

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

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PUBLIC SERVICE  
COMMISSION

In the Matter of:

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

**Responses of  
Midwest Independent Transmission System Operator, Inc.  
to the LG&E/KU 8/18/04 Data Requests**

Midwest Independent Transmission System Operator, Inc. ("MidwestISO") hereby responds to the data requests propounded by Louisville Gas and Electric Company and Kentucky Utilities Company (collectively, "LG&E/KU") on August 18, 2004. Midwest ISO's response consists of one bound volume of text responses and attachments.

Per an agreement with counsel for LG&E/KU, the Midwest ISO previously provided electronic files of its responses to LG&E/KU by e-mail. The Midwest ISO is now providing completed hard-copy volumes of its responses for filing with the Commission and service on the parties.

Today, prior to this filing, the Midwest ISO provided to counsel for LG&E/KU, via e-mail, a supplemented response to LG&E/KU 8/18/04 Data Request Number 28. This replaced the Midwest ISO's original response to Data Request Number 28, previously sent via e-mail to LG&E/KU; the response in the hard-copy volume being filed today is the supplemented version.

Counsel for Midwest ISO, rather than any witness, are responsible for any objection interposed to a data request. In most instances, in a spirit of cooperation and without waiving the stated objection, a response has nonetheless been provided.

Respectfully submitted,

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By: 

ATTORNEYS FOR THE MIDWEST  
INDEPENDENT TRANSMISSION SYSTEM  
OPERATOR, INC.

CERTIFICATE OF FILING AND SERVICE

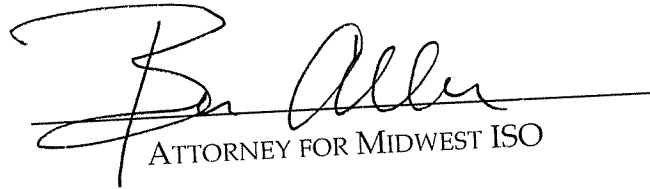
I hereby certify that on this the 8<sup>th</sup> day of September, 2004, the original and ten (10) copies of the foregoing Responses to LG&E/KU 8/18/04 Data Requests were hand-delivered to the Commission for filing, and a copy was sent, via first-class U.S. mail, postage prepaid, to:

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ATTORNEY FOR MIDWEST ISO



**REQUEST:**

1. Please provide any analysis or empirical evidence of the costs LG&E and KU will incur through their participation in the Midwest ISO's Open Access Transmission and Energy Markets Tariff ("TEM").

**RESPONSE:**

The Midwest ISO previously provided the requested information in this docket. It will provide any revisions or updates to that information with its testimony to be filed in this matter on September 22, 2004.



**REQUEST:**

2. Please provide in electronic format (i.e., Excel spreadsheet format) all of the worksheets that accompany the affidavit of Ronald R. McNamara submitted in the MISO Filing *Re: Midwest Independent Transmission System Operator, Inc.*, Docket No. ER04-691-000 and *Public Utilities with Grandfathered Agreements in the Midwest ISO Region*, Docket No. EL04-104-000.

**RESPONSE:**

Please see the compliance and supplemental filings of the Midwest ISO in Federal Energy Regulatory Commission ("FERC") Docket Nos. ER04-691-000 and EL04-104-000, which were submitted on June 25, 2004, and June 28, 2004. These filings can be viewed or downloaded at the Midwest ISO's web page at <http://www.midwestiso.org/> under the heading "Filings to FERC" or through the FERC's web page at <http://www.ferc.gov/>.





**REQUEST:**

3. Please refer to the two exhibits RRM-4 (Annual Congestion Management Savings from Proposed TEMT-Cost of Service Perspective) and RRM-5 (Annual Congestion Management Savings from Proposed TEMT-Market Price of Power Perspective Sensitivity Analysis with 92.3% Maximum Flowgate Utilization), exhibits supporting the affidavit of Ronald R. McNamara submitted in the MISO Filing *Re: Midwest Independent Transmission System Operator, Inc*, Docket No. ER04-691-000 and *Public Utilities with Grandfathered Agreements in the Midwest ISO Region*, Docket No. EL04-104-000. Please provide in electronic format (i.e., Excel spreadsheet format) a breakdown of each column in RRM-4 and RRM-5 by state and utility.

**RESPONSE:**

Objection: The request calls for study and analysis that has not been prepared by MISO and which would be unduly burdensome to prepare in response to this interrogatory. Without waiving that objection, the Midwest ISO provides the following response.

Response: The referenced exhibits were not prepared for the purpose of calculating benefits at an individual utility or state level. With respect to Exhibit RRM-4, no breakdown by utility was prepared that reflects changes in individual utility costs and revenues associated with purchase and sale transactions and no breakdown of the net cost of service by company was developed. And, in the absence of such additional analysis of utility purchases and sales, it is not possible to infer what may be the net cost to serve any individual utility based upon a breakdown of the generating cost data for Exhibit RRM-4. With this caveat, a breakdown by utility for the Total Generation Costs presented in Exhibit RRM-4 is attached to this response. (An electronic file of the spreadsheets, in Excel format, has been provided to LG&E/KU.) No breakdown of the data in Exhibit RRM-4 by state has been developed. No breakdowns of the data in Exhibit RRM-5 by state or utility have been developed.

**Exhibit RRM-4**

Company by company breakdown of total generation cost inputs to the case: 2005 Cost of Service for Current Operations

<b>Company</b>	<b>Date</b>	<b>Total Generation Costs</b>
ALWST	January-05	27311722.46
ALWST	February-05	28742487.94
ALWST	March-05	30583971.98
ALWST	April-05	26665739.58
ALWST	May-05	27769268.17
ALWST	June-05	32803263.83
ALWST	July-05	36691629.86
ALWST	August-05	36573747.21
ALWST	September-05	32566709.6
ALWST	October-05	28163393.03
ALWST	November-05	27607746.93
ALWST	December-05	28937308.07
AUEP	January-05	57786562.21
AUEP	February-05	53869812.93
AUEP	March-05	60436538.4
AUEP	April-05	61463889.23
AUEP	May-05	65838050.1
AUEP	June-05	66021403.47
AUEP	July-05	74482400.9
AUEP	August-05	71953910.3
AUEP	September-05	66123581.25
AUEP	October-05	52871856.12
AUEP	November-05	50799484.11
AUEP	December-05	57007345.91
CEC	January-05	56610577.38
CEC	February-05	56163850.67
CEC	March-05	61344417.11
CEC	April-05	64235072.61
CEC	May-05	68561766.94
CEC	June-05	95137118.59
CEC	July-05	116257146.5
CEC	August-05	109486440.1
CEC	September-05	84513123.27
CEC	October-05	72937211.52
CEC	November-05	58314324.32
CEC	December-05	52815249.44
CGE	January-05	46579770
CGE	February-05	41806642.12
CGE	March-05	39748439.37
CGE	April-05	44213070.3
CGE	May-05	63691467.83
CGE	June-05	75039154.61
CGE	July-05	75097828.83
CGE	August-05	74347485.74
CGE	September-05	70766833.11
CGE	October-05	42420789.1
CGE	November-05	45024180.32
CGE	December-05	46326361.44

<b>Company</b>	<b>Date</b>	<b>Total Generation Costs</b>
CIL	January-05	11063633.92
CIL	February-05	10566172.94
CIL	March-05	11193043.04
CIL	April-05	10603498.14
CIL	May-05	17382376.28
CIL	June-05	18098814.89
CIL	July-05	19551797.15
CIL	August-05	19963336.21
CIL	September-05	17203667.58
CIL	October-05	11202666.73
CIL	November-05	11626878.2
CIL	December-05	11362993.18
CIPS	January-05	28384945.03
CIPS	February-05	24902094.42
CIPS	March-05	28504396.33
CIPS	April-05	29071788.72
CIPS	May-05	27490083.76
CIPS	June-05	37491564.98
CIPS	July-05	45189182.71
CIPS	August-05	45900516.55
CIPS	September-05	35968857.56
CIPS	October-05	26643418.52
CIPS	November-05	31844634.65
CIPS	December-05	28544798.04
DETED	January-05	97185506.29
DETED	February-05	92966977.13
DETED	March-05	97255900.31
DETED	April-05	104066599
DETED	May-05	126274884
DETED	June-05	145290038.7
DETED	July-05	157877799.6
DETED	August-05	158864574.4
DETED	September-05	132152383.5
DETED	October-05	82949895
DETED	November-05	97852864.68
DETED	December-05	97366945.33
EEI	January-05	10895884.72
EEI	February-05	9344724.83
EEI	March-05	9780760.97
EEI	April-05	10995106
EEI	May-05	13153336.6
EEI	June-05	13252883.31
EEI	July-05	14105830.06
EEI	August-05	14513857.73
EEI	September-05	11871343.06
EEI	October-05	9803312.57
EEI	November-05	10074106.66
EEI	December-05	9427642.82
FE	January-05	148266386.2
FE	February-05	143600295.9
FE	March-05	145081197.4
FE	April-05	147902651.5
FE	May-05	176812415.5
FE	June-05	194030337.1

<b>Company</b>	<b>Date</b>	<b>Total Generation Costs</b>
FE	July-05	209784885.2
FE	August-05	207893277.2
FE	September-05	184733493.2
FE	October-05	139625330.4
FE	November-05	146423425.6
FE	December-05	148132228.7
GRE	January-05	14767273.15
GRE	February-05	13473626.29
GRE	March-05	13739910.5
GRE	April-05	10576714.66
GRE	May-05	12817548.1
GRE	June-05	12474774.79
GRE	July-05	12409261.12
GRE	August-05	13837342.1
GRE	September-05	13242309.93
GRE	October-05	11604800.71
GRE	November-05	13080470.36
GRE	December-05	15124748.12
HEC	January-05	13360741.18
HEC	February-05	12904383.85
HEC	March-05	12961559.51
HEC	April-05	10770699.57
HEC	May-05	20316145.27
HEC	June-05	19791290.16
HEC	July-05	21233271.4
HEC	August-05	19991523.12
HEC	September-05	18398032.81
HEC	October-05	10906832.83
HEC	November-05	12265444.95
HEC	December-05	11967944.58
ILPC	January-05	34723575.3
ILPC	February-05	36834217.93
ILPC	March-05	38180624.91
ILPC	April-05	40483901.62
ILPC	May-05	44231259.93
ILPC	June-05	51627478.93
ILPC	July-05	60115525.92
ILPC	August-05	56123253.82
ILPC	September-05	46359597.46
ILPC	October-05	36937058.14
ILPC	November-05	36039667.45
ILPC	December-05	35955725.52
IP&L	January-05	26333749.3
IP&L	February-05	24779590.08
IP&L	March-05	24458922.8
IP&L	April-05	29299368.1
IP&L	May-05	38061548.81
IP&L	June-05	39827342.28
IP&L	July-05	42048235.78
IP&L	August-05	44275963.03
IP&L	September-05	36951883.11
IP&L	October-05	22194557.77
IP&L	November-05	25080224.86
IP&L	December-05	26617341.55

<b>Company</b>	<b>Date</b>	<b>Total Generation Costs</b>
LBWL	January-05	6519560.24
LBWL	February-05	5462258.64
LBWL	March-05	6015890.68
LBWL	April-05	7242724.92
LBWL	May-05	7876085.08
LBWL	June-05	8171398.1
LBWL	July-05	8629656.81
LBWL	August-05	9214545.11
LBWL	September-05	8740690.49
LBWL	October-05	6123175.87
LBWL	November-05	5942102.57
LBWL	December-05	6306954.74
LG&E	January-05	70645531.37
LG&E	February-05	66820088.46
LG&E	March-05	71335925.6
LG&E	April-05	75665251.32
LG&E	May-05	87456984.36
LG&E	June-05	106914559.7
LG&E	July-05	123403294.7
LG&E	August-05	118009971.9
LG&E	September-05	99970148.53
LG&E	October-05	70836373.67
LG&E	November-05	61250717.12
LG&E	December-05	67841169.5
MDU	January-05	5447614.07
MDU	February-05	4686449.07
MDU	March-05	4806442.28
MDU	April-05	4426456.68
MDU	May-05	2474014.57
MDU	June-05	3983420.24
MDU	July-05	4812225.07
MDU	August-05	4971626.33
MDU	September-05	4193550.71
MDU	October-05	5417101.06
MDU	November-05	5119299.58
MDU	December-05	4953208.15
MGE	January-05	4062955.57
MGE	February-05	3885622.65
MGE	March-05	4593312.62
MGE	April-05	4833458.57
MGE	May-05	4717008.72
MGE	June-05	5296028.97
MGE	July-05	6320634.76
MGE	August-05	5958197.46
MGE	September-05	5148907.89
MGE	October-05	4038663.44
MGE	November-05	3649716.87
MGE	December-05	4073800.5
MPL	January-05	13769465.46
MPL	February-05	11105063.39
MPL	March-05	12592827.63
MPL	April-05	13422899.49
MPL	May-05	10462105.41
MPL	June-05	11640291.43

<b>Company</b>	<b>Date</b>	<b>Total Generation Costs</b>
MPL	July-05	12921136.28
MPL	August-05	14102593.6
MPL	September-05	12798904.15
MPL	October-05	14557299.48
MPL	November-05	13447399
MPL	December-05	13104127.08
NIPS	January-05	31695533.8
NIPS	February-05	29695634.31
NIPS	March-05	27961455.17
NIPS	April-05	33722529.26
NIPS	May-05	41427745.61
NIPS	June-05	48739386.04
NIPS	July-05	54748037.86
NIPS	August-05	50446502.51
NIPS	September-05	44177320.04
NIPS	October-05	30233161.75
NIPS	November-05	27899257.43
NIPS	December-05	32057112.42
NSP	January-05	66705209.99
NSP	February-05	62813921.16
NSP	March-05	62443454.78
NSP	April-05	57213106
NSP	May-05	59735377.57
NSP	June-05	61980038.17
NSP	July-05	70489816.96
NSP	August-05	72097480.37
NSP	September-05	60997913
NSP	October-05	60750869.1
NSP	November-05	59740599.52
NSP	December-05	70578217.24
OTP	January-05	5983391.19
OTP	February-05	5359966.99
OTP	March-05	5523056.24
OTP	April-05	5320426.61
OTP	May-05	4471202.96
OTP	June-05	4450775.16
OTP	July-05	5398347.74
OTP	August-05	5509510.54
OTP	September-05	4801136.95
OTP	October-05	5521956.04
OTP	November-05	5036665.87
OTP	December-05	3929457.03
OVEC	January-05	18681097.95
OVEC	February-05	19276140.53
OVEC	March-05	20281962
OVEC	April-05	22170402.2
OVEC	May-05	11506628.18
OVEC	June-05	23634710.36
OVEC	July-05	27707043.85
OVEC	August-05	29286083.39
OVEC	September-05	24952075.93
OVEC	October-05	20645889.4
OVEC	November-05	19462233.97
OVEC	December-05	18923075.03

<b>Company</b>	<b>Date</b>	<b>Total Generation Costs</b>
PSI	January-05	52783540.34
PSI	February-05	51489384.22
PSI	March-05	51112296.59
PSI	April-05	61229258.05
PSI	May-05	80865345.53
PSI	June-05	82119931.48
PSI	July-05	91940357.99
PSI	August-05	94216734.2
PSI	September-05	77752422.16
PSI	October-05	55582938.73
PSI	November-05	51299863.84
PSI	December-05	52242128.83
SIGE	January-05	14554913.33
SIGE	February-05	13709180.6
SIGE	March-05	15675512.06
SIGE	April-05	15365241.43
SIGE	May-05	16910189.63
SIGE	June-05	20853502.4
SIGE	July-05	24486588.73
SIGE	August-05	23743312.03
SIGE	September-05	18932767.19
SIGE	October-05	15248097.98
SIGE	November-05	14002657.11
SIGE	December-05	14866097.69
SIPC	January-05	3520295.84
SIPC	February-05	3042917.83
SIPC	March-05	3919129.42
SIPC	April-05	3804700.97
SIPC	May-05	2100982.85
SIPC	June-05	3297426.7
SIPC	July-05	4841025.6
SIPC	August-05	4365307.86
SIPC	September-05	3024925.91
SIPC	October-05	3845045.12
SIPC	November-05	2959769.27
SIPC	December-05	3421504
SPRIL	January-05	4752661.39
SPRIL	February-05	4426234.36
SPRIL	March-05	4927195.91
SPRIL	April-05	4479692.73
SPRIL	May-05	4952207.78
SPRIL	June-05	6287987.56
SPRIL	July-05	8478244.82
SPRIL	August-05	7542926.69
SPRIL	September-05	6868101.9
SPRIL	October-05	4577141.18
SPRIL	November-05	4613433.38
SPRIL	December-05	4073346.9
WEP	January-05	56973081.5
WEP	February-05	54194792.85
WEP	March-05	55256583.21
WEP	April-05	56035677.03
WEP	May-05	58905292.08
WEP	June-05	65987976.86

<b>Company</b>	<b>Date</b>	<b>Total Generation Costs</b>
WEP	July-05	75675122.82
WEP	August-05	75413652.6
WEP	September-05	62529486.06
WEP	October-05	56991159.6
WEP	November-05	57114866.33
WEP	December-05	57441062.26
WPL	January-05	20919206.7
WPL	February-05	19398316.3
WPL	March-05	19194202
WPL	April-05	17354219.97
WPL	May-05	16871086.16
WPL	June-05	23220319.54
WPL	July-05	27578686.61
WPL	August-05	28003673.86
WPL	September-05	22344467.94
WPL	October-05	22643348.63
WPL	November-05	20490071.04
WPL	December-05	20310919.16
WPPI	January-05	1385582.87
WPPI	February-05	1303960.37
WPPI	March-05	1520632.09
WPPI	April-05	1500411.11
WPPI	May-05	1571642.35
WPPI	June-05	1895870.35
WPPI	July-05	2066088.67
WPPI	August-05	2085595.57
WPPI	September-05	1538944.81
WPPI	October-05	1538963.58
WPPI	November-05	1074327.76
WPPI	December-05	730006.03
WPS	January-05	20422929.19
WPS	February-05	19404776.16
WPS	March-05	19625550.48
WPS	April-05	19496138.56
WPS	May-05	23163832.25
WPS	June-05	25720917.73
WPS	July-05	28091757.85
WPS	August-05	27164190.89
WPS	September-05	23125425.19
WPS	October-05	21956130.57
WPS	November-05	21242963.09
WPS	December-05	21786044.44
WPSC	January-05	781222.18
WPSC	February-05	860056.25
WPSC	March-05	712049.69
WPSC	April-05	899358.46
WPSC	May-05	989571.87
WPSC	June-05	1114811.1
WPSC	July-05	1314756.06
WPSC	August-05	1382958.28
WPSC	September-05	1136322.75
WPSC	October-05	1079301.79
WPSC	November-05	984102.24
WPSC	December-05	821119.31



<b>Company</b>	<b>Date</b>	<b>Total Generation Costs</b>
MISO	January-05	\$972,874,120
MISO	February-05	\$926,889,641
MISO	March-05	\$960,767,161
MISO	April-05	\$994,530,052
MISO	May-05	\$1,138,857,454
MISO	June-05	\$1,306,194,817
MISO	July-05	\$1,463,747,618
MISO	August-05	\$1,447,240,091
MISO	September-05	\$1,233,885,327
MISO	October-05	\$949,847,739
MISO	November-05	\$941,363,499
MISO	December-05	\$967,045,983
MISO	Total	\$13,303,243,504

**Exhibit RRM-4**

Company by company breakdown of total generation cost inputs to the case: 2005 Cost of Service for Proposed EMT

<b>Company</b>	<b>Date</b>	<b>MISO Cost</b>
ALWST	January-05	25,522,462
ALWST	February-05	27,443,952
ALWST	March-05	29,769,361
ALWST	April-05	26,149,863
ALWST	May-05	26,548,784
ALWST	June-05	31,988,474
ALWST	July-05	34,767,111
ALWST	August-05	35,573,692
ALWST	September-05	32,062,023
ALWST	October-05	27,209,817
ALWST	November-05	26,401,854
ALWST	December-05	27,373,223
AUEP	January-05	60,536,161
AUEP	February-05	55,770,436
AUEP	March-05	62,133,356
AUEP	April-05	64,296,606
AUEP	May-05	68,703,400
AUEP	June-05	67,315,727
AUEP	July-05	74,812,542
AUEP	August-05	72,465,217
AUEP	September-05	66,939,101
AUEP	October-05	53,549,068
AUEP	November-05	51,288,788
AUEP	December-05	59,342,683
CEC	January-05	54,808,729
CEC	February-05	53,872,140
CEC	March-05	58,141,549
CEC	April-05	63,586,210
CEC	May-05	68,492,596
CEC	June-05	95,489,243
CEC	July-05	112,852,297
CEC	August-05	106,973,329
CEC	September-05	78,251,311
CEC	October-05	67,433,640
CEC	November-05	54,668,630
CEC	December-05	50,208,292
CGE	January-05	47,654,114
CGE	February-05	42,524,473
CGE	March-05	39,895,391
CGE	April-05	44,960,786
CGE	May-05	63,957,526
CGE	June-05	74,128,363
CGE	July-05	71,871,794
CGE	August-05	71,981,223
CGE	September-05	71,408,173
CGE	October-05	43,854,415
CGE	November-05	45,487,116
CGE	December-05	47,443,806

<b>Company</b>	<b>Date</b>	<b>MISO Cost</b>
CIL	January-05	11,386,246
CIL	February-05	10,640,013
CIL	March-05	12,002,290
CIL	April-05	10,485,634
CIL	May-05	17,874,315
CIL	June-05	18,330,758
CIL	July-05	19,033,686
CIL	August-05	20,092,891
CIL	September-05	17,503,677
CIL	October-05	11,735,116
CIL	November-05	12,515,400
CIL	December-05	11,828,029
CIPS	January-05	25,917,907
CIPS	February-05	23,457,418
CIPS	March-05	28,192,078
CIPS	April-05	29,692,642
CIPS	May-05	28,887,704
CIPS	June-05	38,704,061
CIPS	July-05	45,534,922
CIPS	August-05	45,495,492
CIPS	September-05	37,416,177
CIPS	October-05	25,826,205
CIPS	November-05	29,880,801
CIPS	December-05	26,503,025
DETED	January-05	95,626,282
DETED	February-05	91,881,776
DETED	March-05	95,655,031
DETED	April-05	103,136,059
DETED	May-05	127,184,111
DETED	June-05	146,149,854
DETED	July-05	157,286,035
DETED	August-05	155,878,022
DETED	September-05	129,127,511
DETED	October-05	81,154,442
DETED	November-05	94,886,062
DETED	December-05	95,456,830
EEI	January-05	10,922,468
EEI	February-05	9,318,668
EEI	March-05	9,849,067
EEI	April-05	11,000,566
EEI	May-05	13,431,117
EEI	June-05	13,507,542
EEI	July-05	14,213,721
EEI	August-05	14,571,170
EEI	September-05	11,971,684
EEI	October-05	10,164,576
EEI	November-05	10,178,004
EEI	December-05	9,467,670
FE	January-05	146,486,863
FE	February-05	137,728,958
FE	March-05	140,084,346
FE	April-05	146,202,682
FE	May-05	169,888,325
FE	June-05	190,240,548

<b>Company</b>	<b>Date</b>	<b>MISO Cost</b>
FE	July-05	208,773,244
FE	August-05	204,587,179
FE	September-05	183,579,498
FE	October-05	135,191,101
FE	November-05	146,578,217
FE	December-05	149,305,378
GRE	January-05	14,048,403
GRE	February-05	13,116,947
GRE	March-05	13,444,905
GRE	April-05	10,372,674
GRE	May-05	13,272,680
GRE	June-05	12,509,867
GRE	July-05	11,797,192
GRE	August-05	13,628,102
GRE	September-05	13,343,814
GRE	October-05	11,358,047
GRE	November-05	12,879,274
GRE	December-05	14,578,066
HEC	January-05	13,865,382
HEC	February-05	13,661,491
HEC	March-05	13,179,717
HEC	April-05	10,910,431
HEC	May-05	21,950,917
HEC	June-05	20,858,603
HEC	July-05	22,174,068
HEC	August-05	20,843,745
HEC	September-05	19,415,927
HEC	October-05	11,231,827
HEC	November-05	12,880,616
HEC	December-05	12,404,041
ILPC	January-05	38,153,520
ILPC	February-05	39,967,854
ILPC	March-05	41,503,216
ILPC	April-05	41,863,626
ILPC	May-05	49,557,028
ILPC	June-05	54,109,316
ILPC	July-05	56,524,895
ILPC	August-05	56,414,165
ILPC	September-05	45,962,607
ILPC	October-05	35,995,949
ILPC	November-05	37,705,893
ILPC	December-05	38,148,835
IP&L	January-05	26,663,097
IP&L	February-05	26,235,159
IP&L	March-05	24,598,194
IP&L	April-05	30,903,159
IP&L	May-05	41,480,885
IP&L	June-05	41,168,608
IP&L	July-05	42,794,620
IP&L	August-05	45,955,480
IP&L	September-05	38,435,539
IP&L	October-05	22,443,590
IP&L	November-05	26,705,494
IP&L	December-05	28,397,756

<b>Company</b>	<b>Date</b>	<b>MISO Cost</b>
LBWL	January-05	5,714,699
LBWL	February-05	5,038,863
LBWL	March-05	5,550,515
LBWL	April-05	7,030,847
LBWL	May-05	8,107,806
LBWL	June-05	8,390,323
LBWL	July-05	8,679,515
LBWL	August-05	9,142,912
LBWL	September-05	8,673,745
LBWL	October-05	5,492,755
LBWL	November-05	5,339,269
LBWL	December-05	5,569,301
LG&E	January-05	77,165,687
LG&E	February-05	71,347,323
LG&E	March-05	75,902,341
LG&E	April-05	77,242,095
LG&E	May-05	92,366,171
LG&E	June-05	113,385,988
LG&E	July-05	128,349,781
LG&E	August-05	122,639,825
LG&E	September-05	105,743,459
LG&E	October-05	75,581,334
LG&E	November-05	64,422,992
LG&E	December-05	73,493,866
MDU	January-05	5,661,737
MDU	February-05	4,993,886
MDU	March-05	5,455,837
MDU	April-05	5,164,464
MDU	May-05	2,576,807
MDU	June-05	4,851,019
MDU	July-05	5,767,899
MDU	August-05	5,828,118
MDU	September-05	5,109,351
MDU	October-05	5,792,807
MDU	November-05	5,404,356
MDU	December-05	5,216,123
MGE	January-05	3,589,522
MGE	February-05	3,615,153
MGE	March-05	4,320,355
MGE	April-05	4,614,523
MGE	May-05	4,539,443
MGE	June-05	5,003,294
MGE	July-05	5,845,055
MGE	August-05	5,591,064
MGE	September-05	4,899,541
MGE	October-05	3,942,796
MGE	November-05	3,503,585
MGE	December-05	3,798,248
MPL	January-05	12,484,592
MPL	February-05	10,378,260
MPL	March-05	11,871,147
MPL	April-05	13,449,357
MPL	May-05	10,949,635
MPL	June-05	11,967,582

<b>Company</b>	<b>Date</b>	<b>MISO Cost</b>
MPL	July-05	13,287,070
MPL	August-05	14,312,950
MPL	September-05	12,881,686
MPL	October-05	13,521,498
MPL	November-05	12,321,042
MPL	December-05	12,362,311
NIPS	January-05	30,802,785
NIPS	February-05	28,340,008
NIPS	March-05	26,681,400
NIPS	April-05	34,013,949
NIPS	May-05	39,436,901
NIPS	June-05	47,203,475
NIPS	July-05	51,775,713
NIPS	August-05	49,074,160
NIPS	September-05	42,335,449
NIPS	October-05	29,856,923
NIPS	November-05	27,288,355
NIPS	December-05	32,320,384
NSP	January-05	63,322,853
NSP	February-05	60,056,218
NSP	March-05	60,305,333
NSP	April-05	56,316,129
NSP	May-05	59,506,451
NSP	June-05	60,765,394
NSP	July-05	67,854,819
NSP	August-05	70,023,229
NSP	September-05	60,287,168
NSP	October-05	58,196,616
NSP	November-05	56,637,661
NSP	December-05	66,800,853
OTP	January-05	5,448,980
OTP	February-05	5,194,877
OTP	March-05	5,668,569
OTP	April-05	5,716,606
OTP	May-05	4,547,509
OTP	June-05	4,658,630
OTP	July-05	5,590,044
OTP	August-05	5,705,709
OTP	September-05	5,160,831
OTP	October-05	5,400,929
OTP	November-05	4,822,911
OTP	December-05	3,665,533
OVEC	January-05	25,597,432
OVEC	February-05	23,796,117
OVEC	March-05	24,258,590
OVEC	April-05	26,192,153
OVEC	May-05	14,850,330
OVEC	June-05	26,850,586
OVEC	July-05	34,075,508
OVEC	August-05	34,438,696
OVEC	September-05	30,546,807
OVEC	October-05	25,130,280
OVEC	November-05	23,402,310
OVEC	December-05	24,423,955

<b>Company</b>	<b>Date</b>	<b>MISO Cost</b>
PSI	January-05	55,677,975
PSI	February-05	53,233,180
PSI	March-05	50,125,325
PSI	April-05	61,472,087
PSI	May-05	81,651,455
PSI	June-05	81,160,898
PSI	July-05	90,413,698
PSI	August-05	93,515,872
PSI	September-05	77,913,173
PSI	October-05	58,610,193
PSI	November-05	52,294,191
PSI	December-05	54,877,396
SIGE	January-05	14,598,980
SIGE	February-05	14,178,799
SIGE	March-05	16,556,969
SIGE	April-05	15,813,586
SIGE	May-05	16,379,076
SIGE	June-05	20,688,420
SIGE	July-05	24,080,148
SIGE	August-05	23,209,952
SIGE	September-05	19,538,851
SIGE	October-05	15,655,742
SIGE	November-05	14,329,456
SIGE	December-05	15,058,207
SIPC	January-05	3,352,422
SIPC	February-05	2,939,303
SIPC	March-05	3,888,923
SIPC	April-05	3,761,150
SIPC	May-05	2,096,703
SIPC	June-05	3,273,099
SIPC	July-05	4,483,951
SIPC	August-05	4,333,688
SIPC	September-05	2,930,754
SIPC	October-05	3,755,042
SIPC	November-05	2,967,950
SIPC	December-05	3,219,131
SPRIL	January-05	4,042,615
SPRIL	February-05	4,136,534
SPRIL	March-05	4,976,387
SPRIL	April-05	4,525,452
SPRIL	May-05	4,805,021
SPRIL	June-05	5,966,735
SPRIL	July-05	7,535,157
SPRIL	August-05	7,106,980
SPRIL	September-05	6,144,814
SPRIL	October-05	4,470,868
SPRIL	November-05	4,304,819
SPRIL	December-05	3,629,696
WEP	January-05	54,914,407
WEP	February-05	52,194,956
WEP	March-05	53,780,726
WEP	April-05	56,268,031
WEP	May-05	57,209,336
WEP	June-05	64,972,323

<b>Company</b>	<b>Date</b>	<b>MISO Cost</b>
WEP	July-05	74,404,787
WEP	August-05	73,232,659
WEP	September-05	61,070,019
WEP	October-05	55,165,614
WEP	November-05	55,477,169
WEP	December-05	55,484,770
WPL	January-05	18,168,880
WPL	February-05	17,295,036
WPL	March-05	16,480,008
WPL	April-05	16,748,691
WPL	May-05	16,018,060
WPL	June-05	22,556,438
WPL	July-05	25,996,908
WPL	August-05	25,910,185
WPL	September-05	21,338,628
WPL	October-05	20,591,168
WPL	November-05	18,242,666
WPL	December-05	17,213,114
WPPI	January-05	1,279,881
WPPI	February-05	1,242,281
WPPI	March-05	1,367,640
WPPI	April-05	1,422,742
WPPI	May-05	1,399,875
WPPI	June-05	1,627,829
WPPI	July-05	1,717,745
WPPI	August-05	1,831,592
WPPI	September-05	1,430,467
WPPI	October-05	1,391,824
WPPI	November-05	987,218
WPPI	December-05	633,432
WPS	January-05	20,114,278
WPS	February-05	18,659,545
WPS	March-05	19,208,714
WPS	April-05	19,389,355
WPS	May-05	23,146,964
WPS	June-05	25,144,947
WPS	July-05	26,378,017
WPS	August-05	26,705,051
WPS	September-05	22,779,158
WPS	October-05	21,119,072
WPS	November-05	20,510,102
WPS	December-05	21,191,341
WPSC	January-05	735,712
WPSC	February-05	828,181
WPSC	March-05	700,422
WPSC	April-05	889,254
WPSC	May-05	1,004,807
WPSC	June-05	1,133,619
WPSC	July-05	1,334,043
WPSC	August-05	1,371,980
WPSC	September-05	1,140,977
WPSC	October-05	1,060,426
WPSC	November-05	951,318
WPSC	December-05	764,765



<b>Company</b>	<b>Date</b>	<b>MISO Cost</b>
MISO	January-05	\$974,265,073
MISO	February-05	\$923,087,804
MISO	March-05	\$955,547,702
MISO	April-05	\$1,003,591,408
MISO	May-05	\$1,151,821,737
MISO	June-05	\$1,314,101,564
MISO	July-05	\$1,450,005,984
MISO	August-05	\$1,438,434,329
MISO	September-05	\$1,235,341,918
MISO	October-05	\$941,883,681
MISO	November-05	\$935,263,521
MISO	December-05	\$970,180,060
MISO	TOTAL	\$13,293,524,781



**REQUEST:**

4. Please provide in electronic format (i.e., Excel spreadsheet format) any and all of the worksheets that either accompany or support Ronald R. McNamara's testimony regarding the analysis of the benefits and costs to Louisville Gas and Electric Company and Kentucky Utilities Company in KPSC Case No. 2003-00266 (i.e., *Investigation into the Membership of Louisville Gas and Electric Company and Kentucky Utilities Company in the Midwest Independent Transmission System Operator, Inc.*).

**RESPONSE:**

This information was previously provided by the Midwest ISO in exhibits to the referenced testimony on December 29, 2003, and in its response to LG&E/KU's and the Commission Staff's initial set of data requests. In particular, the Midwest ISO provided materials in response to LG&E/KU Initial Data Requests 19, 21, 22, 30, and 42, and in response to Commission Staff's Initial Data Request 8. It provided all electronic files to LG&E/KU and the Commission on three CD-Rom discs labeled "Confidential," "Public Vol. I," and "Public Vol. II." On September 1, 2004, the Midwest ISO sent an additional copy of each disc via U.P.S. to LG&E/KU, per its request. The Midwest ISO will provide any revisions or updates to the previously provided information with its testimony to be filed in this matter on September 22, 2004.



**REQUEST:**

5. Please provide in electronic format (i.e., Excel spreadsheet format) any and all of the worksheets that accompany the testimony of Michael P. Holstein in Case No. 2003-00266 (i.e., *Investigation into the Membership of Louisville Gas and Electric Company and Kentucky Utilities Company in the Midwest Independent Transmission System Operator, Inc.*).

**RESPONSE:**

This information, including worksheets, was previously provided by the Midwest ISO in its response to LG&E/KU's and the Commission Staff's initial set of data requests in this docket. In particular, the Midwest ISO provided materials in response to LG&E/KU Initial Data Requests 44 and 45, and Commission Staff's Initial Data Request 6. It will provide any revisions or updates to this information with its testimony to be filed in this matter on September 22, 2004.



**REQUEST:**

6. Please provide in electronic format (i.e., Excel spreadsheet format) the most recent analysis performed by MISO or any of its consultants of the locational marginal prices that are relevant to the Louisville Gas and Electric Company and Kentucky Utilities Company generator nodes and load nodes as participants in MISO.

**RESPONSE:**

The Excel-format spreadsheet reproduced below lists the 2005 locational marginal prices that are relevant to the LG&E and KU generator nodes and load nodes as participants in the Midwest ISO. An electronic file of the spreadsheet, in Excel format, has been provided to LG&E/KU.

**LGE-KU 2005 Monthly Average Locational Marginal Prices**

	Jan-05	Feb-05	Mar-05	Apr-05	May-05	Jun-05	Jul-05	Aug-05	Sep-05	Oct-05	Nov-05	Dec-05
LGE-KU Load Weighted Average LMPs (\$/MWh)	17.2	20.2	22.9	23.9	27.7	32.0	37.5	37.4	30.7	25.4	23.0	17.2
LGE-KU Generation Average LMPs (\$/MWh)	16.7	19.4	22.1	22.6	26.9	30.0	34.6	34.7	29.5	23.9	21.8	16.8

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Witness: Ronald R. McNamara





**REQUEST:**

7. Please provide in electronic format (i.e., Excel spreadsheet format) the most recent analysis performed by MISO of the allocation of FTRs to Louisville Gas and Electric Company and Kentucky Utilities Company as participants in MISO under the TEMT.

**RESPONSE:**

Please see the April 28, 2004, informational filing in FERC Docket No. ER04-691-000, regarding the Midwest ISO's illustrative allocation of FTRs. This filing can be viewed or downloaded at the Midwest ISO's web page at <http://www.midwestiso.org/> under the heading "Filings to FERC" or through the FERC's web page at <http://www.ferc.gov/>.



**REQUEST:**

8. Please provide in electronic format (i.e., Excel spreadsheet format) the most recent forecast developed by MISO of the rates that would be expected to be charged for recovering costs under Schedules 10, 16 and 17 of the MISO's TEMT. Please provide the forecast of these rates on an annual basis for the period 2005 to 2010, if a forecast for that entire period is available. Otherwise provide a forecast of the rates for all years that are available in that period of time.

**RESPONSE:**

See attached spreadsheet. (An electronic file of the spreadsheets, in Excel format, has been provided to LG&E/KU.)

# Midwest ISO Annual Billing Rate Forecast

2005                      2006                      2007                      2008                      2009                      2010

Billing Rates		2005	2006	2007	2008	2009	2010
Schedule 10 - Demand Based-	\$ per MWh	\$ 0.113	\$ 0.113	\$ 0.113	\$ 0.112	\$ 0.101	\$ 0.098
Schedule 10 - Energy-	\$ per MWh	\$ 0.037	\$ 0.037	\$ 0.037	\$ 0.036	\$ 0.033	\$ 0.032
Schedule 10 - Total-	\$ per MWh	\$ 0.150	\$ 0.150	\$ 0.150	\$ 0.148	\$ 0.134	\$ 0.130
Portion of Sch 10 - Demand Based		80%	80%	80%	80%	80%	80%
Portion of Sch 10 - Energy		20%	20%	20%	20%	20%	20%
Schedule 16 - \$ per FTR MW Volume		\$ 0.058	\$ 0.059	\$ 0.059	\$ 0.056	\$ 0.056	\$ 0.046
Schedule 17 - \$ per MWh (Load plus Generation)		\$ 0.077	\$ 0.073	\$ 0.072	\$ 0.069	\$ 0.068	\$ 0.056

Forecast as of September 3, 2004:

- 1) Market start date of March 1, 2005.
- 2) Illinois Power integrated into system on 9/30/04.
- 3) Does not include costs for development of ancillary services market or capacity market.



**REQUEST:**

9. In the current market (i.e., Day 1 market), does MISO ever take title to energy transmitted on the MISO-operated transmission system? Will MISO ever take title to energy transmitted on the MISO-operated transmission system in the proposed Day 2 market?

**RESPONSE:**

Objection: The Request appears to call for a legal opinion rather than factual information. In addition, it is not clear whether there is “title” to electric energy or what it means to “take title” to such energy. See the Midwest ISO’s response to Item No. 10. However, without waiving its objection, and in a spirit of cooperation, the Midwest ISO provides the following response.

Answer: The Midwest ISO does not today and will not in the proposed Day 2 market purchase energy as a commodity. The Midwest ISO is not party to any bilateral contract today. It will not be in the Day 2 market. Furthermore, by tariff rule, the Midwest ISO does not purchase any energy today as a principal. It will not do so in the Day 2 market. As a consequence, the Midwest ISO appears not to be involved in any “title” to electric energy.



**REQUEST:**

10. Please trace the proposed Day 2 Market chain of title as MISO understands it of a MWh of energy from LG&E/KU self-scheduled generation of LG&E/KU native load.

**RESPONSE:**

Objection: The Request appears to call for a legal opinion rather than factual information. The Midwest ISO does not understand there to be "title" or a "chain of title" with respect to electric energy, and has not proposed a "Day 2 chain of title" in general or for any particular scenario. The Midwest ISO expresses no opinion on whether "title" or a "chain of title" to electric energy is or should be recognized as a legal concept. Upon a brief search, the question of whether and for what purposes such energy may be treated as personalty or a good (rather than a service) appears to be an open one under Kentucky law today. However, without waiving its objection, and in a spirit of cooperation, the Midwest ISO provides the following response.

Answer: The Midwest ISO does not address title to electricity in its Energy Markets Tariff, which describes services it provides. Generators and companies serving load may be involved in these services in varying ways. The provisions governing their activities, including how they are settled financially in the markets, are included in the Tariff. The Midwest ISO does not know whether the tariffs and rate schedules under which LG&E and KU operate have been construed to provide for or specify passage of title; upon examination, the tariffs on file with the Commission speak of furnishing service and do not address "title" to the energy. The Midwest ISO understands that LG&E/KU provide bundled electric service under those tariffs, that such service is measured at metering points, and that it is charged for, at least in substantial part, based on metered values.





**REQUEST:**

11. Please trace the proposed Day 2 Market chain of title as MISO understands it of a MWh of energy from LG&E/KU generation dispatched by MISO to LG&E/KU native load.

**RESPONSE:**

See the Midwest ISO's response to Item No. 10.



**REQUEST:**

12. In the proposed Day 2 Market, from whom does a MISO load obtain title to the energy it consumes or resells?

**RESPONSE:**

See the Midwest ISO's response to Item No. 10.



**REQUEST:**

13. In the proposed Day 2 Market, to whom does a generator in MISO transfer title to energy generated and dispatched into the MISO pool?

**RESPONSE:**

See the Midwest ISO's response to Item No. 10.



**REQUEST:**

14. Describe the role MISO plays in securing payment from a bankrupt MISO load or LSE in the proposed Day 2 Market.

**RESPONSE:**

The Midwest ISO, in its capacity as Transmission Provider under a FERC-accepted tariff, is responsible for pursuing all available legal avenues and remedies to secure full payment for obligations owed under the Midwest ISO Transmission and Energy Markets Tariff.





**REQUEST:**

15. Identify each out-of-state, out-of-control-area resource and the MW amount that has historically been imported by an LSE into already identified Narrowly Constrained Areas (NCAs”).

**RESPONSE:**

The Midwest ISO has neither developed nor adopted such a list. As a general reference, please see the proposed list of “WUMS External Sources of Firm Power” submitted to the FERC with the Joint Motion to Intervene and Protest of the Wisconsin and Upper Peninsula of Michigan Load Serving Entities in Docket No. ER04-691-000.



**REQUEST:**

16. Identify each known MISO NCA.

**RESPONSE:**

The Independent Market Monitor (“IMM”) has designated two NCAs within the Midwest ISO. See ¶ 293 of the FERC Order issued August 6, 2004, in *Midwest Independent Transmission System Operator, Inc., et al.*, 108 FERC ¶ 61,163 (2004) (“August 6th EMT Order”):

The IMM defined the WUMS areas and the Northern WUMS area as two distinct NCAs. The WUMS NCA includes 15 flowgates that significantly limit imports into WUMS. The Northern WUMS NCA is defined to include 12 flowgates that limit imports into northern Wisconsin and the Upper Peninsula of Michigan. In determining which flowgates belong in the same electrical area, the IMM evaluated combinations of flowgates to determine the potential for multiple-flowgate NCAs. If the flowgates affected common electrical facilities, then anytime one of those flowgates experiences a binding constraint, they count the hour as a constrained hour. If other flowgates in the NCA are constrained that hour, the count of binding hours is unchanged.

The WUMS load-serving entities are Wisconsin Electric Power Company, Edison Sault Electric Company, Wisconsin Public Service Corporation, Upper Peninsula Power Company, Wisconsin Power and Light Company, Madison Gas and Electric Company, Wisconsin Public Power, Inc. and Manitowoc Public Utilities.

See, generally, August 6th EMT Order ¶¶ 288-298 (NCA Identification and Designation). This Order can be viewed or downloaded at the FERC’s web site at <http://www.ferc.gov/> (Notational Votes).



**REQUEST:**

17. Please explain how MISO will calculate and allocate uplift associated with NCA congestion as FERC requires in Paragraphs 91-93 of FERC's August 6, 2004, Order approving the TEMT.

**RESPONSE:**

The Midwest ISO is currently reviewing this issue and was directed in the August 6th EMT Order to provide this information to the FERC on October 5, 2004.



**REQUEST:**

18. List each Grandfathered Agreement (“GFA”) and the MW amount associated with it in which the contracting parties have elected to settle on Option B.

**RESPONSE:**

Please see the filings of the participants submitted in FERC Docket Nos. ER04-691-000 and EL04-104-000, particularly the contract parties’ joint templates of summary GFA information filed on and after June 25, 2004, pursuant to the FERC’s Order in *Midwest Independent Transmission System Operator, Inc., et al.*, 107 FERC ¶¶61,191 at p. 68 (“GFA Order”). The GFA Order also directed the parties submitting joint templates to make a simple statement in their joint filings to indicate whether or not they are willing to voluntarily convert their contract to TEMT service or settle their GFA by accepting the Midwest ISO’s proposed treatment of GFAs. *See id.* at P 69.<sup>1/</sup> In addition, please see the Findings of Fact of the FERC Administrative Law Judges, issued on July 28, 2004 in *Midwest Independent Transmission System Operator, Inc., et al.*, 108 FERC ¶¶ 63,013 (2004). (The Findings of Fact and other filings can be viewed or downloaded through the FERC’s web site at [www.ferc.gov](http://www.ferc.gov).) Step 3 in the fact-finding process,<sup>2/</sup> a ruling from FERC, has not yet occurred.

<sup>1/</sup> The templates sought six items of information for each GFA: the name of the Responsible Entity and of the Scheduling Entity; the applicable source and sink point(s); the maximum number of MW transmitted pursuant to the GFA for each set of source and sink points; and whether modification to the GFA is subject to a “just and reasonable” or a *Mobile-Sierra* “public interest” standard of review. *See, GFA Order* at P 68; *See also*, Findings of Fact, 108 FERC ¶¶ 63,013 (2004) at ¶¶ 15.

<sup>2/</sup> The three steps of the process are described in the Findings of Fact, 108 FERC ¶¶ 63,013 (2004) at ¶¶ 15-18.





**REQUEST:**

19. Please provide any estimates, and all the workpapers in electronic format (i.e., Excel spreadsheet format), MISO has prepared of the Day 2 market congestion cost uplift associated with the GFA contracts for which the relevant parties have agreed to settle on with MISO by choosing MISO's proposed Option B.

**RESPONSE:**

The Midwest ISO has not prepared any such analysis.



**REQUEST:**

20. Please provide any estimates, and all the workpapers in electronic format (i.e, Excel spreadsheet format), MISO has prepared of the congestion cost uplift associated with FERC's ordered NCA congestion uplift.

**RESPONSE:**

The Midwest ISO has not prepared any such analysis.



**REQUEST:**

21. Please list each known potential source of costs that would be subject to uplift and recovered through a schedule charge in the MISO proposed Day 2 market.

**RESPONSE:**

None.



**REQUEST:**

22. For each known potential source of costs listed in the previous question, provide a description of the respective methodology for uplifting that cost and recovering it through a schedule charge, including those sources of uplift that arise as a result of FERC's August 6, 2004 order conditionally approving the MISO Day 2 TEMT.

**RESPONSE:**

See response to Request No. 21.





**REQUEST:**

23. In the proposed Day 2 Market, can designated network resources be self-scheduled price takers?

**RESPONSE:**

Yes, see generally, Sections 1.282 and 39.1.1 of the Energy Markets Tariff.

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Witness: Ronald R. McNamara



**REQUEST:**

24. In the proposed Day 2 Market, must a self-scheduled price taking generator be a designated network resource in order to utilize network integrated transmission service?

**RESPONSE:**

A Generation Resource that elects to be a self-scheduled price taker must be a designated network resource in order to utilize network integrated transmission service. However, any Generation Resource under the EMT may be a self-scheduled price taker.



**REQUEST:**

25. In the proposed Day 2 Market, if LG&E/KU were to self-schedule available generation in an amount intended to meet forecasted LG&E/KU native load, and LG&E/KU did not designate those self-scheduled resources as network resources, how would LG&E/KU be charged for transmission?

**RESPONSE:**

LG&E/KU would be charged for network integrated transmission service ("NITS") based upon the monthly peak load of the Transmission Customer, which represents the use of transmission capacity. The charges for NITS are unrelated to the resources actually used to serve the load because the charges for NITS are demand charges that have nothing to do with the actual output of a particular Generation Resource or designation of a Generation Resource as being self-scheduled.



**REQUEST:**

26. In the proposed Day 2 Market, if LG&E/KU were to self-schedule available generation in an amount intended to meet forecasted LG&E/KU native load would LG&E/KU alone be responsible for any commitment costs associated with these self-scheduled resources?

**RESPONSE:**

Yes.

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Witness: Ronald R. McNamara





**REQUEST:**

27. In the proposed Day 2 Market, if LG&E/KU were to self-schedule available generation in an amount intended to meet forecasted LG&E/KU native load would LG&E/KU be potentially responsible for any commitment costs incurred by MISO in clearing the Day-Ahead market or in the MISO Reliability Assessment Commitment ("RAC") process? If yes, please explain.

**RESPONSE:**

Yes, see Section 39.3.1(c) of the Midwest ISO EMT regarding charges for Day-Ahead Energy Market purchases.

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Witness: Ronald R. McNamara



**REQUEST:**

28. In Paragraph 528 of the Aug 6, 2004 Order on the TEMT, FERC states: "Entities relying on self-scheduling, such as AMP-Ohio, are not disadvantaged in any way by RAC procedures. All may offer their own resources into the RAC to ensure that any costs they may incur are offset by equivalent RAC payments. Similarly, we reject LG&E's concerns that an opt-out provision is needed or additional assurances are required to guarantee that the RAC process will not be used to increase liquidity of the RTM. The RAC process in no way impairs LG&E's ability to use its resources to serve its load or exposes it to costs that it would not otherwise incur."
- a. Can a self-scheduled unit receive MISO Security Constrained Unit Commitment ("SCUC") commitment payments?
  - b. If LG&E/KU were to self-commit and self-schedule generation to serve its load, would LG&E/KU nevertheless incur a share of MISO's SCUC and RAC revenue sufficiency guaranty payment costs? If yes, do LG&E/KU incur these costs today?
  - c. Are the startup and no-load bids entered into the Day-Ahead Market and RAC process cost-based or market-based? Are they guaranteed to be paid as bid or on a market-clearing price basis?

**RESPONSE:**

- a. No.
- b. Possibly. In response to the question of whether LG&E/KU incur these costs today, the Midwest ISO is not familiar with any specific compensation provisions of any contractual agreements or other arrangements LG&E/KU has regarding reserve sharing with other entities.

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Witness: Ronald R. McNamara

- c. Consistent with the EMT Order, the bids entered into the Day-Ahead Market and RAC process would be cost-based for the first two months, and market-based thereafter, but subject to the review and analysis of the Independent Market Monitor ("IMM"). Start up and No load offers are paid as bid, subject to the review and analysis of the IMM. See Section 39.2.9(f) of the EMT.

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Witness: Ronald R. McNamara



**REQUEST:**

29. In the proposed Day 2 Market, how does MISO intend to manage LG&E/KU interruptible retail customers in accordance with TEMT Section 70.1.1? Specifically, will LG&E/KU interruptible retail customers be called upon by MISO in response to MISO coincident demand or LG&E/KU demand?

**RESPONSE:**

LG&E/KU interruptible retail customers will be called upon by the Midwest ISO in response to the Midwest ISO's coincident demand or LG&E/KU demand to the extent LG&E/KU, as the Market Participant, has offered the interruptible load from these retail customers into the Midwest ISO's markets.

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Witness: Ronald R. McNamara





**REQUEST:**

30. Both the Demand Response Task Force and Markets Subcommittee have **within the** past month unanimously passed a motion to change the TEMT definition of "Demand Response Resource" from:

Load located within the Transmission Provider Region whose withdrawals are monitored by the Transmission Provider and who is capable of following Dispatch Instructions in the Real-Time.

to:

Load within the Transmission Provider Region whose withdrawals are monitored by the Transmission Provider and who is permitted to participate in Transmission Provider administered markets under the laws and regulations enacted by the legislature or promulgated by a duly authorized agency of the State in which the monitored withdrawals take place.

Will MISO file the stakeholder-approved revised "Demand Response Resource" definition above at FERC? If so, when and how? If not, why not?

**RESPONSE:**

The filing of this suggested definition is under consideration by the Midwest ISO. **If the** Midwest ISO chooses to file this revised definition, it will do so with the FERC pursuant to Section 205 of the Federal Power Act at such time as the Midwest ISO deems it **to be** appropriate.

Witness: Ronald R. McNamara



**REQUEST:**

30. Both the Demand Response Task Force and Markets Subcommittee have within the past month unanimously passed a motion to change the TEMT definition of "Demand Response Resource" from:

Load located within the Transmission Provider Region whose withdrawals are monitored by the Transmission Provider and who is capable of following Dispatch Instructions in the Real-Time.

to:

Load within the Transmission Provider Region whose withdrawals are monitored by the Transmission Provider and who is permitted to participate in Transmission Provider administered markets under the laws and regulations enacted by the legislature or promulgated by a duly authorized agency of the State in which the monitored withdrawals take place.

Will MISO file the stakeholder-approved revised "Demand Response Resource" definition above at FERC? If so, when and how? If not, why not?

**RESPONSE:**

The filing of this suggested definition is under consideration by the Midwest ISO. If the Midwest ISO chooses to file this revised definition, it will do so with the FERC pursuant to Section 205 of the Federal Power Act at such time as the Midwest ISO deems it to be appropriate.

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Witness: Ronald R. McNamara



**REQUEST:**

31. In the proposed Day 2 Market, are energy sales from LG&E/KU designated resources recallable by MISO to satisfy energy deficiencies within MISO even when LG&E/KU themselves are energy sufficient and otherwise not required to respond to the deficient area?

**RESPONSE:**

Pursuant to Section 69.2 of the EMT, the Midwest ISO may curtail exports sourced from designated network resources only during a declared Emergency.



**REQUEST:**

32. Explain TEMT Section 69 in light of Paragraphs 573-4, and 576 of FERC's August 6, 2004 order approving MISO's TEMT. What is the minimum MW amount of designated resources that LG&E/KU must have in order to serve LG&E/KU native load from any LG&E/KU owned or controlled generation resource using network integration transmission service?

**RESPONSE:**

The minimum MW amount of designated resources that LG&E/KU must have in order to serve their native load is the amount that complies with the adequacy and reserve requirements established by the applicable states and RROs in which LG&E/KU operate.





**REQUEST:**

33. Is MISO aware of any changes to any of NERC's operating Policies 1 through 9 that will occur as the result of MISO commencing the proposed Day 2 Market operations?

**RESPONSE:**

No.

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Witness: Roger C. Harszy



**REQUEST:**

34. Is MISO currently fulfilling all its obligations as Reliability Authority under NERC Operating Policies?

**RESPONSE:**

Yes.

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Witness: Roger C. Harszy



**REQUEST:**

35. Is the RAC performed as described in EMT Section 40.1 required in order for MISO to fulfill its responsibilities as NERC Reliability Authority? If yes, why isn't MISO doing this today? If no, why is it necessary to so in Day 2?

**RESPONSE:**

The Midwest ISO is not currently performing an RAC process because it is not currently administering a security constrained economic dispatch (SCED) imbalance energy market. Pursuant to FERC's Order No. 2000, the Midwest ISO, as a Regional Transmission Organization, must provide a market based mechanism for congestion management and a real-time energy imbalance market. In fulfillment of this requirement, the Midwest ISO's proposed Day 2 Energy Markets based upon LMP and SCED contain, as an element, the RAC process as described in Section 40.1 of the EMT to help ensure the reliable operation of the transmission system and SCED.

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Witness: Ronald R. McNamara



**REQUEST:**

36. Why does MISO believe that a unit who is assured of a Revenue Sufficiency Guaranty will in fact start up and be ready to generate energy if dispatched? Is there any penalty for a MISO committed unit that fails to startup and cannot perform when called upon? And if so, what is that penalty?

**RESPONSE:**

The Midwest ISO believes that Market Participants will respond to economic incentives. The penalty for the failure to startup a committed unit is the lost opportunity to recover its start-up offers.

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Witness: Ronald R. McNamara





**REQUEST:**

37. Is MISO aware that LG&E/KU are assured of recovering all startup and no-load costs whether or not committed by MISO? If yes, why did MISO propose to include those native load customers who pay LG&E/KU those commitment costs among those who share in paying the commitment costs arising from MISO's unit commitment whether in the SCUC or RAC processes?

**RESPONSE:**

The Midwest ISO is without sufficient information to accept or dispute the statement that LG&E/KU are assured of recovering all startup and no-load costs whether or not committed by the Midwest ISO. The Midwest ISO does not currently bill LG&E/KU native load customers for any Midwest ISO services, and does not propose to bill LG&E/KU native load customers for costs associated with the SCUC or RAC processes.

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Witness: Ronald R. McNamara



**REQUEST:**

38. Does MISO take on any new obligation to serve load in the proposed Day 2 Market? If yes, explain what that obligation is and how it interacts with or supplants the obligation to serve of state-franchised utilities residing within MISO. If no, explain why MISO will commit units pursuant to TEMT Section 40.1 so that “the Transmission Provider can reliably operate the facilities and serve its Load Forecast and Capacity requirements?”

**RESPONSE:**

The Midwest ISO does not believe that it will take on any new obligations to serve load in the Day 2 Markets. The referenced part of the tariff, EMT § 40.1, has been paraphrased inaccurately or incompletely; as approved in the August 6th EMT Order (¶528), Section 40.1 more fully describes the intention as follows:

The intent of the Transmission Provider operations in reliability assessment and commitment process is to ensure, to the extent feasible, that expected system conditions in the Operating Day are represented in the Transmission Provider’s Network Model and that the Transmission Provider can reliably operate the facilities and serve its Load Forecast and Capacity requirements.

In approving the Reliability Assessment Commitment process as filed, FERC explained that it “allows the Midwest ISO to commit additional resources when needed to meet load forecasts.” August 6th EMT Order ¶ 528. It also stated: “The RAC process in no way impairs LG&E’s ability to use its resources to serve its load or exposes it to costs that it would not otherwise incur.” *Id.*

Please note that the Midwest ISO is participating in settlement procedures established by FERC to address — with its Transmission Owners — the allocation of functional responsibilities, costs, and liabilities of the Midwest ISO and member Control Areas. The parties have been directed to make a filing with FERC by October 5, 2004, presenting a proposed resolution. August 6th EMT Order ¶ 138.

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Witness: Ronald R. McNamara



**REQUEST:**

39. What are the Transmission Provider "Capacity requirements" referred to at the end of the last sentence in TEMT Section 40.1?

**RESPONSE:**

"Capacity requirements" refers to operating reserve requirements.

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Witness: Ronald R. McNamara



**REQUEST:**

40. In the proposed Day 2 Market, will MISO calculate external proxy prices for external control areas based on the simple average of LMP prices within the defined external area, i.e., without regard to MW load weighting? If not, explain the methodology.

**RESPONSE:**

Yes.

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Witness: Ronald R. McNamara





**REQUEST:**

41. In the proposed Day 2 Market, if MISO changed its proposed methodology of calculating external price proxies from a simple average to a load weighted average calculation, could the external LMP proxy change? If not, why not?

**RESPONSE:**

Yes.

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Witness: Ronald R. McNamara



**REQUEST:**

42. How many control areas for whom MISO will be calculating an external MP proxy directly interconnect with LG&E/KU?

**RESPONSE:**

Currently, there are six (Tennessee Valley Authority, East Kentucky Power Cooperative, Electric Energy, Inc., Big Rivers Electric Corporation, American Electric Power, and Ohio Valley Electric Corporation).

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Witness: Roger C. Harszy



**REQUEST:**

43. Will Eastern Kentucky Power Cooperative (“EKPC”), Tennessee Valley Authority (“TVA”) and Big Rivers Electric Cooperative (“BREC”) generation be included in MISO’s LMP congestion management system?

**RESPONSE:**

No.

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Witness: Ronald R. McNamara



**REQUEST:**

44. In the proposed Day 2 Market, will NERC Transmission Loading Relief procedures (“TLRs”) be called contemporaneously with LMP congestion management?

**RESPONSE:**

When operating procedures and joint operating agreements call for TLR procedures to be invoked and for congestion management responsibilities to be shared between transactions subject to TLR and the Midwest ISO Energy Markets, TLRs will be called prior to and contemporaneously with LMP congestion management.





**REQUEST:**

45. In the proposed Day 2 Market, at what percentage of Operating Security Limit does MISO propose to bind a constraint in its Security Constrained Economic Dispatch ("SCED")?

**RESPONSE:**

Initially, the Midwest ISO will bind a constraint in its SCED at 95% of the Operating Security Limit in the proposed Day 2 Market. The Midwest ISO intends to move this percentage to 100% as operational experience is gained.

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Witness: Ronald R. McNamara



**REQUEST:**

46. In the proposed Day 2 Market, once identified as a constraint by MISO operating engineers, how long does it take MISO to incorporate a constraint into its SCED?

**RESPONSE:**

Using the automated process, the incorporation of a constraint into the Midwest ISO SCED may take five to 10 minutes; however, manual actions may be initiated prior to the five to 10 minute period if necessary.

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Witness: Roger C. Harszy



**REQUEST:**

47. In the proposed Day 2 Market, how long does the MISO SCED take to correctively redispatch once a constraint has been entered into the SCED algorithm?

**RESPONSE:**

Up to the next five-minute interval when the SCED is calculated.

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Witness: Ronald R. McNamara



**REQUEST:**

48. In the proposed Day 2 Market, at what point in the process of MISO operating engineers identifying a constraint, passing that information to the SCED and altering the dispatch does MISO issue a NERC TLR for any tagged transactions that may impact the same constraint?

**RESPONSE:**

At the same time as a constraint is bound and redispatch is initiated.





**REQUEST:**

49. In the proposed Day 2 Market congestion management, when and how does MISO unbind a constraint?

**RESPONSE:**

A constraint would be “unbound” when the flow has dropped to the point where redispatch is no longer needed. This would be accomplished through the SCED algorithm.

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Witness: Roger C. Harszy



**REQUEST:**

50. Please explain the process by which MISO will run a proposed Day 2 Market LMP congestion management system at the same time MISO will utilize NERC TLRs to obtain relief on a constrained transmission element. Please include in this explanation a description of how MISO plans to avoid redispatching MISO generation to support external and through and out transactions.

**RESPONSE:**

Please refer to the April 2, 2004, compliance filing of the Midwest ISO and PJM Interconnection, LLC ("PJM") consisting of revisions to the Joint Operating Agreement between the Midwest ISO and PJM and a Congestion Management Process White Paper, all of which were submitted to the Federal Energy Regulatory Commission in Docket No. ER04-375-001. This joint compliance filing can be viewed or downloaded at the Midwest ISO's web page at <http://www.midwestiso.org/> under the heading "Filings to FERC" or through the FERC's web page at <http://www.ferc.gov/>.

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Witness: Roger C. Harszy



**REQUEST:**

51. Under an LMP-based SCED, if a constraint is ignored or not entered into the SCED, will MISO deviate from what it understands to be the economic order of dispatch?

**RESPONSE:**

No.

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Witness: Ronald R. McNamara



**REQUEST:**

52. In the proposed Day 2 Market, will MISO rely to any extent on external parties when identifying constraints to be entered into the MISO SCED?

**RESPONSE:**

Yes, as part of reliably operating an integrated transmission system, the Midwest ISO coordinates its efforts with its neighboring Reliability Coordinators.





**REQUEST:**

53. How does MISO propose to collect Schedule 21 costs? What is the total estimated costs to LG&E associated with MISO recovery of Schedule 21 charges?

**RESPONSE:**

The Midwest ISO proposes to collect Schedule 21 costs per the terms of its filed rate schedule with the FERC. The total estimated costs to LG&E associated with the recovery of Schedule 21 costs are not known at this time.



**REQUEST:**

54. Referring to MISO's recently filed market benefits testimony at FERC in which MISO claims the lower market clearing price arising from a MISO centrally dispatched market will generate on the order of \$586.1 million annually in savings:
- a. What percentage of load within MISO pays a market-clearing price today for energy?
  - b. What percentage of load in the proposed Day 2 Market does MISO anticipate paying market-clearing price for their energy requirements?

**RESPONSE:**

- a. 100%
- b. 100%

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Witness: Ronald R. McNamara



**REQUEST:**

55. In paragraph 588 of FERC's 8/6/04 Order FERC states: "The Commission rejects LG&E's notion that self-scheduling entities should not have to pay the generator uplift charge. As the Commission stated previously: [S]tart-up and minimum load costs support both energy and ancillary services such as regulation and operating reserves, as well as redispatch to alleviate transmission congestion. Ancillary services are necessary for reliability, and all loads benefit from reliable operation of the transmission system. Since all loads benefit from the system's reliability and since loads from both ISO and bilateral markets may benefit from congestion management and ancillary services, it is not unreasonable that these costs be recovered through the scheduling charges from all loads."
- a. Explain the reason MISO exempts in TEMT Section 37.3.a Transmission Owners taking Network Integration Services to serve Bundled Load from pay Schedules 1-6.
  - b. To the extent Transmission Owners taking Network Integration Services to serve Bundled Load self-supply the ancillary service costs MISO recovers through Schedules 1-6, do other MISO loads contribute to that Transmission Owner's self-supplied ancillary service cost recovery?

**RESPONSE:**

- a. Absent the provisions of EMT Section 37.3a, the Midwest ISO would bill and pay two different functions of the same vertically integrated utility when serving its Bundled Load, *i.e.*, the Midwest ISO would collect payment for transmission service and schedules 1-6 from the merchant function of the utility and pass the collected payment through to the transmission owning side of the same utility.
- b. As a point of clarity, Schedules 1 and 2 are mandatory services that must be taken from the Transmission Provider as stated in Section 3 of the Midwest ISO EMT and OATT and therefore are not self-supplied

ancillary services. Other Midwest ISO loads contribute to the payment of Schedule 1 charges as the charge consists of an average rate charged to all Transmission Customers, with the Midwest ISO then passing the amounts collected for Schedule 1 back to Transmission Owners based on their revenue requirements. With regard to Schedule 2, a required service that cannot be self supplied, other Midwest ISO wholesale loads within a Transmission Owner's control area contribute to fulfillment of the revenue requirements for Schedule 2 because this is a required ancillary service, as do non-Midwest ISO loads outside the Midwest ISO footprint who are charged an average rate for Schedule 2 service, a portion of which is returned to the individual Control Area Operators that actually provide the service for out and through transactions. The amounts collected for transactions sinking in the Transmission Owner's control area under Schedule 2 are passed back to the Control Area Operator where the transaction sinks. Other Midwest ISO wholesale loads within the Transmission Owner's control area can contribute to the Transmission Owner's return of their costs for Schedules 3, 5, and 6 when these services are taken from the Transmission Owner.



**REQUEST:**

56. Paragraph 573 of FERC's August 6, 2004 Order approving the TEMT, in the 2nd sentence, FERC states that "generation resources can be designated self scheduling or network resources." Please state whether MISO's believes that the term "network resource" in the preceding sentence is analogous to being a MISO designated "network resource"?

**RESPONSE:**

Yes.





**REQUEST:**

57. The 3<sup>rd</sup> sentence of Paragraph 573 of the August 6, 2004 Order goes on to say that "...LG&E has the option of designating all its generation resources as self-scheduled and thereby serve all retail load with its own generation..." How does this comport with MISO Network Integrated Transmission Service that requires the customer to register Designated Network Resources to serve its projected load? How does a self-scheduled resource obtain transmission service, if it is no longer a network resource as suggested by FERC?

**RESPONSE:**

The provision in Section 69 of the Tariff, which requires Market Participants to register designated Network Resources available to serve load within the Region, does not prohibit Market Participants from using such Resources to serve their retail load through self-scheduling. The purpose of registering Network Resources is to provide the Transmission Provider with an understanding of what generation resources will be available to serve load in the Region. Section 69.2 of the Tariff specifies that a Market Participant with Network Resources designated pursuant to Section 69.1 can submit a Self-Schedule in lieu of offering such Resources into the Day-Ahead Energy Market to self-serve its load. Paragraph 573 of the August 6, 2004 Order did not provide that once a designated Network Resource had been self-scheduled that it would no longer qualify as a Network Resource.



**REQUEST:**

58. Paragraph 573 of FERC's August 6, 2004 Order implies that self-scheduling resources to serve retail load is analogous to the way it would occur without an ISO energy market. However, self-scheduled generation (and load) is settled no differently than if the resource were offered and cleared by the MISO market.
- a. How does self-scheduling allow LG&E/KU to serve native load in the same way as without the ISO energy market, when Day-Ahead settlement is the same for all cleared Day-Ahead schedules?
  - b. How does self-scheduling allow LG&E/KU to avoid having available Designated Network Resource ("DNR") capacity available for MISO Day-Ahead dispatch for non-LG&E/KU load, perhaps at mitigated prices?
  - c. How does self-scheduling allow LG&E/KU to avoid paying the costs of MISO SCUC revenue guarantees?
  - d. How does self-scheduling allow LG&E/KU to avoid paying the costs of MISO RAC revenue guarantees?
  - e. Is self-scheduled load exempted from MISO uplift of GFA Option B congestion or NCA congestion costs?

**RESPONSE:**

- a. LG&E/KU can submit Day-Ahead financial schedules to eliminate the energy component from any Midwest ISO day-ahead settlement statements.
- b. Self-scheduling self-commits available capacity. By scheduling a commensurate amount of demand, the power balance is achieved between LG&E/KU supply and demand.
- c. The Midwest ISO expects that the market clearing price (LMP) in its Energy Markets will provide sufficient revenues to cover the Revenue Sufficiency Guarantee.

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Witness: Ronald R. McNamara

- d. If LG&E/KU schedules accurately in the Day-Ahead Market and does not deviate from these schedules in the real-time, it can avoid paying the Midwest ISO RAC guarantee.
- e. No.

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Witness: Ronald R. McNamara



**REQUEST:**

59. In the proposed Day 2 Market, are energy sales from LG&E/KU designated resources recallable by MISO to satisfy energy deficiencies within MISO even when LG&E/KU themselves are energy sufficient and otherwise not required to respond to the deficient area?

**RESPONSE:**

See the Midwest ISO's Response to Item No. 31 (of which this request is a verbatim copy).





**REQUEST:**

60. Explain TEMT Section 69 in light of Paragraphs 573-4, and 576 of FERC's August 6, 2004 order approving MISO's Energy Markets Tariff. What is the minimum MW amount of designated resources that LG&E/KU must have in order to serve LG&E/KU native load from any LG&E/KU owned or controlled generation resource using network integration transmission service?

**RESPONSE:**

See the Midwest ISO's Response to Item No. 32 (of which this request is a verbatim copy).