FREQUENTLY ASKED QUESTIONS FOR INTERVAL METERING / PULSE SERVICE

- Q) How can customers obtain interval metering or pulse service?
- A) Work Orders are available electronically on FirstEnergy's web site at: http://www.firstenergycorp.com/metering. Customers should complete the applicable work order from the appropriate Operating Company and follow instructions provided to initiate the fulfillment process. A charge will be added as a line item on the customer's next electric consumption bill. Customers will be contacted by the Company to schedule a date and time to perform the interval meter or pulse service field work. All customer required field work must be completed prior to scheduling this appointment for the Company to perform the interval meter or pulse service work.
- Q) Do I need to speak to my account representative to order interval metering or pulse service?
- **A)** No. All inquiries should be processed in accordance with the steps outlined above. This will allow the Company to track the interval meter / pulse service workflow to ensure timely fulfillment.
- Q) Can my third party energy provider, consultant, or vendor initiate and coordinate the installation of my interval metering or pulse order?
- **A)** Yes. However, a letter of authorization and appropriate work order need to be completed and executed by the customer in order for a third party to initiate such a request. The contracts for interval metering and pulse service are binding between the customer and the Company.
- **Q**) What is the cost for the interval meter or pulse service?
- **A**) Please refer to the appropriate Operating Company work order. Costs will vary by Company, type of work order that is being requested and equipment needed to fulfill the request.
- **Q)** Will I be able to access my interval data?
- A) Customers can access interval data by creating or logging into their account on the FirstEnergy website here: https://www.firstenergycorp.com/content/customer/log in.html and utilizing the Analyze Usage section.
- **Q)** How are the costs for interval metering or pulse service determined?
- A) Costs vary and include type of meter required, installation charges, applicable tariff charges, and applicable taxes.
- **Q**) Are there any other equipment requirements that are the responsibility of the customer in addition to the costs by the Company to complete the work order?
- A) Yes. It is the responsibility of the customer to provide isolation protection and surge protection to the metering location within the weatherproof demarcation box. This equipment must conform to accepted industry standards and must be installed PRIOR to the installation of the interval meter. See the Pulse Service Interface Box Requirements diagram on the website here: https://www.firstenergycorp.com/content/dam/customer/metering/Pulse_Service_Interface_Box_Connection_1-23-09.pdf
- **Q)** Who determines the customer's meter read schedule for interval metered customers?
- A) The Company determines meter read schedules based on meter reading system availability.
- **Q)** When is interval metering required?
- **A)** Interval metering is required pursuant to the retail tariffs of the Companies. Please consult the applicable tariffs for further information.
- **Q**) Can you describe a form "A" circuit in more detail?
- **A)** A form "A" circuit is a 2 wire circuit used for counting pulses. In a form "A" circuit there are 2 wires, a common wire called "K" and one sensing wire called "Y". In this type of circuit, counting occurs by sensing a change of state, generally from low to high, on

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the "Y" sensing wire. This change of state causes the end device, generally a demand controller or recording device, to increment its counter by one. Typically, this is the type of circuit used by the customers end device.

- Q) Can you describe a form "C" circuit in more detail?
- A) A form "C" circuit is a 3 wire circuit used for counting pulses. In a form "C" circuit there are 3 wires, a common wire called "K" and 2 sensing wires called "Y" and "Z". In this type of circuit, counting occurs by sensing a change of state, generally from low to high, on either the "Y" or "Z" sensing wires. Each one of these changes of states causes the end device, generally a demand controller or recording device, to increment its counter by one. This is the type of circuit connected between the utilities meter and the pulse interface box.
- **Q**) Are there voltage and current limits for the pulse circuit?
- A) Yes, there are limits on the maximum wetting voltage and maximum current draw for pulse circuits. The wetting voltage is the voltage applied by the customers end device used for sensing a change of state. The maximum wetting voltage that can be applied for this purpose is 240V AC or 120 V DC. The maximum current draw on pulse circuit is 60mA AC or DC. The customer is responsible for ensuring these limits are not exceeded.
- **Q**) I want to connect my demand controller or recorder in close proximity to the revenue meter. How do I mount my equipment and how do I power up my equipment?
- A). Customer owned equipment of this type cannot be mounted on Company owned equipment. Also, the customer is responsible for powering his customer owned equipment, as there are no voltage connections available at the existing meter base. The customer is responsible for providing isolation protection between the customer's equipment and the Company's meter. The Company reserves the right to refuse to connect or reconnect pulses should an isolation problem exist or cause a failure of pulse circuitry in the meter. The customer may be charged a \$50 investigation fee to troubleshoot pulse service problems, including pulse value calculations after the installation, up to the Pulse Service Interface Box. Maximum wetting voltage is 240V AC or 120V DC with a maximum current draw of 60mA AC or DC.