



SDG&E CDF Project Overview

Utility Integration of Distributed Generation

1-year Design Project



October 29, 2008

Utility Integration of Distributed Generation



Project Scope

This project will explore four main areas to ensure distributed generation can be integrated into the grid and simultaneously support predictive analytics:

- 1) Development of communication technologies to support data transfer from measurement system or local intelligence,
- 2) R&D of measurement technologies for application to an energized grid,
- 3) R&D into development of optimal IT architecture to support widespread predictive analytics,
- 4) Research into diagnostic tools and application of digital signal processing to predict equipment life; but first focused on underground cables.

Project Objectives

- 1) Develop predictive analytics to support functions of Modern Grid such that condition of cable and other equipment insulation can be classified.
- 2) Develop algorithms to enable on-line measurement of transients employing digital signal processing (DSP)

Participants:

SDG&E, Horizon Energy Group (HEG), Arcadian



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Task #	Major Activities	Main Participants
1	Development of Communication Technologies to support data transfer from measurement systems	Arcadian
2	R&D of Measurement Technologies for application to an energized grid	SDG&E
3	R&D into Development of Optimal IT Architecture to support Predictive Analytics	HEG
4	Research into Diagnostic Tools and Application of Digital Signal Processing to predict equipment life	SDG&E
5	Final Report and Documentation	SDG&E, HEG, Arcadian
6	Project Management	SDG&E

Technology Transfer



- Establish Microgrid Advisory Council
 - Key national researchers, utilities
- Planned publications
 - Key journals
- Phase reports
 - Major accomplishments



Q/A