

Dyess AFB
Replace Substation Alpha Relay – Building 11912
FA466126R0010
Questions & Answers

1. What does the switch gear feed and how critical it is?
 - a. It feeds base housing
2. Does the new Relay connect to a Scada or any control system (like online)?
 - a. Equipment is not set for remote operations. No SCADA
3. Electrician on site said he does not have previous Relay with original program but maybe an email with it, in case they don't find program my programmer will need parameters to program, will someone get those to us?

SECTION 5
COORDINATION STUDY

Table 5-1 Substation Relay Settings

Device Location	Device Type		Device Settings							Device Pickup	
			CT Ratio	TOC Tap	TOC Time Dial	IIT Range	IIT Setting	TOC Amps	IIT Amps (Min)		
Switch Station A Feeder	GE 12IAC77B3A	50/51 Phase	400:5	80	2.5	2	6-30	30-150	50	200	4000
Switch Station A Circuit A1	GE 12IAC77B2A	50/51 V-Inv TOC	400:5	80	1.5	2	2-10	10-50	50	120	4000
Switch Station A Circuit A1	GE 12IAC77B2A	50/51 Ground	400:5	80	1.5	2	2-10	10-50	50	120	4000
Switch Station A Circuit A2	GE 12IAC77B3A	50/51 Phase	400:5	80	2.5	2	6-30	30-150	50	200	4000
Switch Station A Circuit A2	GE 12IAC77B2A	50/51 V-Inv TOC	400:5	80	1.5	2	2-10	10-50	50	120	4000
Switch Station A Circuit A2	GE 12IAC77B2A	50/51 Ground	400:5	80	1.5	2	2-10	10-50	50	120	4000

4. Clarify if the replacement and programming would be associated with the GE Multilin 850 Feeder protection relay in the A2-West housing or if the replacement will be in relation to the GE 760 relays.
 - a. It is my understanding that these 850's were meant to be an upgrade to the 760 but programmed to operate on the same parameters.
5. The existing relay observed in the A2-West housing is a **GE Multilin 850 Feeder Protection Relay**. The RFQ references replacement of existing GE 760 relays with new GE 850 relays. Please confirm whether the existing GE 850 relay in A2-West is to be replaced and whether any GE 760 relays remain within the project scope.
6.
 - a. The GE multilin 850 will be the relay used for both pieces of gear.

7. Please confirm the existing **CT ratio(s)** associated with each feeder protection relay. If the ratios differ between feeders, please provide the ratio for each.

a. Please see #3 above.

8. We understand the existing switchgear has been de-energized for over one year. Please confirm whether any inspection, maintenance, or electrical testing of the existing switchgear, circuit breakers, CTs, PTs/VTs, control power, or associated equipment will be required prior to re-energization. If so, please provide the required testing scope.

a. Yes, comprehensive inspection, maintenance, and testing are strictly required before re-energizing. Operating equipment that has been idle for some time risks catastrophic failure, arc flash, and injury due to moisture, dust, hardened grease, and contact oxidation. All testing must align with ANSI/NETA MTS standards. If so, please provide any available one-lines, elementary/control schematics, relay wiring diagrams, AC/DC schematics, CT/PT drawings, switchgear elevations, interconnection drawings, and existing as-builts.

b. Summary of Required Testing Scope

Equipment	Core Action Items
Switchgear Enclosure	Clean interior, torque bolted connections, inspect for moisture/corrosion, and verify space heaters are working.
Circuit Breakers	Perform mechanical operation checks, contact resistance (Ductor), and insulation resistance (Megger) tests.
CTs & PTs/VTs	Perform insulation resistance, polarity, and turns-ratio verification.
Control Power	Test battery/UPS backup systems, inspect protection relays, and verify trip/close circuits.
System Grounding	Verify ground continuity to ensure a low impedance path to ground.

9. Please provide the complete **GE 850 ordering code/model number, firmware revision, option cards/I/O configuration, and accessories** for each Government-furnished relay. Please also confirm both relays are currently available for installation.

a. I can confirm only that both relays are available.

10. Please confirm the existing relay **control power voltage** and the **trip/close circuit control voltage**.
- a. Coordinate with & CES Electrical Shop to physically verify these information by looking at equipment nameplate. CE does not have any as-built copy/info for Sub A.
11. Please provide the existing **PT/VT ratios, system nominal voltage, wiring configuration, and voltage inputs** connected to each relay.
- a. 100:1(Line-Line), 60:1 (Line- Ground), 12.47 kV, Grounded-Wye (Y-Y), 120 VAC.
12. The RFQ states that the new GE 850 relays are to be programmed to match the previously installed GE 760 relays. Since an existing GE 850 was observed, please confirm whether the new relays are to: Match the existing GE 850 settings; Be converted from historical GE 760 settings; or Be programmed from a new Government-approved settings package.
- a. I am thinking it would be converted from the historical 760 settings.
13. Please provide electronic copies of the existing **relay setting files**, along with any available protection coordination study, relay setting calculations, or protection philosophy documentation.
- a. Please see the attached document.
14. Please confirm whether passwords or security credentials are required to access the existing relays and whether they will be provided by the Government/Electrical Shop.
- a. That would be a question for CIMERT team.
15. Please clarify the required testing for the new GE 850 relays, including whether the scope is expected to include **secondary injection, pickup/timing verification, protection element testing, digital I/O testing, trip circuit verification, breaker trip/close testing, metering verification, alarm/annunciation testing, communications testing, and functional logic testing**.
- a. Yes, listed testing items are strictly required. Commissioning the new GE 850 relays requires complete functional validation of the physical wiring, microprocessor logic, and system integration to ensure reliable operation under fault conditions. All testing must follow ANSI/NETA ATS standards.
16. The RFQ requires commissioning and testing at “**full base load.**” Please clarify what constitutes full base load, the anticipated feeder loading during commissioning, and

whether the Government will be responsible for establishing the necessary load condition.

- a. It constitutes the total, normal aggregate power demand of the base's active facilities connected to the substation or switchgear at the time of cutover. This includes running HVAC systems, airfield lighting, hangars, housing, and administrative buildings. It represents the actual operational load supplied by the utility, rather than an artificially generated current.
 - b. Standard military procurement practice dictates that the Government is responsible for system configuration and providing available facility load, while the contractor is responsible for conducting in-service load checks and phase-angle verifications under whatever live load exists at the time of cutover.
17. Please confirm which party will be responsible for operating the switchgear and circuit breakers during initial energization, testing, trip checks, and final commissioning.
- a. Must coordinate with 7 CES Electrical shop.
18. Please confirm whether the GE 850 relays are or will be connected to **SCADA, HMI, annunciation, or another remote monitoring/control system**. If so, please provide the communications protocol, network information, point list, and applicable drawings.
- a. This will not be connected to any outside controls or HMI.
19. Please provide the anticipated **outage window** available for removal, installation, wiring, testing, and commissioning. Please also confirm whether both relays may be replaced simultaneously or if they must be completed one feeder at a time.
- a. This substation isn't in use, so the window is as much as is needed.
20. Please confirm whether the Government anticipates any portion of the relay replacement, energization, or commissioning being performed outside the normal **0700–1600** work period.
- a. The work will be done during standard business hours unless otherwise adjusted by the contractor performing the work.
21. Please clarify which contractor-furnished installation materials will require formal material submittals for approval.
- a. Government will require formal submittals for all materials that become a permanent part of the base infrastructure.
22. Please confirm the required format for final **as-built documentation** and whether editable CAD/DWG files will be required in addition to PDF documents.

- a. Both formats are required for final as-built documentation.
23. Please confirm the required disposition of the existing relays following removal. Should they be returned to the Government/Electrical Shop, retained as spares, or disposed of by the Contractor?
- a. There will be no relays to dispose of as the original relays (GE 760) are already gone.
24. Please confirm that the contractor's one-year warranty applies to installation, wiring, programming, testing, and workmanship, and that failure of Government-furnished equipment itself will remain outside the contractor's warranty responsibility.
- a. Defer to contracting office.
25. Please confirm whether the stated **30-day period of performance** begins upon issuance of the site-work Notice to Proceed and whether Government-related delays involving equipment, settings, outages, access, or commissioning availability will be excluded from the contractor's performance period.
- a. Defer to contracting office.
26. Please confirm whether **Building 11912/Substation Alpha** is located within a General Access, Controlled Access, or USAF Restricted Area and identify any additional escort, badging, or Entry Authorization Letter requirements.
- a. I believe it will be considered General Access
27. Please identify the Government POC who will assist with the required **AF Form 103 Base Civil Engineer Work Clearance Request** and provide the anticipated approval lead time.
- a. Cannot supply a specific contact person at this time. Awardees will be notified of specific contact.
28. Please confirm the documentation required for final project acceptance, including test reports, relay setting files, as-left settings, commissioning reports, redlines/as-builts, photographs, and required Government witness/signatures.
- a. All these files are required upon project final acceptance.
29. Please provide any drawings, existing relay setting files, equipment information, or additional documentation that would help the contractors create accurate and complete proposals.

- a. Please see the attached document.