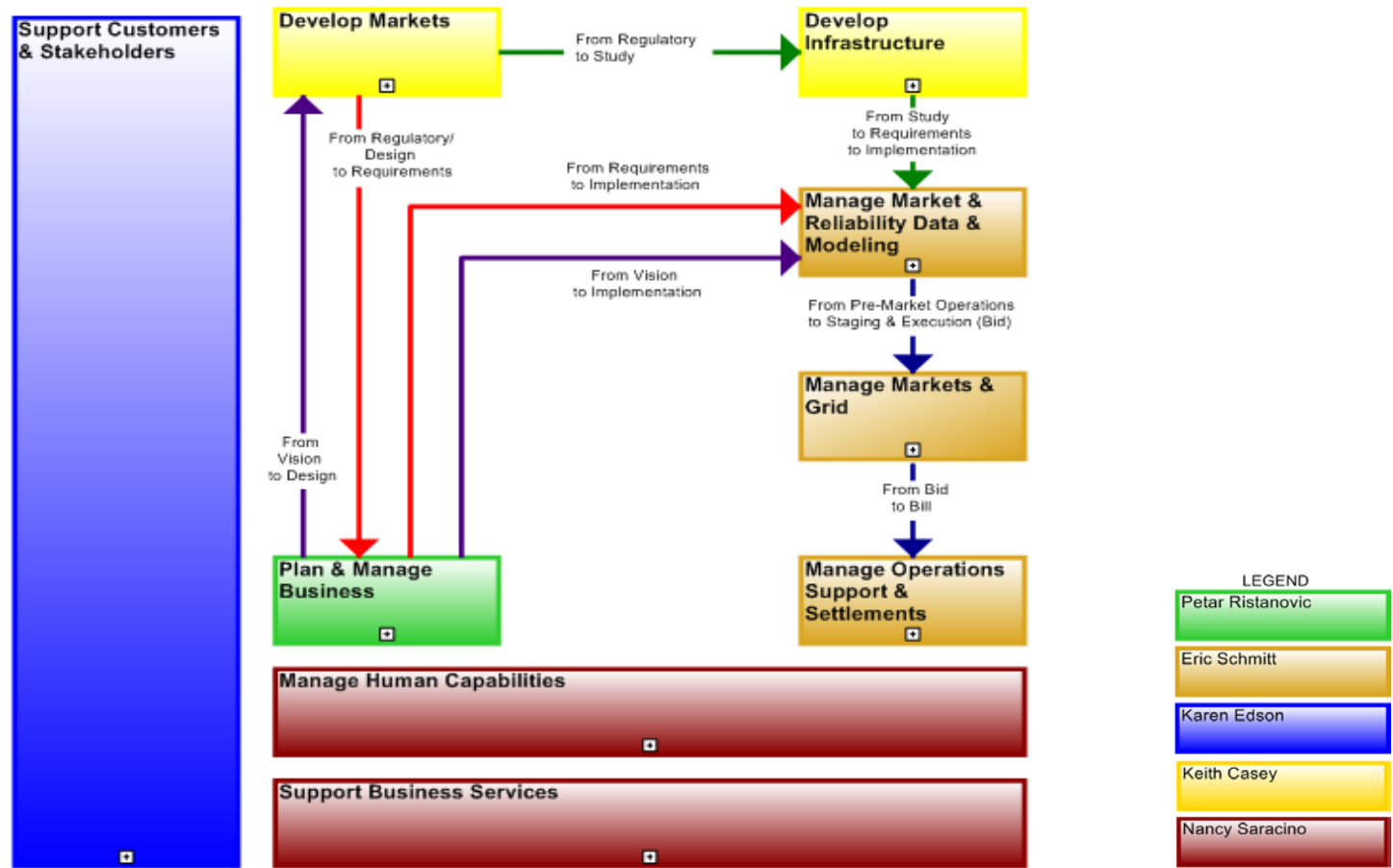


## CAISO Business Process Framework Overview v4.0 (9/12/2013)

- Illustrates high-level information streams between each of the Level I processes
- Shows how core processes in three supporting groups apply to all of the processes at the ISO
- Groups the Level II processes into logical groupings at executive ownership levels

### Business Process Framework Overview

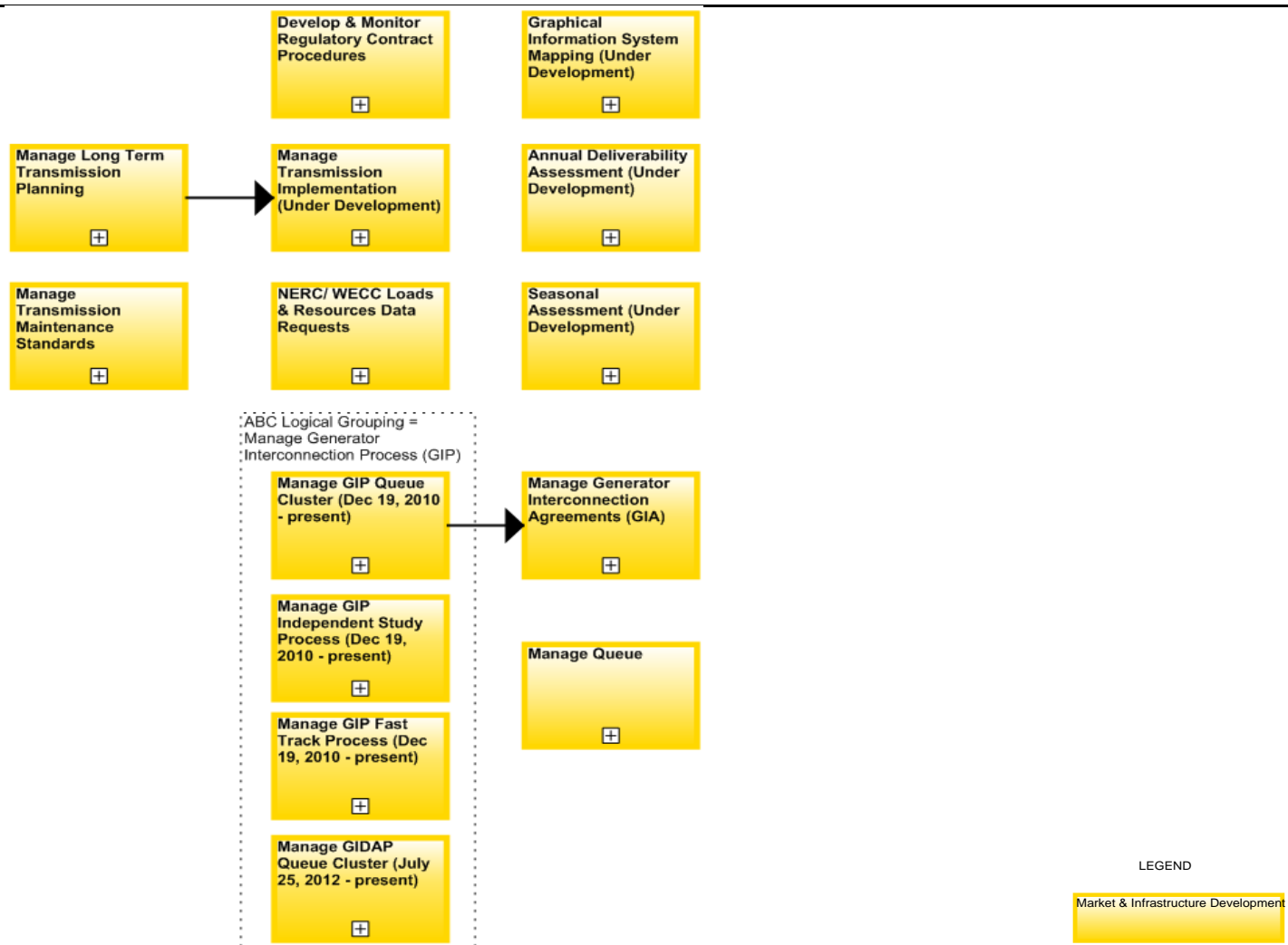


Last Updated: 07/17/13

Process Name	Process Owner	Key Activities
<a href="#">Develop Infrastructure (DI) (80001)</a>	VP, Market Infrastructure & Development	Transmission Planning, Grid Assets Reviews, and Interconnections
<a href="#">Develop Markets (DM) (80002)</a>	VP, Market Infrastructure & Development	Regulatory, Market, Policy, and Product Design
<a href="#">Manage Human Capabilities (MHC) (80003)</a>	VP, General Counsel & Chief Administration Officer	Employee Lifecycle, Training, and Organizational Development
<a href="#">Manage Market &amp; Reliability Data &amp; Modeling (MMR) (80004)</a>	VP, Operations	Resource Data Setup and Changes, Procedures, Training, Base Model Setup, and Congestion Revenue Rights
<a href="#">Manage Markets &amp; Grid (MMG) (80005)</a>	VP, Operations	Outages, Day Ahead Market, Interchange Scheduling, Real Time- Hour Ahead, Real Time, Generation and Transmission and Emergency Operations
<a href="#">Manage Operations Support &amp; Settlements (MOS) (80007)</a>	VP, Operations	Operations Data Analysis, Billing & Settlements, and Disputes
<a href="#">Plan &amp; Manage Business (PMB) (80008)</a>	VP, Technology	Strategic Planning, Governance, Budgeting, Project Management
<a href="#">Support Business Services (SBS) (80009)</a>	VP, General Counsel & Chief Administration Officer	General, IT, Financial, Legal, Compliance, Audit and Market Monitoring Support Services
<a href="#">Support Customers &amp; Stakeholders (SCS) (80010)</a>	VP, Policy & Client Services	Client, Account and Stakeholder Processes, Government Affairs, and Communications

## Develop Infrastructure (DI) (80001)

- Enables the ISO to take a proactive approach to transmission planning by facilitating the building of needed projects
- Provides an important platform for success in addressing future challenges, though an enhanced planning process
- Satisfies compliance requirements, meets other regulatory and policy goals, and participates in joint regional planning groups



Last Updated: 8/6/13

Processes	Process Owner Title	Process Descriptions
<a href="#">Develop &amp; Monitor Regulatory Contract Procedures (201)</a>	Director, Infrastructure Contracts & Management	IP&C is responsible for managing all regulatory contracting mechanisms for the CAISO. Contracts staff works with internal and external personnel to secure the necessary approvals, prepare the requested agreement, initiate and track the agreement execution process, notify internal staff as necessary for implementation, and maintains all official files.
<a href="#">Manage Generator Interconnection Agreements (GIA) (202) also includes GIA Downsize Amendments (211)</a>	Director, Infrastructure Contracts & Management	Depicts the ISO oversight and implementation of the Federal Energy Regulatory Commission (FERC) approved Generator Interconnection Agreement (GIA).
<a href="#">Manage Generator Interconnection Process (GIP) (203)</a>		Grouping of 4 GIP processes
<a href="#">Manage GIDAP Queue Cluster (July 25, 2012 - present) (203)</a>	Manager, Interconnection Resources	This diagram depicts the Generation Interconnection and Deliverability Allocation Procedures (GIDAP). The objective of this process is to implement the requirements for both Small and Large Generating Facility Interconnections to the CAISO controlled grid and to provide a process for allocating Transmission Plan Deliverability for Interconnection requests starting with Queue Cluster 5 and for subsequent clusters. GIDAP applies also to subsequent requests submitted for the Independent Study process, or Fast track Process.
<a href="#">Manage GIP Fast Track Process (Dec 19, 2010 - present) (203)</a>	Manager, Interconnection Resources	Depicts the ISO Grid Assets oversight and implementation of the FERC approved GIP for Interconnection Requests that meet the criteria for the Fast Track Process. Only provisions of the GIP that are superceded by Independent Study Process are detailed here.
<a href="#">Manage GIP Independent Study Process (Dec 19, 2010 - present) (203)</a>	Manager, Interconnection Resources	Depicts the ISO Grid Assets oversight and implementation of the FERC approved GIP for Interconnection Requests that meet the criteria for the Independent Study Process. Only provisions of the GIP that are superceded by Independent Study Process are detailed here.
<a href="#">Manage GIP Queue Cluster (Dec 19, 2010 - present) (203)</a>	Manager, Interconnection Resources	Depicts the ISO Grid Assets oversight and implementation of the Federal Energy Regulatory Commission (FERC) approved Generation Interconnection Procedures (GIP) for Queue Cluster Tariff Section 25 Appendix Y, effective date of December 19, 2010. Includes Phase I and Phase II Interconnection Studies.
<a href="#">Manage Long Term Transmission Planning (204)</a>	Managers, Regional Transmission (North, South)	This process is responsible for: 1) CAISO Transmission Plan: Produce a forward-looking, coordinated transmission plan that provides for full NERC/WECC compliance obligations as well as proactive infrastructure planning initiatives, including economic transmission that facilitates a robust and efficient market 2) Support CPUC Resource Adequacy (RA) through the determination of all LCR requirements for the CAISO Controlled Grid; the determination of all import, zonal, and inter-zonal allocations that are used to define RA obligations for the LSEs 3) Generator Interconnection Study obligations 4) Renewable Integration analysis to assess operational reliability and infrastructure requirements to meet 33% requirements by 2020 5) On an annual basis, assess and validate feasibility of all Long-term CRRs 6) Perform annual congestion studies to a) Define and summarize term "significant and reoccurring" congestion b) Develop mitigation plan c) Provide the upgrade and congestion costs 7) Conduct Deliverability and Locational Capacity Studies in support of the CPUC resource adequacy requirements 9) Generation and transmission reliability assessment (i.e., Planning Reserve Margin and transmission probabilistic planning) 9) Sub-regional/Regional/National work on Planning Issues through NERC, FERC, and WECC 10) Special projects; Represent the ISO in technical groups and committees
<a href="#">Manage Transmission Implementation (205)</a>	Director, Infrastructure Contracts & Management	Major tasks by all ISO departments to incorporate all various types of transmission projects into the grid infrastructure. Additional detail provided in department specific process flow diagrams. Not all tasks are performed for every type of transmission project.

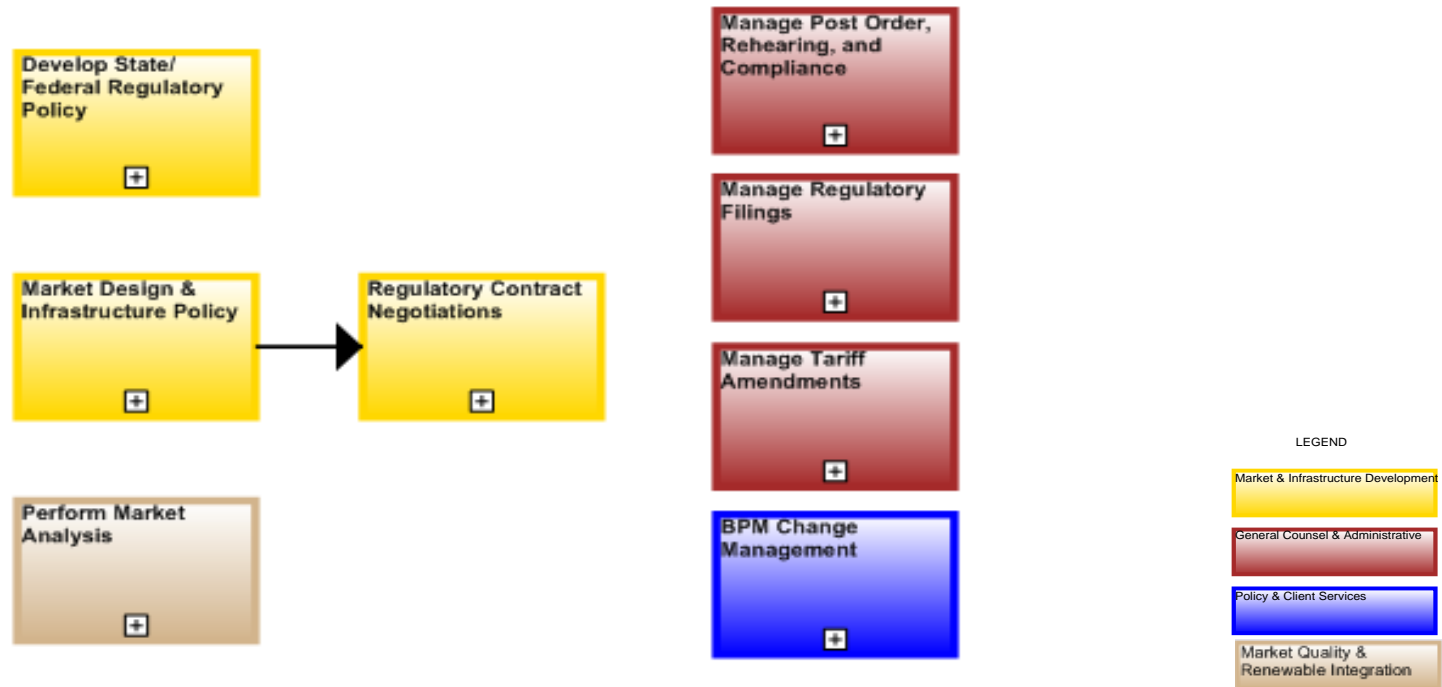
## Develop Infrastructure (DI) (80001) (Continued)

- Enables the ISO to take a proactive approach to transmission planning by facilitating the building of needed projects
- Provides an important platform for success in addressing future challenges, though an enhanced planning process
- Satisfies compliance requirements, meets other regulatory and policy goals, and participates in joint regional planning groups

Processes	Process Owner	Process Descriptions
<a href="#">Manage Transmission Maintenance Standards (206)</a>	Director, Grid Assets	Depicts the ISO Grid Assets oversight and review activities as coordinated with the participating transmission owners to manage the ISO Transmission Maintenance Standards (Transmission Control Agreement Appendix C), mandated by Public Utilities Code 348 and adopted by the ISO. The ISO Transmission Maintenance Standards consist of five major elements: 1) PTO Maintenance Practices - PTO provides and ISO adopts as appropriate a detailed description of the PTO's maintenance program; 2) Standardized Maintenance Reporting – summary of maintenance and inspection tasks planned and performed during the reporting period and the PTO identifies and explains differences between the planned maintenance activities and actual performed maintenance; 3) Annual Maintenance Reviews – ISO conducts field inspections to verify maintenance activities and records to support documented practices and to visually observe the condition of facilities; 4) Availability Measures – statistical analysis, using annual PTO frequency and duration of forced outage data, to quantify the availability performance of transmission circuits under the ISO's operational control. 5) Oversight and review by internal and external technical experts via the ISO Transmission Maintenance Coordination Committee (TMCC) to ensure these standards remain effective and current to the industry.
<a href="#">NERC/ WECC Loads &amp; Resources Data Requests (207)</a>	Director, Grid Assets	Depicts the process for developing templates and documentation, requesting demand response & energy efficiency data from LSEs, and compiling the actual, DR, EE, and forecasts using the WECC template.
<a href="#">Seasonal Assessment (208)</a>	Director, Grid Assets	Depicts the process for seasonal assessment.
<a href="#">Manage Queue (209)</a>	Director, Infrastructure Contracts & Management	Depicts the process for ongoing management of the Generator Queue (post-study). There are six tariff tracking requirements.
<a href="#">Annual Deliverability Assessment (Under Development) (210)</a>	Director, Grid Assets	The process covers an annual assessment methodology for determining and allocating resource adequacy deliverability for distributed generation resources.
<a href="#">Graphical Information System Mapping (Under Development)</a>	Director, Grid Assets	Depicts the process to create specific detailed transmission maps for internal and external requests.

## Develop Markets (DM) (80002)

- Designs and implements value-added enhancements to the wholesale market design
- Improves the ISO's abilities to review and analyze the efficiency and quality of market results
- Creates a framework that will accommodate demand response participation in the ISO market

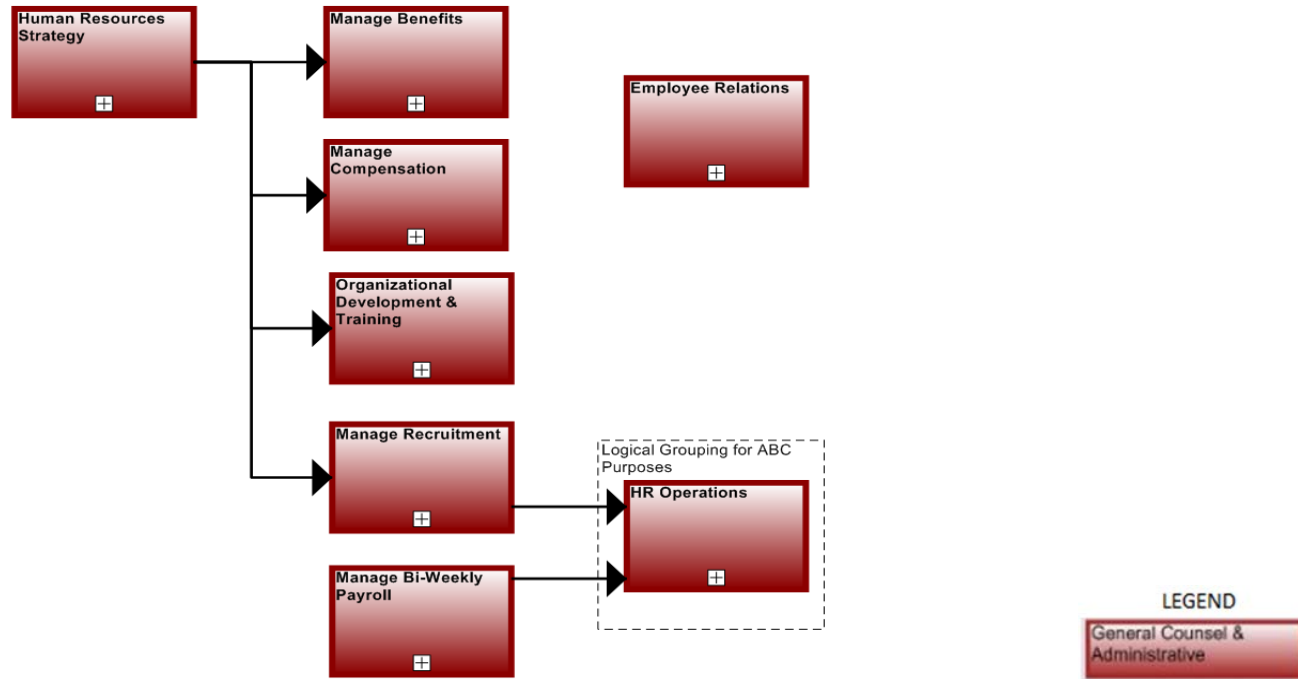


Last Updated: 4/8/13

Processes	Process Owner	Process Descriptions
<a href="#">Manage Regulatory Filings (226)</a>	Deputy General Counsel - Regulatory	The Draft and Review Filing sub process collects all relevant information needed from the project team to prepare an initial draft which is then reviewed by the project team and legal for quality and accuracy, completion of the evidence, strength of the case as well as whether the order sought enables the business process.
<a href="#">Manage Tariff Amendments (227)</a>	Assistant General Counsel - Tariff & Compliance	Draft tariff language is published for review and comment prior to filing with FERC in a tariff amendment filing. Market participants have a minimum of one week to review and comment. Stakeholder meeting (usually conference call) is held to discuss written comments and to respond to questions raised on the call. If time permits, revised tariff language may be published prior to FERC filing. This process is not followed when filing tariff language on compliance with FERC directive unless compliance time frame is more than 30 days. Developing and stakeholdering tariff language is one of the elements of the tariff amendment process. A member of the legal department will be assigned to a stakeholder initiative to provide legal advice. In addition, legal team member drafts the other documents in support of tariff amendment filing and produces drafts for internal review based on agreed upon schedule.
<a href="#">Manage Post Order, Rehearing, and Compliance (228)</a>	Deputy General Counsel - Regulatory	Depicts the Legal procedures that are triggered by a FERC order. Includes seeking rehearing and/or compliance filing if necessary.
<a href="#">Develop State/ Federal Regulatory Policy (229)</a>	Director, Market & Infrastructure Policy	This process is responsible for the development of corporate and regulatory policies related to the physical infrastructure of the electric power system. Staff engages with stakeholders and Federal or State regulatory agencies to produce new regulatory policy, necessary CAISO tariff provisions, and implementation of required business processes.
<a href="#">BPM Change Management (230)</a>	Director, Customer Service & Stakeholder Affairs	Depicts the required activities for managing modifications and additions to Business Practice Manuals (BPMs). BPMs were created to guide ISO operations post MRTU launch and document the consistent and transparent manner in which the ISO will adhere to Tariff provisions. Revision requests for the BPMs may be submitted by stakeholders or an internal ISO department.
<a href="#">Infrastructure Policy (231) and Market Design (233)</a>	Director, Market & Infrastructure Policy	This process includes the design and specification of efficient and effective wholesale electricity spot markets including the identification and development of new products and services as well as the development of solutions to existing market performance issues. This process also covers the formulation of market policies and designs which encourage infrastructure investment.
<a href="#">Perform Market Analysis (232)</a>	Manager, Market Development & Analysis	This process is concerned with the identification and analysis of a market design issue, as it progresses throughout the organization potentially leading up to a Conceptual Design specification and FERC tariff filing.
<a href="#">Regulatory Contract Negotiations (234)</a>	Director, Infrastructure Contracts & Management	IP&C is responsible for the negotiation, drafting, and administration of the CAISO pro-forma and special agreements with market participants and operators of other control areas. These contract negotiations accommodate the other party's request to the extent the negotiations/provisions of the contract are within the framework of the CAISO's Tariff, policies and procedures, and acceptable to FERC and other market participants.

## Manage Human Capabilities (MHC) (80003)

- Comprises the objective of institutional sustainability (people, technology)
- Develops a talent pool to leverage expert technical knowledge and leadership skills
- Creates a work environment that supports and nurtures the ISO's goals



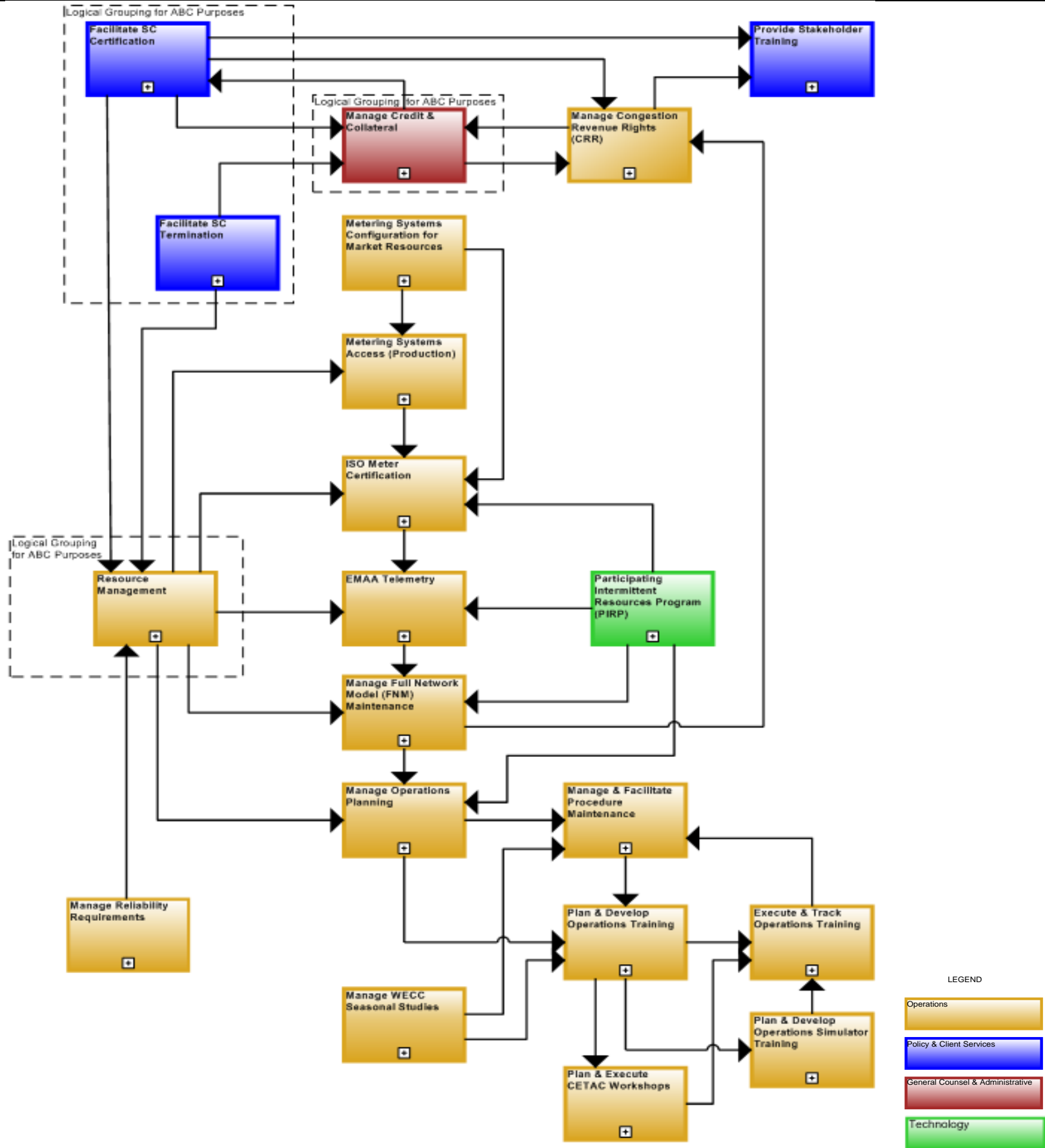
Last Updated: 7/17/13

Processes	Process Owner	Process Descriptions
<a href="#">Human Resources Strategy (251)</a>	VP, Human Resources	Human Resources delivers competitive Human Resources programs and policies to ensure the organization's ability to promote quality treatment of employees and management practices that enable the CAISO to attract, retain, develop, and engage a dedicated and inspired world-class team. The Programs and Services delivered by HR include: 1) Learning & Organizational Development 2) Compensation 3) Employee Benefits 4) Review, validate and file employees' Pay-For-Performance Plans (PFPP) 5) Review STPIP for all employees and make recommendations to officers as necessary 6) Employee Health and Safety Compliance 7) Employee Relations 8) Payroll Administration 9) Employee Recruitment (job posting; job interviews; offer letters; relocation; summer internship program) 10) Employee Life-Cycle 11) Administration of HR Policies and Systems
<a href="#">Manage Benefits (252)</a>	Manager, Compensation & Benefits	Depicts the activities surrounding the development and review of programs including health & welfare benefits, employee benefits, retirement, leave of absence, and workers compensation.
<a href="#">Manage Compensation (253)</a>	Manager, Compensation & Benefits	Depicts the activities surrounding the development and review of programs including compensation, executive compensation, job descriptions, and annual merit/equity and incentive programs.
<a href="#">Manage Bi-Weekly Payroll (254)</a>	Manager, Compensation & Benefits	Depicts the key activities from the time a timecard is submitted through ESS until a paycheck is issued to an employee.
<a href="#">HR Operations (255)</a>	Manager, Human Resources Operations	Logical grouping for ABC purposes. Includes: - <b>Manage Immigration Process</b> - New Candidates with Non-immigrant Visas - Manage Immigration Process for New Candidates that have been identified through the HR- Recruiting process and have existing H1B or TN or CPT or OPT visas or are relocating from a foreign country and need a new visa - <b>Manage Immigration Process</b> - Existing Employees with Non-immigrant Visas - Process applies to existing employees who have non-immigrant visas and require H1B or CPT/OPT extensions and conversions - <b>Manage Immigration Process</b> - Existing Employee Conversions to Permanent Resident - <b>Manage Consultant On Boarding</b> - This diagram depicts the process flow for bringing on board contractor and consultant resources. The scope of the process does not include contractors brought in through CoreStaff. This process starts with the request for resources from the Business Unit and ends with the resource being cleared to bring on board.
<a href="#">Manage Recruitment (256)</a>	Manager, Human Resources Operations	This process details the processes related to the sourcing, screening and hiring of employees at the ISO. Executes the strategy identified by division executives related to workforce planning. Ancillary processes include managing relocation and immigration. This hierarchy also represents the functional decomposition of manage HR administration sub-function which is part of managing human resources function.
<a href="#">Employee Relations (257)</a>	Manager, Human Resources Operations	This process details ensuring the workplace environment allows for maximum productivity and satisfaction. This is achieved by: Addressing employee and/manager concerns, coaching for employees/managers, conducting investigations and providing recommendations on remediations, ensuring ISO is compliant with employment-related laws, marketing the ISO internally/externally as a best place to work.
<a href="#">Organizational Development &amp; Training (258)</a>	Sr Learning & Leadership Development Consultant	This processes depicts the required activities for fulfilling the corporate-wide Training and Development (T&D) requirements. The process involves the following: 1) Consult with manager to identify T&D opportunity or Problem 2) Perform environmental scan 3) Perform initial analysis 4) Design and develop T&D intervention 5) Deploy T&D intervention 6) Track, evaluate and make necessary adjustments to (T&D) intervention



# Manage Market & Reliability Data & Modeling (MMR) (80004)

- Checks and rechecks network modeling policies and protocols to reduce non-market energy dispatches
- Assures that models reflect all grid constraints and produce timely and accurate prices results
- Improves the visibility and transparency of the ISO's business while keeping monitoring and reporting duties secure



Last Updated: 3/13/13

Processes	Process Owner	Process Descriptions
<a href="#">Manage Full Network Model (FNM) Maintenance (301)</a>	Manager, Model & Contract Implementation	Depicts the required activities to maintain and update the Full Network Model (FNM) -- the computer-based model that provides technical specifics of the ISO control area transmission network. The FNM includes a combination of physical network data and commercial data needed to support the reliability goals of the ISO and ensure that network constraints are enforced and feasible operational schedules identified.
<a href="#">Plan &amp; Develop Operations Simulator Training (302)</a>	Manager, Operations Training	Depicts the activities performed by the Operation Training team to plan and develop operations simulator training.
<a href="#">ISO Meter Certification (303)</a>	Manager, Model & Contract Implementation	Depicts the process of certifying new metered entities to provide meter data in the ISO's markets.
<a href="#">EMAA Telemetry (304)</a>	Manager, Model & Contract Implementation	Depicts the process for configuring and testing telemetry for new or existing generators including PDR. The process describes how RIG engineers review documentation to develop point lists, finalize data point lists with generators, and submit the point lists to EMS for QAS testing. RIG engineers then verify the QAS output, perform point-to-point testing and work with MCI to setup A/S testing.
<a href="#">Metering Systems Configuration for Market Resources (305)</a>	Manager, Market Services Meter Engineering & Analysis	Depicts the process of establishing meter communications with ISO MEs, performing resource mappings, configuring resources for ISO programs or special calculations, and providing access to raw meter data.
<a href="#">Metering Systems Access (Production) (306)</a>	Manager, Market Services Meter Engineering & Analysis	Depicts the process for managing secured access to SQMD for both internal and external requests.

## Manage Market & Reliability Data & Modeling (MMR) (80004) (Continued)

- Checks and rechecks network modeling policies and protocols to reduce non-market energy dispatches
- Assures that models reflect all grid constraints and produce timely and accurate prices results
- Improves the visibility and transparency of the ISO's business while keeping monitoring and reporting duties secure

Processes	Process Owner	Process Descriptions
<a href="#">Manage Congestion Revenue Rights (CRR) (307)</a>	Manager, Market Settlement Validation & Resolution	<p>Depicts the required activities for the allocation and auction of Congestion Revenue Rights (CRRs) to market participants as well as the trading of these rights in the secondary market. The allocation and auction processes occur both annually (prior to the start of a new calendar year) and monthly (prior to the start of a new month). Sub processes include:</p> <ol style="list-style-type: none"> <li>(1) Set up of the CRR market</li> <li>(2) Receive CRR allocation and auction submissions</li> <li>(3) Run the CRR market, and</li> <li>(4) Perform secondary market trading.</li> </ol> <p>CRRs are financial rights to receive a portion of the revenue associated with resolving congestion on the ISO system. They are defined between a source and sink location on the grid and enable holders to manage the variability of congestion costs connected to the use of locational marginal pricing. CRRs are allocated to Load Serving Entities (LSEs) and auctioned to all creditworthy participants. They are available with annual and monthly terms and can be bought and sold by holders within the Secondary Registration System available on the ISO Portal.</p>
<a href="#">Manage Credit &amp; Collateral (308)</a>	Manager, Treasury & Credit	<p>Logical grouping for ABC purposes. Includes:</p> <p><b>Manage Credit</b> - Depicts the required activities to ensure that Market Participants comply with CAISO credit policy by ensuring that a Market Participant's Aggregate Credit Limit ("ACL"; i.e., unsecured credit plus posted financial security) exceeds their Estimated Aggregate Liability ("EAL").</p> <p>Determine Liabilities The process of determining what a Market Participant's EAL is (i.e., how much the Market Participant owes the CAISO market). This process includes aggregating inputs from multiple operational system sources such as settlements and CRR and projecting the EAL over the full cash clearing cycle.</p> <p>Compare Limits versus Liabilities The weekly process of ensuring that a Market Participant's ACL exceeds their EAL. For Market Participant's whose EAL is 90% or more of their ACL, CAISO initiates a request that the Market Participant post additional financial security.</p> <p><b>Manage Collateral</b> - The process of setting a Market Participant's ACL by determining any unsecured credit that the Market Participant may be eligible for as well as receiving and posting other forms of financial security from the Market Participant.</p>
<a href="#">Resource Management (309)</a>	Manager, Model & Contract Implementation	<p>Logical grouping for ABC purposes. Includes:</p> <p><b>- Manage Entity &amp; Resource Maintenance Updates</b></p> <p><b>- Manage New Resource Implementation</b> - Depicts the process followed to manage the implementation of all types of resources according to required timelines and in compliance with Tariff and Controls. This process encompasses activities performed from Customer Request to Final Certification to participate in the ISO Market.</p> <p><b>- Manage TRTC (Transmission Rights Transmission Curtailments) Instructions</b> - Depicts the activities performed by the Model &amp; Contract Implementation (MCI) team to manage TRTC instructions. The use of ETC or TOR transmission rights must be scheduled in both CAISO Market and Interchange Scheduling systems by a responsible SC. The responsible SC is determined by the RPTO or NPTO, which notifies the ISO using TRTC instructions. The responsible SC schedules ETC/TORs using market resources registered as source or sink for the ETC/TOR rights, in the CAISO Master File.</p> <p>Any transfer or sale of ETC rights must first be coordinated by the ETC rights holder through the RPTO. The RPTO then revises its TRTC (Transmission Reservation Transmission Contracts) instructions to the CAISO, to reflect any approved transfer, accordingly. Only the responsible SC, as registered with the CAISO, may receive any congestion charge rebate associated with the use of ETC rights.</p> <p><b>- Manage SC-Requested Resource Testing</b></p> <p><b>- Manage Resource Performance Verification</b> - Depicts process for auditing resource performance and conducting unannounced compliance testing.</p>
<a href="#">Manage Reliability Requirements (310)</a>	Manager, Model & Contract Implementation	<p>Depicts the required activities to support the Resource Adequacy program adopted by the California Public Utilities Commission (CPUC) and other local regulatory agencies in compliance with California mandates. The RA program ensures that sufficient resources are available to meet the expected peak demand and provides for reliable power delivery throughout the ISO Control Area.</p> <p>Annual and monthly supply plans submitted by Market Participants (MPs) and Load Serving Entities (LSEs) are reviewed in conjunction with ISO studies regarding local capacity requirements and generation deliverability studies. Analysis of this data is used to create annual and monthly Resource Adequacy Capacity Reports.</p>
<a href="#">Manage Operations Planning (311)</a>	Director, Operations Engineering Services	Provide operating procedures and tools, and training information, to address transmission and generator operational issues in the operating horizon (from 2 days to 1 year).
<a href="#">Manage WECC Seasonal Studies (312)</a>	Director, Operations Engineering Services	Perform WECC Seasonal Studies 3 x per year. Develop System Operating Limits (SOL's) for Southern California Import Transmission (SCIT) and California Oregon Intertie (COI) paths, and implement them for each season.
<a href="#">Participating Intermittent Resources Program (PIRP) (313)</a>	VP, Technology	This is the process required for a qualified Eligible Intermittent Resource (EIR) to become a Participating Intermittent Resource (PIR), and the subsequent annual requirements to maintain PIR status.
<a href="#">Manage &amp; Facilitate Procedure Maintenance (314) and Manage procedure administration, and reporting (315)</a>	Manager, Operations Process & Procedures	Depicts the required activities for managing the development, review, and modification of ISO Operating Procedures. Operating Procedures were created to guide ISO grid operations and document the consistent and transparent manner in which the ISO will adhere to Tariff provisions. Revision requests for the Operating Procedures may be submitted by stakeholders or an internal ISO department.
<a href="#">Plan &amp; Develop Operations Training (316)</a>	Manager, Operations Training	Depicts the required activities for managing the design, development, and delivery of operations (Grid and Market) related training courses, simulator scenarios and training programs to real-time personnel, Operators-in-training (OITs), other ISO departments, and external entities in form of Grid Ops Training, Summer Workshops, and on-the-job training (OJT).
<a href="#">Execute &amp; Track Operations Training (317)</a>	Manager, Operations Training	Depicts the process for conducting required training throughout the year, including planned and ad hoc training. Also includes activities related to reporting training completion to regulatory agencies.
<a href="#">Plan &amp; Execute CETAC Workshops (318)</a>	Manager, Operations Training	The California ISO in conjunction with the California Electric Training Advisory Committee (CETAC) plans, develops and delivers Grid Operator training on an annual basis to provide a learning forum and opportunity for enhanced communications between operating entities involved with the reliable operation of the grid. Workshop courses are largely focused in areas to prepare for managing summer peak system loads. Planning and coordination activities start over 1 year in advance and the workshops are delivered over a 5 week period starting in March or April each year.

## Manage Market & Reliability Data & Modeling (MMR) (80004) (Continued)

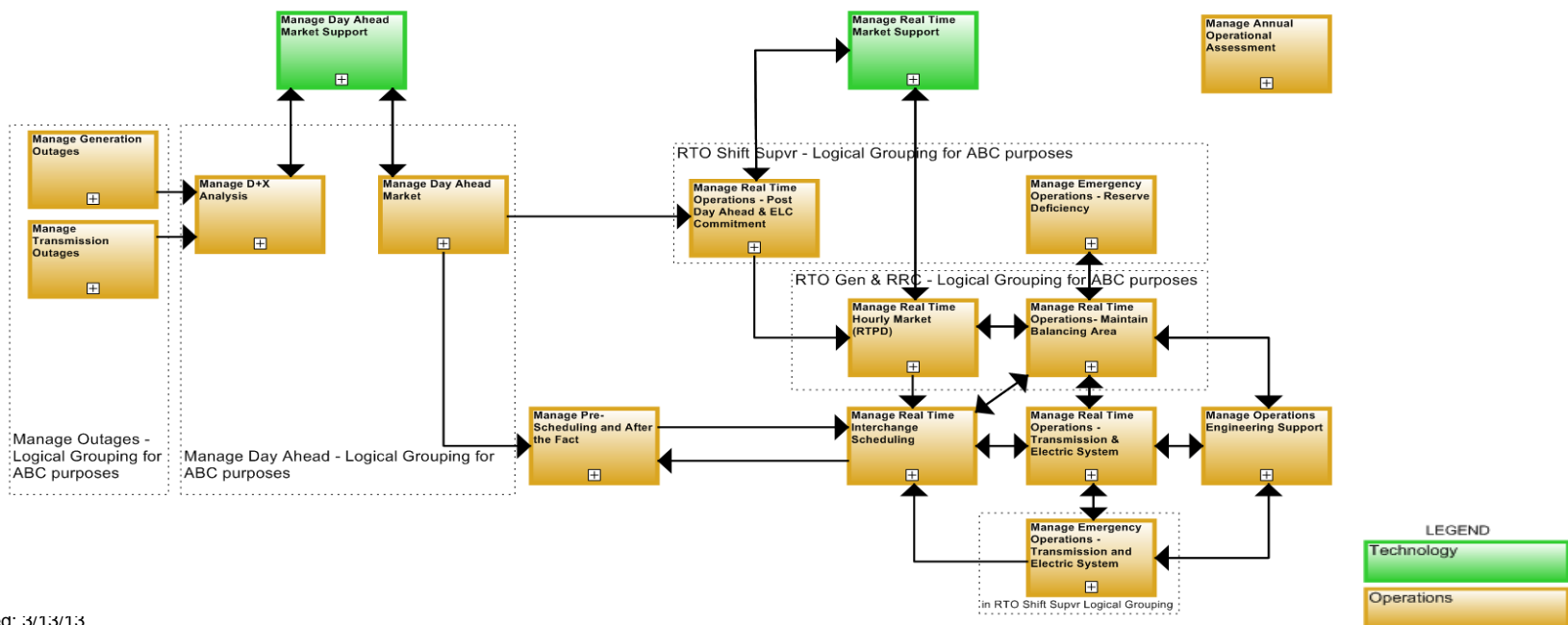
- Checks and rechecks network modeling policies and protocols to reduce non-market energy dispatches
- Assures that models reflect all grid constraints and produce timely and accurate prices results
- Improves the visibility and transparency of the ISO's business while keeping monitoring and reporting duties secure

Processes	Process Owner	Process Descriptions
<a href="#">Provide Stakeholder Training (320)</a>	Manager, Customer Service	This process describes detailed steps for providing stakeholder training.
<a href="#">SC Management (321)</a>		Grouping of 2 SC processes
<a href="#">Facilitate SC Certification (321)</a>	Manager, Customer Service	<p>This Process defines the Scheduling Coordinator (SC) certification process and identifies all the requirements which are needed to complete SC certification. Customer Services oversees the SC certification process and ensures that all requirements are fulfilled prior to letting the SC submit schedules in the CAISO market. CAISO managers that are responsible for the certification requirement manually sign off the SC Checklist when the requirement is fulfilled. On completion, the Client Representative submits a change management request (CMR) to initiate the SC setup in CAISO systems. The Client Representative sends an internal notification as well as creating a Market Notice introducing the new SC in the CAISO market. This process describes the steps for SC Applicants to establish Financial Security as a part of their certification process.</p> <p>This process describes the certification requirements for SC Applicants. These requirements include establishing Financial Security, establishing Network Interface, getting access to Application, attending Training, completing Market Proficiency Test, completing Real Time and Contact Drills, Submitting SC Emergency Plan, registering Interchange ID, submitting Network Connectivity Security Agreement, submitting Acknowledgement Forms, etc.</p> <p>SC Applicants becoming certified for Inter-SC trades or Non-dynamic Energy Imports into the CAISO Control Area do not have post security during the certification phase. Once they go live Finance monitor their activity and they may be asked to post collateral at that time.</p> <p>Other SC Applicants must have an Approved Credit Rating as set forth in the CAISO Tariff.</p> <p>In the absence of an Approved credit rating, an SC can estimate their security obligation using the calculator.</p>
<a href="#">Facilitate SC Termination (321)</a>	Manager, Customer Service	This process describes how to handle voluntary or involuntary termination of a Scheduling Coordinator (SC).



## Manage Markets & Grid (MMG) (80005)

- Manages transmission and generation outages to ensure continuous flow of power to all customers
- Includes dutiful execution of the Day Ahead Market and Interchange Scheduling
- Ensures all local capacity requirements are met and the power is delivered in the least cost possible by avoiding congested areas
- Manages Real Time Scheduling to ensure that load is balanced to generation and that dispatch instructions are generated
- Operates the Day Ahead and Real Time energy markets
- Performs Generation and Transmission Dispatch



Last Updated: 3/13/13

Processes	Process Owner	Process Descriptions
<a href="#">Manage Day Ahead Market Support (352)</a>	Manager, Market Engineering Support	Depicts the activities performed by the Power Systems Technology Operations (PSTO) team to support the Day Ahead market.
<a href="#">Manage Real Time Market Support (353)</a>	Manager, Market Engineering Support	Depicts the activities performed by the Power Systems Technology Operations (PSTO) team to support the Real Time market.
<a href="#">Outage Model and Management (355)</a>		Grouping of 2 outage activities
<a href="#">Manage Generation Outages (355)</a>	Director, Day-Ahead Market & Real-Time Operations Support	Depicts the required activities to coordinate and manage planned and forced generation outages to best ensure system reliability while successfully meeting demand and managing system congestion.
<a href="#">Manage Transmission Outages (355)</a>	Director, Day-Ahead Market & Real-Time Operations Support	Depicts the required activities to coordinate and manage planned and forced transmission outages to best ensure system reliability while successfully meeting demand and managing system congestion.  This process also involves handling of the outage data (text format) in the SLIC Application which will be entered into the EMS Outage Scheduler and the Siemens Outage Scheduler through a direct input method. This outage data is essential for both the Outage schedulers to correctly solve based upon the changes in grid topology. This process also documents the manual data entry procedure until suitable automation is in place.
<a href="#">Manage Day Ahead Market (358)</a>		Grouping of 2 day ahead activities
<a href="#">Manage D+X Analysis (358)</a>	Director, Day-Ahead Market & Real-Time Operations Support	This diagram depicts the analysis activities which occur after the Day Ahead Market (D+1) has been run. Currently the D+2 run is run "today" for 2 days out and utilizes the appropriate outages and load forecasts for that D+2 date, but utilizes the D+1 Master File and Bid data. The D+2 run includes MPM-RRD, IFM and RUC- results are reported but not published externally. The Day Ahead operators run the D+2 processes and are supported by Market Operations and Engineering to analyze the pricing, binding constraints and other outputs. The objective for the analysis is to discover any issues or inconsistencies in the outputs which can be resolved before reaching the D+1 run.
<a href="#">Manage Day Ahead Market (358)</a>	Director, Day-Ahead Market & Real-Time Operations Support	Depicts the required activities to run the Day-Ahead Market (DAM) and includes the tasks that occur in the three hour window - between the close of the DAM at 10 am and publication of results at 1 pm - in support of the next day's grid operation. The DAM commits generation, manages congestion, procures reserves and clears market bids. Sub-processes include:  1) Receive and validate bids 2) Run DAM systems of Market Power Mitigation (MPM), Reliability Requirement Determination (RRD), the Integrated Forward Market (IFM), Residual Unit Commitment (RUC) and Extreme Long-Start Commitment (ELC) 3) Publish results
<a href="#">Manage Pre-Scheduling and After the Fact (359)</a>	Director, Day-Ahead Market & Real-Time Operations Support	The Manage Pre & Post Scheduling process involves validating and approving requests for interchange schedules (RFIs), resolving Net Scheduled Interchange (NSI) and Net Actual Interchange (NAI) discrepancies After the Fact (ATF).  During the Prescheduling time frame, Scheduling Services ensures that the inter-tie schedules submitted prior to the operating day have valid e-Tags, have Day Ahead Market awards, conform to all market and contractual obligations and are checked out with Adjacent Balancing Authorities (ABAs) and WECC Interchange (WIT) in accordance with NERC policies.  During the After the Fact time frame, Scheduling Services ensures that checkouts are performed with Adjacent Balancing Authorities and any potential NAI and/or NSI discrepancies are identified and resolved prior to the Settlements process.
<a href="#">Manage Operations Engineering Support (362)</a>	Director, Operations Engineering Services	Depicts the activities surrounding engineering support of real time operations, which could include analysis as well as tool and procedure updates.
<a href="#">Real Time Operations - Shift Supervisor - Post Day Ahead and Pre Real Time and Manage Emergency Operations (363)</a>		Grouping of 3 real time operations shift supervisor activities
<a href="#">Manage Real Time Operations - Post Day Ahead &amp; ELC Commitment (363)</a>	Director, Real-Time Operations	Depicts the required activities to prepare for running the Real-Time Market. Grid Operations performs the following:  (1) Reviews and adjusts Day-Ahead schedules as needed (2) Manages the real-time bidding process and (3) Prepares for the Real-Time Market hourly intervals process. Time horizon represented by the full process is Trade Hour minus 30 minutes Trade Hour plus 240 minutes.
<a href="#">Manage Emergency Operations - Reserve Deficiency (363)</a>	Director, Real-Time Operations	Details the actions taken as a response to forecasted or existing Operating Reserve deficiencies. The order of the actions taken may vary due to system conditions or other operational issues. The scope of the process includes the escalation and de-escalation through stages of Alerts, Warnings, and levels of Emergency in order to prevent further depletion of reserves or degradation to the system.
<a href="#">Manage Emergency Operations - Transmission &amp; Electric System (363)</a>	Director, Real-Time Operations	This process includes stages of emergency situations ranging from reserve shortages, to load shedding, to brown/black restoration, etc. As well as system restoration steps.

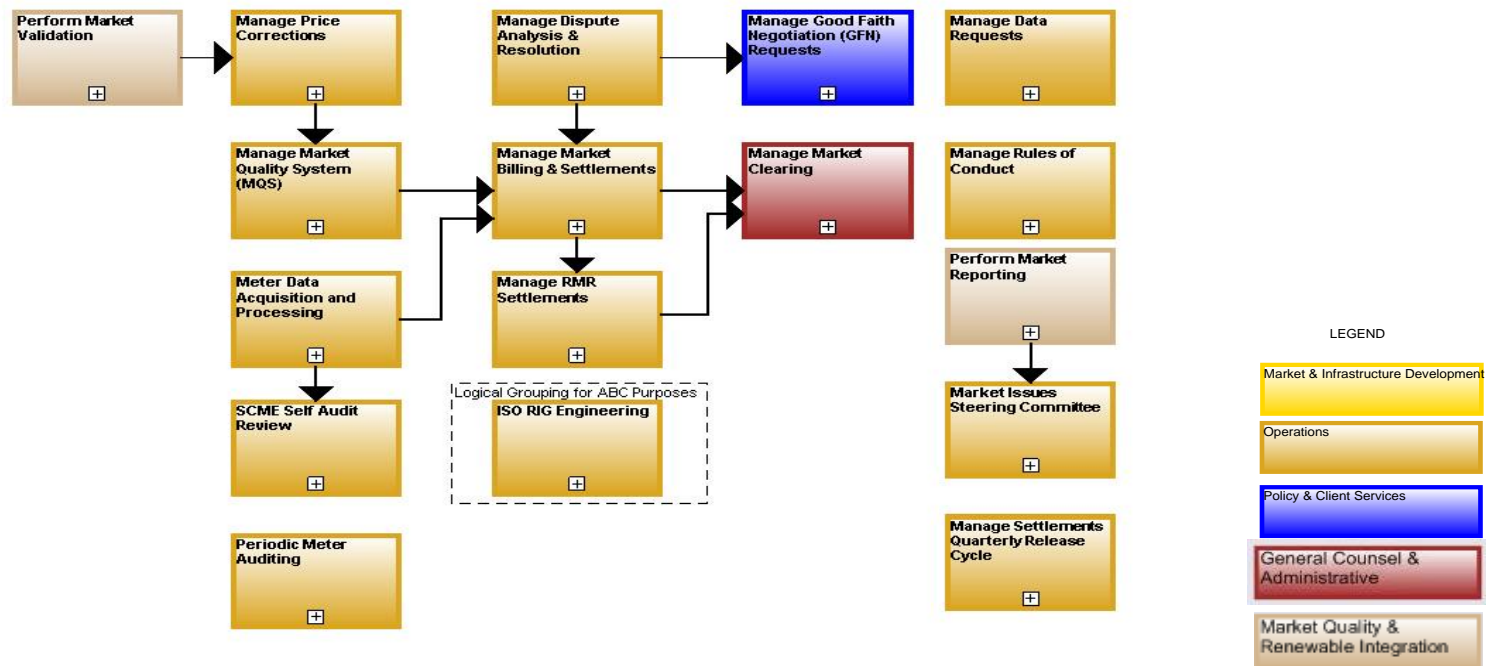
## Manage Markets & Grid (MMG) (80005) (Continued)

- Manages transmission and generation outages to ensure continuous flow of power to all customers
- Includes dutiful execution of the Day Ahead Market and Interchange Scheduling
- Ensures all local capacity requirements are met and the power is delivered in the least cost possible by avoiding congested areas
- Manages Real Time Scheduling to ensure that load is balanced to generation and that dispatch instructions are generated
- Operates the Day Ahead and Real Time energy markets
- Performs Generation and Transmission Dispatch

Processes	Process Owner	Process Descriptions
<a href="#">Real Time Operations - Generation and Real Time Renewables Coordinator (GRRC) desks - Maintain Balancing area and manage real time pre deipatch (RPTD) (364)</a>		Grouping of 2 real time operations GRRC desks activities
<a href="#">Manage Real Time Operations - Maintain Balancing Area (364)</a>	Director, Real-Time Operations	Depicts the required activities for executing the 5 minute dispatches as well for monitoring and mitigating ACE, AGC, reserves, contingencies, exceptional dispatch, etc
<a href="#">Manage Real Time Hourly Market (RTPD) (364)</a>	Director, Real-Time Operations	Depicts the required activities to run the Real-Time Market following its close and the receipt of all real-time bids. Grid Operations performs the following:  (1) Run the Real-Time Market Power Mitigation (MPM) and Reliability Requirements Determination (RRD) processes (2) Manage the Hour-Ahead Scheduling Process (HASP) and (3) Run unit commitment processes - Short-Term Unit Commitment (STUC) runs hourly looking 5 hours ahead, Real-Time Unit Commitment (RTUC) runs every 15 minutes, and Real-Time Economic Dispatch (RTED) runs every five minutes for imbalance energy needs. The time horizon represented by the full process is Trade Hour minus 45 minutes to Trade Hour plus 60 minutes.
<a href="#">Manage Real Time Operations - Transmission &amp; Electric System (365)</a>	Director, Real-Time Operations	The Transmission Dispatch desk focuses largely on the reliability of the system. There are 2 desks in Folsom, one of which focuses on 500kv lines and the other 230 kv lines. There are 2 desks in Alhambra, one of which focuses on SCE 220kv lines and the other SDG&E 230kv lines.  The Lead Transmission Dispatch desk manages changes which impact the market model including but not limited to biasing, TCORs, monitoring pricing and congestion. These activities are represented on a separate diagram.
<a href="#">Manage Real Time Interchange Scheduling (366)</a>	Director, Real-Time Operations	The Manage Interchange Scheduling process involves Real Time Schedulers validating and approving requests for interchange schedules (RFIs), implementing approved schedules in Real Time and resolving Net Scheduled Interchange (NSI) and Net Actual Interchange (NAI) discrepancies both prior to schedule implementation in EMS as well as at the End of Day (after midnight).  During the Real Time/ Intra Hour Change time frames, Real Time Schedulers update and adjustment inter-tie schedules which includes validation of e-Tags, confirmation of ISO market awards, conform to all market and contractual obligations and are checked out with Adjacent Balancing Authorities (ABAs) and WECC Interchange (WIT) in accordance with NERC policies.  During the End of Day time frame, Real Time Schedulers ensure that checkouts are performed with Adjacent Balancing Authorities and any potential NAI and/or NSI discrepancies are identified.
<a href="#">Manage Annual Operational Assessment (367)</a>	Director, System Operations	Per Tariff 22.1.2.2, Review of Compliance with Operations Policies and Procedures, an annual independent review is conducted of the CAISO management's compliance with its operations policies and procedures and presented to the CAISO Governing Board. A market notice is posted to allow Market Participants to input topics for review. Report is available upon request to Market Participants.

## Manage Operations Support & Settlements (MOS) (80007)

- Improves market efficiency by finding the most cost effective way of doing business
- Lowers the financial risk of participating in the wholesale market that in turn lowers the cost of doing business with the ISO
- Translates lower costs into less overhead for ISO customers who can pass the savings to ratepayers



Last Updated: 9/12/13

Processes	Process Owner	Process Descriptions
<a href="#">Perform Market Validation (401)</a>	Manager, Market Validation & Quality	Depicts the process of receiving price issues from the Day Ahead or Real Time markets, researching the issues and validating prices.
<a href="#">Manage Dispute Analysis &amp; Resolution (402)</a>	Manager, Market Settlement Validation & Resolution	Depicts the required activities to coordinate a timely, efficient and accurate dispute resolution process.
<a href="#">Manage Market Quality System (MQS) (403)</a>	Manager, Market Settlement Design & Configuration	Depicts the activities related to the completion of post-process corrections on data from the Day-Ahead and Real-Time Markets. This process reduces the need for manual validation, verification and correction of transactional data that could affect market settlements, thereby reducing invoice errors and disputes. The Market Quality System (MQS) calculates expected energy costs, dispatch operating point, trading hubs, settlement allocations and start up/minimum load costs and publishes them on the OASIS website.
<a href="#">Manage Data Requests (404)</a>	Manager, Market Settlement Design & Configuration	Depicts the required activities to coordinate a timely, efficient and accurate response to data requests from internal and external parties.
<a href="#">Manage Rules of Conduct (406)</a>	Manager, Market Settlement Design & Configuration	Depicts the process to identify and review potential violations of the Rules of Conduct in CAISO Tariff, levy sanctions where violations are confirmed, allocate those funds as appropriate, and refer specific matters to DMM for further research and possible referral to FERC.
<a href="#">Periodic Meter Auditing (407)</a>	Manager, Market Services Meter Engineering & Analysis	Depicts the process of performing periodic audits (at least every two years) of metering installations to verify the integrity of meters and related components.
<a href="#">ISO RIG Engineering (408)</a>	Manager, Market Services Meter Engineering & Analysis	Logical grouping for ABC purposes. Includes: - <b>RIG Incident Management</b> - Depicts the process of resolving RIG issues or incidents with existing market resources. - <b>SLIC Outage Coordination for RIG Activities in Production</b> - Depicts the process of coordinating outages that affect production RIG systems. The process includes tracking the outage in SLIC, and informing the SMC and Real Time Operators at the start and conclusion of the outage. - <b>Certificate Tracking for RIG Installations</b> - Depicts the process of receiving a monthly list of expiring certificates from Information Security, and then contacting the generators with expiring certificates. After the generators request renewals, the RIG Engineers work with the generators to coordinate outages, and install the new certificates. - <b>RIG Site Visits</b> - Depicts the process of scheduling site visits with generators who are undergoing new construction, have undergone an ownership change, or are due for a periodic site visit from the RIG Engineers.
<a href="#">Energy Measurement, Acquisition, &amp; Analysis (409)</a>	Manager, Market Services Meter Engineering & Analysis	Depicts the required activities to collect, analyze and validate meter data submitted by scheduling coordinators, ISO-metered entities, metered subsystems and the Interties. Data must be confirmed as Settlement Quality Meter Data (SQMD) before being passed on to the Settlements team for use in the market clearing process.
<a href="#">SCME Self Audit Review (410)</a>	Manager, Market Services Meter Engineering & Analysis	Each year, the metering group's compliance analyst contacts SCs who submit meter data to advise them of their annual audit requirements. The compliance analyst then confirms the SC's contact information and sends all of the required audit documentation to the SC. The SC then submits an audit plan for review and approval, and then submits the audit report once the audit is complete. Once all audits are complete for the year, the compliance analyst creates a lessons learned report and submits the report to the Board of Governors.
<a href="#">Manage Market Clearing (411)</a>	Controller	Depicts the process of reconciling Market and RMR invoices and receiving funds from market participants. Once funds are received, the ISO moves funds to investment and corporate accounts as necessary, and sends wire transfers to Market Participants to clear the market.
<a href="#">Manage Market Billing &amp; Settlements (412)</a>	Manager, Market Settlement Production	Depicts the required activities to collect market data, facilitate corrections to market data as necessary, calculate charges, process pass through bill data and publish credit, initial, recalc, rerun, and historic statements and invoices to market participants.  <b>Settlements</b> Receiving market data from upstream systems, corrected data from the Market Quality System (MQS), and contractual information, the Settlements system calculates and issues an Initial Settlement statement on Trade Day +7 business days (T+7B) - not all data is available at this time and is estimated. Market participants will review the statement and, if appropriate, will register a dispute(s) with the ISO. On Trade Day +38 business days (T+38B) a Recalculation Statement is issued with complete data and dispute corrections; on Trade Day +76 business days (T+76B), Trade Day +18 months, +35 months, & +36 months (T+18M, T+35M, & T+36M) a Recalculation Statement is issued with dispute, re-run, GFN, etc. corrections.  <b>Billing</b> Market participants receive a single Invoice (due ISO) or Payment Advice (due MP) that nets all charges and/or revenues for multiple trade months (or bill periods). Invoices include charges for market activities (from the settlements process above), FERC fees, the Grid Management Charge (GMC) and the Transmission Access Charge (TAC). Initial Invoices are issued twice for every Trade Month, 7B days after the 15th of the month and 7B days after Trade Month end. Recalculation Invoices are issued on Trade Month+38B. Wire payments between the ISO and market participants are made on Trade Month+15 B (on Initial invoices) and Trade Month+43 B (on Recalc invoices).

## Manage Operations Support & Settlements (MOS) (80007) (Continued)

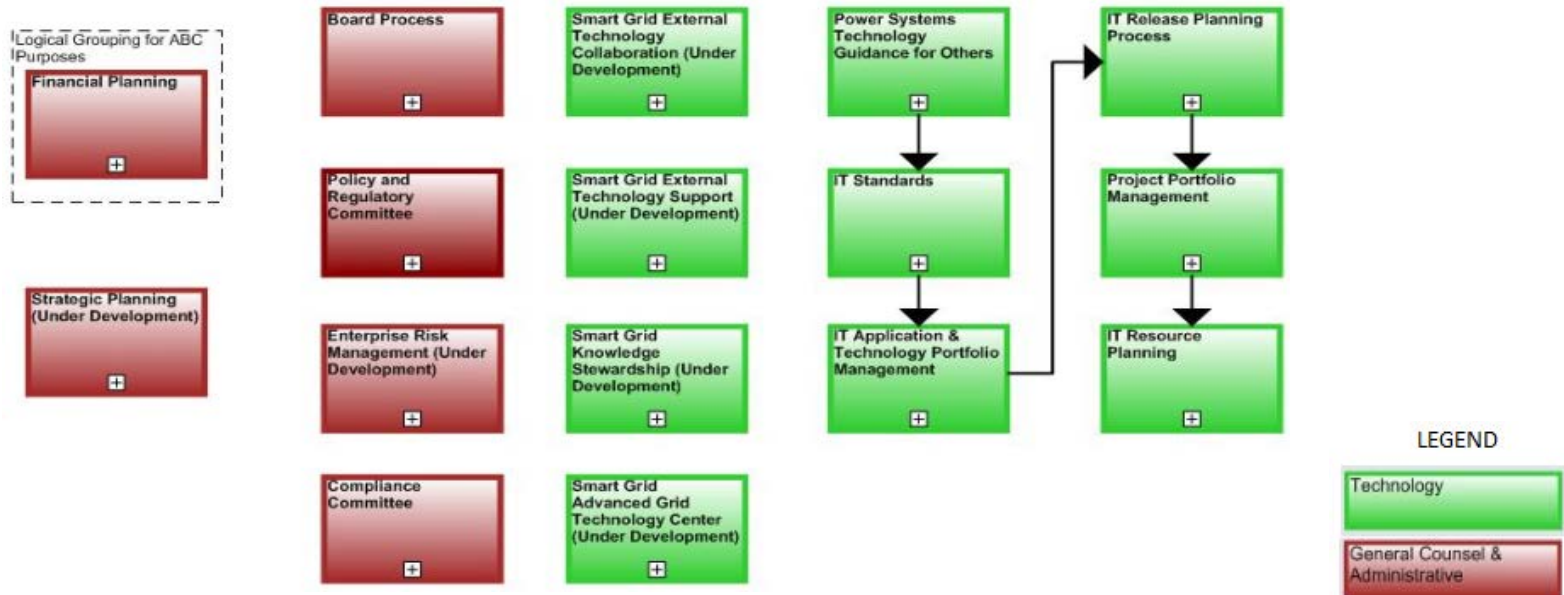
- Improves market efficiency by finding the most cost effective way of doing business
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- Translates lower costs into less overhead for ISO customers who can pass the savings to ratepayers

Processes	Process Owner	Process Descriptions
<a href="#">Manage RMR Settlements (413)</a>	Manager, Market Settlement Production	Depicts the process of running the RMR Owner invoice extraction, acceptance, and validation process and generating the CAISO RMR invoices for RMR Owners and PTOs.
<a href="#">Manage Settlements Quarterly Release Cycle (414)</a>	Manager, Market Settlement Design & Configuration	Depicts the activities related to making non-project-related configuration changes to Settlements systems including, but not limited to, disputes, enhancements, FERC rulings, and Tariff amendments.
<a href="#">Market Issues Steering Committee (416)</a>	Director, Market Services	The CAISO Market Issue Management policy provides the framework by which a cross function team of Operations, Information Technology and Market and Infrastructure Development can successfully manage issues associated with market functionality, processes or policy. It aims to ensure the following: <ul style="list-style-type: none"> <li>- Identification of critical issue that have occurred and highlighted through internal analysis, or external inquiry</li> <li>- Determination of the root cause of identified issue</li> <li>- Determination of Market and Business Impact</li> <li>- Short and Long term resolution of the issue</li> <li>- Introduction of monitoring and control mechanisms</li> <li>- Prevention of future incidents through proactive issue identification</li> </ul>
<a href="#">Perform Market Reporting (417)</a>	Manager, Market Development & Analysis	Depicts the required activities to monitor and report on the daily, routine performance of the ISO markets to identify operations trends and anomalies and monitor ongoing issues. Market performance is summarized within daily internal reports and monthly reports to the Board of Governors and FERC.
<a href="#">Manage Good Faith Negotiation (GFN) Requests (418)</a>	Director, Customer Service & Stakeholder Affairs	Depicts the activities around processing good faith negotiation (GFN) requests received from market participants.
<a href="#">Manage Price Corrections (419)</a>	Manager, Market Settlement Production	Depicts the process of providing corrected pricing data for the Day Ahead or Real Time markets.



## Plan & Manage Business (PMB) (80008)

- Aligns the strategic planning process more closely with budget planning
- Defines, creates and nurtures a culture of cost-consciousness as well as enhancing services while not adding costs
- Allows stakeholders to participate in ISO governance where costs and reliability issues are balanced



Last Updated: 3/25/13

Processes	Process Owner	Process Descriptions
<a href="#">Financial Planning (451)</a>	Director, Financial Planning	Logical grouping for ABC purposes. Includes: Financial Planning, Budgeting & Rates - This process presents the milestones needed to complete the Operating & Maintenance and Capital Projects. This would ensure development of a comprehensive, well thought-out budget to meet CAISO needs. Manage Financial Planning - Depicts the process for long-term financial planning beyond the yearly budget. Considers the long-term rate structure for the ISO, looks at out years to develop the 10-year budget forecast, and includes the process of issuing bonds.
<a href="#">IT Application &amp; Technology Portfolio Management (452)</a>	Manager, IT Architecture	This process identifies new or potential upgrade target technologies for implementation into the ISO's computing infrastructure (includes data architecture).
<a href="#">IT Resource Planning (453)</a>	Manager, Program Lifecycle & Process	Depicts the process of resource planning of human resources among various projects or operational activities, maximizing the utilization of available personnel resources to achieve business goals.
<a href="#">Project Portfolio Management (454)</a>	Manager, Program Lifecycle & Process	Depicts Program Office driven activities from portfolio and release planning through to software development and funding activities.
<a href="#">Power Systems Technology Guidance for Others (455)</a>	Director, Power Systems Technology Development	Provides all technical guidance activities (answering questions, following up with vendors, reviewing technical requirements or designs, etc.).
<a href="#">IT Standards (456)</a>	Manager, IT Architecture	Process is executed every time there is a request for software, hardware, technology, or a need when a new capability identified.
<a href="#">IT Release Planning Process (457)</a>	Manager, Program Lifecycle & Process	Depicts the process of managing IT release planning.
<a href="#">Enterprise Risk Management (459)</a>	Director, Internal Audit	This process depicts activities engaged in across business functions to identify risks and opportunities in the ISO's internal and external environments that would impact its business objectives, evaluate them to determine residual risk exposure, and develop and monitor enterprise risk mitigation strategies to address them. It leverages information across all business functions, and is a key input into the strategic planning process.
<a href="#">Compliance Committee (460)</a>	VP, General Counsel & Chief Administrative Officer	Depicts the Compliance Committee activities which could include decisions as well as inputs to the Corporate Governance processes (ELT, Board of Governors, etc).
<a href="#">Board Process (461)</a>	Assistant Corporate Secretary	Depicts the activities involved in the planning of regularly scheduled Board meetings, including agenda topic development, memo and presentation drafting, executive review of materials, delivery of materials to the Board, presentation dry run, and post-meeting activities.
<a href="#">Smart Grid External Technology Collaboration (462)</a>		Grouping of 2 Smart Grid Technology collaboration activities
<a href="#">Smart Grid External Technology Collaboration (462)</a>	Director, Smart Grid Technology Development	There is a large demand from technology innovators, vendors, and other stakeholders for the ISO to review new technologies, capabilities and in some cases engage directly in pilots to prove assumptions on the way to commercialization and use in ISO production. It is important for the ISO to be responsive to these vendors to demonstrate our support of the state goals and the advancement of technology as it applies to the ISO. ISO staff also increases its know of what technologies and capabilities are emerging (knowledge stewardship) and demonstrates directly how we are furthering smart grid capabilities. The smart grid team meets with technology providers to see their technology and assess how it may help with ISO challenges. We also evaluate pilots and demonstration projects and participate in the developing business case and project scope. Often we are requested to lead or participate in collaboration meetings on smart grid issues, etc. (e.g. telemetry using smart grid technology).
<a href="#">Smart Grid External Technology Support (462)</a>	Director, Smart Grid Technology Development	The research community is working to advance smart grid technology to manage renewable integration and enable resources and capabilities to smooth the transition and further enable end users of energy to have more control in their energy use and cost. The ISO needs to understand and support this research to ensure it includes ISO needs and also to learn from others experiences. The smart grid team develops a high-level plan for what types of research we should support. We evaluate proposals and provide support letters where warranted. We take an advisory role in external research programs and support ISO data requests for the studies. We engage in organized research of EPRI and the CEC.
<a href="#">Smart Grid Knowledge Stewardship (464)</a>	Director, Smart Grid Technology Development	Knowledge stewardship focuses on building the expertise of the smart grid team and the ISO organization as a whole as well as external stakeholders. As the grid evolves, we need to have an understanding of smart technologies and the capabilities they enable as well as the impact and opportunities these technologies may have for the ISO so we can take advantage of the capabilities and prepare for any impacts. The smart grid team provides content for presentations, FAQ lists, and other collateral to the communications info bank. We participate in research forums and conferences as well as researching independently to understand the evolving technologies. Externally, we present to regulatory agencies including the CPUC and CEC speak on panels and at industry events. We also collaboratively develop the renewable lecture series with training and are responsible for the content and delivery of the key messages.
<a href="#">Smart Grid Advanced Grid Technology Center (465)</a>	Director, Smart Grid Technology Development	The advanced grid technology center provides visitors with information about smart grid technologies and capabilities enabled by a smart grid. This enables the ISO to educate a variety of stakeholders about smart grid and its relevance to the ISO. The exhibit format currently offered provides some level of education. The vision is to extend the technology center to include real demonstrations as feasible. The technology center required support to ensure all monitors are working as well as providing tours as requested. We develop and maintain a script and are working on planning for upgrades to the center.



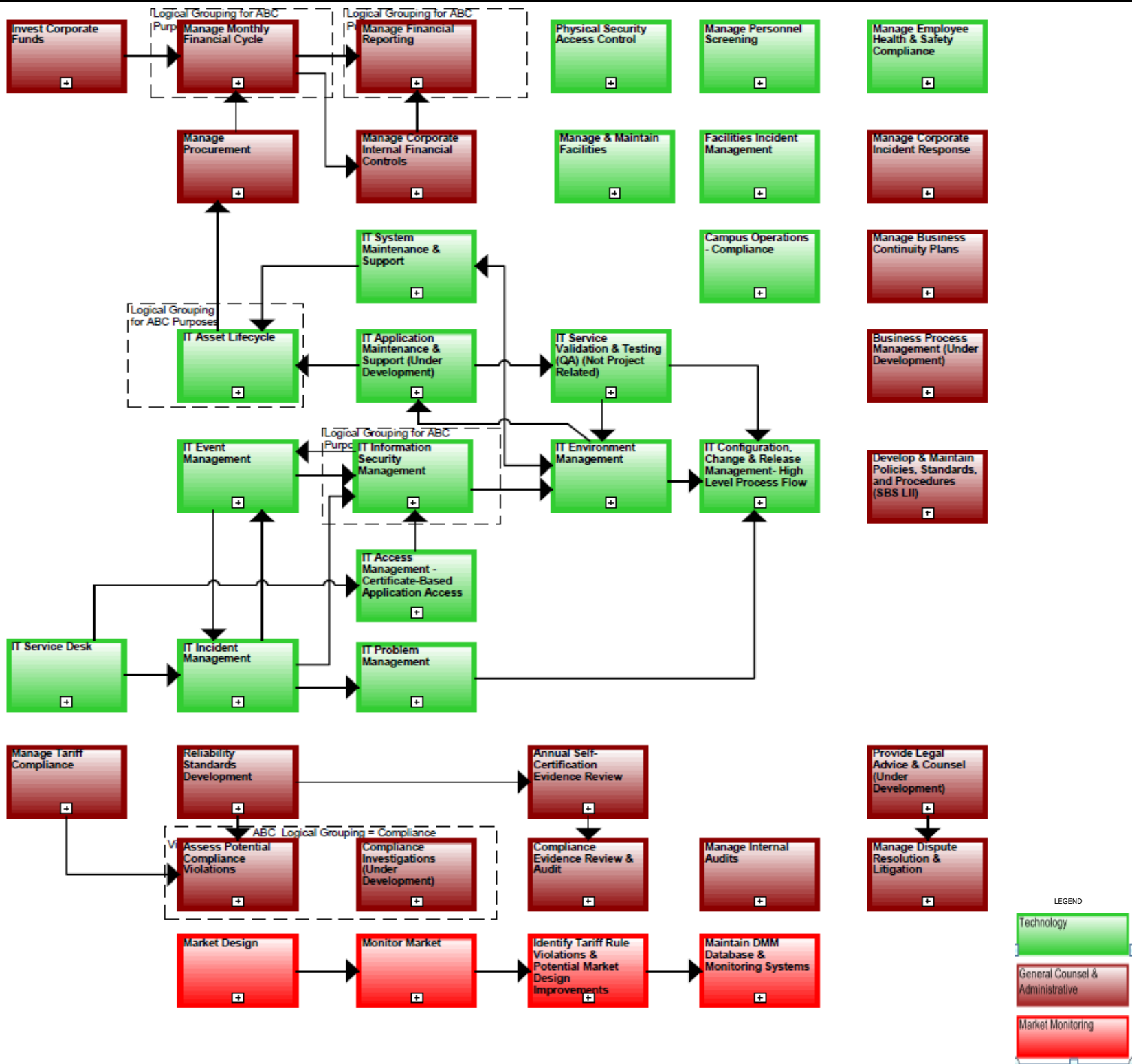
## Plan & Manage Business (PMB) (80008)

- Aligns the strategic planning process more closely with budget planning
- Defines, creates and nurtures a culture of cost-consciousness as well as enhancing services while not adding costs
- Allows stakeholders to participate in ISO governance where costs and reliability issues are balanced

Processes	Process Owner	Process Descriptions
<a href="#">Policy and Regulatory Committee</a>	Deputy General Counsel - Regulatory	This process ensures consistency of ISO policy positions and coordination of approaches across ISO activities in order to enhance organizational effectiveness. To accomplish this, the process performs timely triage when new issues are identified, and provides guidance as needed to in-progress policy and implementation activities.
<a href="#">Strategic Planning</a>	VP, General Counsel & Chief Administrative Officer	The process by which the ISO gathers internal and external inputs, evaluates them against the existing five-year strategy, updates strategic objectives and corporate initiatives, defines annual corporate goals, and aligns internal business strategies and resources to successfully implement the corporate initiatives and achieve strategic objectives. Also included in this process is the manner by which the ISO monitors and reports on corporate performance, as well as maintaining the corporate dashboard.

# Support Business Services (SBS) (80009)

- Comprises the objective of institutional sustainability (people, technology) along with the Manage Human Capabilities process
- Supports well-defined, measured and controlled processes, disciplined business decision making, quality assurance and efficient implementations
- Expands the ISO's enterprise risk management initiative, and supports the development of defined and measurable controls



Last Updated: 11/1/13

Processes	Process Owner	Process Descriptions
<a href="#">Manage Monthly Financial Cycle (501)</a>	Controller	Logical grouping for ABC purposes. Includes: <b>Manage Corporate Billing &amp; Collections (Accounts Receivable)</b> - This process details the Corporate Accounts Receivables activities which include invoicing, processing payments and bank deposits. <b>Manage Accounts Payable (Invoices)</b> - This process details the - Invoice/PO validations for accuracy - Approval of payment sum in line with the business rules - Accurate and timely disbursements to vendors <b>Manage Accounts Payable (Expense Reports)</b> - Depicts the activities required to process employee expense reports including auditing, review, approval, and payment. <b>Manage Monthly Financials</b> - This process details the collection, analysis and reporting of monthly financial data in an organized and timely manner for management and business units. Key phases include creating journal entries, validating data in modules, and then reconciling data in the general ledger, and consolidating financial information for review by the Financial Services group.
<a href="#">Invest Corporate Funds (502)</a>	Treasurer	This process involves the short-term and intermediate term (up to 5 years) investing of ISO funds sourced from GMC collections. Investing is done within the parameters of the Board approved investment policy. The ISO must maintain adequate liquidity to pay obligations as they come due. Short-term funds are typically invested in bank balances and money market funds. Where cash is not required in the short-term, other investment types are used including corporate and government bonds, where yields are typically higher. Investments are procured through several broker-dealers. The ISO also manages funds related to its bond issuances, including unspent bond proceeds, and reserve funds related to the repayment of the debt.

## Support Business Services (SBS) (80009) (Continued)

- Comprises the objective of institutional sustainability (people, technology) along with the Manage Human Capabilities process
- Supports well-defined, measured and controlled processes, disciplined business decision making, quality assurance and efficient implementations
- Expands the ISO's enterprise risk management initiative, and supports the development of defined and measurable controls

Processes	Process Owner	Process Descriptions
<a href="#">Manage Financial Reporting (503)</a>	Controller	<p>Depicts the monthly, quarterly, and annual sub-processes needed to complete the financial reporting cycle.</p> <p>Logical Grouping for ABC purposes. Includes:</p> <p><b>Monthly Business Unit Reports</b> - Process for generating monthly business unit reports, comparing Actuals vs. Budget, and sending the reports to the business units for review.</p> <p><b>Quarterly Board Reports</b> - Process of gathering quarter-end close.</p> <p><b>Quarterly FERC Form 3Q</b> - Process of gathering month-end close and other financial data to create the FERC Form 3Q.</p> <p><b>Annual Sales and Use Tax Filing</b> - Process for filling out the Annual Sales and Use Tax Filing, seeking approval, and filing the forms with the State or County Tax Agency.</p> <p><b>Annual 1099 Misc Income Filing</b> - Process of updating the Oracle AP module with updates for 1099 information, reviewing the 1099 information, running Oracle processes, and providing the Form B to vendors.</p> <p><b>Annual 1099 Interest Income Filing</b> - Process of gathering gathering the amount of interest paid to customers, and determining the reportable amounts for the year. Accounting then creates and mails 1099 forms to customers and 1096 forms to the IRS.</p> <p><b>Annual 571L Property Tax Filing</b> - Process for filling out the Annual Property Tax Filing Form 571L, seeking approval, and filing the forms with the Tax Assessor.</p> <p>Annual Audited Financial Statements - process of gathering month-end close information from the year and other financial data to create the Annual Audited Financial Statements.</p> <p><b>Annual FERC Form 1</b> - Process of gathering month-end close and other financial data to create the FERC Form 1</p> <p><b>Annual FERC Form 582</b> - Process for gathering and reconciling FERC fee data. After submitting the data to FERC, the ISO reviews the FERC bill and sends additional invoices for fees to ISO Participants if needed.</p> <p><b>Annual 990/ 199 Income Tax Filing</b> - process of gathering tax-related data to create Form 990 and Form 199.</p>
<a href="#">IT Application Maintenance &amp; Support (504)</a>	Director, IT Infrastructure Engineering & Network Operations	<p>All application support and maintenance not directly related to a project, Incident Management or Problem Management. Patching – normally patch Test, Stage and Production</p> <p>Break Fix – as needed with production fixes first and all others second.</p> <p>Daily maintenance is performed in terms of monitoring and proactive activities of log file , space management, application stop and start and error log review. Also have account management (create, remove, update). Backups and restores.</p> <p>Changes deployed. Includes IT Storage Commission, IT Operations Support- Infrastructure, Phone System Management, Network Applications Management.</p>
<a href="#">IT Asset Lifecycle (505)</a>	Manager, Asset Management	<p>Logical grouping for ABC purposes. Includes:</p> <p><b>IT Asset Lifecycle - Acquisition, and IT Asset Lifecycle - End of Use</b></p> <p>Business practices that join financial, contractual and inventory functions to support life cycle management and strategic decision making for the IT environment. Assets include all elements of software and hardware that are found in the business environment.</p>
<a href="#">IT Configuration, Change &amp; Release Management- High Level Process Flow (508)</a>	Manager, Data Center & Operations	<p>Depicts the process to ensure that standardized methods and procedures are used for efficient and prompt handling of all changes to a controlled IT infrastructure, in order to minimize the number and impact of any related incidents upon implementation of changes.</p> <p>Provides the framework by which each IT Unit can successfully manage all infrastructure changes to their respective information systems. It aims to ensure the following:</p> <ul style="list-style-type: none"> <li>• All company software and hardware changes to controlled CAISO infrastructure computing environments will be planned, managed, communicated, tested, and documented.</li> <li>• A standard and consistent process to reduce the risk of errors that a change could introduce to the environment.</li> <li>• Integrity in the controlled CAISO infrastructure computing environments.</li> <li>• Consistent communications across divisional boundaries.</li> <li>• Changes are authorized properly, stakeholders are notified, and there is a tracking mechanism and audit trail for each change.</li> </ul>
<a href="#">IT Environment Management (509)</a>	Manager, Technology Systems Support	Provides the framework to manage IT system environment usage for projects, enhancements, maintenance and training.
<a href="#">IT Event Management (510)</a>	Manager, IT Architecture	Create new monitoring to detect and analyze events
<a href="#">IT Incident Management (511)</a>	Manager, Critical Systems	<p>Depicts the process to ensure restoration to a normal service operation as quickly as possible while minimizing the impact on business operations, thus ensuring that the best possible levels of service quality and availability are maintained. Also provides the framework by which IT can successfully manage incidents associated with applications and the infrastructure. It aims to ensure the following:</p> <ul style="list-style-type: none"> <li>• Normal service operation is restored as quickly as possible.</li> <li>• Adverse impacts on business operations are minimized.</li> <li>• The agreed upon levels of service quality and availability are maintained</li> </ul> <p>Includes IT Incident Escalation Notification Flow Severity 1 and 2</p>
<a href="#">IT Information Security Management (512)</a>	Manager, Information Security	<p>Logical grouping for ABC purposes. Includes:</p> <p><b>- IT Information Security Management - Daily CCA Access Review</b> - Ensure validation of critical cyber assets, daily. Align IT and business security to ensure information security is managed effectively in all services and service management activities</p> <p><b>- IT Information Security Management - Quarterly Access Review</b> - Ensure validation of critical cyber assets, quarterly. Align IT and business security to ensure information security is managed effectively in all services and service management activities</p> <p><b>- IT Information Security Management- Awareness and Training</b> - Align IT and business security to ensure information security is managed effectively in all services and service management activities</p>
<a href="#">IT Problem Management (513)</a>	Manager, Data Center & Operations	<p>Depicts the process to resolve the root cause of IT problems. These may involve system tuning, changing operating system or device parameters, or even refactoring the application software to resolve poor performance due to poor design or bad coding practices.</p> <p>Provides the framework by which IT can successfully manage problems associated with applications and the infrastructure. It aims to ensure the following:</p> <ul style="list-style-type: none"> <li>• Identification of problems based on incidents that have occurred</li> <li>• Determination of the root cause of identified problems</li> <li>• Resolution of the problems</li> <li>• Introduction of monitoring and control mechanisms</li> <li>• Prevention of future incidents through proactive problem identification</li> </ul>
<a href="#">IT Service Desk (514)</a>	Manager, IT Operations - Service Desk	The objectives of the Service Desk are: 1) Providing a single (informed) point of contact for customers and 2) Facilitating the restoration of normal operational service with minimal business impact on the customer within agreed SLA levels and business priorities. Resumes "normal service" to the user as soon as possible using existing knowledge or tools or using the incident management process. Service request fulfillment for the end user. Includes Deskside Support and Request Fulfillment (MACs)

## Support Business Services (SBS) (8009) (Continued)

- Comprises the objective of institutional sustainability (people, technology) along with the Manage Human Capabilities process
- Supports well-defined, measured and controlled processes, disciplined business decision making, quality assurance and efficient implementations
- Expands the ISO's enterprise risk management initiative, and supports the development of defined and measurable controls

Processes	Process Owner	Process Descriptions
<a href="#">IT Service Validation &amp; Testing (QA) (Not Project Related) (516)</a>	Manager, Software Quality Assurance	For an enhancement: 1. Request for a software modification comes in from the Business Unit or possibly a MP 2. Request turns into a requirements document, if big enough it becomes a project if not it becomes an enhancement. 3. QA builds test cases based of the requirements. 4. Code is validated as it goes from Test to Stage with QA sign off for a Production release, Business Unit UAT is also done in Stage. 5. Once deployed to production a Business Unit SME validates in Production. For a defect fix/CMR: 1. Issue is identified by QA, Business SME or MP, a defect is written against the software. 2. Code is fixed and deployed to Test, QA validates against the defect which was written. 3. QA validates the defect and it is closed, code proceeds to Stage and Production. 4. Once deployed to production a Business Unit SME validates in Production.
<a href="#">IT System Maintenance &amp; Support (517) and IT non-Production Environment Support (518)</a>	Director, IT Infrastructure Engineering & Network Operations	All system maintenance and support not directly related to a project, Incident Management or Problem Management. Patching – normally patch Test, Stage and Production Break Fix – as needed with production fixes first and all others second. Daily maintenance is performed in terms of monitoring and proactive activities of log file , space management, application stop and start and error log review. Also have account management (create, remove, update). Backups and restores. Changes deployed. Includes IT Storage Commission, IT Operations Support- Infrastructure, Phone System Management, Network Applications Management
<a href="#">IT Access Management - Certificate-Based Application Access (519)</a>	Manager, Corporate Systems	Depicts the process of providing certificate-based access to IT systems
<a href="#">Manage &amp; Maintain Facilities (520)</a>	Manager, Facilities	Depicts process for managing and maintaining CAISO facilities.
<a href="#">Facilities Incident Management (521)</a>	Manager, Facilities	Depicts the process for managing facilities incidents (Sev 1 - 4).
<a href="#">Manage Corporate Incident Response (522)</a>	Manager, Standardization & Quality	Depicts how the ISO will implement the Incident Command System (ICS) to manage an incident that affects business across the organization. Once implemented, the Incident Management Team uses this process to stabilize, mitigate, and terminate an incident.
<a href="#">Manage Business Continuity Plans (523)</a>	Manager, Standardization & Quality	Depicts the process for identifying and evaluating the impacts of significant events that may adversely affect our business, assets, or employees, and to document, test, and train on mitigation strategies.
<a href="#">Campus Operations - Compliance (524)</a>	Manager, Facilities	Depicts process for ensuring all ISO facilities and related activities meet compliance requirements.
<a href="#">Physical Security Access Control (525)</a>	Manager, Physical Security	Depicts the process of identifying visitors to ISO facilities and determining their access requirements for badge issuance. Includes the monitoring of active badges and ensuring that badges have been deactivated for visitors and contractors who no longer require access.
<a href="#">Manage Personnel Screening (526)</a>	Manager, Physical Security	Depicts the process for screening employee and contractor resources prior to badge issuance as well as initiation of the 7-year background check process and background checks due to self-reports. Also includes activities required to perform personnel risk assessments and drug screenings.
<a href="#">Manage Employee Health &amp; Safety Compliance (527)</a>	Manager, Physical Security	Depicts the core functions and activities of the Safety Department as required by Federal, State and Local law as it pertains to employee health and safety. Reinforces and builds the safety culture within the ISO by: 1) Compliance with all regulations related to safety 2) Implementing best practices to maximize safety 3) Conduct investigations related to safety concerns and make recommendations 4) Proactively audit the workplace to identify potential hazards 5) Training employees on general and job-specific safety topics
<a href="#">Manage Procurement (528)</a>	Manager, Procurement & Vendor Management	This process starts with identification of Business requirements or changes to an approved project and details various activities from project package preparation & approval, commercial contract finalization, vendor selection to delivery of goods/services to business units as a part of corporate procurement activity. This is a sub-process of Procurement & Vendor Management process. The lifecycle of procurement process requires participation from many internal and external support areas including but not limited to business units, Vendors, IT Asset Lifecycle-Acquisition process, and Manage Accounts Payable (invoices) process.
<a href="#">Provide Legal Advice &amp; Counsel (529)</a>	VP, General Counsel & Chief Administrative Officer	Depicts the process of providing legal advice and counsel to other business units in the ISO.
<a href="#">Manage Dispute Resolution &amp; Litigation (530)</a>	Assistant General Counsel - Litigation & Mandatory Standards	This process deals with Managing Litigation after it is received by the Legal Department at CAISO.
<a href="#">Reliability Standards Development (532)</a>	Director, Corporate Compliance	Depicts actions needed for managing changes to standards and the development of new standards for NERC and WECC reliability.
<a href="#">Compliance Evidence Review &amp; Audit (533)</a>	Director, Corporate Compliance	Depicts the process where the Compliance Team reviews evidence supporting the ISO's compliance with NERC and WECC reliability standards for the audit period.
<a href="#">Compliance Violations (534)</a>		Grouping of 2 compliance violation activities
<a href="#">Compliance Investigations (534)</a>	Director, Corporate Compliance	Depicts the formal and rigorous process for investigating potential compliance violations.
<a href="#">Assess Potential Compliance Violations (534)</a>	Director, Corporate Compliance	Depicts the actions needed for notification and discovery of potential compliance violations, including preliminary assessment, reporting, and mitigation.
<a href="#">Manage Tariff Compliance (535)</a>	Director, Corporate Compliance	Depicts the process of managing compliance with the ISO tariff.
<a href="#">Manage Internal Audits (536)</a>	Director, Internal Audits	Depicts the approval and performance activities required for the scheduling, planning, conducting, documenting, and follow-up for deficiencies identified during internal audits.
<a href="#">Monitor Market (537)</a>	Manager, Monitoring & Reporting	This process flow describes the market monitoring procedures followed for reviewing market behavior and market results. The process involves review of specific CAISO markets (real time, ancillary services, day-ahead congestion management etc.) on a daily basis to identify any anomalies or potentially inefficient market outcomes.
<a href="#">Identify Tariff Rule Violations &amp; Potential Market Design Improvements (538)</a>	Manager, Analysis & Mitigation	This process performs the following: 1) Identify and review potential violations of CAISO Tariff or market rules 2) Identify ineffective market design, provide recommendations, and /or refer internally for further assessment 3) Refer potential violations of Rules of Conduct to FERC 4) Recommend potential rule changes to CAISO
<a href="#">Annual Self-Certification Evidence Review (541)</a>	Director, Corporate Compliance	Depicts the annual review process of the ISO's compliance with the NERC and WECC actively monitored reliability standards.
<a href="#">Manage Corporate Internal Financial Controls (542)</a>	Controller	This process details the periodic review of Internal controls on the processes that directly impact the presentation and review of the financial statements of the company Briefly it involves, (a) Identification of gaps & design/implementation of new internal controls (b) Determination of Operating effectiveness of existing internal controls (c) Controls adherence audit & review of the status to ensure compliance
<a href="#">Market Design (543)</a>	Manager, Analysis & Mitigation	This process depicts how proposed changes to the market design are reviewed.
<a href="#">Maintain DMM Database &amp; Monitoring Systems (544)</a>	Manager, Monitoring & Reporting	This process deals with the maintenance of DMM Database for timely and accurate management of market data which is an essential input for all of DMM's core functions. DMM maintains a DMM Datamart (P008) that contains market data received from a variety of sources.

## Support Business Services (SBS) (80009) (Continued)

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Processes	Process Owner	Process Descriptions
<a href="#">Business Process Management (545)</a>	Manager, Standardization & Quality	The Business Process Framework process is the development and application of the ISO's business architecture and process improvement methodology. Application of the methodology for process design, improvement, and efficiency are covered under this process. This process inherently covers the maintenance and administration of the ISO's Business Process Framework and associated processes.
<a href="#">Records Management (546)</a>	Manager, Standardization & Quality	The records management program ensures that records created and received in the normal course of business are managed in accordance with federal and state laws and pertinent regulations and business requirements from creation to final disposition.
<a href="#">Develop &amp; Maintain Policies, Procedures and Standards (547)</a>	Director, Business Planning & Operations	This process ensures consistency in the development and maintenance of ISO policies, procedures, and standards, while increasing organizational effectiveness by ensuring adherence to a timeline requirements.



## Support Customers & Stakeholders (SCS) (80010)

- Provides the highest quality of service to its customers, market participants and stakeholders
- Includes timely resolution of customer issues, corporate-wide customer relationship management and streamlined access to market information
- Provides a market design to accommodate renewables and demand response, while keeping costs reasonable and maintaining grid reliability



Last Updated: 3/13/13

Processes	Process Owner	Process Descriptions
<a href="#">Representing the ISO Externally (539) also includes ISO Outreach (604)</a>	Director, Customer Service & Stakeholder Affairs	This process describes how CAISO employees should handle any policy or technical questions received from external sources.
<a href="#">Manage Client Inquiries (601) also includes Support Clients (607) and TP Mapping (608)</a>	Manager, Customer Service	This process aims to improve Customer Service and ensure that CAISO's Scheduling Coordinators' (SC's) issues and inquiries get resolved in a timely manner. 1. Each SCs is assigned a Client Representative (CR). SC either calls Client Representative to raise inquiry or issue or directly logs the query in TRAIN through external web interface. 2. CAISO uses TRAIN to route the inquiry along the company. 3. Customer Services will either resolve the inquiry internally or will route it to a business unit using ownership matrix. 4. Assigned Business Unit plans and provides resolution back to Customer Services 5. Customer Services communicated the resolution to SC and closes the ticket in TRAIN  Issues that fall outside the bid to bill processes, example CAISO policy issues, are handled by Accounts Managers (AM).
<a href="#">Strategic Client Account Management (602)</a>	Manager, Customer Service	ISO Account Managers develop high-level relationships with clients, with the goal of supporting quality dialogue between the ISO and key customers. Tasks include: fast response to customer inquiries on major projects and policy matters, working in concert with customer staff to arrange senior level meetings and their agendas, coordinating the interaction with senior stakeholders and their ISO management peers, overseeing the response by the ISO to stakeholder questions, contributing to individual client interactions within the stakeholder process, and reporting to management on key customer issues, particularly on policy matters that will be addressed by the Board.
<a href="#">Manage Stakeholder Process (603)</a>	Director, Customer Service & Stakeholder Affairs	Administer the stakeholder process in compliance with a set of quality control guidelines for the consistent management of meetings, documents, stakeholder comments and general process structure. Working with other depts, CSIA staff plans each engagement, from conception through the final Board meeting. A master engagement plan is created to guide the stakeholder process for each major initiative. A team is formed between CSIA and the functional organization leading the stakeholder process. Customer engagements, whether they be meetings, papers or conference calls, are planned and executed by these teams. A feedback loop at the end of each meeting helps to validate success, and sets the stage for ongoing improvements.
<a href="#">Government Affairs Process (609)</a>	Directors, Federal Affairs & State Affairs	Depicts the activities required to perform the following: 1) Respond to inquiries from government and regulatory entities 2) Develop strategy jointly with ISO divisions 3) Maintain relationships with government and regulatory entities 4) Address concerns 5) Communicate the ISO's position to government and regulatory entities 6) Communicate government and regulatory entity positions internally at the ISO 7) Monitor the governmental environment 8) Develop work plans to implement ISO initiatives and strategies
<a href="#">Communications &amp; Public Relations (610)</a>	Director, Communications & Public Relations	The Communications and Public Relations Department presents a single, consistent and timely ISO voice and provides a broad range of clear, correct, and useful information to employees, stakeholders, media and the public-at-large. Corporate communication materials are developed and distributed by the department. These include brochures, information kits, annual reports, articles, news releases, market notices and broadcast productions. The team manages three websites: Internet, Market Participant Portal and Intranet sites. The department also develops new products and services, conducting stakeholder focus groups to identify and meet the business needs of market participants. Media relations provided by the department extends to newspaper, radio and TV as well as trade media and international news outlets. CommPR spokespersons provide 24/7 support to media and promote electricity conservation during peak periods of stress on the grid. The department trains in emergency preparedness and performs crisis communication management. All corporate events are coordinated by the department and the team also facilitates tours and speaking engagements.