BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO

In the matter of the Annual Report of	)	
Electric Distribution System Reliability	)	Case No: 21 -0995 -EL-ESS
Pursuant to Rule 4901:1-10-10(C)	)	

Pursuant to Rule 4901:1-10-10(C) of the Ohio Administrative Code,
AES Ohio
hereby submits the attached annual report for the year 2020 .

I certify that the following report accurately and completely reflects the annual report requirements pursuant to Rule 4901:1-10-10 of the Ohio Administrative Code.

Kathryn N Storm
Signature

Kathryn N Storm
Printed Name

VP, US Smart Grid and Ohio T&D Operations
Title

March 29, 2021
Date

AES Ohio
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1. 4901:1-10-10(C)(1): CAIDI (Customer Average Interruption Duration Index)

Performance Standard	After Exclusions	Before Exclusions
125.04	132.17	157.88

2. 4901:1-10-10(C)(1): SAIFI (System Average Interruption Frequency Index)

Performance Standard	After Exclusions	Before Exclusions
0.88	0.84	1.10

3. 4901:1-10-10(C)(1): Supporting Data

Customers Served	CI* After Exclusions	CI Before Exclusions	CMI* After Exclusions	CMI Before Exclusions
594,965	500,588	656,763	66,162,426	103,688,501

Notes:

*CI = Customer Interruptions
CMI = Customer Minutes Interrupted

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4. 4901:1-10-10(C)(2): Major Event Outages

Date	Description	CI	CMI	CAIDI	SAIFI
1/11/2020	Wind	17,126	3,395,597	198.27	1.00
7/19/2020	Thunderstorm	15,918	5,293,361	332.54	1.00
11/15/2020	Wind	43,654	22,252,059	509.74	1.00
	Totals:	**76,698**	**30,941,017**		

Notes:

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5a. 4901:1-10-10(C)(2): Transmission Outages

Outage Start Date	Transmission Circuit Impacted	Outage Start Time	Circuit kV	Outage Cause	Outage Length (minutes)
01/01/2020	Covington - Minster - Rossburg [6625]	12:00 AM	69 kV	Equipment/Hardware Failure	34,100
01/11/2020	Caesars Creek - Webb Road - Wilmington [6917]	12:00 AM	69 kV	High Winds	154,504
01/18/2020	Amsterdam - Coldwater [6629]	12:00 AM	69 kV	High Winds	61,131
01/18/2020	Transmission Bus	12:00 AM	12 kV	Transmission Trouble	66,370
01/18/2020	Transmission Bus	12:00 AM	12 kV	Transmission Trouble	79,671
03/02/2020	Garage Road - New Westville [3302]	12:00 AM	33 kV	Forced Outage	107,552
03/03/2020	Hutchings - Hillsboro (AEP) [13804]	12:00 AM	138 kV	Equipment/Hardware Failure	8,430
03/29/2020	Hutchings - Crystal [6602]	12:00 AM	69 kV	Other	408,384
04/08/2020	Wilmington - Highland (AEP) [6658]	12:00 AM	69 kV	Other	368,045
04/12/2020	Celina - Coldwater [6688]	12:00 AM	69 kV	Equipment/Hardware Failure	423,005
04/29/2020	Celina - Coldwater [6688]	12:00 AM	69 kV	Equipment/Hardware Failure	310,718
04/29/2020	Celina - Coldwater [6688]	12:00 AM	69 kV	Forced Outage	20,988
05/10/2020	Southwestern - Trebein [6686]	12:00 AM	69 kV	Trees Out of ROW	41,404
05/26/2020	Transmission Bus	12:00 AM	12 kV	Transmission Trouble	84,890
05/26/2020	Transmission Bus	12:00 AM	12 kV	Transmission Trouble	16,216
06/08/2020	Jamestown - Washington C.H. [6902]	12:00 AM	69 kV	Scheduled/Planned Outage	299,018
06/10/2020	Covington - Minster - Rossburg [6625]	12:00 AM	69 kV	Trees Out of ROW	527,136
06/10/2020	Sidney - Amsterdam [6628]	12:00 AM	69 kV	Lightning	10,814
06/12/2020	Brookville - West Manchester [6639]	12:00 AM	69 kV	Forced Outage	5,434
06/21/2020	Garage Road - New Westville [3302]	12:00 AM	33 kV	Equipment/Hardware Failure	115,500

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5a. 4901:1-10-10(C)(2): Transmission Outages

Outage Start Date	Transmission Circuit Impacted	Outage Start Time	Circuit kV	Outage Cause	Outage Length (minutes)
06/22/2020	Garage Road - New Westville [3302]	12:00 AM	33 kV	Equipment/Hardware Failure	240,265
06/22/2020	Garage Road - New Westville [3302]	12:00 AM	33 kV	Equipment/Hardware Failure	176,454
07/05/2020	Transmission Bus	12:00 AM	12 kV	Transmission Trouble	142,380
07/05/2020	Transmission Bus	12:00 AM	12 kV	Transmission Trouble	444,444
07/10/2020	Sidney - Amsterdam [6628]	12:00 AM	69 kV	Trees Out of ROW	15,846
07/19/2020	Covington - Minster - Rossburg [6625]	12:00 AM	69 kV	Trees Out of ROW	214,312
07/22/2020	Sidney - Amsterdam [6628]	12:00 AM	69 kV	Scheduled/Planned Outage	4,448
08/21/2020	Sidney - Botkins [6631]	12:00 AM	69 kV	Equipment/Hardware Failure	803,899
08/24/2020	Covington - Greenville [6644]	12:00 AM	69 kV	Equipment/Hardware Failure	481,969
08/28/2020	Bellefontaine - Blue Jacket - Indian Lake [6648]	12:00 AM	69 kV	Scheduled/Planned Outage	33,988
09/07/2020	Indian Lake - New Hampshire [3307]	12:00 AM	33 kV	Equipment/Hardware Failure	44,828
10/05/2020	Garage Road - New Westville [3302]	12:00 AM	33 kV	Scheduled/Planned Outage	431,206
11/14/2020	Bellefontaine - Blue Jacket - Indian Lake [6648]	12:00 AM	69 kV	Equipment/Hardware Failure	27,182
11/15/2020	Coldwater - Rossburg [6684]	12:00 AM	69 kV	High Winds	292,873
12/01/2020	Transmission Bus	12:00 AM	12 kV	Transmission Trouble	81,734
12/04/2020	Trebein - Yellow Springs [6659]	12:00 AM	69 kV	Vehicle Accident	5,923

Notes:

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5b. 4901:1-10-10(C)(2): Distribution Circuits Impacted by Transmission Outages

Outage Start Date	CI per Outage	CMI per Outage	# of Impacted Circuits	IDs for Impacted Circuits	CI per Circuit	CMI per Circuit
01/01/2020	1,932	34,100	4	BE1201	625	11,031
01/01/2020	1,932	34,100	4	BE1203	456	8,048
01/01/2020	1,932	34,100	4	BE1205	467	8,243
01/01/2020	1,932	34,100	4	BP1202	384	6,778
01/11/2020	2,091	154,504	2	HW1202	1,164	86,524
01/11/2020	2,091	154,504	2	HW1204	927	67,980
01/18/2020	521	61,131	1	KH1202	521	61,131
01/18/2020	2,530	66,370	2	KA1203	346	9,077
01/18/2020	2,530	66,370	2	KA1201	2,184	57,294
01/18/2020	3,037	79,671	2	KA1202	1,538	40,347
01/18/2020	3,037	79,671	2	KA1204	1,499	39,324
03/02/2020	1,428	107,552	1	MB1201	1,428	107,552
03/03/2020	1,028	8,430	1	HM1202	1,028	8,430
03/29/2020	8,139	408,384	7	QF1202	1,508	40,490
03/29/2020	8,139	408,384	7	MK1206	35	1,972
03/29/2020	8,139	408,384	7	MK1204	1,727	97,316
03/29/2020	8,139	408,384	7	MK1202	1,203	67,789
03/29/2020	8,139	408,384	7	QF1201	1,274	34,207
03/29/2020	8,139	408,384	7	QF1205	852	22,876
03/29/2020	8,139	408,384	7	MG1205	1,540	143,733

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5b. 4901:1-10-10(C)(2): Distribution Circuits Impacted by Transmission Outages

Outage Start Date	CI per Outage	CMI per Outage	# of Impacted Circuits	IDs for Impacted Circuits	CI per Circuit	CMI per Circuit
04/08/2020	4,176	368,045	5	HD1204	696	61,341
04/08/2020	4,176	368,045	5	HD1206	616	54,290
04/08/2020	4,176	368,045	5	JV1202	236	20,799
04/08/2020	4,176	368,045	5	JV1204	1,233	108,668
04/08/2020	4,176	368,045	5	HD1202	1,395	122,946
04/12/2020	1,906	423,005	3	KE1203	391	86,776
04/12/2020	1,906	423,005	3	KE1202	1,042	231,255
04/12/2020	1,906	423,005	3	KE1201	473	104,974
04/29/2020	1,908	310,718	3	KE1203	391	63,674
04/29/2020	1,908	310,718	3	KE1202	1,042	169,690
04/29/2020	1,908	310,718	3	KE1201	475	77,354
04/29/2020	1,908	20,988	3	KE1203	391	4,301
04/29/2020	1,908	20,988	3	KE1202	1,042	11,462
04/29/2020	1,908	20,988	3	KE1201	475	5,225
05/10/2020	578	41,404	1	GC1201	578	41,404
06/10/2020	1,755	527,136	4	BP1202	385	59,418
06/10/2020	1,755	527,136	4	BE1201	445	151,923
06/10/2020	1,755	527,136	4	BE1205	468	159,775
06/10/2020	1,755	527,136	4	BE1203	457	156,020
06/10/2020	278	10,814	2	BG1201	76	2,956

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5b. 4901:1-10-10(C)(2): Distribution Circuits Impacted by Transmission Outages

Outage Start Date	CI per Outage	CMI per Outage	# of Impacted Circuits	IDs for Impacted Circuits	CI per Circuit	CMI per Circuit
06/10/2020	278	10,814	2	BG1202	202	7,858
06/12/2020	238	5,434	1	MJ1206	238	5,434
05/26/2020	4,792	84,890	3	EH1203	1,351	24,093
05/26/2020	4,792	84,890	3	EH1205	1,454	25,130
05/26/2020	4,792	84,890	3	EH1201	1,987	35,667
05/26/2020	1,146	16,216	1	EI1202	1,146	16,216
06/08/2020	2,125	299,018	5	JE1202	1,008	141,120
06/08/2020	2,125	299,018	5	JE1210	425	59,500
06/08/2020	2,125	299,018	5	JE1208	52	8,684
06/08/2020	2,125	299,018	5	JE1206	621	86,940
06/08/2020	2,125	299,018	5	JE1211	19	2,774
06/21/2020	1,433	115,500	1	MB1201	1,433	115,500
06/22/2020	1,433	176,454	2	MB1201	536	43,219
06/22/2020	1,433	176,454	2	MB1201	897	133,234
06/22/2020	1,433	240,265	2	MB1201	367	21,610
06/22/2020	1,433	240,265	2	MB1201	1,066	218,654
07/05/2020	5,291	444,444	3	AX1201	2,783	233,772
07/05/2020	5,291	444,444	3	AX1205	1,120	94,080
07/05/2020	5,291	444,444	3	AX1207	1,388	116,592
07/05/2020	1,695	142,380	2	AX1202	749	62,916

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5b. 4901:1-10-10(C)(2): Distribution Circuits Impacted by Transmission Outages

Outage Start Date	CI per Outage	CMI per Outage	# of Impacted Circuits	IDs for Impacted Circuits	CI per Circuit	CMI per Circuit
07/05/2020	1,695	142,380	2	AX1208	946	79,464
07/10/2020	278	15,846	2	BG1202	202	11,514
07/10/2020	278	15,846	2	BG1201	76	4,332
07/19/2020	1,931	214,312	5	BP1202	385	8,464
07/19/2020	1,931	214,312	5	BE1201	622	59,080
07/19/2020	1,931	214,312	5	BE1205	380	72,954
07/19/2020	1,931	214,312	5	BE1203	457	43,407
07/19/2020	1,931	214,312	5	BE1205	87	30,408
07/22/2020	278	4,448	2	BG1201	76	1,216
07/22/2020	278	4,448	2	BG1202	202	3,232
08/21/2020	5,100	803,899	4	BI1201	599	93,015
08/21/2020	5,100	803,899	4	BJ1202	2,340	368,043
08/21/2020	5,100	803,899	4	BJ1206	791	125,993
08/21/2020	5,100	803,899	4	BJ1204	1,370	216,848
08/24/2020	3,281	481,969	3	LG1202	1,357	197,557
08/24/2020	3,281	481,969	3	LG1206	1,276	160,244
08/24/2020	3,281	481,969	3	LG1206	648	124,168
08/28/2020	687	33,988	2	EC1201	635	31,411
08/28/2020	687	33,988	2	EC1202	52	2,577
09/07/2020	93	44,828	1	ED1202	93	44,828

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5b. 4901:1-10-10(C)(2): Distribution Circuits Impacted by Transmission Outages

Outage Start Date	CI per Outage	CMI per Outage	# of Impacted Circuits	IDs for Impacted Circuits	CI per Circuit	CMI per Circuit
10/05/2020	1,450	431,206	1	MB1201	1,450	431,206
11/14/2020	687	27,182	2	EC1201	635	25,125
11/14/2020	687	27,182	2	EC1202	52	2,057
11/15/2020	2,107	292,873	3	LC1201	936	130,104
11/15/2020	2,107	292,873	3	KG1201	907	126,073
11/15/2020	2,107	292,873	3	KG1203	264	36,696
12/01/2020	10,731	81,734	4	AK1211	2,136	16,269
12/01/2020	10,731	81,734	4	AK1213	3,833	29,195
12/01/2020	10,731	81,734	4	AK1215	2,561	19,506
12/01/2020	10,731	81,734	4	AK1219	2,201	16,764
12/04/2020	53	5,923	1	GC1203	53	5,923

Notes:

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5c. 4901:1-10-10(C)(2): Index values during transmission outages

Outage start date	CAIDI during outage	SAIFI during outage
01/01/2020	17.6500	0.0033
01/11/2020	73.8900	0.0036
01/18/2020	117.3334	0.0009
01/18/2020	26.2333	0.0043
01/18/2020	26.2333	0.0052
03/02/2020	75.3167	0.0024
03/03/2020	8.2000	0.0018
03/29/2020	50.1762	0.0139
04/08/2020	88.1333	0.0072
04/12/2020	221.9333	0.0033
04/29/2020	162.8500	0.0033
04/29/2020	11.0000	0.0033
05/10/2020	71.6334	0.0010
05/26/2020	17.7148	0.0082
05/26/2020	14.1500	0.0020
06/08/2020	140.7144	0.0036
06/10/2020	300.3626	0.0030
06/10/2020	38.9000	0.0005
06/12/2020	22.8332	0.0004
06/21/2020	80.6000	0.0025
06/22/2020	167.6655	0.0025
06/22/2020	123.1360	0.0025
07/05/2020	84.0000	0.0029
07/05/2020	84.0000	0.0091
07/10/2020	57.0000	0.0005
07/19/2020	110.9851	0.0033
07/22/2020	16.0000	0.0005
08/21/2020	157.6273	0.0087
08/24/2020	146.8968	0.0056

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5c. 4901:1-10-10(C)(2): Index values during transmission outages

Outage start date	CAIDI during outage	SAIFI during outage
08/28/2020	49.4729	0.0012
09/07/2020	482.0172	0.0002
10/05/2020	297.3833	0.0025
11/14/2020	39.5667	0.0012
11/15/2020	139.0000	0.0036
12/01/2020	7.6167	0.0184
12/04/2020	111.7509	0.0001

Notes:

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6a. 4901:1-10-10(C)(3)(a): Data excluding major events and transmission outages

Outage Cause	Events	Customers Interrupted	Customers MInutes Interrupted
Animal/Bird	2,050	42,873	3,600,992
Blast/Explosion/Fire	1	1,136	148,222
Equipment/Hardware Failure	1,747	117,688	17,466,589
Forced Outage	555	60,466	4,394,319
Galloping Conductors	1	3,124	265,488
High Winds	411	20,716	5,725,084
Lightning	654	15,810	2,902,023
Other	54	15,012	686,233
Overload	16	2,606	122,432
Personnel Error	24	1,017	50,681
Scheduled/Planned Outage	1,831	33,157	2,601,726
Transmission Trouble	0	0	0
Tree Trimmers, Company	11	1,306	83,955
Tree Trimmers, Customer	70	1,893	297,923
Trees Inside ROW	162	16,135	2,652,837
Trees Out of ROW	1,101	71,129	12,224,001
UG Const./Dig-Ins	123	3,348	794,215
Undesired Relay Operation	2	4,909	173,349
Unknown	1,103	33,470	3,794,989
Vandalism	43	502	96,367
Vehicle Accident	353	54,103	8,052,473
Water/Moisture	3	188	28,529
Totals:	**10,315**	**500,588**	**66,162,426**

Notes:

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6b. 4901:1-10-10(C)(3)(b): Data for major events only

Outage Cause	Events	Customers Interrupted	Customers MInutes Interrupted
Animal/Bird	18	28	8,874
Blast/Explosion/Fire	0	0	0
Equipment/Hardware Failure	50	7,649	2,324,652
Forced Outage	12	3,900	329,253
Galloping Conductors	0	0	0
High Winds	349	32,527	17,426,764
Lightning	27	285	91,720
Other	2	1,206	28,262
Overload	0	0	0
Personnel Error	0	0	0
Scheduled/Planned Outage	4	12	613
Transmission Trouble	0	0	0
Tree Trimmers, Company	0	0	0
Tree Trimmers, Customer	0	0	0
Trees Inside ROW	63	7,432	2,853,533
Trees Out of ROW	202	19,438	7,195,272
UG Const./Dig-Ins	0	0	0
Undesired Relay Operation	0	0	0
Unknown	15	3,483	457,098
Vandalism	0	0	0
Vehicle Accident	2	738	224,976
Water/Moisture	0	0	0
Totals:	**744**	**76,698**	**30,941,016**

Notes:

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6c. 4901:1-10-10(C)(3)(c): Data for transmission outages only

Outage Cause	Events	Customers Interrupted	Customers MInutes Interrupted
Animal/Bird	0	0	0
Blast/Explosion/Fire	0	0	0
Equipment/Hardware Failure	11	20,234	2,666,348
Forced Outage	3	3,574	133,975
Galloping Conductors	0	0	0
High Winds	3	4,719	508,508
Lightning	1	278	10,814
Other	2	12,315	776,429
Overload	0	0	0
Personnel Error	0	0	0
Scheduled/Planned Outage	4	4,540	768,660
Transmission Trouble	7	29,222	915,705
Tree Trimmers, Company	0	0	0
Tree Trimmers, Customer	0	0	0
Trees Inside ROW	0	0	0
Trees Out of ROW	4	4,542	798,699
UG Const./Dig-Ins	0	0	0
Undesired Relay Operation	0	0	0
Unknown	0	0	0
Vandalism	0	0	0
Vehicle Accident	1	53	5,923
Water/Moisture	0	0	0
Totals:	**36**	**79,477**	**6,585,059**

Notes:

AES Ohio
Rule 10 Report for 2020

7. 4901:1-10-10(C)(4): Momentary Interruptions

Total Number = 575

Notes:

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

3/31/2021 5:01:26 PM

in

Case No(s). 21-0995-EL-ESS

Summary: Annual Report Pursuant to Rule 4901:1-10-10 Electric Distribution System Reliability electronically filed by Mr. Robert J Adams on behalf of The Dayton Power and Light Company d/b/a AES Ohio