

Appendix A
Functionalization of Activity Groupings for ISO Rate Structure (DRAFT)

Function	Sub-Function	Direct Personnel	Activities within proposed Grouping	Indicative Cost Centers (There is some overlap among cost centers)	Applications
Grid Reliability Services	Core Reliability Services (base level) Energy and Transmission Services (scalable portion)	Real-Time Grid Operations <ul style="list-style-type: none"> • RT Grid Resource Coordination • Gen Dispatchers • RT Intertie Scheduling • Trans Dispatchers 	Ancillary Services management: <ul style="list-style-type: none"> • Dispatch of energy associated with Ancillary Services, including: <ul style="list-style-type: none"> ○ Regulation ○ Spin ○ Non-spin ○ Replacement reserve ○ Black start Monitoring of system conditions and dispatching to maintain reliability: <ul style="list-style-type: none"> • Load and resource balancing • Transmission line/path congestion management • Voltage control • Frequency control • System emergency management • Power flow studies and security analyses Determination of resource adequacy in real time Coordinating Western Interconnection reliability with all WECC Reliability Coordinators Integration and communication with other Control Areas: <ul style="list-style-type: none"> • Interconnected switching operations for planned and unplanned outages • Generation and transmission equipment outage coordination Interchange scheduling ETC scheduling and administration EMS and Telemetry management	1544 – Real Time Scheduling 1564 – Operations Scheduling 1546 – Security Coordination 1545 – Grid Operations 1566 – Regional Coordination 1461 – Control Systems 1752 – Manager of Markets (portion) 1462 – Field Data Acquisition (portion)	See Cost Allocation Matrix detail on assignment of system applications

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Grid Reliability Services	Core Reliability Services (base level) Energy and Transmission Services (scalable portion)	Interchange Pre-Scheduling WECC Requirements	Day-ahead/Hour-ahead intertie scheduling <ul style="list-style-type: none"> • ETAG (NERC-required electronic schedule tagging) • Existing Transmission Contracts Calculator (ETCC) and scheduling • New Firm Uses (NFU) scheduling Reconciliation of schedules and interchange after-the-fact NERC/WECC/CAISO Tariff required reporting Weekly: <ul style="list-style-type: none"> • Inadvertent Interchange report • NERC reports (Inadvertent Interchange, ETAG) • WECC “donut” report Monthly: <ul style="list-style-type: none"> • WECC Unscheduled Flow curtailment report Quarterly: <ul style="list-style-type: none"> • Quarterly California Energy Commission 1305 report Annually: <ul style="list-style-type: none"> • SDG&E DOE report • FERC 714 report • Report of Economic Operation 	1565 – Pre-scheduling and Support	
Grid Reliability Services	Core Reliability Services (base level) Energy and Transmission Services (scalable portion)	Outage Coordination	Pre-planning of and preparation for generation and transmission outages Generation and transmission equipment outage tracking and data/record keeping On-site generation outage monitoring (SB-39 compliance) Outage reporting (web site updates and regulatory agency reporting) Supply of Generation and Transmission data for OASIS postings	1542 Outage Coordination	

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Grid Reliability Services	Core Reliability Services (base level) Energy and Transmission Services (scalable portion)	Operations Engineering, Maintenance, and Support	<p>Transmission Maintenance:</p> <ul style="list-style-type: none"> Develop, monitor and enforce of transmission maintenance standards Manage and oversee new generation interconnections, major capacity additions or upgrades and supporting Transmission Planning in project tracking. Manage, analyze, prepare reports on system availability, reliability, and outage records. Manage, audit, investigate, approving Transmission Maintenance Practices. Manage, oversee, and approve the equipment ratings. <p>Operations Engineering:</p> <ul style="list-style-type: none"> Perform seasonal, annual, and, as necessary special analysis of transmission system performance and ratings. Review, approve and provide specification on daily system configurations, emergency conditions, clearances and operational conditions. Develop, prepare and update operating procedures. Perform operational studies and system security analyses <p>Operations Support: Manage the development, preparation and revision of all ISO Operating Procedures:</p> <ul style="list-style-type: none"> Transmission grid Market Operations Generation Emergency Perform generating unit ancillary service certification and P-MAX testing Manage UDC and Inter-Control Area Operating agreements Manage dynamic energy scheduling agreements and interfaces Manage required WECC Reliability Management System (RMS) and NERC. Maintain Compliance Program data collection, tracking, storage and reporting processes 	1558 – Transmission Maintenance 1561 – Operations Engineering, South 1562 – Operations Engineering, North 1554 – Special Projects Engineering 1549 – Operations Training Group 1555 – Operations Support Group 1559 – Operations Application Support 1563 – Coordinated Operations	

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Grid Reliability Services	Core Reliability Services (base level) Energy and Transmission Services (scalable portion)	Loads & Resources Grid Planning Operations R&D	Transmission Planning: <ul style="list-style-type: none"> • Perform system transmission planning to ensure overall reliability • Perform reserve requirement studies • Perform Long-term (monthly, annual and longer) load forecasting • Determine long term <i>transmission</i> resource adequacy Regional Coordination: <ul style="list-style-type: none"> • Coordinate participation in NERC, WECC, NAESB, ESC, and OSC • Monitor and participate in resolving seams issues in the Western Interconnection • Provide Control Area and interconnection mapping services to real time operations. Determine long-term <i>generation</i> resource adequacy: <ul style="list-style-type: none"> • Manage, develop, prepare, publish and participate in seasonal system load and generation assessments. • Participate, guide, influence, and maintain records on environmentally constrained generation units. • Determine dual fuel generator requirements Determine Reliability Must-Run (“RMR”) contract requirements Review Participating Transmission Owners (“PTOs”) Bulk Power Program and new generator or load interconnection studies	1521 – Grid Planning 1543 – Loads and Resources 1566 – Regional Coordination	
Grid Reliability Services	Core Reliability Services (base level)	Reliability Contract Administration	Administration of RMR settlements Validation of Summer Reliability Generation invoices Development and implementation of Tariff modifications Maintenance of agreements with existing and new clients Meeting regulatory directives related to contract activities Non-vendor contract administration	1723 Tariff and Contracts Implementation 1731 Contracts and Special Projects (portion)	

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Grid Reliability Services	Energy and Transmission Services (scalable portion)	Market Monitoring and Compliance	Evaluation of transmission capacity expansion Review and recommend changes to ISO rules and protocols Monitor and measure operational performance consistent with contractual commitments and Tariff requirements Ensure generator compliance with dispatch instructions and must offer requirements Administer ISO Oversight and Investigations Review	1641 – Market Analysis (portion) 1642 – Market Surveillance Committee (portion) 1661 – Compliance (portion) 1662 – Data Quality Group (portion)	
Market Services	Forward Scheduling	HA Grid Resources Coordination DA Grid Resources Coordination Markets & Scheduling Group (portion) Market Operations (portion) Market Engineering (portion) Business Solutions (portion) Market Integration (portion) Congestion (portion) ETCs	Manage transmission and generation schedules: <ul style="list-style-type: none"> • Day and Hour-Ahead schedules (including Participating Intermittent Resources) • Determine schedule feasibility 	1752 – Manager of Markets (portion) 1753 – Market Application and Testing 1755 – Business Solutions (portion) 1757 – Market Integration (portion)	
Market Services	Congestion Management	Congestion (portion)	Manage inter-zonal congestion	1752 – Manager of Markets (portion) 1753 – Market Application and Testing 1755 – Business Solutions (portion) 1757 – Market Integration 1756 – Market Quality (portion)	

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Market Services	Congestion Management	Marketing monitoring	Monitoring and reporting on congestion management market performance Investigating and reporting on potential gaming and market power abuses (congestion)	1641 – Market Analysis (portion) 1642 – Market Surveillance Committee (portion) 1661 – Compliance (portion) 1662 – Data Quality Group (portion)	
Market Services	Market Usage	Market Operations Manager of Markets Market Quality (portion) Market Eng (portion) Business Solution (portion) Market Integration (portion) Markets & Scheduling Group (portion) Market Monitoring & Compliance FTR Auctions	Perform weekly, daily and hourly load forecasting Operate A/S and Real-Time markets Determine market clearing prices (A/S and Energy) Mitigate bids (real time and forward) Maintenance of market information postings (transmission/market OASIS) Operate unit commitment service under SMD Mitigate market power in Day-Ahead, Hour-Ahead and Real Time markets Develop and manage demand response participation Administer FTRs: <ul style="list-style-type: none"> • Perform FTR auctions (Primary) • Coordinate FTR bilateral trading (Secondary) • Calculate and determine feasibility of FTR capacity 	1752 – Manager of Markets 1753 – Market Application and Testing 1757 – Market Integration 1756 – Market Quality (portion)	
Market Services	Market Usage	Marketing monitoring and compliance	Monitor and report on market performance Investigate and report on potential gaming and market abuses Perform special studies on market efficiency, bidding behavior Develop new market rules or changes to market rules in response to market behavior Prepare and provide reports to regulatory authorities Implement and calculate penalties and sanctions for noncompliance	1641 – Market Analysis (portion) 1642 – Market Surveillance Committee (portion) 1661 – Compliance (portion) 1662 – Data Quality Group (portion)	

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Settlements, Metering and Client Relations		Settlements, Billing, Credit Administration and Metering	Determine charges associated with: <ul style="list-style-type: none"> • Transmission services • Day-Ahead schedules and markets (A/S and Energy) • Hour-Ahead schedules and markets (A/S and Energy) • Real time balancing energy market • Congestion management • Administrative charges, including the Grid Management Charge Manage settlement data Manage ETC manual settlements Prepare market and GMC invoices Prepare special invoices for FERC fees, interest, etc. Perform settlement statement reruns Market/settlements design and settlements training Dispute resolution, GFN, arbitration and monitoring Credit and collateral management <ul style="list-style-type: none"> • Manage collections and payments • SC financial security analysis Determination of losses and allocation Metering and data management <ul style="list-style-type: none"> • Collect and validate data from ISO polled meters • Repository of data polled from ISO polled meters and data submitted by SCs • Responsible for site inspection of metering sites • Responsible for setting up RIG data bases and submitting data into EMS • Push data to Settlement databases Manage Participating Intermittent Resources settlements	1722 – Application Support 1723 – Tariff and contract implementation 1724 – BBS-PSS 1725 – BBS-FSS 1462 – Field Data Acquisition (portion) 1321 - Accounting 1756 – Market Quality (portion)	

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Settlements, Metering and Client Relations		Account Management Services and Training	Provide ISO Tariff, Systems, Market and Settlements guidance to market participants Communicate scheduled events to market participants Communicate Market information Develop training curriculum Provide training to Market Participants (Settlements, System Infrastructure, Market Design) Facilitate stakeholder process Facilitate resolution of Market Participant issues	1741 – Client Relations	
Settlements, Metering and Client Relations		ISO contract administration	Administer ISO contracts (non-vendor, e.g., RMR, PTO, MSS) Negotiate, manage, litigate contracts	1731 – Contracts and Special Projects (portion)	
		Administrative and General (not directly assigned elsewhere)	CEO Finance and Accounting Legal HR Regulatory policy and affairs Information services Strategic development Communications	1111 – CEO 1651 – Board of Governors 1241 – MD02 (currently) 1300 – Finance indirects 1400 – Information Services indirects 1600 – Legal and Regulatory indirects 1700 – Market Services indirects 1800 – Corporate and Strategic Development indirects	
All	All	Startup costs	Recover costs associated with Startup		