

Exhibit No. 211P

Exhibit No.:
Issue(s): *Advanced Metering
Infrastructure*
Witness: *Claire M Eubanks*
Sponsoring Party: *MoPSC Staff*
Type of Exhibit: *Direct Testimony*
Case Nos.: *ER-2022-0129 and
ER-2022-0130*
Date Testimony Prepared: *June 8, 2022*

MISSOURI PUBLIC SERVICE COMMISSION

INDUSTRY ANALYSIS DIVISION

ENGINEERING ANALYSIS DEPARTMENT

DIRECT TESTIMONY

OF

CLAIRE M. EUBANKS, P.E.

**Evergy Metro, Inc. d/b/a Evergy Missouri Metro
Case No. ER-2022-0129**

**Evergy Missouri West, Inc. d/b/a Evergy Missouri West
Case No. ER-2022-0130**

*Jefferson City, Missouri
June 2022*

**** Denotes Confidential Information ****

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ADVANCED METERING INFRASTRUCTURE.....3

DIRECT TESTIMONY

OF

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**Evergy Metro, Inc. d/b/a Evergy Missouri Metro
Case No. ER-2022-0129**

**Evergy Missouri West, Inc. d/b/a Evergy Missouri West
Case No. ER-2022-0130**

Q. Please state your name and business address.

A. My name is Claire M. Eubanks and my business address is Missouri Public Service Commission, P.O. Box 360, Jefferson City, Missouri, 65102.

Q. By whom are you employed and in what capacity?

A. I am employed by the Missouri Public Service Commission (“Commission”) as the Manager of the Engineering Analysis Department of the Industry Analysis Division.

Q. Please describe your educational background and work experience.

A. I received my Bachelor of Science degree in Environmental Engineering from the University of Missouri – Rolla, now referred to as Missouri University of Science and Technology, in May 2006. I am a licensed professional engineer in the states of Missouri and Arkansas. I began my career as a Project Engineer with Aquaterra Environmental Solutions, Inc., now SCS Aquaterra, an engineering consulting firm with locations across the Midwest. As a Project Engineer, I worked on a variety of engineering and environmental projects including landfill design, environmental sampling, construction oversight, and construction quality assurance. Over the course of my six years with Aquaterra I was promoted several times, eventually to Project Manager. As a Project Manager, I managed a variety of engineering projects primarily related to the design and environmental compliance of solid waste landfills,

1 including performing as the Certifying Engineer for projects related to landfill design,
2 construction plans and specifications, and construction quality assurance.

3 In November 2012, I began my employment with the Commission as a Utility
4 Regulatory Engineer I. My primary job duties were primarily related to the Renewable
5 Energy Standard, reviewing applications for Certificates of Convenience and Necessity,
6 construction audits, and the development and evaluation of in-service criteria. In January 2017,
7 I was promoted to Utility Regulatory Engineer II and in April of 2020, I was promoted to
8 my current position.

9 Q. Have you previously filed testimony before the Commission?

10 A. Yes, numerous times. Please refer to Schedule CME-d1, attached to this
11 Direct Testimony, for a list of cases in which I have filed testimony or recommendations.

12 Q. What knowledge, skills, experience, training, and education do you have in the
13 areas of which you are testifying as an expert witness?

14 A. I have received continuous training at in-house and outside seminars on
15 technical matters since I began my employment at the Commission. I have been employed by
16 this Commission as an Engineer for over 9 years, and have submitted testimony numerous times
17 before the Commission. I have also been responsible for the supervision of other Commission
18 employees in rate cases and other regulatory proceedings.

19 **EXECUTIVE SUMMARY**

20 Q. What is the purpose of your direct testimony?

21 A. The purpose of my direct testimony is to support Staff's recommended
22 disallowance related to the premature retirement of Advanced Metering Infrastructure ("AMI").

1 Q. Through this testimony, do you provide any recommendations for recommended
2 rate base levels to be reflected in the revenue requirement ordered in this case?

3 A. Yes.

4 **ADVANCED METERING INFRASTRUCTURE**

5 Q. What is Staff's recommendation to the Commission regarding the premature
6 retirement of AMI meters?

7 A. Based on the data Staff has received to date, Staff recommends that the
8 Commission resolve the premature retirement of AMI meters issue by basing its awarded
9 revenue requirement on a disallowance of (\$3,641,734) and (\$1,973,398) from Evergy
10 Missouri Metro's ("EMM") and Evergy Missouri West's ("EMW") FERC Account 370.2,
11 respectively. At this time, these adjustments are based only on the premature retirements that
12 occurred during the test year and update period.¹ Staff has requested more data from Evergy
13 as this issue has matured, and will incorporate the level of disallowance associated with
14 premature retirement that occurred before the test year as soon as the information to calculate
15 such adjustments is provided by Evergy.

16 Q. What is AMI?

17 A. AMI is an integrated system of smart meters, communication networks, and data
18 management systems that enables two-way communication between utilities and customers.²

19 Q. What is a smart meter?

¹ Staff initially requested a spreadsheet of all meter exchanges that occurred from June 30, 2020 through December 31, 2021, as it was unclear when Evergy began its AMI to AMI-SD meter exchanges.

² *Advanced Metering Infrastructure and Customer Systems*, U.S. Department of Energy, September 2016.

1 A. An electric smart meter, or an AMI meter, is a device that measures and
2 records electricity usage hourly or sub-hourly. Depending on the manufacturer and model
3 of the AMI meter, other capabilities may be available such as monitoring the on/off
4 status of electric service, measuring voltage, and remotely disconnecting and reconnecting
5 electric service.

6 Q. What are the capabilities of the AMI meters used by Evergy?

7 A. Evergy has installed AMI meters that have different capabilities. Evergy's
8 residential³ AMI meters are ** [REDACTED]
9 [REDACTED] ** The major difference between the ** [REDACTED]
10 [REDACTED] ** meters have
11 the capability to remotely disconnect and reconnect electric service. For the remaining portion
12 of my testimony, I will refer to these meters as AMI-SD meters. Schedule CME-d3 includes an
13 overview of the ** [REDACTED] **. **

14 Q. When did Evergy initially deploy AMI meters?

15 A. EMM and EMW initially replaced AMR⁴ meters with AMI meters in portions
16 of its service territories from 2014 to 2016.⁵ As of September of 2018, EMM's AMI meter
17 penetration was approximately 98% and EMW's was somewhat less than 60%.⁶ Customers in
18 the remaining portions of the service territories received either AMI or AMI-SD meters between
19 2019 and 2020. As of January 2022, EMM and EMW have 1,225 Non-AMI meters remaining.⁷

³ Evergy's commercial and industrial AMI meters are ** [REDACTED] **

⁴ Automated meter reading is a metering system that allows a utility representative to read the meter device from a handheld device or vehicle at a distance, such as the sidewalk, rather than having a manual meter reader record the number off the display screen.

⁵ The Smart Grid Demonstration project included installation of AMI meters in 2010 and 2011, approximately 2.11% of its meter population (Surrebuttal Testimony of Geoff Marke, Schedule GM-6, ER-2018-0145).

⁶ Surrebuttal Testimony of Darrin Ives in ER-2018-0145 and ER-2018-0146, page 21 lines 10-11.

⁷ Based on data provide in response to Staff Data Request 2s in EE-2022-0071 (included in Schedule CME-d2).

1 Q. What is the design life of the AMI meters installed in the 2014 to 2016
2 timeframe?

3 A. The ** [REDACTED] ** meters have a design life of 20+ years.

4 Q. Is it just and reasonable to retire meters prior to the end of their design life?

5 A. Not without justification.

6 Q. During the test year and update period how many meters did Evergy exchange?

7 A. Over the test year and update period, EMM exchanged 49,647 meters and
8 EMW exchanged 22,235 meters. Of the exchanged meters, 99% of meters exchanged were
9 less than 7 years old.

10 Q. What are the primary reasons provided by Evergy for a meter exchange to occur?

11 A. Evergy provided a spreadsheet of all meter exchanges that occurred over the test
12 year.⁸ The spreadsheet included field notes associated with the individual meter exchanges.
13 Staff grouped the field notes into categories. Based on this grouping, in descending order of
14 most common to least, the top reasons for meter exchanges during the test year include:

- 15 • To exchange an AMI meter with an AMI-SD meter (i.e. service
16 disconnect capable meter)
- 17 • To exchange an AMI meter with an AMI-SD meter due to customer
18 arrears
- 19 • Communication issues
- 20 • Unknown reasons
- 21 • Net meter installations

22 Q. Are there other reasons for meter exchanges?

⁸ Response to Staff Data Request 283 in ER-2022-0129 and Response to Staff Data Request 296 in ER-2022-0130.

1 A. Yes, there were instances of meter exchanges that occurred due to damaged or
2 failing meters, access issues, and customer requested exchanges (such as the AMI-opt out
3 program).

4 Q. Is Staff recommending a disallowance of all meter replacements that involved
5 meters prior to the end of design service life (20+ years)?

6 A. No. Staff is recommending a disallowance of meter exchanges that occurred for
7 the following reasons:

- 8 • To exchange an AMI meter with an AMI-SD meter. Including the
9 instances where Evergy noted the customer arrears. As Staff is
10 concerned that customers in arrears are being targeted first for
11 exchanging an AMI meter with an AMI-SD meter.
- 12 • Unknown reasons

13 Q. Why is Staff recommended a disallowance for meter replacements that occurred
14 for the reasons listed above?

15 A. The vast majority (99%) of the exchanged AMI meters are less than 7 years old.
16 While it is reasonable and necessary to replace a meter that is damaged or failing, it is not
17 reasonable to replace a meter solely to gain a new a new capability or when there is seemingly
18 no reason.

19 Q. Is Evergy replacing meters when on-site for other reasons?

20 A. Yes, in some instances. However, Evergy is also replacing meters in batches as
21 workload allows.

22 Q. Does Evergy have a plan for switching out all AMI meters by a date certain?

1 A. Evergy intends to complete the replacement of AMI meters with AMI-SD
2 meters by the end of 2024.

3 Q. Has the Commission recently ordered a disallowance related to premature
4 retirement of meters?

5 A. Yes. In a recent Spire case, GR-2021-0108, the Commission could not conclude
6 that replacement of meters that were less than 10 years old was just and reasonable in all
7 instances and therefore disallowed recovery of 26% of the meter replacements. The
8 Commission found instances where certain meter replacements were appropriate, for example,
9 when an existing meter needs replacement.⁹ Staff's recommendation in this case is consistent
10 with the Commission's order in the previous Spire rate case.

11 Q. Are the AMI meters with service disconnect capability more costly than
12 AMI meters without that capability?

13 A. Yes. ** [REDACTED]
14 [REDACTED] ** For this
15 reason, Staff does not oppose the installation of AMI-SD on an as-needed basis. However, in
16 many instances, Evergy is replacing AMI meters that still have a significant portion of
17 remaining life.

18 **CONCLUSION**

19 Q. What is the level and derivation of Staff's recommended disallowance related to
20 imprudent meter retirements?

⁹ Amended Report and Order GR-2021-0108, page 46-48.

1 A. Staff multiplied the number of meters per grouping described above by the cost
2 per meter (** [REDACTED] **) per meter¹⁰ depending on meter type). This resulted in a
3 disallowance of (\$3,641,734) and (\$1,973,398) from EMM's and EMW's FERC account
4 370.2, respectively. Schedule CME-d4 includes a summary of the number of meters per
5 grouping.

6 Q. Does Staff have concerns with Evergy's continuing plans to exchange
7 AMI meters?

8 A. Staff recommends that Evergy discontinue its practice of premature meter
9 replacements. However, (** [REDACTED]

10 [REDACTED]
11 [REDACTED]
12 [REDACTED]
13 [REDACTED]¹¹ **) As of January 2022, EMM and EMW have only 1,225 Non-AMI meters.¹²
14 This apparent disparity between the number of meters (** [REDACTED] **)
15 and the remaining number of non-AMI meters left to replace is consistent with an intent by
16 Evergy to continue or expand its practice of premature meter retirements.

17 Q. Does that conclude your direct testimony?

18 A. Yes it does.

¹⁰ Cost per meter from the direct work papers of Marisol Miller. "CONFIDENTIAL_Evergy (MO West) Allocators Workpapers 202106 - Direct Filing" and "Evergy (MO Metro) Allocators Workpapers 202106 - Direct Filing"

¹¹ Staff Data Request 287.1 in ER-2022-0129 and Staff Data Request 298.1 in ER-2022-0130 (included in Schedule CME-d2).

¹² Based on data provide in response to Staff Data Request 2s in EE-2022-0071 (included in Schedule CME-d2).

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Evergy Metro, Inc. d/b/a Evergy)
Missouri Metro's Request for Authority to) Case No. ER-2022-0129
Implement a General Rate Increase for Electric)
Service)

In the Matter of Evergy Missouri West, Inc.)
d/b/a Evergy Missouri West's Request for) Case No. ER-2022-0130
Authority to Implement a General Rate)
Increase for Electric Service)

AFFIDAVIT OF CLAIRE M. EUBANKS, PE

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

COMES NOW CLAIRE M. EUBANKS, PE and on her oath declares that she is of sound mind and lawful age; that she contributed to the foregoing *Direct Testimony of Claire M. Eubanks, PE*; and that the same is true and correct according to her best knowledge and belief.

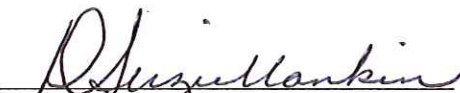
Further the Affiant sayeth not.


CLAIRE M. EUBANKS, PE

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 6th day of June 2022.




Notary Public

CLAIRE M. EUBANKS, PE

PRESENT POSITION:

I am the Manager of the Engineering Analysis Department, Industry Analysis Division of the Missouri Public Service Commission.

EDUCATIONAL BACKGROUND AND WORK EXPERIENCE:

I received my Bachelor of Science degree in Environmental Engineering from the University of Missouri – Rolla, now Missouri University of Science and Technology, in May 2006. I am a licensed professional engineer in the states of Missouri and Arkansas. Immediately after graduating from UMR, I began my career with Aquaterra Environmental Solutions, Inc., now SCS Aquaterra, an engineering consulting firm based in Overland Park, Kansas. During my time with Aquaterra, I worked on various engineering projects related to the design, construction oversight, and environmental compliance of solid waste landfills. I began my employment with the Commission in November 2012 and was promoted to my current position in April 2020.

CASE HISTORY:

Case Number	Utility	Type	Issue
EA-2012-0281	Ameren	Rebuttal	Certificate of Convenience and Necessity
EC-2013-0379 EC-2013-0380	KCP&L KCP&L GMO	Rebuttal	RES Compliance
EO-2013-0458	Empire	Memorandum	RES Compliance Plan & Report
EO-2013-0462	Ameren	Memorandum	RES Compliance Report
EO-2013-0503	Ameren	Memorandum	RES Compliance Plan
EO-2013-0504	KCPL	Memorandum	RES Compliance Plan & Report
EO-2013-0505	GMO	Memorandum	RES Compliance Plan & Report
ET-2014-0059	KCP&L GMO	Rebuttal	RES Retail Rate Impact
ET-2014-0071	KCP&L	Rebuttal	RES Retail Rate Impact
ET-2014-0085	Ameren	Rebuttal	RES Retail Rate Impact
ER-2014-0258	Ameren	Cost of Service Report, Surrebuttal	RES, In-Service

Case Number	Utility	Type	Issue
EO-2014-0151	KCP&L GMO	Memorandum	RESRAM
EO-2014-0357	Electric	Memorandum	Solar Rebates Payments
EO-2014-0287	KCPL	Memorandum	RES Compliance Plan
EO-2014-0288	GMO	Memorandum	RES Compliance Plan
EO-2014-0289	KCPL	Memorandum	RES Compliance Report
EO-2014-0290	GMO	Memorandum	RES Compliance Plan
ER-2014-0370	KCP&L	Cost of Service Report	RES
EX-2014-0352	N/A	Live Comments	RES rulemaking
EC-2015-0155	GMO	Memorandum	Solar Rebate Complaint
EO-2015-0260	Empire	Memorandum	RES Compliance Plan & Report
EO-2015-0263	KCPL	Memorandum	RES Compliance Report
EO-2015-0264	GMO	Memorandum	RES Compliance Report
EO-2015-0265	KCPL	Memorandum	RES Compliance Plan
EO-2015-0266	GMO	Memorandum	RES Compliance Plan
EO-2015-0267	Ameren	Memorandum	RES Compliance Plan & Report
EO-2015-0252	GMO	Staff Report	Integrated Resource Plan – Renewable Energy Standard
EO-2015-0254	KCPL	Staff Report	Integrated Resource Plan – Renewable Energy Standard
EA-2015-0256	KCP&L GMO	Live Testimony	Greenwood Solar CCN
EO-2015-0279	Empire	Memorandum	RES Compliance Plan & Report
ET-2016-0185	KCP&L	Memorandum	Solar Rebate Tariff Suspension
EO-2016-0280	KCPL	Memorandum	RES Compliance Report
EO-2016-0281	GMO	Memorandum	RES Compliance Report
EO-2016-0282	KCPL	Memorandum	RES Compliance Plan
EO-2016-0283	GMO	Memorandum	RES Compliance Plan
EO-2016-0284	Ameren	Memorandum	RES Compliance Plan & Report
ER-2016-0023	Empire	Report	RES
ER-2016-0156	KCP&L GMO	Rebuttal	RESRAM Prudence Review

Case Number	Utility	Type	Issue
EA-2016-0208	Ameren	Rebuttal	Certificate of Convenience and Necessity
ER-2016-0285	KCPL	Cost of Service Report	In-Service, Greenwood Solar
ER-2016-0179	Ameren	Rebuttal	In-Service, Labadie Landfill
EW-2017-0245	Electric	Report	Working Case on Emerging Issues in Utility Regulation
EO-2017-0268	Ameren	Memorandum	RES Compliance Plan & Report
EO-2017-0269	KCPL	Memorandum	RES Compliance Report
EO-2017-0271	KCPL	Memorandum	RES Compliance Plan
GR-2017-0215 & GR-2017-0216	Spire	Rebuttal & Surrebuttal	CHP for Critical Infrastructure
GR-2018-0013	Liberty Utilities (Midstates Natural Gas)	Rebuttal	CHP Outreach Initiative for Critical Infrastructure Resiliency
EO-2018-0287	Ameren	Memorandum	RES Compliance Plan & Report
EO-2018-0288	KCPL	Memorandum	RES Compliance Report
EO-2018-0290	KCPL	Memorandum	RES Compliance Plan
EA-2016-0207	Ameren	Memorandum	Certificate of Convenience and Necessity
ER-2018-0146	GMO	Cost of Service Report	RESRAM Prudence Review
ER-2018-0145 ER-2018-0146	KCPL GMO	Class Cost of Service Report, Rebuttal	Solar Subscription Pilot Rider, Standby Service Rider
EA-2018-0202	Ameren	Staff Report	Certificate of Convenience and Necessity
EE-2019-0076	Ameren	Memorandum	Variance Request – Reliability Reporting
EA-2019-0021	Ameren	Staff Report	Certificate of Convenience and Necessity
EA-2019-0010	Empire	Staff Report	Certificate of Convenience and Necessity
EX-2019-0050	N/A	Live Comments	Renewable Energy Standard

Case Number	Utility	Type	Issue
EO-2019-0315	KCPL	Memorandum in Response to Commission Questions	Renewable Energy Standard
EO-2019-0316	GMO	Memorandum	Renewable Energy Standard
EO-2019-0317	KCPL	Memorandum in Response to Commission Questions	Renewable Energy Standard
EO-2019-0318	GMO	Memorandum	Renewable Energy Standard
ER-2019-0335	Ameren	Cost of Service Report	Renewable Energy Standard, In-Service Criteria
EA-2019-0371	Ameren	Staff Report	Certificate of Convenience and Necessity
EO-2020-0329	Evergy Missouri Metro	Memorandum	Renewable Energy Standard
EO-2020-0330	Evergy Missouri West	Memorandum	Renewable Energy Standard
EE-2021-0237	Evergy Missouri Metro	Memorandum	Cogeneration Tariff
EE-2021-0238	Evergy Missouri West	Memorandum	Cogeneration Tariff
EE-2021-0180	Ameren Missouri	Memorandum	Electric Meter Variance
ET-2021-0151 and 0269	Evergy	Memorandum, Rebuttal Report	Transportation Electrification
AO-2021-0264	Various	Staff Report	February 2021 Cold Weather Event
EW-2021-0104	n/a	Staff Report	RTO Membership
EW-2021-0077	n/a	Staff Report	FERC Order 2222
EO-2021-0339	Evergy Missouri West	Memorandum	Territorial Agreement
GR-2021-0108	Spire	Rebuttal	Automated Meter Reading Opt-out Tariff
EA-2021-0087	ATXI	Rebuttal Report	Certificate of Convenience and Necessity
ER-2021-0240	Ameren Missouri	Cost of Service Report Rebuttal	In-Service Bat Mitigation

Case Number	Utility	Type	Issue
ER-2021-0312	Empire	Cost of Service Report	Construction Audit – Engineering Review, In-service
EO-2022-0061	Evergy Missouri West	Surrebuttal	Special Rate/ Renewable Energy Standard
EA-2022-0099	ATXI	Rebuttal	Certificate of Convenience and Necessity

Evergy MO Metro and MO West
Case Name: 2021 Knock and Collect Waiver
Case Number: EE-2022-0071

Requestor Bernsen Deborah -
Response Provided March 24, 2022

Question:0002S

SUPPLEMENT

Please provide an update as of January 2022 on all the meter models used throughout EMM and EMW service territories. Include the name of the model(s) used in EMM and EMW territories, provide the total number of each meter type in EMM and EMW territories, state which meters are AMI or non-AMI with a breakdown of how many are AMI with and without service disconnect capabilities. Please provide the date AMI meter deployment began and when it was complete for EMW and EMM. DR requested by Debbie Bernsen (debbie.bernsen@psc.mo.gov)

RESPONSE: (do not edit or delete this line or anything above this)

Confidentiality: PUBLIC

Statement: This response is Public. No Confidential Statement is needed.

Response:

erritory	AMI/Non AMI	Manufacturer	Meter Model	Switch Disconnect	Meter Count
EMM	AMI	Landis + Gyr	FOCUS AL	No	117,669
EMM	AMI	Landis + Gyr	FOCUS AXR	No	2,095
EMM	AMI	Landis + Gyr	FOCUS AXR-SD	Yes	177,728
EMM	AMI	Landis + Gyr	FOCUS RXR	No	5,960
EMM	AMI	Landis + Gyr	RXR S4E	No	10,319
EMM	AMI	Landis + Gyr	RXR S4X	No	459
EMM	NON-AMI	Unknown	Unknown	No	428
EMM	NON-AMI	Landis + Gyr	FOCUS AL	No	5
EMM	NON-AMI	Unknown	Unknown	No	50
EMW	AMI	Landis + Gyr	FOCUS AL	No	126,189
EMW	AMI	Landis + Gyr	FOCUS AXR	No	9,394
EMW	AMI	Landis + Gyr	FOCUS AXRE-SD	Yes	1
EMW	AMI	Landis + Gyr	FOCUS AXR-SD	Yes	187,974
EMW	AMI	Landis + Gyr	FOCUS RXR	No	8,543
EMW	AMI	Landis + Gyr	RXR S4E	No	5,997
EMW	AMI	Landis + Gyr	RXR S4X	No	2,811
EMW	NON-AMI	Unknown	Unknown	No	270
EMW	NON-AMI	Landis + Gyr	FOCUS AL	No	21
EMW	NON-AMI	Landis + Gyr	FOCUS AX	No	1
EMW	NON-AMI	Unknown	Unknown	No	450

The rollout of AMI for KC Metro EMM meters began in 2014Q1 and was substantially completed in 2015Q4. KC Metro EMW began in 2015Q4 and substantially completed in 2016Q4. The deployment of the remainder of both EMM and EMW began in 2019Q1 and completed in 2020Q4.

Information provided by: Corey Paczosa

Attachment(s):



Missouri Verification:

I have read the Information Request and answer thereto and find answer to be true, accurate, full and complete, and contain no material misrepresentations or omissions to the best of my knowledge and belief; and I will disclose to the Commission Staff any matter subsequently discovered which affects the accuracy or completeness of the answer(s) to this Information Request(s).

Signature /s/ *Brad Lutz*
Director Regulatory Affairs

mpsc_20220314-f.1-answer-0295

HAS BEEN DEEMED

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IN ITS ENTIRETY

mpsc_20220314-f.1-answer-0282

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SCHEDULE CME-d4

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