the Energy to Lead

CALIFORNIA NATURAL GAS PIPELINE ASSESSMENT
CEC #500-10-050

GTI Project Joint PAC Meeting

March 5, 2012

REVIEW OF TASKS and DELIVERABLES

- Baseline Technology Assessment for Pipeline Integrity and Monitoring Technology in the State of California
  - Deliverables – Review of current state of technologies being used
  - Scheduled Completion Date – April 30, 2012
- Assessment of Currently Available Pipeline Integrity Assessment and Monitoring Technology
  - Deliverables – Catalogue of available technologies and gap analysis
  - Scheduled Completion Date – July 31, 2012
- Evaluate Emerging Pipeline Integrity Assessment and Monitoring Technology
  - Deliverables – identification of technologies that could be developed or enhanced in the next 2-4 years with emphasis on integration with the AMI communications backbone
  - Scheduled Completion Date – October 31, 2012

Status and Next Steps (March and April) – Task 2

- Task 2
  - Interviewing of California Operators Nearing Completion
  - Initiating Second and Final Round of Data Gathering and Verification of Technologies in Use
  - Initiate Preparation of Task Report
  - External Expert Review of Draft Report
  - Submit Task Report – 4/30/2012

Status and Next Steps (March and April) – Task 3

- Task 3
  - Nearing Completion of Cataloging Currently Available Technologies
    - Review Copyright Status and Obtain Permissions
    - Create Editable and PDF Versions of Catalogue
  - Initiating Gap Analysis, Including Ability to Use or be Modified to Use AMI
    - Conduct Brainstorming Session(s)
      - Provide Task 2 Report as Pre-Read Material
  - Initiate Preparation of Task Report

Status and Next Steps (March and April) – Task 4 & Implementation Plan

- Task 4
  - Not Emphasized To-date, Occurring in Parallel with Tasks 2 and 3
  - Initiate Identification of Emerging Technologies by June, 2012
  - Provide Gap Analysis, Including Ability to Use or be Modify to Use AMI
- Implementation Plan
  - No Action at this time
  - Initiate Plan Preparation in 4th Quarter 2012

Technology Recommendations

- Pilot Studies
  - Right-of-Way Intrusion
  - In-Line Inspection
  - Above Ground Inspection
  - Smart Field Data Collection Devices
  - Bar Coding for Field Data Collection and Tracking and Traceability
- Concept Development
  - Low Cost/Low Power Sensing and Monitoring Devices
  - Integrating GIS with SCADA, Public Data, Design Specifications, Procedures

Development Approach

> *GTI Follows the Stage/Gate Approach*

STAGE	GATE
IDEA GENERATION	IDEA SELECTION
TECHNICAL and MARKET ANALYSIS	RESEARCH APPROVAL
RESEARCH IMPLEMENTATION	PROOF OF FEASIBILITY
TECHNOLOGY DEVELOPMENT	PRODUCT DEVELOPMENT INITIATION
PRODUCT DEVELOPMENT	DEPLOYMENT INITIATION
DEPLOYMENT	COMMERCIALIZATION INITIATION
COMMERCIALIZATION	COMPLETION REVIEW
IMPLEMENTATION	IMPLEMENTATION REVIEW

Discussion

- Questions
- Comments
- Recommendations

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