | - | • | ' | , | , | - |
| Administrative Costs | | | | | | | | | | | 1 | Ť | | | Ť | |
| Implementation & Administration (Sch. 10, 16, 17) | - | • | • | • | • | ' | , | , | | • | • | , | • | | | ' |
| Ancillary Services Market Administration | • | ' | , | • | • | • | - | - | ' | - | • | , | • | 1 | ' | ' |
| Other Administrative Costs | | 1 | ' | , | | , | , | | , | 1 | - | , | ' | - | • | , |
| Subtotal | - | - | • | 1 | ' | • | 1 | , | ' | ' | | , | ' | ' | , | , |
| | | | | | | | | | | | | | | | | |
| Operations Costs | | | | | | | | | | | | | | | | |
| Generation Costs | | | | | | | | | | | | | | | | |
| A&G Casts Associated with RTO Membership | \$8.31 | 0.89 | 0.92 | 0.94 | 0.96 | 0.99 | 1.01 | 1.01 | 1.01 | 1.01 | 1.01 | 1.01 | 1.01 | 1.01 | 1.01 | 1.01 |
| Native Load | | | | | | | | | | | | | | | | |
| Fuel Costs | \$5,475.79 | 525.49 | 612.50 | 638.55 | 651.47 | 648.98 | 669.38 | 669.38 | 669.38 | 669.38 | 669.38 | 669.38 | 669.38 | 669.38 | 669.38 | 669.38 |
| Fixed O&M Costs | \$591.77 | 61.62 | 61.80 | 63.86 | 67.43 | 70.13 | 73.50 | 73.50 | 73.50 | 73.50 | 73.50 | 73.50 | 73.50 | 73.50 | 73.50 | 73.50 |
| Variable O&M Costs | \$229.38 | 18.66 | 19.33 | 21.25 | 22.72 | 25.70 | 31.57 | 31.57 | 31.57 | 31.57 | 31.57 | 31.57 | 31.57 | 31.57 | 31.57 | 31.57 |
| Emission Credit Casts | \$722.02 | 102.84 | 106.32 | 100.37 | 94.92 | 72.82 | 75.35 | 75.35 | 75.35 | 75.35 | 75.35 | 75.35 | 75.35 | 75.35 | 75.35 | 75.35 |
| Market Purchases | \$262.78 | 19.22 | 18.18 | 22.97 | 33.11 | 38.30 | 35.15 | 35.15 | 35.15 | 35.15 | 35.15 | 35.15 | 35.15 | 35.15 | 35.15 | 35.15 |
| Subtotal | \$7,281.74 | 727.83 | 818.13 | 846.99 | 869.66 | 855.94 | 884.94 | 884.94 | 884.94 | 884.94 | 884.94 | 884.94 | 884.94 | 884.94 | 884.94 | 884.94 |
| Off-system Sales | | | | | | | | | | | | | | | | |
| Fuel Costs | \$799.35 | 113.06 | 104.19 | 86.06 | 84.45 | 79.72 | 93.28 | 93.28 | 93.28 | 93.28 | 93.28 | 93.28 | 93.28 | 93.28 | 93.28 | 93.28 |
| Variable O&M Costs | \$27.44 | 3.31 | 2.68 | 2.33 | 2.54 | 2.77 | 3.62 | 3.62 | 3.62 | 3.62 | 3.62 | 3.62 | 3.62 | 3.62 | 3.62 | 3.62 |
| Emission Credit Costs | \$89.57 | 18.25 | 14.76 | 11.02 | 10.59 | 7.84 | 8.63 | 8.63 | 8.63 | 8.63 | 8.63 | 8.63 | 8.63 | 8.63 | 8.63 | 8.63 |
| Market Purchases | \$0.00 | 1 | | 1 | 1 | • | | - | • | • | - | 1 | - | - | - | • |
| Subtetal | \$916.37 | 134.62 | 121.62 | 99.42 | 97.57 | 90.33 | 105.53 | 105.53 | 105.53 | 105.53 | 105.53 | 105.53 | 105.53 | 105.53 | 105.53 | 105.53 |
| | | | | | | | | | | | | | | | | |
| Transmission System Operation Costs | | | | | | | | | | | | | | | | |
| A&G Costs Associated with RTO Membership | S7.90 | 0.42 | 0.92 | 0.94 | 0.96 | 0.99 | 1.01 | 1.01 | 1.01 | 1.01 | 1.01 | 1.01 | 1.01 | 1.01 | 1.01 | 1.01 |
| Reliability Coordinator and OASIS Services | \$4.89 | 0.53 | 0.54 | 0.55 | 0.57 | 0.58 | 0.59 | 0.59 | 0.59 | 0.59 | 0.59 | 0.59 | 0.59 | 0.59 | 0.59 | 0.59 |
| Suhtetal | \$12.79 | 0.95 | 1.45 | 1.49 | 1.53 | 1.57 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 |
| Transmission Usage Costs | | | 1 | | | | | | 1 | 100 | | | L L L | 1110 | | Ļ |
| Transmisison Payments | 520.62 | 1,34 | 1.34 | 1.86 | 2.73 | 3.1/ | C/.7 | C/.7 | C/-7 | C/.7 | C/7 | C/7 | C/7 | C/.7 | C/.7 | C/.7 |
| Transmission Congestion Payments | - | | | , , | , , , | | , , | | , r. | | 1 0 | 1 0 10 | , , , | , 1E | 1 0 | |
| Subtotal | 520.62 | 1.34 | 1.34 | 1.80 | 2.(3 | 3.1/ | C/-7 | C/-7 | C/.7 | C/.7 | C/-7 | C/7 | 6/.7 | C/.7 | 67.7 | C/.7 |
| Uplift Charges | - | | | | | | | | | | | | | | | |
| Schedule 21 Uplift Charges | | - | , | | , | - | , | 1 | , | , | , | , | , | 1 | 1 | , |
| Miscellaneous Uplifi Casts | • | , | • | ' | • | ' | 1 | - | , | ' | , | • | | ' | • | , |
| Subtotal | , | 1 | - | ' | • | • | - | , | , | - | | | 1 | • | • | , ; |
| Legal, Regulatory & Transaction Costs | S3.72 | 0.40 | 0.41 | 0.42 | 0.43 | 0.44 | 0.45 | 0.45 | 0.45 | 0.45 | 0.45 | 0.45 | 0.45 | 0.45 | 0.45 | 0.45 |
| | 69 269 27 | CT 100 | 10 010 | 064.40 | 0100 | 050 43 | 00 200 | 00 200 | 00 200 | 00 200 | 00 300 | 00 200 | 00 300 | 005 70 | 00 200 | 00 200 |
| 1 01at Costs | 10.002,00 | 04.400 | 10.040 | 21.12 | 00.710 | 275.42 | 67.000 | 677066 | 07.000 | 07.000 | 04-000 | 77.000 | 04.000 | 0.4.000 | 23.000 | 04.000 |
| Revenues (note revenues will be negative numbers) | 1 | | | | | | | | | | | | | | | |
| Transmission Revenues | | | | | | | - | | | | | | | | | |
| Transmission Revenues | (\$35.01) | | (4.00) | (4.00) | (4.00) | (4.00) | (4.00) | (4.00) | (4.00) | (4.00) | (4.00) | (4.00) | (4.00) | (4.00) | (4.00) | (4.00) |
| Subtotal | (\$35.01) | | (4.00) | (4.00) | (4.00) | (4.00) | (4.00) | (4.00) | (4.00) | (4.00) | (4.00) | (4.00) | (4.00) | (4.00) | (4.00) | (4.00) |
| Off-system Sales Revenue | (S1,334.56) | (213.14) | (178.25) | (140.43) | (139.18) | (127.51) | (152.04) | (152.04) | (152.04) | (152.04) | (152.04) | (152.04) | (152.04) | (152.04) | (152.04) | (152.04) |
| | | | | | | | | | | | | | | | | |
| FTRs | | | | | | | | | | | | | | | | |
| V-1K Kevennes (as offset to congestion payments) | , | ' | • | | ' | • | - - | ' | - | • | | - | - | ' | • | |
| Share of Net Kevenue from P.1K Auction | , | ' | | , | - | , | ' | ' | ' | - | ' | ' | • | , | , | - |
| Subtotal | | , | | • | • | ' | • | | · | - | , | · - | - | , | , | |
| Miscellancous Kevenues | - 120 221 | 1210 240 | 140 261 | 154 421 | 117 181 | 1131 541 | 1158 041 | (156 OA) | (156 DAV | 1155 041 | 1155 041 | 115G 041 | (156.04) | 1156 041 | /156 DAV | (156 DA) |
| l otal Kevenues | 1/02/02/14 | (210.24) 276.10 | 761 63 | 806 60 | 820.70 | 1 00 008 | 140.001 | RAD 26 | 840.26 | 840.26 | 840.26 | R40.26 | 840.26 | 840.26 | 840.26 | 840.26 |
| INet Cost (Revenue) | 90'020'02 | 010.13 | 100.101 | 00000 | 1 11:270 | 1 72.770 | 1 77.740 | 1 77.720 | 177.040 | 1 77.740 | 1 22.010 | 1 74.772.0 | 1 24.25 | 1 23.220 | 04-04-0 | 77.720 |

\$63.49 \$88.30 Difference Between Net Cost MISO and Net Cost Std Net Cost MISO minus Net Cost TORC w/o Exit Fee

VERIFICATION

COMMONWEALTH OF KENTUCKY)) SS: COUNTY OF JEFFERSON)

The undersigned, **Michael S. Beer**, being duly sworn, deposes and says he is Vice President of Rates and Regulatory for LG&E Energy LLC, that he has personal knowledge of the matters set forth in the foregoing testimony, and that the answers contained therein are true and correct to the best of his information, knowledge and belief.

MICHAEL S. BEER

Subscribed and sworn to before me, a Notary Public in and before said County and State, this $\underline{\beta}\underline{\partial}^{\underline{t}\underline{b}}$ day of September 2004.

Notary Public J. Elyy

My Commission Expires:

