

Preliminary 2014 - 2015 Proposed Capital and Project Listing

2014 Hardware & Software Purchases

Add a visible timer to indicate how long the system has been over a N-1 limit and Improvement to one-line diagrams UI

Ancillary Services Forecasting System

Clean Build / Implement a master configuration setting for Siemens applications

Constraint Parameter Enhancement

Corporate Systems Enhancements Project

Energy Management System (EMS) Automatic Generation Control (AGC) Enhancements

Enhance Multi Stage Generation (MSG) to accommodate lack of bids on actual output configuration

Enterprise model management systems (EMMS) Phase 3

Expand Metering and Telemetry Options

Facilities Projects

FERC 764 15 minute Scheduling & Settlement Requirements

Flexible Capacity Procurement

Flexible Ramp Forecasting Tools

Forecast Optimizer Phase 1

Framework implementations, for various systems

Improve Accuracy of Real Time Contingency Analysis (RTCA) in the market & Energy Management System (EMS)

Improve Deliverability Study Tools

Improve patching and deployment to minimize planned unavailability

Incorporate the Market Services work a rounds, to become part of Siemens final design to improve performance and support.

Infrastructure and outsourcing, oracle benefits, business suite and basic monitoring

Integration layer and improvements

Standard capacity product phase 3

Marginal Loss Surplus Allocation

Market Enhancements to eliminate Exceptional Dispatches Operations situational awareness tools

Market Services Enhancements 2014

Market Validation Tools (Phase 2 and 3)

Market Tools Enhancements Phase 2

Non-Generator Resources in Ancillary Services Market Requirements

Operational impacts of Distributed Energy Resources (DER) at scale

Operational meter analysis & reporting new features, corrections, and automation

Operations Enhancements 2014

Outage Coordination (Optimization)

Outage Management System (OMS) Phase 3

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Perfect Rollback for all applications

Provide Effectiveness Factor for all units to relief congestion along with their SE solution

Renewable integration study work and annual flexibility assessment

Replacing and/or consolidating database software

Resource Interconnection Management System (RIMS) Enhancements/Gaps/

Secured Credit Changes for Convergence Bidding

Service Request Management

Smart Grid California Energy Commission Phasor project

Synchrophasor

Technology Pilots and Demonstrations and Pilot Process Website

Topology Estimation

UC San Diego micro grid visibility project

Update in FERC's Electronic Quarterly Report (EQR) software

Upgrades to Oracle business suite software – human resources, finance, procurement and market clearing

Vehicle to grid pilot (Air Force)

Voice of the Customer – 2 Pilot Projects

Voltage Stability Analysis (VSA) Integration into the Market (Closed Loop)

Total Proposed Capital And Project Budget of 2014 Estimated at \$ 19.5M