

# Exhibit No. 185

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Ameren Missouri's  
Response to MPSC Data Request  
ER-2022-0337

In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariffs to Adjust Its  
Revenues for Electric Service

No.: MPSC 0439

: DR 209.1s states in part “Vintage, location, voltage, etc. are not a part of the asset information collected (which is by design because not collecting such information is the essence of and a key benefit of using mass property accounting). At the end of the month, the work management system sends that information to the PowerPlan system. The information sent to PowerPlan includes the retirement unit (40’ pole) and the quantities retired (2). PowerPlan then automatically uses the Iowa survivor curve for the account where the cost of 40’ poles are recorded to determine what quantities within any given vintage year it will select for retirement. That vintage year will not, except by pure coincidence, match the vintage of the actual asset retired in the field.” The draft Evaluation Methodology contained in Ryan Arnold’s Direct Testimony in part relies on the Age/Asset Vintage as a criterion to support justification for distribution system investments. (1) Explain, in detail, the Age/Asset vintage data Ameren Missouri has available to quantify and document the Age/Asset vintage for distribution system assets for each category separately: system hardening, substations, underground cable upgrades, revitalization of the Downtown St. Louis underground network, grid resiliency, and smart grid technology. (2) Please reconcile the response to DR 209.1s and the Draft evaluation methodology presented in Ryan Arnold’s Direct Testimony. Specifically, DR requested by Claire Eubanks ([Claire.eubanks@psc.mo.gov](mailto:Claire.eubanks@psc.mo.gov) <<mailto:Claire.eubanks@psc.mo.gov>>)

**RESPONSE: (Do not edit or delete this line or anything above this. Start typing your response right BELOW Date.)**

**Prepared By: Mitch Lansford**

**Title: Director Regulatory Accounting**

**Date: December 14, 2022**

To clarify, the quote from DR 209.1s1 referred to in this Data Request relates to the type of information that is determined to process a retirement for categories of mass property, as it relates to the Company's property accounting records. Other categories of information or data points are determined for other purposes, as I will describe below.

The Company maintains accounting records for all of its investments and those accounting records contain life characteristics as required under the FERC USoA. A copy of these accounting records was provided in the response to Data Request MPSC 0125.1. Separately, the Company maintains operational records for its energy delivery

assets which were provided in response to Data Request MPSC 0440 and which document the vintage of those assets. No other age/asset vintage data exists for these assets.

For our accounting records and as further explained in the Company's response to Data Request MPSC 0209.3, the life characteristics of remaining investments accounted for as categories of mass property are influenced by the statistical analysis performed as part of depreciation studies. Meaning, the Commission ordered depreciation rates and the survivor curves underlying those depreciation rates determine the vintage of asset to be removed from the Company's accounting records upon retirement. Operational records can be much more flexible or dynamic. For comparison, the Company could replace a specific pole we know is only 10 years old for a number of reasons (e.g., damaged by an accident or storm) and rather than removing from the accounting records a 10-year-old pole, the applicable survivor curve may indicate that it is statistically more likely that the pole would have been older, say 70 years old. Our accounting records would be updated to reduce the number of 70-year-old poles by 1 as a result of this hypothetical retirement. In contrast, in the example just described the Company's operational records include a location of the pole that was removed and any available historical data on that specific pole, which then allows those operational records to be updated for that specific pole's retirement at that time.

Specific details for each requested category are as follows:

#### **System Hardening**

We identified our sub-transmission system as rapidly aging through our own observations and operational records. Those operational records were developed over time through updates made by the individuals completing the work at the time the work was completed and subsequent pole inspections. It is not possible to isolate the sub-transmission system from the entirety of the distribution system within the Company's accounting records as there are investments in sub-transmission assets but also in other distribution system assets in the various FERC accounts in which distribution system investment is recorded. Therefore, no comparison of the life characteristics between operational and accounting records can be performed.

#### **Substations**

Substations are retirement unit (or location) property, as opposed to mass property, so it is possible to compare life characteristics from our accounting records to other records in certain instances.

We have operational data available for oil and air circuit breakers and power transformers. However, with respect to circuit breakers, it is not possible to isolate oil and air circuit breakers from vacuum circuit breakers within the Company's accounting records (they are simply recorded as investment in breakers generally) and, therefore, no comparison of the life characteristics between operational and accounting records can be performed.

With respect to transformers, although the level of disaggregation among the various components of our substations and naming conventions can differ between sources, the Company compared the life characteristics of a sample of transformers between our accounting records and the operational records provided in response to Data Request MPSC 0440. The results are as follows:

Operational Records MPSC 0440						Accounting Records MPSC 0125.1			
#	Substation/Parent Line	Age	Age Range	Manufacture Date	Customer Count on Assets over 50	Asset Type	Asset ID	In Service Year	Difference
1	AFFTON	58	55-59 Years	04/01/1964	4002	Substation Transformer	969547	1963	1
2	AFFTON	58	55-59 Years	04/01/1964		Substation Transformer	969547	1963	1
3	ALDINE	48	45-49 Years	10/01/1974		Substation Transformer	967497	1974	-
4	ALDINE	66	65-69 Years	10/01/1956	3195	Substation Transformer	967496	1956	-
5	ALLEN-382	26	25-29 Years	03/01/1996		Substation Transformer	985565	1997	(1)
6	ANNADA	60	60-64 Years	01/25/1962	775	Substation Transformer	1136220	1966	(4)
7	ANNISTON	6	5-9 Years	09/01/2016		Substation Transformer	37769306	2016	-
8	ARROWHEAD	34	30-34 Years	01/01/1988		Substation Transformer	1141817	1999	(11)
9	ASHBY	30	30-34 Years	01/01/1992		Substation Transformer	963498	1992	-
10	AUBON PAIN	26	25-29 Years	01/01/1996		Substation Transformer	1141580	1996	-
11	AUBURN-691	56	55-59 Years	02/01/1966	1643	Substation Transformer	5882451	1966	-
12	AUDRAIN 12 KV	50	50-54 Years	11/01/1972	1661	Substation Transformer	1134815	1972	-
13	AUDRAIN 34 KV	9	5-9 Years	09/01/2013		Substation Transformer	32907508	2014	(1)
14	AUDUBON	12	10-14 Years	02/21/2010		Substation Transformer	24377931	2010	-
15	BAKER	52	50-54 Years	01/01/1970	456	Substation Transformer	1131987	1970	-
16	BAKER	52	50-54 Years	01/01/1970		Substation Transformer	1131987	1970	-
17	BAKER	52	50-54 Years	01/01/1970		Substation Transformer	1131987	1970	-
18	BALLAS	3	0-4 Years	06/30/2019		Substation Transformer	42329012	2019	-
19	BALLAS	3	0-4 Years	06/30/2019		Substation Transformer	42329012	2019	-
20	BALLAS	3	0-4 Years	03/01/2019		Substation Transformer	42329012	2019	-
21	BALTIMORE	9	5-9 Years	01/01/2013		Substation Transformer	31947968	2013	-
22	BARING	71	70-74 Years	01/01/1951		Substation Transformer	1132153	1952	(1)
23	BARING	71	70-74 Years	01/01/1951		Substation Transformer	1132153	1952	(1)
24	BARING	71	70-74 Years	01/01/1951	213	Substation Transformer	1132153	1952	(1)
25	BARTON	42	40-44 Years	11/01/1980		Substation Transformer	968792	1981	(1)

This sample clearly shows a consensus between the two sources. Minor differences in the life characteristics can be explained by the difference between a manufacture date and an in-service date of the project. For larger differences they may well further be explained by the installation of a capital spare at those sites. The same operational recordkeeping process that produced the transformer records also produced the circuit breaker records.

### Underground Cable Upgrades

The Company analyzed its standards and changes in standards over time to compare to operational data indicating the type of cable installed by underground circuit or portion of circuit. As one would expect, the quality of operational records collected more recently is more robust than what was collected many decades ago when these cables were first installed. For this reason, the Company identified the mileage associated with underground residential distribution cable (URD) as ~7,450+ and utilized a range of potential cable ages in its presentation referred to in Data Request MPSC 0440. A summary of our operational records is as follows:

URD Cable Vintage	Mileage	Cable Age (Years)	Expected Life (Years)	Lateral Failures per Mile
First Generation & Older	~850	45+	40	2.42
Second Generation	~1,600	38 – 45	40	1.70
Third Generation	~700	32 – 38	40	1.22
Fourth Generation	~4,300	Present - 32	40	0.88

  

Obsolete Feeder Exit Cable Type	Mileage	Cable Age (Years)	Expected Life (Years)	Feeder Outages Due to Lead Cable
Lead Cable (PILC)	~450+	32 – 101	60	~60 outages per year

Our accounting records do not capture the generation of cable, but below is a summary from our accounting records based on similar age groupings and subject to the limitations previously discussed for categories of mass property which, as earlier noted, do not distinguish between different kinds of cable.

Mileage	Cable Age (Years)
1,406	45+
833	38 - 45
855	32 - 38
5,854	32 or Less

Note that it would not be possible to plan projects based on this accounting data as no location data is maintained for categories of mass property.

### **Underground Revitalization**

Available age or asset vintage data has been previously discussed in the underground cable upgrades category. The same limitations that prevent making a meaningful comparison between the operational data and the accounting data due to mass property accounting apply to this category.

### **Grid Resiliency**

Available age or asset vintage data has been previously discussed in the system hardening, substations, and underground cable upgrades categories. The same limitations that prevent making a meaningful comparison between the operational data and the accounting data due to mass property accounting apply to this category.

### **Smart Grid**

No age or asset vintage data is applicable to this category.

JOB_NUMBER	TAG_NUMBER	FEEDER_NAME	is_pole_reject	is_facility_reject	inspection_date	age_at_inspection	age_bin	large_age_bin
201410239	182156	198002	FALSE	TRUE	10/25/2014	40	31-40 years	30-45 years
201410239	182159	198002	FALSE	FALSE	10/25/2014	48	41-50 years	45 or more years
201410239	362285	198002	FALSE	FALSE	10/25/2014	21	21-30 years	0-30 years
201410239	395139	198002	FALSE	FALSE	10/25/2014	48	41-50 years	45 or more years
201410239	395140	198002	FALSE	TRUE	10/25/2014	48	41-50 years	45 or more years
201410239	395142	198002	FALSE	TRUE	10/25/2014	28	21-30 years	0-30 years
201410239	395143	198002	FALSE	FALSE	10/25/2014	47	41-50 years	45 or more years
201410239	395144	198002	FALSE	FALSE	10/25/2014	49	41-50 years	45 or more years
201410239	395146	198002	FALSE	TRUE	10/25/2014	54	51-60 years	45 or more years
201410239	395148	198002	FALSE	FALSE	10/25/2014	47	41-50 years	45 or more years
201410239	395149	198002	FALSE	TRUE	10/25/2014	47	41-50 years	45 or more years
201410239	395150	198002	FALSE	FALSE	10/25/2014	54	51-60 years	45 or more years
201410239	395152	198002	FALSE	TRUE	10/25/2014	54	51-60 years	45 or more years
201410239	395153	198002	FALSE	TRUE	10/25/2014	40	31-40 years	30-45 years
201410884	2015055	922042	FALSE	FALSE	3/31/2014	37	31-40 years	30-45 years
201410884	2015066	922042	FALSE	FALSE	3/31/2014	35	31-40 years	30-45 years
201410884	2015067	922042	FALSE	FALSE	3/31/2014	37	31-40 years	30-45 years
201410884	2015075	922042	FALSE	FALSE	3/31/2014	38	31-40 years	30-45 years
201410884	2015085	922042	FALSE	FALSE	3/31/2014	37	31-40 years	30-45 years
201410884	2019729	922042	FALSE	FALSE	3/31/2014	40	31-40 years	30-45 years
201410884	2019731	922042	FALSE	TRUE	3/31/2014	40	31-40 years	30-45 years
201410884	2019887	922042	FALSE	FALSE	3/31/2014	30	21-30 years	0-30 years
201410884	2019888	922042	FALSE	FALSE	3/31/2014	38	31-40 years	30-45 years
201410884	2019897	922042	FALSE	FALSE	3/31/2014	36	31-40 years	30-45 years
201410884	2099601	922042	FALSE	FALSE	3/31/2014	37	31-40 years	30-45 years
201410884	2780012	922042	FALSE	FALSE	3/31/2014	15	11-20 years	0-30 years
201410884	3769902	922042	FALSE	FALSE	3/31/2014	4	0-10 years	0-30 years
201411069	3660309	935042	FALSE	FALSE	11/24/2014	3	0-10 years	0-30 years
201411069	3711929	935042	FALSE	FALSE	11/12/2014	4	0-10 years	0-30 years
201411069	3711978	935042	FALSE	FALSE	11/12/2014	3	0-10 years	0-30 years
201411069	3711980	935042	FALSE	FALSE	11/12/2014	3	0-10 years	0-30 years
201411069	3721918	935042	FALSE	FALSE	11/12/2014	4	0-10 years	0-30 years
201411069	3721919	935042	FALSE	FALSE	11/12/2014	4	0-10 years	0-30 years
201411069	3721922	935042	FALSE	FALSE	11/12/2014	4	0-10 years	0-30 years
201411069	3721923	935042	FALSE	FALSE	11/12/2014	4	0-10 years	0-30 years
201411069	3721924	935042	FALSE	FALSE	11/12/2014	4	0-10 years	0-30 years
201411069	3721925	935042	FALSE	FALSE	11/12/2014	4	0-10 years	0-30 years
201411069	3721927	935042	FALSE	FALSE	11/12/2014	4	0-10 years	0-30 years
201411069	3721928	935042	FALSE	TRUE	11/12/2014	4	0-10 years	0-30 years
201411069	3721930	935042	FALSE	TRUE	11/12/2014	4	0-10 years	0-30 years

MSPC 6439 slide 01-001 pole data

