g GE Energy	**Functional Testing Specification**
Parts & Repair Operations ***Louisville, KY***	**LOU-GEF-IC600RPU**

Test Procedure for Series Six Redundant Processor Unit

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1. SCOPE

1.1 This is a functional testing procedure for a Series Six Redundant Processor Unit.

2. STANDARDS OF QUALITY

2.1 Refer to the current revision of the IPC-A-610 standard for workmanship standards.

3. APPLICABLE DOCUMENTS

3.1 The following document(s) shall form part of this specification to the extent specified herein. Unless otherwise indicated, the latest issue shall apply.
3.1.1 Check board's electronic folder for more information.

4. ENGINEERING REQUIREMENTS

4.1 Equipment Cleaning
4.1.1 Equipment should be clean and free of debris prior to applying power unless performing an initial check. Refer to site specific SRA's for cleaning guidelines.
4.2 Equipment Inspection
4.2.1 Equipment should be visually inspected for any defects prior to applying power. This inspection should include the following as a minimum:
4.2.1.1 Wires: broken, cracked, or loosely connected
4.2.1.2 Terminal strips / connectors: broken or cracked
4.2.1.3 Components: visually damaged
4.2.1.4 Capacitors: bloated or leaking
4.2.1.5 Solder joints: damaged or cold
4.2.1.6 Circuit board: burned or de-laminated
4.2.1.7 Printed wire runs / Traces: burned or damaged

5. EQUIPMENT REQUIRED

5.1 The following equipment is required to perform the process requirements. Equipment may be substituted provided that all accuracy's and test ratios are equivalent or better.

Qty	Reference #	Description
1		S6 RPU Test Rack System

6. TESTING PROCESS

6.1 SETUP

6.1.1 Turn off the power to RPU-CPU1, RPU-CPU2, RPU I/O 1, RPU I/O 2 and RPU-Main.

6.1.2 Connect the data cable between the bottom ports of each the Data Control card and the CPU Switch cards of the customers RPU.

6.1.3 Connect the top port of the CPU Switch card of the customers RPU to the bottom port of the CPU1 I/O Control card.

6.1.4 Connect the middle port of the CPU Switch card of the customers RPU to the bottom port of CPU2 I/O Control card.

6.1.5 Connect the top port of the I/O Switch card of the customers RPU to the top port of RPU I/O 1.

6.1.6 Connect the bottom port of the I/O Switch card of the customers RPU to the top port of RPU I/O 2.

6.1.7 Disconnect the edge connector from the I/O Switch card of the shop RPU and connect it to the I/O Switch card of the customers RPU.

6.2 TEST PROCESS

6.2.1 Turn on power to both RPU-CPU1 and RPU-CPU2.

6.2.2 Turn on power to RPU I/O 1 and RPU I/O 2.

6.2.3 Turn on power to the customers RPU.

6.2.4 Turn the CPU Key Switch (labeled “Auto”) of the customers RPU (located on the power supply) to the CPU1 position.

6.2.5 Ensure that the Device Switch card reads “1” on its BCD display and that the “CPU1” LED of the Device Switch card is lit.

6.2.6 Turn off RPU-CPU1.

6.2.7 Ensure that the Device Switch card switches from CPU1 to CPU2 (as indicated by the corresponding LEDs) when RPU-CPU1 is turned off.

6.2.8 Turn on RPU-CPU1.

6.2.9 Ensure that the Device Switch card switches back from CPU2 to CPU1.

6.2.10 Turn the CPU Key Switch (labeled “Auto”) of the customers RPU to the CPU2 position.

6.2.11 Ensure that the Device Switch card reads “1” on its BCD display and that the “CPU2” LED of the Device Switch card is lit.

6.2.12 Turn off RPU-CPU2.

6.2.13 Ensure that the Device Switch card switches from CPU2 to CPU1 (as indicated by the corresponding LEDs) when RPU-CPU2 is turned off.

6.2.14 Turn on RPU-CPU2.

6.2.15 Ensure that the Device Switch card switches back from CPU1 to CPU2.

6.2.16 Repeat steps 7.4 – 7.15 for RPU I/O 1 and RPU I/O 2.

6.2.17 Reverse section 6 to disconnect the customers RPU and reconnect the shop RPU.

6.2.18 Turn on power to both RPU-CPU1 and RPU-CPU2.

6.2.19 Turn on power to RPU I/O 1 and RPU I/O 2.

6.2.20 Turn on power to the shop RPU.

6.3 ***Test complete***.

7. NOTES

7.1 None at this time.

8. ATTACHMENTS

8.1 None at this time.