

**Niagara Mohawk Power
Corporation Docket No.
ER25-312-000**

**Filing of Large Generator Interconnection Agreement with Sterling Power Partners, L.P.
(Alliance Energy), Fourth Revised Service Agreement No. 1144**

ATTACHMENT C

Supplemental Affidavit of Michael Falls

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

Niagara Mohawk Power Corporation)	Docket No. ER25-312-000
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**SUPPLEMENTAL AFFIDAVIT OF MICHAEL FALLS IN SUPPORT OF NIAGARA
MOHAWK POWER CORPORATION’S SUBMISSION OF AN AMENDED AND
RESTATED LARGE GENERATOR INTERCONNECTION AGREEMENT WITH
STERLING POWER PARTNERS L.P.**

I, Michael Falls, being duly sworn, depose and say as follows:

1. This supplemental affidavit is being made on behalf of Niagara Mohawk Power Corporation d/b/a National Grid (“Niagara Mohawk”). The statements made herein are true and correct to the best of my knowledge and belief, and I adopt them as my sworn testimony in this proceeding.

2. In my Affidavit submitted on behalf of Niagara Mohawk in this proceeding on December 6, 2024 (“December 6 Affidavit”), I summarized (i) my qualifications; (ii) my participation in the needs assessment of Niagara Mohawk’s Oneida Substation; (iii) my knowledge of the Sterling Attachment Facilities (defined below) and the need for their replacement; (iv) the redesign of the Oneida Substation from a straight bus design to a breaker and a half scheme and Niagara Mohawk’s reason for that determination; (v) the need for installation of updated System Protection Facilities; and (vi) the location of the Connecting Transmission Owner Attachment Facilities that are for the sole use of the Sterling Generating Facility.

3. I am submitting this supplemental affidavit to explain what triggered the need to replace and reconfigure the Sterling Attachment Facilities. I also conclude that their replacement and reconfiguration is not triggered by, nor does it result in, a material modification to the operating

characteristics of the Sterling Generating Facility. The Commission has requested Niagara Mohawk to provide this information in response to the deficiency letter issued by Kurt M. Longo, Director, Division of Electric Power Regulation – East on December 30, 2024, in this proceeding (“Deficiency Letter”).

4. The Oneida Substation is a 115-kV/13.2-kV air-insulated substation constructed in 1961 with a vertical bus design. As I mentioned in my December 6 Affidavit, seven 115-kV transmission lines interconnect to the Oneida Substation, including a 115-kV radial generation tie line (“Line No. 4”) that is dedicated to the sole use of Sterling Power Partners L.P. (“Sterling Power Partners”). Line No. 4 enters the Oneida Substation yard and connects to switch #43, 115-kV circuit breaker R40, and switch #41, which together, are classified as Connecting Transmission Owner Attachment Facilities dedicated to the sole use of the Sterling Generating Facility (“Sterling Attachment Facilities”). The Sterling Attachment Facilities are housed within the design and footprint of the Oneida Substation, but because of switches #43 and #41, are electrically isolated from the other substation components.
5. As early as 2021, Niagara Mohawk identified notable asset deficiencies due to the age and condition of various critical components at the Oneida Substation. Niagara Mohawk has concluded that five 115-kV oil circuit breakers require replacement. My field engineers have monitored these oil circuit breakers for years and reported a history of leaks and mechanism issues particular to each. The original equipment manufacturers of the oil circuit breakers no longer have replacement inventory as the components have a mixed vintage ranging from 1959 to 1962. Other asset deficiencies at Oneida Substation include worn components applicable to nineteen manual gang-operated disconnect switches and 90 cap and pin insulators, which are

original to the 1961 construction of the facility. Niagara Mohawk has determined that all this equipment is at the end of its useful life. For instance, switches #41 and #43 that are classified as Sterling Attachment Facilities are two of the nineteen manual gang-operated disconnect switches that require replacement.

6. In its design of the rebuilt Oneida Substation, Niagara Mohawk is adding a new circuit breaker (Breaker R815) that may be utilized, in part, to help isolate the Sterling Generating Facility during certain operation and maintenance work and other outage conditions at Oneida Substation. Breaker R815 will also be utilized to isolate the 115-kV Teall-to-Oneida Line, which we refer to as “Line No. 2.” Breaker R815 will be a shared use facility, half dedicated to the Sterling Generating Facility, and half dedicated to Line No. 2. However, as can be seen in Amended Figure A-1 in Attachments A and B contained in Niagara Mohawk’s Response to the Deficiency Letter, the point of interconnection for the Sterling Generating Facility to Niagara Mohawk’s transmission system will be located between switch #43, which is located on the generator-side of the point of interconnection, and Breaker R815, which is located on the transmission-side of the point of interconnection. Because of the intended shared use of Breaker R815, Niagara Mohawk is not classifying Breaker R815 as a Connecting Transmission Owner Attachment Facility. Nor is Niagara Mohawk proposing to charge Sterling Power Partners for Niagara Mohawk’s investment cost or operation and maintenance expense specific to Breaker R815. The Sterling Attachment Facilities remain the same under the Amended LGIA as they appear in the earlier version of the LGIA: *“Oneida - Sterling # 4 line - a 2.5 mile long Single-circuit 115kV line and the associated Circuit breaker # 40B and switches 43B and 41B (including associated controls/protection/communication/power equipment and facilities).”* Niagara Mohawk is not proposing to add additional equipment to what Sterling

Power Partners is already responsible for. Niagara Mohawk intends on decommissioning and replacing the existing Sterling Attachment Facilities as part of the replacement of the Oneida Substation, but does not plan to add Breaker R815 nor even half of Breaker R815 to the list of Sterling Attachment Facilities in the Amended LGIA.

7. Although Sterling Power Partners will benefit by the installation of Breaker R815 as part of the new breaker-and-a-half design at the replaced Oneida Substation, no costs applicable to that breaker will be directly assigned to Sterling Power Partners.
8. A breaker-and-a-half substation design consists of two main buses, and features one circuit breaker between every two circuits, resulting in 1.5 breakers per circuit. Oneida Substation is currently configured as a single breaker design, meaning one breaker per circuit. There are several drivers triggering the need to reconfigure the Oneida Substation from a single breaker vertical bus design to a breaker-and-a-half horizontal bus design. First, National Grid as the owner of public utility systems in New York and New England has adopted the breaker-and-a-half substation design as its preferred substation configuration enterprise wide as demonstrated in National Grid's TGP28 Transmission Planning Guide that National Grid makes available on its public OASIS website <https://www.nationalgridus.com/Oasis/Filings-and-Studies>. Second, substations that are equipped with a breaker-and-a-half design permit for better isolation of substation circuits. For instance, once reconfigured, Niagara Mohawk may take several circuits at Oneida Substation into an outage state while isolating the Sterling Generating Facility from that interruption, thus permitting Sterling Power Partners to continue to dispatch power from their facility notwithstanding the other circuits that are in an outage state. Third, this operational flexibility should result in more unfettered opportunities for

Sterling Power Partners to participate in the NYISO's wholesale markets notwithstanding other operation and maintenance work occurring at Onedia Substation simultaneous to dispatch. Fourth, Niagara Mohawk finds that the horizontal bus design better ensures against safety risks caused by limited work space due to the close proximity of parallel buses. Electrical worker safety is taken into account anytime a facility is modified or rebuilt at Niagara Mohawk.

9. If Niagara Mohawk reconfigures the entire Oneida Substation to a breaker-and-a-half design, but for the Breaker R40 Sterling Attachment Facility, Sterling Power Partners will not obtain the benefit of uninterrupted dispatch while other circuits at Oneida Substation are placed into outage state for operation and maintenance activities. Instead, Sterling Power Partners would be foreclosed from dispatching power while other circuits are in outage state as is the case today. Additionally, it is impractical in the engineering sense to redesign six out of seven circuits in a breaker-and-a-half configuration and to exclusively leave Sterling Power Partner's circuit in a single breaker design. It would hinder some of the benefits of the Oneida Substation rebuild for Sterling Power Partners and increase costs for all customers to accommodate the unconventional single breaker and breaker-and-a-half hybrid substation design that Sterling Power Partners proposes—price tag—sight unseen.
10. Neither the replacement nor reconfiguration of Oneida Substation is triggered by, nor does it result in, a material modification to the operating characteristics of the Sterling Generating Facility. The voltage criteria during switching and steady state switching at rebuilt Oneida Substation will not change from the voltage criteria observed at Oneida Substation at the present time. Niagara Mohawk is, however, adding a new capacitor bank to the design of the rebuilt Oneida Substation at the expense of its native load customers to help maintain 115-kV

voltage to mitigate the effect on the system that the eventual retirement of the Sterling Generating Facility is expected to cause. This redundancy assured by the addition of the capacitor bank is informed by Good Utility Practice and is not an expense to Sterling Power Partners.

11. This concludes my supplemental affidavit.

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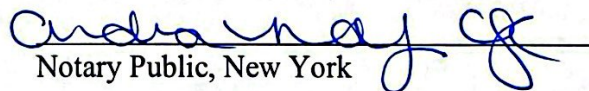
Before me, the undersigned Notary Public, in and for the State of New York, personally appeared Michael Falls, who being by me first duly sworn, deposes and states that he is the individual identified and providing information in the attached *Supplemental Affidavit* and the same is true and correct to the best of his knowledge, information and belief.



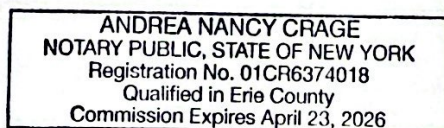
Michael Falls

State of New York: SS

Sworn to and subscribed before me this 29th day of January 2025.



Notary Public, New York



My commission expires: 4/23/2026