## **DEC Exhibit 3**

Proposed Standard Offer Power Purchase Agreement

**Docket No. E-100, Sub 167** 

## PURCHASE POWER AGREEMENT

#### between

## **DUKE ENERGY CAROLINAS, LLC**

and

## **SELLER NAME**

"Facility Name" Project

**Initial Delivery Date:** (<u>date interconnection facilities installed</u>)

# PURCHASE POWER AGREEMENT BY A QUALIFYING COGENERATOR OR SMALL POWER PRODUCER

	DUKE ENERGY CAROLINAS, LLC,
	a North Carolina Limited Liability Company ("Company"),
	and
	a(n) [insert place of formation] [insert entity type] ("Seller"), for the
	"," Project
comi Fede Regu appli of thi ident Reso (Her	eral Energy Regulatory Commission (FERC), and that construction of the Facility (was/was not) menced on or after November 9, 1978, and that the Facility is a qualifying facility as defined by the eral Energy Regulatory Commission ("FERC") pursuant to Section 210 of the Public Utility pulatory Policies Act of 1978 [and which is a small power producer as defined in G.S. 62-3(27a) - (if licable)]. The Facility as defined herein (the "Facility") shall consist of that certain [insert description are Facility including fuel type and Nameplate Capacity rating in AC and DC] [where applicable, tify any Storage Resource connected to or incorporated into the Facility along with the Storage ource's capacity (MW and MWh)] which is located at [insert facility address].  The parties are also referred to individually as a "Party" and collectively as the "Parties").  The parties are also referred to individually as a "Party" and collectively as the "Parties").
succ	essors and assigns, do hereby agree to the following.
<b>1.</b> 1.1	Seller shall sell and deliver exclusively to Company all of the electric power generated by the Facility, net of the Facility's own auxiliary electrical requirements, and Company shall purchase, receive, use and pay for the same, subject to the conditions contained in this Agreement. Upon the completion of the installation, by Company, of its system upgrades and interconnection facilities at the point of delivery of Seller's and Company's conductors, Seller shall become responsible for the payment to Company of any and all charges that may apply, whether or not Seller actually delivers any electricity to Company. If Seller requests retail electric service for the Facility's auxiliary electrical requirements from Company when Seller's generation is reduced, such power shall be provided to Supplier pursuant to a separate electric service agreement under Company's rate tariffs appropriate for such service.
	Seller shall sell and deliver exclusively to Company all of the electric power generated by the Facility, net of the Facility's own auxiliary electrical requirements, and Company shall purchase, receive, use and pay for the same, subject to the conditions contained in this Agreement. Upon the completion of the installation, by Company, of its system upgrades and interconnection facilities at the point of delivery of Seller's and Company's conductors, Seller shall become responsible for the payment to Company of any and all charges that may apply, whether or not Seller actually delivers any electricity to Company. If Seller requests retail electric service for the Facility's auxiliary electrical requirements from Company when Seller's generation is reduced, such power shall be provided to Supplier pursuant to a separate electric service agreement under Company's rate tariffs

50 51	1.4	The Contract Capacity of the Facility, as defined in the Terms and Conditions for the Purchase of Electric Power isAC kW/MW. The estimated annual energy production of the Facility			
52 53		iskWh.			
54	2.	Rate Schedule			
55		The sale, delivery, and use of electric power hereunder, and all services of whatever type to			
56		rendered or performed in connection therewith, shall in all respects be subject to and in accordance			
57		with Company's Rate Schedule PP, Electricity No. 4, North Carolina Revised Leaf No.			
58		90, [Variable Rate], [10-year Fixed Long-Term Rate] for [Distribution][Transmission]			
59		Interconnection ("Rate Schedule") and the Terms and Conditions for the Purchase of Electric			
60		Power, both of which are now on file with the North Carolina Utilities Commission			
61		("Commission"), and are hereby incorporated by reference and made a part hereof as though fully			
62		set forth herein. Said Rate Schedule and Terms and Conditions for the Purchase of Electric Power			
63		are subject to change, revision, alteration or substitution, either in whole or in part, upon order of			
64		said Commission or any other regulatory authority having jurisdiction, and any such change,			
65		revision, alteration or substitution shall immediately be made a part hereof as though fully written			
66		herein, and shall nullify any prior provision in conflict therewith.			
67		The language shows having with "Caid Data Cahadula" shall not apply to the Fixed I and Tame			
68 69		The language above beginning with "Said Rate Schedule" shall not apply to the Fixed Long-Term Rates themselves, but it shall apply to all other provisions of the Rate Schedule and Terms and			
70		Conditions for the Purchase of Electric Power, including but not limited to Variable Rates, other			
71		types of charges (e.g., administrative charges), and all non-rate provisions.			
72		types of charges (e.g., administrative charges), and an non-race provisions.			
73	3.	Initial Delivery Date			
74		The term of this Agreement shall be a minimum of 5 years when contracting for capacity payments			
75		and shall begin upon the first date when energy is generated by the Facility and delivered to the			
76		Company and continuing for the term specified in the Rate Schedule paragraph above and shall			
77		automatically extend thereafter unless terminated by either party by giving not less than thirty (30)			
78		days prior written notice. Any automatic extension of this Agreement will be at the Variable Rates			
79		in effect at the time of extension. The term shall begin no earlier than the date the Company's			
80		Interconnection Facilities are installed and are ready to accept electricity from the Seller which is			
81		requested to be The Company at its sole discretion may terminate this Agreement			
82		on, 20 (30 months following the date of the order initially approving the rates			
83		selection shown above which may be extended beyond 30 months if construction is nearly complete			
84 85		and the Seller demonstrates that it is making a good faith effort to complete its project in a timely			
86		manner <sup>1</sup> ) if the Seller is unable to provide generation capacity and energy production consistent with the energy production levels specified in Provision No. 1.4 above. This date may be extended			
87		with the energy production levels specified in Provision No. 1.4 above. This date may be ext by upon mutual agreement by both parties.			
88		by upon mutual agreement by boar parties.			
89	4.	Interconnection Facilities			
90		Unless otherwise required by Company, an Interconnection Agreement pursuant to the North			
91		Carolina Interconnection Procedures, Forms, And Agreements For State-Jurisdictional Generator			
92		Interconnections (Interconnection Standard) shall be executed by Seller, including payments of all			
93		charges and fees associated with the interconnection, before Company will accept this Agreement.			
		gible Sellers establishing a Legally Enforceable Obligation on or before November 15, 2016, and seeking payment			

<sup>&</sup>lt;sup>1</sup> Eligible Sellers establishing a Legally Enforceable Obligation on or before November 15, 2016, and seeking payment under rates approved in Docket No. E-100, Sub 140, shall continue to be eligible for such rates, even if they fail to commence delivering power to the utility on or before September 10, 2018, pursuant to Section 1.(c) of Session Law 2017-192, unless the Seller's nameplate capacity along with the combined nameplate capacity of generation facilities connected or with priority rights under the North Carolina Interconnection Procedures to be connected ahead of Seller to the same general distribution substation transformer exceeds the nameplate capacity of the transformer, as determined by Company. The term for these extended Agreements available to eligible E-100 Sub 140 Sellers shall commence on September 10, 2018 and expire no later than 15 years from that date.

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	ted:		, Seller
Witr	ness as to Seller:		
atta rece abo	on the execution by Company and Seller chments shall become an agreement for Seive and purchase from Seller the electricity described qualifying generating facilities and conditions set forth herein.	in the block provided below, this Seller to deliver and sell to Compity generated and delivered to Con	oany and for Company to mpany by Seller from the
6.	Reporting Requirements Upon request, facilities larger than 10 monthly, and day-ahead forecast of hou is required to notify the Company of pla soon as known. The Seller shall include unavailable capacity, and the reason for	urly production, as specified by the anned or unplanned outages, notified the start time, the time for return	e Company. If the Seller cation should be made as
	Resource must be charged solely by to operated and equipped in accordance which is attached hereto as Exhibit A, a (the "Energy Storage Protocol").	the Facility and the use of any S ith the system operator's Energy S	torage Resource shall be torage Protocol, a copy of
5.	Energy Storage If the Facility is to be equipped with b Resource"), the Storage Resource shal	•	
	Interconnection Facilities Charge shall equipment and is \$ per month.	If be 1.0 % of the installed cos	t of metering and other
			n Agreement, or (b) The

## Exhibit A Energy Storage Protocol

- 1. The Storage Resource must be on the DC side of the inverter and charged exclusively by the Facility.
- 2. The Storage Resource will be controlled by the Seller, within operational limitations described below.
- 3. The maximum output of the Facility, including any storage capability, at any given time shall be limited to the Facility's Contract Capacity as specified in the Agreement.
- 4. The discharge of stored energy is not permitted while the Facility has received or is subject to a curtailment instruction (i.e., system operator instruction) from the system operator if such discharge would cause the total output of the Facility to exceed the level permitted by the system operator instruction.
- 5. Ramp rates for Storage Resource shall not exceed 10 percent of the Storage Resource's capacity (MW) on a per minute basis, up or down, at any time that the facility is not generating, unless the system operator has waived this ramping limitation.
- 6. Scheduling for capturing peak pricing periods and other storage limitations:
  - a. For all (winter and summer) months/days with discrete capacity rate hour window periods ("Capacity Hour Window"), the Seller shall distribute any intended energy storage discharge of the storage device in a manner that levelizes (holds constant), on an expected basis, the total output of the Facility at the highest practical level over the duration of each specific Capacity Hour Window selected by the Seller for energy storage discharge of such calendar day, except as limited by ramp rate criteria, inverter capability, availability, state of charge and the Facility's Contract Capacity as specified in the Agreement. For clarity, total output of the Facility is not required to be held at the same level across both morning and evening Capacity Hour Windows during winter months. The Seller may, at its discretion, elect to discharge storage across either or both winter morning and evening Capacity Hour Windows, provided that the intended energy storage discharge for each Capacity Hour Window is distributed in a way that holds total Facility output constant across the respective Capacity Hour Window.
  - b. For any storage discharge occurring on weekends and holidays where only Off-Peak energy rates apply, the Seller shall be permitted to distribute discharge (if any) of the storage device across hours selected by Seller, except as limited by ramp rate criteria, inverter capability, availability, state of charge and the Facility's Contract Capacity as specified in the Agreement.
  - c. For the remaining (shoulder) months without Capacity Hour windows, the Seller shall be permitted to distribute discharge (if any) of the storage device across hours selected by Seller, except as limited by ramp rate criteria, inverter capability, availability, state of charge and the Facility's Contract Capacity as specified in the Agreement.

- 7. Company reserves the right to add or modify operating restrictions specified in these Energy Storage Protocols to the extent necessary to comply with NERC Standards as such standards may be modified from time to time during the Term. Any such modification shall be implemented by Company in a Commercially Reasonable Manner and shall be applied to the Facility and Company's own generating assets on a non-discriminatory basis. If Seller can make a commercially reasonable demonstration to Company, which is approved by Company in its reasonable discretion, that the Facility does not contribute to potential NERC compliance violations for which the modifications have been implemented, then such modifications shall not apply to the Facility.
- 8. If identification of Capacity Hours changes over the course of the term of the Agreement, Seller will make commercially reasonable efforts to work with Company to adjust the hours of charging/discharging to coincide with these updated hours. However, Seller shall not be obligated to do so in a way that compromises their original economic value contemplated for storage resource.
- 9. Seller will only be compensated for Energy and Capacity actually provided to Buyer in accordance with the terms of the Agreement.

#### Notes:

a) Other capitalized terms used in this Exhibit which have not been defined herein shall have the meaning ascribed to such terms in the Agreement to which this exhibit is attached.

## PURCHASE POWER AGREEMENT

#### between

## **DUKE ENERGY CAROLINAS, LLC**

and

## **SELLER NAME**

"Facility Name" Project

**Initial Delivery Date:** (<u>date interconnection facilities installed</u>)

Approved: Effective \_\_\_\_\_November 16, 2019 in Docket No. E-100, Sub\_16758 by Order dated

# PURCHASE POWER AGREEMENT BY A QUALIFYING COGENERATOR OR SMALL POWER PRODUCER

	DUKE ENERGY CAROLINAS, LLC, a North Carolina Limited Liability Company ("Company"),
	a North Caronna Eminted Etablity Company (Company),
	and
	a(n) [insert place of formation] [insert entity type] ("Seller"), for the
	"," Project
com by th Regroper defin type conr	eral Energy Regulatory Commission (FERC), and that construction of the Facility (was/was not amenced on or after November 9, 1978, and that the Facility is or will be a qualifying facility as define the Federal Energy Regulatory Commission ("FERC") pursuant to Section 210 of the Public Utility ulatory Policies Act of 1978 [and which is or will be a hydroelectric generating facility owned and rated by a small power producer as defined in G.S. 62-3(27a) - (if applicable)]. The Facility and herein (the "Facility") shall consist of that certain [insert description of the Facility including function of the Managery Producer and Nameplate Capacity rating in AC and DC] [where applicable, identify any Storage Resource and the Facility along with the Storage Resource's capacity (MW and Mr)] which is located at [insert facility address].
In c	reinafter, the parties are also referred to individually as a "Party" and collectively as the "Parties"). consideration of the mutual covenants herein contained, the Parties hereto, for themselves, the cessors and assigns, do hereby agree to the following:
In c	consideration of the mutual covenants herein contained, the Parties hereto, for themselves, the
In c succ	Service Requirements Seller shall sell and deliver exclusively to Company all of the electric power generated by the Facility, net of the Facility's own auxiliary electrical requirements, and Company shall purchase receive, use and pay for the same, subject to the conditions contained in this Agreement. Upon the completion of the installation, by Company, of its system upgrades and interconnection facilities at the point of delivery of Seller's and Company's conductors, Seller shall become responsible for the payment to Company of any and all charges that may apply, whether or not Seller actually deliver any electricity to Company. If Seller requests retail electric service for the Facility's auxiliar electrical requirements from Company when Seller's generation is reduced, such power shall be provided to Supplier pursuant to a separate electric service agreement under Company's rate tariffe

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50 51 52 53 54	1.4	The Contract Capacity of the Facility, as defined in the Terms and Conditions for the Purchase of Electric Power isAC kW/MW. The estimated annual energy production of the Facility iskWh.
55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70	2.	Rate Schedule  The sale, delivery, and use of electric power hereunder, and all services of whatever type to be rendered or performed in connection therewith, shall in all respects be subject to and in accordance with Company's Rate Schedule PP, Electricity No. 4, North Carolina Revised Leaf No. 90, [Variable Rate], [10-year Fixed Long-Term Rate] Option [A][B] for [Distribution][Transmission] Interconnection ("Rate Schedule") and the Terms and Conditions for the Purchase of Electric Power, both of which are now on file with the North Carolina Utilities Commission ("Commission"), and are hereby incorporated by reference and made a part hereof as though fully set forth herein. Said Rate Schedule and Terms and Conditions for the Purchase of Electric Power are subject to change, revision, alteration or substitution, either in whole or in part, upon order of said Commission or any other regulatory authority having jurisdiction, and any such change, revision, alteration or substitution shall immediately be made a part hereof as though fully written herein, and shall nullify any prior provision in conflict therewith.  The language above beginning with "Said Rate Schedule" shall not apply to the Fixed Long-Term Rates themselves, but it shall apply to all other provisions of the Rate Schedule and Terms and
71 72 73		Conditions for the Purchase of Electric Power, including but not limited to Variable Rates, other types of charges (e.g., administrative charges), and all non-rate provisions.
74 75 76 77 78 79 80 81 82 83 84 85 86 87 88	3.	Initial Delivery Date  The term of this Agreement shall be a minimum of 5 years when contracting for capacity payments and shall begin upon the first date when energy is generated by the Facility and delivered to the Company and continuing for the term specified in the Rate Schedule paragraph above and shall automatically extend thereafter unless terminated by either party by giving not less than thirty (30) days prior written notice. Any automatic extension of this Agreement will be at the Variable Rates in effect at the time of extension. The term shall begin no earlier than the date the Company's Interconnection Facilities are installed and are ready to accept electricity from the Seller which is requested to be The Company at its sole discretion may terminate this Agreement on, 20(30 months following the date of the order initially approving the rates selection shown above which may be extended beyond 30 months if construction is nearly complete and the Seller demonstrates that it is making a good faith effort to complete its project in a timely manner¹) if the Seller is unable to provide generation capacity and energy production consistent with the energy production levels specified in Provision No. 1.4 above. This date may be extended by upon mutual agreement by both parties.
90	4.	Interconnection Facilities

#### **Interconnection Facilities**

November 16, 2019 in Docket No. E-100, Sub 16758 by Order dated Approved: Effective

<sup>&</sup>lt;sup>1</sup> Eligible Sellers establishing a Legally Enforceable Obligation on or before November 15, 2016, and seeking payment under rates approved in Docket No. E-100, Sub 140, shall continue to be eligible for such rates, even if they fail to commence delivering power to the utility on or before September 10, 2018, pursuant to Section 1.(c) of Session Law 2017-192, unless the Seller's nameplate capacity along with the combined nameplate capacity of generation facilities connected or with priority rights under the North Carolina Interconnection Procedures to be connected ahead of Seller to the same general distribution substation transformer exceeds the nameplate capacity of the transformer, as determined by Company. The term for these extended Agreements available to eligible E-100 Sub 140 Sellers shall commence on September 10, 2018 and expire no later than 15 years from that date.

91 92 93 94 95 96 97		Carolina Interconnection Procedures, F Interconnections (Interconnection Stand charges and fees associated with the inte (Either sentence (a) or (b) as follows Interconnection Facilities Charge shall	ry, an Interconnection Agreement pursuant to the North orms, And Agreements For State-Jurisdictional Generator and shall be executed by Seller, including payments of all erconnection, before Company will accept this Agreement is inserted into the agreement as appropriate) (a) The be specified in the Interconnection Agreement, or (b) The label 1.0 % of the installed cost of metering and other
99 00 01 02 03 04 05 06	5.	Energy Storage If the Facility is to be equipped with be Resource"), the Storage Resource shall Resource must be charged solely by the operated and equipped in accordance with the storage of the storag	attery storage or other energy storage device (the "Storage be identified in this Agreement. In all cases the Storage he Facility and the use of any Storage Resource shall be the the system operator's Energy Storage Protocol, a copy of s may be modified from time to time by the system operator
07 08 09 10 11 12 13 14 15 16 17	attac rece abov	monthly, and day-ahead forecast of hou is required to notify the Company of pla soon as known. The Seller shall include unavailable capacity, and the reason for on the execution by Company and Seller is chments shall become an agreement for Selve and purchase from Seller the electricity	,000 kW may be required to provide prior notice of annual rly production, as specified by the Company. If the Sellement or unplanned outages, notification should be made as the start time, the time for return to service, the amount of the outage.  In the block provided below, this Agreement together with seller to deliver and sell to Company and for Company to the ty generated and delivered to Company by Seller from the year the rates, in the quantities, for the term, and upon the
		ess as to Seller:	
	Printe	ed:	, Seller
	Printe	ed:	ByPrinted:
			Title
	ACC	EPTED: DUKE ENERGY CAROLINAS LLC	This day of, 20  Mail Payment/Bill to:
	Ву_		

This \_\_\_\_\_, 20\_\_

1 1

# Exhibit A Energy Storage Protocol

- 1. The Storage Resource must be on the DC side of the inverter and charged exclusively by the Facility.
- 2. The Storage Resource will be controlled by the Seller, within operational limitations described below.
- 3. The maximum output of the Facility, including any storage capability, at any given time shall be limited to the Facility's Contract Capacity as specified in the Agreement.
- 4. The discharge of stored energy is not permitted while the Facility has received or is subject to a curtailment instruction (i.e., System Operator Instructionsystem operator instruction) from the system operator if such discharge would cause the total output of the Facility to exceed the level permitted by the system operator instruction.
- 5.—Ramp rates for Storage Resource shall not exceed 10 percent of the Storage Resource's capacity (MW) on a per minute basis, whether up or down, at any time that the Facility is not generating, unless the system operator has waived this ramping limitation.
- 6.5. When the Facility is generating, the Storage Resource shall not act to increase the net ramp rate of the Facility by more than 5 percent of the Storage Resource's capacity (MW) per minute in relation to the output from the Facility alone, over a one-minute interval, up or down, unless the system operator has waived this ramping limitation.

#### 7.6. Scheduling for capturing peak pricing periods and other storage limitations:

- For all (winter and summer) months/days with Premium Peak windowsdiscrete a. capacity rate hour window periods ("Capacity Hour Window"), the Seller shall distribute any intended energy storage discharge of the storage device in a manner that levelizes (holds constant), on an expected basis, the combined total output of solar and storagethe Facility at the highest practical level duringover the Premium Peak hours-duration of each specific Capacity Hour Window selected by the Seller for energy storage discharge of such calendar day, except as limited by ramp rate criteria and, inverter capability, availability, state of charge and the Facility's Contract Capacity as specified in the Agreement. For clarity, total output of the Facility is not required to be held at the same level across both morning and evening Capacity Hour Windows during winter months. The Seller may, at its discretion, elect to discharge storage across either or both winter morning and evening Capacity Hour Windows, provided that the intended energy storage discharge for each Capacity Hour Window is distributed in a way that holds total Facility output constant across the respective Capacity Hour Window.
- b.—For any storage discharge occurring on weekends and holidays where only Off-Peak energy rates apply, the Seller shall apply the same be permitted to distribute discharge logic that is applied to Weekdays/non-Holidays, for the respective month.
- c.b. If(if any) of the storage device is AC (MW) limited, discharge may begin prior to the Premium Peak window to allow the storage device to reach its Allowable Depth (as

defined below) of Dischargeacross hours selected by Seller, except as limited by ramp rate criteria, inverter capability, availability, state of charge and the Facility's Contract Capacity as specified in the Agreement.

- d. For the remaining (shoulder) months without Premium Peak Capacity Hour windows, the Seller shall be permitted to distribute any discharge (if any) of the storage device in a way that levelizes (holds constant) the combined outputacross hours selected by Seller, except as limited by ramp rate criteria, inverter capability, availability, state of solar charge and storage at the highest practical level during three consecutive hours beginning with the hour of sunset.
- e.c. If the storage device is AC (MW) limited, discharge may continue beyond the three-hour window until the storage device reaches its Allowable Depth of Discharge Facility's Contract Capacity as specified in the Agreement.
- 8.7. Company reserves the right to add or modify operating restrictions specified in these Energy Storage Protocols to the extent necessary to comply with NERC Standards as such standards may be modified from time to time during the Term. Any such modification shall be implemented by Company in a Commercially Reasonable Manner and shall be applied to the Facility and Company's own generating assets on a non-discriminatory basis. If Seller can make a commercially reasonable demonstration to Company, which is approved by Company in its reasonable discretion, that the Facility does not contribute to potential NERC compliance violations for which the modifications have been implemented, then such modifications shall not apply to the Facility.
- 8. If identification of Capacity Hours changes over the course of the term of the Agreement, Seller will make commercially reasonable efforts to work with Company to adjust the hours of charging/discharging to coincide with these updated hours. However, Seller shall not be obligated to do so in a way that compromises their original economic value contemplated for storage resource.
- 9. Seller will only be compensated for Energy and Capacity actually provided to Buyer in accordance with the terms of the Agreement.

#### Notes:

a) "Allowable Depth of Discharge" shall mean the MWh energy storage potential, considering the original equipment manufacturer's recommendations and any emergent operating limitations, at a given point in time.

<del>b) \_</del>

a) Other capitalized terms used in this Exhibit which have not been defined herein shall have the meaning ascribed to such terms in the Agreement to which this exhibit is attached.