Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Fuel and Fuel Related Cost Factors Using:
Proposed Nuclear Capacity Factor of 95.73%
Test Period Ended December 31, 2023
Billing Period September 2024 through August 2025
Docket E-7, Sub 1304

Line #	Unit	Reference	Generation (MWh)	Unit Cost (cents/kWh)	Fuel Cost ($)
			D	E	D * E = F
1	Total Nuclear	Workpaper 1	60,207,920	0.5518	332,225,252
2	Coal	Workpaper 3 & 4	12,133,505	4.4094	535,009,000
3	Gas CT and CC	Workpaper 3 & 4	25,398,789	3.4009	863,780,065
4	Reagents and Byproducts	Workpaper 8			30,185,368
5	Total Fossil	Sum	37,532,294		1,428,974,434
6	Hydro	Workpaper 3	4,222,386		
7	Net Pumped Storage	Workpaper 3	(3,257,750)		
8	Total Hydro	Sum	964,636		-
9	Solar Distributed Generation	Workpaper 3	431,227		-
10	Total Generation	Line 1 + Line 5 + Line 8 + Line 9	99,136,076		1,761,199,685
11	Less Lee CC Joint Owners	Workpaper 3 & 4	(876,000)		(21,752,442)
12	Less Catawba Joint Owners	Workpaper 3 & 4	(14,116,637)		(77,896,854)
13	Net Generation	Sum Lines 10-13	84,143,439		1,661,550,389
14	Purchased Power	Workpaper 3 & 4	12,586,006	3.1276	393,644,708
15	JDA Savings Shared	Workpaper 5			34,396,187
16	Total Purchased Power		12,586,006		428,040,896
17	Total Generation and Purchased Power	Line 13 + Line 16	96,729,446	2.1602	2,089,591,285
18	Fuel expense recovered through intersystem sales	Workpaper 3 & 4	(666,675)	4.1834	(27,889,431)
19	Line losses and Company use	Line 21-Line 18-Line 17	(6,256,346)		-
20	System Fuel Expense for Fuel Factor	Lines 17 + 18 + 19			2,061,701,854
21	Projected System MWh Sales At Meter for Fuel Factor	Workpaper 7	89,806,424		89,806,424
22	Fuel and Fuel Related Costs cents/kWh	Line 20 / Line 21 / 10			2.2957

Note: Rounding differences may occur

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Fuel and Fuel Related Cost Factors Using:
Proposed Nuclear Capacity Factor of 95.73%
Test Period Ended December 31, 2023
Billing Period September 2024 through August 2025
Docket E-7, Sub 1304

Line #	Description	Reference	Residential	GS/Lighting	Industrial	Total
1	NC Projected Billing Period MWh Sales at Generator	Workpaper 7	24,198,399	26,115,830	13,078,907	63,393,136
	Calculation of Fuel (Non-Capacity) Rate by Class					Amount
2	System Fuel (Non-Capacity) Costs	Workpaper 7 - Line 11				$ 2,043,629,333
3	NC Portion - Jurisdictional % based on Projected Billing Period MWh Sales at Generator	Workpaper 7				66.69%
4	NC Retail Fuel (Non-Capacity) Costs before 2.5% Purchase Power Test	Line 2 * Line 3				$ 1,362,896,402
5	NC Retail Reduction due to 2.5% Purchased Power Test	Workpaper 9				-
6	NC Retail Fuel (Non-Capacity) Costs Allowable Under GEN. STAT. § 62-133.2(A2)	Line 4 + Line 5				$ 1,362,896,402
7	NC Retail Projected Billing Period MWh Sales Allocation Factors at Generator	Line 1 / Line 1 Total	**38.17%**	**41.20%**	**20.63%**	**100.00%**
8	Fuel (Non-Capacity) Costs allocated on Projected Billing Period MWh Sales	Line 6 * Line 7	$ 520,244,197	$ 561,467,273	$ 281,184,932	$ 1,362,896,402
	Calculation of Renewable and Cogeneration Purchased Power Capacity Rate by Class					Amount
9	Purchased Power for REPS Compliance - Capacity	Workpaper 4				$ 11,295,326
10	QF Purchased Power - Capacity	Workpaper 4				10,496,458
11	Total of Renewable and QF Purchased Power Capacity	Line 9 + Line 10				$ 21,791,784
12	NC Portion - Jursidicational % based on 2022 Production Demand Allocator	Input				67.12%
13	NC Renewable and QF Purchased Power - Capacity	Line 11 * Line 12				$ 14,626,471
14	2022 Production Demand Allocation Factors	Input	49.05%	35.73%	15.22%	100.00%
15	Renewable and QF Purchased Power - Capacity allocated on 2022 Production Demand Allocator	Line 13 * Line 14	$ 7,174,604	$ 5,226,011	$ 2,225,856	$ 14,626,471
16	Renewable and QF Purchased Power - Capacity cents/kWh based on Projected Billing Period Sales at Meter	Line 15 / Line 1 / 10	0.0314	0.0213	0.0180	0.0245
	Billed Rates					
17	NC Projected Billing Period MWh Sales at Meter	Workpaper 7	22,870,391	24,590,927	12,348,188	59,809,506
			cents/kWh	**cents/kWh**	**cents/kWh**	**cents/kWh**
18	Fuel (Non-Capacity) cents/kWh based on Projected Billing Period MWh Sales	Line 8 / Line 17 / 10	2.2747	2.2832	2.2771	2.2787
19	REPS Compliance and QF Purchased Power - Capacity cents/kWh	Line 16	0.0314	0.0213	0.0180	0.0245
20	Total adjusted Fuel and Fuel Related Costs cents/kWh	Line 18 + Line 19	2.3061	2.3045	2.2951	2.3032
21	EMF Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	0.4819	0.2460	0.3892	0.3656
22	EMF Interest Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	-	-	-	-
23	Net Fuel and Fuel Related Costs Factors cents/kWh	Line 20 + Line 21 + Line 22	2.7880	2.5505	2.6843	2.6688

Note: Rounding differences may occur

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Fuel and Fuel Related Cost Factors Using:
Proposed Nuclear Capacity Factor of 95.73%
Test Period Ended December 31, 2023
Billing Period September 2024 through August 2025
Docket E-7, Sub 1304

Line #	Unit	Reference	Generation (MWh)	Unit Cost (cents/kWh)	Fuel Cost ($)
			D	E	D * E = F
1	Total Nuclear	Workpaper 1	60,207,920	0.5518	332,225,252
2	Coal	Workpaper 3 & 4	11,140,994	4.4094	491,245,678
3	Gas CT and CC	Workpaper 3 & 4	25,398,789	3.4009	863,780,065
4	Reagents and Byproducts	Workpaper 8	-		30,185,368
5	Total Fossil	Sum	36,539,782		1,385,211,111
6	Hydro	Workpaper 3	4,222,386		
7	Net Pumped Storage	Workpaper 3	(3,257,750)		
8	Total Hydro	Sum	964,636		
9	Solar Distributed Generation	Workpaper 3	431,227		
10	Total Generation	Line 1 + Line 5 + Line 8 + Line 9	98,143,565		1,717,436,362
11	Less Lee CC Joint Owners	Workpaper 3 & 4	(876,000)		(21,752,442)
12	Less Catawba Joint Owners	Workpaper 3 & 4	(14,116,637)		(77,896,854)
13	Net Generation	Sum Lines 10-13	83,150,928		1,617,787,066
14	Purchased Power	Workpaper 3 & 4	12,586,006		393,644,708
15	JDA Savings Shared	Workpaper 5	-		34,396,187
16	Total Purchased Power		12,586,006		428,040,896
17	Total Generation and Purchased Power	Line 13 + Line 16	95,736,934		2,045,827,962
18	Fuel expense recovered through intersystem sales	Workpaper 3 & 4	(666,675)		(27,889,431)
19	Line losses and Company use	Line 21-Line 18-Line 17	(6,256,346)		-
20	System Fuel Expense for Fuel Factor	Lines 17 + 18 + 19			2,017,938,531
21	Normalized Test Period MWh Sales	Exhibit 4	88,813,912		88,813,912
22	Fuel and Fuel Related Costs cents/kWh	Line 20 / Line 21 / 10			2.2721

Note: Rounding differences may occur

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Fuel and Fuel Related Cost Factors Using:
Proposed Nuclear Capacity Factor of 95.73%
Test Period Ended December 31, 2023
Billing Period September 2024 through August 2025
Docket E-7, Sub 1304

Line #	Description	Reference	Residential	GS/Lighting	Industrial	Total
1	NC Normalized Test Period mWh Sales at Generator	Workpaper 7a	24,131,647	25,991,687	12,397,056	62,520,389
	Calculation of Fuel (Non-Capacity) Rate by Class					Amount
2	System Fuel (Non-Capacity) Costs	Workpaper 7a - Line 11				$ 1,999,866,010
3	NC Portion - Jurisdictional % based on Projected Billing Period MWh Sales at Generator	Workpaper 7a				66.61%
4	NC Retail Fuel (Non-Capacity) Costs before 2.5% Purchase Power Test	Line 2 * Line 3				$ 1,332,138,646
5	NC Retail Reduction due to 2.5% Purchased Power Test	Workpaper 9				-
6	NC Retail Fuel (Non-Capacity) Costs Allowable Under GEN. STAT. § 62-133.2(A2)	Line 4 + Line 5				$ 1,332,138,646
7	NC Retail Projected Billing Period MWh Sales Allocation Factors at Generator	Line 1 / Line 1 Total	**38.60%**	**41.57%**	**19.83%**	**100.00%**
8	Fuel (Non-Capacity) Costs allocated on Projected Billing Period MWh Sales	Line 6 * Line 7	$ 514,179,445	$ 553,811,822	$ 264,147,378	$ 1,332,138,646
	Calculation of Renewable Purchased Power Capacity Rate by Class					Amount
9	Purchased Power for REPS Compliance - Capacity	Workpaper 4				$ 11,295,326
10	QF Purchased Power - Capacity	Workpaper 4				10,496,458
11	Total of Renewable and QF Purchased Power Capacity	Line 9 + Line 10				$ 21,791,784
12	NC Portion - Jursidicational % based on 2022 Production Demand Allocator	Input				67.12%
13	NC Renewable and QF Purchased Power - Capacity	Line 11 * Line 12				$ 14,626,471
14	2022 Production Demand Allocation Factors	Input	49.05%	35.73%	15.22%	100.00%
15	Renewable and QF Purchased Power - Capacity allocated on 2022 Production Demand Allocator	Line 13 * Line 14	$ 7,174,604	$ 5,226,011	$ 2,225,856	$ 14,626,471
16	Renewable and QF Purchased Power - Capacity cents/kWh based on Normalized Test Period Sales at Meter	Line 15 / Line 1 / 10	0.0315	0.0214	0.0190	0.0248
	Billed Rates					
17	NC Normalized Test Period MWh Sales at Meter	Exhibit 4	22,807,302	24,474,032	11,704,432	58,985,766
			cents/kWh	**cents/kWh**	**cents/kWh**	**cents/kWh**
18	Fuel and Fuel Related Costs excluding Purchased Power for REPS Compliance and QF Purchased Capacity cents/kWh	Line 8 / Line 17 / 10	2.2545	2.2629	2.2568	2.2584
19	REPS Compliance and QF Purchased Power - Capacity cents/kWh	Line 16	0.0315	0.0214	0.0190	0.0248
20	Total adjusted Fuel and Fuel Related Costs cents/kWh	Line 18 + Line 19	2.2860	2.2843	2.2758	2.2832
21	EMF Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	0.4819	0.2460	0.3892	0.3656
22	EMF Interest Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	-	-	-	-
23	Net Fuel and Fuel Related Costs Factors cents/kWh	Line 20 + Line 21 + Line 22	2.7679	2.5303	2.6650	2.6488

Note: Rounding differences may occur

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
NERC 5 Year Average Nuclear Capacity Factor of 91.90% and Projected Period Sales
Test Period Ended December 31, 2023
Billing Period September 2024 through August 2025
Docket E-7, Sub 1304

Clark Exhibit 2
Schedule 3
Page 1 of 2

Line #	Unit	Reference	Generation (MWh)	Unit Cost (cents/kWh)	Fuel Cost ($)
			D	E	D * E = F
1	Total Nuclear	Workpaper 1	57,797,776	0.5518	318,926,159
2	Coal	Workpaper 3 & 4	13,978,555	4.4094	616,363,766
3	Gas CT and CC	Workpaper 3 & 4	25,398,789	3.4009	863,780,065
4	Reagents and Byproducts	Workpaper 8	-		30,185,368
5	Total Fossil	Sum	39,377,344		1,510,329,199
6	Hydro	Workpaper 3	4,222,386		
7	Net Pumped Storage	Workpaper 3	(3,257,750)		
8	Total Hydro	Sum	964,636		
9	Solar Distributed Generation	Workpaper 3	431,227		
10	Total Generation	Line 1 + Line 5 + Line 8 + Line 9	98,570,982		1,829,255,358
11	Less Lee CC Joint Owners	Workpaper 3 & 4	(876,000)		(21,752,442)
12	Less Catawba Joint Owners	Workpaper 3 & 4	(13,551,543)		(74,778,615)
13	Net Generation	Sum Lines 10-13	84,143,439		1,732,724,301
14	Purchased Power	Workpaper 3 & 4	12,586,006		393,644,708
15	JDA Savings Shared	Workpaper 5	-		34,396,187
16	Total Purchased Power		12,586,006		428,040,896
17	Total Generation and Purchased Power	Line 13 + Line 16	96,729,446		2,160,765,196
18	Fuel expense recovered through intersystem sales	Workpaper 3 & 4	(666,675)		(27,889,431)
19	Line losses and Company use	Line 21-Line 18-Line 17	(6,256,346)		-
20	System Fuel Expense for Fuel Factor	Lines 17 + 18 + 19			2,132,875,765
21	Projected System MWh Sales At Meter for Fuel Factor	Workpaper 7	89,806,424		89,806,424
22	Fuel and Fuel Related Costs cents/kWh	Line 20 / Line 21 / 10			2.3750

Note: Rounding differences may occur

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Fuel and Fuel Related Cost Factors Using:
NERC 5 Year Average Nuclear Capacity Factor of 91.90% and Projected Period Sales
Test Period Ended December 31, 2023
Billing Period September 2024 through August 2025
Docket E-7, Sub 1304

Line #	Description	Reference	Residential	GS/Lighting	Industrial	Total
1	NC Projected Billing Period MWh Sales at Generator	Workpaper 7b	24,198,399	26,115,830	13,078,907	63,393,136
	Calculation of Fuel (Non-Capacity) Rate by Class					Amount
2	System Fuel (Non-Capacity) Costs	Workpaper 7b - Line 11				$ 2,114,803,245
3	NC Portion - Jurisdictional % based on Projected Billing Period MWh Sales at Generator	Workpaper 7b				66.58%
4	NC Retail Fuel (Non-Capacity) Costs before 2.5% Purchase Power Test	Line 2 * Line 3				$ 1,408,036,000
5	NC Retail Reduction due to 2.5% Purchased Power Test	Workpaper 9				-
6	NC Retail Fuel (Non-Capacity) Costs Allowable Under GEN. STAT. § 62-133.2(A2)	Line 4 + Line 5				$ 1,408,036,000
7	NC Retail Projected Billing Period MWh Sales Allocation Factors at Generator	Line 1 / Line 1 Total	**38.17%**	**41.20%**	**20.63%**	**100.00%**
8	Fuel (Non-Capacity) Costs allocated on Projected Billing Period MWh Sales	Line 6 * Line 7	$ 537,474,864	$ 580,063,263	$ 290,497,874	$ 1,408,036,000
	Calculation of Renewable Purchased Power Capacity Rate by Class					Amount
9	Purchased Power for REPS Compliance - Capacity	Workpaper 4				$ 11,295,326
10	QF Purchased Power - Capacity	Workpaper 4				10,496,458
11	Total of Renewable and QF Purchased Power Capacity	Line 9 + Line 10				$ 21,791,784
12	NC Portion - Jursidicational % based on 2022 Production Demand Allocator	Input				67.12%
13	NC Renewable and QF Purchased Power - Capacity	Line 11 * Line 12				$ 14,626,471
14	2022 Production Demand Allocation Factors	Input	49.05%	35.73%	15.22%	100.00%
15	Renewable and QF Purchased Power - Capacity allocated on 2022 Production Demand Allocator	Line 13 * Line 14	$ 7,174,604	$ 5,226,011	$ 2,225,856	$ 14,626,471
16	Renewable and QF Purchased Power - Capacity cents/kWh based on Normalized Test Period Sales at Meter	Line 15 / Line 1 / 10	0.0314	0.0213	0.0180	0.0245
	Billed Rates					
17	NC Projected Billing Period MWh Sales at Meter	Workpaper 7b	22,870,391	24,590,927	12,348,188	59,809,506
			cents/kWh	**cents/kWh**	**cents/kWh**	**cents/kWh**
18	Fuel and Fuel Related Costs excluding Purchased Power for REPS Compliance and QF Purchased Capacity cents/kWh	Line 8 / Line 17 / 10	2.3501	2.3589	2.3526	2.3542
19	REPS Compliance and QF Purchased Power - Capacity cents/kWh	Line 16	0.0314	0.0213	0.0180	0.0245
20	Total adjusted Fuel and Fuel Related Costs cents/kWh	Line 18 + Line 19	2.3815	2.3802	2.3706	2.3787
21	EMF Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	0.4819	0.2460	0.3892	0.3656
22	EMF Interest Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	-	-	-	-
23	Net Fuel and Fuel Related Costs Factors cents/kWh	Line 20 + Line 21 + Line 22	2.8634	2.6262	2.7598	2.7443

Note: Rounding differences may occur