DRAFT: Response from DE to Energy Services with Supplemental Screen Results
Template, v1, February 2017

DATE: [January 1, 2017]

TO: [Customer Project Manager Name], Energy Services - Customer Project Manager

FROM: [Engineer Name], Distribution Engineering, System Design - Engineer

RE: [Applicant Name]
[Applicant Address]
Supplemental Analysis
[DG Technology] distributed generation application
Application File No: MC – [123456]

Project Summary

[Example]
The customer presently has a **[low tension, 3-phase, 120/208V]** electric service. M&S plate **[xx]** indicates that the address has a **[xx]** service off the **[xx] network/load area**.

This project application includes the installation of a **[xx] kW (AC) solar PV inverter system** interconnected with Con Edison's distribution system under the **Net Metering (Rider R)** rate for a non-residential customer. The proposed system consists of **[xx]** paralleled inverters powered by solar panels. The documents submitted with the application show the selected inverters to be the same brand which is **[Manufacturer]** **[xxkW, x-phase, voltage, 60 Hz inverter]**, Model **[xx]**. The inverter is listed on the NYS DPS's "Certified Interconnection Equipment" list. To be considered for parallel operation with Con Edison's distribution system, the customer's DG facility must meet all the requirements contained in the March 2016, New York State Public Service Commission's Standard Interconnection Requirements (SIR).

The account customer has authorized [**Contractor Name and Company**] to act on their behalf in the installation and application process of this DG project.

Supplemental Screening Analysis Results: PASS/FAIL

Screen G: Supplemental Penetration Test: [PASS (if less than 100% min load)/FAIL (if more than 100% min load)]

The capacity of the DG measuring at [xx kW] exceeds and [is/is not] less than 100% of the minimum load observed over the last 12 months for all line sections bounded by utility equipment upstream from the DG. Historical customer load data and RMS transformer profiles obtained have shown approximate maximum load values of xx kW – xx kW, over the last 12 months.

Screen H: Power Quality and Voltage Tests: [PASS (if all yes) /FAIL (if any no)]
In aggregate with existing generation on the Line Section,

a. Can it be determined within the Supplemental Review that the voltage regulation on the line section can be maintained in compliance with current voltage regulation requirements under all system conditions? [Yes/No]

b. Can it be determined within the Supplemental Review that the voltage fluctuation is within acceptable limits as defined by IEEE 1453 or utility practice similar to IEEE1453? [Yes/No]

c. Can it be determined within the Supplemental Review that the harmonic levels meet IEEE519 limits at the Point of Common Coupling (PCC)? [Yes/No]

[Technical reasons, data, and analysis supporting results]:

Screen I: Safety and Reliability Tests: [PASS (if does not)/FAIL (if does)]

The location of the proposed DG or the aggregate generation capacity on the Line Section [does/does not] create specific impacts to safety or reliability that cannot be adequately addressed without a detailed study.

[Technical reasons, data, and analysis supporting results]:

[If any Screen **FAILS**]:
The applicant's proposed system cannot pass all of the relevant technical screens. The applicant shall notify Con Edison within ten (10) business days whether to proceed to a Supplemental Analysis results meeting, proceed to a full CESIR, or withdraw the project.

[If all Screens **PASS**]:

This project has passed all of the relevant technical screens, and this customer's design as shown in this revision of the diagram, **does meet** the basic design and interconnection requirements of the New York State Public Service Commission SIR.

Please forward an executed Appendix A to the Customer with the following design review comments (below) for their follow up action. The applicant may begin construction in accordance with this utility-accepted design. All comments below must be addressed and approved before the applicant requests an inspection.

Design Review Comments

1. **[Drawing Comments]**
   Resubmit the Three-Line Diagram (Drawing Name 'PV System Line Diagram', Revision Date **[xx]**) to fix or include the following key points:

   a. **[example]** Indicate the incoming service characteristics on the drawing, including voltage and cable size.

   b. **[example]** Please differentiate between all new and existing equipment.

   c. **[example]** Please include the existing PV system on the drawing since an updated drawing with all generating equipment has to be posted near the utility meter and the Generator Disconnect Switches.

   d. **[example]** Indicate the drawing number.

   e. **[example]** Indicate the changes made in the revision in the Issues/Revisions box.

2. **[Equipment Specifications]**
   [example]: Please provide the manufacturer's cut-sheet for the generator disconnect switch. Note that the generator disconnect switch has to be an external, manual, visible, gang operated load break disconnect switch to meet the requirements of the SIR.

3. **[Testing Procedures]**
   Include the following items to the Pre-Operation Verification Test Procedure, in addition to the steps already submitted:

   a. **[example]:** For the grid outage test showing that all inverters will immediately stop producing during a utility outage simulated by the opening of the generator disconnect switch, indicate that the test is for [**xx**] inverters and list them in the test procedure.

   b. **[example]:** For the time delay test for inverter startup verifying inverters do not start producing for a minimum of 5 minutes upon return of the utility source simulated by the closing of the generator disconnect switch, indicate that the test is for [**xx**] inverters and list them in the test procedure.

   c. **[example]:** Refer to all equipment operated in the verification test as it is labeled on the three-line diagram.

   d. **[example]:** Include the location of all equipment operated in the verification test.

4. **[Other]**
   [example]: There is existing distributed generation at this location. The submitted SIR Appendix B indicates that there is not. Resubmit a signed copy of the SIR Appendix B to indicate there is existing distributed generation, provide information about the existing generation and include the details on the electrical drawing.

General requirements for all DG interconnections:

A. Provide the load dispatcher name and phone number you wish to appear in the First Amendment (document to follow). Note that this contact is required to be available at this phone number 24 hours, 7 days a week. The contact will need to be available for communications regarding emergency operation of customer equipment and may need to provide access to their equipment if necessary.

B. The generator disconnect switch (intertie disconnect) shall provide a visible break, manual, gang-operated, load break, lockable, and accessible isolating device.

C. At the location, and on the drawing, identify and clearly label the "DEVICE 89 - GENERATOR DISCONNECT SWITCH" with permanent 3/8 inch letters or larger.

D. The panel board housing the inverter circuit breakers should be labeled "DEVICE 52IT PANEL" with the individual breakers labeled as 52IT-1, 52IT-2, et cetera, to correspond with the associated inverter.

E. Labeling of all inverters, junction boxes, combiner boxes, array strings, and fuses at the site is required.

F. Field installation and one/three-line diagram should match 100%. All equipment concerning the DG installation at this site should be shown on this diagram. The system diagram must comply with Con Edison's System Diagram checklist.

G. Any revisions to the one/three-line diagram should include an updated revision number, date, and comments on the diagram that briefly indicate the changes made. This must be uploaded to Project Center and approved before any inspection is conducted by Con Edison.

H. Per the NYS SIR, the verification testing procedure will need to be performed every four years and results logged.

I. All documentation and proper drawings should be submitted and approved prior to the testing and commencement of operation of your equipment. This includes certified relay test reports where applicable.

J. The one-line diagram shall be laminated and displayed on site within close vicinity of the Con Edison revenue meter and any other generator disconnects downstream. Signage at the revenue meter should include that the meter is fed from two sources. Additional signage shall also be included as to the location of the disconnect switch.

Testing and Inspection

Please make an appointment with the CPM, **[name]**, once all documentation is submitted and drawings are approved for a site inspection. **Note that a site inspection will not be scheduled until the installation passes DOB or local municipality inspection and ALL outstanding items have been addressed.** Please ensure that the system is entirely complete, operational, and passes the verification testing procedure before scheduling a site inspection.

The generator-owner/contractor shall be responsible for ongoing compliance with all applicable local, state, and federal codes and standardized interconnection requirements as they pertain to

the interconnection of the generating equipment. Note that the New York State Building Code may require additional certifications.

Please forward the above review findings to the application agent.