



Exhibit A to Master Energy Purchase Agreement – Electric Commodity Sales (Ex. A v.09.17.18)

The following details of this Exhibit A (this “Exhibit A”) to the Master Energy Purchase Agreement – Electric Commodity Sales (the “Master Agreement”) shall, upon execution, become part of and be governed by the terms of the Master Agreement (the Master Agreement, together with this Exhibit A and any Attachment(s) hereto, to be hereinafter referred to collectively as the “Agreement”) and be dated and effective as of 04/04/2019. Capitalized terms not otherwise defined in this Exhibit A shall have the meaning ascribed to such terms in the Master Agreement.

Nature of Purchase and Sale Obligation: AEP Energy shall sell to Customer, and Customer shall purchase from AEP Energy, Customer's full usage requirements of Retail Energy at Customer's facilities based upon the retail electric energy requirements of the Service Location(s) listed on the relevant Attachment A-1.

Retail Energy Pricing: Customer's total monthly invoice may be itemized by the various costs associated with the functions specific to Retail Energy supply and delivery in the EDC service territory listed in the relevant Attachment A-1. The itemized costs shall be determined by the executed Attachment(s) hereto and as described in the Definitions of Terms below. The below Energy Price or Default Energy Price, as applicable, does not include any EDC or otherwise non-bypassable charges for services under the applicable electric rate tariff or any applicable (and not expressly included) taxes.

Term: AEP Energy shall use reasonable efforts to begin supplying Retail Energy to Customer (the “Commencement Date”) under the relevant Attachment A-1 (a) upon the meter read date that is estimated to be on or around the Anticipated Start Date specified in the relevant Attachment A-1, and (b) after AEP Energy receives confirmation that the EDC has completed its processing and has accepted the delivery service request; provided, however, that in no event shall the Commencement Date be fewer than three (3) calendar days following the Offer Expiration Time set forth in the relevant Attachment. AEP Energy shall not be liable for any lost savings or lost opportunity as a result of a delay in the Commencement Date. This Exhibit A shall remain in effect from the date hereof and the relevant Term shall continue concurrently with any Attachment A-1 then in effect, unless sooner terminated under the Agreement.

Definitions of Terms:

The following terms are applicable to all products; however, charges shall only be itemized if prescribed in the relevant Attachment A-1 and shall be calculated as prescribed in such Attachment A-1:

Energy Losses: Energy losses are costs associated with the delivery of the Retail Energy as prescribed in the applicable transmission and distribution tariffs and are incurred based on the difference between EDC metered volumes and settlement volumes provided by the Regional Transmission Organization (RTO).

Capacity: The capacity peak load contribution (PLC) is determined and provided by the EDC for each of Customer's EDC account number(s). Capacity obligations are administered by the applicable RTO and determined for Customer using its PLC and applicable rates.

Transmission: Unless the EDC is responsible for transmission service, AEP Energy shall act as Customer's agent for securing and managing Customer's transmission service during the term of the Agreement. The network service peak load (NSPL) contribution is determined and provided by the EDC for each of Customer's EDC account number(s). The Network Integration Transmission Service (NITS) or transmission obligations are administered by the applicable RTO and determined for Customer using its NSPL and applicable rates.

Ancillary Services: Ancillary services costs include all other applicable RTO and Open Access Transmission Tariff (OATT) charges not otherwise included in this Exhibit A.

RPS: Renewable Portfolio Standards (RPS) are a regulation that requires the increased production of energy from renewable energy sources. RPS requirements shall be based upon renewable compliance charges, including costs associated with meeting renewable portfolio standards and all other environmental and renewal program compliance standards at the levels required under applicable law by the EDC or by state or federal regulatory agencies. To the extent the below Energy Price or Default Energy Price, as applicable, does not include all applicable RPS requirements, the RPS will be based on AEP Energy's incurred costs and billed as a separate line item.

The following terms are applicable to certain products (as indicated in the relevant Attachment A-1); however, charges shall only be itemized if prescribed in the relevant Attachment A-1 and shall be calculated as prescribed in such Attachment A-1:

Energy Price: The Energy Price shall be determined by AEP Energy using Customer's actual and estimated historical and forecasted load data, which is considered representative of the Service Location(s)' anticipated Retail Energy requirements for the term. The Energy Price is set forth in the Attachment A-1 and applies to all Retail Energy covered under the relevant Attachment A-1, including any unmetered lighting volumes.

Summer Price: Summer pricing applies to the June meter read, as defined by the applicable EDC Meter Bill Group, and the next three (3) consecutive full meter reading periods.

Non-Summer Price: Non-summer pricing applies to all other meter reading periods not defined under Summer Price.

On-Peak Price: On-peak pricing shall apply to all usage from Monday through Friday, excluding North American Electric Reliability Corporation (NERC) holidays, from Hour Ending (HE) 0800 Eastern Prevailing Time (EPT) through HE 2300 EPT.

Off-Peak Price: Off-peak pricing applies to all usage in hours not defined under On-Peak Price.

Metering Changes: If after execution of the Attachment A-1, meters capable of measuring hourly (i.e., interval meters) electric usage are installed, AEP Energy may, in its sole discretion and using commercially reasonable assumptions, revise the Energy Price set forth on Attachment A-1 in order to reflect the financial impact occasioned by the new metering.

The following terms are applicable to certain index-based price products (as indicated in the relevant Attachment A-1); however, charges shall only be itemized if prescribed in the relevant Attachment A-1 and shall be calculated as prescribed in such Attachment A-1:

Default Energy Price: The Default Energy Price shall be based upon the applicable RTO EDC day ahead hourly locational marginal price (LMP) plus a Default Index Adder.

Default Index Adder: The Default Index Adder shall be specified in Attachment A-1. Specific to the Default Index Adder, On-Peak and Off-Peak shall be defined according to the hours as specified in On-Peak Price and Off-Peak Price defined above.

FRCQ: As an alternative to the Default Energy Price, the Parties may designate a price for a block of the Retail Energy supply (the Firm Rate Contract Quantity or "FRCQ") for the Service Location(s) located within the EDC service territory. In the case of an On-Peak and Off-Peak FRCQ, On-Peak and Off-Peak shall be defined as according to NERC. The FRCQs are listed in Attachment A-1.

Excess Usage Charge: Usage above the FRCQ shall be billed at the Default Energy Price.

Shortfall Charge (Credit): In cases where Customer's usage is less than the FRCQ (Shortfall), Customer's shortfall kWhs shall be invoiced as a credit or debit, as applicable, at the block Energy Price less the applicable RTO EDC day ahead hourly locational marginal price (LMP).

State Disclosure(s): The following provisions apply only to Service Locations located in the relevant state(s). AEP Energy's Illinois license was granted in Order No. 09-0147, Pennsylvania license number is A-2009-2132755, and New Jersey license number is ESL-0160. The District of Columbia Public Service Commission's telephone number is (202) 626-5100 and website address is www.dcpssc.org and Office of the People's Counsel's telephone number is (202) 727-3071 and website address is www.opc-dc.gov. The Maryland Public Service Commission's toll-free telephone number is (800) 492-0474 and website address is www.psc.state.md.us/intranet/home.cfm. The New Jersey Board of Public Utilities Division of Consumer Relations' toll-free telephone number is 1-800-624-0241. Applicable to Service Locations in Ohio: Customer has the right to request from AEP Energy twice within a twelve (12) month period up to twenty-four (24) months of Customer's payment history without charge; Customer may be charged switching fees by the EDC.

IN WITNESS WHEREOF, each of the Parties has caused this Exhibit A to be executed by a duly authorized representative, who, by applying his or her signature, represents and warrants full right, power, and authority to sign on behalf of the relevant Party named below, effective as of the date first written above.

AEP Energy, Inc.

Customer: Pangea Ventures LLC

Signature: _____

Signature: _____

Name: Scott D. Slisher

Name: Daniel Meister

Title: Chief Solutions Officer

Title: Operations Manager