**Witness Testing Documentation Checklist (MA-DG)**

The customer must provide at least **25 business days advanced notice** prior to the scheduling a witness test.

Please carefully review your Conditional Approval email (and any attachments) for any additional documentation

Requirements that are specific to your application. After reviewing the Conditional Approval email, please use this

checklist to ensure that you provide all necessary project completion documentation.

*For any documents provided by National Grid, please verify that the legal contact information has been entered correctly. If corrections or updates need to be made, please submit an up-to-date copy of the* [**Legal Information Document**](https://www9.nationalgridus.com/non_html/DG_Legal_Information_Document.doc).

Updated versions of all forms may be found on National Grid’s “Interconnection Documents” webpage: [**https://www9.nationalgridus.com/masselectric/home/energyeff/4\_interconnection-documents.asp**](https://www9.nationalgridus.com/masselectric/home/energyeff/4_interconnection-documents.asp)

Please reference Frequently Asked Questions (FAQ) for answers on several different topics: [Frequently Asked Questions (FAQ)](https://www9.nationalgridus.com/masselectric/business/energyeff/4_faq.asp)

|  |  |  |  |
| --- | --- | --- | --- |
| **For DG Application:** |  | **Customer Submission** | **National Grid** |
| **1** | National Grid requires the customer shall complete the “Witness Test Procedure” document in sufficient detail, and provide applicable supporting documentation such as project drawings, to identify the scope of work for each individual test necessary to demonstrate that the Connection Requirements have been met, including without limitation, the Company’s **Electric Service Bulletin (ESB) 756 and Institute of Electrical and Electronics Engineers (IEEE) 1547 along with the M.D.P.U. 1320**. The Company is relying upon the information provided by the customer herein, and the customer shall ensure that all information provided is true, complete and accurate.  | Select Action | Select Action |
| **a)** | [National Grid Witness Test Guidelines](file:///C%3A%5CUsers%5CCallas%5CDocuments%5C01-witness_test_guideline_2016-2017%5CNG_DG_MA_RI_witness_test_guideline_20161228.pdf)  | Select Action |
| **2** | Please download the **National Grid Witness Test Procedure** PDF document. Please save to local drive and utilize the interactive edit enabled PDF format to complete the National Grid Witness Test.  | Select Action | Select Action |
| **a)** | [National Grid Witness Test Procedure (edit enabled PDF document)](file:///%5C%5Cnyhcbdrs11v%5Cshared%5CInterconnection%5C21_Templates%5Cmulti_state_documents%5CNGrid_Witness_Test_Procedure_live_20170103.pdf) | Select Action |
| **b)** | A printable **National Grid Witness Test Procedure** PDF document is also available. Please “Ctrl+Click” the link below and save to local drive. Print out the applicable pages to Your local printer.  | Select Action | Select Action |
| **b.1)** | [National Grid Witness Test Procedure (edit enabled PDF document)](file:///%5C%5Cnyhcbdrs11v%5Cshared%5CInterconnection%5C21_Templates%5Cmulti_state_documents%5CNGrid_Witness_Test_Procedure_live_20170103.pdf) | Select Action |
| **c)** | Please scan the completed **National Grid Witness Test Procedure** and email documentsto the respective: | Select Action | Select Action |
| **All DG applications in the Standard Process must undergo a witness test. In preparation for the witness test.****The customer must submit the following Items for approval.** |
| **3** | **Commissioning Memo** | *Shall be signed and dated on* ***Electrical Company/ Installation Contractor*** *letterhead, AND include/provide all of the following statements with Frequency (Hz) Listing* **Under-Frequency Trip Settings for DG Systems Requirements:** 1. **30kW (AC) or below (Aggregate Generation)**
2. **Above 30kW (AC) (Aggregate Generation)**
 | Select Action | Select Action |
| **Please see link to NPCC Curve guide below – Under section e.1** |

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | **Customer Submission** | **National Grid** |
| **3** | **Commissioning Memo (continued)** | energy_lines |  |  |
| **a)** | The system passed the “**2 seconds shutdown**, when utility disconnect is open” test.  | Select Action | Select Action |
| **b)** | The system passed the “**5 minutes before restart**, after utility disconnect is closed” test.  | Select Action | Select Action |
| **c)** | A **visual inspection** confirms that the system matches the As-Built electrical **One** or **Three** line diagram dated (**most recent one-line or three-line date**) and signed with date matching the commissioning memo date. | Select Action | Select Action |
| **d)** | The relay frequency settings identified in the relevant interconnection standards **M.D.P.U. No. 1320, Section 4.2.3.2.1b** **Frequency** and in the Screening Memo and/or Supplemental Review Memo are adhered to and have been tested. Provide field proof, via ***statement/table*** in memo, if field difficult, providing additional support documentation and noted as such in Commissioning Memo is acceptable. | Select Action | Select Action |
| **e)** | List Inverter internal relay ***frequency (Hz) and time settings***.**NOTE:** If field testing is difficult, additional support documentation may be accepted. Please follow the link for guidance: | Select Action | Select Action |
| **e.1)** | [**MA\_DG\_UF\_Trip\_Settings\_Letter.pdf**](https://www9.nationalgridus.com/non_html/UF_trip_settings_letter_20161227.pdf) | Select Action |
| **4** | A complete **As-Built** **P.E.-Stamped** **One-Line Diagram\*** ***(must be signed and dated on the of the commissioning test by the contractor responsible for the commissioning test)*** | Select Action | Select Action |
| **5** | [**Exhibit C2**](http://www.nationalgridus.com/non_html/MA_DG_Exhibit_C2.doc)**Attachment 2** | Expedited/Standard Certificate of Completion or P.T.O (Permission to Operate) *(must be signed by the Authority Having Jurisdiction at the time of electrical inspection)* | Select Action | Select Action |
| **a)** | [MA\_DG\_Exhibit\_C2\_Attachment\_2.doc](https://www9.nationalgridus.com/non_html/MA_DG_Exhibit_C2.doc) | Select Action |
| **6** | P.E.-Stamped Three-Line Diagram | Select Action | Select Action |
| **a)** | **Relay Configuration** | *Configuration of all internal and redundant relays* | Select Action | Select Action |
| **b)** | Includes any transformers, grounding equipment, etc. | Select Action | Select Action |
| **c)** | **Post-Study Changes** | *The diagram must also incorporate any changes noted in the Impact and/or Detailed Studies.* | Select Action | Select Action |
| **7** | **Witness Testing Plan(s)** | *The witness test plan must meet the criteria addressed in National Grid’s Witness Test Guidelines. Witness Testing may include (but not limited to):* | Select Action | Select Action |
| **a)** | **CT’s & VT’s Testing Reports** | Select Action | Select Action |
| **b)** | **Power Start Up Plan** | Select Action | Select Action |
| **c)** | **Relays** | Select Action | Select Action |
| **d)** | **DTT (Direct Transfer Trip)** | Select Action | Select Action |
| **e)** | **RTU (Remote Terminal Unit)** | Select Action | Select Action |
| **8** | **CustomerPre-Test**  | *Prior to the official witness test the customer must perform a pre-test that verifies the functionality of all aspects listed on the witness testing plan(s).* | Select Action | Select Action |
| **9** | Proposed Witness Testing Date(s) (Depending on the Testing required) | Click here to enter a date. | Select Action |
| **10** | Proposed Back-up Witness Testing Date(s) (Depending on the Testing required)  | Click here to enter a date. | Select Action |