


| | | |
|---|----------------|--|
|  | <h1>Guide</h1> | Department: Customer Relations & Interconnection Services, Asset Management |
| | | Document No: GD-1914 v1.0 |
| Title: CUSTOMER PROJECT SUPPORT PROCESS | | Issue Date: 04-01-2019 |
| | | Previous Date: N/A |

Contents

| | | |
|-------|---------------------------------------|---|
| 1 | PURPOSE | 2 |
| 2 | INTRODUCTION | 2 |
| 3 | DEFINITIONS | 2 |
| 4 | PHASES | 3 |
| 4.1 | Planning Phase..... | 3 |
| 4.1.1 | Customer Steps..... | 3 |
| 4.1.2 | ATC Roles and Responsibilities..... | 4 |
| 4.2 | Design Phase..... | 5 |
| 4.2.1 | Customer Steps..... | 5 |
| 4.2.2 | ATC Roles and Responsibilities..... | 6 |
| 4.3 | Construction Phase..... | 6 |
| 4.3.1 | Customer Steps..... | 6 |
| 4.3.2 | ATC Roles and Responsibilities..... | 7 |
| 5 | REFERENCES | 7 |
| 6 | DOCUMENT REVIEW | 7 |
| 7 | RECORDS RETENTION | 8 |
| 8 | REVISION INFORMATION | 8 |
| 9 | APPENDICES | 9 |
| 9.1 | Appendix A- Process Flow Diagram..... | 9 |

| | |
|--|----------------------------|
| Approved By: Signature of approver (electronic signature is acceptable) | Author: Jill Muller |
|--|----------------------------|

CAUTION: Any hard copy reproductions of this Procedure should be verified against the on-line system for current revisions.

1 PURPOSE

The purpose of this document is to outline the steps ATC will take to support work done by our Customers that affects ATC owned equipment not requiring an ATC capital project. This process will be used to guide the work through three separate ATC phases: planning, design and construction.

2 INTRODUCTION

Customer projects which include modifications to ATC owned equipment have inherent risk to the ATC system. It is important that these modifications be reviewed by ATC groups such as System Protection, Metering and Control, Operations, EMS, Engineering and Commissioning for awareness and to mitigate any associated risks.

3 DEFINITIONS

CT – Current Transformer

Balancing Authority (BA) – Metering between LDC boundary's facilitated by ATC

EMS – ATC Operations group responsible for maintaining the EMS (Energy Management System).

FM-9130 – ATC form submitted to ATC Operations if required by the FM-9130 process. See reference section.

HMI – Human Machine Interface. This device is managed by the ATC Metering and Control group and is installed in some ATC substations.

Issued For Review (IFR) Drawings – Drawings that have been drafted and are being sent to functional areas for review.

Issued For Construction (IFC) Drawings – Drawings that have been finalized by engineering and are ready for construction.

Customer Project Support (CPS) Process Coordinator – Responsible for the overall coordination of the Customer Project Support Process.

Customer – A Local Distribution Company (LDC), municipality, cooperative, generator, or any other entity that connects to ATC's equipment.

M&C – ATC Operations group responsible for metering and control systems.

Outage Request – Outage request submitted to ATC Operations via the ATC outage management system.

Project Participants – ATC project team members representing ATC functional areas such as System Protection, Metering & Control and Engineering.

Protective Outage Request (POR) – Form submitted to ATC Operations if required by POR process. See reference section.

RTU – Remote Terminal Unit. This device is the responsibility of the ATC Metering and Control group.

4 PHASES

This process covers three distinct phases: Planning, Design and Construction.

4.1 Planning Phase

The planning phase is initiated when ATC is notified of a Customer's project. During the planning phase, ATC functional areas will review the Customer's scope and identify any ATC scope to support the project.

4.1.1 Customer Steps

4.1.1.1 Submit project information to ATC.

Project submission/identification can be done in a multitude of ways, including using the LIRF (Load Interconnection Request Form) process, an email notification, a list of upcoming projects, etc. This information will be communicated to the ATC CPS Coordinator. The minimum information required at this step is the Customer's schedule and scope.

The Customer may use the following questions to help determine whether ATC needs to be involved in the project. If any of these apply, ATC will evaluate the project to determine the level of ATC support needed.

- 1) Will the proposed work require wiring changes to ATC owned protective, RTU or IT systems?
- 2) Will the proposed work require setting changes to ATC owned protective relays?
- 3) Will the proposed work require that ATC complete a companion project at other stations?
- 4) Will the proposed work require modeling in the ATC short circuit case?
- 5) Does this project require updates to ATC owned drawings?

Typical Customer Project Support projects

- Distribution transformer replacement
- Circuit switcher replacement
- Protection/relay upgrades that interface with ATC protection schemes
- AC/DC panel replacement when modifying ATC equipment circuits
- RTU upgrade/replacements that affect ATC equipment
- Control house battery
 - a. Change in voltage (ie. 48V to 130V) – review required
 - b. Like for like Customer owned – no review required
- Changes impacting Balancing Authority (BA) metering
- Modifications to ATC owned common facilities

4.1.1.2 Assign ATC project team members to Customer project team.

ATC CPS Coordinator will communicate the ATC scope and project team members to the Customer. The Customer's project manager will assign the ATC project participants to the project team and invite them to project team meetings.

4.1.1.3 Submit ATC Outage Request

If the Customer has identified the associated outage requirements, an outage request may be submitted at this stage. This may be done in the design phase if the outage requirements have not yet been identified.

4.1.2 ATC Roles and Responsibilities

4.1.2.1 CPS Coordinator

The CPS Coordinator is responsible for overall ATC coordination of activities such as receiving and acknowledging notification of projects, creating Project Central project sites, logging project information (scope, schedule, one-line diagram and original project notification communication) and initial technical review of the project information.

After the initial review, the coordinator will facilitate an internal functional area review and gather ATC scope and project team members. They will communicate this information back to the Customer and function as the main point of contact between them and the internal review team.

If it is determined that the project will require ATC capital work, the CPS Coordinator will alert ATC Planning to facilitate the submission of a LIRF. The project will then be tracked and managed within the LIRF process.

The CPS Coordinator is responsible for creating a project site in Project Central and will provide a link to the Customer contact or their designee for posting/sharing of project documents. The CPS Coordinator will facilitate obtaining Customer Project Central access as needed. If Project Central is not accessible to the Customer, the CPS Coordinator will facilitate posting the project documents.

4.1.2.2 Internal Review Team

The internal review team will include representatives from Operations, Commissioning, System Protection, Metering and Control, EMS, Engineering, Information Technology Outside Plant, Asset Management and Standards. Team members are responsible for reviewing the Customer project documents and responding with comments or questions. Team members will also determine if there will be any ATC scope required to support the project and assign team members (Project Participants) as needed.

4.1.2.3 Project Participants

If there is non-capital ATC scope to support the Customer project, functional area project team members will be assigned. These team members will attend Customer project team meetings as needed to support the project.

4.2 Design Phase

This design phase is initiated with the inclusion of ATC Project Participants in the Customer project team meetings/discussions. This includes the routing of Customer project drawings through ATC functional areas with scope associated with the project and the development of any associated deliverables required to support the project.

4.2.1 Customer Steps

The information required/requested from the Customer includes Issued For Review (IFR) drawings (one-line, schematics, wiring & physical) and equipment data (breaker CT data for protection modeling, CT curves, CT Impedance data, Transformer Impedances and MVA) in pdf format.

Information, including drawings, should be submitted via ATC's Project Central project page. If the Customer does not have access to ATC's Project Central site, the LDC will work with the ATC CPS Coordinator to determine how to submit the IFR drawings and information.

ATC CPS Coordinator will contact the Customer when drawing markups have been completed. The Customer then incorporates comments into the Issued For Construction (IFC) drawing set.

If an outage is required and the Outage Request had not been submitted in the Planning Phase, it should be submitted in the Design Phase. Protective Outage Requests and FM-9130 forms should also be submitted during this phase in preparation for the Construction Phase, although they may be submitted during the Construction Phase given appropriate time requirements are met.

4.2.2 ATC Roles and Responsibilities

4.2.2.1 CPS Coordinator

The CPS Coordinator receives notification that IFR drawings from the Customer have been submitted to Project Central. If the Customer does not have access to Project Central, the CPS Coordinator will work with the Customer to gain access or determine an appropriate way to submit the drawings.

The CPS Coordinator will notify the Project Participants that drawings are available for internal review.

The CPS Coordinator notifies the Customer when drawings have been reviewed by ATC. The CPS Coordinator will facilitate getting the IFR drawings with any comments to the Customer.

4.2.2.2 Project Participants

ATC Project Participants are required to review Customer IFR drawings and provide drawing markups and comments to the CPS Coordinator. For a typical CPS project, participants will have two weeks to review the IFR drawings and provide comments. If a non-typical timeline is required, the coordinator will notify the Project Participants.

If ATC engineered drawings are required, Project Participant (Engineering) develops drawings and orders materials; following the typical ATC Engineering processes.

If additional construction resources are needed for non-capital ATC scope (remote transfer trip for example), Commissioning will contact the Customer to secure additional resources. If the Customer is not able to support the work, Commissioning will contact ATC Construction for assistance in securing resources.

Project Participants perform additional work to support the project Construction Phase, such as relay/RTU programming and EMS screen updates. The requirements for each group are determined by that group and will not be detailed in this document. All settings are sent to the field prior to construction. Project Participants update Ratings as necessary.

4.3 Construction Phase

The construction phase is initiated by the submission of the IFC drawings from the Customer to ATC Project Central. Other inputs in this phase consist of final Outage Request/POR/FM-9130 submittals, final schedule, relay settings and RTU/HMI programming.

4.3.1 Customer Steps

IFC drawings should be submitted via ATC's Project Central project page. If the Customer does not have access to ATC's Project Central site, the Customer will

work with the ATC CPS Coordinator to determine how to submit the IFC drawings.

The Customer field crews will coordinate with the ATC Commissioning Engineer assigned to the project to ensure that the ATC scope is completed successfully.

4.3.2 ATC Roles and Responsibilities

4.3.2.1 CPS Coordinator

The CPS Coordinator informs Project Participants that the IFC drawings are complete and available for reference during construction activities.

4.3.2.2 Commissioning Engineer

The Commissioning Engineer confirms that relay settings/RTU/HMI programming have been sent to the field, reviews IFC drawings to verify sequencing, contacts Customer members to discuss schedule, commissioning scope and to ensure responsibility for all commissioning activities have been assigned. The Commissioning Engineer also works with the Customer to ensure appropriate Outage Request/POR/FM-9130 submissions have been made and reviews them for accuracy.

The Commissioning Engineer will supervise field resources as needed, verifies setting changes are complete and that relay settings have been compared by ATC System Protection.

Following construction, the Commissioning Engineer reviews field revisions as needed and verifies that all closeout documentation (Mx Settings Order, yellow lined prints, yellow lined points list, field labeling) have been completed and properly submitted.

5 REFERENCES

Interconnected Entity Equipment Testing Approval (FM-9130), TOP-20GN-48

Protective Relay, Communication Channel, and RTU Outage Approval Procedure (POR), TOP-20GN-36

ATC Document Control Guide, GD-0480

ATC Document Review Checklist, FM-0481

ATC Load Interconnection Request Form (LIRF)

ATC Load Interconnection Guide

6 DOCUMENT REVIEW

This document will be reviewed no less than every three years.

The review will ensure this document remains current and meets all new or revised procedures and standards. All reviews will be documented in the Revision Information section.

7 RECORDS RETENTION

Documents are maintained per the Records Retention Schedule

ATC's Archive Center SharePoint Site

Enterprise Information Management Policy

8 REVISION INFORMATION

| Version | Author | Date | Section | Description |
|---------|-------------|------------|---------|-------------|
| 1.0 | Jill Muller | 04/01/2019 | All | New Process |

9 APPENDICES

9.1 Appendix A- Process Flow Diagram

