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October 3, 2007

Conference Call: Network Protector Enabled Generation (NPEG)

Meeting Minutes

Attendees:

JP: Jose Palomo, CEC
MV: Mohammad Vaziri, PG&E
ML: Meg Lusardi, Massachusetts DOER
DB: Dan Butterfield, NStar
BS: Bill Steely, EPRI
JW: Jim Watts, Ingersoll-Rand
FC: Fran Cummings, MTC
JBz: John Bzura, National Grid
JB: Jim Bing, New Energy Options

Note: there appeared to be several additional participants that may not have logged in by name. Anyone wishing to add your name to the list please do so.

NPEG Conference Call Agenda

Background:

- MTC DG Collaborative initiative to promote acceptance of Distributed Generation: background for new callers.
- Update IEEE 1547.6 Working Group, 8/7/07 & 8/8/07, in Las Vegas.
- GSA Williams Building site visit and meeting 10/2/07; information for contribution to NPEG Draft Performance Specification
 - a. Record existing hardware components & configuration
 - b. Evaluate performance: what has worked and what has not
 - c. Determine what if any monitoring is in place
 - d. Revise/redline NPEG spec based upon GSA experience to date

Discussion:

- Solicitation of comments on NPEG Draft Performance Specification
- Questions/discussion
- Set date for next conference call



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JP: Jose explained that the CEC is moving forward with work in this area. PG&E is drafting a proposal for a demonstration project in one of the local network grids.

JBz: Invite Jeff from BEIR – Network Protector Manufacturer

JB: JB described Draft NPEG Performance Specification. Mostly an articulation of Bill Feero research and IEEE papers

IEC specification Format, 3-Levels:

- 1) Enterprise
- 2) Operational
- 3) Hardware Requirements

We are looking for suggestions, criticisms, corrections to the Draft Spec. Example: suggestion by Dan Butterfield to build in redundancy – more than one series device monitoring power direction. We are looking for relevant reference from ANSI, IEEE, etc.

JP: Project in CA to demonstrate
Replace/update relays with monitoring capability
Utilize Latest Relays
Modify design (make DG connection easier)
Monitor operation and behavior
Then change relay design

MV: Supervised communication link. Feedback to master controller. Communication between Utility Devices to Generating Facility

JB: Check channel link
“Channel” “Status” language – Fire Language Arena uses
“Supervised Links”
Modify language to Utility Standards

MV: Manufactures are aware –can build hardware. Martin Baier of Eaton C-H designed auxiliary components at GSA Williams. Williams’s system is not monitored now. IEEE is cognizant about relay issues

JBz: Is Martin Baier from Eaton on the call?

JB: Mark Faulkner from Eaton said that Eaton has ongoing research and partnerships in this area which are covered by NDA’s and can not participate in this type of open forum. However they would be open to possible collaboration with smaller groups under a separate NDA agreement.

MV: 1547.6 Identified Issues --- clean up language. There are problems – Negative Load and closed protectors. George Moskos of NStar will review the Issues section of the standard.



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FC: Asked if there are commercially available relays? Bill Feero's concept is new.

FC: The Draft NPEG performance specification uses an IEC framework for standards development and adds a Performance Specifications. Reference available equipment and functionality. List Protection on market and find missing components and functionality

Use IEC Specifications to find missing protection for new equipment. JB and Fran work on Specifications. By examining the capabilities of presently available NPs and comparing them to the functionality that Bill Feero described we can determine the capabilities that are not on the market today.

MV: Communication Problems. Customer not allowed communicating with "GRID" Not Direct Communication Link. Curtailment. Systems hard wired for shut down when 50% rule is violated PG&E controls customers sited DG

JB: Asked if the AEP Dolan test facility can simulate a secondary network?

MV: Said Dolan was limited in what it could do for network protectors.

FC: Asked if the DUIT facility could simulate secondary networks.

MV: Said DUIT tests were conducted at the PG&E lab. This was limited to testing single-phase voltage regulation

MV: Said that their plans for testing the NPEG concept included no prototype equipment on live customers.

JB: Said that the original experimental concept suggested by Bill Feero included bench testing at the board level.

JBz: Suggested that the NP manufacturers must have bench-testing facilities? Said we should invite manufacture experts to join conference

ML: Said Massachusetts governor is interested in DG in state.

MV: Described the likely California approach. There are problems with Network Protectors tripping. Look for correlation with close monitoring of existing systems. Energy Commission will fund project.

JBz: Asked how many DG systems were installed on secondary networks in CA.

MV: 4-5 DG spot networks in CA. Not all are operating presently.

JBz: DG installed in NY is small compared to building load. Mentioned that Jock Moffat, formerly of Eaton C-H, has recently retired and may be consulting in this area. JBz said he would reach out to Jock on this issue.

JB: Descried site visit and meeting at the GSA Williams building, the site of the initial study conducted by Bill Feero. The existing systems are still in place and are working but have no monitoring. Monitor to collect data when installing new relay equipment



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MV: Says that the PG&E system had live monitoring – monitor new SCADA

JB: The group is requesting comments on Draft NPEG Specifications by October 24th – JB will consolidate comments and distribute them to the group by October 31st.

Any suggestions, comments, corrections, criticisms, or relevant information will be helpful and greatly appreciated. We need comments from NP manufactures and utilities.

JBz: Asked about NY specifics about installed DG and get addresses.

Next Conference call Thursday, November 15th at 11:00am EST, 8:00am PST.