

PUBLIC REDACTED

November 1, 2023

**VIA ELECTRONIC FILING**

Ms. A. Shonta Dunston, Chief Clerk  
North Carolina Utilities Commission  
4325 Mail Service Center  
Raleigh, North Carolina 27699-4300

**RE: Duke Energy Carolinas, LLC and Duke Energy Progress, LLC's  
Avoided Cost Information Required by 18 C.F.R. § 292.302(b)(1)-(3)  
Docket No. E-100, Sub 194**

Dear Ms. Dunston:

Duke Energy Carolinas, LLC (“DEC”) and Duke Energy Progress, LLC (“DEP”) and, together with DEC, the “Companies”) hereby submit to the North Carolina Utilities Commission (“Commission”) the information required by Federal Energy Regulatory Commission regulation 18 C.F.R. § 292.302(b)(1)-(3), which requires electric utilities to file certain avoided cost information with their respective state commissions on a biennial basis.

The Companies have designated their respective cost data as confidential and trade secret information and respectfully request that the Commission protect it from public disclosure pursuant to N.C. Gen. Stat. § 132-1.2. The information reflects the Companies’ costs to procure additional energy and/or capacity. The wholesale electricity market is extremely competitive and, in order for the Companies to obtain the most cost-effective energy and capacity to meet the needs of its customers, they must protect from public disclosure of their projected and actual cost to procure such energy, capacity, or both. In addition, if this information was made publicly available, potential suppliers would know the price against which they must bid, and rather than bidding the lowest price possible, they would simply bid a price low enough to beat the Companies’ projections.

The Companies will make the confidential information available to other parties pursuant to an appropriate confidentiality agreement.

Please do not hesitate to contact me if you have any questions.

Very truly yours,

/s/ E. Brett Breitschwerdt

cc: Parties of Record

**CERTIFICATE OF SERVICE**

I certify that a copy of Duke Energy Carolinas, LLC's and Duke Energy Progress, LLC's Avoided Cost Information Required by 18 C.F.R § 292.302(b)(1)-(3), in Docket No. E-100, Sub 194, has been served electronically to all parties of record.

This the 1st day of November, 2023.

/s/ E. Brett Breitschwerdt

E. Brett Breitschwerdt  
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*Attorney for Duke Energy Carolinas, LLC  
and Duke Energy Progress, LLC*

**DUKE ENERGY CAROLINAS, LLC’S AVOIDED COST INFORMATION PURSUANT TO 18 C.F.R. § 292-302(b)**

Duke Energy Carolinas, LLC (“DEC”) provides the below information in compliance with its obligations under 18 C.F.R. § 292.302(b). DEC’s most current avoided cost rates are set forth in its Application, Schedule PP(SC), and Large QF Tariff as filed in Docket No. E-100, Sub 194.

**ESTIMATED AVOIDED ENERGY COSTS  
18 C.F.R. § 292.302(b)(1)**

The estimated avoided cost on the electric utility’s system, solely with respect to the energy component, for various levels of purchases from qualifying facilities. Such levels of purchases shall be stated in blocks of not more than 100 megawatts for systems with peak demand of 1,000 megawatts or more, and in blocks equivalent to not more than 10 percent of the system peak demand for systems of less than 1,000 megawatts. The avoided costs shall be stated on a cents per kilowatt-hour basis, during daily and seasonal peak and off-peak periods, by year, for the current calendar year and each of the next five years.

**RESPONSE:**

WINTER AVERAGE AVOIDED ENERGY COST BY PERIOD (¢/kWh)

**BEGIN CONFIDENTIAL**

Year	Premium	Average AM	Average PM	Average
	On-Peak Hours	On-Peak Hours	On-Peak Hours	Off-Peak Hours
2023				
2024				
2025				
2026				
2027				
2028				

**END CONFIDENTIAL**

SUMMER AVERAGE AVOIDED ENERGY COST BY PERIOD (¢/kWh)

BEGIN CONFIDENTIAL

Year	Premium	Average PM	Average
	On-Peak Hours	On-Peak Hours	Off-Peak Hours
2023	[REDACTED]		
2024			
2025			
2026			
2027			
2028			

END CONFIDENTIAL

SHOULDER AVERAGE AVOIDED ENERGY COST BY PERIOD (¢/kWh)

BEGIN CONFIDENTIAL

Year	Average	Average
	On-Peak Hours	Off-Peak Hours
2023	[REDACTED]	
2024		
2025		
2026		
2027		
2028		

END CONFIDENTIAL

Notes:

- 1) Energy costs are expressed in nominal dollars and do not incorporate additional considerations used in rate calculations.
- 2) Energy price periods are per NCUC Docket No. E-100, Sub 194.

HOUR DEFINITIONS

Season	Period	Days	Months	Hours
Winter	Premium	Mon – Fri <sup>1</sup>	Dec - Feb	6:00 am – 9:00 am
Winter	On-Peak Morning	Mon – Fri <sup>1</sup>	Dec - Feb	5:00 am – 6:00 am & 9:00 am – 10:00 am
Winter	On-Peak Evening	Mon – Fri <sup>1</sup>	Dec - Feb	5:00 pm – 11:00 pm
Winter	Off-Peak	Mon – Fri <sup>1</sup>	Dec - Feb	Remaining Hours + Holidays
		Sat – Sun		All Hours <sup>2</sup>
<b>Summer</b>				
Summer	Premium	Mon – Fri <sup>1</sup>	Jun - Sept	5:00 pm – 9:00 pm
Summer	On-Peak	Mon – Fri <sup>1</sup>	Jun - Sept	12:00 pm – 5:00 pm & 9:00 pm – 11:00 pm
Summer	Off-Peak	Mon – Fri <sup>1</sup>	Jun - Sept	Remaining Hours + Holidays
		Sat – Sun		All Hours <sup>2</sup>
<b>Shoulder</b>				
Shoulder	On-Peak	Mon – Fri <sup>1</sup>	Mar - May, Oct - Nov	6:00 am – 10:00 am & 4:00 pm – 11:00 pm
Shoulder	Off-Peak	Mon – Fri <sup>1</sup>	Mar - May, Oct - Nov	Remaining Hours + Holidays
		Sat – Sun		All Hours <sup>2</sup>

## Notes:

- 1) Excludes holidays considered as off-peak (New Year's Day, Good Friday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and the day after, and Christmas Day).
- 2) When one of the above holidays falls on a Saturday, the Friday before will be considered off-peak; when the holiday falls on a Sunday, the following Monday will be considered off-peak.

**FUTURE RESOURCE ADDITIONS  
18 C.F.R. § 292.302(b)(2)**

The electric utility's plan for the addition of capacity by amount and type, for purchases of firm energy and capacity, and for capacity retirements for each year during the succeeding 10 years.

**RESPONSE:**

**PROPOSED INCREMENTAL RESOURCE CAPACITY ADDITIONS (MW)**

Year	Solar	Battery	Wind	Nuclear (Includes Uprates)	Pumped Storage (Includes Uprates)	Combined Cycle (Includes Uprates)	Combustion Turbine (Includes Uprates)	Total Incremental Additions	Total Cumulative Additions
2024	162	-	-	45	80	-	402	689	2,014
2025	656	29	-	-	40	-	-	724	2,739
2026	325	63	-	-	-	-	-	388	3,126
2027	285	3	-	-	-	14	-	301	3,428
2028	592	148	-	-	-	40	-	780	4,207
2029	560	140	-	-	-	-	1,275	1,975	6,182
2030	560	20	-	25	-	-	-	604	6,786
2031	710	840	-	25	-	-	-	1,575	8,361
2032	675	540	-	-	-	1,360	-	2,576	10,937
2033	675	460	-	-	-	-	-	1,135	12,072
Total	6,523	2,242	-	96	120	1,414	1,677		

Notes:

- 1) Data Source: Portfolio P3 (as presented in the 2023 NC CPIRP filed in Docket No. E-100, Sub 190).
- 2) The information in the table above includes designated, mandated, and undesignated resources.
- 3) All values represent incremental MW in the year in which the resource is installed.
- 4) Data presented on a beginning of year basis.
- 5) Solar and energy storage additions reflect nameplate capacity ratings.
- 6) Renewables capacity listed excludes REC-Only contracts.

PROPOSED RESOURCE CAPACITY RETIREMENTS

Year	Winter Capacity (MW)	Description (Date Retired)
2023	167	Allen 1
	259	Allen 5
2028	380	Marshall 1
	380	Marshall 2
2030	546	Cliffside 5
2031	658	Marshall 3
	660	Marshall 4

## Notes:

- 1) Data Source: Portfolio P3 (as presented in the 2023 NC CPIRP filed in Docket No. E-100, Sub 190).
- 2) All values represent the year in which the resource is retired.
- 3) All retirements are for planning purposes only.
- 4) Retirement dates based on Coal Retirement Study presented in 2023 NC CPIRP filed in Docket No. E-100, Sub 190.

**CAPITAL AND ENERGY COSTS OF PLANNED ADDITIONS  
18 C.F.R. § 292.302(b)(3)**

The estimated capacity costs at completion of the planned capacity additions and planned capacity firm purchases, on the basis of dollars per kilowatt, and the associated energy costs of each unit, expressed in cents per kilowatt-hour. These costs shall be expressed in terms of individual generating units and of individual planned firm purchases.

**RESPONSE:**

**ESTIMATED CAPITAL AND ENERGY COSTS FOR PLANNED CAPACITY ADDITIONS**  
**BEGIN CONFIDENTIAL**

2024	162 MW Solar Capacity Cost: \$ [REDACTED]/kW Energy Cost: [REDACTED] cents/kWh
	45 MW Nuclear Uprate Capacity Cost: \$ [REDACTED]/kW Energy Cost: [REDACTED] cents/kWh
	80 MW Bad Creek Uprate Capacity Cost: \$ [REDACTED]/kW Energy Cost: [REDACTED] cents/kWh
	402 MW Lincoln Project Capacity Cost: \$ [REDACTED]/kW Energy Cost: [REDACTED] cents/kWh
2025	656 MW Solar Capacity Cost: \$ [REDACTED]/kW Energy Cost: [REDACTED] cents/kWh
	29 MW Energy Storage Capacity Cost: \$ [REDACTED]/kW Energy Cost: [REDACTED] cents/kWh
	40 MW Bad Creek Uprate Capacity Cost: \$ [REDACTED]/kW Energy Cost: [REDACTED] cents/kWh
2026	325 MW Solar Capacity Cost: \$ [REDACTED]/kW Energy Cost: [REDACTED] cents/kWh
	63 MW Energy Storage Capacity Cost: \$ [REDACTED]/kW Energy Cost: [REDACTED] cents/kWh
2027	285 MW Solar Capacity Cost: \$ [REDACTED]/kW Energy Cost: [REDACTED] cents/kWh



	3 MW Energy Storage Capacity Cost: \$████/kW Energy Cost: █cents/kWh
	14 MW Combined Cycle Uprate Capacity Cost: \$████/kW Energy Cost: █cents/kWh
2028	592 MW Solar Capacity Cost: \$████/kW Energy Cost: █cents/kWh
	148 MW Energy Storage Capacity Cost: \$████/kW Energy Cost: █cents/kWh
	40 MW Combined Cycle Uprate Capacity Cost: \$████/kW Energy Cost: █cents/kWh
2029	560 MW Solar Capacity Cost: \$████/kW Energy Cost: █cents/kWh
	140 MW Energy Storage Capacity Cost: \$████/kW Energy Cost: █cents/kWh
	1,275 MW Combustion Turbine Capacity Cost: \$████/kW Energy Cost: █cents/kWh
2030	560 MW Solar Capacity Cost: \$████/kW Energy Cost: █cents/kWh
	20 MW Energy Storage Capacity Cost: \$████/kW Energy Cost: █cents/kWh
	25 MW Nuclear Uprate Capacity Cost: \$████/kW Energy Cost: █cents/kWh
2031	710 MW Solar Capacity Cost: \$████/kW Energy Cost: █cents/kWh
	840 MW Energy Storage Capacity Cost: \$████/kW Energy Cost: █cents/kWh
	25 MW Nuclear Uprate Capacity Cost: \$████/kW Energy Cost: █cents/kWh

2032	675 MW Solar Capacity Cost: \$ [REDACTED]/kW Energy Cost: [REDACTED] cents/kWh
	540 MW Energy Storage Capacity Cost: \$ [REDACTED]/kW Energy Cost: [REDACTED] cents/kWh
	1,360 MW Combined Cycle Capacity Cost: \$ [REDACTED]/kW Energy Cost: [REDACTED] cents/kWh
2033	675 MW Solar Capacity Cost: \$ [REDACTED]/kW Energy Cost: [REDACTED] cents/kWh
	460 MW Energy Storage Capacity Cost: \$ [REDACTED]/kW Energy Cost: [REDACTED] cents/kWh

**END CONFIDENTIAL**

Notes:

- 1) Data Source: Portfolio P3 (as presented in the 2023 NC CPIRP filed in Docket No. E-100, Sub 190).
- 2) Energy cost includes fuel and variable O&M for combined cycle, combustion turbine, and uprate projects.
- 3) Table does not include utility-owned and already-contracted solar already in place.
- 4) Energy costs for solar, energy storage, and wind projects are shown as zero. These technologies do not have variable O&M costs in DEP’s modeling; all operations costs are modeled as fixed O&M.
- 5) All resource costs are based on new build resources for this filing. Capacity costs represent inflated installed cost of new build resources.
- 6) Energy Storage capacity cost based on 100 MW/400 MWh Li-ion battery.
- 7) Solar and Storage are priced as separate components but may be paired. Pairing will be determined at time of procurement.
- 8) Combustion turbine and Combined Cycle capacities (MW) reflect winter ratings.
- 9) Capacity cost for new resources based on generic unit assumptions and expressed in installed costs (including AFUDC) unless otherwise noted. Uprate capital does not include AFUDC.

**DUKE ENERGY PROGRESS, LLC’S AVOIDED COST INFORMATION PURSUANT TO 18 C.F.R. § 292-302(b)**

Duke Energy Progress, LLC (“DEP”) provides the below information in compliance with its obligations under 18 C.F.R. § 292.302(b). DEP’s most current avoided cost rates are set forth in its Application, Schedule PP(SC), and Large QF Tariff as filed in Docket No. E-100, Sub 194.

**ESTIMATED AVOIDED ENERGY COSTS  
18 C.F.R. § 292.302(b)(1)**

The estimated avoided cost on the electric utility’s system, solely with respect to the energy component, for various levels of purchases from qualifying facilities. Such levels of purchases shall be stated in blocks of not more than 100 megawatts for systems with peak demand of 1,000 megawatts or more, and in blocks equivalent to not more than 10 percent of the system peak demand for systems of less than 1,000 megawatts. The avoided costs shall be stated on a cents per kilowatt-hour basis, during daily and seasonal peak and off-peak periods, by year, for the current calendar year and each of the next five years.

**RESPONSE:**

WINTER AVERAGE AVOIDED ENERGY COST BY PERIOD (¢/kWh)

**BEGIN CONFIDENTIAL**

Year	Premium On-Peak Hours	Average AM On-Peak Hours	Average PM On-Peak Hours	Average Off-Peak Hours
2023				
2024				
2025				
2026				
2027				
2028				

**END CONFIDENTIAL**

SUMMER AVERAGE AVOIDED ENERGY COST BY PERIOD (¢/kWh)

BEGIN CONFIDENTIAL

Year	Premium	Average PM	Average
	On-Peak Hours	On-Peak Hours	Off-Peak Hours
2023			
2024			
2025			
2026			
2027			
2028			

END CONFIDENTIAL

SHOULDER AVERAGE AVOIDED ENERGY COST BY PERIOD (¢/kWh)

BEGIN CONFIDENTIAL

Year	Average	Average
	On-Peak Hours	Off-Peak Hours
2023		
2024		
2025		
2026		
2027		
2028		

END CONFIDENTIAL

Notes:

- 1) Energy costs are expressed in nominal dollars and do not incorporate additional considerations used in rate calculations.
- 2) Energy price periods are per NCUC Docket No. E-100, Sub 194.

HOUR DEFINITIONS

Season	Period	Days	Months	Hours
Winter	Premium	Mon – Fri <sup>1</sup>	Dec - Feb	6:00 am – 9:00 am
Winter	On-Peak Morning	Mon – Fri <sup>1</sup>	Dec - Feb	4:00 am – 6:00 am
Winter	On-Peak Evening	Mon – Fri <sup>1</sup>	Dec - Feb	5:00 pm – 11:00 pm
Winter	Off-Peak	Mon – Fri <sup>1</sup>	Dec - Feb	Remaining Hours + Holidays
		Sat – Sun		All Hours <sup>2</sup>
Summer	Premium	Mon – Fri <sup>1</sup>	Jun - Sept	6:00 pm – 10:00 pm
Summer	On-Peak	Mon – Fri <sup>1</sup>	Jun - Sept	2:00 pm – 6:00 pm & 10:00 pm - 12:00 am
Summer	Off-Peak	Mon – Fri <sup>1</sup>	Jun - Sept	Remaining Hours + Holidays
		Sat – Sun		All Hours <sup>2</sup>
Shoulder	On-Peak	Mon – Fri <sup>1</sup>	Mar - May, Oct - Nov	5:00 am – 9:00 am & 5:00 pm – 11:00 pm
Shoulder	Off-Peak	Mon – Fri <sup>1</sup>	Mar - May, Oct - Nov	Remaining Hours + Holidays
		Sat – Sun		All Hours <sup>2</sup>

Notes:

- 1) Excludes holidays considered as off-peak (New Year’s Day, Good Friday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and the day after, and Christmas Day).
- 2) When one of the above holidays falls on a Saturday, the Friday before will be considered off-peak; when the holiday falls on a Sunday, the following Monday will be considered off-peak.

**FUTURE RESOURCE ADDITIONS**  
**18 C.F.R. § 292.302(b)(2)**

The electric utility's plan for the addition of capacity by amount and type, for purchases of firm energy and capacity, and for capacity retirements for each year during the succeeding 10 years.

**RESPONSE:**

**PROPOSED RESOURCE CAPACITY ADDITIONS (MW)**

Year	Solar	Battery	Onshore Wind	Nuclear (Includes Uprates)	Combined Cycle (Includes Uprates)	Combustion Turbine (Includes Uprates)	Total Incremental Additions	Total Cumulative Additions
2024	338	11	-	-	-	-	349	453
2025	110	35	-	-	-	-	145	598
2026	230	89	-	-	80	-	399	997
2027	535	31	-	-	78	-	644	1,641
2028	924	220	-	-	-	-	1,144	2,785
2029	860	220	-	13	1,400	850	3,343	6,127
2030	860	20	-	13	-	-	893	7,020
2031	935	860	300	-	-	-	2,095	9,114
2032	890	-	450	-	-	-	1,340	10,454
2033	900	-	450	-	1,360	-	2,710	13,164
Total	6,671	1,499	1,200	26	2,918	850		

Notes:

- 1) Data Source: Portfolio P3 (as presented in the 2023 NC CPIRP filed in Docket No. E-100, Sub 190).
- 2) The information in the table above includes designated, mandated, and undesignated resources.
- 3) All values represent incremental MW in the year in which the resource is installed.
- 4) Data presented on a beginning-of-year basis.
- 5) Solar, energy storage, and wind additions reflect nameplate capacity ratings.
- 6) Renewables capacity listed excludes REC-Only contracts.

PROPOSED RESOURCE CAPACITY RETIREMENTS

<b>Year</b>	<b>Winter Capacity (MW)</b>	<b>Description</b>
2028	380	Roxboro 1
	673	Roxboro 2
2030	713	Mayo 1

## Notes:

- 1) Data Source: Portfolio P3 (as presented in the 2023 NC CIPRP filed in Docket No. E-100, Sub 190).
- 2) All values represent the year in which the resource is retired.
- 3) All retirements are for planning purposes only.
- 4) Retirement dates based on Coal Retirement Study presented in 2023 NC CIPRP filed in Docket No. E-100, Sub 190.

**CAPITAL AND ENERGY COSTS OF PLANNED ADDITIONS  
18 C.F.R. § 292.302(b)(3)**

The estimated capacity costs at completion of the planned capacity additions and planned capacity firm purchases, on the basis of dollars per kilowatt, and the associated energy costs of each unit, expressed in cents per kilowatt-hour. These costs shall be expressed in terms of individual generating units and of individual planned firm purchases.

**RESPONSE:**

**ESTIMATED CAPITAL AND ENERGY COSTS FOR PLANNED CAPACITY ADDITIONS**  
**BEGIN CONFIDENTIAL**

2024	338 MW Solar Capacity Cost: \$ [REDACTED]/kW Energy Cost: [REDACTED] cents/kWh
	11 MW Energy Storage Capacity Cost: \$ [REDACTED]/kW Energy Cost: [REDACTED] cents/kWh
2025	110 MW Solar Capacity Cost: \$ [REDACTED]/kW Energy Cost: [REDACTED] cents/kWh
	35 MW Energy Storage Capacity Cost: \$ [REDACTED]/kW Energy Cost: [REDACTED] cents/kWh
2026	230 MW Solar Capacity Cost: \$ [REDACTED]/kW Energy Cost: [REDACTED] cents/kWh
	89 MW Energy Storage Capacity Cost: \$ [REDACTED]/kW Energy Cost: [REDACTED] cents/kWh
	80 MW Combined Cycle Uprates Capacity Cost: \$ [REDACTED]/kW Energy Cost: [REDACTED] cents/kWh
2027	535 MW Solar Capacity Cost: \$ [REDACTED]/kW Energy Cost: [REDACTED] cents/kWh
	31 MW Energy Storage Capacity Cost: \$ [REDACTED]/kW Energy Cost: [REDACTED] cents/kWh
	78 MW Combined Cycle Uprates Capacity Cost: \$ [REDACTED]/kW Energy Cost: [REDACTED] cents/kWh



2028	924 MW Solar Capacity Cost: \$ [REDACTED]/kW Energy Cost: [REDACTED] cents/kWh
	220 MW Energy Storage Capacity Cost: \$ [REDACTED]/kW Energy Cost: [REDACTED] cents/kWh
2029	860 MW Solar Capacity Cost: \$ [REDACTED]/kW Energy Cost: [REDACTED] cents/kWh
	220 MW Energy Storage Capacity Cost: \$ [REDACTED]/kW Energy Cost: [REDACTED] cents/kWh
	13 MW Nuclear Uprates Capacity Cost: \$ [REDACTED]/kW Energy Cost: [REDACTED] cents/kWh
	40 MW Combined Cycle Uprates Capacity Cost: \$ [REDACTED]/kW Energy Cost: [REDACTED] cents/kWh
	1,360 MW Combined Cycle Capacity Cost: \$ [REDACTED]/kW Energy Cost: [REDACTED] cents/kWh
	850 MW Combustion Turbine Capacity Cost: \$ [REDACTED]/kW Energy Cost: [REDACTED] cents/kWh
2030	860 MW Solar Capacity Cost: \$ [REDACTED]/kW Energy Cost: [REDACTED] cents/kWh
	20 MW Energy Storage Capacity Cost: \$ [REDACTED]/kW Energy Cost: [REDACTED] cents/kWh
	13 MW Nuclear Uprates Capacity Cost: \$ [REDACTED]/kW Energy Cost: [REDACTED] cents/kWh
2031	935 MW Solar Capacity Cost: \$ [REDACTED]/kW Energy Cost: [REDACTED] cents/kWh
	860 MW Energy Storage Capacity Cost: \$ [REDACTED]8/kW Energy Cost: [REDACTED] cents/kWh
	300 MW Onshore Wind Capacity Cost: \$ [REDACTED]/kW Energy Cost: [REDACTED] cents/kWh

2032	890 MW Solar Capacity Cost: \$ [REDACTED]/kw Energy Cost: [REDACTED]cents/kWh
	450 MW Onshore Wind Capacity Cost: \$ [REDACTED]/kw Energy Cost: [REDACTED]cents/kWh
2033	900 MW Solar Capacity Cost: \$ [REDACTED]/kw Energy Cost: [REDACTED]cents/kWh
	450 MW Onshore Wind Capacity Cost: \$ [REDACTED]/kw Energy Cost: [REDACTED]cents/kWh
	1,360 MW Combined Cycle Capacity Cost: \$ [REDACTED]/kw Energy Cost: [REDACTED]cents/kWh

END CONFIDENTIAL

Notes:

- 1) Data Source: Portfolio P3 (as presented in the 2023 NC CIPRP filed in Docket No. E-100, Sub 190).
- 2) Energy cost includes fuel and variable O&M for combined cycle, combustion turbine, and uprate projects.
- 3) Table does not include utility-owned and already-contracted solar already in place.
- 4) Energy costs for solar, energy storage, and wind projects are shown as zero. These technologies do not have variable O&M costs in DEP's modeling; all operations costs are modeled as fixed O&M.
- 5) All resource costs are based on new build resources for this filing. Capacity costs represent inflated installed cost of new build resources.
- 6) Energy Storage capacity cost based on 100 MW/400 MWh Li-ion battery.
- 7) Solar and Storage are priced as separate components but may be paired. Pairing will be determined at time of procurement.
- 8) Combustion turbine and Combined Cycle capacities (MW) reflect winter ratings.
- 9) Capacity cost for new resources based on generic unit assumptions and expressed in installed costs (including AFUDC) unless otherwise noted. Uprate capital does not include AFUDC.

ESTIMATED CAPACITY AND ENERGY COSTS FOR PLANNED FIRM PURCHASES

The undesignated renewable resource additions listed under the 292.302(b)(2) requirement involve additions of large numbers of small power producers that will be subject to capacity and energy rates that will be negotiated or in place at the time the agreements are signed.