Exhibit 4

CALIFORNIA ISO

ANALYTICAL SUPPORT FOR CALIFORNIA ISO GRID MANAGEMENT CHARGE FOR 2002 (USING 2002 PROPOSED BUDGET)

October 26, 2001

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I. OVERVIEW OF COST ALLOCATION PROCESS

This section provides an overview of the cost allocation matrix, a table which summarizes the California ISO's 2002 operating budget according to the three unbundled service categories:

- Control Area Services, abbreviated as "CAS"
- Congestion Management (previously known as "Inter-Zonal Scheduling"), abbreviated as "CONG"
- Ancillary Services and Real-Time Energy Operations (replacing "Market Operations"), abbreviated as "ASREO"

A description of the three categories follows in the next section, "ISO Unbundled Service Category Descriptions." The third service category "Ancillary Services and Real-Time Energy Operations" replaces the previous "Market Operations" category. The cost allocation matrix lists all ISO costs that are elements of the grid management charge, including operating costs and debt service, and the effect of the operating reserve.

The operating costs are organized according to "cost centers"[1] and are grouped according to categories called "Departmental Roll-Ups." For example, the following cost centers: "1521 Grid Planning", "1542 Outage Coordination", and, "1543 Operations Engineering", are included in the "Operations Direct" Departmental Roll-up. The budgeted amounts for each cost center are either directly assigned to the three unbundled service categories or are allocated to the categories in the cost allocation matrix.

For FY2001, when the California ISO implemented an unbundled Grid Management Charge, directors and managers from each cost center assigned their overall costs to the three unbundled service categories. Certain costs related to department overhead, overall corporate overhead, or services that benefit multiple departments and functions were allocated based overall operating costs or headcount.

For FY2002, The California ISO has refined and improved the process. The California ISO has developed a new budgeting tool for its 2002 Operating Budget which requires managers and directors of each cost center to assign each expense line item within their cost center to the unbundled categories or a general category. This refinement provides an enhanced level of accuracy in the documentation of the allocation percentages for each cost center.

Operating and Maintenance Budget Costs

Cost centers are grouped according to "Direct" and "Indirect" Departmental Rollups. Cost centers that fall within a "Direct" Department Rollup are allocated by direct assignment. Cost centers that fall within an Indirect Department Rollup are allocated by based on the results of the direct assignments. Descriptions of the direct and indirect allocation methodologies are presented below:

Directly Assigned Costs:

Direct costs are those that are directly related to one or more of the three unbundled service categories. Each expense line item within the directly assigned cost center is allocated according to ratios provided by the cost center's manager or director. The costs are then totaled for each of the three unbundled service categories. The total for each unbundled service category within the cost center is then divided by the total amount budgeted for the cost center to arrive at the cost center's overall allocation percentages.

[1] Cost centers are synonymous with departments The California ISO's Oracle based accounting system groups all costs according to cost centers.

Managers and directors of cost centers with directly assigned costs also have the option to allocate a percentage of their overall costs to a "general" category. Costs in this category include those that support several aspects of the work done in their cost center. These costs are subsequently spread over the three unbundled service categories.

The simplified example below shows how costs for "Cost Center X " are allocated to the three unbundled serve categories. Note that the factors are provided for each subcomponent of these expenses. For example, each staff person in a department is directly assigned to the unbundled categories.

Step 1: Managers provide ratios for each line item.

Cost Center X	Total $s	% CAS	%CONG	%ASREO	%General
Salaries	$100	25%	25%	25%	25%
Travel	$100	25%	25%	50%	

Step 2:Budgeted costs are totaled for each unbundled service category.

Cost Center X	Total $s	CAS $s	CONG $	ASREO$	General $s
Salaries	$100	$25	$25	$25	$25
Travel	$100	$25	$25	$50	
Total	$200	$50	$50	$75	$25

Step 3: Allocation percentages for general dollars are calculated.

Cost Center X	Total	CAS	CONG	ASREO
Total amount: (Without General)	$175	$50	$50	$75
Allocation percentages (Without General)	100%	28.57%	28.57%	42.86%

Step 4: General dollars are allocated to the three unbundled service categories.

General

CAS: $25 x 28.57% = $7.14
CONG: $25 x 28.57% = $7.14
ASREO: $25 x 42.86% = $10.71

Cost Center X	Total $	CAS $	CONG $	ASREO $
General Costs	$25	$7.143	$7.143	$10.714

Step 5: Costs are totaled for each unbundled service category.

Cost Center X	Total	CAS	CONG	ASREO
Total Without General:	$175	$50	$50	$75

General Costs	$25	$7.143	$7.143	$10.714
Total	$200	$57.143	$57.143	$85.714

Step 6: Allocation Percentages are computed for the cost center.

Cost Center X	Total	CAS	CONG	AS RT
Total	$200	$57.143	$57.143	$85.714
Allocation percentages	100%	28.57%	28.57%	42.86%

Indirect Costs

Cost centers that provide services that cannot be directly assigned to the unbundled service categories are allocated in a different manner. Allocation factors for these indirect costs are developed using five approaches:

- Allocated Based on Department Direct Costs: Cost centers that are directly related to specific departments are allocated based on those department's direct costs. For example, costs within the Indirect Operations Departmental Roll-up are allocated according to the Direct Operations Departmental Rollup allocation factors. Correspondingly, cost centers included in the Indirect Information Technology Departmental Rollup are allocated according to the Direct Information Technology Departmental Rollup.

- Allocated Based on Supervised Departments' Costs: Cost centers that are directly related to specific departments which the cost center supervises are allocated based on those departments' direct costs.

- Allocated based on Direct Operating Costs – Cost centers which involve services that benefit multiple departments are allocated based on total direct operating costs of those departments. For example, cost center 1631, Legal & Regulatory, serves the entire company, and is thus allocated according to ratios of direct operating costs.

- Allocated Based on Labor Dollar Ratios: Cost centers which benefit multiple departments that are more closely related to employees than overall direct operating costs are allocated based on labor dollars ratios. For example, 1841, Human Resources, is allocated to the three unbundled services based on labor dollar ratios.

- Allocated based on Labor Dollar Ratios – Special – Cost center 1441, Vendor Management, is allocated using a modified labor dollar ratio approach. The methodology for this is shown in the cost allocation matrix, and is described later in this document.

The cost centers and the allocation methodologies are listed in the table that follows, "Allocation Descriptive Detail". Note, however, that even these indirect cost centers may, and have, assigned individual costs directly to the unbundled service categories where appropriate.

Other costs or revenues which are elements of the ISO's overall revenue requirement include:

	Allocated:
Interest revenues	Overall O&M allocation results
SC application & other fees	Overall O&M allocation results

WSCC Security Coordination Reimbursement	100% CAS

Capital Costs: Debt Service and Cash Funded Capital Expenditures

The total budgeted debt service costs for 2002 (including the debt service coverage requirement of 25%) are $60 million, representing principal and interest payments related to earlier bond issuances in 1998, and 2000 of $337.5 million, and a planned 2002 issuance of $20 million. The California ISO was unable to issue bonds in 2001. As a result of CAISO's expected inability to issue new debt when funds are needed in 2002, $8.3 million of the 2002 budgeted capital expenditures will be funded directly from the GMC.

The allocation methodology used to allocate the debt service and cash funded capital expenditures to the three unbundled service categories involved a detailed review of the contract milestones, and costs associated with those milestones. ISO Directors and Managers performed this assignment process, with the assistance of the ISO finance staff.

Additional details of this process and the proposed 2002 capital projects are provided in Section VI of this report.

Revenue Credit/Defiency

In addition to 2002 costs, the 2002 revenue requirement includes prior year costs and adjustments resulting from the ISO's Operating Reserve. The calculation of the Operating Reserve revenue credit or deficiency for each unbundled service category is shown in Section V of this report.

Summary of Cost Allocation Results

The attached cost allocation matrix summarizes these results and ratios that show the percentage of total ISO costs associated with the provision of each of the three unbundled services offered by the ISO. The budgeted 2002 allocation ratios developed are as listed below. These are net allocation factors, after the application of the 2001 revenue credit or deficiency from the Operating reserve.

1.	CAS	57.9%
2.	CONG	11.4%
3.	ASREO	30.7%

These ratios are then applied to the ISO's overall Revenue Requirement for 2002, resulting in a revenue requirement for each of the three unbundled service categories as follows (in thousands). The following page provides an overview of the total revenue requirement.

1.	CAS	$ 141,826,806
2.	CONG	$ 27,787,380
3.	ASREO	$ 75,179,700
	Total	$244,793,886

After determining the revenue requirement associated with each of the three unbundled categories, the volume forecasts for each category are developed. The billing determinants for each category are as follows:

1.	CAS	Gross Control Area Load and Exports
2.	CONG	Net scheduled Inter-Zonal flows per path, Excluding Existing Transmission Contracts
3.	ASREO	Purchases and sales of Ancillary Services and Real-Time Energy whether instructed or uninstructed. Includes 50% of self provided A/S.

The forecasted volumes of the billing determinant for each unbundled service category for 2002 are as follows (in thousands of MWhs):

1.	CAS	246,487
2.	CONG	75,558
3.	ASREO	78,597

Finally, a unit charge per MWh is developed to recover the costs for the three unbundled service categories by dividing the revenue requirement for each of the three categories by the associated billing determinant volumes. The unit charges for 2002 are as follows (in $ per MWh):

1.	CAS	.575
2.	CONG	.368
3.	ASREO	.957

A description of the tasks and responsibilities of each cost center, the results of their allocations, and any commentary related to these allocations is provided below in the section entitled "Allocation Descriptive Detail." The cost allocation matrix and the descriptive text, which is included for each cost center explains the methodology used for allocating all operating costs.

The overall revenue requirement for 2002 of $244,793,886, consists of the following (in thousands):

Revenue Requirement ($ in '000)	
Operating & Maintenance Budget	177,465
Financing Budget:	
Principal-Existing Debt	
Interest-Existing Debt	33,800
Total Debt Service-New Debt ($20 Million in New Debt for 2002)	10,711
Operating Reserve (25% of Principal & Interest)	3,513
Subtotal, Financing Collection	60,029
Capital Project Funding (full CapEx Budget Funded)	8,301
Less: Expense Recovery Budget:	
Interest Earnings	(1,350)
SC Application & Training Fees	(15)
WSCC Reimbursement/NERC Reimbursement	(1,245)
Subtotal, Expense Recovery Budget	(2,610)
Subtotal, Revenue Requirement before Revenue Credit	243,186
(Revenue Credit)/Deficiency From Operating Reserve (12/31/2001 Reserve Balance varies by Service Category)	1,608
Total Revenue Requirement	**244,794**

II. ALLOCATION METHOD SUMMARY

A description of the methods used to allocate specific operating and debt service costs to the three unbundled service categories follows. In this table, the cost centers are listed in the order in which they appear in the cost allocation matrix.

	Cost Center	Allocation Methodology
1500	Operations – Direct	
1521	Grid Planning	Direct Assignment
1542	Outage Coordination	Direct Assignment
1543	Loads and Resources	Direct Assignment
1544	Real-Time Scheduling	Direct Assignment
1545	Grid Operations	Direct Assignment
1546	Security Coordination	Direct Assignment
1549	Operations Training Group	Direct Assignment
1554	Special Projects Engineering	Direct Assignment
1555	Operations Support Group	Direct Assignment
1558	Transmission Maintenance	Direct Assignment
1561	Southern Area Engineering	Direct Assignment
1562	Northern Area Engineering	Direct Assignment
1563	Coordinated Operations	Direct Assignment
1565	Pre-Scheduling and Support	Direct Assignment
1566	Regional Coordination	Direct Assignment
1559	Operations Application Support	Direct Assignment
1500	Operations – Indirect	
1511	VP - Grid Operations General	Department Direct costs
1547	Engineering and Maintenance	Supervised Department costs
1548	Operations Support and Training Group – General	Supervised Department costs
1564	Operations Scheduling	Supervised Department Costs
1700	VP Market Services	
1722	Application Support	Direct Assignment
1723	Tariff and Contract Implementation	Direct Assignment
1724	BBS - PSS	Direct Assignment
1725	BBS - FSS	Direct Assignment
1731	Contracts and Special Projects	Direct Assignment
1741	Client Relations	Direct Assignment
1752	Manager of Markets	Direct Assignment
1753	Market Application & Testing	Direct Assignment
1755	Market Support and Development	Direct Assignment
1756	Market Quality	Direct Assignment
1757	Market Integration	Direct Assignment
1700	Market Services – Indirect	
1711	VP - Market Services	Department Direct costs
1721	Billing and Settlements	Supervised Department Costs
1751	Market Operations	Supervised Department Costs

1400	Information Services – Direct	
1424	Asset, Contract & Change Mgmt Group	Direct Assignment
1441	Vendor Management	Labor Dollar Ratios - Special
1461	RT Operations Applications Support	Direct Assignment
1462	Field Data Acquisition & Data Quality	Direct Assignment
1467	Post Operations Application Support	Direct Assignment
1400	VP Information Services Indirect	
1411	Chief Information Officer- General	
1422	Application Development Services	Department Direct Costs
1431	User Support Services	Direct Operating Costs
1432	Technology Infrastructure Services-General	Direct Operating Costs
1442	Production Support Services	Direct Operating Costs
1451	Information Security Services	Direct Operating Costs
1463	Corporate & Operation Systems	Department Direct costs
1468	Corporate Application Support	Direct Operating Costs
1471	Infrastructure Engineering	Direct Operating Costs
		Direct Operating Costs
1600	Legal - Direct	
1641	Market Analysis	
1661	Compliance	Direct Assignment
1662	Data Quality Group	Direct Assignment
		Direct Assignment
1300	Finance - Corporate Indirect	
1311	CFO - General	Supervised Department Costs
1321	Accounting	Direct Operating costs
1331	Treasury and Financial Planning	Direct Operating costs
1351	Facilities	Labor Dollar Ratios
1361	Office Administration	Labor Dollar Ratios
1600	Legal: Chief Counsel – Indirect	
1611	General Counsel – General	Supervised Department Costs
1631	Legal and Regulatory	Direct Operating costs
1800	VP Corporate and Strategic Development – Indirect-	
1811	VP Corporate and Strategic Devt. - General	Supervised Department costs
1821	Communications	Direct Operating costs
1831	Strategic Development	Labor Dollar Ratios
1851	Office of Strategic Services	Direct Operating costs
1861	Regulatory Policy	Direct Operating costs
	CEO / Human Resources – Corporate Indirect Salaries	
1111	CEO - General	Labor Dollar Ratios
1841	Human Resources	Labor Dollar Ratios
1651	Board of Governors	Labor Dollar Ratios

III. UNBUNDLED SERVICE CATEGORY DESCRIPTIONS

A description of the three categories of services performed by the ISO is as follows:

1. **Control Area Services (Grid Reliability):** This category is responsible for managing the Control Area and the ISO Controlled Grid to "keep the lights on," *i.e.*, ensure safe, reliable operation of the transmission grid and dispatch of bulk power supplies, including:

   - performing operational studies;
   - system security analyses;
   - transmission maintenance standards;
   - system planning to ensure overall reliability;
   - integration with other Control Areas;
   - emergency management;
   - outage coordination;
   - transmission planning; and
   - scheduling Generation, imports, exports, and wheeling in the Day-Ahead and Hour-Ahead of actual operations.

2. **Congestion Management (previously known as "Inter-Zonal Scheduling"):** This category is responsible for dealing with Congestion, which exists when power flowing on a transmission path exceeds the transmission path capacity. Congestion management is conducted by the ISO during the scheduling process and results in the economic rationing of transmission service in order to prevent congestion.

3. **Ancillary Services and Real-Time Energy Operations (previously known as "Market Operations"):** This category is responsible for providing for ancillary service and real-time energy related services, including, but not limited to: providing open and non-discriminatory access for market making activities for participants through Ancillary Services auctions and Energy balancing services, Posting of market information; Market surveillance and analysis; administration of self-provision of ancillary services; Settlement, billing, and metering related to these;

IV. COST CENTER (DEPARTMENT) DESCRIPTIONS

All ISO cost centers are listed and described in the following section of this report. For "Direct Assignment" cost centers, allocation results are listed.

1100 Chief Executive Officer Division

1111 CEO - General

Description:

The CEO oversees and directs all operations of the ISO and reports to the Board of Governors.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Allocated based on Labor Dollar Ratios

1300 Chief Financial Officer Division

1311 CFO - General

Description:

The Chief Financial Officer oversees directly the activities of the Accounting (Controller) and Treasury and Financial Planning groups, and the Facilities and Office Administration functions. All of these are functions which support all ISO services.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Allocated based on Supervised Departments' Costs

1321 Accounting

Description:

The ISO Accounting Department is comprised of four areas of responsibility. Each area performs specific functions that enable the department as a whole to provide the best possible financial accounting services to the ISO. Each area and a brief description of its functions is listed below:

- Controllership/Accounting Administration

Responsible for implementing internal control policies and procedures. This area acts as the umbrella for all other areas of the department.

- General Accounting and Financial Reporting

Responsible for preparing, analyzing and distributing financial and management reports to various internal and external users.

Responsible for coordinating the financial, operational and settlements control, and other audits. These audits ensure that the ISO is in conformity with generally accepted accounting principles and is in compliance with certain established procedures.

Responsible for preparing and submitting various tax returns and other informational filings to federal, state and local agencies.

Responsible for the integrity and maintenance of the general ledger and fixed assets systems. Tasks include reconciliations of accounts and bank statements, preparation and input of journal vouchers, and analyses of expenditures.

- Cash and Credit

Responsible for processing payments for goods and services where a valid purchase order was placed with the invoicing vendor as well as for those goods and services received by the ISO which were not ordered by purchase order, including the reimbursement of employee travel expenses.

Assists in the market settlement process by collecting and distributing cash to the market players. This responsibility includes the settlement process for GMC, market, FTR, FERC, SRA, emissions, start-up and other types.

Responsible for the receipt of monies, banking interfaces and general cashier operations.

- Purchasing

Responsible for obtaining products, services and travel for California ISO. Acts as authorized agents to create and distribute formal purchase orders to suppliers.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Allocated based on Direct Operating costs

1331 Treasury and Financial Planning

Description:

The Financial Planning and Treasury group is responsible for the following:

- Treasury and Cash Management;
- Insurance/ Risk Management;
- Debt administration;
- Budgeting/Financial Planning;
- Benchmarking;
- GMC/Rates/Unbundling and;
- Accounting System Support and Maintenance

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Allocated based on Direct Operating costs

1351 Facilities

Description:

The Facilities Department is responsible for the physical building environment of the California ISO. Its role is to provide and maintain a safe, comfortable, and efficient workplace that fosters teamwork and collaboration in a highly reliable building infrastructure. This role can be broken down into several areas:

- Facilities Planning. This involves the allocation of space to accommodate staff and staff changes along with the redesign, modifications, and furnishing of that space.
- Critical Systems. This involves providing and ensuring high-reliability infrastructure to accommodate Information technology equipment and operating systems housed in the computer rooms and Dispatch control center.
- Building Maintenance. This involves the maintenance of the general office areas and computer facilities with respect to heating/ventilation/air conditioning, building electrical distribution, structural systems, etc.
- Housekeeping. This involves janitorial upkeep of the building interiors as well as the appearance of the grounds and other exterior elements.
- Property Leases. This involves administration of all existing property lease agreements including payments, landlord-tenant issues, and negotiation of changes.
- New Facility Development. This involves the planning, development, and transition into all newly acquired ISO properties, leased or owned.
- Administrative. This involves tracking, reporting, and benchmarking all ISO Facilities activities and costs.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Allocated based on Labor Dollar Ratios

1361 Office Administration

Description:

The Corporate Services Department has primary responsibility over four distinct corporate functions consisting of Physical Security, Corporate Safety, Administrative and Office Support Services. The main goal of the Corporate Services Department is to ensure a safe and secure work environment and provide the administrative and office support necessary for ISO employees to perform their jobs at the highest

levels possible.

Physical Security – Responsible for providing physical protection of ISO personnel and property. This includes workplace violence prevention, investigations of criminal acts, executive protection, risk management/threat assessment, life safety system monitoring, critical systems monitoring and medical first responders.

Safety - Responsible for ensuring compliance with all aspects of corporate safety program including; risk assessment, management and mitigation, workers compensation administration, ergonomic compliance and other related safety programs. Responsibilities extend to all visitors, contractors and employees on ISO property or performing services directly controlled by the ISO. Also responsible for ensuring compliance with all applicable local, state, and federal safety laws and regulations.

Administration and Office Support - Responsible for facilitating corporate support functions including, mail services, shipping and receiving, reception desk, office supplies, office automation equipment, conference room set-up and management and related office support services. Also responsible for ensuring consistent policies and procedures are in place for corporate administrative staff.

Cost Allocation Methodology and Percentages:

Allocated based on Labor Dollar Ratios

1400 Chief Information Officer Division

1411 Chief Information Officer- General

Description:

The Chief Information Officer assumes responsibility for all ISO information services infrastructure, strategies, and key business processes. Cost center 1411 is an executive function, therefore included as corporate overhead.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Allocated based on Department Direct costs

1424 Asset, Contract & Change Mgmt Group

Description:

The IS Assets, Contracts, and Change Management ("ACCM") group is responsible for enterprise programs and processes related to managing technology assets. Assets include hardware, storage arrays, software licenses, and other IS-related services through their lifecycle. The IS-related services and include hardware maintenance and software upgrades and support. ACCM also manages the Asset and the Change Management modules of an integrated management tool.

ACCM manages and coordinates the process for technology related contracts, from bidding the requirements, constructing the contract documents, negotiating the prices and terms, and administering the resulting agreement from beginning to expiration.

ACCM coordinates IS budget development and administration, hardware warranty and maintenance contract management, software licensing, maintenance contract management, lease administration, asset management, and technology lifecycle process. It tracks expenditures against budgets and tracks invoice payments against purchase orders.

ACCM coordinates activities with procurement, provisioning and technical support groups and prepares lease/purchase requisitions. It verifies invoice accuracy and administers processes for approval and payment.

Finally, ACCM is responsible for the Change and Configuration Management processes and promotes corporate-wide compliance with Change Management. The ACCM group also provides Configuration Management support by providing the framework for each business unit to control the deployment of modifications to their existing system software and maintaining the UNIX and NT custom software release repositories.

In 2002, ACCM anticipates the following tasks will be required:

- Lease equipment payments including refreshes for most servers and workstations throughout ISO;
- Procure hardware maintenance for existing and new equipment;
- Arrange for existing and new software upgrades and support renewal;
- Coordinate all of the Asset Management purchases within ISO, concentrated on non-hardware issues.
- Relationship manager for Oracle, Compaq, Compaq Financial Services, Fleet Business Credit Corporation, De Lage Landen Financial Services, Sun Microsystems, Legato, iPlanet, GartnerGroup, SoftSmiths, Brokat, Structure Consulting Group, Actuate, EPRI, Iron mountain Data Security, and Vitria.
- Capital and operating budget coordination for fourteen cost centers and three rollups.
- Accounting analysis for monthly re-forecasting; year-end forecasting for consultants and major contracts.
- Special analyses for finance and accounting to assist corporate level fund allocations to support various discoveries.
- Preparation of Capital project requests for multiple groups within ISO.
- Define and record internal document development and approval processes.
- Tracks expenditures against budgets; tracks invoice payments against purchase orders.
- Manages and coordinates the process for technology related contracts, from bidding the requirements, constructing the contract documents, negotiating the prices and terms, and administering the resulting agreement from beginning to expiration.
- Coordinate IS budget development and administration, hardware warranty and maintenance contract management, software licensing, maintenance contract management, lease administration, asset management, and technology lifecycle process.
- Verify invoice accuracy and administer processes for approval and payment.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. For this department, individual contract costs were associated with particular ISO projects or tasks, and assigned to the unbundling categories as appropriate. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Direct Assignment

CAS	CONG	ASREO
41%	11.2%	47.7%

1471 Infrastructure Engineering

Description:

The Infrastructure Engineering department has two major responsibilities, engineering and architecture. The System Engineering and Network Engineering groups perform the detailed engineering analyses required to expand, refresh or otherwise enhance the ISO's production computing infrastructure (systems and networks). It oversees acquisition, configuration, and deployment to production of these resources. The Technology Architecture and Information Architecture groups define the approaches used to capture and represent both business and software system information, determine and specify

high-level modeling approaches and guidelines, identify opportunities for the sharing and reuse of information, lead the construction of information models, define a common terminology based on core business concepts, define and maintain the ISO's technology infrastructure architecture; and provide direction and guidance to vendors of infrastructure products and services.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Allocated based on Direct Operating Costs

1430 Infrastructure Services Group

1431 User Support Services

Description:

IT End User Support Services provides corporate wide computing infrastructure support including the following:

- Platform Support – Enterprise NT Computing hardware, operating system, and layered product configuration, installation, testing, and maintenance, along with regular system administration duties to ensure the reliability and effective performance of the computer platforms. This includes both servers and workstations, and the integration of third party products.

- System Management – Regular monitoring of computing infrastructure hardware and software, along with database and application processes to ensure seven day a week and 24-hour a day availability of platforms and business systems. This function includes the escalation, notification, and documentation of system failures. In addition, system engineers analyze system activity and performance to provide capacity management, including the recommendation for short- and long-term computing infrastructure enhancements. System Management also provides Tivoli (system monitoring software) and NetView design, development, implementation and support of the production and development environments.

- Help Desk and Desk Side Support – Installation, maintenance, and support of the office automation infrastructure, including support to internal users in the use of office automation tools, both hardware and software. In addition, the Help Desk provides central call logging and issue management for office automation, internal communication infrastructure, and facility related problems and issues.

Responsibilities also include Tape Management for backup and recovery, and paging and cell phone administration.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the

three categories.

Allocated based on Direct Operating Costs

1432 Technology Infrastructure Services-General

Description:
This is the general cost center for the Director of Technology Infrastructure Services (TIS). End User Support Services (cost center 1431), Vendor Management (cost center 1441), Production Support Services (cost center 1442) and Information Security Services(cost center 1451) report to this Director. This cost center provides for the cost of general support including such items as the administrative assistant and the general director level expenses.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Allocated based on Direct Operating Costs

1441 Vendor Management

Description:

This department's primary function is to oversee all contracts and costs for the Technology Infrastructure Services group within IS. The group is responsible for administrating the MCI contract including asset management, billing and vendor management. In addition, we provide contract and invoicing review for Pacific Bell, Intercall, Arch Communications (paging), AT&T Wireless (cell phones), Internap (third party internet services).

This group provides budget support, compliance and development for all 5 cost centers within the TIS department.

Vendor Management oversees the contract with MCI for the Energy Communication Network ("ECN") which includes a high speed and high availability fiber optic statewide network connecting the Folsom and Alhambra ISO sites, the Area Control Centers, regional security coordinators, and all Market Participants. The ECN is utilized to control the transmission systems, generators, and Ancillary Service providers. It provides the "marketplace" for the direct Market Participants. In addition, it integrates all power revenue metering points and supports the consolidation of metering data.

The costs related to the MCI telecommunications contract are allocated based on modified direct labor dollar ratio approach, as described below.

The MCI telecommunications contract costs account for approximately $30.8 million, a majority of the costs in this cost center. The ISO does not have, and has been unable to obtain from MCI, the information necessary to perform a detailed Direct Assignment of the costs of the MCI contract to the three ISO service categories. Making such an allocation would require knowledge from MCI about the data needs of each of

the three ISO service categories and reliance on various aspects of the network services provided by the MCI contract. As an alternative, the ISO has estimated the costs of the major components of the MCI services.

The MCI charges are viewed as falling under two broad categories: charges that are assessed for services utilized by all ISO employees, and those that are assessed for utilization by employees in specific groups such as Operations, Market Services, Compliance, and the Department of Market Analysis. The first category includes the Voice Premises and Shared Network Services costs, totaling approximately $3.7 million per year. These MCI costs were allocated to the three ISO service categories based on the total ISO labor dollar ratios related to each cost category.

The second category, totaling approximately $27.1 million, was allocated, where possible, based on usage factors. The following steps were used for the allocation.

First, about $1.8 million, or 22% of the Bandwidth and Wide Area Network ("WAN") infrastructure costs (that is, data backbone) were allocated directly to the ASREO Operations Function, as this capacity is set aside for connected entities.

For the remaining $25.2 million, the major functional groups in the ISO that were utilizing the Bandwidth and WAN Usage (that is, access charges, Internet, redundancy), and Data Premises cost categories were determined. For each functional group in these departments, the appropriate labor dollar ratios were utilized to allocate the costs to the three ISO service categories; and the remaining MCI Costs were then allocated to each service category based on the corresponding headcount.

The results of the allocation procedure for MCI Costs are provided in the table below.

Category	2002 Budget Amount ($000)	Control Area Services	Congestion Management	Ancillary Services and Real-Time Energy Operations
Total Vendor Management Department Costs:	$30,774			
Direct Assignment	$1,846	0%	0%	100%
Total Headcount Allocation	$3,692	59%	9%	32%
Specific Headcount Allocation	$25,235	60%	10%	30%
Allocation Ratio	100.00%	59.7%	10.5%	29.8%

Cost Allocation

Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Allocated based on Labor Dollar Ratios - Special

1442 Production Support Services

Description:

The Production Support Services Department consists of the following support units: UNIX Administration, Data Base Administration, and Network Operations.

Although these groups have different skills sets, the common goal of Production Support Services is to provide 24 x 7 availability, and secure reliable systems, data bases, and networks to support all business functions within the ISO.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Allocated based on Direct Operating costs

1451 Information Security Services

Description:

Accurate and confidential information is critical for safe, reliable grid operations and efficient markets through secure e-commerce. Information Security Services ("ISS") is responsible for the securing and safeguarding of information, whether in repository in the ISO computer systems or in transit via networks and communication systems. Activities that support this continuous process are information security policies, procedures, and standards development for both internal users and market participants. ISS is also responsible for the education, awareness and compliance of these policies, procedures and standards. As well, ISS provides security requirements for the design, engineering and implementation of security infrastructure for existing and new applications, communication systems, and e-commerce solutions. Other activities ISS provides are the monitoring and auditing of security logs, administration of remote access platforms and digital certificates, enabling applications to use certificates, encryption technologies, and responding to and investigating security incidents leading the Security Incident Response Team (SIRT). ISS also supports business continuity planning and testing for the ISO and external parties.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Allocated based on Direct Operating costs

1460 Corporate & Operation Systems Group

1422 Application Development Services

Description:
Application Development Services ("ADS") department is primarily responsible for the development and support of virtually all ISO production application systems, including both operations and administrative systems. The department is composed of the following seven areas, four of which are headed by Lead Application Engineers:

- Control Systems (2 staff, 1 contractor)
- Markets & Scheduling (1 lead, 3 staff, 7 contractors)
- Metering & Settlements (1 lead, 2 staff, 11 contractors)
- Enterprise Systems (1 lead, 3 staff, 6 contractors)
- Data Warehouse (1 lead, 5 staff, 3 contractors)
- Application Architecture (1 architect)
- ADSC Outsourced Contract (1 account manager/lead, 9 consultants)

Operations systems responsibilities include:

- Grid Planning
- Grid Engineering & Maintenance
- Grid Control & Management (EMS)
- Scheduling, Outage Coordination and Reporting
- Market Execution
- Market Settlement, Invoicing and Payment
- Meter Data Collection and Validation
- Market monitoring, Analysis & Regulatory Reporting
- Tariff and Contract Compliance
- Dispute and Issue Tracking, Management and Reporting
- Data Warehouse

Administrative Systems Responsibilities Include:

- Enterprise Services Management (employee life cycle, asset & change management, help desk)
- Human Resources
- Budgeting
- Employee Bonus Calculation

The department engages in all aspects of the full systems development life cycle (SDLC), including business analysis, requirements definition, functional and technical design, development, implementation, and ongoing maintenance and enhancement of applications. In addition, ADS is responsible for the development and maintenance of both the systems development life cycle (SDLC) methodology and the

definition and extension of the application architecture framework used by the enterprise.

Standardized component architectures and common technical standards have been adopted, a common SDLC is near completion and the leadership structure is in place to manage the full complement of ISO resources required to fulfill the mission of the group.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Allocated based on Direct Operating costs

1461 RT Operations Applications Support

Description:

RT Operations Applications Support is responsible for providing real-time as well as historical operational data to Dispatch Operations and other related functions for the purpose of operating the California ISO grid. Responsibilities include the maintenance and operation of ISO owned data acquisition and database systems related to the delivery and display of operational data. RT Operations Applications Support cost center ensures operational data meets or exceeds the reliability and availability requirements for the safe, efficient and reliable operation of the ISO grid. The delivery and presentation of the operational data is in accordance with all applicable ISO technical standards, practices, procedures and policies. In addition to maintaining and operating the data acquisition and database systems, the RT Operations Applications Support cost center will maintains the existing and future interfaces to ISO internal and external systems related to the collection and dissemination of real-time operational data.

RT Operations Applications Support Business Deliverables:

RT Operations Applications Support cost center provides the following services as they relate to the collection, delivery and presentation of operational data:

- Cutover to a new EMS system (ABB/Bailey) at the end of the year 2001.
- Database maintenance for the following major systems – SCADA, Network, GOTS, Master IOC, SCADA IOC, STAR, ICCP, Advanced Applications and PI.
- Application maintenance and support for the following systems – Data Acquisition, AGC, Resource Scheduler, Resource monitor, MDAS Online and PI.

Specific Areas of Support:

AGC (Automatic Generation Control) -

- Support Unit AGC Testing (Development and Production)
- Operating Reserve
- Control Performance Programs (CPS)
- System Load Calculation

System Interfaces:

Meter Data Acquisition Systems (MDAS) Interface
Scheduling Interface (SI) Interface
Plant Information (PI) System Interface
Bill's Interchange Scheduler (BITS) Interface
SLIC Interface (Bailey System)

Hardware Related Systems:

- Mapboard
- Western Systems Coordinating Council (WSCC) Workstations
- Participating Load Agreements (PLA)
- Energy Management System (EMS) Development Room Systems
- Energy Management System (EMS) Production Room Systems
- Remedial Action Scheme (RAS) Systems
- Generation Control Project (GCP) Systems (Development and Production)
- Plant Information (PI) Systems

Generation Control Project (GCP):

- Operation and Maintenance of GCP Systems (Folsom and Alhambra)
- EMS Data Acquisition Systems
- Support of SMSC monitoring

Applications:

- Energy Management System Alarm Processing
- Generation Control Project Alarm Processing
- Resource monitoring
- Resource Scheduling
- Operating Reserve
- Interchange Scheduling
- Control Performance Programs Calculations
- System Load Calculations

General Support of User Organizations:

- Grid Ops
- Operations and Engineering
- Market Compliance
- Market Operations
- Meter Data Acquisition Systems (MDAS)
- Operations Support & Training (OSAT)
- Information Systems Data Warehouse

24X7 On Call Support:

- Energy Management System systems

- Generation Control Project Systems
- Plant Information Systems
- System Interfaces

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Direct Assignment

CAS	CONG	ASREO
100%	0%	0%

1462 Field Data Acquisition & Data Quality

Description:

The responsibilities of the Field Data Acquisition & Data Quality group are as follows:

- Supporting the Remote Intelligent Gateway ("RIG") interface system in the daily operation of power Generation, scheduling, and control of the ISO Controlled Grid. The Automatic Generation Control (AGC) system simultaneously controls Generating Unit output to match resources to Load and maintain frequency. Generating Units offering regulation services must be capable of being controlled by the ISO EMS. RIG interface units meet the ISO standards for transporting AGC signals. The ISO has the ability to send either set point or raise/lower signals. Additionally, the RIG has multiple ports to allow control to be switched between the Generator and the ISO.

- Verification and processing of raw meter data into Settlement Ready data, which the ISO uses for generating preliminary and final financial settlement statements for the Market Participants, Market Surveillance and reports.

- Providing Settlement Ready metering data for the ISO billing system, including:

  - Auditing the ISO meter inspection process and providing engineering judgment related to proposed and existing metering systems;
  - Operating and maintaining Meter Data Acquisition Systems ("MDAS") that directly acquire metering data from ISO metered entities and receive metering data from SCs;
  - Auditing metering data collection, storage and processing systems of the SCs;
  - Maintaining the metering standards and specifications for approved meters and metering systems.
  - Coordinating and approving proposed metering system-engineering designs.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Direct Assignment

CAS	CONG	ASREO
38%	3%	59%

1463 Corporate & Operation Systems

Description:

The Corporate & Operation Systems group supports Real-Time Operations Application Support (1461), Field Data Acquisition & Data Quality (1462), and Post Operations Application Support (1467).

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Allocated based on Department Direct costs

1467 Post Operations Application Support

Description:

The Post Operations Application Support and Administration (POASA) is responsible for supporting applications and functionality of systems interconnected to various Operations Systems platforms. POASA provides systems administration to the Metering systems and systems analysts support to the Settlement systems. This department directly supports ASREO in providing timely and accurate data.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Direct Assignment

CAS	CONG	ASREO
0%	0%	100%

1468 Corporate Application Support

Description:

Corporate Application Support and Administration (CASA) supports business application software for Corporate & Strategic Development (Human Resources, Project Office, and Communications), Finance and Accounting, Facilities, Legal & Regulatory Affairs, and Information Services. This team also supports various enterprise-wide applications including Internet and Intranet.

For new requirements, this team is responsible for performing the initial requirements analysis, evaluating products, and installing, configuring and customizing pre-packaged applications for the stated customers. For implemented systems, responsibilities of this team include application administration, problem management, on-going maintenance, enhancements, and integration of supported software. Supported systems include but are not limited to the following:

- Oracle Financials (Corporate); General Ledger, Accounts Payable, Accounts Receivable, Projects, Purchasing, Fixed Assets, Oracle Financial Analyzer, and Cash Management, Oracle Financials (Market); General Ledger, Accounts Payable, Accounts Receivable, and Electronic Data Interchange;
- Best! Software - Imperativ Human Resources Management System; Payroll and Roles (self-service web application)
- Documentum - Enterprise Document Management System
- Internet & Intranet
- Peregrine (a.k.a. Remedy) - Action Request System; Help Desk, Change Management, Asset Management, Service Level Agreement, Transmission Registry, Resource Registry, Settlement Dispute System, and more.
- Rational - All Software Development Toolsets; RequisitePro and ClearCase repositories

This team has customer relationship management responsibilities for those departments listed above. We primarily support the "General" departments of the organization. Some of the communication aspects of the Internet site serve CAS and ASREO. Additionally, there are workflow applications in Peregrine's Action Request System that supports both CAS and ASREO. The Market Financials system is the only system directly supporting to ASREO.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Direct Operating Costs

1500 VP - Grid Operations Division

1511 VP - Grid Operations General

Description:

The VP Grid Operations oversees all aspects of the ISO Operations division and is responsible for the safe and reliable operation of the power grid; assumes responsibility for ensuring that transmission standards and reliability of electric operations are maintained at high levels; oversees or influences directly the development and implementation of numerous processes, procedures and technologies necessary to enable the deployment of the ISO organization; and assumes responsibility for the development of operations and engineering capabilities necessary to promote the timely implementation of the ISO activities consistent with applicable orders of regulatory bodies including FERC orders, NERC and WSCC policies.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Allocated based on Department Direct costs

1521 Grid Planning

Description:

The ISO Grid Planning Department is charged with reviewing the Participating Transmission Owners ("PTOs") Bulk Power Program (a five-year Program is filed with the ISO every year) and reviewing the studies the PTOs perform for connecting new generators or Load to the ISO Controlled Grid. The ISO recommendations (if any) are either implemented by the PTOs or the problem is resolved via dispute resolution processes.

Additionally, Grid Planning conducts studies to determine Reliability Must-Run ("RMR") contract requirements, dual fuel generator requirements and provides support to Operating Engineering. Grid

Planning has been involved in the preparation of the new ISO Reliability criteria and conducts several meetings per year with stakeholder groups, and is working toward common facility ratings (when feasible).

Additionally, Grid Planning leads or supports several Regional and National technical/engineering groups including the WSCC, the Western Interconnection
Coordination Forum and NERC.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on

the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Direct Assignment

CAS	CONG	ASREO
100%	0%	0%

1530 Operations Scheduling Group

1542 Outage Coordination

Description:

Outage Coordination performs activities related to the following:

- Approving or denying outage requests to enable necessary maintenance to preserve reliability of Generation and transmission facilities while at the same time assuring real-time operating reliability.
- Long-term planning (up to 12 months) for outage coordination for both Generation and transmission facilities, interfacing new Generation and transmission facilities into the existing ISO Controlled Grid.
- Recording, maintaining, and reporting data related to outages.
- Ensuring accurate path ratings and integrated outages to ensure minimum reliability standards are adhered to. The coordinators work closely with Operating Engineers to help accomplish this.
- Path ratings and allocation percentages are finalized by the Outage Coordinators, then passed on to the inter-tie scheduling group. Additionally, these allocations are passed on to Existing Contracts holders and posted on the Internet as part of the Control Area responsibilities.
- When transfer paths are derated, congestion can occur. Although this process of mitigating congestion is similar to "scheduling" above, it differs in that by allocating the reduced percentages to the scheduling group, congestion is pre-empted by reducing schedules on a scheduled basis, which allows for better management of congestion.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Direct Assignment

CAS	CONG	ASREO
100%	0%	0%

1544 Real-Time Scheduling

Description:

Operations Scheduling is the primary interface between the ISO and its 11 adjacent Control Areas as a part of the WSCC interconnection. Metered and scheduled interchange is coordinated on a pre-schedule, Real-Time, and after-the-fact basis with the neighboring Control Areas. Direct and distinct functions also are performed to enable the ISO markets, congestion, and settlements process. All of these functions require accommodations to assure that Existing Contracts are honored.

All interchange transactions must be coordinated with adjacent and external Control Areas within the limits of the ISO jurisdictional transmission system. This includes implementing and monitoring all interchange schedules into and out of the ISO Control Area regardless if they are scheduled on Existing Transmission Contract ("ETC") or New Firm Uses ("NFU") transmission. Interchange scheduled on behalf of all SCs must be reconciled to meet WSCC and NERC criteria.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Direct Assignment

CAS	CONG	ASREO
75%	15%	10%

1564 Operations Scheduling

Description:

Real- Time Scheduling group consists of a team of NERC and WSCC certified operators working shift work in the Control Center in Folsom and Alhambra. Primary Duties/Responsibilities are as follows:

- Implements Real-Time interchange schedules with adjacent Control Areas. Primary contact with Schedule Coordinators for all Real-Time schedule issues
- monitors and adjust interchange transactions as necessary on Real-Time basis to maintain schedules within path limitations.
- Coordinate with Gen. Dispatch, GRC and CERS to obtain required imbalance energy though existing Market processes and Out of Market sources as needed.
- Perform Allocation and Implementation of Real-Time schedule curtailments based on Unscheduled Flow or Path derates.
- Provides Control Area and Transmission Provider Approval for Electronic Tagging System in RealTime.
- Provides Services as PSE for Electronic Tagging to support CERS sales & exchanges on interties.
- Records and Logs information pertaining to Intertie scheduling
- Primary ISO responsibility for compliance with NERC Policy 3 and WSCC MORC Section 3

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Allocated based on Supervised Departments' Costs

1565 Pre-Scheduling and Support

Description:

The staff of Pre-Scheduling and Support coordinates and schedules energy resources to meet system Load requirements and pre-checks all schedules with adjacent utilities to ensure correct intertie plans. Primary department contact is with settlements and billing department and client relations. We serve as a liaison between real-time, pre-schedule and after-the-fact staff. We support CONG and ASREO as needed with these responsibilities. In addition we maintain records of ETC's and ATC's for the PTO's. This is a cumbersome process that requires attention to detail and much manual intervention.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Direct Assignment

CAS	CONG	ASREO
75%	15%	10%

1540 Engineering and Maintenance Group

1543 Loads and Resources

Description:

The Loads and Resources group is responsible for the following activities:

- Preparing Control Area and local area Load and resource adequacy assessments;
- Engineering support for environmental issues impacting Control Area resources;
- Developing and maintaining various ISO operating procedures;
- Participating in WSCC committees and workgroups related to interconnected power system operations;
- Providing support for Existing Contract, MSS and System Units, and other Scheduling issues;
- Providing engineering support for ISO contracts issues (e.g., RMR contract, Participating Generator

Agreement ("PGA"), etc.)
- Providing engineering support for ISO projects (e.g., Automated Dispatch System ("ADS"), Generator Communication Project ("GCP"), etc.)
- Supporting EMS project development.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Direct Assignment

CAS	CONG	ASREO
100%	0%	0%

1547 Engineering and Maintenance

Description:

The Director of Engineering and Maintenance manages the following work groups:
- Transmission Facilities
- Operations Engineering
- Northern Engineering
- Southern Engineering
- Loads and Resources
- Coordinated Operations

The responsibilities of this department are:

- Develop ISO Operating Procedures
- Work with Outage Coordination in analyzing clearances
- Prepare summer and winter assessments for the local areas
- Support the Real-Time Operation and provide on-call services
- Review transmission plans, projects, and new Generation for the local areas
- Provide Engineering support for RMR and reliability Generation
- Prepare disturbance reports for the local areas
- Participate in WSCC and RTO related activities

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Allocated based on Supervised Departments' Costs

1558 Transmission Maintenance

Description:

Transmission Maintenance manages the creation, implementation, and enforcement of ISO Maintenance Standards; provides for high quality, safe, and reliable service; and manages the creation and implementation of this ISO application for Scheduling Logging ISO California.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Direct Assignment

CAS	CONG	ASREO
98%	0%	2%

1561 Southern Area Engineering

Description:

Southern Area Operations Engineering is responsible for the technical support of the southern portions of the area operation and Bulk system operations. Nearly all Area OE responsibilities directly support the category of Control Area Services.

Core functions of the Area OEs include the following: Conduct seasonal operating studies, establish seasonal OTCs and write procedures, support Outage Coordination in the analysis of Transmission and Generation clearances, identify and prepare for grid reliability concerns of the upcoming season (including proposing and managing short-term projects), provide ongoing active participation in and guidance to, the Grid Planning process, provide on-call OE support for real-time emergencies, represent the ISO in technical reliability groups and committees of WSCC and regional reliability forum.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Direct Assignment

CAS	CONG	ASREO
100%	0%	0%

1562 Northern Area Engineering

Description:

Northern Area Operations Engineering is responsible for the technical support of the northern portions of the ISO Grid. Nearly all Area OE responsibilities directly support the category of Control Area Services.

Core functions of the Area OEs include the following: Conduct seasonal operating studies and write procedures, support Outage Coordination in the analysis of Transmission and Generation clearances, identify and prepare for grid reliability concerns of the upcoming season (including proposing and managing short-term projects), provide ongoing active participation in and guidance to, the Grid Planning process, provide on-call OE support for real-time emergencies, and represent the ISO in technical reliability groups and committees.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Direct Assignment

CAS	CONG	ASREO
100%	0%	0%

1563 Coordinated Operations

Description:

The Coordinated Operations Group is responsible for identifying issues that impact the efficient operation of Grid Operations, especially as they interface with outside entities such as the CERS, and internal groups such as Market Operations, Market Quality, OSAT, Scheduling, Settlements, Legal, Compliance and Outage Coordination, and then developing solutions that benefit all of CAISO.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Direct Assignment

CAS	CONG	ASREO
90%	2%	7%

1550 Regional Coordination Group

1546 Security Coordination

Description:

Security Coordination monitors real-time system conditions to observe and mitigate potential problems as well as react to system emergencies in the Western Interconnection, with the primary focus on the California-Mexico Sub-region of WSCC (CAISO, LDWP and CFE Control Areas). Security Coordinators have the final authority to direct operations before, during, and after problems or disturbances with a regional impact.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Direct Assignment

CAS	CONG	ASREO
100%	0%	0%

1566 Regional Coordination

Description:

Regional Coordination responsibilities include being an active interface with WSCC and NERC committees, subcommittees, task forces and work groups; participating in and influencing the transition of both WSCC and NERC to their new organizations, WECC and NAERO; tracking the aforementioned groups' work and reporting to executive management; WSCC and NERC compliance reporting; the RTO effort including seams issues and coordination with both internal and external organizations in support of CAS, CONG, and ASREO.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Direct Assignment

CAS	CONG	ASREO
70%	12%	18%

1560 Operations Support and Training Group

1548 Operations Support and Training Group - General

Description:

The Director of OSAT is responsible for: overseeing preparation and administration of training across all operations groups, other groups in the ISO, and Market Participants; providing support for ISO efforts to interface with and incorporate markets and deregulation from an operations perspective as they develop inside and outside the ISO; updating, creating and maintaining all ISO Operating Procedures; implementing Emergency Response programs and procedures within the ISO and in coordination with state and federal external agencies; developing and maintaining EMS Displays as required and requested by Control Room personnel; providing presentation development and support for the Operations organization; and providing budget development and support for the Operations Division.

OSAT provides training and support to all groups within the Operations Division, to other departments within the ISO, and to Market Participants, to ensure and enhance system reliability as well as to facilitate and expand workably competitive markets. The primary role of OSAT is to provide support to all departments within the Operations Division, including the development of training programs, dispatch support and development of tools for operations (special projects).

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments that directly assign their costs to the three categories.

Allocated based on Supervised Departments' Costs

1549 Operations Training Group

Description:

The Operations Training group is responsible for identifying, creating, developing and facilitating or administering appropriate training material for grid operations, market operations, scheduling, other ISO groups, and Market Participants; procure and implement necessary hardware and software to accomplish this training; monitor the activities of various groups internal and external, for example; operations support, operations engineering, NERC & WSCC personnel to support the various operations training needs including procedures, reports, EMS needs, tools development and other support activities as needed. Specific roles and responsibilities include:

- Directing the activities of the trainees to assure appropriate material and processes are created to

accomplish training for operations, other ISO groups, and Market Participants;
- Managing support functions to assure training on procedures, tools and other training needs are met for all operations groups, other ISO departments, and external entities;
- Preparing and managing the training budget;
- Representing the ISO in WSCC, NERC and other forums as required.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments that directly assign their costs to the three categories.

Direct Assignment

CAS	CONG	ASREO
63%	24%	13%

1554 Special Projects Engineering

Description:

Special Projects Engineering provides reports to FERC, NERC and WSCC on Control Area Operations. It provides support to all groups within the Operations Division, to other departments within the ISO, and to Market Participants, to ensure and enhance system reliability as well as to facilitate and expand workably competitive markets. The primary role of Special Project Engineering is to provide Operations personnel with the best technology, tools and advanced applications that solve operating problems, improve grid reliability and facilitate the accurate and timely reporting to various regional reliability organizations and government agencies.

Specific roles and responsibilities include:

- Management of Special Projects that support Operations;
- Development of Wind Generation Forecasting tools
- Creation and Maintenance of Transmission Maps and Geographic data;
- Research and Development – Analysis and Installation of tools to improve grid reliability;
- Participating in NERC and WSCC committees and task forces relating to Operations and Scheduling;
- Field-testing proposed NERC and WSCC Compliance Templates;
- Developing concepts for operational control of Distributed Generation resources;
- Developing and directing R&D programs such as the three-year CERTS program; and
- Developing Board Documents and Tariff language for proposed changes in ISO Operations and Markets.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Direct Assignment

CAS	CONG	ASREO
87%	4%	9%

1555 Operations Support Group

Description:

The Operations Support Group is responsible for supporting the various market and grid operations needs of the ISO Real-Time operations control room floor and the Operations business unit. Included in these support functions are emergency preparedness and response coordination, emergency event notification, interconnected Control Area, UDC and PTO agreement support, Ancillary Services certification testing, creation, tracking and maintenance of procedures for Grid, Market and Scheduling Operations, various reporting functions including WSCC RMS data collection and reporting, development and maintenance of the ISO business continuity plan including business recovery contingency procedures, and other support activities as needed. Specific roles and responsibilities include:

- Management of Operations support functions to assure that procedures, tools, reporting, and other support needs are met for all operations groups, other ISO departments and external entities;
- Preparing and managing the Operations Support Cost Center budget;
- Representing the ISO in WSCC, NERC and other forums as required;
- Identifying and managing changes in the tariff, protocols, and market design that would improve market and grid operations;
- State and federal agency and intra-Control Area entity communications interdependency support;
- Managing and participating in projects related to the creation or enhancement of ISO operations, functions, processes, procedures or communications.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Direct Assignment

CAS	CONG	ASREO
60%	22%	19%

1559 Operations Application Support

Description:

OSAT Operations Applications Support's primary role is to provide safe, reliable electric transmission services, to all Californians within the ISO Control Area at the lowest reasonable cost through the development, enhancement and support of specialized custom applications and expert systems designed

to improve the efficiency and effectiveness of ISO real-time operators.

- Communication with other business units to insure that Operations Systems has the ability to maintain the functionality of existing processes in support of changes to interconnected systems.

- Coordination of Operations Systems and ISO business units to direct the acquisition of new systems and applications in support of end user requirements.

- Actively seek the replacement of existing systems as necessary by providing specifications for RFIs, RFQs, or bid proposals to implement changes to development, test and production environments.

- Coordinate personnel from within the Operations Applications department for the development of specifications and bids for the procurement of new systems or applications, and to provide improvements or modifications to existing systems and applications.

- During project implementation, develop levels of expertise for Operations Applications support staff and assure vendor compliance to project design specifications by maintaining consistent staff involvement in all phases of project development.

- Develop standards and procedures for the testing of delivered products to assure they meet all requirements of the original specifications.

- Provide improvements or modifications to existing systems and applications to support end user requirements through project design, product development, coordination of comprehensive testing of deliverables to assure all requirements of the original specifications have been followed.

- Coordinate project transition from factory development and testing to a production environment by providing training for end-users, developing general system information for all ISO personnel, delivery of all applicable manuals, and provide interface information on vendors for Operations Applications support personnel.

- Ensure Operations Applications staff adhere to ISO change management and configuration management policies and procedures in support of Grid Operations systems, applications and databases.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Direct Assignment

CAS	CONG	ASREO
80%	10%	9%

1570 Grid Operations Group

1545 Grid Operations

Description:

The Grid Operations group is responsible for the following:

- Overseeing and performing all Real-Time Operations of the ISO Electrical Grid and Control Area, including managing all aspects of the California Control Area;
- Ensuring reliable and safe operation of the ISO Controlled Grid;
- Ensuring reliable operation includes any authority needed to maintain control of the Grid, including authority over all PTO's and Utility Distribution Companies ("UDC's") in regards to system reliability and system emergencies, the ability to order must run generating units on-line, and manual Load shedding as needed;
- Coordinating Load and system restoration after any contingency or major system disturbance in cooperation with the WSCC Security Coordinator;
- Declaring, when appropriate, a Statewide System Emergency as detailed in the Dispatch Protocol, suspending market operations, and setting Administrative prices for Ancillary Services needed to resolve the emergency;
- Ensuring compliance with all WSCC, NERC criteria, and ISO protocols and procedures;
- Working with the WSCC Security Coordinator to ensure compliance with all policies and operating procedures applicable to the Western Interconnection;
- Controlling applicable Generation to meet inter-tie obligations, contributing to frequency control, and meeting any emergency responses, and WSCC and NERC criteria to support the transmission system and operation of the energy market in the most reliable manner;
- Maintaining documentation for Generation operations;
- Procuring additional Ancillary Services as necessary;
- Managing operation of eligible Regulatory Must-Take, Must-Run, and RMR Generation;
- Dispatching interruptible Loads to maintain required reserve levels during system emergencies; and
- Coordinating Generation resources to meet system Load requirements and satisfy contractual obligations, and responding to system frequency deviations and voltage issues.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Direct Assignment

CAS	CONG	ASREO
80%	10%	10%

1600 General Counsel Division

1611 General Counsel - General

Description:

The General Counsel cost center (1611) reflects the administrative and office support for the General Counsel. The General Counsel Group provides service relating to all the unbundled GMC categories.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Allocated based on Supervised Departments' Costs

1631 Legal and Regulatory

Description:

The Legal & Regulatory Department's responsibilities fall broadly into three functional areas: legal, regulatory and legislative. The majority of the department's costs and resources are associated with the regulatory area. In that area, the department directs the preparation of pleadings, Tariff amendments and other regulatory filings; develops factual records and other supporting materials; communicates and advocates the Company's policy objectives to regulatory authorities; reviews and monitors regulatory activities as they may affect the Company's objectives; responds to regulatory inquiries and investigations; and provides advice and counsel concerning Tariff and other regulatory requirements. The department pursues these activities before both state (Electricity Oversight Board, Public Utility Commission, California Energy Commission) and federal (Federal Energy Regulatory Commission) regulatory authorities. In the legislative area, the department educates policymakers at the state and federal levels concerning the Company's operations, practices and policies; provides comments and testimony on proposed legislation; responds to inquiries from lawmakers and the state and federal executive offices, and otherwise facilitates communication among Company management and state and federal policymakers. In the legal area, the department negotiates and drafts key vendor contracts and other agreements, manages the Company's litigation and otherwise oversees the resolution of disputes, and counsels management on contract, employment, intellectual property and other general corporate matters. Additionally, the department maintains the corporate records, including the corporate bylaws, and Board minutes.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Allocated based on Direct Operating costs

1641 Market Analysis

Description:

The Department of Market Analysis (DMA) reviews and monitors the efficiency and effectiveness of the ISO markets (Ancillary Service, Congestion Management and Real-Time), generates periodic reports of market performance, investigates observed or reported rule violations and/or market anomalies (e.g. gaming behavior), and develops and/or evaluates proposed market design changes. Additionally, the department conducts specialized studies and analyses and responds to information requests, serving in essence as the Company's in-house economic consultants. Specific functions of DMA include:

monitoring the market and reporting on market performance, including:

- Indices of market performance, including prices, competitive baseline costs, Loads, supply availability, outages and bidding patterns
- Prices in related markets (such as natural gas, emissions, surrounding areas, etc.)
- Level of imports/exports
- Ancillary Service Bid Sufficiency
- Congestion Management Market and Firm Transmission Rights
- Competitiveness of the Market
- Investigating and reporting on potential gaming and market power abuses.
- Identifying, reviewing and reporting deliberate or inadvertent violations of market rules or contracts that affect the efficiency of the market.
- Performing special studies of the impacts of bidding behavior on market efficiency and performance.
- Performing special studies on market efficiency and performance, both independently and at the request of ISO management, ISO Board of Governors, FERC and various outside agencies.
- Responding to numerous data requests (including subpoenas).
- Reviewing ISO rules and protocols from a market performance perspective, and recommending specific changes in market rules and protocols.
- Working with other areas of the ISO to implement these changes affecting market performance.
- Supporting the Market Surveillance Committee, by completing special analysis to support reporting and recommendations of the MSC to ISO management.
- Reporting to Federal Energy Regulatory Commission, California Public Utility Commission, Electricity Oversight Board and many other governmental and regulatory agencies.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Direct Assignment

CAS	CONG	ASREO
14%	21%	65%

1651 Board of Governors

Description:

Board of Governors expenses for Board meetings, Board member compensation and travel and expense reimbursement for Board members to attend Board meetings and perform other duties on behalf of the ISO.

Board expenses are considered overhead, and are allocated to the three GMC service categories.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Allocated based on Labor Dollar Ratios

1660 Compliance Group

1661 Compliance

Description:

The responsibilities of the Compliance Department fall broadly into two areas (reflecting the combination of two units during a corporate reorganization): operational compliance and data quality. In the first area, the department monitors and measures the operational performance (e.g. the delivery of specific quantities of energy within specific timeframes) of market participants to ensure compliance with contractual commitments and other requirements. Additionally the Department implements and calculates authorized penalties and sanctions for instances of noncompliance. Efforts in the past year have focused on encouraging suppliers to follow dispatch instructions and reducing the under-scheduling of Load. In the area of data quality, the department oversees programs designed to assure that the meter data on which financial settlements are based is of sufficiently high (i.e. reliable) quality. These programs include trend analysis, for purpose of identifying potential meter errors, site visits for purposes of testing participants' meter units, and training and assistance for purposes of enabling participants to comply with self-audit requirements. Apart from these activities, in recent months, the department has assumed a substantial role in developing the ISO Demand Responsiveness programs and assuring that the performance data used for settlement of transactions consummated through these programs is accurate and correct.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Direct Assignment

CAS	CONG	ASREO
76%	9%	16%

1662 Data Quality Group

Description:

See description under 1661.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Direct Assignment

CAS	CONG	ASREO
67%	0%	33%

1700 VP - Market Services Division

1711 VP- Market Services General

Description:

The VP of Market Services sets policy, plans, directs, and coordinates through subordinate Directors the activities of the Client Relations, Settlements, Market Operations, Market Quality and Contracts and Special Project functions of the ISO.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Allocated based on Department Direct costs

1731 Contracts and Special Projects

Description:

The Contracts and Special Projects department is tasked with:

- Developing and negotiating contracts with Market Participants;
- Assisting other Departments and Sections regarding contracts, compliance, FERC matters, and other special projects.

Contracts work responsibilities include:

- Development of Agreements with New Clients and Existing Clients;
- Develop new agreements; execute pro forma agreements as needed to expand participation in the ISO, Interconnected Control Area Operating Agreements ("ICAOAs") with other Control Area operators that have not yet executed the ICAOA, and others; and
- Assist in enhancing client understanding of ISO agreement terms and conditions.

Contract Activities Based on Regulatory Directives:

- Amend agreements as needed and file with FERC;
- Revise and maintain the standard pro forma agreements; and
- If FERC sets the agreement for hearing, negotiate the settlement of all interventions. If settlement cannot be reached, participate and provide testimony for the litigation proceedings.

Special Agreements:

- Determine if changes are needed to special agreements, such as the TCA;
- Develop, negotiate and administer Summer Reliability Agreements;

- Develop, negotiate and administer any subsequent reliability agreements that may be needed with the changing market design;
- Assist in crafting amendments to the RMR agreement and obtain executed agreements resulting thereof; and
- Develop Black Start, Voltage Support, and Emergency Assistance Agreements

Administration of Contracts:

- Responsible for administration of all contracts executed with Market Participants, including but not limited to contract interpretation, deadlines tracking, and records management;
- Administer Reliability Must-Run Agreements ("RMR"), including but not limited to assisting Settlements in the monthly invoicing process, negotiating amendments to RMR Agreement, negotiating settlement for dual fuel issues, and developing rates; and
- Review operating procedures and operating instructions for consistency with the ISO agreements and ISO Tariff.

Special Projects:

- Administering the ADR requirements of the ISO Tariff;
- Participate in FERC litigation regarding the municipal utilities;
- Project leader for the Access Charge proceeding;
- Facilitate relationship with State agencies during the California crisis, including CERS;
- Support or lead teams on Existing Contracts issues;
- Maintain a library of all FERC orders impacting agreements and the ISO Tariff;
- Participate in FERC proceedings not initiated by Contracts, including complaints;
- Participate in CPUC proceedings, as needed;
- Responsible for ISO Tariff search program;
- Responsible for Agreement tracking system; and
- Participate in the Generator Communications Project that establishes AGC requirements for generators;

Other Projects Work Requirements:

Support of Other Departments as needed which may include the Legal and Regulatory Department, other Market Service Departments, Operations, Market Surveillance and IT.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Direct Assignment

CAS	CONG	ASREO
60%	9%	31%

1741 Client Relations

Description:

The Client Relations group is the primary business interface between the ISO and its clients (i.e., SCs, transmission owners, Participating Generators, municipalities, and adjacent Control Areas):

- Manage the overall business relationship between the ISO and each of its Clients at all levels;
- Facilitate the business requirements for Participating Generators;
- Resolve operational, market and tariff issues on behalf of Clients;
- Certify and train Clients (Scheduling Coordinators, Participating Generators and others) for participation in the CAISO markets;
- Manage the stakeholder process for market and operational changes;
- Communicate effectively with market participants on market, operational and regulatory issues.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Direct Assignment

CAS	CONG	ASREO
37%	9%	53%

1720 Settlements

1721 Billing and Settlements

Description:

Settlement and Billing functions are performed for all transactions in the Control Area. Information regarding these transactions is forwarded, on a regular basis to the ISO. Scheduling information for Day-Ahead and Hour-Ahead is validated prior to Real-Time operations to insure compliance with ISO tariff and protocols. Subsequent to the Settlement Period, operating and billing data is compiled by the Settlements and Field Data Acquisition departments in order to produce, in accordance with the ISO's payment calendar, both a preliminary and a final settlement statement for each Market Participant. Examples of major billing and price components necessary for determining final billing are as follows: market clearing prices, bid prices, ex-post prices, and metered information from generators, Loads, and inter-tie points. These financial transactions involve billions of dollars each year. Preliminary Statements and Final Settlements are transmitted daily in accordance with the ISO calendar to each Market Participant. The monthly Grid Management Charges are summarized on Preliminary and last Final Statement for the trade month. Monthly Preliminary Invoices, which summarize all charges on the month's Preliminary Statements, and monthly Final Invoices, which summarize the difference between the summed Preliminary Statements and the summed Final Statements, are sent to each Market Participant in order to collect and pay for use of ISO market and Control Area needs.

This department supports all three service categories.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments that directly assign their costs to the three categories.

Allocated based on Supervised Departments' costs

1722 Application Support

Description:

The Business Process Development group assures the best use of technology to facilitate the expedient, timely and accurate delivery of settlement statements and invoices to ISO's Market Participants. The group identifies potential issues with existing business processes/protocols and assists management in formulating solutions. It facilitates the definition and implementation of new settlement protocols/processes. It also serves as the primary department interface with the Information Services (IS) Division to ensure adequate system, operation support and development services are in place to support the mission of the Settlements & Billing Department.

The primary functions include:

- Work with Department staff to identify and prioritize process and technology enhancements to support ISO's Settlements and Billing operation.
- monitor ISO market design activities, interpret Tariff changes, define detail process requirements, and determine automation and implementation strategies.
- Prepare business requirement documents for system development projects, facilitate and assist in the detail system design, monitor project progress and test new systems/software to assure compliance with business rules.
- Identify potential issues with existing business rules and assist senior management in formulating solutions and new settlement protocols.
- As the primary IS liaison, assure adequate system resources, operation support and development services are in place to support the Department's operation.
- Represent the Department in enterprise wide technology development efforts.
- Collaborate with other Market Services and ISO Departments to improve data flows for effective and efficient business operation.

Functions are in support of all three service categories.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Direct Assignment

CAS	CONG	ASREO
14.3%	6.9%	78.8%

1723 Tariff and Contract Implementation

Description:

The RMR Settlement group, under the Manager of Tariff and Contract Implementation, performs all tasks associated with the validation of RMR invoices provided by the RMR Generator Owners. In this role, the RMR Settlement Group deals with, on almost a daily basis the ISO dispatchers who handle the RMR units, the RMR Generator owners and the Participating Transmission Owners who is billed for such RMR charges. The RMR Settlement group implements all needed settlement validation modifications brought about by majority decisions of the members of the RMR Contract Schedule O task force. Additionally, the RMR Settlements group validates invoices of the Summer Reliability Generators. The Manager of Tariff and Contract Implementation supports the efforts of the RMR Settlement group in dealing with both internal and external RMR-related matters, as well as assists the Director of Settlements in the development and implementation of ISO Tariff modifications, and other contract implementation issues. Because this group deals with a broad range of issues related to CAS and ASREO, we should be considered in both of these categories.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments that directly assign their costs to the three categories.

Direct Assignment

CAS	CONG	ASREO
15%	7%	78%

1724 BBS - PSS

Description:

The Preliminary Settlements group is responsible for the accuracy and timeliness of Preliminary Settlement Statements, the correct implementation of the necessary manual work-around to the existing Settlements software, and issuing the Preliminary Invoice to Market Participants. The group coordinates with the Operations group to obtain information necessary for production of correct Settlement Statements, and investigates the Settlement impact of proposed operating conditions and client suggestions. The group works with Application Support group and software vendors to design, test, and enhance Settlement software. The group is responsible for maintaining and operating a dedicated billing system for Market Participants, ensuring timely and accurate bills and payment processing and managing the authorized credit limit for ISO customers. The group maintains the Master File and is responsible for Settlements' specific review of the tariff and making recommendations for changing the tariff and protocols. The group supports the Grid Management Charge Unbundling Team and Firm Transmission Rights Team.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Direct Assignment

CAS	CONG	ASREO
15%	7%	78%

1725 BBS - FSS

Description:

The department is responsible for the accuracy and timeliness of Final Settlement Statements and correct implementation of necessary manual work-arounds to the existing Settlements software and issuing the Final Invoice to Market Participants. The group supports the Client Relations and Market Quality groups in resolving Market Participant issues, and correct implementation of approved disputed items. The group is also responsible for maintaining and operating a dedicated billing system for Market Participants, ensuring timely and accurate bills and payment processing. The group coordinates with Operations to obtain information necessary for production of correct Settlement Statements and supports the Transmission Access Charge Team and the Settlement Improvement Team. Settlements also handles all data requests, discovery requirements and FERC mandates, as they relate to Settlements information. Functions are in support of all three service categories.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Direct Assignment

CAS	CONG	ASREO
15%	7%	78%

1750 Market Operations Group

1751 Market Operations

Description:

The Market Operations group consists of Market Operations (1751), Manager of Markets (1752), and Manager of Applications (1753),Business Solutions (1755) and Market Integration (1757). The group is responsible for conducting Day-Ahead, Hour-Ahead and Real-Time Markets, including:

- Managing inter- and intra-zonal congestion and making changes (via Adjustment Bids);

- Re-dispatching schedules to resolve congestion at the lowest possible cost to customers;
- Managing the Ancillary Service and imbalance energy markets; and calculating the market clearing prices for spinning, non-spinning, replacement and regulation;
- Ensuring that the SCs posting of requirements regarding congestion, losses and Ancillary Services, etc., is reliable;
- Ensuring continuous interface between the ISO and the SCs that will allow SCs to make best use of transmission resources;
- Providing technical expertise on the design of the California market related to the bidding, scheduling, and settlement systems;
- Reviewing market design and prices on a daily basis;
- Providing engineering analysis to support SCs, settlements, and daily operations;
- Providing technical analysis, input, and review of vendor supplied design documents for compliance with ISO-defined requirements;
- Ensuring thorough testing of vendor supplied applications by creating test objectives, conditions, and scripts to be used for module;
- Designing and performing integration testing;
- Documenting and managing vendor-supplied scheduling application software changes in accordance with release management procedures;
- Conducting SC training and SC certification testing;
- Performing software life cycle activities in support of in-house scheduling software requirements necessary for market reliability and accuracy as detailed in the FERC filing and ISO protocols;
- Administering all interface applications between the SI database and all other subsystems;
- Providing system administration support for test and development environments; and
- Providing an advisory role to ISO Market Surveillance group on market power issues.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Allocated based on Supervised Departments' Costs

1752 Manager of Markets

Description:

Markets

Grid Resource Coordinators (GRCs) on this team are responsible for operating all CAISO markets for the Day Ahead, Hour Ahead and Real-time operations. GRC's on this team author, review and maintain all documented procedures and protocols in accordance with CAISO tariff and policies. This team is the primary interface with Operations.

Functions:

- Forecast CAISO Control Area Load requirements
- Determine in coordination with Operations' the hourly Ancillary Service requirements and procurement
- Facilitate Congestion Management markets

- Procure Real-Time Energy (BEEP) for CAISO system needs
- Log and procure Out-of-Market energy purchases
- Define and document Market Operations' procedures
- Coordinate and plan market service requirements with Operations'

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Direct Assignment

CAS	CONG	ASREO
20%	30%	50%

1753 Market Application & Testing

Description:

The Market Application and Testing group is responsible for conducting Day-Ahead, Hour-Ahead and Real-Time Markets, including:

- Managing inter- and intra-zonal congestion and making changes (via Adjustment Bids);
- Re-dispatching schedules to resolve congestion at the lowest possible cost to customers;
- Managing the Ancillary Service and imbalance energy markets; and calculating the market clearing prices for spinning, non-spinning, replacement and regulation;
- Ensuring that the SCs posting of requirements regarding congestion, losses and Ancillary Services, etc., is reliable;
- Ensuring continuous interface between the ISO and the SCs that will allow SCs to make best use of transmission resources;
- Providing technical expertise on the design of the California market related to the bidding, scheduling, and settlement systems;
- Reviewing market design and prices on a daily basis;
- Providing engineering analysis to support SCs, settlements, and daily operations;
- Providing technical analysis, input, and review of vendor supplied design documents for compliance with ISO-defined requirements;
- Ensuring thorough testing of vendor supplied applications by creating test objectives, conditions, and scripts to be used for module;
- Designing and performing integration testing;
- Documenting and managing vendor-supplied scheduling application software changes in accordance with release management procedures;
- Conducting SC training and SC certification testing;
- Performing software life cycle activities in support of in-house scheduling software requirements necessary for market reliability and accuracy as detailed in the FERC filing and ISO protocols;
- Administering all interface applications between the SI database and all other subsystems;

- Providing system administration support for test and development environments; and
- Providing an advisory role to ISO Market Surveillance group on market power issues.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Direct Assignment

CAS	CONG	ASREO
20%	30%	50%

1755 Market Support and Development

Description:

The Market Development and Support group has the overall responsibility of the SI application and all other Market Application (i.e. RMR scheduling, Operator Interface, Existing Transmission Contract application, and Interchange Transaction Scheduling) and Database development, support and security, for support of Day-Ahead, Hour-Ahead and the Real-Time Energy Markets. Also is responsible for overseeing and administering all interface applications between the SI operational databases and all other subsystems (e.g.,. EMS, SA, BBS, BITS, etc.). Provides system administration support for test and development environments. This position ensures facilitation of Markets through reliable Market applications and databases. All applications and interfaces must be designed and operated to increase the transparency and the efficiency of the Markets. Working with SCs is critical to the success of the ISO in providing needed interfaces to facilitate Markets.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Direct Assignment

CAS	CONG	ASREO
29.6%	10.4%	60%

1757 Market Integration

Description:

Engineers on this Market Integration team are experts in market engineering, information and scheduling design. They are responsible for verifying all business requirements are implemented as per design of Business Solutions, Market Engineering and in accordance with CAISO tariff. They provide the technical expertise for ensuring all Market Systems are integrated with legacy applications, processes and procedures. Engineers on this team also analyze the operational and financial impacts of market functionality and provide recommendations on new protocols or procedures based on the analysis.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Direct Assignment

CAS	CONG	ASREO
20%	30%	50%

1760 Market Quality Group

1756 Market Quality

Description:

Market Quality provides a central team in Market Services that ensures the quality of the "bid to book" market transaction data prior to the settlements process. Market Quality achieves this by identifying, monitoring, recommending, implementing and/or executing processes, procedures, system enhancements and controls in the ISO's business process flow to ensure accurate market transaction data flows throughout the ISO business processes. The Market Quality team works together with the ISO's Operations and Market Services business personnel and systems to accomplish this task. Since its inception in June 2001, Market Quality business processes have been implemented in the following areas:

- Technical dispute analysis and resolution
- Grid and Market Operations transactional review and correction
- Meter data and RMR transactional review and correction
- Master File Data Coordination

Specific tasks performed by the team include the following responsibilities:

- Develop and deploy Market Quality standards, procedures and controls for new and existing business processes including market, settlement, and metering
- Continually review current market, settlement and operational process to ensure efficiencies; identify potential problems and design quality assurance solutions for preventative and/or corrective actions.
- Identify software inefficiencies on business systems; work with business owners to enhance software efficiency and design solutions for monitoring and quality control.
- Identify policy issues, conduct impact assessment and work with Client Relations, ISO business system owners and policy office to get resolution.

- Review new ISO tariff and contract language to ensure intent of agreements is being met by software, manual process and floor procedures; ensure controls and processes are in place to avoid relevant client disputes.
- monitor disputes, resolve discrepancies and determine, develop and deploy necessary changes to business process, procedures and controls to resolve issues.
- Participate in Market and Settlement design teams in developing new market functionality that ensures the quality of market and settlement information and transactions throughout the business process.
- Calculate billable quantities and business transactions when necessary to ensure valid results and quality settlements data.
- Participate in Market and Settlement implementation, testing and Market Simulation of new Market functionality from business quality perspective as well as a customer perspective. Also, test potential problem scenarios to identify short and long term solutions.
- Ensure that Grid and Market Operations transactional processes and procedures adhere to the Market Quality standards, controls and procedures. Identify areas where additional training is required.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Direct Assignment

CAS	CONG	ASREO
33%	33%	34%

1800 VP Corporate and Strategic Devt

1811 VP Corporate and Strategic Devt. - General

Description:

This cost center contains the costs of the VP Corporate and Strategic Development. The VP Corporate and Strategic Development oversees the Human Resources Department, the Communications Department, and the Policy Office (the Policy Office is comprised of Strategic Development, Regulatory Policy and the Office of Strategic Support - OSS).

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Allocated based on Supervised Departments' Costs

1821 Communications

Description:

The Communications group is responsible for the Corporate Communications functions of the ISO, including internal and external communications and media relations:

- Serve as Public Information Coordinators during all electrical emergencies; hold news conferences and coordinate print, radio and TV news coverage from ISO control room, playing an important role in maintaining reliability of the Grid by promoting conservation.
- Develop and distribute news releases, advisories and media kits, and serve as media spokespersons for the ISO.
- Plan and execute corporate special events;
- Maintain ISO Speakers Bureau and Speech Bank;
- Review and analyze expenditures, operations, and workflow of the unit to maximize operational efficiency of the organization;
- Coordinate development of business plans, processes, and procedures to manage internal and external communications.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Allocated based on Direct Operating costs

1841 Human Resources

Description:

The Human Resources Department is responsible for health and welfare benefits design and administration, compensation design and administration, payroll, employee relations, training, recruitment and employee retention, oversight of the staff augmentation function through external contractors, and employee records management. Human Resources is an overhead department; Human Resources activities, tasks, and projects serve employees throughout the organization.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Allocated based on Labor Dollar Ratios

1830 Strategic Development

1831 Strategic Development

Description:

See Regulatory Policy Group department description stated below.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Allocated based on Labor Dollar Ratios

1860 Regulatory Policy Group

1851 Office of Strategic Services

Description:

See Regulatory Policy Group description stated below.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Allocated based on Direct Operating costs

1861 Regulatory Policy

Description:

The Strategic Development, Regulatory Policy and Office of Strategic Services areas collectively form the Policy Office (PO). The PO is the focal point for articulating the long-term strategy of the CAISO and leading the development of CAISO policy positions that are consistent with the business and regulatory strategy. The PO should provide considered, steady policy guidance for daily operations as well as a foundation for responding to unexpected events and developments. In addition to leading the development of policy positions, the office will be active in ensuring that these positions are consistently communicated internally and externally in all forums (across CAISO departments, Board of Governors, regulatory and legislative environs, and engineering venues such as the WSCC, stakeholder forums).

The Policy Office will often direct policy development work but, other departments must do much of the work. The PO is not a self-contained work unit - policy must be developed from a broad array of perspectives from within and outside of the company. "Directing work" means framing the policy questions and identifying the information/analyses necessary to properly answer the questions, managing the work process necessary to develop information, final integration of input, and written articulation of the policy. The PO should facilitate cross-departmental collaboration and initiate interaction with other agencies.

I. Mission Statement

To articulate Strategic Objectives and ensure interdepartmental cooperation in the development and implementation of corporate and regulatory policies and plans in a way that guides performance of the CAISO's Core Functions.

II. General Roles and Responsibilities

A. Develop long-term Strategic Objectives and plans, policies, and corporate goals.
B. Oversee program, project, and process management for the CAISO.
C. Oversee the alignment of daily operations, regulatory filings and projects with policies and Strategic Objectives.
D. Maintain active dialogue with key policy makers, regulatory agencies, regional entities and other ISOs.
E. Serve as Liaison for Board of Governors by, working with the Corporate Secretary, managing the Board communications and administration;

III. Specific Activities and Tasks

Articulate Strategic Objectives and Plans

1. Define corporate vision for long term, taking regulatory, technological, and political considerations into account;
2. Articulate Strategic Objectives and envisioned core functions;
3. Define corporate goals to reflect that vision;
4. Oversee the development and implementation of short- and long-term strategic plans to achieve objectives (includes definition of corporate goals); and
5. Maintain active dialogue with RTOs and regional entities.

Develop policies consistent with strategic objectives:

1. Identify and prioritize missing or erroneous policies that are not consistent with strategic objectives, based on business impact;
2. Facilitate development and implementation of new and/or revised policies, practices and processes that support objectives;
3. monitor and assess results of implemented policies and make necessary adjustments and changes.

Guide CAISO development activities within regulatory context to ensure that the corporation's long-term policy and strategic objectives are aligned with regulatory policy:

1. Maintain active dialogue with regulatory agencies and key policy makers;
2. Maintain awareness of all regulatory communications in progress;
3. Review and interpret regulatory directives and determine potential impacts on current ISO operations and strategic objectives/plans; and
4. Reconcile directives of various regulatory entities;

Anticipate and facilitate resolution of challenges facing the CAISO:

1. Maintain awareness of all work efforts planned and underway at the ISO via project communication materials, meeting minutes, email correspondence, telephone communications, etc.; and
2. Provide insight to others related to California issues and needs.

Guide CAISO market design changes to ensure compatibility with current ISO market design features and strategic objectives/plans:

1. Ensure interdepartmental cooperation in developing reforms and design changes to CAISO markets;
2. Assess proposed market changes for consistency with CAISO policies and Strategic Objectives and compatibility with existing market design features.
3. Compile information on and assess the design and operation of other restructured electricity markets; and
4. Maintain active dialogue with other ISOs and external energy market experts.

Develop and oversee program, project, and process management to ensure organizational effectiveness:

1. Develop and Manage Corporate Information Flow;
2. Develop and manage corporate reference repository for such items as Strategic Objectives and plans, CAISO policies, electric market design information, CAISO history, and other documents (e.g. FACT Sheets, PIR, Executive Summaries, etc);
3. Oversee Project Steering Committee and provide Enterprise resource administration (assignment);

4. Develop and maintain CAISO project management methodology and provide project and process management coaching;
5. Provide staffing for and coaching to work efforts, as required;
6. Review and/or oversee creation of major written documents for release outside of CAISO (e.g. report executive summaries, FACT Sheets, and letters); and
7. Budget development and administration.
8. monitor and assess management and staff to ensure effectiveness and recommend organizational adjustments;

Manage, together with the Corporate Secretary, Board of Governor communications and administration.

Cost Allocation Methodology and Percentages:

The costs of this department are allocated to the ISO's three unbundled service categories based on the approach noted here. The results of the allocation process are shown in full on the ISO's Cost Allocation Matrix. Results are shown here only for departments which directly assign their costs to the three categories.

Allocated based on Direct Operating costs.

V. OPERATING RESERVE CALCULATION

The 2002 revenue requirement also includes a provision related to the Operating Reserve.

From the inception of the ISO's operations, funds collected above and beyond those needed to cover budgeted operating expenses have been used to fund the Operating Reserve. These funds are collected every year at the rate of 25% of budgeted debt service (consisting of principal and interest payments.) The operating reserve is targeted to build to a level equal to 15% of overall budgeted operating expenses (excluding debt service).

The Operating Reserve is calculated separately by unbundled service category. At December 31, 2001, it is anticipated that for Control Area Services and Congestion Management, a reserve deficiency of $5 millon and $2 million will exist. For ASREO Operations, a revenue credit of $2 million will be available. The amount of the credit or deficiency depends on (1) actual costs incurred by each service category during the year (2) revenue under or over-collections for each service category during the year and (3) other revenues such as ISO fines, (4) use of the operating reserve to fund capital expenditures in 2001, and (5) reserve balances for each service at the beginning of the current year.

Calculation of the 2001 Operating Reserve balances, and accordingly, the deficiency or revenue credit available for each service follows.

California ISO

Calculation of Available Revenue Credit for 2002

$ in '000

		Budget				Actual								
		CAS	CONG	AS&RT	Total	CAS	CONG	AS&RT	Total	Allocation	CAS	CONG	AS&RT	Total
1	**Beginning Reserve Balance, 1/1/2001**	$ 15,840	$ 2,970	$ 14,190	$ 33,000	$ 9,806	$ 1,839	$ 8,784	$ 20,429	2001 Section 35 Filing, Distribution of 2001 revenue credit (48%, 9%, 43%)	48.0%	9.0%	43.0%	100.0%
2	**Calculation of Contribution to Reserve from Operations**													
3	Revenue:													
4	GMC Rates 2001 Calendar Year Revenue	108,518	19,519	97,377	225,414	100,095	16,771	101,226	218,091	Actual collections and forecast for remainder of 2001	45.9%	7.7%	46.4%	100.0%
5	Other	1,702	117	583	2,402	2,240	199	1,201	3,640	Security coordinator fees assigned to CAS, remainder spread proportionately	61.5%	5.5%	33.0%	100.0%
6	Expenses:													
7	O&M	(88,055)	(12,700)	(71,043)	(171,798)	(83,956)	(12,109)	(67,736)	(163,800)	Variance spread proportionately. Allocation based on filed 2001 O&M allocations by category.	51.3%	7.4%	41.4%	100.0%
8	Debt Service	(20,485)	(6,062)	(23,966)	(50,513)	(18,619)	(5,509)	(21,783)	(45,911)	Variance spread proportionately Allocation based on filed 2001 allocation factors.	40.6%	12.0%	47.4%	100.0%
9	Contribution to Operating Reserve (Sum lines 2 through 8)	1,680	874	2,951	5,505	(240)	(648)	12,908	12,020					
10	**Other Reserve Uses**													
11	Use of Reserve for CapEx					(7,248)	(513)	(5,067)	(12,829)	2001 Section 35 Filing, Allocation of Proposed 2001 Debt Service, excluding CMR. $12,829 is shortfall of funding available for CAPEX in 2001 due to inability to issue bonds.	56.5%	4.0%	39.5%	100.0%
13	Generator Fines/Penalties					2,400	450	2,150	5,000	Allocated based on overall Rev Req	48.0%	9.0%	43.0%	100.0%
14	**Net Increase in Operating Reserve (Sum Lines 9-13)**	1,680	874	2,951	5,505	(5,088)	(712)	9,991	4,191					
19	**Ending Reserve Balance (Line 1 plus Line 14)**	17,520	3,844	17,141	38,505	4,718	1,127	18,775	24,620					
20	Less: Reserve Requirement (15% of 2002 Budget, Line 20)	14,962	2,848	8,418	26,228	14,962	2,848	8,418	26,228					
21	*FY2002 Operating Budget (net)*	*99,747*	*18,985*	*56,123*	*174,855*	*99,747*	*18,985*	*56,123*	*174,855*	Net O&M Budget (exclusive of interest earnings, WSCC collection, and other revenues)	57.0%	10.9%	32.1%	100.0%
22	Equals: Revenue Credit Available (Line 19 less Line 20)	2,558	997	8,722	12,277	(10,244)	(1,721)	10,357	(1,608)					

VI. CAPITAL BUDGET PROJECT ALLOCATIONS

Capital costs are grouped in the Cost Allocation Matrix according to the seven categories shown below:

1. Infrastructure (Direct Assignment): Items include the EMS , Scheduling Infrastructure (SI), Balance of Business Systems (BBS), MDAS (Meter Data Acquisition System), RMR (Reliability Must Run), Market Analysis software, User groups, startup costs, and working capital. A brief description of the systems are as follows:

Scheduling Infrastructure (SI): SI provides the information management services needed by the scheduling system. It includes the hardware, software and databases that allow the ISO to collect, validate, store, transfer, archive and audit the energy and ancillary services schedules nominated or accepted by the ISO from SC's.

Sheduling Applications (SA): SA is the applications used by the ISO's scheduling personnel to assess the state of the transmission system, to evaluate the Preferred Schedules submitted by SCs and to establish committed operating schedules. These applications include congestion and transmission management software necessary to assist in congestion management and to determine the transmission price associated with the use of congested inter-zonal transmission paths.

Balance of Business Systems (BBS): BBS refers to the computer and other systems to support the following business processes: 1) Settlements to calculate payments owed between the ISO and SCs for imbalances, congestion and ancillary services; 2) Billing and Credit to support accounting, invoicing, payment and collection of these payments; 3) General accounting systems and administrative functions associated with daily ISO operations.

Meter Data Acquisition System (MDAS) – MDAS, also called Field Data Acquisition (FDA), is used to collect metering data from all generators and others connected directly to the transmission lines, tie points and zonal interface points. This refers to the metering standards, data servers, interface equipment, databases and software that allow the ISO to collect that data.

2. Infrastructure (Allocated Items): This category includes items which are generally used by all ISO functions, and are allocated based on the results of the total operating cost allocation, labor dollar ratios, or specific Department results. Examples include Issue management system (Remedy), Security System (CUDA), Corporate Accounting System (Oracle), HR System, Imperitiv, etc.

3. Startup (Allocated Items): These infrastructure items are used by all ISO functions, and are allocated based on either the results of the operating cost allocation, or total infrastructure costs.

4. Other Software and Enhancements (Direct Assignment): Items included in this category include EMS/MDAS and the Participating Load program, SA/SI/BBS, and are allocated based on direct assignment.

5. 2000 and 2001 Capital Debt Service: Items in this category include: SA/SI/BBS, EMS/CIM/FDA, EMS, SA/SI/BBS, facilities, furniture, office equipment, land, and building costs. They are allocated based on direct assignment, operating costs and labor dollar ratios.

6. Budgeted 2002 Capital Debt Service: The debt service costs related to the planned 2002 bond issuance are allocated to the three unbundled service categories based on the results of the allocation of total bond spending to date. In the future, these costs will be allocated to the appropriate category, as funds are spent. Budgeted 2002 capital items include operating systems, facilities, and corporate systems.

7. 2002 Cash Funded Capital Expenditures: As with the 2002 debt service, the cash funded capital expenditures are allocated to the three unbundled service categories based on the results of the allocation of total bond spending to date, and include the same items as above: operating systems, facilities, and corporate systems.

The support for the cost allocation related to the projects in the proposed 2002 capital budget follows (support for items 6 and 7 above). Values of individual capital projects have not been provided to prevent such data from being used in project bidding.

2002 Capital Budget Proposed Projects

Funding Method 2002 Bond Issuance Funded

Category 2002 Operating Systems

Project Name Systems redesign planning

Reference Number 21 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
25%	25%	50%	0%	100%

Cost Allocation / Assignment Methodology

Direct Assignment

Overview

To be used for the planning and design of either changes to the current ISO Market Structure or for changes to existing systems for a more open architecture.

Impacts if Project is Not Implemented

The current systems would remain the same and the cost for changes would continue to increase.

Impacted Systems	*Allocation Pct.*
Various	100%
	100%

Expenditure Justification

System redesign

2002 Capital Budget Proposed Projects

Funding Method 2002 Bond Issuance Funded

Category 2002 Operating Systems

Project Name Load Following Service/ 10-min

Reference Number 36 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
50%	0%	50%	0%	100%

Cost Allocation / Assignment Methodology

Direct Assignment

Overview

Allows for specific Generating Units to receive signals to inc or dec based on the ISO system Load, with potential
savings due to a decrease in regulation procurement needed to remain compliant with NERC CPS2 criteria.

Impacts if Project is Not Implemented

Impacted Systems	*Allocation Pct.*
SA/SI	100%
	100%

Expenditure Justification

Grid reliability

System redesign

Market savings

2002 Capital Budget Proposed Projects

Funding Method 2002 Bond Issuance Funded

Category 2002 Operating Systems

Project Name Enhancement of Settlement Rerun Tools

Reference Number 43 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
0%	0%	100%	0%	100%

Cost Allocation / Assignment Methodology

Direct Assignment

Overview

There has been a huge increase in settlement reruns due to retroactive settlement calculations, FERC mandates and previous settlement errors. ISO has a rerun tool that was designed for occasional use. It requires significant operator intervention. This project aims at improving the settlement rerun tools in the following areas:

- Achieve a higher degree of automation and minimize operator intervention.
- Support rerun using results from a previous rerun.
- Provide a robust archive mechanism for rerun data.
- Maintain a record of all reruns and data changes made .
- Provide a central data repository for all rerun data.

Impacts if Project is Not Implemented

Without the improvements, ISO will face increasing difficulty in maintaining its rerun data. In the extreme cases, ISO may lose track of previous rerun activities, causing errors in subsequent reruns.

Impacted Systems	*Allocation Pct.*
Settlement	100%
	100%

Expenditure Justification

Internal productivity, cost savings, avoided costs

System redesign

Market information/accuracy/analysis

2002 Capital Budget Proposed Projects

Funding Method 2002 Bond Issuance Funded

Category 2002 Operating Systems

Project Name Migration of Settlement Client Application to Web Based Platform

Reference Number 42 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
0%	0%	100%	0%	100%

Cost Allocation / Assignment Methodology

Direct Assignment

Overview

The Settlement Client Application is used by ISO staff to view and validate settlement data. It is built on the PowerBuilder (Ver 5) platform and utilizes a proprietary software library. This platform is obsolete and maintenance/enhancement has become very costly and ineffective. The goal of this project is to rebuild the application on an open and standard platform to minimize long term maintenance cost and take advantage of potential improvements from a newer technology platform.

Impacts if Project is Not Implemented

Without the migration, ISO will continue to maintain the Settlement Client Application on the existing platform. This will result in a much higher maintenance cost. Besides, due to the limited knowledge pool, the existing platform may not provide the functionality desired by the users.

Impacted Systems	*Allocation Pct.*
Settlement	100%
	100%

Expenditure Justification

Internal productivity, cost savings, avoided costs

CAISO infrastructure requirement

2002 Capital Budget Proposed Projects

Funding Method 2002 Bond Issuance Funded

Category 2002 Operating Systems

Project Name Integration of Settlement Workaround Tools

Reference Number 41 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
0%	0%	100%	0%	100%

Cost Allocation / Assignment Methodology

Direct Assignment

Overview

The goal of this project is to integrate the existing Settlement Workaround tools into the Settlement System, eliminating the manual work and associated human errors. Many of these tools were designed to handle special settlement exemptions and corresponding allocations. These tools require daily manual execution. There is no central storage for the data created by these tools. It makes it difficult to audit/trace the charges generated by these tools. Such shortcomings will be overcome when these tools are incorporated as an integral part of the Settlement System.

Impacts if Project is Not Implemented

Without the integration of these manual tools, ISO will continue to process certain settlement charges manually, with a higher operation cost and higher probability for errors.

Impacted Systems	*Allocation Pct.*
Settlement	100%
	100%

Expenditure Justification

Internal productivity, cost savings, avoided costs

Market information/accuracy/analysis

2002 Capital Budget Proposed Projects

Funding Method 2002 Bond Issuance Funded

Category 2002 Operating Systems

Project Name Control Area / BITS

Reference Number 40 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
100%	0%	0%	0%	100%

Cost Allocation / Assignment Methodology

Direct Assignment

Overview

This project would provide Control Area check out utilizing similar technology to the ADS dispatching System. This system would provide a GRID interface similar to the Transmission Scheduling Interface in BITS, allowing only Control Areas to see permitted Transmission MW by Tiepoint. This system would integrate with BITS to allow for Check out during Real-Time.

Impacts if Project is Not Implemented

If the project is not implemented, then ISO will still continue checking out via telephone.

Impacted Systems	*Allocation Pct.*
Scheduling Application	70%
Scheduling Infrastructure	30%
	100%

Expenditure Justification

Grid reliability

Market savings

Internal productivity, cost savings, avoided costs

2002 Capital Budget Proposed Projects

Funding Method 2002 Bond Issuance Funded

Category 2002 Operating Systems

Project Name Price Response to Dynamic Demand

Reference Number 39 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
50%	0%	50%	0%	100%

Cost Allocation / Assignment Methodology

Direct Assignment

Overview

This project will allow for the submission of Load that is sensitive to price signals in real-time, and will be responsive based on those price signals. This may improve the ISO real-time energy volume by allowing Loads to participate in the ISO 10-minute energy market.

Impacts if Project is Not Implemented

Impacted Systems	*Allocation Pct.*
SI	100%
	100%

Expenditure Justification

Grid reliability

Continuation of started project

2002 Capital Budget Proposed Projects

Funding Method 2002 Bond Issuance Funded

Category 2002 Operating Systems

Project Name Firmness of import lost in inter SC energy trades; SC-SC energy trades result in loss of reserves

Reference Number 35 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
25%	50%	25%	0%	100%

Cost Allocation / Assignment Methodology

Direct Assignment

Overview

This project establishes the firmness of an SC importing energy on an inter-tie, even if the SC were to then trade the ancillary service obligation to another SC. Project designed to reduce the loss of reserves associated with inter-SC trades

Impacts if Project is Not Implemented

Impacted Systems	*Allocation Pct.*
SA/SI	100%
	100%

Expenditure Justification

Grid reliability

2002 Capital Budget Proposed Projects

Funding Method 2002 Bond Issuance Funded

Category 2002 Operating Systems

Project Name Enhance validation rules - Contracts Rules (ETC) - (RMR) etc

Reference Number 34 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
50%	0%	50%	0%	100%

Cost Allocation / Assignment Methodology

Direct Assignment

Overview

Migration of the ETC calculator to a Rules base engine to allow for accurate calculations of Existing Transmission
Contract rights and capacities on existing Transmission paths. This would also include the integration of the
Calculator with the Interchange Transmission Scheduling system (BITS). This would allow schedule to quickly
identify the affects of curtailments on contract rights for schedule Paths.

Impacts if Project is Not Implemented

The current system does not provide the ability to identify the relationship between Existing Contract and manage
the affect of changes to associated relationships. Scheduling would not be able to identify affects of curtailment
on contract paths.

Impacted Systems	*Allocation Pct.*
Scheduling Application	45%
SI/BBS	55%
	100%

Expenditure Justification

Grid reliability

Market savings

Market information/accuracy/analysis

2002 Capital Budget Proposed Projects

Funding Method 2002 Bond Issuance Funded

Category 2002 Operating Systems

Project Name Calculation of Ex-post GMMs

Reference Number 33 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
50%	0%	50%	0%	100%

Cost Allocation / Assignment Methodology

Direct Assignment

Overview

This project will provide for the development of GMM's based on actual flows rather than scheduled flows as determined by the Hour Ahead market. This allows for a more accurate development of loss factors which are used in settlements calculations.

Impacts if Project is Not Implemented

Impacted Systems	*Allocation Pct.*
SI/SA/BBS	100%
	100%

Expenditure Justification

Internal productivity, cost savings, avoided costs

Grid reliability

Market information/accuracy/analysis

2002 Capital Budget Proposed Projects

Funding Method 2002 Bond Issuance Funded

Category 2002 Operating Systems

Project Name E-Tag

Reference Number 32 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
100%	0%	0%	0%	100%

Cost Allocation / Assignment Methodology

Operating Costs

Overview

For enhancements to Electronic Tagging (E-tag) which is the NERC Policy 3 mandated communication protocol for the creation, distribution and approval of interchange transaction requests. The California ISO, as a member of the WSCC, implemented an ETAG system for prescheduling in March of 2000 and is preparing it for hourly real-time tagging in October of 2001. All WSCC members will be required to implement a next generation (1.7) compliant system for the western interconnection by November 13, 2001. Although the current system (1.6) meets the minimum requirements of NERC Policy 3, the current system configuration is vulnerable to:

? Slow workstation response which hinders the processing of tags,
? Loss of ETAG functionality and market disruption due to single points of failure, and;
? Security issues associated with the use of the NT server.

Impacts if Project is Not Implemented

Unable to meet NERC Policy 3 mandate.

Impacted Systems	*Allocation Pct.*
E-Tag	100%
	100%

Expenditure Justification

Continuation of started project

2002 Capital Budget Proposed Projects

Funding Method 2002 Bond Issuance Funded

Category 2002 Furniture/Facilities/Office Equipment

Project Name Leaseholds

Reference Number 13 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
0%	0%	0%	100%	100%

Cost Allocation / Assignment Methodology

Total Salaries

Overview

Provide for various leasehold improvement projects, as needed, to support ISO staff residing in our Folsom and Alhambra locations. The costs for these individual improvements is generally too small to merit preparation of individual requests.

Impacts if Project is Not Implemented

Operational inefficiency and/ or reliability will be impaired if needed improvements are not made to the physical facility as needed.

Impacted Systems	*Allocation Pct.*
Facilities	100%
	100%

Expenditure Justification

CAISO infrastructure requirement

Internal productivity, cost savings, avoided costs

2002 Capital Budget Proposed Projects

Funding Method 2002 Bond Issuance Funded

Category 2002 Furniture/Facilities/Office Equipment

Project Name Office Equipment

Reference Number 12 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
0%	0%	0%	100%	100%

Cost Allocation / Assignment Methodology

Total Salaries

Overview

Provide additional equipment to assure an efficient work environment at the ISO's Folsom and Alhambra locations.

The amount of the budget and the cost of the individual items are so small that the process for preparing a separate request for each individual need as it arises is not merited.

Impacts if Project is Not Implemented

Provides esential facilities equipment for reliable operations at all ISO sites, as the need arises. Without such equipment, reliability would be compromised.

Impacted Systems	*Allocation Pct.*
Facilities	100%
	100%

Expenditure Justification

CAISO infrastructure requirement

2002 Capital Budget Proposed Projects

Funding Method 2002 Bond Issuance Funded

Category 2002 Corporate Systems

Project Name Brix Service Level Agreement monitoring Tools

Reference Number 113 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
0%	0%	0%	100%	100%

Cost Allocation / Assignment Methodology

Operating Costs

Overview

As the ISO prepares the technical requirements for its Next Generation Network, it is necessary to obtain an
accurate representation of existing network performance to use as a standard for future needs.

Impacts if Project is Not Implemented

The ability to create viable Service Level Agreements for any future Wide Area Networking contract will be limited

Impacted Systems	*Allocation Pct.*
Commumication Network	100%
	100%

Expenditure Justification

Internal productivity, cost savings, avoided costs

Grid reliability

2002 Capital Budget Proposed Projects

Funding Method 2002 Bond Issuance Funded

Category 2002 Corporate Systems

Project Name Voice-over-IP "pilot"

Reference Number 114 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
0%	0%	0%	100%	100%

Cost Allocation / Assignment Methodology

Operating Costs

Overview

The ISO is currently looking to expand its office space into another portion of 101 Blue Ravine in Folsom. Network Engineering acknowledges this addition as an opportunity to explore the possibility of using Voice over IP technology in the future. Using VoIP could produce a return on the initial investment by reducing the amount of new cable infrastructure that would need to be installed in a new building. A VoIP pilot would also allow Network Engineering to evaluate the viability of the technology for the future ISO campus. There is also a possibility of leveraging the potential of a large VoIP installation in the future against vendors, who may be willing to help procure the pilot equipment a substantially reduced cost.

Impacts if Project is Not Implemented

The ISO will not be able to make an knowledgeable effort to converge voice and data services to reduce cost.

Impacted Systems	*Allocation Pct.*
Commumication Network	100%
	100%

Expenditure Justification

CAISO infrastructure requirement

Internal productivity, cost savings, avoided costs

2002 Capital Budget Proposed Projects

Funding Method 2002 Bond Issuance Funded

Category 2002 Corporate Systems

Project Name Enterprise System monitoring - Tivoli Licenses

Reference Number 106 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
0%	0%	0%	100%	100%

Cost Allocation / Assignment Methodology

Operating Costs

Overview

Tivoli License are required when new ISO systems are introduced. System monitoring provides an efficient,
reliable and proactive tool to ensure mission critical systems are available , and provides improved service levels
to end users supporting and managing the market operations and all other system currently being used by the ISO.
Additional licenses are required to keep us in compliance with company software user requirements..

Impacts if Project is Not Implemented

Impacted Systems	*Allocation Pct.*
Tivoli	100%
	100%

Expenditure Justification

CAISO infrastructure requirement

Internal productivity, cost savings, avoided costs

Market savings

2002 Capital Budget Proposed Projects

Funding Method 2002 Bond Issuance Funded

Category 2002 Corporate Systems

Project Name Software Purchased - Non Project

Reference Number 124 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
0%	0%	0%	100%	100%

Cost Allocation / Assignment Methodology

Operating Costs

Overview

Software needed for systems that are not covered under other projects. Also accommodates needed software purchases for all Non- project related items. All requests must be through signed purchase requests before being charged to this project. Eliminates small Capital Requests since they can be handled under this project.

Impacts if Project is Not Implemented

Software purchases will be required to complete the full capital project request process and forms for each item.

Impacted Systems	*Allocation Pct.*
Various	100%
	100%

Expenditure Justification

CAISO infrastructure requirement

2002 Capital Budget Proposed Projects

Funding Method 2002 Bond Issuance Funded

Category 2002 Corporate Systems

Project Name Data Warehouse Phase III

Reference Number 71 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
0%	0%	0%	100%	100%

Cost Allocation / Assignment Methodology

Operating Costs

Overview

In 2001, the framework and architecture of the Data Warehouse (DW) as a single repository became a reality.
Production hardware platforms were purchased and implemented in Folsom and Alhambra, standardized
mechanisms were built to extract data from the business transaction systems nightly, a handful of data marts
were built from the DW to support specific business applications and the standard query and reporting software
will be implemented by year end.

In 2002, use of the DW is expected to explode. The foundation layer of data, the Operational Data Store (ODS) will
be expanded to contain all data from all transaction systems since start of business, providing internal and
external users (where appropriate) the capability to combine and integrate data from nearly any source for
reporting and analysis. Existing separate data repositories will be converted to the DW, creating a single source
for information across the enterprise. This project provides the consulting, software and training resources to
implement this expansion.

Impacts if Project is Not Implemented

Continued silos of information pulled from different sources, resulting in conflicting information being provided to
regulators, courts and participants in litigation.

Impacted Systems	*Allocation Pct.*
DW	100%
	100%

Expenditure Justification

Internal productivity, cost savings, avoided costs

Regulatory requirement

Market participant request

2002 Capital Budget Proposed Projects

Funding Method 2002 Bond Issuance Funded

Category 2002 Corporate Systems

Project Name Computer Equipment Purchases

Reference Number 123 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
0%	0%	0%	100%	100%

Cost Allocation / Assignment Methodology

Operating Costs

Overview

Hardware or equipment needed for owned systems that are not covered under other projects. Also accommodates needed equipment purchases for all Non- project related items. All requests must be through signed purchase requests before being charged to this project. Eliminates small Capital Requests since they can be handled under this project.

Impacts if Project is Not Implemented

Hardware and equipment purchases will be required to complete the full capital project request process and forms for each item.

Impacted Systems	*Allocation Pct.*
Computer Equipment	100%
	100%

Expenditure Justification

CAISO infrastructure requirement

2002 Capital Budget Proposed Projects

Funding Method 2002 Bond Issuance Funded

Category 2002 Other Systems

Project Name Server Rack Project

Reference Number 14 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
45%	10%	45%	0%	100%

Cost Allocation / Assignment Methodology

Direct Assignment

Overview

To meet infrastructure build out for raised floor purchase of computer equipment racks and mount for system
equipment

Impacts if Project is Not Implemented

Approved projects will not be implemented or delayed

Impacted Systems	*Allocation Pct.*
Computer Equipment	100%
	100%

Expenditure Justification

CAISO infrastructure requirement

2002 Capital Budget Proposed Projects

Funding Method 2002 Bond Issuance Funded

Category 2002 Other Systems

Project Name PSYMETRIX - Grid Dynamics monitoring

Reference Number 102 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
100%	0%	0%	0%	100%

Cost Allocation / Assignment Methodology

Direct Assignment

Overview

Installation and evaluation of new technology for continuous measurement of frequency, amplitude and damping modes which occur on the power grid in the 0-4Hz band. Objective is improve power system reliability by monitoring transmission system stability and power system stabilizer turning. Measurement devices have been installed at the Vincent Substation and the Los Banos Substation on critical 500 Kv transmission lines. Subsecond data on the oscillations in the power flows are being sent to Folsom for monitoring and analysis. Results to date indicate some damping issues and a need for further analysis of the PSS devices at major power plants.

Impacts if Project is Not Implemented

Project has already been initiated and work is in progress. Preliminary results show unexplained periods of poor damping which need further analysis.

Impacted Systems	*Allocation Pct.*
Psymetrix	100%
	100%

Expenditure Justification

Grid reliability

Continuation of started project

2002 Capital Budget Proposed Projects

Funding Method 2002 Bond Issuance Funded

Category 2002 Other Systems

Project Name Market Analysis System Enhancements

Reference Number 94 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
10%	10%	80%	0%	100%

Cost Allocation / Assignment Methodology

Direct Assignment

Overview

The Department of Market Analysis is working to improve our ability to quickly and effectively respond to market developments and requests for special analysis. The MMS enhancements are to allow improved monitoring and analysis of energy transactions and scheduling, export/import patterns by individual market participants, increased out-of-market purchases and involvement in regional energy markets by the ISO. The project represents enhancements that are not included in the support by IT.

Impacts if Project is Not Implemented

Without the MMS system enhancements DMA would not be able to effectively perform core functions of monitoring the ISO markets and responding to outside regulators, government entities, and ISO requirements in a timely manner.

Impacted Systems	*Allocation Pct.*
MMS	100%
	100%

Expenditure Justification

Market information/accuracy/analysis

Regulatory requirement

Internal productivity, cost savings, avoided costs

2002 Capital Budget Proposed Projects

Funding Method 2002 Bond Issuance Funded

Category 2002 Other Systems

Project Name All system ODS Implementation

Reference Number 72 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
20%	10%	70%	0%	100%

Cost Allocation / Assignment Methodology

Direct Assignment

Overview

* Provide a single Operational Data Store.
* Provide relief to production system as a repository of post operational day information.
* Provide an Audit trail of any adjustments to data.
* Allow open access of data to all authorized parties.
* Migrate settlement pushes from current operations systems to the ODS, to capture adjustment to data.
* Migrate Post Operational Day pushes from the operational systems to OASIS, to capture adjustment to data.
* Provide Interfaces to allow authorized users to make adjustment of data, and have an Audit trail created.

Impacts if Project is Not Implemented

Data analysis and extraction would be limited to avoid severely impacting Control system. Audit capabilities would be limited or non existing for data adjustments.

Impacted Systems	*Allocation Pct.*
Scheduling Application	5%
SI/BBS	80%
DW	15%
	100%

Expenditure Justification

Market information/accuracy/analysis

System redesign

Market savings

Continuation of started project

Regulatory requirement

2002 Capital Budget Proposed Projects

Funding Method 2002 Bond Issuance Funded

Category 2002 Other Systems

Project Name CERTS Technology Project

Reference Number 103 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
90%	0%	10%	0%	100%

Cost Allocation / Assignment Methodology

Direct Assignment

Overview

The Consortium for Electric Reliability Technology Solutions (CERTS) was created to promote research and development targeted at improving grid reliability. Their objective is to develop new tools, such as computer models, and energy-related environmental technology enhancements that will benefit the ISO and the energy users in California. Technology target areas include better Load forecasting and other reliability planning and operational tools, advanced Generation, renewable energy systems, and end use efficiency. Current project tasks include the installation of a Phasor Measurement system to monitor critical phase angles in the California and WSCC Power Grid; installation of a new Voltage/VAR monitoring tool for real-time operations; delivery of a neural network Load forecasting tool; and delivery of a power system simulator for dispatcher training.

Impacts if Project is Not Implemented

The State California Energy Commission is the major funding for this work. They have committed approximately $3 million for the initial year's work with potential funding of $7 million over a 3 year period. The ISO's commitment is to provide data, personnel resources and computer hardware & software as needed for the installation and testing of the new tools at the ISO. The $50,000 in funding for 2002 basically covers the cost of anticipated workstations and servers that will be needed to meet our commitment. Lack of ISO funding would put the entire project at risk and we would lose a major opportunity to improve the tools needed for system

reliability

Impacted Systems	*Allocation Pct.*
System	80%
EMS	20%
	100%

Expenditure Justification

Grid reliability

Continuation of started project

2002 Capital Budget Proposed Projects

Funding Method 2002 Bond Issuance Funded

Category 2003 Other Systems

Project Name Compliance Programs - Priority 2

Reference Number 83 ***Priority*** 2 Very Important

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
70%	0%	30%	0%	100%

Cost Allocation / Assignment Methodology

Direct Assignment

Overview

These priority 2 programs automate processes that currently exist in legacy systems.

Impacts if Project is Not Implemented

Without automation, staff will rapidly become overburdened and additional staff will be necessary to implement
new procedures.

Impacted Systems	*Allocation Pct.*
CAP	52%
DW	48%
	100%

Expenditure Justification

Regulatory requirement

Grid reliability

Continuation of started project

2002 Capital Budget Proposed Projects

Funding Method 2002 Bond Issuance Funded

Category 2003 Other Systems

Project Name Audit Programs

Reference Number 84 ***Priority*** 2 Very Important

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
30%	0%	70%	0%	100%

Cost Allocation / Assignment Methodology

Direct Assignment

Overview

This program allows for the automation of UFE calculation and other audit systems.

Impacts if Project is Not Implemented

Improper settlements charges in the form of over or under reporting resulting in inaccurate distribution of monies.

Impacted Systems	*Allocation Pct.*
CAP	100%
	100%

Expenditure Justification

Internal productivity, cost savings, avoided costs

Market information/accuracy/analysis

Market savings

2002 Capital Budget Proposed Projects

Funding Method 2002 Bond Issuance Funded

Category 2003 Operating Systems

Project Name Develop Market Simulation Tools

Reference Number 49 ***Priority*** 2 Very Important

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
0%	0%	100%	0%	100%

Cost Allocation / Assignment Methodology

Direct Assignment

Overview

Development of tools, both hardware and software, to aid in staff contingency analysis of various market
scenarios, to benchmark current market accuracy and to identify potential system enhancements.

Impacts if Project is Not Implemented

Impacted Systems	*Allocation Pct.*
Scheduling Infrastructure	100%
	100%

Expenditure Justification

Market information/accuracy/analysis

Market participant request

2002 Capital Budget Proposed Projects

Funding Method 2002 Bond Issuance Funded

Category 2003 Operating Systems

Project Name Support for metered subsystems (Municipal)/ Pseudo Unit

Reference Number 46 ***Priority*** 2 Very Important

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
75%	0%	25%	0%	100%

Cost Allocation / Assignment Methodology

Direct Assignment

Overview

Pseudo systems today are representations of all resources behind the meter and not metered to individual units/subsystems. This project will allow for EMS and Market visibility to individual units in municipal subsystems as part of a system redesign effort to enhanced market visibility of resources.

Impacts if Project is Not Implemented

Impacted Systems	*Allocation Pct.*
SI/SA/BBS	100%
	100%

Expenditure Justification

System redesign

Grid reliability

2002 Capital Budget Proposed Projects

Funding Method 2002 Bond Issuance Funded

Category 2003 Operating Systems

Project Name GCP Phase II - RIG to DNP Protocol Conversion

Reference Number 56 ***Priority*** 2 Very Important

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
100%	0%	0%	0%	100%

Cost Allocation / Assignment Methodology

Direct Assignment

Overview

Currently, there are approximately 25 RIGs that are candidates for conversion to DNP. These original RIGs are using Channel Access with the new installations running DNP. Converting these RIGs to Channel Access will reduce the maintenance of the RIGs by consolidating the RIGs into a single protocol.

Impacts if Project is Not Implemented

Elevated maintenance costs will be incurred until such time that the Channel Access RIGs are converted to DNP.

Impacted Systems	*Allocation Pct.*
RIG	100%
	100%

Expenditure Justification

Continuation of started project

System redesign

2002 Capital Budget Proposed Projects

Funding Method 2002 Bond Issuance Funded

Category 2003 Operating Systems

Project Name FTR - Development

Reference Number 47 ***Priority*** 2 Very Important

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
0%	50%	50%	0%	100%

Cost Allocation / Assignment Methodology

Direct Assignment

Overview

Development of new software for current annual FTR auctions, and the development of potential sub-markets,
such as monthly, daily, or hourly FTR auctions.

Impacts if Project is Not Implemented

Impacted Systems	*Allocation Pct.*
FTR	100%
	100%

Expenditure Justification

Market information/accuracy/analysis

Market savings

Market participant request

2002 Capital Budget Proposed Projects

Funding Method 2002 Bond Issuance Funded

Category 2003 Operating Systems

Project Name Market Stabilization

Reference Number 51 ***Priority*** 2 Very Important

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
0%	25%	75%	0%	100%

Cost Allocation / Assignment Methodology

Direct Assignment

Overview

Efforts involved in responding to FERC rulings for market stabilization, such as development of proxy bid price
calculation tools and reporting tools.

Impacts if Project is Not Implemented

Impacted Systems	*Allocation Pct.*
SI/SA/BBS	100%
	100%

Expenditure Justification

Regulatory requirement

Market savings

Market information/accuracy/analysis

2002 Capital Budget Proposed Projects

Funding Method 2002 Bond Issuance Funded

Category 2003 Operating Systems

Project Name Price Cap Enhancements

Reference Number 55 ***Priority*** 2 Very Important

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
0%	25%	75%	0%	100%

Cost Allocation / Assignment Methodology

Direct Assignment

Overview

Provide the ISO the flexibility to change/modify individual commodity price caps. This is a regulatory mandate.

Impacts if Project is Not Implemented

Impacted Systems	*Allocation Pct.*
SI/SA/BBS	100%
	100%

Expenditure Justification

Regulatory requirement

2002 Capital Budget Proposed Projects

Funding Method 2002 Bond Issuance Funded

Category 2003 Operating Systems

Project Name Long Term Settlement Historical DB

Reference Number 90 ***Priority*** 2 Very Important

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
0%	0%	100%	0%	100%

Cost Allocation / Assignment Methodology

Direct Assignment

Overview

The intent of this effort is to incorporate Settlements historical data (MHAP) into the Data Warehouse architecture.

While MHAP currently contains all Settlement transactions older than T-120, it does not contain FERC re-run data
which is written to a separate Re-run data base.

Impacts if Project is Not Implemented

Impacted Systems	*Allocation Pct.*
DW	100%
	100%

Expenditure Justification

CAISO infrastructure requirement

Market information/accuracy/analysis

2002 Capital Budget Proposed Projects

Funding Method 2002 Bond Issuance Funded

Category 2003 Operating Systems

Project Name Ability to non-firm exports as Non-spin and Replacement

Reference Number 54 ***Priority*** 2 Very Important

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
0%	50%	50%	0%	100%

Cost Allocation / Assignment Methodology

Direct Assignment

Overview

This project will allow the ISO to utilize non-firm exports of replacement and non-spinning reserve as reserves that count towards the ISO Control Area requirement in the event that these exports are cut in real-time. This project requires additional mapping of the physical resource behind the export schedule to remain consistent with the physical dispatch of intra-Control Area reserves.

Impacts if Project is Not Implemented

Impacted Systems	*Allocation Pct.*
SA/SI	100%
	100%

Expenditure Justification

Market savings

2002 Capital Budget Proposed Projects

Funding Method 2002 Bond Issuance Funded

Category 2003 Operating Systems

Project Name FTR Annual Auction

Reference Number 50 ***Priority*** 2 Very Important

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
0%	50%	50%	0%	100%

Cost Allocation / Assignment Methodology

Direct Assignment

Overview

Project is designed to acquire additional auction software to operate FTR auctions in a more efficient manner. Will provide for additional flexibility in posting, requesting bids, and better system performance.

Impacts if Project is Not Implemented

Impacted Systems	*Allocation Pct.*
FTR	100%
	100%

2002 Capital Budget Proposed Projects

Funding Method Cash Funded

Category 2002 Operating Systems

Project Name Interface EMS/CIM into SA

Reference Number 38 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
100%	0%	0%	0%	100%

Cost Allocation / Assignment Methodology

Direct Assignment

Overview

This project allows BEEP and/or other SA applications to provide the EMS system Generation POPS and data sufficient for future EMS simulator systems. It provides for increase accuracy in information flow between market software and Control Area systems.

Impacts if Project is Not Implemented

Impacted Systems	*Allocation Pct.*
SA	100%
	100%

Expenditure Justification

Grid reliability

Market savings

Market information/accuracy/analysis

2002 Capital Budget Proposed Projects

Funding Method Cash Funded

Category 2002 Operating Systems

Project Name EMS Final Milestones 2001 Project

Reference Number 31 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
100%	0%	0%	0%	100%

Cost Allocation / Assignment Methodology

Direct Assignment

Overview

The replacement of the EMS system achieves the following objectives: Greater EMS system stability resulting in improved reliability of grid operation; Implementation of middleware at the EMS system interfaces to greatly increase the flexibility to connect to and to adapt to changes occurring with external systems; Implementation of Network Applications to assess the operating condition of the California Security Coordination area; and a generally more flexible, scalable and functionally rich system. $ for Final Payment

Impacts if Project is Not Implemented

2001 Capital Project continuation - Contract Commitment - No choice

Impacted Systems	*Allocation Pct.*
EMS	100%
	100%

Expenditure Justification

Continuation of started project

Internal productivity, cost savings, avoided costs

System redesign

2002 Capital Budget Proposed Projects

Funding Method Cash Funded

Category 2002 Operating Systems

Project Name Hour Ahead Data Analysis Tool- Enhancements

Reference Number 101 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
0%	25%	75%	0%	100%

Cost Allocation / Assignment Methodology

Direct Assignment

Overview

Complete the HADAT tool to allow it to work correctly with current operating paradigms. The tool already assists
operators in data input into SA but needs to be reworked to handle new analysis requirements.

Impacts if Project is Not Implemented

Impacted Systems	*Allocation Pct.*
SI	100%
	100%

Expenditure Justification

Internal productivity, cost savings, avoided costs

Market savings

2002 Capital Budget Proposed Projects

Funding Method Cash Funded

Category 2002 Operating Systems

Project Name Day Ahead Data Analysis Tool - Enhancements

Reference Number 99 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
0%	25%	75%	0%	100%

Cost Allocation / Assignment Methodology

Direct Assignment

Overview

This effort is intended to mirror the effort already expended on the HADAT Hour Ahead analysis tool. Its purpose is to allow the efficient input of Day Ahead ancillary service parameters into the SI ODB, and to allow for efficient allocation of ancillary service procurement at least cost. This tool will also assist operators with Unit Commitment and Must-Offer wavier decisions.

Impacts if Project is Not Implemented

The operators are using best judgment in procuring ancillary services and cannot process all potential savings from efficient allocation without some form of automation.

Impacted Systems	*Allocation Pct.*
SI	100%
	100%

Expenditure Justification

Internal productivity, cost savings, avoided costs

Market savings

2002 Capital Budget Proposed Projects

Funding Method Cash Funded

Category 2002 Operating Systems

Project Name Market Financials 11i

Reference Number 95 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
0%	0%	100%	0%	100%

Cost Allocation / Assignment Methodology

Direct Assignment

Overview

Upgrade the instance of Oracle Financials supporting the Market from application version 10.7 to 11i. This is a highly customized instance of Oracle General Ledger, Accounts Payable and Accounts Receivable. The requested funds are for consulting fees to ensure a smooth transition for the customizations.

Impacts if Project is Not Implemented

If this project is not completed by June 2002, the ISO will need to purchase a costly extended support agreement with Oracle as the application version 10.7 will be de-supported as of June 2002. The extended support agreement is valid through December 2002. If the project is not completed by December, support will not be available through Oracle Corporation for the applications.

Impacted Systems	*Allocation Pct.*
Mkt. Fin.	100%
	100%

Expenditure Justification

CAISO infrastructure requirement

2002 Capital Budget Proposed Projects

Funding Method Cash Funded

Category 2002 Operating Systems

Project Name Buy back DA/HA, HA/RT

Reference Number 37 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
100%	0%	0%	0%	100%

Cost Allocation / Assignment Methodology

Direct Assignment

Overview

This project allows for an SC to re-procure Day Ahead ancillary services in the Hour Ahead market, but at the Day
Ahead MCP. This effort is due to the decreased activity of the HA markets.

Impacts if Project is Not Implemented

Impacted Systems	*Allocation Pct.*
SA	100%
	100%

Expenditure Justification

Market savings

2002 Capital Budget Proposed Projects

Funding Method Cash Funded

Category 2002 Operating Systems

Project Name Neutrality Unbundling

Reference Number 44 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
0%	0%	100%	0%	100%

Cost Allocation / Assignment Methodology

Direct Assignment

Overview

ISO collects Neutrality Charges (Charge Type 1010) to balance the payments and charges related to its Real-Time energy transactions. There were occasions in which the Neutrality Charges were higher than the limit specified in the ISO Tariff. Market Participants are requesting ISO to separate the components that make up the Neutrality Charges. Under this project, the various neutrality components will be identified and necessary changes will be made to the Settlement System to separate these components into different charges.

Impacts if Project is Not Implemented

Without the unbundling, many SCs are skeptical of ISO's Neutrality Charges. The unbundling request may eventually become a FERC mandate which ISO may be forced to take action.

Impacted Systems	*Allocation Pct.*
Settlement	100%
	100%

Expenditure Justification

Market participant request

Market information/accuracy/analysis

2002 Capital Budget Proposed Projects

Funding Method Cash Funded

Category 2002 Operating Systems

Project Name Master File - Upgrade Need estimate

Reference Number 45 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
25%	25%	50%	0%	100%

Cost Allocation / Assignment Methodology

Direct Assignment

Overview

Project of Master File Redesign
1. Background

The Master File (MF) is a database that stores the information of the Generation, intertie, Load point, congestion
zone, demand zone, schedule coordinator, etc. It is common information shared among the SI/SA, MDAS, BBS,
RMR, ETC, SLIC, DMA, Compliance and other ISO systems. It is critical to store the master file data accurately and
audit the data changes easily.

2. Current Problems

The follows are the current problem of Master File database structure:

Overwrite the Pmax value of a resource ID when update the Master File
No seasonal function of Generation characters, such as Pmax.
No relationship between PSP (Physical Schedule Point) and individual resources
There are no record to refer the detail information for audit
Open Master File to Schedule Coordinate

It is necessary to modify and improve the master file structure according to new business requirements.
First, the previous data (such as Pmax) will be overwritten when updating MF table. This will create potential
problems for the must-offer compliance, settlement and other system since all historical Pmax value will be
overwritten after update. All systems retrieving generator data from Master File

will be possible to get the
inaccurate data.
Secondly, the master file table in its current structure does not have functionality to handle the seasonal data. This
will result in inaccurate representation of a resource.
Thirdly, there are many PSP in master file due to the requirements of meter and schedule. The outage coordination
(OS) group will need the individual unit ID with the relationship of PSP unit. EMS group will need the relationship of
PSP and individual unit as well for the Real-Time dispatch visibility. The current MF design has no capability to refer
the individual unit to PSP units. This will create potential problem for settlement, Outage Coordination, EMS, Market
Analysis group.
Fourthly, without a log field when updating the MF tables, it is very difficult to find out the detail information about
the master file changes and have appropriate audit. Without the detail data, it will spend much more time on
settlement dispute process and audit process.
Finally, it is necessary to open the Master File to Schedule Coordinator to provide a better client services, which
meet ISO 2001 goals. Through a secured website, SC can retrieve its own generator data at any time. The current
practice is to email SC the generator data on monthly base.

Impacts if Project is Not Implemented

2002 Capital Budget Proposed Projects

Like many systems at the ISO the masterfile was designed to meet the needs of startup. Now 3 1/2 years later
we have identified many issues that need resolution. Due to the way the Master File links to multiple systems, it
has become clear to the master file working group that the way to fix current problems and ensure a flexible
system for the future is to do a re-write of the entire system.

Impacted Systems	***Allocation Pct.***
Mkt. Fin.	100%
	100%

Expenditure Justification

CAISO infrastructure requirement

2002 Capital Budget Proposed Projects

Funding Method Cash Funded

Category 2002 Operating Systems

Project Name Enhance Remedy MQ dispute tracking

Reference Number 92 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
0%	50%	50%	0%	100%

Cost Allocation / Assignment Methodology

Direct Assignment

Overview

In June of 2001 Market Quality Started resolving technical dispute resolution. In an effort to utilize a single dispute tracking tool throughout the company, Market Quality utilized the Remedy system. The Remedy interface for dispute tracking has many limitations. Market Quality has identified several areas where the Remedy interface can be enhanced to provide better tracking of disputes types, internal notifications and reporting functions. The following is a list of general enhancements:

Adjustment type field - to differentiate the types of tickets that have been referred to settlements

Projected Rerun date field - Rerun date if rerun adjustment type is chosen

AR Notifier - Allows the notification feature to function each time a ticket is referred or resolved

Due Date field - Field for due date of ticket to Settlements for adjustment, auto populate from payment calendar and add to ticket print out.

Interchange ID field - Add a field that will track the interchange id per dispute

Auto Update - Have a job run on a regular basis that will update BA ID's and CT's from MasterFile

Query list view - Add 'Referred To Individual' to query view list

User guide - Provide electronically, preferably thorough the application.

Reason field - A compliment to status field that can further clarify the actions required/purpose of referral

Provide a better audit trail - Additional "Referred To" lines would help us follow the path the ticket took between departments. Provide a referred to box and the reason it was referred. Needs to be queried easily.

Status field - Additional choices for the ticket status

Impacts if Project is Not Implemented

Impact
Inefficient management of disputes requiring resolution from Settlements
Inability to monitor expected resolution date
Notification system cannot be relied on as a means to indicate a status change of a dispute
Reduces the possibility of disputes being referred too late to Settlements for resolution (post final dispute)
Disputes cannot be managed or queried by Interchange ID
Presently updated manually by privileged users only, ID's and CT's not current
A query view containing 'Referred to Individual' is only possible by creating a customized report in Remedy,
Inefficient means of tracking dispute progress
Hard copy guide is not readily available to all users, guide does not provide enough relevant information
Categorizing disputes for assignment and resource management can only be accomplished by reading through the
comments and details
The history of a dispute cannot be queried only viewed by visual scanning within the audit window
Remedy needs additional categories for dispute workflow, resolution, and management

2002 Capital Budget Proposed Projects

Impacted Systems	*Allocation Pct.*
C.H.A.S.E	100%
	100%

Expenditure Justification

Market savings

Market information/accuracy/analysis

Internal productivity, cost savings, avoided costs

2002 Capital Budget Proposed Projects

Funding Method Cash Funded

Category 2002 Operating Systems

Project Name Enhancements to Chase for MQ issues tracking

Reference Number 91 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
20%	20%	60%	0%	100%

Cost Allocation / Assignment Methodology

Direct Assignment

Overview

In a review of current department work processes, Market Quality Department has determined its current method for managing and auditing its actions on data quality issues and corrections are inefficient and cumbersome.

It has been determined that Market Quality should obtain a more effective and efficient method of tracking issues and maintaining an audit trail on the resolution of these issues. This can be provided through the enhancement of the CHASE application, upon incorporation of additional requirements initiated by Market Quality.

Impacts if Project is Not Implemented

If the CHASE enhancements cannot be implemented, staff will have to continue to use multiple MS Excel spreadsheets and/or MS Word documents to track data quality exceptions, e-mail communications to notify various business units of data quality issues, and shared drive folders to store supporting information and logs.

In using this current issue management method, it is difficult to link data quality issues to disputes and/or system issues and to establish a clear audit trail of the issue resolution through all affected business units.

Impacted Systems	*Allocation Pct.*
C.H.A.S.E	100%

100%

Expenditure Justification

Internal productivity, cost savings, avoided costs

Market information/accuracy/analysis

Market savings

2002 Capital Budget Proposed Projects

Funding Method Cash Funded

Category 2002 Operating Systems

Project Name Automation Tools - Priority 1

Reference Number 74 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
70%	0%	30%	0%	100%

Cost Allocation / Assignment Methodology

Direct Assignment

Overview

This project allow the development of internal tool that aid in the development of compliance programs

Impacts if Project is Not Implemented

Growth of compliance systems would cause current systems to be come overloaded and result in inefficient
operations

Impacted Systems	*Allocation Pct.*
System	100%
	100%

Expenditure Justification

Regulatory requirement

Grid reliability

Market information/accuracy/analysis

2002 Capital Budget Proposed Projects

Funding Method Cash Funded

Category 2002 Operating Systems

Project Name Compliance Programs - Priority 1

Reference Number 73 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
70%	0%	30%	0%	100%

Cost Allocation / Assignment Methodology

Direct Assignment

Overview

This program funds the development of programs that monitors compliance with the tariff. Participants that are found to be non-compliant are assessed according to the tariff.

Impacts if Project is Not Implemented

Compliance will not be able to develop the necessary programs that are needed to monitor the compliance with the tariff.

Impacted Systems	*Allocation Pct.*
DW	45%
CAP	55%
	100%

Expenditure Justification

Internal productivity, cost savings, avoided costs

Regulatory requirement

Market savings

2002 Capital Budget Proposed Projects

Funding Method Cash Funded

Category 2002 Funiture/Facilities/Office Equipment

Project Name Fixtures & Furniture - conversion of contractors and new employees

Reference Number 11 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
0%	0%	0%	100%	100%

Cost Allocation / Assignment Methodology

Total Salaries

Overview

Provide for various furniture acquisitions to support ISO staff residing in its Folsom and Alhambra facilities. The individual requests for workstation furniture to support new staff, for ergonomic adjustments to existing workstations, and for misc. filing and accessories is too small to merit preparing individual requests. The department will manage this budget.

Impacts if Project is Not Implemented

Without this project adequate furniture needed to support ISO cannot be obtained.

Impacted Systems	*Allocation Pct.*
Facilities	100%
	100%

Expenditure Justification

CAISO infrastructure requirement

Internal productivity, cost savings, avoided costs

2002 Capital Budget Proposed Projects

Funding Method Cash Funded

Category 2002 Funiture/Facilities/Office Equipment

Project Name Additional 20,000 SF Space Build-Out- (Blue Shield) 101 Blue Ravine RD and 105 Lake Forest

Reference Number 15 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
0%	0%	0%	100%	100%

Cost Allocation / Assignment Methodology

Total Salaries

Overview

This project will provide critically needed space for ISO staff that have endured the lost of amenities, including conference rooms, lunchrooms, and file space. Despite continuing size reductions of workstations, there is not adequate space to house all 2001 headcount, let allow 2002 staff increases.

Impacts if Project is Not Implemented

There will not be enough workstation space for all staff. Conference rooms, lunchrooms, etc., will be totally consumed housing employees and consultants.

Impacted Systems	*Allocation Pct.*
Facilities	100%
	100%

Expenditure Justification

CAISO infrastructure requirement

Internal productivity, cost savings, avoided costs

2002 Capital Budget Proposed Projects

Funding Method Cash Funded

Category 2002 Corporate Systems

Project Name Access Security System- Migration to Win2K

Reference Number 107 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
0%	0%	0%	100%	100%

Cost Allocation / Assignment Methodology

Operating Costs

Overview

Upgrade of Facility Security monitoring systems to work with Windows 2000.

Impacts if Project is Not Implemented

Impacted Systems	*Allocation Pct.*
System	100%
	100%

Expenditure Justification

CAISO infrastructure requirement

2002 Capital Budget Proposed Projects

Funding Method Cash Funded

Category 2002 Corporate Systems

Project Name Tivoli Security - Risk Manager

Reference Number 108 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
0%	0%	0%	100%	100%

Cost Allocation / Assignment Methodology

Operating Costs

Overview

Tivoli Secure Way Risk Manager is an enterprise-wide risk management solution enabling organizations to centrally manage attacks, threats and exposures by correlating security information from firewalls, intrusion detectors, vulnerability scanning tools and other security checkpoints. The solution enables administrators to eliminate clutter such as false-positives, while quickly identifying the real security threats to help administrators respond with adaptive security measures.

Impacts if Project is Not Implemented

The ISO will not be able to normalize enterprise-wide security data for the purpose of detecting common anomalies.

Impacted Systems	*Allocation Pct.*
Tivoli	100%
	100%

Expenditure Justification

CAISO infrastructure requirement

Internal productivity, cost savings, avoided costs

Continuation of started project

2002 Capital Budget Proposed Projects

Funding Method Cash Funded

Category 2002 Corporate Systems

Project Name Internet Caching and Traffic Shaping

Reference Number 112 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
0%	0%	0%	100%	100%

Cost Allocation / Assignment Methodology

Operating Costs

Overview

The ISO's Internet access could be reduced by using an Internet caching or traffic shaping device, that would cache often-used content (including bandwidth-intensive applications such as streaming audio) or reduce the available bandwidth to specific, non-critical services. The net result could be the reduction of Internet traffic, leading to cost reduction by downgrading the ISO's current Internet bandwidth from it's Internet service provider(s). An example would be the reduction of InterNAP service from the current "Tier 2" service, to a "Tier 1" service, resulting in approx. $46k in yearly savings. Finally, Internet caching and traffic shaping may help to prevent the ISO from exceeding contractual obligations and incurring financial penalties.

Impacts if Project is Not Implemented

Internet bandwidth capacity needs will increase, impacting future budgets

Impacted Systems	*Allocation Pct.*
Commumication Network	100%
	100%

Expenditure Justification

Internal productivity, cost savings, avoided costs

CAISO infrastructure requirement

2002 Capital Budget Proposed Projects

Funding Method Cash Funded

Category 2002 Corporate Systems

Project Name Satellite Building Expansion (101 - BlueShield Space)

Reference Number 115 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
0%	0%	0%	100%	100%

Cost Allocation / Assignment Methodology

Operating Costs

Overview

Due to space constraints, Facilities is investigating expanding into other office space. This expansion will require
voice and data hardware, as well as the cabling to support them.

Impacts if Project is Not Implemented

No telecommunications services will be available when personnel move to their new offices

Impacted Systems	*Allocation Pct.*
Commumication Network	100%
	100%

Expenditure Justification

CAISO infrastructure requirement

Internal productivity, cost savings, avoided costs

2002 Capital Budget Proposed Projects

Funding Method Cash Funded

Category 2002 Corporate Systems

Project Name OA and WeNet Network Refresh

Reference Number 116 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
0%	0%	0%	100%	100%

Cost Allocation / Assignment Methodology

Operating Costs

Overview

The OA and WeNet networks are comprised of Cabletron LAN switches that are no longer sold or supported by the original manufacturer. Many components are "end-of-life" and can only be replaced by a limited stock of used, refurbished equipment in case of hardware failure. In addition, the number of ports currently available is less than the number of outstanding requests for connections, and far less than the projected growth in additional ports over the next 2 years (the remainder of the MCI contract).

Impacts if Project is Not Implemented

Impacted Systems	*Allocation Pct.*
Commumication Network	100%
	100%

Expenditure Justification

CAISO infrastructure requirement

Internal productivity, cost savings, avoided costs

Grid reliability

2002 Capital Budget Proposed Projects

Funding Method Cash Funded

Category 2002 Corporate Systems

Project Name New CAFM System

Reference Number 93 ***Priority*** 1 Essential

Functional Allocations

CAS	*CONG*	*ASREO*	*General*	*Total*
0%	0%	0%	100%	100%

Cost Allocation / Assignment Methodology

Operating Costs

Overview

This project provides facilities with a facilities computer aided facilities management system ("CAFM") with which to integrate its existing databases and spreadsheets of space planning and maintenance information with data provided through the CHASE/ Remedy program. This will enable the Facilities department to respond quickly with enhance planning and analysis for changing organizational needs. In addition, it will enable Facilities to track maintenance activities that reduce the cost for excessive or ineffective vendor repairs, prompt us when preventative maintenance tasks are due, and better track costs in many categories.

Impacts if Project is Not Implemented

Facilities would continue to struggle to meet the space planning needs of the ISO under tight space constraints and in the face of preparing for a new campus. CHASE/ Remedy data could not be integrated into the departments databases to support decision making and cost tracking. The reliability of the preventative maintenance program would continue to rely on a series of unrelated documents and spreadsheets.

Impacted Systems	*Allocation Pct.*
Facilities	100%
	100%

Expenditure Justification

Internal productivity, cost savings, avoided costs

CAISO infrastructure requirement

California ISO

Appendix A

Cost Allocation Matrix: FY2002 Budget

Summary Table of Results

Category	Control Area Operations	Congestion Management	A/S and Real Time Energy	Total
Gross Cost Allocation %	54.1%	10.7%	35.2%	100.0%
Gross Revenue Requirement	$131,580,978	$26,067,177	$85,537,433	$243,185,589
Net Cost Allocation % (after 2001 revenue credit/deficiency)	57.9%	11.4%	30.7%	100.0%
Net Revenue Requirement	$ 141,826,806	$ 27,787,380	$ 75,179,700	$ 244,793,886

Attached Worksheets

Summary Cost Allocation Matrix	Appendix A1
Cost Allocation Matrix	Appendix A2
Telecommunications - Total Salaries Method	Appendix A3
Telecommunications - Specific Salaries Method	Appendix A4
Worksheet for Allocation of Certain Supervisory Departments	Appendix A5

CALIFORNIA ISO
SUMMARY COST ALLOCATION MATRIX - 2002 BUDGET

Line#	ISO Dept #	OPERATING COSTS	Amount Salaries	Amount Operations	Allocation			Allocation/ Assignment Method	Cost Allocated		
					Control Area Services	Congestion Mgmt.	A/S and Real Time Energy		Control Area Services	Congestion Mgmt.	A/S and Real Time Energy
1		**Gross Operating Costs**									
2	1500	**Operations - Direct**									
3	1521	Grid Planning	$ 2,060,915	$ 2,642,615	100.0%	0.0%	0.0%	Direct Assignment	$2,642,615	$0	$0
4	1542	Outage Coordination	$ 1,605,282	$ 1,825,756	100.0%	0.0%	0.0%	Direct Assignment	$1,825,756	$0	$0
5	1543	Loads and Resources	$ 848,766	$ 931,266	100.0%	0.0%	0.0%	Direct Assignment	$931,266	$0	$0
6	1544	Real-Time Scheduling	$ 2,766,779	$ 2,859,227	74.9%	15.1%	10.0%	Direct Assignment	$2,141,045	$430,909	$287,273
7	1545	Grid Operations	$ 7,074,516	$ 7,409,016	79.6%	10.2%	10.2%	Direct Assignment	$5,897,205	$757,145	$754,666
8	1546	Security Coordination	$ 1,161,146	$ 1,214,746	100.0%	0.0%	0.0%	Direct Assignment	$1,214,746	$0	$0
9	1549	Operations Training Group	$ 2,067,952	$ 3,493,437	63.0%	23.9%	13.2%	Direct Assignment	$2,200,232	$833,539	$459,665
10	1554	Special Projects Engineering	$ 584,547	$ 1,054,797	86.6%	4.5%	8.9%	Direct Assignment	$913,726	$47,326	$93,746
11	1555	Operations Support Group	$ 946,146	$ 1,116,946	59.7%	21.7%	18.6%	Direct Assignment	$666,981	$242,427	$207,539
12	1558	Transmission Maintenance	$ 1,067,625	$ 1,875,575	98.4%	0.0%	1 6%	Direct Assignment	$1,845,659	$0	$29,916
13	1561	Southern Area Engineering	$ 1,011,718	$ 1,173,918	100.0%	0.0%	0.0%	Direct Assignment	$1,173,918	$0	$0
14	1562	Northern Area Engineering	$ 1,086,299	$ 1,144,139	100.0%	0.0%	0.0%	Direct Assignment	$1,144,139	$0	$0
15	1563	Coordinated Operations	$ 548,968	$ 665,968	90.4%	2.4%	7 2%	Direct Assignment	$602,050	$15,979	$47,938
16	1565	Pre-Scheduling and Support	$ 1,738,892	$ 1,767,392	75.4%	14.7%	9.8%	Direct Assignment	$1,333,419	$260,384	$173,589
17	1566	Regional Coordination	$ 413,849	$ 545,749	70.4%	12.1%	17.6%	Direct Assignment	$384,126	$65,825	$95,798
18	1559	Operations Application Support	$ 469,852	$ 494,352	80.4%	10.2%	9.4%	Direct Assignment	$397,564	$50,473	$46,315
19	1500	**Operations - Indirect**									
20	1511	VP - Grid Operations General	$ 930,487	$ 1,833,887	74.2%	14.1%	11.7%	Allocated based on Department Direct cos	$1,360,842	$258,635	$214,411
21	1547	Engineering and Maintenance	$ 284,247	$ 1,449,247	98.4%	0.3%	1.3%	Allocated based on Supervised Departmer	$1,425,764	$3,999	$19,484
22	1548	Operations Support and Training Group - Genera	$ 362,036	$ 425,636	77 4%	7.0%	15.5%	Allocated based on Supervised Departmer	$329,626	$29,845	$66,165
23	1564	Operations Scheduling	$ 277,313	$ 320,013	82.1%	10.7%	7 1%	Allocated based on Supervised Departmer	$262,871	$34,285	$22,857
24	1700	**VP Market Services**									
25	1722	Application Support	$ 170,495	$ 295,345	14.3%	6.9%	78.8%	Direct Assignment	$42,218	$20,507	$232,619
26	1723	Tariff and Contract Implementation	$ 872,566	$ 1,193,948	90.0%	0.0%	10.0%	Direct Assignment	$1,074,553	$0	$119,395
27	1724	BBS - PSS	$ 1,063,065	$ 1,309,065	15.0%	7.0%	78.0%	Direct Assignment	$196,360	$91,635	$1,021,071
28	1725	BBS - FSS	$ 1,000,653	$ 1,240,929	15.0%	7.0%	78.0%	Direct Assignment	$186,139	$86,865	$967,925
29	1731	Contracts and Special Projects	$ 1,098,390	$ 1,420,890	59.8%	8.9%	31.3%	Direct Assignment	$848,990	$127,089	$444,812
30	1741	Client Relations	$ 2,200,547	$ 2,739,347	37.5%	9.4%	53.1%	Direct Assignment	$1,026,935	$257,390	$1,455,022
31	1752	Manager of Markets	$ 2,127,409	$ 2,206,709	20.0%	30.0%	50.0%	Direct Assignment	$441,342	$662,013	$1,103,355
32	1753	Market Application & Testing	$ 1,236,051	$ 1,933,351	20.0%	30.0%	50.0%	Direct Assignment	$386,670	$580,005	$966,676
33	1755	Market Support and Development	$ 698,032	$ 1,228,032	29.6%	10.4%	60.0%	Direct Assignment	$363,010	$128,203	$736,819
34	1756	Market Quality	$ 2,003,173	$ 2,203,423	33.1%	33 1%	33.8%	Direct Assignment	$729,170	$729,170	$745,084
35	1757	Market Integration	$ 662,871	$ 990,831	20.0%	30.0%	50.0%	Direct Assignment	$198,166	$297,249	$495,416
36	1700	**Market Services - Indirect**									
37	1711	VP - Market Services	$ 389,917	$ 408,117	32.4%	18.4%	49.2%	Allocated based on Department Direct cos	$132,384	$74,930	$200,803
38	1721	Billing and Settlements	$ 385,579	$ 441,579	36.9%	4.9%	58.2%	Allocated based on Supervised Departmer	$162,788	$21,608	$257,183
39	1751	Market Operations	$ 447,754	$ 819,254	20.0%	30.0%	50.0%	Allocated based on Supervised Departmer	$163,851	$245,776	$409,627
40	1400	**Information Services - Direct**									
41	1424	Asset, Contract & Change Mgmt Group	$ 667,235	$ 19,332,812	41.0%	11.2%	47.7%	Direct Assignment	$7,935,704	$2,171,531	$9,225,576
42	1441	Vendor Management	$ 194,698	$ 30,774,566	59.7%	10.5%	29 8%	Allocated based on Labor Dollar Ratios - S	$18,381,225	$3,236,211	$9,157,130
43	1461	RT Operations Applications Support	$ 2,078,100	$ 2,330,715	100.0%	0.0%	0.0%	Direct Assignment	$2,330,715	$0	$0
44	1462	Field Data Acquisition & Data Quality	$ 1,300,096	$ 2,356,162	38.3%	2.8%	58.9%	Direct Assignment	$902,057	$66,726	$1,387,379
45	1467	Post Operations Application Support	$ 877,938	$ 977,918	0.0%	0.0%	100.0%	Direct Assignment	$0	$0	$977,918
46	1400	**VP Information Services Indirect**									
47	1411	Chief Information Officer- General	$ 386,862	$ 1,742,012	53.0%	9.8%	37.2%	Allocated based on Department Direct cos	$922,968	$170,992	$648,052
48	1422	Application Development Services	$ 3,681,663	$ 3,985,028	50.2%	8.4%	41.4%	Allocated based on Direct Operating costs	$1,999,555	$336,134	$1,649,338
49	1431	User Support Services	$ 482,127	$ 7,168,082	58.1%	11.1%	30.8%	Allocated based on Direct Operating costs	$4,162,384	$797,961	$2,207,737
50	1432	Technology Infrastructure Services-General	$ 250,115	$ 285,315	58.1%	11.1%	30.8%	Allocated based on Direct Operating costs	$165,678	$31,762	$87,876
51	1442	Production Support Services	$ 2,914,278	$ 3,259,478	53.7%	10.3%	36.0%	Allocated based on Direct Operating costs	$1,749,930	$335,475	$1,174,073
52	1451	Information Security Services	$ 985,829	$ 1,503,429	58.1%	11.1%	30.8%	Allocated based on Direct Operating costs	$873,016	$167,364	$463,049
53	1463	Corporate & Operation Systems	$ 374,751	$ 424,551	84.1%	0.4%	15.5%	Allocated based on Department Direct cos	$357,206	$1,558	$65,787
54	1468	Corporate Application Support	$ 1,306,675	$ 1,524,927	56.5%	10.8%	32.7%	Allocated based on Direct Operating costs	$860,827	$165,027	$499,073

CALIFORNIA ISO
SUMMARY COST ALLOCATION MATRIX - 2002 BUDGET

Line#	ISO Dept #	OPERATING COSTS	Amount Salaries	Amount Operations	Allocation				Cost Allocated		
					Control Area Services	Congestion Mgmt.	A/S and Real Time Energy	Allocation/ Assignment Method	Control Area Services	Congestion Mgmt.	A/S and Real Time Energy
55	1471	Infrastructure Engineering	$ 1,455,182	$ 1,737,389	58.1%	11.1%	30.8%	Allocated based on Direct Operating costs	$1,008,872	$193,409	$535,108
56	1600	**Legal - Direct**									
57	1641	Market Analysis	$ 1,846,583	$ 3,441,040	14.1%	20.9%	65.0%	Direct Assignment	$484,845	$718,144	$2,238,051
58	1661	Compliance	$ 1,106,490	$ 1,394,790	75.8%	8.6%	15.5%	Direct Assignment	$1,057,908	$120,171	$216,711
59	1662	Data Quality Group	$ 328,036	$ 496,036	66.7%	0.0%	33.3%	Direct Assignment	$330,691	$0	$165,345
60	1300	**Finance - Corporate Indirect**									
61	1311	CFO - General	$ 450,557	$ 530,057	61.3%	10.8%	27.8%	Allocated based on Supervised Departmer	$325,131	$57,482	$147,445
62	1321	Accounting	$ 820,451	$ 2,318,351	48.0%	8.5%	43.5%	Allocated based on Direct Operating costs	$1,112,795	$197,947	$1,007,609
63	1331	Treasury and Financial Planning	$ 809,517	$ 2,017,637	66.6%	8.7%	24.7%	Allocated based on Direct Operating costs	$1,343,183	$175,164	$499,290
64	1351	Facilities	$ 654,706	$ 5,298,657	62.0%	11.1%	26.9%	Allocated based on Labor Dollar Ratios	$3,283,917	$589,250	$1,425,490
65	1361	Office Administration	$ 645,454	$ 2,426,024	62.0%	11.1%	26.9%	Allocated based on Labor Dollar Ratios	$1,503,562	$269,792	$652,670
66	1600	**Legal - Chief Counsel - Corporate Indirect**									
67	1611	General Counsel - General	$ 463,778	$ 527,678	45.5%	11.0%	43.5%	Allocated based on Supervised Departmer	$240,199	$57,853	$229,626
68	1631	Legal and Regulatory	$ 3,243,880	$ 14,713,509	49.3%	9.2%	41.5%	Allocated based on Direct Operating costs	$7,251,201	$1,359,395	$6,102,913
69	1800	**VP Corporate and Strategic Development - Corporate Indirect**									
70	1811	VP Corporate and Strategic Devt. - General	$ 383,492	$ 506,792	58.0%	11.0%	31.0%	Allocated based on Supervised Departmer	$294,174	$55,691	$156,927
71	1821	Communications	$ 427,176	$ 928,776	57.7%	11.0%	31.3%	Allocated based on Direct Operating costs	$536,170	$101,964	$290,641
72	1831	Strategic Development	$ 278,394	$ 278,394	62.0%	11.1%	26.9%	Allocated based on Labor Dollar Ratios	$172,539	$30,959	$74,896
73	1851	Office of Strategic Services	$ 625,250	$ 1,023,750	57.7%	11.0%	31.3%	Allocated based on Direct Operating costs	$590,998	$112,391	$320,361
74	1861	Regulatory Policy	$ 662,814	$ 1,492,939	57.7%	11.0%	31.3%	Allocated based on Direct Operating costs	$861,854	$163,900	$467,184
75	1111	**CEO / Human Resources - Corporate Indirect**									
76	1111	CEO - General	$ 740,026	$ 1,079,051	61.1%	11.0%	28.0%	Allocated based on Labor Dollar Ratios	$658,833	$118,382	$301,836
77	1841	Human Resources	$ 2,907,520	$ 4,950,645	61.1%	11.0%	28.0%	Allocated based on Labor Dollar Ratios	$3,022,700	$543,133	$1,384,812
78	1651	Board of Governors		$ 163,640	61.1%	11.0%	28.0%	Allocated based on Labor Dollar Ratios	$99,913	$17,953	$45,774
79		Salary Adjustments, FY2001		$ 3,800,693	60.9%	10.8%	28.3%		$2,314,308	$412,019	$1,074,366
80		**Gross Operating Costs**	**$ 75,013,510**	**$ 177,465,345**					**$101,781,181**	**$19,128,952**	**$56,555,212**
81		**Gross Operating Costs %**							57.4%	10.8%	31.9%
82		**Other Revenues**									
83		Interest Revenues		$ (1,350,300)	57.1%	10.8%	32.1%	Operating Costs	($771,499)	($145,434)	($433,367)
84		SC Application and Training Fees		$ (15,000)	57.1%	10.8%	32.1%	Cost Center 1546	($8,570)	($1,616)	($4,814)
85		WSCC Security Coordination		$ (1,244,746)	100.0%	0.0%	0.0%	Operating Costs	($1,244,746)	$0	$0
86		**Total Other Revenue**		**$ (2,610,046)**					**($2,024,816)**	**($147,049)**	**($438,181)**
87		**Total Other Revenue %**							77.6%	5.6%	16.8%
88		**Net Operating Costs**									
89		**Net Operating Costs**		**$ 174,855,300**					**$99,756,366**	**$18,981,903**	**$56,117,031**
90		**Net Operating Costs %**							57.1%	10.9%	32.1%
91		**Capital**									
92		EMS		$16,470,000	100.0%	0.0%	0.0%	Direct Assignment	$16,470,000	$0	$0
93		SI		$27,102,000	39.0%	20.0%	41.0%	Direct Assignment	$10,569,780	$5,420,400	$11,111,820
94		SA		$31,681,000	35.0%	25.0%	40.0%	Direct Assignment	$11,088,350	$7,920,250	$12,672,400
95		BBS		$48,173,000	0.0%	0.0%	100.0%	Direct Assignment	$0	$0	$48,173,000
96		MDAS		$8,166,000	10.0%	0.0%	90.0%	Direct Assignment	$816,600	$0	$7,349,400
97		RMR-Software		$56,000	100.0%	0.0%	0.0%	Direct Assignment	$56,000	$0	$0
98		Market Anaysis Software		$238,000	0.0%	0.0%	100.0%	Direct Assignment	$0	$0	$238,000
99		Vehicles		$96,000	10.0%	0.0%	90.0%	Direct Assignment	$9,600	$0	$86,400
100		FERC Study Software		$11,000	25.0%	25.0%	50.0%	Direct Assignment	$2,750	$2,750	$5,500
101		Analope Project		$0	100.0%	0.0%	0.0%	Direct Assignment	$0	$0	$0
102		GCP		$975,000	100.0%	0.0%	0.0%	Direct Assignment	$975,000	$0	$0
103		SRS Software		$1,049,000	0.0%	0.0%	100.0%	Direct Assignment	$0	$0	$1,049,000
104		ETC Software		$891,000	0.0%	100.0%	0.0%	Direct Assignment	$0	$891,000	$0
105		FTR Auction software		$17,000	0.0%	0.0%	100.0%	Direct Assignment	$0	$0	$17,000
106		ACC Upgrades		$1,162,000	100.0%	0.0%	0.0%	Direct Assignment	$1,162,000	$0	$0

CALIFORNIA ISO
SUMMARY COST ALLOCATION MATRIX - 2002 BUDGET

Line#	ISO Dept #	OPERATING COSTS	Amount Salaries	Amount Operations	Allocation				Cost Allocated		
					Control Area Services	Congestion Mgmt.	A/S and Real Time Energy	Allocation/ Assignment Method	Control Area Services	Congestion Mgmt.	A/S and Real Time Energy
107		**Total Infrastructure Direct Assigned Items**		**$136,087,000**					$41,150,080	$14,234,400	$80,702,520
108		**Infrastructure Allocated Items**									
109		*Issue Management System -Remedy*		$692,000	57.1%	10.9%	32.1%	Operating Costs	$394,792	$75,122	$222,086
110		Security System - CUDA		$6,993,000	57.1%	10.9%	32.1%	Operating Costs	$3,989,563	$759,145	$2,244,292
111		Corporate Accounting - Oracle		$2,993,000	57.1%	10.9%	32.1%	Operating Costs	$1,707,531	$324,913	$960,556
112		Document Management System - EDMS		$1,715,000	57.1%	10.9%	32.1%	Operating Costs	$978,421	$186,177	$550,402
113		HR System - Imperativ		$136,000	57.1%	10.9%	32.1%	Operating Costs	$77,589	$14,764	$43,647
114		HR System - ABRA		$38,000	57.1%	10.9%	32.1%	Operating Costs	$21,679	$4,125	$12,195
115		System Management and Monitoring - Tivoli		$200,000	57.1%	10.9%	32.1%	Operating Costs	$114,102	$21,712	$64,187
116		Data Warehouse		$1,279,000	57.1%	10.9%	32.1%	Operating Costs	$729,680	$138,845	$410,475
117		Network Software		$630,000	57.1%	10.9%	32.1%	Operating Costs	$359,420	$68,391	$202,188
118		Facilities		$10,566,000	61.0%	11.0%	28.0%	Total Salaries	$6,450,409	$1,158,528	$2,957,064
119		Furniture		$5,391,000	61.0%	11.0%	28.0%	Total Salaries	$3,291,137	$591,106	$1,508,757
120		Facilities-Office Equipment		$1,330,000	61.0%	11.0%	28.0%	Total Salaries	$811,948	$145,830	$372,222
121		Transmission Display Software - TIDS		$139,000	57.1%	10.9%	32.1%	Operating Costs	$79,301	$15,090	$44,610
122		Other software and Enhancements		$3,482,000	57.1%	10.9%	32.1%	Operating Costs	$1,986,509	$377,998	$1,117,493
123		MCI Contract		$27,040,000	59.7%	10.5%	29.8%	Telecom Dept	$16,150,620	$2,843,489	$8,045,891
124		IBM Contract		$6,816,000	58.1%	11.1%	30.8%	IT Dept	$3,957,936	$758,767	$2,099,297
125		**Total Infrastructure Allocated Items**		**$69,440,000**					$41,100,637	$7,484,001	$20,855,362
126		**Subtotal Infrastructure**		**$205,527,000**					$82,250,717	$21,718,401	$101,557,682
127		**Subtotal Infrastructure %**						Allocation %	40.0%	10.6%	49.4%
128		**Startup Allocated Items**							0		
129		Trustee Costs		$5,692,000	40.0%	10.6%	49.4%	Infrastructure subtotal	$2,277,905	$601,484	$2,812,611
130		Interest-Capitalized		$1,261,000	40.0%	10.6%	49.4%	Infrastructure subtotal	$504,645	$133,252	$623,103
131		User Groups		$957,000	40.0%	10.6%	49.4%	Infrastructure subtotal	$382,986	$101,128	$472,886
132		Startup Costs-through 3/31/98		$52,897,000	57.1%	10.9%	32.1%	Operating Costs	$30,178,167	$5,742,381	$16,976,452
133		Working Capital-3 months		$21,692,000	57.1%	10.9%	32.1%	Operating Costs	$12,375,462	$2,354,835	$6,961,703
134		**Total Startup Allocated Items**		**$82,499,000**					$45,719,165	$8,933,080	$27,846,755
135		**Other Software and Enhancements**									
136		2000 Spending: EMS/MDAS/Participating Load Prog		$1,651,155	89.0%	0.0%	11.0%	Direct Assignment	$1,469,528	$0	$181,627
137		2000 Spending: SA/SI/BBS		$4,569,322	8.0%	21.0%	71.0%	Direct Assignment	$365,546	$959,558	$3,244,219
138		2000 Spending: Other Systems/Vehicles		$1,240,714	12.0%	0.0%	88.0%	Direct Assignment	$148,886	$0	$1,091,828
139		2001 Spending: Other Systems		$4,439,568	57.1%	10.9%	32.1%	Operating Costs	$2,532,810	$481,950	$1,424,809
140		2000 Spending: Facilities/Furniture/Office Equipment		$1,473,241	61.0%	11.0%	28.0%	Total Salaries	$899,395	$161,536	$412,310
141		**Total Other Software and Enhancements**		**$13,374,000**					$5,416,164	$1,603,043	$6,354,793
142		**Total 1998 Bonds**									
143		Total 1998 Bonds		**$301,400,000**					$133,386,046	$32,254,524	$135,759,430
144		Total 1998 Bonds %						Allocation %	44.3%	10.7%	45.0%
145		**Total 2000 Bonds**									
146		Land & Building Costs		$9,300,000	61.0%	11.0%	28.0%	Total Salaries	$5,677,532	$1,019,715	$2,602,753
147		2000 Projects:SA/SI/BBS		$16,881,315	44.8%	1.6%	53.6%	Direct Assignment	$7,564,517	$265,037	$9,051,761
148		2000 Projects: EMS/CIM/FDA		$1,494,967	79.0%	0.0%	21.0%	Direct Assignment	$1,181,024	$0	$313,943
149		2000 Projects: Other Systems		$4,028,218	57.1%	10.9%	32.1%	Operating Costs	$2,298,131	$437,294	$1,292,793
150		2001 Spending: EMS		$1,911,445	100.0%	0.0%	0.0%	Direct Assignment	$1,911,445	$0	$0
151		2001 Spending: SA/SI/BBS		$2,397,690	13.0%	0.0%	87.0%	Direct Assignment	$311,700	$0	$2,085,990
152		2001 Spending: Other Systems		$75,615	0.0%	0.0%	100.0%	Direct Assignment	$0	$0	$75,615
153		2001 Spending: Facilities/Furniture/Office Equipment		$10,750	61.0%	11.0%	28.0%	Total Salaries	$6,563	$1,179	$3,009
154		Total 2000 Bonds		**$36,100,000**					$18,950,912	$1,723,225	$15,425,864
155		Total 2000 Bonds %						Allocation %	52.5%	4.8%	42.7%
156		**Total 1998 and 2000 Bonds**									
157		Total 1998 and 2000 Bonds							$152,336,957	$33,977,749	$151,185,293
158		Total 1998 and 2000 Bonds %						Allocation %	45.1%	10.1%	44.8%
159		**Total 2002 Bonds - Funding 2002 Capital Budget and Some 2003 Projects**									
160		2002 Budget: Operating Systems		$9,567,440	25.0%	15.0%	60.0%	Direct Assignment	$2,391,860	$1,435,116	$5,740,464

CALIFORNIA ISO
SUMMARY COST ALLOCATION MATRIX - 2002 BUDGET

Line#	ISO Dept #	OPERATING COSTS	Amount Salaries	Amount Operations	Allocation: Control Area Services	Allocation: Congestion Mgmt.	Allocation: A/S and Real Time Energy	Allocation/ Assignment Method	Cost Allocated: Control Area Services	Cost Allocated: Congestion Mgmt.	Cost Allocated: A/S and Real Time Energy
161		2002 Budget: Furniture/Facilities/Office Equipment		$125,000	61.0%	11.0%	28.0%	Total Salaries	$76,311	$13,706	$34,983
162		2002 Budget: Corporate Systems		$1,678,780	57.1%	10.9%	32.1%	Operating Costs	$957,758	$182,245	$538,778
163		2002 Budget: Other Systems		$2,327,780	20.0%	28.0%	52.0%	Direct Assignment	$465,556	$651,778	$1,210,446
164		2003 Budget: Other Systems		$154,000	42.0%	0.0%	58.0%	Direct Assignment	$64,680	$0	$89,320
165		2003 Budget: Operating Systems		$6,147,000	21.0%	25.0%	54.0%	Direct Assignment	$1,290,870	$1,536,750	$3,319,380
166		Total 2002 Bonds		**$20,000,000**					$5,247,035	$3,819,595	$10,933,371
167		Total 2002 Bonds %						Allocation %	26.2%	19.1%	54.7%
168		**Total Debt Service**									
169		Debt Service - Existing Debt (1998 and 2000 Bonds): Including Res		$55,638,481	45.1%	10.1%	44.8%	1998 & 2000 bonds	$25,113,472	$5,601,394	$24,923,815
170		Anticipated Debt Service - 2002 Bonds: Including Reserve		$4,390,808	26 2%	19.1%	54.7%	2002 bonds	$1,151,936	$838,555	$2,400,317
171		Total Debt Service Cost		**$60,029,289**					**$26,265,409**	**$6,439,949**	**$27,323,932**
172		Total Debt Service Cost %						Allocation %	43.8%	10.7%	45.5%
173		**Cash Funded Cap Ex: 2002 Capital Budget**									
174		2002 Budget: Operating Systems		$4,946,000	72.8%	5.7%	21.5%	Direct Assignment	$3,602,172	$279,944	$1,063,885
175		2002 Budget: Furniture/Facilities/Office Equipment		$1,075,000	61.0%	11.0%	28.0%	Total Salaries	$656,274	$117,870	$300,856
176		2002 Budget: Corporate Systems		$2,280,000	57.1%	10.9%	32.1%	Operating Costs	$1,300,758	$247,512	$731,730
177		Total Cash Funded Cap Ex		**$8,301,000**					**$5,559,204**	**$645,326**	**$2,096,470**
178		Total Cash Funded Cap Ex%						Allocation %	67.0%	7.8%	25.3%
179		**Total Cost of Service - 2002**									
180		Gross Operating Costs		$177,465,345	57.1%	10.9%	32.1%		$101,781,181	$19,128,952	$56,555,212
181		Other Costs and Income		($2,610,046)	77.6%	5.6%	16.8%		($2,024,816)	($147,049)	($438,181)
182		Net Operating Costs		$174,855,300	57.4%	10.8%	31.9%		$99,756,366	$18,981,903	$56,117,031
183		Debt Service		$60,029,289	43.8%	10.7%	45.5%		$26,265,409	$6,439,949	$27,323,932
184		Cash Funded Cap Ex		$8,301,000	67.0%	7.8%	25.3%		$5,559,204	$645,326	$2,096,470
185		Total Gross Cost of Service		$243,185,589					**$131,580,978**	**$26,067,177**	**$85,537,433**
186		Total Gross Cost of Service %						Allocation % results before Revenue Credit or Deficiency	54.1%	10.7%	35.2%
187		(Revenue Credit)/Shortfall from 2001		$1,608,297					$ 10,245,828	$ 1,720,202	$ (10,357,733)
188		Total Net Cost of Service		$244,793,886					**$141,826,806**	**$27,787,380**	**$75,179,700**
189		Total Net Cost of Service %						Net Allocation %	57.9%	11.4%	30.7%

CALIFORNIA ISO
COST ALLOCATION MATRIX - 2002 BUDGET

Line #	ISO Dept #	OPERATING COSTS	Amount Labor	Amount Total Costs	Allocation			Source	Allocation/ Assignment Method	Salary & Total Cost Allocated		
					Control Area Services	Congestion Mgmt.	A/S and Real Time Energy			Control Area Services	Congestion Mgmt.	A/S and Real Time Energy
1	1500	Operations - Direct Costs										
2	1521	Grid Planning	$ 2,060,915		100.0%	0.0%	0.0%		Direct Assignment	$ 2,060,915	$ -	$ -
3				$ 2,642,615	100.0%	0.0%	0.0%	Department	Direct Assignment	$ 2,642,615	$ -	$ -
4	1542	Outage Coordination	$ 1,605,282		100.0%	0.0%	0.0%		Direct Assignment	$ 1,605,282	$ -	$ -
5		Total Costs		$ 1,825,756	100 0%	0.0%	0.0%	Department	Direct Assignment	$ 1,825,756	$0	$0
6	1543	Loads and Resources	$ 848,766		100 0%	0.0%	0.0%		Direct Assignment	$ 848,766	$ -	$ -
7		Total Costs		$ 931,266	100.0%	0.0%	0.0%	Department	Direct Assignment	$ 931,266	$ -	$ -
8	1544	Real-Time Scheduling	$ 2,766,779		75.0%	15.0%	10.0%		Direct Assignment	$ 2,075,084	$ 415,017	$ 276,678
9		Total Costs		$ 2,859,227	74.9%	15.1%	10.0%	Department	Direct Assignment	$ 2,141,045	$430,909	$287,273
10	1545	Grid Operations	$ 7,074,516		79.5%	10.3%	10.3%		Direct Assignment	$ 5,620,928	$ 726,794	$ 726,794
11		Total Costs		$ 7,409,016	79.6%	10 2%	10.2%	Department	Direct Assignment	$ 5,897,205	$757,145	$754,666
12	1546	Security Coordination	$ 1,161,146		100.0%	0.0%	0 0%		Direct Assignment	$ 1,161,146	$ -	$ -
13		Total Costs		$ 1,214,746	100.0%	0.0%	0 0%	Department	Direct Assignment	$ 1,214,746	$0	$0
14	1554	Special Projects Engineering	$ 584,547		84.2%	4 4%	11 5%		Direct Assignment	$ 491,984	$ 25,527	$ 67,035
15		Total Costs		$ 1,054,797	86.6%	4.5%	8.9%	Department	Direct Assignment	$ 913,726	$47,326	$93,746
16	1555	Operations Support Group	$ 946,146		59.1%	22 7%	18.2%		Direct Assignment	$ 559,365	$ 214,741	$ 172,040
17		Total Costs		$ 1,116,946	59.7%	21.7%	18.6%	Department	Direct Assignment	$ 666,981	$242,427	$207,539
18	1558	Transmission Maintenance	$ 1,067,625		97.4%	0.0%	2.6%		Direct Assignment	$ 1,039,699	$ -	$ 27,926
19		Total Costs		$ 1,875,575	98.4%	0.0%	1.6%	Department	Direct Assignment	$ 1,845,659	$0	$29,916
20	1561	Southern Area Engineering	$ 1,011,718		100.0%	0 0%	0.0%		Direct Assignment	$ 1,011,718	$ -	$ -
21		Total Costs		$ 1,173,918	100.0%	0 0%	0.0%	Department	Direct Assignment	$ 1,173,918	$0	$0
22	1562	Northern Area Engineering	$ 1,086,299		100.0%	0.0%	0 0%		Direct Assignment	$ 1,086,299	$ -	$ -
23		Total Costs		$ 1,144,139	100.0%	0.0%	0 0%	Department	Direct Assignment	$ 1,144,139	$0	$0
24	1563	Coordinated Operations	$ 548,968		88.4%	2 9%	8.7%		Direct Assignment	$ 485,050	$ 15,979	$ 47,938
25		Total Costs		$ 665,968	90.4%	2 4%	7.2%	Department	Direct Assignment	$ 602,050	$15,979	$47,938
26	1565	Pre-Scheduling and Support	$ 1,738,892		75.0%	15.0%	10.0%		Direct Assignment	$ 1,304,169	$ 260,834	$ 173,889
27		Total Costs		$ 1,767,392	75.4%	14.7%	9.8%	Department	Direct Assignment	$ 1,333,419	$260,384	$173,589
28	1566	Regional Coordination	$ 413,849		59.5%	16.5%	24 0%		Direct Assignment	$ 246,131	$ 68,308	$ 99,411
29		Total Costs		$ 545,749	70.4%	12.1%	17.6%	Department	Direct Assignment	$ 384,126	$65,825	$95,798

CALIFORNIA ISO
COST ALLOCATION MATRIX - 2002 BUDGET

Line #	ISO Dept #	OPERATING COSTS	Amount Labor	Amount Total Costs	Allocation			Source	Allocation/ Assignment Method	Salary & Total Cost Allocated		
					Control Area Services	Congestion Mgmt.	A/S and Real Time Energy			Control Area Services	Congestion Mgmt.	A/S and Real Time Energy
30	1549	Operations Training Group	$ 2,067,952		65.2%	24.0%	10.8%		Direct Assignment	$ 1,348,800	$ 496,241	$ 222,911
31		Total Costs		$ 3,493,437	63.0%	23.9%	13.2%	Department	Direct Assignment	$ 2,200,232	$833,539	$459,665
32	1559	**Operations Application Support**	$ 469,852		79.5%	10 7%	9 8%		Direct Assignment	$ 373,330	$ 50,334	$ 46,187
33				$ 494,352	80.4%	10.2%	9.4%	Department	Direct Assignment	$ 397,564	$50,473	$46,315
34	**Total Operations Direct Salary Cost Only**		**$ 25,453,252**							$ 21,318,667	$ 2,273,775	$ 1,860,810
35	**Total Operations Direct Salary %**								**Allocation %**	83.8%	8.9%	7.3%
36	**Total Operations Direct Costs**			**$ 30,214,899**						$ 25,314,448	$ 2,704,007	$ 2,196,444
37	**Total Operations Direct Costs %**								**Allocation %**	83.8%	8.9%	7.3%
38	**1500**	**Operations - Indirect Costs**										
39	1511	VP - Grid Operations General	$ 930,487		74.2%	14.1%	11 7%		Allocated based on Department Direct costs	$ 690,471	$ 131,227	$ 108,789
40		Total		$ 1,833,887	74.2%	14.1%	11.7%	Calculation	Allocated based on Department Direct costs	$ 1,360,842	$ 258,635	$ 214,411
41	1547	Engineering and Maintenance	$ 284,247		98.4%	0.3%	1.3%		Allocated based on Supervised Departments costs	$ 279,641	$ 784	$ 3,821
42		Total Costs		$ 1,449,247	98.4%	0 3%	1 3%	Calculation	Allocated based on Supervised Departments costs	$ 1,425,764	$ 3,999	$ 19,484
43	1548	OSAT	$ 362,036		77.4%	7.0%	15.5%		Allocated based on Supervised Departments costs	$ 280,372	$ 25,385	$ 56,278
44		Total Costs		$ 425,636	77.4%	7.0%	15.5%	Calculation	Allocated based on Supervised Departments costs	$ 329,626	$ 29,845	$ 66,165
45	1564	Operations Scheduling	$ 277,313		82.1%	10.7%	7 1%		Allocated based on Supervised Departments costs	$ 227,795	$ 29,711	$ 19,807
46		Total Costs		$ 320,013	82.1%	10.7%	7 1%	Department	Allocated based on Supervised Departments costs	$ 262,871	$34,285	$22,857
47	**Total Operations Indirect Salaries**		**$ 1,854,083**							$ 1,478,280	$ 187,107	$ 188,696
48	**Total Operations Indirect Costs**			**$ 4,028,783**						$ 3,379,103	$ 326,764	$ 322,917
49	**Total Operations Salaries**		**$ 27,307,335**							$ 22,796,947	$ 2,460,882	$ 2,049,506
50	**Total Operations Costs**			**$ 34,243,682**						$ 28,693,550	$ 3,030,771	$ 2,519,361
51	**Operations Indirect Costs as % of Total**			12%								
52	**1700**	**VP Market Services**										
53	1722	Application Support	$ 170,495		15.0%	7.0%	78 0%		Direct Assignment	$ 25,574	$ 11,935	$ 132,986
54		Total Costs		$ 295,345	14.3%	6.9%	78.8%	Department	Direct Assignment	$ 42,218	$ 20,507	$ 232,619
55	1723	Tariff and Contract Implementatio	$ 872,566		90.0%	0.0%	10.0%		Direct Assignment	$ 785,309	$ -	$ 87,257
56		Total Costs		$ 1,193,948	90.0%	0.0%	10.0%	Department	Direct Assignment	$ 1,074,553	$ -	$ 119,395

CALIFORNIA ISO
COST ALLOCATION MATRIX - 2002 BUDGET

Line #	ISO Dept #	OPERATING COSTS	Amount Labor	Amount Total Costs	Allocation			Source	Allocation/ Assignment Method	Salary & Total Cost Allocated		
					Control Area Services	Congestion Mgmt.	A/S and Real Time Energy			Control Area Services	Congestion Mgmt.	A/S and Real Time Energy
57												
58	1724	BBS - PSS	$ 1,063,065		15.0%	7.0%	78.0%		Direct Assignment	$ 159,460	$ 74,415	$ 829,191
59		Total Costs		$ 1,309,065	15.0%	7.0%	78.0%	Department	Direct Assignment	$ 196,360	$ 91,635	$ 1,021,071
60	1725	BBS - FSS	$ 1,000,653		15.0%	7.0%	78.0%		Direct Assignment	$ 150,098	$ 70,046	$ 780,509
61		Total Costs		$ 1,240,929	15.0%	7.0%	78.0%	Department	Direct Assignment	$ 186,139	$ 86,865	$ 967,925
62	1731	Contracts and Special Projects	$ 1,098,390		55.0%	10.0%	35.0%		Direct Assignment	$ 604,115	$ 109,839	$ 384,437
63		Total Costs		$ 1,420,890	59.8%	8.9%	31.3%	Department	Direct Assignment	$ 848,990	$ 127,089	$ 444,812
64	1741	Client Relations	$ 2,200,547		39.1%	9.4%	51.6%		Direct Assignment	$ 859,855	$ 206,260	$ 1,134,432
65		Total Costs		$ 2,739,347	37.5%	9.4%	53.1%	Department	Direct Assignment	$ 1,026,935	$ 257,390	$ 1,455,022
66	1752	Manager of Markets	$ 2,127,409		20.0%	30.0%	50.0%		Direct Assignment	$ 425,482	$ 638,223	$ 1,063,705
67		Total Costs		$ 2,206,709	20.0%	30.0%	50.0%	Department	Direct Assignment	$ 441,342	$ 662,013	$ 1,103,355
68	1753	Market Application & Testing	$ 1,236,051		20.0%	30.0%	50.0%		Direct Assignment	$ 247,210	$ 370,815	$ 618,026
69		Total Costs		$ 1,933,351	20.0%	30.0%	50.0%	Department	Direct Assignment	$ 386,670	$ 580,005	$ 966,676
70	1755	Market Support and Developmen	$ 698,032		30.0%	10.0%	60.0%		Direct Assignment	$ 209,410	$ 69,803	$ 418,819
71		Total Costs		$ 1,228,032	29.6%	10.4%	60.0%	Department	Direct Assignment	$ 363,010	$ 128,203	$ 736,819
72	1756	Market Quality	$ 2,003,173		33.0%	33.0%	34.0%		Direct Assignment	$ 661,047	$ 661,047	$ 681,079
73		Total Costs		$ 2,203,423	33.1%	33.1%	33.8%	Department	Direct Assignment	$ 729,170	$ 729,170	$ 745,084
74	1757	Market Integration	$ 662,871		20.0%	30.0%	50.0%		Direct Assignment	$ 132,574	$ 198,861	$ 331,436
75				$ 990,831	20.0%	30.0%	50.0%	Department	Direct Assignment	$ 198,166	$ 297,249	$ 495,416
76	**Total Market Services Direct Salaries**		**13,133,252**							4,260,134	2,411,244	6,461,875
77	**Total Market Services Direct Salaries %**								**Allocation %**	32.4%	18.4%	49.2%
78	**Total Market Services Direct Costs**			**16,761,870**						5,493,552	2,980,127	8,288,191
79	**Total Market Services Direct Costs %**								**Allocation %**	32.8%	17.8%	49.4%

CALIFORNIA ISO
COST ALLOCATION MATRIX - 2002 BUDGET

Line #	ISO Dept #	OPERATING COSTS	Amount Labor	Amount Total Costs	Allocation: Control Area Services	Allocation: Congestion Mgmt.	Allocation: A/S and Real Time Energy	Source	Allocation/ Assignment Method	Salary & Total Cost Allocated: Control Area Services	Salary & Total Cost Allocated: Congestion Mgmt.	Salary & Total Cost Allocated: A/S and Real Time Energy
80	1700	**Market Services - Indirect Costs**										
81	1711	*VP - Market Services*	$ 389,917		32.4%	18 4%	49.2%	Calculation	Allocated based on Department Direct costs	$ 126,480	$ 71,588	$ 191,848
82		Total		$ 408,117	32 4%	18 4%	49 2%	Calculation	Allocated based on Department Direct costs	132,384	74,930	200,803
83	1721	Billing and Settlements	$ 385,579		36 1%	5 0%	58.9%		Allocated based on Supervised Departments costs	$ 139,057	$ 19,410	$ 227,112
84		Total Costs		$ 441,579	36.9%	4.9%	58.2%	Department	Allocated based on Supervised Departments costs	$ 162,788	$ 21,608	$ 257,183
85	1751	Market Operations	$ 447,754		20.0%	30.0%	50.0%		Allocated based on Supervised Departments costs	$ 89,551	$ 134,326	$ 223,877
86		Total Costs		$ 819,254	20.0%	30.0%	50.0%	Department	Allocated based on Supervised Departments costs	$ 163,851	$ 245,776	$ 409,627
87	**Total Market Services Indirect Salaries**		**$ 1,223,250**									
88	**Total Market Services Indirect Costs**			**$ 1,668,950**						355,088	225,324	642,838
89	**Total Market Services Salaries**		**14,356,502**							459,023	342,314	867,613
90	**Total Market Services Costs**			**$18,430,820**						**4,615,222**	**2,636,568**	**7,104,712**
91	**Market Services Indirect as % of Total**			9%						5,952,576	3,322,440	9,155,805
92	1400	**Information Services - Direct Costs**										
93	1424	Asset, Contract & Change Mgmt	$ 667,235		41 0%	11.2%	47.7%		Direct Assignment	$ 273,886	$ 74,946	$ 318,403
94		Total Costs		$ 19,332,812	41.0%	11.2%	47.7%	Department	Direct Assignment	$ 7,935,704	$2,171,531	$9,225,576
95	1441	Vendor Management	$ 194,698		59.7%	10.5%	29.8%		Allocated based on Labor Dollar Ratios - Special	$ 116,290	$ 20,474	$ 57,933
96		Total Costs		$ 30,774,566	59 7%	10.5%	29.8%	Calculation	Allocated based on Labor Dollar Ratios - Special	$ 18,381,225	$3,236,211	$9,157,130
97	1461	RT Operations Applications Supp	$ 2,078,100		100.0%	0.0%	0.0%		Direct Assignment	$ 2,078,100	$ -	$ -
98		Total Costs		$ 2,330,715	100.0%	0.0%	0.0%	Department	Direct Assignment	$ 2,330,715	$0	$0
99	1462	Field Data Acquisition & Data Qu	$ 1,300,096		38.3%	5.1%	56.6%		Direct Assignment	$ 497,568	$ 66,457	$ 736,071
100		Total Costs		$ 2,356,162	38.3%	2 8%	58.9%	Department	Direct Assignment	$ 902,057	$66,726	$1,387,379
101	1467	Post Operations Application Supp	$ 877,938		0 0%	0 0%	100 0%		Direct Assignment	$ -	$ -	$ 877,938
102		Total Costs		$ 977,918	0.0%	0.0%	100.0%	Department	Direct Assignment	$ -	$0	$977,918
103	**Total IS Direct Salaries**		**$ 5,118,067**							$ 2,965,844	$ 161,877	$ 1,990,346
104	**Total IS Direct Salaries %**								**Allocation %**	57.9%	3 2%	38 9%
105	**Total IS Direct Costs**			**$55,772,173**						$ 29,549,701	$ 5,474,468	$ 20,748,004

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Line #	ISO Dept #	OPERATING COSTS	Amount Labor	Amount Total Costs	Allocation			Source	Allocation/ Assignment Method	Salary & Total Cost Allocated		
					Control Area Services	Congestion Mgmt.	A/S and Real Time Energy			Control Area Services	Congestion Mgmt.	A/S and Real Time Energy
106	**Total IS Direct Cost %**								**Allocation %**	52.98%	9.82%	37.20%
107	**1600**	**Legal - Direct Costs**										
108	1641	Market Analysis	$ 1,846,583		20.0%	20.0%	60.0%		Direct Assignment	$ 369,317	$ 369,317	$ 1,107,950
109		Total		$ 3,441,040	14.1%	20.9%	65 0%	Department	Direct Assignment	$ 484,845	$ 718,144	$ 2,238,051
110	1661	Compliance	$ 1,106,490		80 0%	10 0%	10.0%		Direct Assignment	$ 885,192	$ 110,649	$ 110,649
111				$ 1,394,790	75.8%	8.6%	15.5%	Department	Direct Assignment	$ 1,057,908	$ 120,171	$ 216,711
112	1662	Data Quality Group	$ 328,036		66.7%	0.0%	33 3%		Direct Assignment	$ 218,691	$ -	$ 109,345
113		Total Costs		$ 496,036	66.7%	0.0%	33.3%	Department	Direct Assignment	$ 330,691	$ -	$ 165,345
114	**Total Legal Direct Salaries**		**$ 3,281,109**							$ 1,473,199	$ 479,966	$ 1,327,944
115	**Total Legal Direct Salaries %**								**Allocation %**	44.9%	14.6%	40.5%
116	**Total Legal Direct Costs**			**$5,331,866**						$ 1,873,444	$ 838,315	$ 2,620,107
117	**Total Legal Direct Cost %**								**Allocation %**	35.1%	15.7%	49.1%
118	**Subtotal Salaries Operations, Market Services, Indirect IS**			**$ 50,063,013**						$ 31,851,212	$ 5,739,293	$ 12,472,508
119	**Salary Percentages**									63.6%	11.5%	24.9%
120	**Subtotal Costs Operations, Market Services, Indirect IS**			**$ 113,778,541**						$ 66,069,271	$ 12,665,994	$ 35,043,276
121	**Expense Percentages**									58.1%	11.1%	30.8%
122	**1400**	**VP Information Services Indirect Costs**										
123	1411	Chief Information Officer- Genera	$ 386,862		53 0%	9.8%	37.2%		Allocated based on Department Direct costs	$ 204,971	$ 37,973	$ 143,918
124		Total		$ 1,742,012	53.0%	9.8%	37.2%	Calculation	Allocated based on Department Direct costs	$ 922,968	$170,992	$648,052
125	1422	Application Development Service	$ 3,681,663		50.2%	8.4%	41.4%		Allocated based on Direct Operating costs	$ 1,847,337	$ 310,546	$ 1,523,780
126		Total Costs		$ 3,985,028	50.2%	8.4%	41.4%	Calculation	Allocated based on Direct Operating costs	$ 1,999,555	$ 336,134	$ 1,649,338
127	1431	User Support Services	$ 482,127		58.1%	11.1%	30 8%		Allocated based on Direct Operating costs	$ 279,963	$ 53,671	$ 148,493
128		Total Costs		$ 7,168,082	58.1%	11.1%	30.8%	Calculation	Allocated based on Direct Operating costs	$ 4,162,384	$797,961	$ 2,207,737
129	1432	Technology Infrastructure Service	$ 250,115		58.1%	11.1%	30.8%		Allocated based on Direct Operating costs	$ 145,238	$ 27,843	$ 77,034
130		Total Costs		$ 285,315	58.1%	11.1%	30.8%	Calculation	Allocated based on Direct Operating costs	$ 165,678	$31,762	$ 87,876

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COST ALLOCATION MATRIX - 2002 BUDGET

Line #	ISO Dept #	OPERATING COSTS	Amount Labor	Amount Total Costs	Allocation			Source	Allocation/ Assignment Method	Salary & Total Cost Allocated		
					Control Area Services	Congestion Mgmt.	A/S and Real Time Energy			Control Area Services	Congestion Mgmt.	A/S and Real Time Energy
131	1442	Production Support Services	$ 2,914,278		53.7%	10.3%	36.0%		Allocated based on Direct Operating costs	$ 1,564,601	$ 299,946	$ 1,049,731
132				$ 3,259,478	53.7%	10.3%	36.0%	Calculation	Allocated based on Direct Operating costs	$ 1,749,930	$335,475	$1,174,073
133	1451	Information Security Services	$ 985,829		58 1%	11.1%	30.8%		Allocated based on Direct Operating costs	$ 572,454	$ 109,744	$ 303,631
134		Total Costs		$ 1,503,429	58.1%	11.1%	30.8%	Calculation	Allocated based on Direct Operating costs	$ 873,016	$167,364	$ 463,049
136	1463	Corporate & Operation Systems	$ 374,751		84.1%	0.4%	15.5%		Allocated based on Department Direct costs	$ 315,305	$ 1,375	$ 58,070
138		Total Costs		$ 424,551	84.1%	0.4%	15 5%	Calculation	Allocated based on Department Direct costs	$ 357,206	$1,558	$ 65,787
137	1471	Infrastructure Engineering	$ 1,455,182		58.1%	11.1%	30 8%		Allocated based on Direct Operating costs	$ 845,000	$ 161,993	$ 448,189
138		Total Costs		$ 1,737,389	58.1%	11.1%	30.8%	Calculation	Allocated based on Direct Operating costs	$ 1,008,872	$193,409	$ 536,108
139	1468	Corporate Application Support	$ 1,306,675		56.5%	10.8%	32.7%		Allocated based on Direct Operating costs	$ 737,623	$ 141,408	$ 427,644
140				$ 1,524,927	56.5%	10.8%	32.7%		Allocated based on Direct Operating costs	$ 860,827	$165,027	$499,073
141	**Total IS Indirect Salaries**		**$ 11,837,482**							$ 6,512,490	$ 1,144,500	$ 4,180,492
142	**Total IS Indirect Costs**			**$21,630,211**						$ 12,100,435	$ 2,199,682	$ 7,330,094
143	**Total IS Operating Salaries**		**$ 16,955,549**							$ 9,478,334	$ 1,306,377	$ 6,170,837
144	**Total IS Operating Costs**			**$77,402,384**						$ 41,650,136	$ 7,674,151	$ 28,078,097
145	**IS Indirect Costs as % of IT Operating Costs**			28%								
146	**Operating Costs and Salaries Before Corporate Indirects**											
147	**Total Operating Salaries**		**$ 61,900,495**							**$ 38,363,702**	**$ 6,883,793**	**$ 16,653,000**
148	**Total Operating Salaries %**								**Allocation %**	62.0%	11.1%	26.9%
149	**Total Operating Costs**			**$135,408,752**						**$78,169,706**	**$14,885,677**	**$42,373,370**
150	**Total Operating Costs %**								**Allocation %**	57.7%	11.0%	31.3%
151	**1300 Finance - Corporate Indirect Costs**											
152	1321	Accounting	$ 820,451		48.0%	8.5%	43.5%		Allocated based on Direct Operating costs	$ 393,812	$ 70,052	$ 356,587
153		Total		$ 2,318,351	48.0%	8.5%	43.5%	Calculation	Allocated based on Direct Operating costs	$ 1,112,795	$ 197,947	$ 1,007,609

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Line #	ISO Dept #	OPERATING COSTS	Amount Labor	Amount Total Costs	Allocation			Source	Allocation/ Assignment Method	Salary & Total Cost Allocated		
					Control Area Services	Congestion Mgmt.	A/S and Real Time Energy			Control Area Services	Congestion Mgmt.	A/S and Real Time Energy
154	1331	Treasury and Financial Planning	$ 809,517		66.6%	8.7%	24.7%		Allocated based on Direct Operating costs	$ 538,912	$ 70,279	$ 200,325
155		Total		$ 2,017,637	66.6%	8.7%	24 7%	Calculation	Allocated based on Direct Operating costs	$ 1,343,183	$ 175,164	$ 499,290
156												
157	1351	Facilities	$ 654,706		62 0%	11.1%	26.9%		Allocated based on Labor Dollar Ratios	$ 405,763	$ 72,808	$ 176,135
158		Total		$ 5,298,657	62.0%	11.1%	26.9%	Calculation	Allocated based on Labor Dollar Ratios	$ 3,283,917	$ 589,250	$ 1,425,490
159	1361	Office Administration	$ 645,454		62 0%	11.1%	26.9%		Allocated based on Labor Dollar Ratios	$ 400,029	$ 71,779	$ 173,646
160		Total		$ 2,426,024	62.0%	11.1%	26.9%	Calculation	Allocated based on Labor Dollar Ratios	$ 1,503,562	$ 269,792	$ 652,670
161	**Total Finance Indirect Costs**			**$12,060,669**						$ 7,243,457	$ 1,232,152	$ 3,585,059
162	**Total Finance Op Salaries b/f CFO**		$ 2,930,128							$ 1,738,516	$ 284,919	$ 906,693
163	**Finance Indirect as % of Fin Operating Costs**			100%						60.1%	10.2%	29.7%
164	**1300 - Finance - Based on Finance Corporate Indirect Costs**											
165	1311	CFO - General	$ 450,557		61 3%	10 8%	27.8%		Allocated based on Supervised Departments costs	$ 276,366	$ 48,860	$ 125,330
166		Total		$ 530,057	61.3%	10.8%	27.8%	Department	Allocated based on Supervised Departments costs	$ 325,131	$ 57,482	$ 147,445
167	**Total Finance Op Salaries**		$ 3,380,685							$ 2,014,883	$ 333,779	$ 1,032,023
168	**Total Finance Operating Costs**			$ 12,590,726						$ 7,568,588	$ 1,289,634	$ 3,732,504
169	**Finance Indirect as % of Fin Operating Costs**			100%								
170	**1600 - Legal - Chief Counsel - Corporate Indirect Costs**											
171	1631	Legal and Regulatory	$ 3,243,880		49.3%	9.2%	41.5%		Allocated based on Direct Operating costs	$ 1,598,669	$ 299,705	$ 1,345,506
172		Total		$ 14,713,509	49.3%	9.2%	41.5%	Calculation	Allocated based on Direct Operating costs	$ 7,251,201	$1,359,395	$6,102,913
173	**Total Legal Indirect Salaries**		$ 3,243,880							1,598,668.7	299,705.1	1,345,506.3
174	**Total Legal Indirect Costs**			$ 14,713,509						$ 7,251,201	$ 1,359,395	$ 6,102,913
175	**Total Legal Salaries**		$ 6,524,989							3,071,868.0	779,670.7	2,673,450.4
176	**Total Legal Costs**			$20,045,375						$9,124,645	$2,197,709	$8,723,020
177	**Indirect as % of Total**			73.4%						45.5%	11.0%	43.5%
178	**1600 - Legal - Chief Counsel - Based on Legal Corporate Indirect and Direct Costs**											
179	1611	General Counsel - General	$ 463,778		45.5%	11.0%	43.5%		Allocated based on Supervised Departments costs	$ 211,112	$ 50,847	$ 201,819

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Line #	ISO Dept #	OPERATING COSTS	Amount Labor	Amount Total Costs	Allocation: Control Area Services	Allocation: Congestion Mgmt.	Allocation: A/S and Real Time Energy	Source	Allocation/ Assignment Method	Salary & Total Cost Allocated: Control Area Services	Salary & Total Cost Allocated: Congestion Mgmt.	Salary & Total Cost Allocated: A/S and Real Time Energy
180		Total		$ 527,678	45.5%	11.0%	43.5%	Calculation	Allocated based on Supervised Departments costs	$ 240,199	$57,853	$229,626
181	**Total Legal Salaries**		$ 6,988,767							3,282,979	830,518	2,875,270
182	**Total Legal Costs**			$20,573,053						$9,364,844	$2,255,562	$8,952,647
183	**Indirect as % of Total**			76%					Op Cost %	45.5%	11.0%	43.5%
184	**1800**	**VP Corporate and Strategic Development - Corporate Indirect Costs**										
185	1821	Communications	$ 427,176		57.7%	11.0%	31.3%		Allocated based on Direct Operating costs	$ 246,603	$ 46,897	$ 133,676
186		Total Costs		$ 928,776	57.7%	11.0%	31.3%	Calculation	Allocated based on Direct Operating costs	$ 536,170	$ 101,964	$ 290,641
187	1831	Strategic Development	$ 278,394		62 0%	11.1%	26.9%		Allocated based on Labor Dollar Ratios	$ 172,539	$ 30,959	$ 74,896
188				$ 278,394	62 0%	11.1%	26.9%	Calculation	Allocated based on Labor Dollar Ratios	$ 172,539	$ 30,959	$ 74,896
189	1851	Office of Strategic Services	$ 625,250		57.7%	11.0%	31.3%		Allocated based on Direct Operating costs	$ 360,949	$ 68,642	$ 195,659
190				$ 1,023,750	57.7%	11.0%	31.3%	Direct Op Costs	Allocated based on Direct Operating costs	$ 590,998	$ 112,391	$ 320,361
191	1861	Regulatory Policy	$ 662,814		57.7%	11.0%	31.3%		Allocated based on Direct Operating costs	$ 382,634	$ 72,766	$ 207,414
192		Total Costs		$ 1,492,939	57.7%	11 0%	31.3%	Direct Op Costs	Allocated based on Direct Operating costs	$ 861,854	$ 163,900	$ 467,184
193	**Total Corporate and Strategic Devpt b/f HR**		$ 1,993,634							$ 1,162,724	$ 219,265	$ 611,645
194	**Total Corporate and Strategic Devpt b/f HR**			$3,723,859						$ 2,161,561	$ 409,215	$ 1,153,083
									Op Cost %	58.0%	11.0%	31.0%
196	**1800**	**VP Corporate and Strategic Development - Based on Corporate Indirect Costs**										
196	1811	VP Corporate and Strategic Devt.	$ 383,492		58.0%	11.0%	31.0%		Allocated based on Supervised Departments costs	$ 222,603	$ 42,142	$ 118,747
197		Total Costs		$ 506,792	58.0%	11 0%	31.0%	Calculation	Allocated based on Supervised Departments costs	$ 294,174	$ 55,691	$ 156,927
198	**Total Corporate and Strategic Devpt b/f HR**		$ 2,377,126							$ 1,385,327	$ 261,407	$ 730,392
199	**Total Corporate and Strategic Devpt b/f HR**			$4,230,651						$ 2,455,734	$ 464,907	$ 1,310,010
200	**Cost Allocation Percentage**									58.0%	11.0%	31.0%
201		**Total Costs and Salaries before HR/CEO**										
202		**Total Costs and Salaries before HR/CEO**										

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Line #	ISO Dept #	OPERATING COSTS	Amount Labor	Amount Total Costs	Allocation: Control Area Services	Allocation: Congestion Mgmt.	Allocation: A/S and Real Time Energy	Source	Allocation/ Assignment Method	Salary & Total Cost Allocated: Control Area Services	Salary & Total Cost Allocated: Congestion Mgmt.	Salary & Total Cost Allocated: A/S and Real Time Energy
203		**Total Salaries before HR/CEO**	$ 71,365,964							$ 43,573,692	$ 7,829,531	$ 19,962,741
204		**Total Salaries before HR/CEO %**							**Allocation %**	61.1%	11.0%	28.0%
205		***Total Costs before HR/CEO***		**$ 167,471,316**						**$ 95,685,428**	**$ 18,037,465**	**$ 53,748,423**
206		**Total Costs before HR/CEO %**							**Allocation %**	57.1%	10.8%	32.1%
207		**100/1200 - CEO / Human Resources - Corporate Indirects**										
208	1111	CEO - General	$ 740,026		61 1%	11.0%	28 0%		Allocated based on Labor Dollar Ratios	$ 451,835	$ 81,188	$ 207,003
209		Total		$ 1,079,051	61 1%	11.0%	28.0%	Calculation	Allocated based on Labor Dollar Ratios	$ 658,833	$ 118,382	$ 301,836
210	1841	Human Resources	$ 2,907,520		61.1%	11.0%	28.0%		Allocated based on Labor Dollar Ratios	$ 1,775,235	$ 318,983	$ 813,302
211		Total		$ 4,950,645	61.1%	11.0%	28.0%	Calculation	Allocated based on Labor Dollar Ratios	$ 3,022,700	$ 543,133	$ 1,384,812
212	1651	Board of Governors								$ -	$ -	$ -
213		Total		$ 163,640	61.1%	11.0%	28.0%		Allocated based on Labor Dollar Ratios	$ 99,913	$ 17,953	$ 45,774
214		**Total CEO/HR Salaries**	**$ 3,647,546**							$ 2,227,071	$ 400,171	$ 1,020,305
215		**Total CEO/HR Costs**		**$ 6,193,336**						$ 3,781,446	$ 679,468	$ 1,732,422
216		**Total Salaries Prior to Salary Adjustments**	**$ 75,013,510**							$ 45,800,763	$ 8,229,702	$ 20,983,045
217		**Total Salaries Prior to Salary Adjustments %**							**Allocation %**	61%	11%	28%
218		**Total Costs Prior to Salary Adjustments**		**173,664,652**						$ 99,466,874	$ 18,716,933	$ 55,480,845
219		**Total Costs Prior to Salary Adjustments &**							**Allocation %**	57.3%	10.8%	31.9%
220		**Other Costs**										
221	All	Salary Adjustments, FY2002	$ 3,800,693	$3,800,693	60 9%	10 8%	28 3%	Calculation	As distributed to various departments	2,314,308	412,019	1,074,366
222		**Total Other Costs**	**$ 3,800,693**	**$3,800,693**						$2,314,308	$412,019	$1,074,366
223		**Gross Operating Costs**										
224		**Total Operating Salaries**	**$ 78,814,203**							$ 48,115,070	$ 8,641,721	$ 22,057,412
225		**Total Operating Salaries %**							**Allocation %**	61.0%	11.0%	28.0%
226		**Gross Operating Costs**		**$177,465,345**						**$101,781,181**	**$19,128,952**	**$56,555,212**
227		**Gross Operating Costs %**							**Allocation %**	57.4%	10.8%	31.9%
228		**Other Revenues**										
229	All	Interest Revenues		($1,350,300)	57.1%	10.8%	32.1%	Calculation	Operating Costs	$ (771,499)	($145,434)	($433,367)
230	All	SC Application and Training Fees		($15,000)	57.1%	10.8%	32 1%			$ (8,570)	($1,616)	($4,814)
231	All	WSCC Security Coordination		($1,244,746)	100.0%	0.0%	0.0%			$ (1,244,746)	$0	$0
232		**Total Other Revenue**		**($2,610,046)**						$ (2,024,816)	$ (147,049)	$ (438,181)
233		**Total Other Revenue %**							**Allocation %**	77.6%	5.6%	16.8%
234		**Net Operating Costs - 2001**										
235		**Total Salaries**	**$ 78,814,203**							48,115,070	8,641,721	22,057,412
236		**Total Salaries %**							**Allocation %**	61.0%	11.0%	28.0%
237		**Net Operating Costs**		**$174,855,300**						$99,756,366	$18,981,903	$56,117,031
238		**Net Operating Costs %**							**Allocation %**	57.1%	10.9%	32.1%
239		**1998 Bonds**										
240		**Infrastructure - Direct Assigned Items**										

CALIFORNIA ISO
COST ALLOCATION MATRIX - 2002 BUDGET

Line #	ISO Dept #	OPERATING COSTS	Amount Labor	Amount Total Costs	Allocation			Source	Allocation/ Assignment Method	Salary & Total Cost Allocated		
					Control Area Services	Congestion Mgmt.	A/S and Real Time Energy			Control Area Services	Congestion Mgmt.	A/S and Real Time Energy
241		EMS		$16,470,000	100.0%	0.0%	0.0%	Contract Analysis	Direct Assignment	$16,470,000	$0	$0
242		SI		$27,102,000	39.0%	20.0%	41.0%	Contract Analysis	Direct Assignment	$10,569,780	$5,420,400	$11,111,820
243		SA		$31,681,000	35 0%	25.0%	40.0%	Contract Analysis	Direct Assignment	$11,088,350	$7,920,250	$12,672,400
244		BBS		$48,173,000	0.0%	0.0%	100 0%	Contract Analysis	Direct Assignment	$0	$0	$48,173,000
245		MDAS		$8,166,000	10.0%	0.0%	90.0%	Contract Analysis	Direct Assignment	$816,600	$0	$7,349,400
246		RMR-Software		$56,000	100.0%	0 0%	0.0%	G/L	Direct Assignment	$56,000	$0	$0
247		Market Anaysis Software		$238,000	0.0%	0.0%	100.0%	G/L	Direct Assignment	$0	$0	$238,000
248		Vehicles		$96,000	10.0%	0.0%	90.0%	G/L	Direct Assignment	$9,600	$0	$86,400
249		FERC Study Software		$11,000	25.0%	25.0%	50.0%	G/L	Direct Assignment	$2,750	$2,750	$5,500
250		Analope Project		$0	100.0%	0.0%	0.0%	G/L	Direct Assignment	$0	$0	$0
251		GCP		$975,000	100 0%	0.0%	0.0%	G/L	Direct Assignment	$975,000	$0	$0
252		SRS Software		$1,049,000	0.0%	0.0%	100.0%	G/L	Direct Assignment	$0	$0	$1,049,000
253		ETC Software		$891,000	0.0%	100.0%	0.0%	G/L	Direct Assignment	$0	$891,000	$0
254		FTR Auction software		$17,000	0.0%	0.0%	100.0%	G/L	Direct Assignment	$0	$0	$17,000
255		ACC Upgrades		$1,162,000	100.0%	0.0%	0.0%	G/L	Direct Assignment	$1,162,000	$0	$0
256		**Total Infrastructure Direct Assigned Items**		**$136,087,000**						$41,150,080	$14,234,400	$80,702,520
257		**Infrastructure - Allocated Items**										
258		Issue Management System -Remedy		$692,000	57 1%	10.9%	32.1%	G/L	Operating Costs	$394,792	$75,122	$222,086
259		Security System - CUDA		$6,993,000	57.1%	10.9%	32.1%	G/L	Operating Costs	$3,989,563	$759,145	$2,244,292
260		Corporate Accounting - Oracle		$2,993,000	57.1%	10.9%	32.1%	G/L	Operating Costs	$1,707,531	$324,913	$960,556
261		Document Management System - EDMS		$1,715,000	57.1%	10.9%	32.1%	G/L	Operating Costs	$978,421	$186,177	$550,402
262		HR System - Imperativ		$136,000	57.1%	10.9%	32.1%	G/L	Operating Costs	$77,589	$14,764	$43,647
263		HR System - ABRA		$38,000	57 1%	10.9%	32.1%	G/L	Operating Costs	$21,679	$4,125	$12,195
264		System Management and Monitoring - Tivoli		$200,000	57.1%	10.9%	32.1%	G/L	Operating Costs	$114,102	$21,712	$64,187
265		Data Warehouse		$1,279,000	57.1%	10.9%	32.1%	G/L	Operating Costs	$729,680	$138,845	$410,475
266		Network Software		$630,000	57 1%	10.9%	32.1%	G/L	Operating Costs	$359,420	$68,391	$202,188
267		Facilities		$10,566,000	61.0%	11.0%	28.0%	G/L	Total Salaries	$6,450,409	$1,158,528	$2,957,064
268		Furniture		$5,391,000	61.0%	11.0%	28.0%	G/L	Total Salaries	$3,291,137	$591,106	$1,508,757
269		Facilities-Office Equipment		$1,330,000	61.0%	11.0%	28.0%	G/L	Total Salaries	$811,948	$145,830	$372,222
270		Transmission Display Software - TIDS		$139,000	57.1%	10.9%	32.1%	G/L	Operating Costs	$79,301	$15,090	$44,610
271		Other software and Enhancements		$3,482,000	57.1%	10.9%	32.1%	G/L	Operating Costs	$1,986,509	$377,998	$1,117,493
272		MCI Contract		$27,040,000	59.7%	10.5%	29.8%	Contract Analysis	Telecom Dept	$16,150,620	$2,843,489	$8,045,891
273		IBM Contract		$6,816,000	58.1%	11.1%	30.8%	G/L	IT Dept	$3,957,936	$758,767	$2,099,297
274		**Total Infrastructure Allocated Items**		**$69,440,000**						$41,100,637	$7,484,001	$20,855,362
275		**Subtotal Infrastructure**		**$205,527,000**						$82,250,717	$21,718,401	$101,557,882
276		**Subtotal Infrastructure %**							**Allocation %**	40.0%	10.6%	49.4%
277		**Startup - Allocated Items**										
278		Trustee Costs		$5,692,000	40 0%	10.6%	49.4%	G/L	Infrastructure subtotal	$2,277,905	$601,484	$2,812,611
279		Interest-Capitalized		$1,261,000	40.0%	10.6%	49.4%	G/L	Infrastructure subtotal	$504,645	$133,252	$623,103
280		User Groups		$957,000	40.0%	10.6%	49.4%	G/L	Infrastructure subtotal	$382,986	$101,128	$472,886
281		Startup Costs-through 3/31/98		$52,897,000	57.1%	10.9%	32 1%	G/L	Operating Costs	$30,178,167	$5,742,381	$16,976,452
282		Working Capital-3 months		$21,692,000	57.1%	10.9%	32 1%	G/L	Operating Costs	$12,375,462	$2,354,835	$6,961,703

CALIFORNIA ISO
COST ALLOCATION MATRIX - 2002 BUDGET

Line #	ISO Dept #	OPERATING COSTS	Amount Labor	Amount Total Costs	Allocation			Source	Allocation/ Assignment Method	Salary & Total Cost Allocated		
					Control Area Services	Congestion Mgmt.	A/S and Real Time Energy			Control Area Services	Congestion Mgmt.	A/S and Real Time Energy
283		**Total Startup Allocated Items**		**$82,499,000**						$45,719,165	$8,933,080	$27,846,755
284		**Other Software and Enhancements**										
285		2000 Spending: EMS/MDAS/Participating Load Prog		$1,651,155	89.0%	0.0%	11.0%	Separate Analysis	Direct Assignment	$1,469,528	$0	$181,627
286		2000 Spending: SA/SI/BBS		$4,569,322	8 0%	21.0%	71.0%	Separate Analysis	Direct Assignment	$365,546	$959,558	$3,244,219
287		2000 Spending: Other Systems/Vehicles		$1,240,714	12.0%	0.0%	88 0%	Separate Analysis	Direct Assignment	$148,886	$0	$1,091,828
288		2001 Spending: Other Systems		$4,439,568	57.1%	10.9%	32.1%	Separate Analysis	Operating Costs	$2,532,810	$481,950	$1,424,809
289		2000 Spending: Facilities/Furniture/Office Equipmen		$1,473,241	61.0%	11.0%	28 0%	Separate Analysis	Total Salaries	$899,395	$161,536	$412,310
290		**Total Other Software and Enhancements**		**$13,374,000**						$5,416,164	$1,603,043	$6,354,793
291		**Total 1998 Bonds**										
292		**Total 1998 Bonds**		**$301,400,000**						$133,386,046	$32,254,524	$135,759,430
293		**Total 1998 Bonds %**							**Allocation %**	44.3%	10.7%	45.0%
294		**Total 2000 Bonds**										
295		Land & Building Costs		$9,300,000	61.0%	11.0%	28.0%		Total Salaries	$5,677,532	$1,019,715	$2,602,753
296		2000 Projects:SA/SI/BBS		$16,881,315	44.8%	1.6%	53.6%	Separate Analysis	Direct Assignment	$7,564,517	$265,037	$9,051,761
297		2000 Projects: EMS/CIM/FDA		$1,494,967	79.0%	0.0%	21 0%	Separate Analysis	Direct Assignment	$1,181,024	$0	$313,943
298		2000 Projects: Other Systems		$4,028,218	57.1%	10.9%	32.1%	Separate Analysis	Operating Costs	$2,298,131	$437,294	$1,292,793
299		2001 Spending: EMS		$1,911,445	100.0%	0 0%	0.0%	Separate Analysis	Direct Assignment	$1,911,445	$0	$0
300		2001 Spending: SA/SI/BBS		$2,397,690	13.0%	0.0%	87.0%	Separate Analysis	Direct Assignment	$311,700	$0	$2,085,990
301		2001 Spending: Other Systems		$75,615	0.0%	0 0%	100.0%	Separate Analysis	Direct Assignment	$0	$0	$75,615
302		2001 Spending: Facilities/Furniture/Office Equipmen		$10,750	61.0%	11.0%	28.0%	Separate Analysis	Total Salaries	$6,563	$1,179	$3,009
303		**Total 2000 Bonds**		**$36,100,000**						$18,950,912	$1,723,225	$15,425,864
304		**Total 2000 Bonds %**							**Allocation %**	52.5%	4.8%	42.7%
306		**Total 1998 and 2000 Bonds**										
308		**Total 1998 and 2000 Bonds**		**$337,500,000**						$152,336,957	$33,977,749	$151,185,293
307		**Total 1998 and 2000 Bonds %**							**Allocation %**	45.1%	10.1%	44.8%
308		**Total 2002 Bonds: Funding 2002 Capital Budget and Some 2003 Projects**										
309		2002 Budget: Operating Systems		$9,567,440	25.0%	15.0%	60.0%	Separate Analysis	Direct Assignment	$2,391,860	$1,435,116	$5,740,464
310		2002 Budget: Funiture/Facilities/Office Equipment		$125,000	61.0%	11.0%	28 0%	Separate Analysis	Total Salaries	$76,311	$13,706	$34,983
311		2002 Budget: Corporate Systems		$1,678,780	57.1%	10.9%	32.1%	Separate Analysis	Operating Costs	$957,758	$182,245	$538,778
312		2002 Budget: Other Systems		$2,327,780	20.0%	28.0%	52.0%	Separate Analysis	Direct Assignment	$465,556	$651,778	$1,210,446
313		2003 Budget: Other Systems		$154,000	42 0%	0.0%	58.0%	Separate Analysis	Direct Assignment	$64,680	$0	$89,320
314		2003 Budget: Operating Systems		$6,147,000	21.0%	25.0%	54.0%	Separate Analysis	Direct Assignment	$1,290,870	$1,536,750	$3,319,380
315		**Total 2002 Bonds**		**$20,000,000**						$5,247,035	$3,819,595	$10,933,371

CALIFORNIA ISO
COST ALLOCATION MATRIX - 2002 BUDGET

Line #	ISO Dept #	OPERATING COSTS	Amount Labor	Amount Total Costs	Allocation			Source	Allocation/ Assignment Method	Salary & Total Cost Allocated		
					Control Area Services	Congestion Mgmt.	A/S and Real Time Energy			Control Area Services	Congestion Mgmt.	A/S and Real Time Energy
316		**Total 2002 Bonds %**							**Allocation %**	26.2%	19.1%	54.7%
317		**Total Debt Service**										
318		Debt Service - Existing Debt (1998 and 2000 Bonds): Including F		$55,638,481	45.1%	10.1%	44.8%	Calculation	1998 & 2000 bonds	$25,113,472	$5,601,394	$24,923,615
319		Anticipated Debt Service - 2002 Bonds: Including Reserve		$4,390,808	26.2%	19.1%	54.7%	Calculation	2002 bonds	$1,151,936	$838,555	$2,400,317
320		**Total Debt Service Cost**		**$60,029,289**						**$26,265,409**	**$6,439,949**	**$27,323,932**
321		**Total Debt Service Cost %**							**Allocation %**	43.8%	10.7%	45.5%
322		**Cash Funded Cap Ex: 2002 Capital Budget**			**71.0%**							
323		2002 Budget: Operating Systems		$4,946,000	72.8%	5.7%	21.5%	Separate Analysis	Direct Assignment	$3,602,172	$279,944	$1,063,885
324		2002 Budget: Funiture/Facilities/Office Equipment		$1,075,000	61.0%	11.0%	28.0%	Separate Analysis	Total Salaries	$656,274	$117,870	$300,856
325		2002 Budget: Corporate Systems		$2,280,000	57.1%	10 9%	32 1%	Separate Analysis	Operating Costs	$1,300,758	$247,512	$731,730
326		**Total Cash Funded Cap Ex**		**$8,301,000**						**$5,559,204**	**$645,326**	**$2,096,470**
327		**Total Cash Funded Cap Ex%**							**Allocation %**	67.0%	7.8%	25.3%
328		**Total Cost of Service - 2002**										
329		**Gross Operating Costs**	**$ 78,814,203**	$177,465,345	57.1%	10.9%	32.1%			$101,781,181	$19,128,952	$56,555,212
330		**Other Costs and Income**		($2,610,046)	77.6%	5.6%	16.8%			($2,024,816)	($147,049)	($438,181)
331		**Net Operating Costs**		$174,855,300	57.4%	10.8%	31.9%			$99,756,366	$18,981,903	$56,117,031
332		**Debt Service**		$60,029,289	43.8%	10.7%	45.5%			$26,265,409	$6,439,949	$27,323,932
333		**Cash Funded Cap Ex**		$8,301,000	67 0%	7 8%	25.3%			$5,559,204	$645,326	$2,096,470
334		**Total Gross Cost of Service**		**$243,185,589**						**$131,580,978**	**$26,067,177**	**$85,537,433**
335		**Total Gross Cost of Service %**							**Allocation % results before Revenue Credit or Deficiency**	54.1%	10.7%	35.2%
336		**(Revenue Credit)/Shortfall from 2001**		$ 1,608,297	637.1%	107.0%	-644 0%			$ 10,245,828	$ 1,720,202	$ (10,357,733)
337		**Total Net Cost of Service**		**$244,793,886**						**$141,826,806**	**$27,787,380**	**$75,179,700**
338		**Total Net Cost of Service %**							**Net Allocation %**	57.9%	11.4%	30.7%

CALIFORNIA ISO
COST ALLOCATION MATRIX - 2002 BUDGET

TELECOMMUNICATIONS - Total Salaries Method

Line #	ISO Dept #	OPERATING COSTS	Amount Labor	Amount Total Costs	Functional Allocation			Source	Assignment Method	Salary Cost Allocated		
					Control Area Services	Congestion Mgmt.	A/S and Real Time Energy			Control Area Services	Congestion Mgmt.	A/S and Real Time Energy
1	1500	**Operations - Direct Salaries**										
2	1521	Grid Planning	$ 2,060,915		100.0%	0.0%	0 0%		Direct Assignment	2,060,915	-	-
3	1542	Outage Coordination	$ 1,605,282		100 0%	0.0%	0 0%		Direct Assignment	1,605,282	-	-
4	1543	Loads and Resources	$ 848,766		100.0%	0.0%	0.0%		Direct Assignment	848,766	-	-
5	1544	Real-Time Scheduling	$ 2,766,779		75.0%	15.0%	10.0%		Direct Assignment	2,075,084	415,017	276,678
6	1545	Grid Operations	$ 7,074,516		79 5%	10 3%	10.3%		Direct Assignment	5,620,928	726,794	726,794
7	1546	Security Coordination	$ 1,161,146		100.0%	0 0%	0 0%		Direct Assignment	1,161,146	-	-
8	1554	Special Projects Engineering	$ 584,547		84 2%	4.4%	11.5%		Direct Assignment	491,984	25,527	67,035
9	1555	Operations Support Group	$ 946,146		59.1%	22.7%	18.2%		Direct Assignment	559,365	214,741	172,040
10	1558	Transmission Maintenance	$ 1,067,625		97.4%	0.0%	2.6%		Direct Assignment	1,039,699	-	27,926
11	1561	Southern Area Engineering	$ 1,011,718		100.0%	0.0%	0.0%		Direct Assignment	1,011,718	-	-
12	1562	Northern Area Engineering	$ 1,086,299		100.0%	0.0%	0 0%		Direct Assignment	1,086,299	-	-
13	1563	Coordinated Operations	$ 548,968		88.4%	2.9%	8 7%		Direct Assignment	485,050	15,979	47,938
14	1565	Pre-Scheduling and Support	$ 1,738,892		75.0%	15.0%	10 0%		Direct Assignment	1,304,169	260,834	173,889
15	1566	Regional Coordination	$ 413,849		59.5%	16.5%	24.0%		Direct Assignment	246,131	68,308	99,411
16	1549	Operations Training Group	$ 2,067,952		65.2%	24.0%	10.8%		Direct Assignment	1,348,800	496,241	222,911
17	1559	Operations Application Support	$ 469,852		79.5%	10.7%	9.8%		Direct Assignment	373,330	50,334	46,187
18		**Total Operations Direct Salary Cost Only**	**$ 25,453,252**							21,318,667	2,273,775	1,860,810
19		**Total Operations Direct Salary %**							**Allocation %**	83.8%	8.9%	7.3%
20	1500	**Operations - Indirect Salaries**										
21	1511	VP - Grid Operations General	$ 930,487		80.1%	10.6%	9.3%		Allocated based on Department Direct costs	745,649	98,368	86,470
22	1547	Engineering and Maintenance	$ 284,247		97.4%	0.5%	2 2%		Allocated based on Supervised Departments costs	276,739	1,306	6,202
23	1548	OSAT	$ 362,036		77.1%	7.8%	15.1%		Allocated based on Supervised Departments costs	278,963	28,268	54,805
24	1564	Operations Scheduling	$ 277,313		84 2%	9.5%	6 3%		Allocated based on Supervised Departments costs	233,440	26,324	17,549
25		**Total Operations Indirect Salaries**	**$ 1,854,083**							$ 1,534,791	$ 154,266	$ 165,026
26		**Total Operations Salaries**	**$ 27,307,335**							$ 22,853,458	2,428,041	2,025,836
27	1700	**VP Market Services Salaries**										
28	1722	Application Support	$ 170,495		15.0%	7.0%	78.0%		Direct Assignment	25,574	11,935	132,986
29	1723	Tariff and Contract Implementation	$ 872,566		90 0%	0.0%	10.0%		Direct Assignment	785,309	-	87,257
30	1724	BBS - PSS	$ 1,063,065		15.0%	7.0%	78.0%		Direct Assignment	159,460	74,415	829,191
31	1725	BBS - FSS	$ 1,000,653		15.0%	7.0%	78 0%		Direct Assignment	150,098	70,046	780,509
32	1731	Contracts and Special Projects	$ 1,098,390		55.0%	10.0%	35.0%		Direct Assignment	604,115	109,839	384,437
33	1741	Client Relations	$ 2,200,547		39 1%	9.4%	51.6%		Direct Assignment	859,855	206,260	1,134,432
34	1752	Manager of Markets	$ 2,127,409		20.0%	30.0%	50.0%		Direct Assignment	425,482	638,223	1,063,705
35	1753	Market Application & Testing	$ 1,236,051		20 0%	30.0%	50.0%		Direct Assignment	247,210	370,815	618,026
36	1755	Market Support and Development	$ 698,032		30.0%	10.0%	60.0%		Direct Assignment	209,410	69,803	418,819
37	1756	Market Quality	$ 2,003,173		33.0%	33 0%	34.0%		Direct Assignment	661,047	661,047	681,079
38	1757	Market Integration	$ 662,871		20 0%	30.0%	50.0%		Direct Assignment	132,574	198,861	331,436
39		**Total Market Services Direct Salaries**	**$ 13,133,252**							4,260,134	2,411,244	6,461,875
40		**Total Market Services Direct Salaries %**							**Allocation %**	32.4%	18.4%	49.2%
41	1700	**Market Services - Indirect Salaries**										
42	1711	VP - Market Services	$ 389,917		32.4%	18 4%	49.2%		Allocated based on Department Direct costs	126,480	71,588	191,848
43	1721	Billing and Settlements	$ 385,579		36 1%	5.0%	58 9%		Allocated based on Supervised Departments costs	139,057	19,410	227,112
44	1751	Market Operations	$ 447,754		20.0%	30.0%	50 0%		Allocated based on Supervised Departments costs	89,551	134,326	223,877
45		**Total Market Services Indirect Salaries**	**$ 1,223,250**							**$ 355,088**	**$ 225,324**	**$ 642,838**
46		**Total Market Services Salaries**	**$ 14,356,502**							**$ 4,615,222**	**$ 2,636,568**	**$ 7,104,712**
47	1400	**Information Services - Direct Salaries**										
48	1424	Asset, Contract & Change Mgmt Group	$ 667,235		41.0%	11 2%	47 7%		Direct Assignment	273,886	74,946	318,403
49	1441	Vendor Management	$ 194,698	*Excluded*					Allocated based on Labor Dollar Ratios - Special	-	-	-

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TELECOMMUNICATIONS - Total Salaries Method

50	1461	RT Operations Applications Support	$ 2,078,100		100.0%	0.0%	0 0%		Direct Assignment	2,078,100	-	-
51	1462	Field Data Acquisition & Data Quality	$ 1,300,096		38.3%	5.1%	56 6%		Direct Assignment	497,568	66,457	736,071
52	1467	Post Operations Application Support	$ 877,938		0.0%	0.0%	100.0%		Direct Assignment	-	-	877,938
53	**Total IS Direct Salaries**		**$ 4,923,369**							**$ 2,849,554**	**$ 141,403**	**$ 1,932,412**
54	**Total IS Direct Salaries %**								**Allocation %**	57.9%	2.9%	39.2%
55	**1600 - Legal - Direct Salaries**											
56	1641	Market Analysis	$ 1,846,583		20.0%	20.0%	60 0%		Direct Assignment	369,317	369,317	1,107,950
57	1661	Compliance	$ 1,106,490		80 0%	10 0%	10.0%		Direct Assignment	885,192	110,649	110,649
58	1662	Data Quality Group	$ 328,036		66.7%	0.0%	33 3%		Direct Assignment	218,691	-	109,345
59	**Total Legal Direct Salaries**		**$ 3,281,109**							1,473,199	479,966	1,327,944
60	**Total Legal Direct Salaries %**								**Allocation %**	44.9%	14.6%	40.5%
61	**Subtotal IS, Market Services, Operations**		**$ 49,868,315**							**$ 31,791,433**	**$ 5,685,978**	**$ 12,390,905**
62	**Percentage Subtotal IS, MS, Op**									63.8%	11.4%	24.8%
63	**1400 - VP Information Services Indirect Salaries**											
64	1411	Chief Information Officer- General	$ 386,862		57.9%	2 9%	39.2%		Allocated based on Department Direct costs	223,908	11,111	151,843
65	1422	Application Development Services	$ 3,681,663		53.7%	8.4%	37.9%		Allocated based on Direct Operating costs	1,977,739	309,693	1,394,231
66	1431	User Support Services	$ 482,127		63.8%	11.4%	24 8%		Allocated based on Direct Operating costs	307,360	54,972	119,795
67	1432	Technology Infrastructure Services-Ger	$ 250,115		63.8%	11 4%	24.8%		Allocated based on Direct Operating costs	159,450	28,518	62,147
68	1442	Production Support Services	$ 2,914,278		58.4%	10.4%	31.2%		Allocated based on Direct Operating costs	1,701,107	304,247	908,924
69	1451	Information Security Services	$ 985,829		63 8%	11.4%	24 8%		Allocated based on Direct Operating costs	628,474	112,404	244,951
70	1463	Corporate & Operation Systems	$ 374,751		60.5%	1.6%	37 9%		Allocated based on Department Direct costs	226,787	5,852	142,113
71	1471	Infrastructure Engineering	$ 1,455,182		63.8%	11.4%	24.8%		Allocated based on Direct Operating costs	927,690	165,920	361,573
72	1468	Corporate Application Support	$ 1,306,675		61.7%	11 0%	27 3%		Allocated based on Direct Operating costs	805,929	144,142	356,604
73	**Total IS Indirect Salaries**		**$ 11,837,482**							6,958,443	1,136,858	3,742,180
74	**Total IS Operating Salaries**		**$ 16,760,851**						**Allocation %**	58.8%	9.6%	31.6%
75	**Operating Costs and Salaries Before Corporate Indirect**											
76	**Total Operating Salaries**		**$ 61,705,797**							**$ 38,749,876**	**$ 6,822,836**	**$ 16,133,085**
77	**Total Operating Salaries %**								**Allocation %**	62.8%	11.1%	26.1%
78	**1300 - Finance - Corporate Indirect Salaries**											
79	1311	CFO - General	$ 450,557		61.1%	11.2%	27.7%		Allocated based on Supervised Departments costs	275,144	50,458	124,955
80	1321	Accounting	$ 820,451		51.1%	9 0%	39 9%		Allocated based on Direct Operating costs	419,202	73,811	327,438
81	1331	Treasury and Financial Planning	$ 809,517		62.8%	11.1%	26.1%		Allocated based on Direct Operating costs	508,359	89,509	211,650
82	1351	Facilities	$ 654,706		62 8%	11.1%	26.1%		Allocated based on Labor Dollar Ratios	411,141	72,391	171,174
83	1361	Office Administration	$ 645,454		62.8%	11.1%	26.1%		Allocated based on Labor Dollar Ratios	405,331	71,368	168,755
84	**Total Finance Indirect Salaries b/f CFO**									$ 1,744,033	$ 307,078	$ 879,017
85										59.5%	10.5%	30.0%
86	**Total Finance Operating Salaries**		**$ 3,380,685**							$ 2,019,177	$ 357,537	$ 1,003,972
87	**1600 - Legal - Chief Counsel - Corporate Indirect Salaries**											
88	1611	General Counsel - General	$ 463,778		53.2%	12.7%	34 1%		Allocated based on Supervised Departments costs	$ 246,561	$ 58,968	$ 158,249
89	1631	Legal and Regulatory	$ 3,243,880		61.5%	10.8%	27.7%		Allocated based on Direct Operating costs	$ 1,995,722	$ 349,664	$ 898,494
90	**Total Legal Indirect Salaries b/f GC**		**$ 3,243,880**							$ 1,995,722	$ 349,664	$ 898,494
91	**Total Legal Salaries b/f GC**		**$ 6,524,989**							**$ 3,468,921**	**$ 829,630**	**$ 2,226,438**
92	**Legal Percentages b/f GC**									53.2%	12.7%	34.1%
93	**Total Legal Salaries**		**$ 6,988,767**							$ 3,468,921	$ 829,630	$ 2,226,438
94	**1800 - VP Corporate and Strategic Development - Corporate Indirect Salaries**											
95	1811	VP Corporate and Strategic Devt. - Ger	$ 383,492		62.8%	11.1%	26 1%		Allocated based on Supervised Departments costs	$ 240,824	$ 42,403	$ 100,265
96	1821	Communications	$ 427,176		62.8%	11.1%	26.1%		Allocated based on Direct Operating costs	$ 268,257	$ 47,233	$ 111,686
97	1831	Strategic Development	$ 278,394		62 8%	11.1%	26.1%	Calculation	Allocated based on Labor Dollar Ratios	$ 174,825	$ 30,782	$ 72,787

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TELECOMMUNICATIONS - Total Salaries Method

98	1851	Office of Strategic Services	$ 625,250		62.8%	11.1%	26 1%		Allocated based on Direct Operating costs	$ 392,643	$ 69,134	$ 163,473
99	1861	Regulatory Policy	$ 662,814		62.8%	11 1%	26.1%	Calculation	Allocated based on Direct Operating costs	$ 416,233	$ 73,288	$ 173,294
100	**Total Strategic Devpt B/f VP**		$ 1,993,634							$ 1,251,958	$ 220,437	$ 521,239
101	**Percentages b/f VP Strat Development**									62.8%	11.1%	26.1%
102	**Total Corporate and Strategic Devpt b/f HR**		**$ 2,377,126**							$ 1,492,783	$ 262,840	$ 621,504
103	**Total Costs and Salaries before HR/CEO**											
104	**Total Salaries before HR/CEO**		**70,707,488**							**44,257,557**	**7,792,877**	**18,657,054**
105	**Total Salaries before HR/CEO %**								**Allocation %**	62.6%	11.0%	26.4%
106	**1100/Other CEO / Human Resources - Corporate Indirect Salaries**											
107	1111	CEO - General	$ 740,026		62.6%	11.0%	26.4%		Allocated based on Labor Dollar Ratios	463,200	81,560	195,265
108	1841	Human Resources	$ 2,907,520		62.6%	11.0%	26.4%		Allocated based on Labor Dollar Ratios	1,819,888	320,446	767,185
109	1651	Board of Governors								0.0	0.0	0.0
110	**Total CEO/HR Salaries**		**$ 3,647,546**							2,283,089	402,007	962,451
111												
112	**Total Operating Salaries b/f Adjustment**		$ 74,355,034							$ 46,540,646	$ 8,194,884	$ 19,619,505
113	**Total Operating Salaries %**								**Allocation %**	**62.6%**	**11.0%**	**26.4%**

CALIFORNIA ISO
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TELECOMMUNICATIONS: Specific Salaries Method

Line#	ISO Dept #	OPERATING COSTS	Amount Labor	Amount Total Costs	Allocation			Source	Assignment Method	Salary Cost Allocated		
					Control Area Services	Congestion Mgmt.	A/S and Real Time Energy			Control Area Services	Congestion Mgmt.	A/S and Real Time Energy
1	**1500**	**Operations - Direct Salaries**										
2	1521	Grid Planning	$ 2,060,915		100.0%	0.0%	0.0%		Direct Assignment	2,060,915	-	-
3	1542	Outage Coordination	$ 1,605,282		100.0%	0.0%	0.0%		Direct Assignment	1,605,282	-	-
4	1543	Loads and Resources	$ 848,766		100.0%	0 0%	0 0%		Direct Assignment	848,766	-	-
5	1544	Real-Time Scheduling	$ 2,766,779		75 0%	15 0%	10.0%		Direct Assignment	2,075,084	415,017	276,678
6	1545	Grid Operations	$ 7,074,516		79.5%	10.3%	10 3%		Direct Assignment	5,620,928	726,794	726,794
7	1546	Security Coordination	$ 1,161,146		100.0%	0.0%	0.0%		Direct Assignment	1,161,146	-	-
8	1554	Special Projects Engineering	$ 584,547		84 2%	4.4%	11.5%		Direct Assignment	491,984	25,527	67,035
9	1555	Operations Support Group	$ 946,146		59.1%	22.7%	18 2%		Direct Assignment	559,365	214,741	172,040
10	1558	Transmission Maintenance	$ 1,067,625		97 4%	0.0%	2.6%		Direct Assignment	1,039,699	-	27,926
11	1561	Southern Area Engineering	$ 1,011,718		100.0%	0 0%	0.0%		Direct Assignment	1,011,718	-	-
12	1562	Northern Area Engineering	$ 1,086,299		100 0%	0.0%	0.0%		Direct Assignment	1,086,299	-	-
13	1563	Coordinated Operations	$ 548,968		88.4%	2 9%	8 7%		Direct Assignment	485,050	15,979	47,938
14	1565	Pre-Scheduling and Support	$ 1,738,892		75 0%	15.0%	10.0%		Direct Assignment	1,304,169	260,834	173,889
15	1566	Regional Coordination	$ 413,849		59.5%	16.5%	24 0%		Direct Assignment	246,131	68,308	99,411
16	1549	Operations Training Group	$ 2,067,952		65.2%	24.0%	10.8%		Direct Assignment	1,348,800	496,241	222,911
17	1559	Operations Application Support	$ 469,852		79.5%	10.7%	9 8%		Direct Assignment	373,330	50,334	46,187
18	**Total Operations Direct Salary Cost Only**		**$ 25,453,252**							21,318,667	2,273,775	1,860,810
19	**Total Operations Direct Salary %**								**Allocation %**	83.8%	8.9%	7.3%
20	**1500**	**Operations - Indirect Salaries**										
21	1511	VP - Grid Operations General	$ 930,487		80 1%	10.6%	9.3%		Allocated based on Department Direct costs	$ 745,649	$ 98,368	$ 86,470
22	1547	Engineering and Maintenance	$ 284,247		97.4%	0 5%	2.2%		Allocated based on Supervised Departments costs	$ 276,739	$ 1,306	$ 6,202
23	1548	OSAT	$ 362,036		77 1%	7 8%	15.1%		Allocated based on Supervised Departments costs	$ 278,963	$ 28,268	$ 54,805
24	1564	Operations Scheduling	$ 277,313		84.2%	9.5%	6.3%		Allocated based on Supervised Departments costs	233,440	26,324	17,549
25	**Total Operations Indirect Salaries**		**$ 1,854,083**							$ 1,534,791	$ 154,266	$ 165,026
26	**Total Operations Salaries**		**$ 27,307,335**							$ 22,853,458	2,428,041	2,025,836
27	**1700**	**VP Market Services Salaries**										
28	1722	Application Support	$ 170,495		15 0%	7.0%	78 0%		Direct Assignment	25,574	11,935	132,986
29	1723	Tariff and Contract Implementation	$ 872,566		90.0%	0.0%	10 0%		Direct Assignment	785,309	-	87,257
30	1724	BBS - PSS	$ 1,063,065		15 0%	7 0%	78.0%		Direct Assignment	159,460	74,415	829,191
31	1725	BBS - FSS	$ 1,000,653		15.0%	7.0%	78.0%		Direct Assignment	150,098	70,046	780,509
32	1731	Contracts and Special Projects	$ 1,098,390		55.0%	10.0%	35.0%		Direct Assignment	604,115	109,839	384,437
33	1741	Client Relations	$ 2,200,547		39.1%	9.4%	51 6%		Direct Assignment	859,855	206,260	1,134,432
34	1752	Manager of Markets	$ 2,127,409		20.0%	30.0%	50.0%		Direct Assignment	425,482	638,223	1,063,705
35	1753	Market Application & Testing	$ 1,236,051		20 0%	30.0%	50.0%		Direct Assignment	247,210	370,815	618,026
36	1755	Market Support and Development	$ 698,032		30.0%	10.0%	60.0%		Direct Assignment	209,410	69,803	418,819
37	1756	Market Quality	$ 2,003,173		33 0%	33.0%	34 0%		Direct Assignment	661,047	661,047	681,079
38	1757	Market Integration	$ 662,871		20.0%	30.0%	50.0%		Direct Assignment	132,574	198,861	331,436
39	**Total Market Services Direct Salaries**		**$ 13,133,252**							4,260,134	2,411,244	6,461,875
40	**Total Market Services Direct Salaries %**								**Allocation %**	32.4%	18.4%	49.2%
41	**1700**	**Market Services - Indirect Salaries**										
42	1711	VP - Market Services	$ 389,917		32.4%	18.4%	49.2%		Allocated based on Department Direct costs	126,480	71,588	191,848
43	1721	Billing and Settlements	$ 385,579		36.1%	5.0%	58 9%		Allocated based on Supervised Departments costs	139,057	19,410	227,112
44	1751	Market Operations	$ 447,754		20.0%	30 0%	50.0%		Allocated based on Supervised Departments costs	89,551	134,326	223,877
45	**Total Market Services Indirect Salaries**		**$ 1,223,250**							**$ 355,088**	**$ 225,324**	**$ 642,838**
46	**Total Market Services Salaries**		**$ 14,356,502**							**$ 4,615,222**	**$ 2,636,568**	**$ 7,104,712**
47	**1400**	**Information Services - Direct Salaries**										
48	1424	Asset, Contract & Change Mgmt Group							Direct Assignment	-	-	-
49	1441	Vendor Management							Allocated based on Labor Dollar Ratios - Special	-	-	-
50	1461	RT Operations Applications Support	$ 2,078,100		100.0%	0 0%	0 0%		Direct Assignment	2,078,100	-	-
51	1462	Field Data Acquisition & Data Quality	$ 1,300,096		38.3%	5.1%	56 6%		Direct Assignment	497,568	66,457	736,071
52	1467	Post Operations Application Support	$ 877,938		0.0%	0.0%	100 0%		Direct Assignment	-	-	877,938
53	**Total IS Direct Salaries**		**$ 4,256,134**							2,575,668	66,457	1,614,009

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Line#	ISO Dept #	OPERATING COSTS	Amount Labor	Amount Total Costs	Allocation: Control Area Services	Allocation: Congestion Mgmt.	Allocation: A/S and Real Time Energy	Source	Assignment Method	Salary Cost Allocated: Control Area Services	Salary Cost Allocated: Congestion Mgmt.	Salary Cost Allocated: A/S and Real Time Energy
54	**Total IS Direct Salaries %**								**Allocation %**	60.5%	1 6%	37.9%
55	**1600**	**Legal - Direct Salaries**										
56	1641	Market Analysis	$ 1,846,583		20.0%	20.0%	60.0%		Direct Assignment	369,317	369,317	1,107,950
57	1661	Compliance	$ 1,106,490		80 0%	10 0%	10 0%		Direct Assignment	885,192	110,649	110,649
58	1662	Data Quality Group	$ 328,036		66.7%	0.0%	33 3%		Direct Assignment	218,691	-	109,345
59	**Total Legal Direct Salaries**		**$ 3,281,109**							1,473,199	479,966	1,327,944
60	**Total Legal Direct Salaries %**								**Allocation %**	44.9%	14 6%	40.5%
61	**Subtotal IS, Market Services, Operations**		**49,201,080**							**31,517,547**	**5,611,032**	**12,072,502**
62	**Percentage Subtotal IS, MS, Op**									64.1%	11.4%	24.5%
63	**1400**	**VP Information Services Indirect Salaries**										
64	1411	Chief Information Officer- General	$ 386,862		60 5%	1.6%	37.9%		Allocated based on Department Direct costs	234,116	6,041	146,706
65	1422	Application Development Services							Allocated based on Direct Operating costs	$ -	$ -	$ -
66	1431	User Support Services	$ 482,127		64.1%	11.4%	24 5%		Allocated based on Direct Operating costs	308,844	54,983	118,300
67	1432	Technology Infrastructure Services-General	$ 250,115		64.1%	11.4%	24.5%		Allocated based on Direct Operating costs	160,220	28,524	61,371
68	1442	Production Support Services	$ 2,914,278		58 7%	10.4%	30.9%		Allocated based on Direct Operating costs	1,709,322	304,309	900,647
69	1451	Information Security Services	$ 985,829		64.1%	11.4%	24 5%		Allocated based on Direct Operating costs	631,509	112,427	241,894
70	1463	Corporate & Operation Systems	$ 374,751		60.5%	1.6%	37.9%		Allocated based on Department Direct costs	226,787	5,852	142,113
71	1468	Corporate Application Support	$ 1,306,675		62.0%	11.0%	27.0%		Allocated based on Direct Operating costs	809,821	144,171	352,683
72	1471	Infrastructure Engineering							Allocated based on Direct Operating costs	-	-	-
73	**Total IS Indirect Salaries**		**$ 6,700,637**							4,080,619	656,306	1,963,712
74	**Total IS Operating Salaries**		**$ 10,956,771**						**Allocation %**	60.9%	9.8%	29.3%
75	**1**	**Operating Costs and Salaries Before Corporate Indirect**										
76	**Total Operating Salaries**		**$ 55,901,717**							**$ 35,598,166**	**$ 6,267,338**	**$ 14,036,214**
77	**Total Operating Salaries %**								**Allocation %**	63.7%	11.2%	25.1%
78	**1300**	**Finance - Corporate Indirect Salaries**										
79	1311	CFO - General							Allocated based on Supervised Departments costs	$ -	$ -	$ -
80	1321	Accounting							Allocated based on Direct Operating costs	$ -	$ -	$ -
81	1331	Treasury and Financial Planning							Allocated based on Direct Operating costs	$ -	$ -	$ -
82	1351	Facilities							Allocated based on Labor Dollar Ratios	$ -	$ -	$ -
83	1361	Office Administration							Allocated based on Labor Dollar Ratios	$ -	$ -	$ -
84	**Total Finance Indirect Salaries**									$ -	$ -	$ -
85	**Total Finance Operating Salaries**		**$ -**							$ -	$ -	$ -
86	**1600**	**Legal - Chief Counsel - Corporate Indirect Salaries**										
87	1611	General Counsel - General							Allocated based on Supervised Departments costs	$ -	$ -	$ -
88	1631	Legal and Regulatory							Allocated based on Direct Operating costs	$ -	$ -	$ -
89	**Total Legal Indirect Salaries**		**$ -**							$ -	$ -	$ -
90	**Total Legal Salaries**		**$ 3,281,109**							$ 1,473,199	$ 479,966	$ 1,327,944
91	**1800**	**VP Corporate and Strategic Development - Corporate Indirect Salaries**										
92	1811	VP Corporate and Strategic Devt. - General							Allocated based on Supervised Departments costs	$ -	$ -	$ -
93	1821	Communications							Allocated based on Direct Operating costs	$ -	$ -	$ -
94	1831	Strategic Development							Allocated based on Labor Dollar Ratios	$ -	$ -	$ -
95	1851	Office of Strategic Services							Allocated based on Direct Operating costs	$ -	$ -	$ -
96	1861	Regulatory Policy							Allocated based on Direct Operating costs	$ -	$ -	$ -
97	**Total Corporate and Strategic Devpt b/f HR**		**$ -**							$ -	$ -	$ -
98		**Total Costs and Salaries before HR/CEO**										
99	**Total Salaries before HR/CEO**		**55,901,717**							**35,598,166**	**6,267,338**	**14,036,214**

CALIFORNIA ISO
COST ALLOCATION MATRIX - 2002 BUDGET
TELECOMMUNICATIONS: Specific Salaries Method

Line#	ISO Dept #	OPERATING COSTS	Amount Labor	Amount Total Costs	Allocation: Control Area Services	Allocation: Congestion Mgmt.	Allocation: A/S and Real Time Energy	Source	Assignment Method	Salary Cost Allocated: Control Area Services	Salary Cost Allocated: Congestion Mgmt.	Salary Cost Allocated: A/S and Real Time Energy
100		**Total Salaries before HR/CEO %**							**Allocation %**	63.7%	11.2%	25.1%
101		**1100/Other CEO / Human Resources - Corporate Indirect Salaries**										
102	1111	CEO - General							Allocated based on Labor Dollar Ratios	-	-	-
103	1841	Human Resources							Allocated based on Labor Dollar Ratios	-	-	-
104	1651	Board of Governors								0.0	0.0	0.0
105		**Total CEO/HR Salaries**	$ -							0.0	0.0	0.0
106		**Other Costs**										
107	All	**Salary Adjustments, FY2002**							**Operating Costs**	$0	$0	$0
108		**Gross Operating Costs (Salaries)**										
109		**Total Operating Salaries**	$ 55,901,717							$ 35,598,166	$ 6,267,338	$ 14,036,214
110		**Total Operating Salaries %**							**Allocation %**	63.7%	11.2%	25.1%
111		**Other Revenues**										
112		**Net Operating Costs - 2002**										
113		**Total Salaries**	$ 55,901,717							35,598,165.5	6,267,337.6	14,036,214.0
114		**Total Salaries %**							**Allocation %**	63.7%	11.2%	25.1%
115		**Excluded Salaries**										
116		IS	$ 9,680,441									
117		Market Services	$ 389,917									
118		Finance	$ 3,380,685									
119		Legal	$ 3,707,658									
120		Strategic Planning & Communications	$ 2,377,126									
121		HR/CEO	$ 3,647,546									
122		**Total Excluded Salaries**	$ 23,183,373									
123	1441	**Vendor Management**										
124	1441	**Vendor Management (Telecommunications)**										
125		Direct Allocation		$1,846,474	0.0%	0.0%	100.0%	Estimate of cost for Connected Entities		$0	$0	$1,846,474
126		Total Salary Allocation - attached		$3,692,948	62.6%	11.0%	26.4%	Estimate of cost for voice services		$2,311,607	$407,010	$974,430
127		Specific Salary Allocation - above		$25,235,244	63.7%	11.2%	25.1%	Remaining cost		$16,069,718	$2,829,201	$6,336,325
128		**Total Vendor Management Costs**		$30,774,666						$18,381,325	$3,236,211	$9,157,230
129		**Allocation Ratio**								59.7%	10.5%	29.8%

Percentages of Total Cost for Direct, Total, Specific	
Direct	6.0%
Total	12.0%
Specific	82.0%

CALIFORNIA ISO
COST ALLOCATION MATRIX - 2002 BUDGET

Appendix A5

WORKSHEET FOR ALLOCATION OF COSTS OF CERTAIN SUPERVISORY DEPARTMENTS

OPERATING EXPENSES

Cost Center 1463 Operating Expenses

	Total	CAS	CONG	A/S and Real Time
1461		100%	0%	0%
	$ 2,330,715	$ 2,330,715	$ -	$ -
1462		38%	3%	59%
	$ 2,356,162	902,057	66,726	1,387,379
		-	-	-
1467		0%	0%	100%
	$ 977,918	-	-	977,918.00
Total	$ 5,664,795	$ 3,232,772	$ 66,726	$ 2,365,297
		57%	1%	42%
1463				
	$ 424,551	84.14%	0.37%	15.50%
		$ 357,206	$ 1,558	$ 65,787

Cost Center 1547

1543		100%	0%	0%
	$ 931,266	$ 931,266	$ -	$ -
1561		100%	0%	0%
	$ 1,173,918	$ 1,173,918	$ -	$ -
1562		100%	0%	0%
	$ 1,144,139	$ 1,144,139	$ -	$ -
1563		90%	2%	7%
	$ 665,968	$ 602,050	$ 15,979	$ 47,938
1558		98%	0%	2%
	$ 1,875,575	$ 1,845,659	$ -	$ 29,916
Total	$ 5,790,866	$ 5,697,033	$ 15,979	$ 77,854
		98.38%	0.28%	1.34%
1547				
	$ 1,449,247	98.38%	0.28%	1.34%
		$ 1,425,764	$ 3,999	$ 19,484

SALARIES

Cost Center 1463 Salaries

	Total	CAS	CONG	A/S and Real Time
1461		100%	0%	0%
	$ 2,078,100	$ 2,078,100	$ -	$ -
1462		38%	5%	57%
	$ 1,300,096	497,568	66,457	736,071
1467		0%	0%	100%
	$ 877,938	-	-	877,938
Total	$ 4,256,134	$ 2,575,668	$ 66,457	$ 1,614,009
		61%	2%	38%
1463				
	$ 374,751	85.22%	0 47%	14.31%
		$ 319,359	$ 1,773	$ 53,619

Cost Center 1547

1543		100%	0%	0%
	$ 848,766	$ 848,766	$ -	$ -
1561		100%	0%	0%
	$ 1,011,718	1,011,718	-	-
1562				
1563		88%	3%	9%
	$ 548,968	485,050	15,979	47,938
1558		97%	0%	3%
	$ 1,067,625	1,039,699	-	27,926
Total	$ 3,477,077	$ 3,385,234	$ 15,979	$ 75,864
		97%	0%	2%
1547				
	$ 284,247	97.36%	0.46%	2 18%
		$ 276,739	$ 1,306	$ 6,202

CALIFORNIA ISO
COST ALLOCATION MATRIX - 2002 BUDGET

Appendix A5

WORKSHEET FOR ALLOCATION OF COSTS OF CERTAIN SUPERVISORY DEPARTMENTS

OPERATING EXPENSES

Cost Center 1548

1549		63%	24%	13%
	$ 3,493,437	$ 2,200,232	$ 833,539	$ 459,665
1554		87%	4%	9%
	$ 1,054,797	$ 913,726	$ 47,326	$ 93,746
1555		60%	22%	19%
	$ 1,116,946	$ 666,981	$ 242,427	$ 207,539
1559		80%	10%	9%
	$ 494,352	$ 397,564	$ 50,473	$ 46,315
Total	$ 6,159,532	$ 4,178,502	$ 1,173,765	$ 807,265
		67.84%	19.06%	13.11%
1548				
	$ 425,636	77.44%	7.01%	15.54%
		$ 329,626	$ 29,845	$ 66,165

Cost Center 1564

1544		75%	15%	10%
	$ 2,859,227	$ 2,141,045	$ 430,909	$ 287,273
1542		100%	0%	0%
	$ 1,825,756	$ 1,825,756	$ -	$ -
1565		75%	15%	10%
	$ 1,767,392	$ 1,333,419	$ 260,384	$ 173,589
	$ 6,452,375	$ 5,300,222	$ 691,293	$ 460,862
Total	$ 6,452,375	$ 5,300,220	$ 691,293	$ 460,862
		82.14%	10.71%	7.14%
1564				
	$ 320,013	82.14%	10.71%	7.14%
		$ 262,871	$ 34,285	$ 22,857

SALARIES

Cost Center 1548

1549		65%	24%	11%
	$ 2,067,952	$ 1,348,800	$ 496,241	$ 222,911
1554		84%	4%	11%
	$ 584,547	491,984	25,527	67,035
1555				
1559		79%	11%	10%
	$ 469,852	373,330	50,334	46,187
Total	$ 3,122,351	$ 2,214,115	$ 572,102	$ 336,134
		71%	18%	11%
1548				
	$ 362,036	77.05%	7.81%	15 14%
		$ 278,963	$ 28,268	$ 54,805

Cost Center 1564

1549		75%	15%	10%
	$ 2,766,779	$ 2,075,084	$ 415,017	$ 276,678
1554		100%	0%	0%
	$ 1,605,282	1,605,282	-	-
Total	$ 4,372,061	$ 3,680,366	$ 415,017	$ 276,678
		84%	9%	6%
1564				
	$ 277,313	84.18%	9.49%	6.33%
		$ 233,440	$ 26,324	$ 17,549

CALIFORNIA ISO
COST ALLOCATION MATRIX - 2002 BUDGET

Appendix A5

WORKSHEET FOR ALLOCATION OF COSTS OF CERTAIN SUPERVISORY DEPARTMENTS

OPERATING EXPENSES

Cost Center 1721

1722		14%	7%	79%
	$ 295,345	$ 42,218	$ 20,507	$ 232,619
1723		90%	0%	10%
	$ 1,193,948	$ 1,074,553	$ -	$ 119,395
1724		15%	7%	78%
	$ 1,309,065	$ 196,360	$ 91,635	$ 1,021,071
1725		15%	7%	78%
	$ 1,240,929	$ 186,139	$ 86,865	$ 967,925
Total	$ 4,039,287	$ 1,499,270	$ 199,007	$ 2,341,010
		37.12%	4.93%	57.96%
1721				
	$ 441,579	36.87%	4.89%	58.24%
		$ 162,788	$ 21,608	$ 257,183

Cost Center 1751

1752		20%	30%	50%
	$ 2,206,709	$ 441,342	$ 662,013	$ 1,103,355
1753		20%	30%	50%
	$ 1,933,351	$ 386,670	$ 580,005	$ 966,676
1755		30%	10%	60%
	$ 1,228,032	$ 363,010	$ 128,203	$ 736,819
1757		20%	30%	50%
	$ 990,831	$ 198,166	$ 297,249	$ 495,416
Total	$ 6,358,923	$ 1,389,188	$ 1,667,471	$ 3,302,265
		22.55%	27.07%	53.61%
1751				
	$ 819,254	20.00%	30.00%	50.00%
		$ 163,851	$ 245,776	$ 409,627

SALARIES

Cost Center 1721

1722		15%	7%	78%
	$ 170,495	$ 25,574	$ 11,935	$ 132,986
1723		90%	0%	10%
	$ 872,566	785,309	-	87,257
1724		15%	7%	78%
	$ 1,063,065	159,460	74,415	829,191
1725		15%	7%	78%
	$ 1,000,653	150,098	70,046	780,509
Total	$ 3,106,779	$ 1,120,441	$ 156,395	$ 1,829,943
		36%	5%	59%
1721				
	$ 385,579	36.06%	5.03%	58.90%
		$ 139,057	$ 19,410	$ 227,112

Cost Center 1751

1752		20%	30%	50%
	$ 2,127,409	$ 425,482	$ 638,223	$ 1,063,705
1753		20%	30%	50%
	$ 1,236,051	247,210	370,815	618,026
1755		30%	10%	60%
	$ 698,032	209,410	69,803	418,819
1757		20%	30%	50%
	$ 662,871	132,574	198,861	331,436
Total	$ 4,724,363	$ 1,014,676	$ 1,277,703	$ 2,431,985
		21%	27%	51%
1751				
	$ 447,754	20.00%	30.00%	50.00%
		$ 89,551	$ 134,326	$ 223,877