



LC: MV: MF
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Part 1

Edward R. Wicker, Jr.
Senior Counsel
Legal Services - Regulatory

June 30, 2021

VIA HAND DELIVERY

Ms. Terri Lemoine Bordelon
Records and Recording Division
Louisiana Public Service Commission
Galvez Building, 12th Floor
602 North Fifth Street
Baton Rouge, Louisiana 70802

2021 JUN 30 PM 3:12
LA PUBLIC SERVICE
COMMISSION

Re: 2021 Reports of Entergy Louisiana, LLC as Required by LPSC Order No. U-34447 (LPSC Docket No. X-35953)

Dear Ms. Bordelon:

Enclosed are an original and three copies of the Annual Report of Entergy Louisiana, LLC ("ELL") Regarding its Continued Membership in the Midcontinent Independent System Operator, Inc. Please retain an original for your files and return a date-stamped copy to our courier.

ELL is making this compliance filing pursuant to the terms of LPSC Order No. U-34447 (ELL MISO Renewal). Also pursuant to that Order, ELL is serving a copy of the filing on the service list of Docket No. U-34447, as well as that of this docket.

Please note that the filing contains information that is designated Highly Sensitive Protected Materials ("HSPM"), which is being provided to you under seal pursuant to the provisions of the LPSC General Order dated August 31, 1992, and Rules 12.1 and 26 of the Commission's Rules of Practices and Procedures. The HSPM material is being produced only to the appropriate Reviewing Representatives who executed a confidentiality agreement in Docket No. U-34447. I have also enclosed three copies of a CD-ROM containing HSPM Attachments 7 through 11, 13, and 14 for your records.

If you have any questions, please do not hesitate to call me. Thank you for your courtesy and assistance with this matter.

By Hand

Ms. Bordelon
June 30, 2021
Page 2

Sincerely,

A handwritten signature in black ink, appearing to read 'Edward R. Wicker, Jr.', with a stylized, flowing script.

Edward R. Wicker, Jr.

ERW/ddm
Enclosures

cc: X-35953, U-34447 Official Service List

BEFORE THE
LOUISIANA PUBLIC SERVICE COMMISSION

**IN RE: 2021 REPORTS OF
ENTERGY LOUISIANA, LLC AS
REQUIRED BY ORDER NO. U-34447**

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DOCKET NO. X-35953

**ANNUAL REPORT OF ENTERGY LOUISIANA, LLC
REGARDING ITS CONTINUED MEMBERSHIP IN THE
MIDCONTINENT INDEPENDENT SYSTEM OPERATOR, INC.**

Entergy Louisiana, LLC (“ELL”), through undersigned counsel, hereby submits to the Louisiana Public Service Commission (“LPSC” or “Commission”) this Annual Report Regarding ELL’s Continued Membership in the Midcontinent Independent System Operator, Inc. (“MISO”), as required by LPSC Order No. U-34447,¹ and more particularly, as required by Section II(B) of the Monitoring Plan (Corrected) filed on November 30, 2020, pursuant to the directives of that Order, which provides as follows: “For each year that the Monitoring Plan is in place, ELL shall file an Annual Report with the initial one to be filed on June 30, 2021. Subsequent Annual Reports shall be filed on the last business day of June in each succeeding year. That Annual Report shall contain the following items and information [listed below].”

I. An annual cost/benefit analysis that compares an estimate of ELL costs in MISO in the previous calendar year to an estimate of ELL costs had ELL not joined an RTO and, instead, operated as a standalone Balancing Authority in the previous calendar year. The cost estimates shall include:

- a) Energy-related costs corresponding to the production, purchase, and sale of energy;**

¹ LPSC Docket No. U-34447, *In re: Application Regarding Continued Participation in the Midcontinent Independent System Operator, Inc. Regional Transmission Organization*, dated July 1, 2020.

- b) **Capacity-related costs corresponding to long-term planning reserve requirements; and**
- c) **Administrative charges.**

ELL Response:

ELL estimates that participation in MISO in 2020 was approximately \$63 million less costly than operations would have been had ELL not participated in MISO and instead operated as a standalone Balancing Authority (“BA”). The \$63 million estimate is comprised of three main components:

- a) Lower energy-related costs from MISO participation compared to standalone BA operations of roughly \$24 million.
- b) Lower capacity-related costs from MISO participation compared to standalone BA operations of roughly \$57 million.
- c) Higher administrative costs from MISO participation compared to standalone BA operations of roughly \$18 million.

See Attachment 1 titled “MISO Historical Benefits Calculation – Results of 2020 ELL Analysis” for additional information related to this cost comparison.

2. A comparison of how ELL's capacity, energy and transmission costs (revenues and expenses) have changed in the most recent calendar year as compared to each of the previous three calendar years.

ELL Response:

See Attachment 2 titled “Capacity Energy and Transmission Costs.”

3. The costs referred to in Section II.B.2. above shall include changes to:

- a) **ELL's total MISO Revenue Sufficiency Guarantee ("RSG") costs and revenues (with costs and revenues provided by RSG category including Voltage and Local Reliability ("VLR")) and any other RSG category**

(to the extent that this detail is provided in ELL's MISO settlement statements);

- b) **MISO Planning Reserve Margins applicable to ELL;**
- c) **Local Resource Zone ("LRZ") 9 Capacity Import and Export Limits; and**
- d) **Local Clearing Requirements.**

ELL Response:

a) See Attachment 3 titled "RSG Charges" for a summary of ELL's RSG charges and Make Whole Payments for the period requested. Positive numbers reflect amounts paid to MISO, and negative numbers reflect amounts received from MISO.

b) – d) See the table below regarding the MISO Planning Reserve Margin ("PRM"), Capacity Import Limit ("CIL"), Capacity Export Limit ("CEL"), and Local Clearing Requirement ("LCR") for the MISO 2018-19, 2019-20, and 2020-21 Planning Years.

	2018-2019	2019-2020	2020-2021
PRM	8.4%	7.9%	8.9%
CIL	3,622.0	3,631.0	3,410.0
CEL	2,149.0	2,223.6	1,918.0
LCR	19,319.0	19,525.2	20,893.7

See also the highly sensitive Attachment 8 provided in response to Question 15 titled "ELL 2020-2021 Auction Results" for more detailed information regarding ELL's participation in the Planning Resource Auction ("PRA").

4. Identification of the causes for the changes in the capacity, energy and transmission costs and to what extent those changes can be attributed to MISO;

ELL Response:

For capacity, three primary factors since the 2019-20 PRA could have caused changes:

1. Preclude Resources on Long Term Outages from Participation in the PRA (ER20-129)

- In January 2020, FERC approved MISO’s filing to limit the ability of resources to participate in a Fixed Resource Adequacy Plan (“FRAP”) and MISO’s PRA, if the resource has expected full or partial outages that last for any ninety (90) or more of the first 120 calendar days of the Planning Year which is consistent with the highest period of Loss of Load Expectation (“LOLE”) risk.
2. Load Modifying Resource (“LMR”) Testing Requirement Refinements (ER19-650)
- In February 2019, FERC approved part of MISO’s Resource Availability and Need (“RAN”) initiative related to LMR availability. Further, LMR Business Practice refinements clarified that LMRs must provide power test results or performance data from a previous event to avoid a potential underperformance penalty or be subject to a penalty if it failed to perform during an emergency event.
3. Ongoing Fleet Change
- The PRA results reflect the industry’s ongoing shift away from coal-fired generation and an increasing reliance on gas-fired resources and non-traditional resources such as intermittent renewable resources and various demand-based resources.

These trends relative to capacity are the basis for MISO’s current RAN efforts, including an expected filing at the FERC to incentivize the improved availability of LMRs, on which MISO is increasingly relying to ensure reliable operations.

For energy, costs can be impacted by the amount of purchases, sales, uplift payments, and other regular activities in the MISO market. For transmission, the variance between the average charges for 2017-19 and 2020 are primarily due to a decrease in the ELL native load utilized for calculation of Schedule 2 charges, along with decreases in the network load utilized for the calculation of all network charges where ELL is a network customer in the CLECO Transmission Planning Zone (“TPZ”). Regarding variances in the FERC 565 Accounts, see the note in Attachment 2, provided in response to Question 2, on the “Transmission Charges (Expenses)” tab.

5. Discussion of going forward changes expected within MISO that are anticipated to materially affect ELL's forward capacity, energy and transmission costs;

ELL Response:

For capacity costs, four changes within MISO may affect PRA prices:

1. Conventional Deliverable ICAP (ER20-1942)
 - FERC accepted a Tariff filing on October 27, 2020 to increase the deliverability requirements for capacity resources and related conversion of capacity to Zonal Resource Credits (“ZRCs”) in MISO’s PRA. This filing addresses the deliverability and conversion rules applicable to conventional resources. In order to obtain full capacity credit, the resource must be fully deliverable.
2. Intermittent Deliverable ICAP (ER20-2005)
 - FERC accepted a Tariff filing on November 13, 2020 to increase the deliverability requirements for capacity resources and related conversion of capacity to ZRCs in MISO’s PRA. The amount of capacity eligible to be converted into ZRCs depends on the performance and deliverability level of the intermittent resource.
3. Annual CIL/CEL Study’s Voltage Stability Analysis Methodology
 - CIL/CEL studies utilize generator to generator transfers; however, zonal imports may be limited by voltage constraints. For additional voltage analyses, the PY 2021-22 transfer utilizes a generator to generator transfer methodology, whereas the previous Planning Year utilized a load to load transfer methodology. Generator to generator transfer is more reflective of system capability at peak hour.
4. Ongoing Fleet Change
 - The PRA results reflect the industry’s ongoing shift away from coal-fired generation and increasing reliance on gas-fired resources and renewables, as well as other trends discussed in the MISO Forward report.

In addition, MISO is currently conducting a stakeholder process regarding the potential design and implementation of a seasonal resource adequacy construct. This would result in separate PRAs for each of the four seasons of the year and could potentially include modifications to the way MISO develops the PRM, PRA design, capacity accreditation, and must offer requirements. Additionally, MISO is contemplating implementation of a minimum capacity

requirement which would require a Load Serving Entity (“LSE”) to own or contract for at least 50% of their Planning Reserve Margin Requirement (“PRMR”), limiting how much an LSE can rely on the PRA to meet their capacity needs. ELL is participating in these MISO processes, and if needed, will adapt future resource planning efforts to align with changes implemented by MISO.

For energy costs, two changes within MISO may affect prices:

1. Short Term Reserve (“STR”) Product

- The STR product is expected to be rolled out in December 2021. ELL has some concern that this could increase costs, but MISO has not yet provided estimates. See Attachment 4 titled “Short Term Reserve” for a MISO presentation showing reduced RSG cost of \$1.6 million annually and STR revenues that could be realized by resources of \$4 million annually.

2. Scarcity Pricing and Value of Lost Load (“VOLL”)

- Over the coming years, MISO is expected to make changes to Scarcity Pricing and VOLL. While increased scarcity prices during an emergency event could lead to increased costs, this mechanism could reduce after-the-fact market charges. MISO, however, has not provided estimates. See Attachment 5 titled “Scarcity Pricing Evaluation” for information provided by MISO.

For transmission costs, ELL’s MTEP21 Target Appendix A project submission is consistent with prior years and is not likely to materially impact transmission costs. MISO, however, may identify projects in MTEP21 and beyond through the Long Range Transmission Plan (“LRTP”), for which cost allocation discussions are currently underway in MISO’s Regional Expansion Cost Allocation and Benefits Working Group. No LRTP candidate projects have been identified to date, so the potential impact is not yet known.

6. The number of hours of planned outage by ELL generation units, by month, for the previous calendar year;

ELL Response:

The information responsive to this request has been designated as Highly Sensitive Protected Material and will be provided only to Reviewing Representatives authorized and

designated under the confidentiality agreement executed in this docket and/or in LPSC Docket No. U-34447.

See the highly sensitive Attachment 7 titled “ELL 2020 Monthly Outage Hours.”

7. The number of hours of forced outage by ELL generation units, by month, for the previous calendar year;

ELL Response:

The information responsive to this request has been designated as Highly Sensitive Protected Material and will be provided only to Reviewing Representatives authorized and designated under the confidentiality agreement executed in this docket and/or in LPSC Docket No. U-34447.

See the highly sensitive Attachment 7 provided in response to Question 6.

8. The number of sustained (more than one minute) ELL transmission outages, by month, for the previous calendar year by voltage level;

ELL Response:

See the table below for calendar year 2020:

Voltage	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
69 kV	2			2				1		2	1		8
115 kV	10	4	4	18	9	10	5	35	10	41	2	5	153
230 kV	5	1		6	1		2	5	5	16	2	3	46
500 kV				2	1		1	1	3				8
Total	17	5	4	28	11	10	8	42	18	59	5	8	215

9. The administrative costs paid by ELL annually to MISO;

ELL Response:

See the response to Question 10.

10. A comparison of the most recent annual administrative costs paid by ELL to MISO to the costs paid for the prior two calendar years;

ELL Response:

See the table below for the annual administrative costs paid by ELL to MISO for the past three years:

	2018	2019	2020
MISO Market Admin	\$10,566,716	\$10,204,146	\$11,142,316
Schedule 10 Transmission Admin	\$16,236,771.33	\$16,611,642.31	\$16,672,085.50

11. The monthly bill impacts on an average residential customer of those MISO administrative costs;

ELL Response:

See the table below for the bill impacts per month on the average ELL residential customer for the past three years:

MISO Admin Fees	2018	2019	2020
	\$ 0.33	\$ 0.32	\$ 0.35

See also Attachment 6 titled “Bill Effect ELL MISO Admin Fees 2018-2020” for how the numbers were calculated.

12. The total overall salaries and compensation of the MISO executives and Board of Directors and a breakdown by position;

ELL Response:

MISO provided the following information to ELL for incorporation herein. ELL has not sought to confirm its accuracy, and, as a general matter, takes no position on such information:

The following information is based on MISO's 2019 IRS Form 990.

NAME	TITLE	REPORTABLE COMPENSATION – 2019
John Bear	CEO	\$3,085,733
Clair Moeller	President	\$1,219,495
Richard Doying	Exec VP Market Development Strategy	\$1,067,846
Stephen Kozey	Senior VP and Secretary	\$1,214,187
John Carl Goode	Chief Information Officer	\$922,160
Melissa Brown	Senior VP and Chief Financial Officer	\$762,676
Andre Porter	VP and General Counsel	\$701,791
Jennifer Curran	VP System Planning	\$668,774
Todd Hillman	VP South Region Executive	\$643,379
Gregory Powell	VP Human Resources	\$631,525
Todd Ramey	VP System Operations and Markets	\$635,636
Richard Wayne Schug	VP Strategy and Business Development	\$516,034
Keri Glitch	VP and Chief Info Security	\$520,809
David Charles Boyd	VP Gov and Regulatory Affairs	\$485,637
Michal Curran	Former Member, Board of Directors	\$218,080
Phyllis Currie	Member, Board of Directors	\$183,375
Baljit Dail	Member, Board of Directors	\$167,750
Todd Raba	Member, Board of Directors	\$166,250
Barbara Krumsiek	Member, Board of Directors	\$164,125
Horace Doggett	Member, Board of Directors	\$163,750
Mark Johnson	Member, Board of Directors	\$160,250
Theresa Wise	Member, Board of Directors	\$156,375
Thomas M. Rainwater (thru 4/19)	Member, Board of Directors	\$117,755
Nancy Lange	Member, Board of Directors	\$113,750
Robert Lurie	Member, Board of Directors	\$39,250

13. A comparison of the most recent annual salaries and compensation of the MISO executives and Board of Directors to that for the prior two calendar years;

ELL Response:

MISO provided the following information to ELL for incorporation herein. ELL has not sought to confirm its accuracy, and, as a general matter, takes no position on such information:

The following information is based on MISO's IRS Form 990 for the years 2017, 2018 and 2019.

TITLE	2019	2018	2017
CEO	\$3,085,733	\$2,740,916	\$2,541,594
President	\$1,219,495	\$1,431,082	\$1,028,770
Exec VP Market Development Strategy	\$1,067,846	\$1,063,381	\$973,300
Senior VP and Secretary	\$1,214,187	\$971,759	\$897,149
Chief Information Officer	\$922,160	\$1,012,516	\$660,298
Senior VP and Chief Financial Officer	\$762,676	\$642,466	\$367,476
VP and General Counsel	\$701,791	\$629,924	\$443,536
VP System Planning	\$668,774	\$608,598	\$507,610
VP South Region Executive	\$643,379	\$611,500	\$662,792
VP Human Resources	\$631,525	\$604,047	\$529,305
VP System Operations and Markets	\$635,636	\$617,684	\$522,856
VP Strategy and Business Development	\$516,034	\$564,927	\$538,003
VP and Chief Info Security	\$520,809	\$446,021	\$223,825
VP Gov and Regulatory Affairs	\$485,637	\$456,463	\$388,915
VP Forward Markets		(thru 7/18) \$383,280	\$485,871
Member, Board of Directors	\$218,080	\$168,125	\$156,875
Member, Board of Directors	\$183,375	\$153,250	\$145,250
Member, Board of Directors	\$167,750	\$175,625	\$133,500
Member, Board of Directors	\$166,250	\$156,500	\$111,375
Member, Board of Directors	\$164,125	\$156,500	\$107,750
Member, Board of Directors	\$163,750	\$155,125	\$110,500
Member, Board of Directors	\$160,250	\$146,500	\$130,625
Member, Board of Directors	\$156,375	\$96,750	
Member, Board of Directors	(thru 4/19) \$117,755	\$155,250	\$137,000
Member, Board of Directors	\$113,750		
Member, Board of Directors	\$39,250		

14. Justification for those administrative costs, and compensation;

ELL Response:

MISO provided the following information to ELL for incorporation herein. ELL has not sought to confirm the accuracy of such information, and, as a general matter, takes no position on such information:

What does MISO do?

- Manages the largest RTO/ISO geographic footprint in North America
- Manages operations for one of the world's largest energy markets
- Manages relationships with hundreds of member, stakeholder and other industry organizations
- Provides more than \$3.6 billion in annual benefits to member organizations
- Provides more than 255 years of combined experience among the MISO Operating Committee members

MISO was the First RTO and is North America's Largest RTO/ISO.

MISO is the primary RTO/ISO in the central part of the North American continent spanning from the Gulf of Mexico in the south to Canada's Hudson Bay in the north, then, from the Great Lakes and Appalachian foothills in the east to the open prairies west of the Mississippi River. This footprint represents a truly diverse operating network. Across the MISO footprint, diversity exists in energy policy, structure of state and local governments, interpretation and implementation of regulations by individual stakeholders. This diversity demands that MISO's leadership engage with various stakeholders across the footprint in order to reconcile diverging styles into a unified, reliable approach to bulk electric grid operations.

MISO Operates A World Class Energy Market.

MISO's leadership is responsible for overseeing one of the world's largest energy market platforms for matching the supply and demand of energy. Providing independent, equal and non-discriminatory access to the electric transmission system is a core function of MISO, as the largest RTO by geographic footprint. Since 2005, MISO has provided financially binding day-ahead and real-time pricing of energy. MISO's Markets include a Financial Transmission Rights Market, a Day-Ahead Market and a market for operating reserves and regulation. Overall, MISO managed more than \$24.7 billion in transactions in 2019 on behalf of 471 Market Participants who serve approximately 42 million people.

Outstanding Performance of MISO Operations

MISO's efficient market operations and reliable balancing authority functions ensure and support increased grid reliability. The MISO Operating Committee members are responsible for all MISO operations, including the supervision of more than 65,000 miles of transmission lines and nearly 7,000 generating units with a market Generation Capacity of 183,963 MW. This requires coordination with 134 Non-transmission Owners, 52 Transmission Owners and 32 Local Balancing Authorities.

MISO operators efficiently and reliably operate the bulk electric grid through optimized transmission utilization, allowing market transparency, eliminating pancaked transmission rates and centralizing unit commitment and dispatch. MISO engineers plan and coordinate with peer organizations and members to ensure seamless operations across our footprint as well as the rest of the North American continent. This includes the outage coordination team who ensures that the right generators and transmission lines are online at the right time. Ultimately, the MISO Operating Committee is responsible for the performance of these professionals.

MISO Supports Stakeholder Engagement and Customer Service.

Employees represent the most important stakeholder group at MISO. There are more than 900 employees based in Arkansas, Indiana, Minnesota, which also serve as our North, Central and South Region Control Centers, respectively, as well as the District of Columbia (D.C.). While the primary headquarters is in Carmel, Indiana, MISO's workforce is decentralized across the facilities to maintain diversity and flexibility.

Thought diversity and collaboration are essential to MISO as the most reliable, value-creating RTO. To enable broad stakeholder participation, MISO hosts meetings that are open to anyone that would like to participate and provides dial-in and WebEx access. A stakeholder can be a Member, Market Participant, government or regulatory official, or anyone who is interested in learning more about MISO.

The formal stakeholder process requires a dedicated team of professionals focused solely on engaging with stakeholders in a meaningful way. All of MISO's business units are involved in the stakeholder process and the relationships among MISO stakeholders are key to the decision-making process. Consistent engagement with these groups is a priority of the MISO Operating Committee to encourage constructive dialogue.

Relationships go far beyond the MISO-facilitated stakeholder meetings. MISO leadership and employees participate in industry events to engage with regulators, entrepreneurs, academics and other thought-leaders to enhance MISO's strategic vision. This level of engagement requires precise coordination to ensure that the right person is at the right event at the right time.

MISO's Value Proposition

With growing energy demands throughout MISO's footprint, our services help ensure reliable, least-cost delivered energy. As noted by its Value Proposition, MISO unlocks billions of dollars in annual benefits for its entire region. In 2019, those efforts provided between \$3.2 billion and \$3.9 billion in regional benefits, driven by enhanced reliability, more efficient use of the region's existing transmission and generation assets, and a reduced need for new assets.

MISO's Value Proposition affirms its core belief that a collective, region-wide approach to grid planning and management delivers the greatest benefits. Our landmark analysis serves as a model for other grid operators and transparently communicates the benefits in everything we do.

MISO works every day to create value for its members. The market value that MISO adds became apparent shortly after the energy markets began in 2005. To quantify this value, MISO – in collaboration with its stakeholders – created the MISO Value Proposition in 2007. The Value Proposition breaks MISO's business model into recognized categories of benefits and calculates a range of dollar values for each defined category. From 2007 through 2019, the Value Proposition studies revealed that MISO provided the region an estimated \$26 billion in cumulative net benefits.

MISO is Guided by Proven, Experienced Leadership

The MISO Operating Committee consists of the organization's 12 senior leaders. These executives are responsible for serving all stakeholders – ranging from Market Participants to government regulators to end use consumers. This requires the MISO leadership team to be both knowledgeable of their specific business unit, but also able to understand and speak to all areas of business to a certain degree. The executive team is dedicated to continuous strategic planning that ensures delivery of its cornerstones of Customer Service, Effective Communication and Operational Excellence.

MISO's leadership represents more than 255 years of combined experience. While most of this experience is within the energy industry, the Operating Committee also represents seasoned leaders within their own specific areas of focus. MISO Operating Committee members serve the energy industry in a multitude of ways while representing the needs and interests of our employees and stakeholders. This service involves countless hours of travel to facilitate personal interaction with as many stakeholders as possible. Through fostering leadership within MISO, the Operating Committee ensures effective management of the organization as well as stewardship of the region's electric transmission system.

Every full time MISO employee can contribute to the success of corporate metrics and in turn achieve incentive awards. A target payout for short term incentive performance is

established for the employee, which may depend on a number of factors. MISO's Board of Directors annually retains the services of expert outside executive compensation consultants in the review of officer compensation. These consultants perform a full and independent study of direct compensation (base plus incentives), considering the level of compensation relative to the duties performed, the current competitive market for similar skills, knowledge and responsibility, and other strategic needs identified by the Board of Directors. The consultants prepare a full detailed report to the Human Resources Committee (HRC) of the Board of Directors for each office and key employee position, including recommendations for direct compensation changes. The HRC combines the recommendations of the consultants with evaluations of officer performance to recommend appropriate compensation levels to the Board of Directors for approval. Annually, the consultant prepares a letter of "reasonableness" of the total remuneration package for officers of the company, consistent with Section 4958 of the Internal Revenue Code.

MISO Administrative Charges

MISO funds its operational costs such as those described above pursuant to its FERC-filed Tariff through certain Schedules. Schedules 10, 16 and 17 are the primary schedules through which MISO, as the Transmission Provider, recovers administrative costs from Transmission Customers, Transmission Owners and other entities.

Costs recovered under Schedule 10 include those associated with building and operating MISO's control rooms, including capital costs (actual costs of financing and not a return on equity), operating expenses, costs associated with administering MISO's Tariff, and annual FERC charges. Costs associated with financial transmission rights administrative services provided by MISO as the Transmission Provider are assessed to all Market Participants that are primary holders of Financial Transmission Rights (FTRs) pursuant to Schedule 16. These costs include, but are not limited to, those associated with coordination of FTR bilateral trading; administration of FTRs through allocation, assignment, auction or other FERC-accepted process; support of MISO's on-line, internet-based FTR tool; feasibility analyses of rights that can be outstanding and accommodated by the Transmission System; and administration of FTRs and revenue distribution. Schedule 17 costs are associated with MISO's Energy and Operating Reserve Markets Support Administrative Service, which is provided to all Market Participants that participate in MISO's markets. These costs include market modeling and scheduling functions; market bidding support; locational marginal pricing support; market settlements and billing; market monitoring functions; and simultaneous co-optimization for the scheduling and enabling of the least-cost, security-constrained commitment and dispatch of generation resources to serve load and provide operating reserves while also establishing a spot energy market.

The amount of annual administrative charges to be assessed to a Transmission Owner is determined by first identifying the total amount of MWhs for that year. Thereafter, the percentage of MWhs attributable to a Transmission Owner such as ELL is determined. For example:

2019 Total MWhs:	725,951,000
ELL MWhs:	74,581,270 ²
ELL % of MWhs:	10.27%

Next, the total amount of recoverable administrative costs is identified and assessed to a Transmission Owner based upon their applicable percentage.

2019 Total MISO Administrative Costs:	\$304,928,000
ELL Portion:	\$31,327,070 ³

MISO's administrative costs include compensation paid to executives as discussed herein. In 2019, MISO's executive W-2/1099-MISC reportable compensation totaled \$16,946,616 and other compensation totaled \$2,855,387. Based on the percentage of MWhs attributed to ELL in the example above, its approximate portion of these totals is calculated to be \$1,740,417 and \$293,248, respectively.

Transmission Owners that are utilities may recover their assessed MISO administrative costs from their customers in monthly bills. (*See*, Section II(B)(11).) Likewise, revenues earned by these entities from their participation in MISO may also be credited to customers.

References

<https://www.misoenergy.org/about/media-center/corporate-fact-sheet/>

<https://www.misoenergy.org/about/miso-strategy-and-value-proposition/miso-value-proposition/>

<https://www.misoenergy.org/markets-and-operations/#t=10&p=0&s=&sd=>

² The number of "ELL MWhs" provided by MISO does not account for co-owner agreements, MSS-4 like PPAs, third party PPAs, or other MWh allocations that may be applicable.

³ The dollar amount of "ELL Portion" provided by MISO does not account for co-owner agreements, MSS-4 like PPAs, third party PPAs, or other cost allocations that may be applicable. Such allocations are performed by Entergy after MISO settlement statements are received. In response to Question 10, ELL provided its annual administrative costs paid to MISO.

15. A list of the net capacity purchase or sales, by amount and cost, made by ELL through its participation in the most recent MISO Planning Resource Auction;

ELL Response:

Certain information responsive to this request has been designated as Highly Sensitive Protected Material and will be provided only to Reviewing Representatives authorized and designated under the confidentiality agreement executed in this docket and/or in LPSC Docket No. U-34447.

ELL participated in MISO's PRA for the 2020-21 Planning Year (June 1, 2020 – May 31, 2021). For that period, ELL purchased [REDACTED] of capacity from the MISO market at [REDACTED], reflecting the auction clearing price from multiple zones of [REDACTED]. See the highly sensitive Attachment 8 titled "ELL 2020-2021 Auction Results" for more detailed information.

16. The allocation of Auction Revenue Rights ("ARRs") and Financial Transmission Rights ("FTRs") received by ELL in the previous calendar year;

ELL Response:

The information responsive to this request has been designated as Highly Sensitive Protected Material and will be provided only to Reviewing Representatives authorized and designated under the confidentiality agreement executed in this docket and/or in LPSC Docket No. U-34447. See the highly sensitive Attachment 9 titled "ELL Annual ARR Allocation Results_PY2021," and the highly sensitive Attachment 10 titled "ELL Annual ARR Allocation Results_PY2022."

17. The cost of ARRs and FTRs purchased by ELL in the MISO market processes in the previous calendar year;

ELL Response:

The information responsive to this request has been designated as Highly Sensitive Protected Material and will be provided only to Reviewing Representatives authorized and designated under the confidentiality agreement executed in this docket and/or in LPSC Docket No. U-34447.

[REDACTED]

[REDACTED]

[REDACTED]

18. The net congestion charges (i.e. net of congestion revenues), if any, paid by ELL to MISO in the previous calendar year;

ELL Response:

ELL's net congestion charges are shown in the table below, with positive numbers reflecting net congestion charges and negative numbers reflecting net congestion revenues. Congestion charges represent the cost of delivering owned and contracted generation to load. This can be calculated by subtracting the Marginal Congestion Component ("MCC") of the Locational Marginal Price ("LMP") of the generator source from the MCC of the LMP of the load sink.

The table below reflects congestion charges (net of revenues from ARRs and FTRs) from resources owned or under contract by ELL prior to MISO integration on December 19, 2013 ("pre-

MISO integration resources”).⁴ After the termination of the Entergy System Agreement on August 31, 2016, ELL has modified its net congestion calculation. While the System Agreement was in effect, ELL was allocated a share of the total net congestion incurred by the System Agreement Operating Companies. This calculation included both Day-Ahead and Real-Time market effects, with the specifics of the calculation dictated by the System Agreement for purposes of allocating costs among the System Agreement Operating Companies. Now that ELL is operating as a standalone entity outside of the System Agreement, ELL can produce a simplified congestion calculation that only includes Day-Ahead market effects. ELL has chosen to exclude the Real-Time market effects because: (1) the Real-Time market effects on congestion are difficult to quantify; (2) FTRs hedge congestion incurred in the Day-Ahead market only; and (3) over 98% of ELL’s load needs have been served through the Day-Ahead market since joining MISO. The following table reflects ELL’s net congestion charges from its pre-MISO integration resources utilizing the new Day-Ahead only methodology.

ELL’s Net Congestion from Pre-MISO Integration Resources	
Period	Net Congestion Charge/(Revenue)
Jan. 1, 2020 – Dec. 31, 2020	(\$615,125)

⁴ The pre-MISO integration resources include Ninemile Unit 6 because that resource was granted transmission service by the Independent Coordinator of Transmission prior to MISO integration. See ELL’s Fifth Post-Integration Monitoring Report filed September 30, 2016 in LPSC Docket No. U-32675 for a more detailed explanation of pre-MISO integration resources.

19. A summary of the types of ancillary services purchased by ELL from MISO as well as those provided by ELL to MISO and the compensation paid and received by ELL for such services in the previous calendar year;

ELL Response:

Certain information responsive to this request has been designated as Highly Sensitive Protected Material and will be provided only to Reviewing Representatives authorized and designated under the confidentiality agreement executed in this docket and/or in LPSC Docket No. U-34447.

Three types of ancillary services are purchased from MISO by ELL and provided by ELL to MISO: Supplemental, Spinning, and Reserve. See highly sensitive Attachment 11 titled "Ancillary Charges" for a summary of ELL's Ancillary charges for the period requested. Positive numbers reflect amounts paid to MISO, and negative numbers reflect amounts received from MISO.

20. A breakdown of the energy mix used to supply ELL's customers, showing the MWh and average cost by month of power and energy supplied by resources owned or controlled (through limited- or long-term bilateral purchase power agreements) by ELL, energy "put" to ELL by QFs, and purchases from the MISO markets in the previous calendar year. This shall include tables reflecting monthly generation output totals by unit, for legacy gas generators, owned or under contract by ELL. These tables were previously submitted in Docket No. U-32675 and were entitled "ELL Legacy Gas Generation December [year]";

ELL Response:

See Attachment 12 titled "ELL Generation 2020 – Annual MISO Report."

21. A list of the principles, practices, and protocols ELL utilized to procure capacity and energy in the previous calendar year, including:

- i) The manner of offering in generation and bidding and scheduling load into the Day Ahead and Real Time Markets;**
- ii) ARR nominations; and**
- iii) All other material aspects of any MISO administered market interaction.**

ELL Response:

Certain information responsive to this request has been designated as Highly Sensitive Protected Material and will be provided only to Reviewing Representatives authorized and designated under the confidentiality agreement executed in this docket and/or in LPSC Docket No. U-34447.

i)

20

[REDACTED]

ii) In advance of MISO integration, each Entergy Operating Company received ARR Entitlements based on their historical firm transmission usage. These ARR Entitlements were available for nomination for the Partial Year (December 19, 2013 through May 31, 2014) and can be available for nomination in each Annual ARR Allocation Process.

[REDACTED]

iii) ELL is not aware of anything further that has been requested.

22. All underlying workpapers supporting ELL's analyses.

ELL Response:

Certain information responsive to this request has been designated as Highly Sensitive Protected Material and will be provided only to Reviewing Representatives authorized and

designated under the confidentiality agreement executed in this docket and/or in LPSC Docket No. U-34447.

See the highly sensitive Attachment 13 and Attachment 14 titled “2020 MISO Energy-Related Benefits_ELL_WP” and “2020 MISO Capacity-Related Benefits_ELL_WP,” respectively, for the underlying workpapers for the response to Question 1. All other underlying workpapers have been provided, where appropriate, as part of the applicable responses.

Respectfully submitted,

BY: 

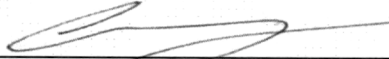
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**ATTORNEYS FOR
ENTERGY LOUISIANA, LLC**

CERTIFICATE OF SERVICE

I hereby certify that I have served copies of the foregoing pleading upon all other known parties to this proceeding, and those who are on the LPSC Docket No. U-34447 service list, by electronic mail and/or overnight delivery.

New Orleans, Louisiana, this 30th day of June, 2021

A handwritten signature in black ink, appearing to read 'Edward R. Wicker, Jr.', is written over a horizontal line.

Edward R. Wicker, Jr.

MISO Historical Benefits Calculation

Results of 2020 ELL Analysis

April 2021

Overview

- The results of the 2020 MISO savings calculation indicate that ELL continues to experience meaningful benefits from MISO participation -- \$63 million of benefits in 2020 compared to standalone BA operations
- ELL's 2020 benefits have decreased by \$11 million compared to 2019
 - The decrease is attributed to a decrease in energy-related benefits; primarily, a decrease in the flex benefits corresponding to MISO participation
- The following slides discuss the 2020 results in more detail.

Highlights of the energy-related cost/benefit calculation

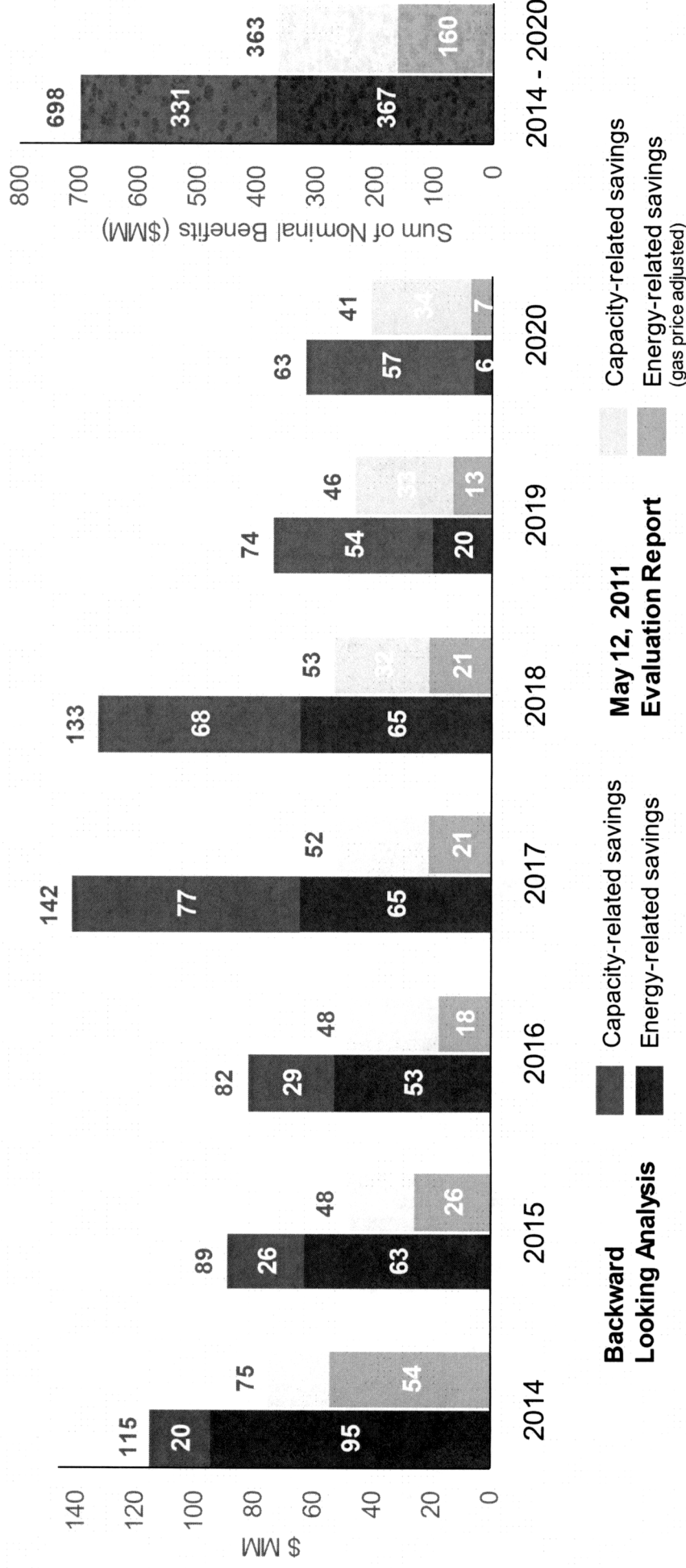
Attachment J
LPSC Docket No. X-235953
June 30, 2021
3 of 4

- An important difference between MISO and standalone BA operations involves the commitment of flexible resources to meet needs
- The methodology used for estimating flex savings identifies whether MISO's commitment of ELL's resources is sufficient to meet standalone BA flex requirements
 - If the MISO commitment is sufficient, the analysis assumes no flex savings attributed to MISO participation
 - If the MISO commitment is not sufficient, the analysis estimates the cost of the additional flexibility required based on the opportunity cost of operating units for flex as opposed to operating them at their preferred level given the LMP
- The addition of LCPS in 2020 had a significant impact on the change in flex savings between 2019 and 2020
 - LCPS was committed by MISO during most days of 2020
 - With more flex committed by MISO, a larger portion of the standalone BA flexibility requirements is assumed to be met by MISO's commitment
 - The analysis conservatively assumes no flex savings attributed to the portion of standalone BA flexibility requirements met by MISO's commitment.¹

¹ This is conservative because the analysis effectively assumes that there is no additional cost for using these resources as flexible resources.

ELL's estimated benefits from MISO participation

- ELL continues to experience meaningful benefits from MISO participation -- \$63 million of benefits in 2020 compared to standalone BA operations.



Notes:

- The May 12, 2011 Evaluation Report assumed continuation of the ESA for all OpCos except EAL thru 2015, and all OpCos except EAL and EML thereafter. The Backward-Looking analysis reflects continuation of the ESA for all OpCos except EAL thru November, 2015, for all OpCos except EAL and EML thru August, 2016, and termination of the ESA thereafter.
- Energy-related savings include incremental administrative costs.
- 2017 -- 2020 capacity-related savings corresponding to the Backward-Looking analysis reflects the impact of forced outage rates on MISO requirements but not on standalone requirements.

**BEFORE THE
LOUISIANA PUBLIC SERVICE COMMISSION**

**IN RE: 2021 REPORTS OF
ENERGY LOUISIANA, LLC AS
REQUIRED BY ORDER NO. U-34447**

)
)
)

DOCKET NO. X-35953

**ATTACHMENT 2
CAPACITY ENERGY AND
TRANSMISSION COSTS**

ON CD-ROM

JUNE 30, 2021

**BEFORE THE
LOUISIANA PUBLIC SERVICE COMMISSION**

**IN RE: 2021 REPORTS OF
ENTERGY LOUISIANA, LLC AS
REQUIRED BY ORDER NO. U-34447**

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DOCKET NO. X-35953

**ATTACHMENT 3
RSG CHARGES**

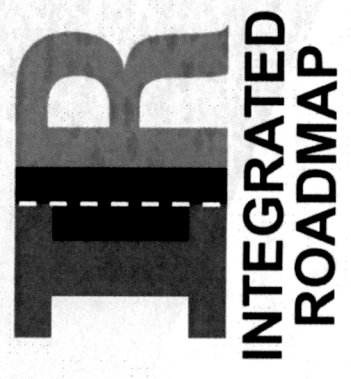
ON CD-ROM

JUNE 30, 2021

Short-Term Reserve (STR)

Market Roadmap ID: 10
Issue ID: MR010

Market Subcommittee (MSC)
August 8, 2019



Purpose & Key Takeaways

Purpose: Short-Term Reserve (STR)
Update on Tariff Feedback

Key Takeaways:

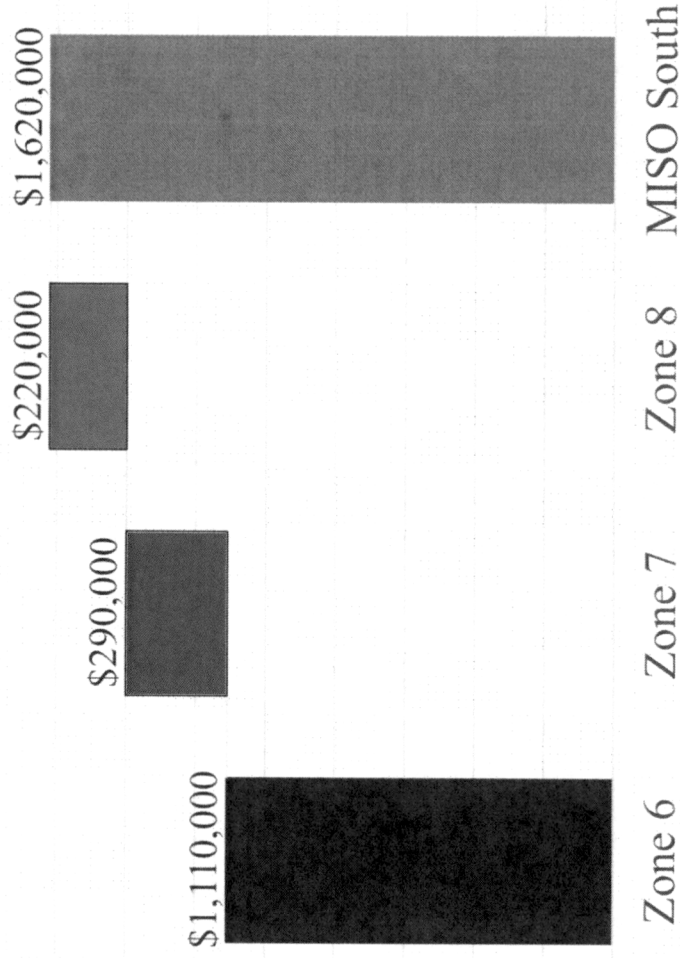
- \$4m estimated annual STR revenue
- Constructive feedback on Tariff changes posted with July meeting materials
- Re-evaluating penalty prices per discussion with IMM
- Tariff filing Q4 2019 - Target Go Live Q4 2021



STR reduced production costs by about \$5 million in simulations

- In the Day Ahead market, the total production cost increase due to STR product is estimated to be less than 1%
 - Commitment changes due to the STR products are minimal and depend on network congestion
- MISO estimates an approximately \$5 million/year net production cost benefit by adding the STR product
 - Actual Annual benefits depend on RDT utilization
 - STR product could add sufficient market revenue to reduce uplift for some resources
- ~32% of estimated benefits could help reduce RSG in MISO South

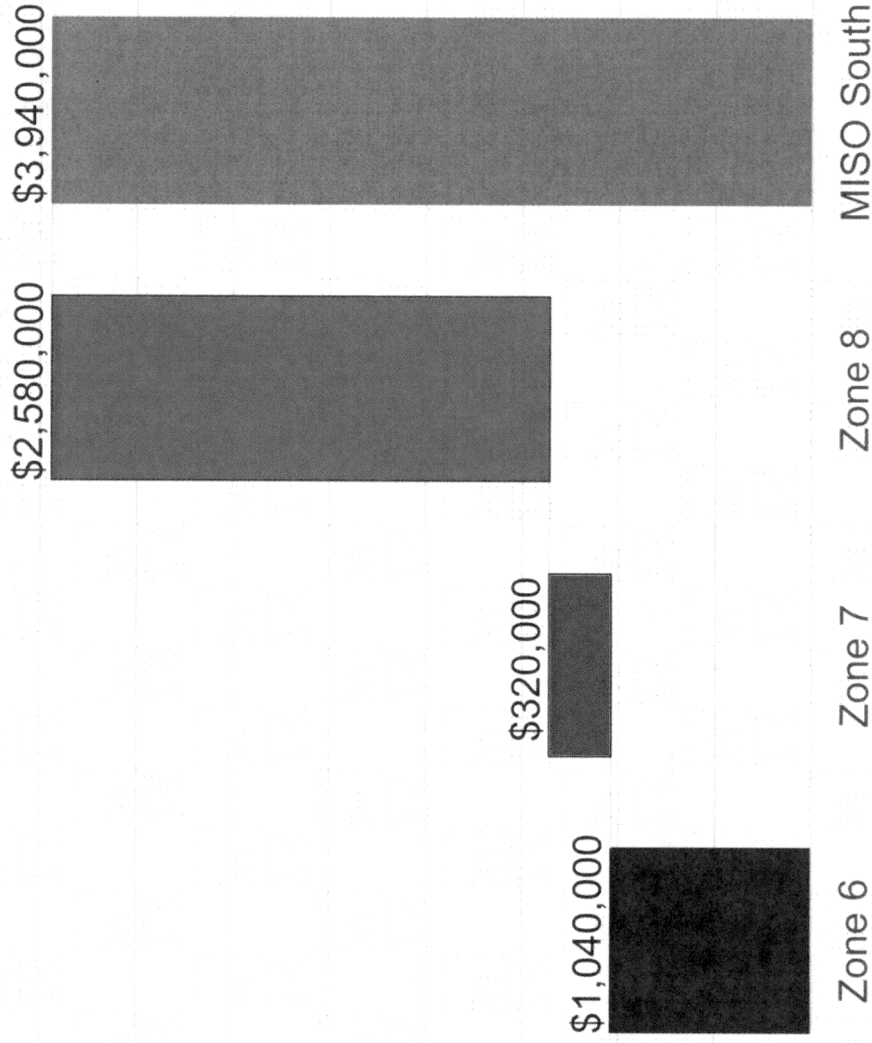
STR reduced annual RSG by \$1.6 million in simulations



- The estimated annual reduction in RSG for the MISO South Region is approximately \$1.6 million
- RSG reduction depends on resource participation and offers
- No commitments changes assumed in IRAC, FRAC, and LAC

\$4m annual expected revenue from STR clearing

- The estimated annual STR revenue for the MISO South Region is approximately \$4 million
- STR revenue will depend on actual STR offers
- In 83% of 864 simulation runs STR provided positive hourly revenue (\$379 average), with stdev. of \$296



Summary of Tariff modifications

- Module A
 - New and modified definitions
 - Module C
 - STR product and resource requirements
 - New offer parameters
 - STR deployment
 - Make-whole payments
 - Deployment charges
 - Module D
 - Mitigation thresholds
 - Module E-1
 - Must offer obligation for Capacity Resources
 - Schedule 27
 - RTORSGP and DAMAP calculations
 - Schedule 28
 - Market-wide STR demand curve
 - New Schedule 51
 - STR product description
 - Cost allocation
 - Schedules 29 & 29a*
 - Updates to optimization formulations
- *Posted 7/22

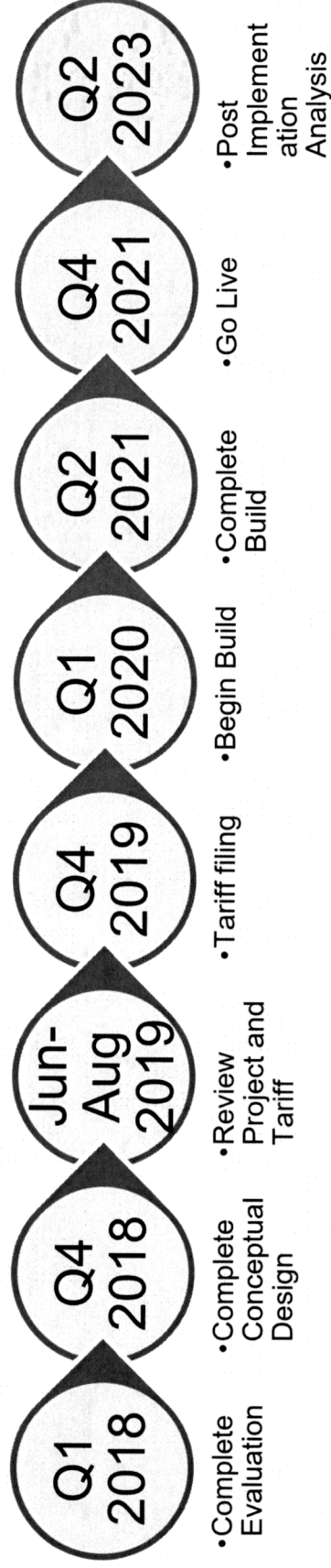
Stakeholder feedback helps improve tariff draft

- Suggested change to minimum runtime to 4 hrs
- Suggested \$50 threshold in Module D
- Oversights, formatting, consistency, etc.
- Additional reliability and cost/benefit analysis requested regarding Local areas

Market-wide demand curve proposed at \$100, evaluating right level for local and sub-regional

- Market-wide STR clearing will utilize a \$100 single step demand curve
- Local and sub-regional STR clearing will utilize related RPE penalty prices to value STR shortages
 - MISO proposed \$60 penalty prices for local and sub-regional
 - IMM suggested these levels are too low
- MISO re-evaluating higher penalty prices based on discussion with the IMM

Project Timeline



Questions and Comments

Bill Peters - bpeters@misoenergy.org

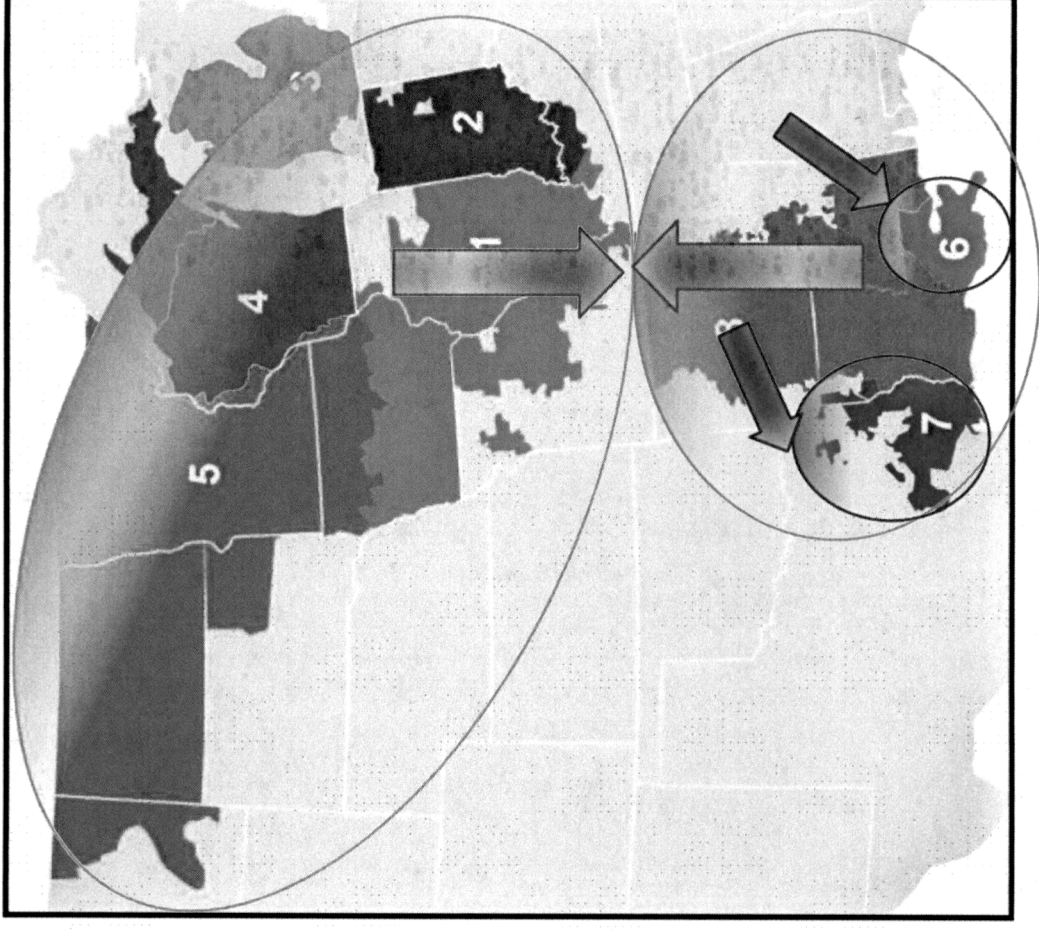
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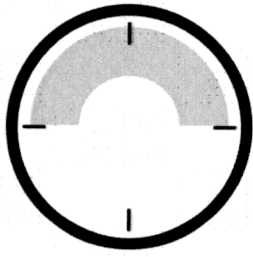
Appendix

Short Term Reserves (STR) meet three identified current and future needs

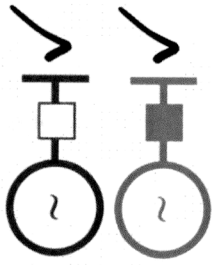
- **Market-Wide** requirements to ensure **flexibility** to meet load and supply volatility / variability as MISO's resource portfolio continues to evolve
- Managing **Regional Transfer Limits** between MISO North and MISO South within contractual limits
- **Local Areas / Reserve Zones** with limited availability of flexible resources, which are also constrained by transmission issues



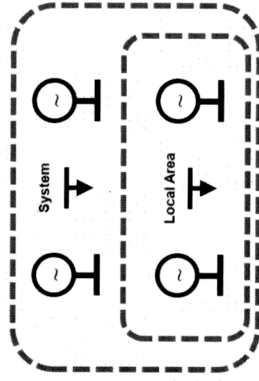
Four key STR features to meet needs and achieve intended benefits



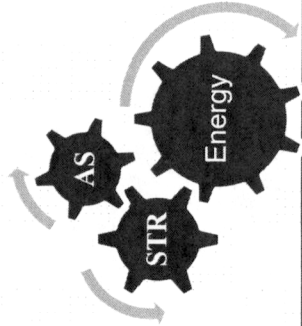
30 Minute ramp response time



Offline and online capacity eligibility



Locational requirement



Co-optimization with energy and ancillary services

References

Conceptual Design

<https://cdn.misoenergy.org/20190115%20Short%20Term%20Reserves%20Workshop%20Conceptual%20Design309809.pdf>

Workshop Materials

<https://www.misoenergy.org/events/short-term-reserves-workshop---january-15-2019/>

Evaluation Paper

<https://cdn.misoenergy.org/20180412%20MSC%20Item%2008%20STCR%20Evaluation%20Paper170646.pdf>

Market Roadmap – Short Term Capacity Reserves (MR010)

<https://www.misoenergy.org/stakeholder-engagement/issue-tracking/short-term-capacity-pricing-and-reliability-requirements/>

IMM 2017 State of the Market Report

<https://cdn.misoenergy.org/2017%20State%20of%20the%20Market%20Report242952.pdf>

Scarcity Pricing Evaluation

May 2021

Purpose Statement

MISO's emergency pricing framework and various scarcity pricing mechanisms are critical to efficient price formation in the Energy and Operating Reserve Markets. Under MISO's Integrated Roadmap and in response to price formation concerns voiced by the Independent Market Monitor and stakeholders, MISO is evaluating emergency and scarcity pricing within the larger Resource Availability and Need (RAN) program.

This evaluation paper is the second of two papers initiated in conjunction with MISO's RAN program for 2020 and 2021 and focuses on near-term enhancements to improve price formation during shortage conditions in the MISO footprint. The first evaluation paper focused on price formation during capacity emergencies¹ and was completed in September 2020.²

Executive Summary

MISO's Resource Availability and Need (RAN) program identified concerns that market prices during historical emergencies and shortages have not reflected the scarce conditions declared by MISO.³ MISO's Independent Market Monitor (IMM) has also made multiple recommendations to improve MISO's emergency and scarcity pricing mechanisms.⁴

Efficient and transparent prices encourage Market Participants to make efficient operational decisions and can support and inform investment decisions. This evaluation paper is the second of two evaluating price formation in MISO Energy and Operating Reserve Markets resulting from MISO's Resource Availability and Need initiative. This paper focuses on prices during shortage events and evaluates near-term, mid-term, and long-term enhancements to various scarcity pricing mechanisms. The enhancements are intended to better price and manage growing uncertainty, incent flexibility, visibility, and availability needs, and address issues identified during recent emergency events. The first evaluation paper focused on emergency pricing enhancements and was published in September 2020. In addition, MISO is exploring additional enhancements to further improve price formation during emergency and scarcity conditions on a longer time horizon.

This paper addresses the following scarcity and sub-regional pricing problem statements developed and discussed with stakeholders:

1. System-wide shortage conditions may not be appropriately reflected in prices for Energy and Operating Reserves

¹ For the purposes of this evaluation paper, an emergency generally refers to events requiring corrective action related to the shortage of capacity resources, wherein the transmission system remains intact to deliver energy from those resources.

² See MISO's September 2020 Emergency Pricing Evaluation Paper at <https://cdn.misoenergy.org/RAN%20Emergency%20Pricing%20Evaluation%20Paper%20Sept%202020475337.pdf>

³ See MISO's December 2019 RAN White Paper at [https://cdn.misoenergy.org/Aligning%20Resource%20Availability%20and%20Need%20\(RAN\)410587.pdf](https://cdn.misoenergy.org/Aligning%20Resource%20Availability%20and%20Need%20(RAN)410587.pdf)

⁴ See the IMM's State of the Market recommendations 2015-1, 2016-1 and 2018-1.

Scarcity Pricing - Evaluation

2. Sub-regional shortage conditions may not be appropriately reflected in prices for Energy and Operating Reserves

3. There are insufficient price signals to reflect upcoming, forecasted shortage and incentivize response across internal and external resources

In addition, the IMM has made two State of the Market Recommendations that pertain to scarcity pricing in MISO markets. Recommendation 2016-1 focuses on MISO's VOLL and Operating Reserve Demand Curve (ORDC) and 2015-1 includes a recommendation to suspend offline pricing in ELMP.⁵

In this evaluation paper, MISO assesses the following scarcity pricing enhancements whose objective is to address the above problem statements and recommendations:

- Evaluate calculation methods and available data for updating the **Value of Lost Load** with the objective of ensuring optimal market prices reflecting customer's willingness to pay to avoid curtailments.
- Implement a new **Operating Reserve Demand Curve** derived from Value of Lost Load and a revised Loss of Load Probability derived from more accurate aggregate uncertainties, to ensure the proper valuation of Operating Reserves during shortages.
- Implement enhanced **Short-Term Reserve** and **Up Ramp Capability** product requirements and demand curves based on aggregate net uncertainties to procure the reserve capacity needed to manage growing uncertainty in the energy markets.
- Improve **Regional Directional Transfer** management through enhanced demand curves based on aggregate net uncertainties.
- Improve regional clearing of Operating Reserves and Short-Term Reserves through enhanced constraint formulations to the **Reserve Procurement Enhancement (RPE)**, accounting for aggregate uncertainty.
- Improve shortage pricing by better reflecting the economics and availability of **Offline Fast Start Resources** in Enhanced Locational Marginal Prices (ELMP).
- Evaluate and modify, if necessary, the market **Price Cap** for Locational Marginal Prices (LMPs) and Market Clearing Prices (MCPs), currently set at VOLL (\$3,500) to align with other scarcity pricing changes.

Although not evaluated here, the applicability of Emergency Pricing during various emergency procedures, including administratively setting prices at VOLL when Load Shedding is directed by MISO will be address in a separate initiative.

⁵ 2019 State of the Market Report, pp. 117 and 119 respectively.

Scarcity Pricing - Evaluation

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1 Introduction

A key function of MISO's Energy and Operating Reserves markets is the formation of efficient and transparent prices that reflect the value of Energy and system needs. A guiding principle for MISO's markets is to incentivize Market Participants to make efficient operational and investment decisions in both the short- and long-run. Short-run market efficiency generally involves resources operating according to their marginal cost, and long-run market efficiency involves optimal investments in upgrading, maintaining and building new capacity. Because accurate market prices aid in maintaining reliability and maximizing market value, they are critical to MISO's value-creating mission.

Emergency and scarcity conditions can create challenges for price formation. Out-of-market actions taken during emergencies can lead to price suppression and the absence of price responsive demand requires MISO to rely on administrative mechanisms to set prices during shortages of Energy and Operating Reserves. To address these issues MISO has designed an emergency pricing framework and various scarcity pricing mechanisms.

These pricing mechanisms have proven effective in several instances, however, some results indicate further improvements are required. MISO's Independent Market Monitor (IMM) and stakeholders have expressed concerns that prices during recent emergencies and shortages do not reflect the scarce conditions declared by MISO. As accurate market prices are needed to properly incentivize resource availability and encourage market participants to take actions that would improve conditions, MISO has prioritized addressing these concerns within the Resource Availability and Need (RAN) Program.⁶

This evaluation paper is the second of two evaluating price formation in MISO Energy and Operating Reserve Markets in 2020-2021. This paper focuses on shortcomings in MISO's scarcity pricing mechanisms and recommends enhancements that can be implemented in the near-term. The first evaluation paper focused on emergency pricing enhancements and was completed in September 2020.⁷ MISO filed Tariff revisions to implement the enhancements with FERC on December 21, 2020.⁸

Following extreme weather and system events in August 2020 and February 2021, MISO performed an evaluation of pricing during capacity shortages and transmission emergencies to address concerns expressed by stakeholders. This evaluation will not be addressed in this paper.

1.1 Definitions and Scope of the Scarcity Pricing Evaluation

MISO defines shortages as instances when Energy and Operating Reserve requirements exceed available supply. Shortage pricing refers to the mechanisms designed to reflect the value of these

⁶ See MISO's December 2019 RAN White Paper at [https://cdn.misoenergy.org/Aligning%20Resource%20Availability%20and%20Need%20\(RAN\)410587.pdf](https://cdn.misoenergy.org/Aligning%20Resource%20Availability%20and%20Need%20(RAN)410587.pdf)

⁷ Evaluation posted on MISO's website at: <https://cdn.misoenergy.org/RAN%20Emergency%20Pricing%20Evaluation%20Paper%20Sept%202020475337.pdf>

⁸ <https://cdn.misoenergy.org/2020-12-21%20Docket%20No.%20ER21-700-000505508.pdf>