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 95.40%
Test Period Ended December 31, 2023
Billing Period Sept 2024 through Aug 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	60,001,207	0.5561	333,675,458
2	Coal	Workpaper 3 & 4	12,133,505	4.4094	535,009,000
3	Gas CT and CC	Workpaper 3 & 4	25,226,685	3.4674	874,702,857
4	Reagents and Byproducts	Workpaper 8			35,509,807
5	Total Fossil	Sum	37,360,190		1,445,221,665
6	Hydro	Workpaper 3	4,745,064		
7	Net Pumped Storage	Workpaper 3	(3,858,458)		
8	Total Hydro	Sum	886,606		-
9	Solar Distributed Generation	Workpaper 3	370,349		-
10	Total Generation	Line 1 + Line 5 + Line 8 + Line 9	98,618,351		1,778,897,123
11	Less Lee CC Joint Owners	Workpaper 3 & 4	(728,842)		(20,336,093)
12	Less Catawba Joint Owners	Workpaper 3 & 4	(14,135,004)		(78,608,911)
13	Net Generation	Sum Lines 10-13	83,754,505		1,679,952,119
14	Purchased Power	Workpaper 3 & 4	12,184,511	3.2398	394,756,740
15	JDA Savings Shared	Workpaper 5			35,913,409
16	Total Purchased Power		12,184,511		430,670,150
17	Total Generation and Purchased Power	Line 13 + Line 16	95,939,016	2.2000	2,110,622,269
18	Fuel expense recovered through intersystem sales	Workpaper 3 & 4	(820,718)	3.8146	(31,306,907)
19	Line losses and Company use	Line 21-Line 18-Line 17	(4,513,699)		-
20	System Fuel Expense for Fuel Factor	Lines 17 + 18 + 19			2,079,315,362
21	Projected System MWh Sales At Meter for Fuel Factor	Workpaper 7	90,604,599		90,604,599
22	Fuel and Fuel Related Costs cents/kWh	Line 20 / Line 21 / 10			2.2949

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 95.40%
Test Period Ended December 31, 2023
Billing Period Sept 2024 through Aug 2025
Docket E-7, Sub 1304

Clark Rebuttal Exhibit 2
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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				$ 2,060,976,924
3	NC Portion - Jurisdictional % based on Projected Billing Period MWh Sales at Generator	Workpaper 7				66.12%
4	NC Retail Fuel (Non-Capacity) Costs before 2.5% Purchase Power Test	Line 2 * Line 3				$ 1,362,717,942
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				$ 1,362,717,942
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	$ 520,176,075	$ 561,393,754	$ 281,148,113	$ 1,362,717,942
	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				10,762,375
11	Total of Renewable and QF Purchased Power Capacity	Line 9 + Line 10				$ 22,057,701
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				$ 14,804,952
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	$ 7,262,153	$ 5,289,782	$ 2,253,018	$ 14,804,952
16	Renewable and QF Purchased Power - Capacity cents/kWh based on Projected Billing Period Sales at Meter	Line 15 / Line 1 / 10	0.0318	0.0215	0.0182	0.0248
	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	2.2745	2.2829	2.2768	2.2784
19	REPS Compliance and QF Purchased Power - Capacity cents/kWh	Line 16	0.0318	0.0215	0.0182	0.0248
20	Total adjusted Fuel and Fuel Related Costs cents/kWh	Line 18 + Line 19	2.3063	2.3044	2.2950	2.3032
21	EMF Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	0.4751	0.3221	0.6890	0.4094
22	EMF Interest Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	-	-	0.0063	0.0008
23	EMF Increment (Decrement) Docket E-7, Sub 1282	Exh 3 pg 2, 3, 4	0.0285	(0.0003)	0.0217	0.0138
24	Net Fuel and Fuel Related Costs Factors cents/kWh	Line 20 + Line 21 + Line 22	2.8099	2.6262	3.0120	2.7272

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 95.40%
Test Period Ended December 31, 2023
Billing Period Sept 2024 through Aug 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	60,001,207	0.5561	333,675,458
2	Coal	Workpaper 3 & 4	10,196,921	4.4094	449,618,202
3	Gas CT and CC	Workpaper 3 & 4	25,226,685	3.4674	874,702,857
4	Reagents and Byproducts	Workpaper 8	-		35,509,807
5	Total Fossil	Sum	35,423,606		1,359,830,866
6	Hydro	Workpaper 3	4,745,064		
7	Net Pumped Storage	Workpaper 3	(3,858,458)		
8	Total Hydro	Sum	886,606		
9	Solar Distributed Generation	Workpaper 3	370,349		
10	Total Generation	Line 1 + Line 5 + Line 8 + Line 9	96,681,767		1,693,506,324
11	Less Lee CC Joint Owners	Workpaper 3 & 4	(728,842)		(20,336,093)
12	Less Catawba Joint Owners	Workpaper 3 & 4	(14,135,004)		(78,608,911)
13	Net Generation	Sum Lines 10-13	81,817,922		1,594,561,320
14	Purchased Power	Workpaper 3 & 4	12,184,511		394,756,740
15	JDA Savings Shared	Workpaper 5	-		35,913,409
16	Total Purchased Power	0	12,184,511		430,670,150
17	Total Generation and Purchased Power	Line 13 + Line 16	94,002,432		2,025,231,470
18	Fuel expense recovered through intersystem sales	Workpaper 3 & 4	(820,718)		(31,306,907)
19	Line losses and Company use	Line 21-Line 18-Line 17	(4,513,699)		-
20	System Fuel Expense for Fuel Factor	Lines 17 + 18 + 19			1,993,924,563
21	Normalized Test Period MWh Sales	Exhibit 4	88,668,015		88,668,015
22	Fuel and Fuel Related Costs cents/kWh	Line 20 / Line 21 / 10			2.2488

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 95.40%
Test Period Ended December 31, 2023
Billing Period Sept 2024 through Aug 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				$ 1,975,586,126
3	NC Portion - Jurisdictional % based on Projected Billing Period MWh Sales at Generator	Workpaper 7a				66.72%
4	NC Retail Fuel (Non-Capacity) Costs before 2.5% Purchase Power Test	Line 2 * Line 3				$ 1,318,060,192
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				$ 1,318,060,192
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	$ 508,745,438	$ 547,958,967	$ 261,355,787	$ 1,318,060,192
	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				10,762,375
11	Total of Renewable and QF Purchased Power Capacity	Line 2 + Line 3				$ 22,057,701
12	NC Portion - Jursidicational % based on 2022 Production Demand Allocator	Input				67.12%
13	NC Renewable and QF Purchased Power - Capacity	Line 4 * Line 5				$ 14,804,952
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 6 * Line 7	$ 7,262,153	$ 5,289,782	$ 2,253,018	$ 14,804,952
16	Renewable and QF Purchased Power - Capacity cents/kWh based on Normalized Test Period Sales at Meter	Line 8 / Line 1 / 10	0.0318	0.0216	0.0192	0.0251
	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	2.2306	2.2389	2.2330	2.2345
19	REPS Compliance and QF Purchased Power - Capacity cents/kWh	Line 16	0.0318	0.0216	0.0192	0.0251
20	Total adjusted Fuel and Fuel Related Costs cents/kWh	Line 18 + Line 19	2.2624	2.2605	2.2522	2.2596
21	EMF Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	0.4751	0.3221	0.6890	0.4094
22	EMF Interest Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	-	-	0.0063	0.0008
23	EMF Increment (Decrement) Docket E-7, Sub 1282	Exh 3 pg 2, 3, 4	0.0285	(0.0003)	0.0217	0.0138
24	Net Fuel and Fuel Related Costs Factors cents/kWh	Line 20 + Line 21 + Line 22	2.7660	2.5823	2.9692	2.6836

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 Sept 2024 through Aug 2025
Docket E-7, Sub 1304

Clark Rebuttal Exhibit 2
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Line #	Unit	Reference		Generation (MWh)	Unit Cost (cents/kWh)	Fuel Cost ($)
				D	E	D * E = F
1	Total Nuclear	Workpaper 1		57,797,776	0.5561	321,421,856
2	Coal	Workpaper 3 & 4		13,817,855	4.4094	609,277,910
3	Gas CT and CC	Workpaper 3 & 4		25,226,685	3.4674	874,702,857
4	Reagents and Byproducts	Workpaper 8		-		35,509,807
5	Total Fossil	Sum		39,044,539		1,519,490,575
6	Hydro	Workpaper 3		4,745,064		
7	Net Pumped Storage	Workpaper 3		(3,858,458)		
8	Total Hydro	Sum		886,606		
9	Solar Distributed Generation	Workpaper 3		370,349		
10	Total Generation	Line 1 + Line 5 + Line 8 + Line 9		98,099,269		1,840,912,431
11	Less Lee CC Joint Owners	Workpaper 3 & 4		(728,842)		(20,336,093)
12	Less Catawba Joint Owners	Workpaper 3 & 4		(13,615,922)		(75,722,145)
13	Net Generation	Sum Lines 10-13		83,754,505		1,744,854,193
14	Purchased Power	Workpaper 3 & 4		12,184,511		394,756,740
15	JDA Savings Shared	Workpaper 5		-		35,913,409
16	Total Purchased Power		0	12,184,511		430,670,150
17	Total Generation and Purchased Power	Line 13 + Line 16		95,939,016		2,175,524,342
18	Fuel expense recovered through intersystem sales	Workpaper 3 & 4		(820,718)		(31,306,907)
19	Line losses and Company use	Line 21-Line 18-Line 17		(4,513,699)		-
20	System Fuel Expense for Fuel Factor	Lines 17 + 18 + 19				2,144,217,436
21	Projected System MWh Sales At Meter for Fuel Factor	Workpaper 7		90,604,599		90,604,599
22	Fuel and Fuel Related Costs cents/kWh	Line 20 / Line 21 / 10				2.3666

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 Sept 2024 through Aug 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				$ 2,125,878,998
3	NC Portion - Jurisdictional % based on Projected Billing Period MWh Sales at Generator	Workpaper 7b				66.02%
4	NC Retail Fuel (Non-Capacity) Costs before 2.5% Purchase Power Test	Line 2 * Line 3				$ 1,403,505,314
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				$ 1,403,505,314
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	$ 535,745,413	$ 578,196,773	$ 289,563,129	$ 1,403,505,314
	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				10,762,375
11	Total of Renewable and QF Purchased Power Capacity	Line 2 + Line 3				$ 22,057,701
12	NC Portion - Jursidicational % based on 2022 Production Demand Allocator	Input				67.12%
13	NC Renewable and QF Purchased Power - Capacity	Line 4 * Line 5				$ 14,804,952
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 6 * Line 7	$ 7,262,153	$ 5,289,782	$ 2,253,018	$ 14,804,952
16	Renewable and QF Purchased Power - Capacity cents/kWh based on Normalized Test Period Sales at Meter	Line 8 / Line 1 / 10	0.0318	0.0215	0.0182	0.0248
	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	2.3425	2.3513	2.3450	2.3466
19	REPS Compliance and QF Purchased Power - Capacity cents/kWh	Line 16	0.0318	0.0215	0.0182	0.0248
20	Total adjusted Fuel and Fuel Related Costs cents/kWh	Line 18 + Line 19	2.3743	2.3728	2.3632	2.3714
21	EMF Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	0.4751	0.3221	0.6890	0.4094
22	EMF Interest Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	-	-	0.0063	0.0008
23	EMF Increment (Decrement) Docket E-7, Sub 1282	Exh 3 pg 2, 3, 4	0.0285	(0.0003)	0.0217	0.0138
24	Net Fuel and Fuel Related Costs Factors cents/kWh	Line 20 + Line 21 + Line 22	2.8779	2.6946	3.0802	2.7954

Note: Rounding differences may occur