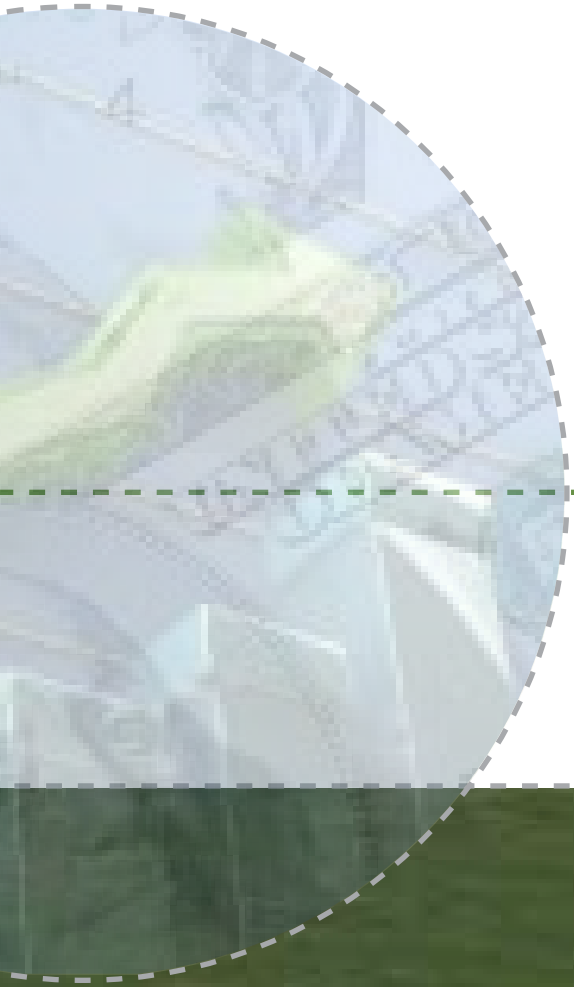


2011
BUDGET AND GRID MANAGEMENT CHARGE RATES

PRELIMINARY

California ISO
Your Link to Power

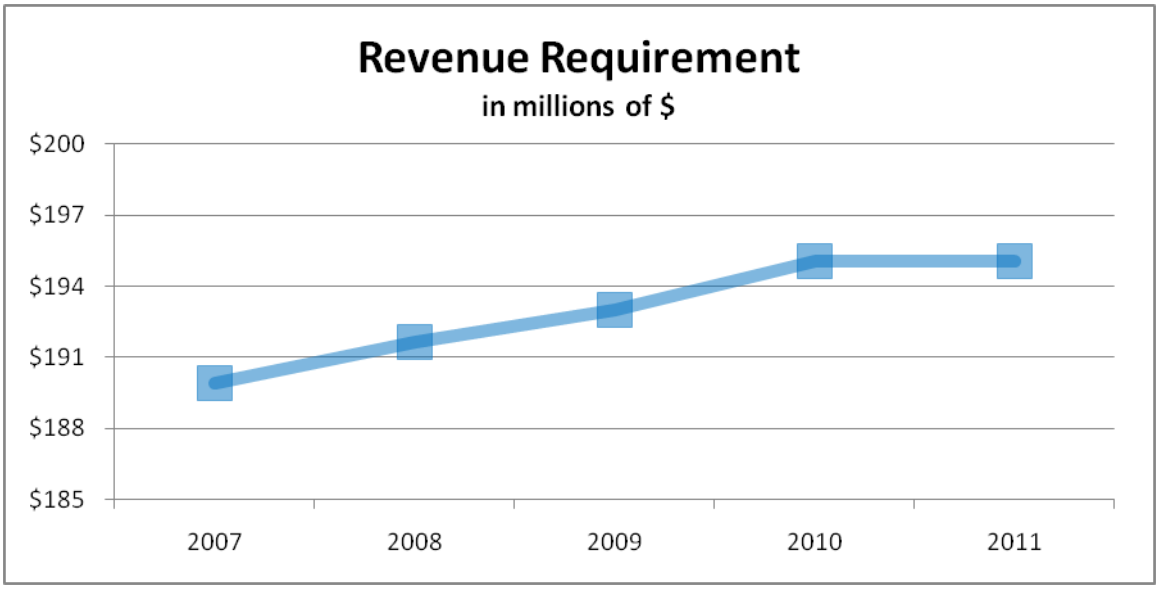
Prepared by Department of Financial Planning
September 1, 2010

2011 Budget and GMC Rates

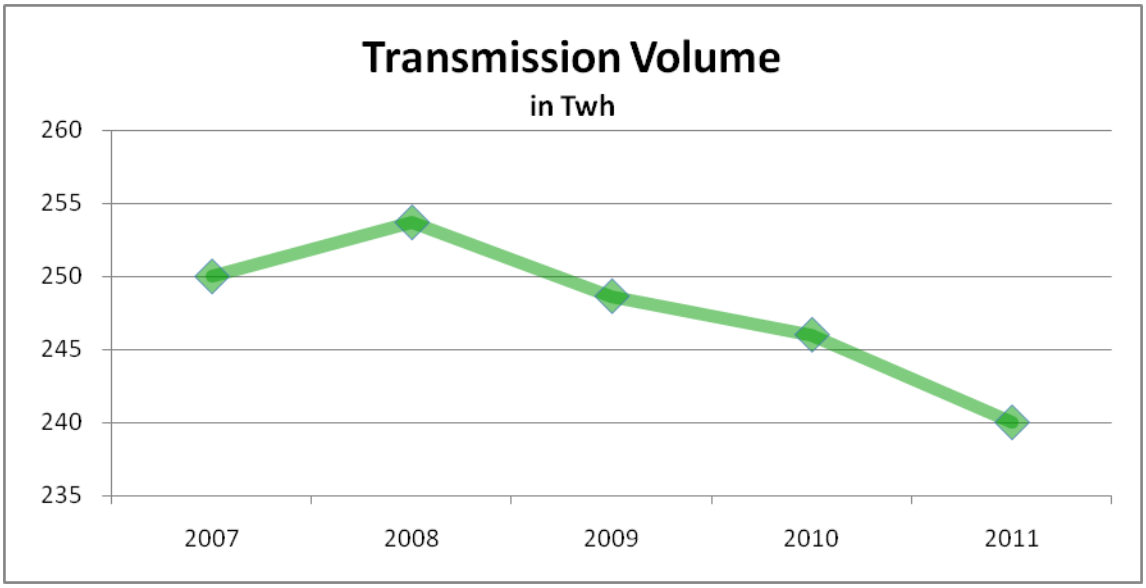
Table of Contents

I. 2011 Revenue Requirement

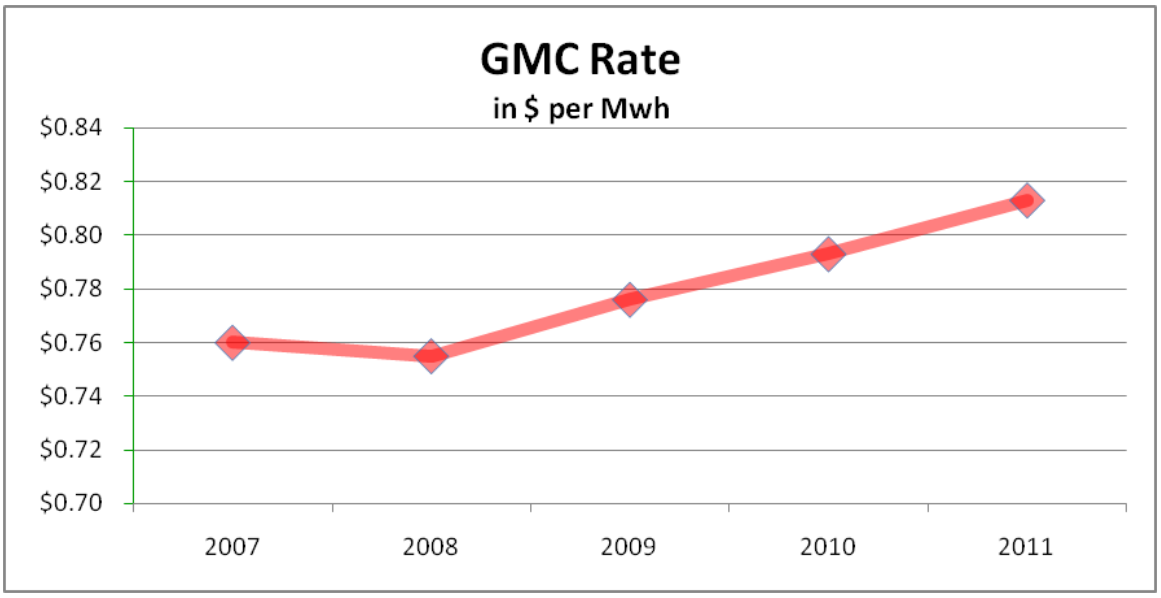
The 2011 budget provides for a revenue requirement of $195.1 million, the same amount as 2010 and less than a 2.7% increase over the past five years. As further described in this document, the California Independent System Operator Corporation is increasing service levels through effective management and allocation of resources toward key corporate initiatives as outlined in the Five-Year Strategic Plan.



Due to the economic conditions in California, the transmission volume is projected to be down 2.4% from 2010 and down 4.0% over the last five years. This results in a higher grid management charge, as noted below.



We expect the bundled composite grid management charge (GMC) to be $0.81 per MWh. Although the revenue requirement did not change, the GMC is 2.5% higher than the rate for 2010, which was $0.79, which was also higher than in recent years because of a drop in transmission volumes.



The revenue requirement has been reduced substantially since 2003, which highlights the ISO's firm commitment to maintain a grid management charge in the mid- to high 70 cent per MWh range for the next several years, consistent with the Five-Year Strategic Plan, absent uncontrolled drops in transmission volume. The growth rate of the revenue requirement over the last five years has been under 0.7% while transmission volume has declined at a 1.0% rate, resulting in rate growth of 1.7% for the five-year period.

Components of 2011 Revenue Requirement

Transmission volumes in the state are projected to drop 2.4% or 6.0 TWh to 240.0 TWh for 2011 because of weak economic conditions. When combined with other factors, this results in a 2.5% increase in the pro-forma bundled GMC to $0.81 per MWh.

A summary of the 2011 revenue requirement compared to 2010 is as follows:

Revenue Requirement ($ in millions)	2011 Budget	2010 Budget	$ Change	% Change
Operating & Maintenance Budget	$162.5	$162.7	$(0.2)	(0.1)%
Miscellaneous revenue	(7.6)	(8.1)	0.5	6.2%
Subtotal net Operating & Maintenance	154.9	154.6	0.3	0.2%
Debt Service including 25% reserve	43.7	61.0	(17.3)	(39.6)%
Out-of-Pocket Capital Funding	27.0	15.0	12.0	80.0%
Subtotal before revenue credit	225.6	230.6	(5.0)	(2.2)%
Revenue Credit	(30.5)	(35.5)	5.0	14.1%
Total Revenue Requirement	**$195.1**	**$195.1**	**$ -**	**0%**
Transmission volume in TWh	**240.0**	**246.0**	**(6.0)**	**(2.4)%**
Pro-forma Bundled GMC per MWh	**$0.813**	**$0.793**	**$0.020**	**2.5%**

The revenue requirement is recovered through the unbundled grid management charges. Each unbundled service offering has corresponding rates paid by users of that service. These rates are calculated by determining the costs associated with each of these services, and then dividing those figures by the forecasted billing determinant volume for each service. The result is a rate per unit of use. Section X of this document outlines the determination of GMC rates.

II. Budget Overview

This budget package provides an overview of and detail about the ISO cost of service that for 2011 consists of the following:

- Operating and maintenance (O&M) budget
- Debt service costs (section VI)
- Project and capital funding (section VII)
- Other revenues and expense recoveries (section VIII)
- Revenue credit from operating reserve account (section IX)

The O&M budget is the largest of these components and is the primary focus of this report, which consists of the costs necessary for ongoing operations. The O&M budget of $162.5 million in 2011 was virtually unchanged from 2010. The O&M budget is presented in three views:

- By process — such as support customers and stakeholders (section III)
- By resource — such as salaries (section IV)
- By division — such as the Operations Division (section V)

Debt service costs are the principal and interest payments related of the ISO's 2008 bonds and a 25% debt service reserve collection. In June 2008, the ISO issued fixed rate bonds that funded 2008 to 2010 capital expenditures and retired existing variable rate demand bonds. During 2009, the ISO issued bonds to build a new headquarters facility. Debt service during the building's development stage is funded from bond proceeds. Occupancy is planned for early 2011. Debt service costs on both bonds decreased by $17.3 million to $43.7 million in 2011, which reflects the 2008 and 2009 bond amortization and a 25% debt service reserve.

The revenue requirement contains direct funding for capital and other projects in 2011 amounting to $27 million. The source was primarily from an additional month's collection of the grid management charge in January 2010 arising from the implementation of the payment acceleration market software enhancement in November 2009. Direct funding avoids the additional costs of interest and the 25% debt service reserve. Total capital spending for 2011 is budgeted primarily for systems development related to expand market capabilities.

Other revenue and expense recoveries are various offsets to the revenue requirement, such as interest, scheduling coordinator application fees, Participating Intermittent Resource Program fees, training and the California-Oregon Intertie Path Operator fee.

The operating reserve credit is a reduction or offset to the ISO revenue requirement for 2011. In any year that the ISO operating reserve account exceeds 15% of prospective year's O&M budget, such excess is used as a reduction in the revenue requirement for the coming year. For 2011, the ISO forecasts a credit from the operating reserve account of $30.5 million. The operating reserve account is calculated separately for each grid management charge category.

Budget Guidance

Each year, division and departmental budget planners receive guidance on the expected overall budget outcome and the mechanics of how it will be prepared. Guidance provided for developing the 2011 revenue requirement called for each ISO division to develop an O&M budget consistent with the Strategic Plan and limiting increases to less than 3.0%.

Company-wide, the O&M budget will result in a revenue requirement under the $197 million threshold that triggers a review filing with federal regulators and a bundled grid management charge similar to 2010. In late July, ISO management met and refined the proposed budget to keep it at the same level as 2010. This included reducing headcount, contractors and consultants. The budget achieves the above goals and funds ISO operations and initiatives as set forth in the Strategic Plan.

After the Board reviews the budget in early September, the ISO posts it to its website for stakeholder review. Stakeholders can comment on the budget in a workshop on October 14 (notes of that discussion and subsequent stakeholder questions are posted on the ISO website).

Strategic Outlook

The ISO is fully engaged with state, regional and federal officials in shaping the power industry's transformation to one that is ready to meet the needs of modern society. Clean energy is already playing a critical role in meeting environmental goals with more than 3,000 MW of wind resources now connected to the ISO grid. The ISO sees the 2020 future grid, at which time utilities must have 33 percent of their resource portfolio in renewable energy, in three areas.

Demand:

- Growth in demand is tied to economic recovery, but is tempered by greater energy efficiency and rooftop solar.
- Retail electricity customers can reduce their use and sell those kilowatt-hour savings as demand response energy products into the wholesale market.
- Over one million electric vehicles will reduce harmful emissions creating new sources of demand.

Resources:

- Large utility scale renewable power plants contribute to resource diversification and help balance the grid while keeping costs in check.
- Energy storage and other smart grid technologies complement and support renewable resources while enhancing reliability.
- Closer and energetic collaboration with regional planning entities makes it possible to benefit from economies of scale and increases the sharing of resources in the West.

Transmission:

- Building new transmission lines remains challenging but is aided by improved planning and siting processes.
- New generation investment triggers new transmission investment.
- Reductions in coal contracts free up capacity for renewable generation imports.

The ISO plays a leading role in providing policymakers with the technical advice to aid them in their regulatory and policy deliberations, such as those calling for a 33 percent renewables portfolio standard. The ISO is also actively working with the California Air Resources Board to implement greenhouse gas curbs mandated by Assembly Bill 32 (California Global Warming Solutions Act of 2006).

Just as in 2010, the sluggish economy continues to affect the ISO, mostly through lower electricity volumes, and its customers. As most companies, the ISO is keeping its costs contained while improving services. This is accomplished in part by making sure staffing levels and skill sets efficiently meet current and future needs, scrutinizing expenses, and deftly managing investments and debt obligations.

Aligning with the Strategic Plan

The ISO is continuing in 2011 the focus begun in 2005 to contain or lower operating costs while improving services and enhancing the reliability of the California transmission grid. This includes, for instance, strengthening the ISO compliance efforts without adding costs. It also includes performing the increased responsibilities and planning needed to integrate 20 percent and 33 percent renewable portfolio standards.

The 2011 budget also represents another step taken in 2009 to align with the Strategic Plan, which is the primary roadmap for the ISO to achieve organizational and operational objectives and goals. The Strategic Plan this year is focusing on three key areas:

- System — initiatives that identify the requirements to ensure a stable and reliable foundation for grid and market operations as well as infrastructure planning;
- Environment — initiatives that promote and support environmental and regulatory policies and objectives; and
- Organization — initiatives that develop the people and processes needed to efficiently use resources to manage the rapid changes the industry is undergoing.

The Strategic Plan contains the refined vision of moving the corporation forward and is supported by the initiatives to further flesh out the ISO strategy, while the budget explains how the corporation funds and allocates its resources to support its business plans. The ISO management and staff created a 2011 budget that supports the Strategic Plan with the right mix of talent, skills and financial resources to be successful.

Aligning the strategic planning process more closely with budget planning reveals with greater transparency how ISO resources are used and the costs associated with business and operational activities. This, in turn, enables management to better assess

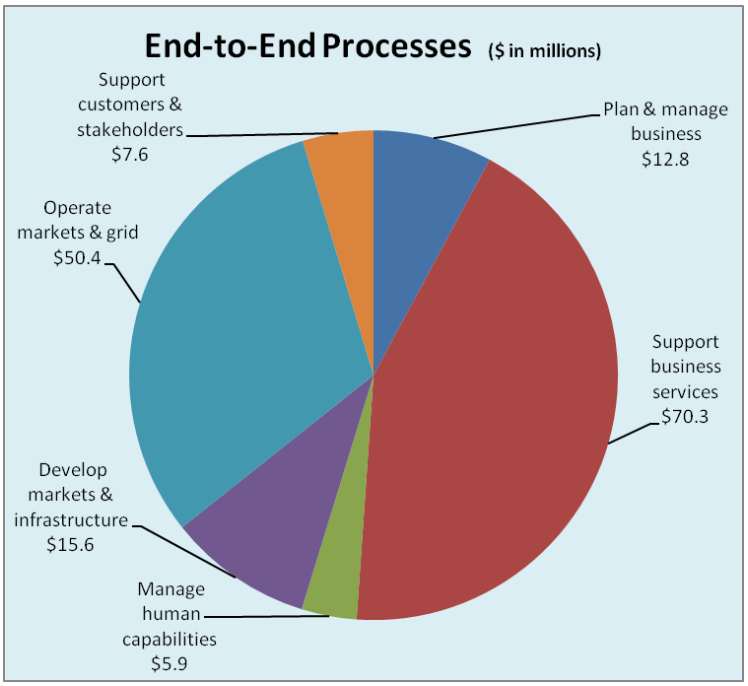
the value of corporate projects and processes and determine whether they are under or over resourced. The ISO is also scrutinizing day-to-day expenses in an effort to ensure the most effective use of budgeted resources.

The highest level of the ISO is actively involved with defining, creating and nurturing a culture of cost-consciousness as well as enhancing services while not adding costs. Stakeholders also participate in ISO governance by engaging in new policy and tariff stakeholder processes that weigh and balance costs and reliability issues.

Not only is the ISO vigilant in containing costs, it also places a high emphasis on managing our resources in a smart and prudent manner.

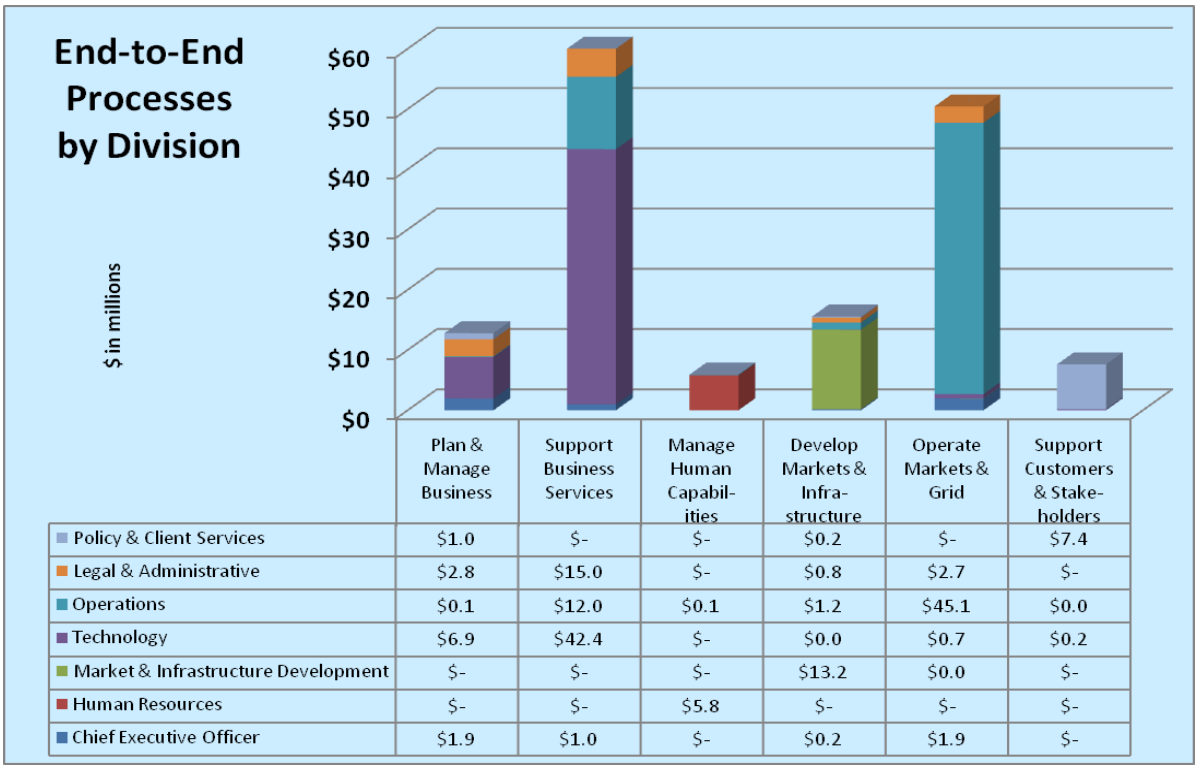
III. Process View

In the fall of 2009, we initiated activity based costing and in 2010, we further leveraged the system to provide greater transparency and granularity in how the budget supports business plans. We derived costs for the activities using an estimate of the percentage of time spent by each cost center on the end-to-end process. We then took the percentages and allocated them to the six summary activities described below. This budget reports the cost centers in the following buckets:



- Support customers and stakeholders – client, account and stakeholder processes, government affairs and communications;
- Develop markets and infrastructure – regulatory, market, policy and product design and transmission planning, grid asset reviews and interconnection studies;
- Operate markets and grid – manage and operate the markets including modeling, setup and settlements;
- Manage human capabilities – employee lifecycle, training and organizational development;
- Support business services – general, information technology, financial, legal and compliance support services; and
- Plan and manage business – strategic planning, governance, budgeting and project management.

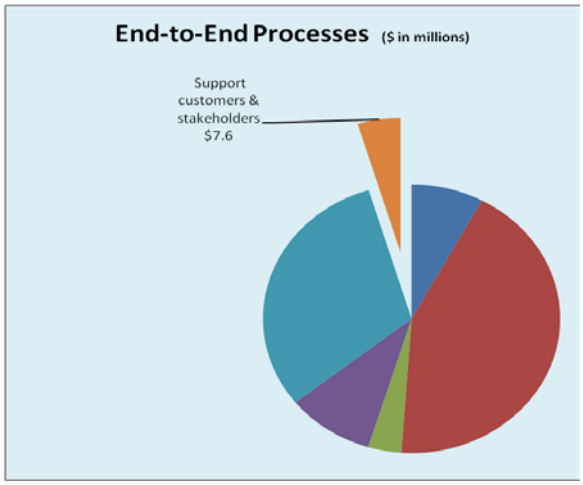
We allocated the divisions' costs into the end-to-end processes as follows:



	Plan & Manage Business	Support Business Services	Manage Human Capabil-ities	Develop Markets & Infra-structure	Operate Markets & Grid	Support Customers & Stake-holders
Policy & Client Services	$1.0	$-	$-	$0.2	$-	$7.4
Legal & Administrative	$2.8	$15.0	$-	$0.8	$2.7	$-
Operations	$0.1	$12.0	$0.1	$1.2	$45.1	$0.0
Technology	$6.9	$42.4	$-	$0.0	$0.7	$0.2
Market & Infrastructure Development	$-	$-	$-	$13.2	$0.0	$-
Human Resources	$-	$-	$5.8	$-	$-	$-
Chief Executive Officer	$1.9	$1.0	$-	$0.2	$1.9	$-

Support Customers and Stakeholders

Support Customers and Stakeholders, amounting to $7.6 million and 38 staff, is made up of elements of one division, Policy and Client Services. The ISO is committed to provide the highest quality of service to its customers, market participants and stakeholders. This includes the timely resolution of customer issues and streamlined access to market information.



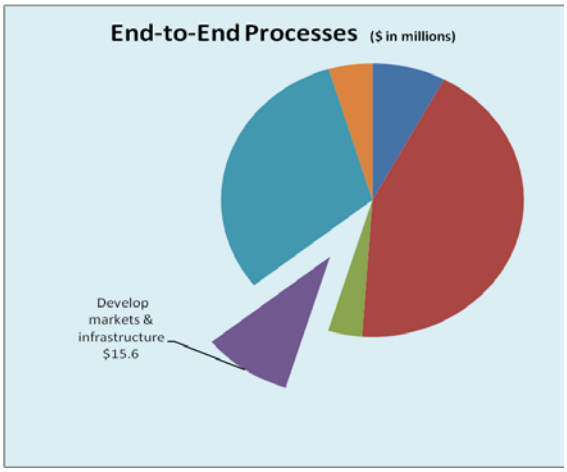
Primary Activities

This process has a variety of initiatives that directly promote improving customers' business experience with the ISO and disseminating clear and consistent corporate information for stakeholder and public consumption. Besides responding to inquiries quickly and encouraging quality dialogue between the ISO and its key customers, this activity provides the resources necessary to manage the stakeholder process that results in quality interactions.

In addition, supporting customers comprises robust government affairs activities that communicates the ISO position to government and regulatory bodies the advice and technical expertise to advance policies and mandates that also protect grid reliability.

Develop Markets and Develop Infrastructure

Develop Markets and Develop Infrastructure are two separate processes that cover the ISO activities in designing and implementing value-added enhancements to the market design and proactively planning and facilitating grid upgrades, especially those needed to integrate renewable resources.

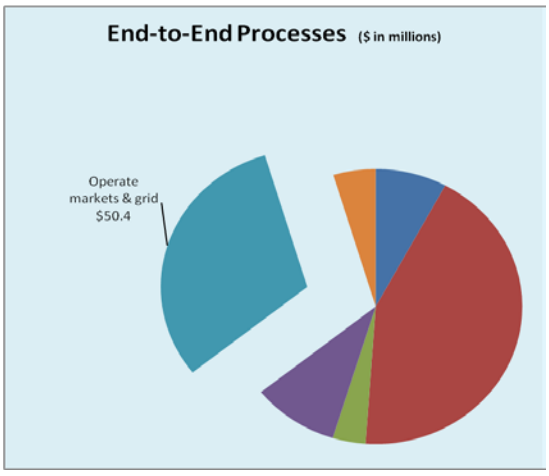


Develop Markets
Develop markets, amounting to $5.4 million and 22 staff, is comprised of elements from two divisions: Market Infrastructure and Development and Legal and Administrative. This activity includes improving our abilities to review and analyze the efficiency and quality of market results, and identifying market design enhancements that solve issues and increase efficiencies and transparency.

Among the many initiatives under this banner are ones that are building the business and operational framework that accommodates demand response, renewable resources and storage technologies participation in the ISO market.

Develop Infrastructure Develop infrastructure, amounting to $10.2 million and 48 staff, is comprised of four divisions: Market Infrastructure and Development, Operations, Legal and Administrative and Policy and Client Services. The budget continues to support a proactive approach to transmission planning that has resulted in reforming transmission planning into a comprehensive approach that considers reliability needs, implementing state and federal environment policies and renewable portfolio standards.

Operate Markets and Grid



There are four end-to-end processes that make up operate markets and grid: Manage Market and Reliability Data and Modeling, Manage Market Setup and Execution, Operate Real Time Market and Grid, and Manage Operations Support and Settlements.

Manage Market and Reliability Data and Modeling
Manage Market and Reliability Data and Modeling, amounting to $11.9 million and 55 staff, is comprised of primarily the Operations division with elements of the Technology and Legal and Administrative divisions. The ISO diligently checks and rechecks its network

modeling policies and protocols to reduce as much as possible non-market energy dispatches, assure models reflect all grid constraints and produce timely and accurate prices results.

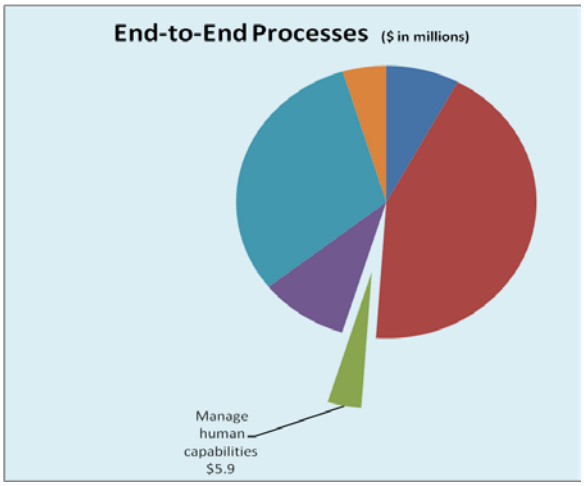
Manage Market Setup and Execution
Manage Market Setup and Execution, amounting to $6.7 million and 32 staff, is comprised of primarily the Operations division with elements of the Technology division. A difficult ISO responsibility is to manage transmission and generation outages, especially those that are unplanned, as it takes expertise honed in split-second decision-making situations to ensure continuous flow of power to all customers. Managing the market includes executing the day ahead market and interchange scheduling to make sure all local capacity requirements are met and the power is delivered with the least cost possible by avoiding congested areas.

Operate Real Time Market and Grid
Operate Real Time Market and Grid, amounting to $18.3 million and 70 staff, is comprised of the Operations division. This is the fundamental process of the Company that ensures load is balanced to generation and the least cost generation is dispatched.

Manage Operations Support and Settlements
Manage Operations Support and Settlements, amounting to $13.6 million and 78 staff, is mostly comprised of Operations along with the Market Monitoring department of the CEO division. The budget provides the resources that work to improve market efficiency. This effort includes lowering the financial risk of participating in the wholesale market that in turn lowers the cost of doing business with the ISO. The lower cost translates into less overhead for ISO customers who can pass the savings to ratepayers.

Manage Human Capabilities

Manage Human Capabilities, amounting to $5.9 million and 19 staff, consists of five primary end-to-end processes that combine to ensure the ISO's ability to attract and retain skills and talent necessary to achieve business objectives: compensation, benefits, recruitment, training and development and employee relations.

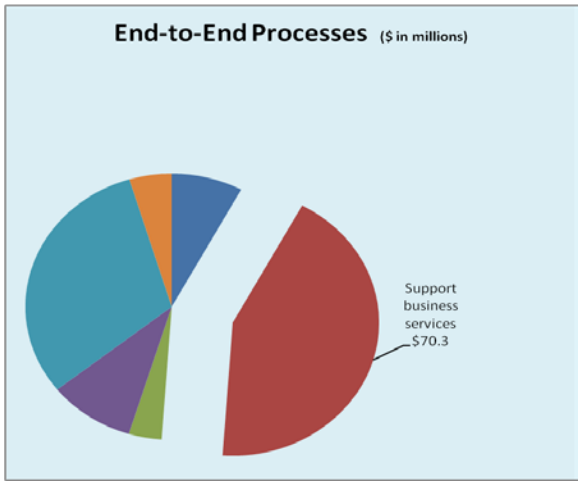


With respect to compensation and benefits, the budget provides resources to support the ISO's ability to attract and retain uniquely skilled and highly sought-after professionals, and ensure that the menu of benefits offerings reflects creative cost containment measures while at the same time preserves options sufficient to meet the needs of a diverse employee population.

Developing the next generation of ISO people equipped with knowledge, skills and expertise to meet the challenges of today and the future remains a top priority. The budget provides resources to ensure ISO employees not only grow in their jobs but also increase their value to the corporation.

In addition, the budget provides resources to support management and employees in maintaining a respectful and transparent workplace environment where employees are highly engaged and pursue both their highest potential and the success of the corporation.

Support Business Services



Support Business Services, amounting to $70.3 million and 199 staff, is comprised of elements of four divisions: Technology, Operations, Legal and Administrative, and the Market Monitoring Department of the Chief Executive Officer division.

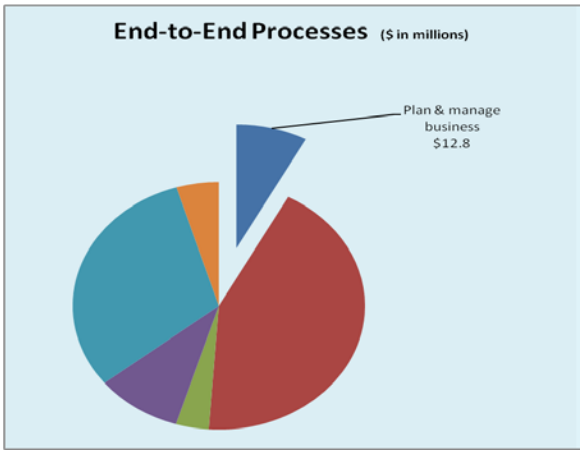
This process provides the resources to improve upon the ISO's ability to effectively carry out its business duties by developing well defined, measured and controlled processes (workflow and information technology), nurturing disciplined business decision making, maintaining quality assurance and efficiently implementing enhancements.

In addition, this cost center supports the initiatives that improve and maintain a responsive and effective compliance culture.

Plan and Manage Business

The Plan and Manage Business process, amounting to $12.8 million and 40 staff, is comprised of four divisions: Technology, Legal and Administrative, Operations, and Policy and Client Services.

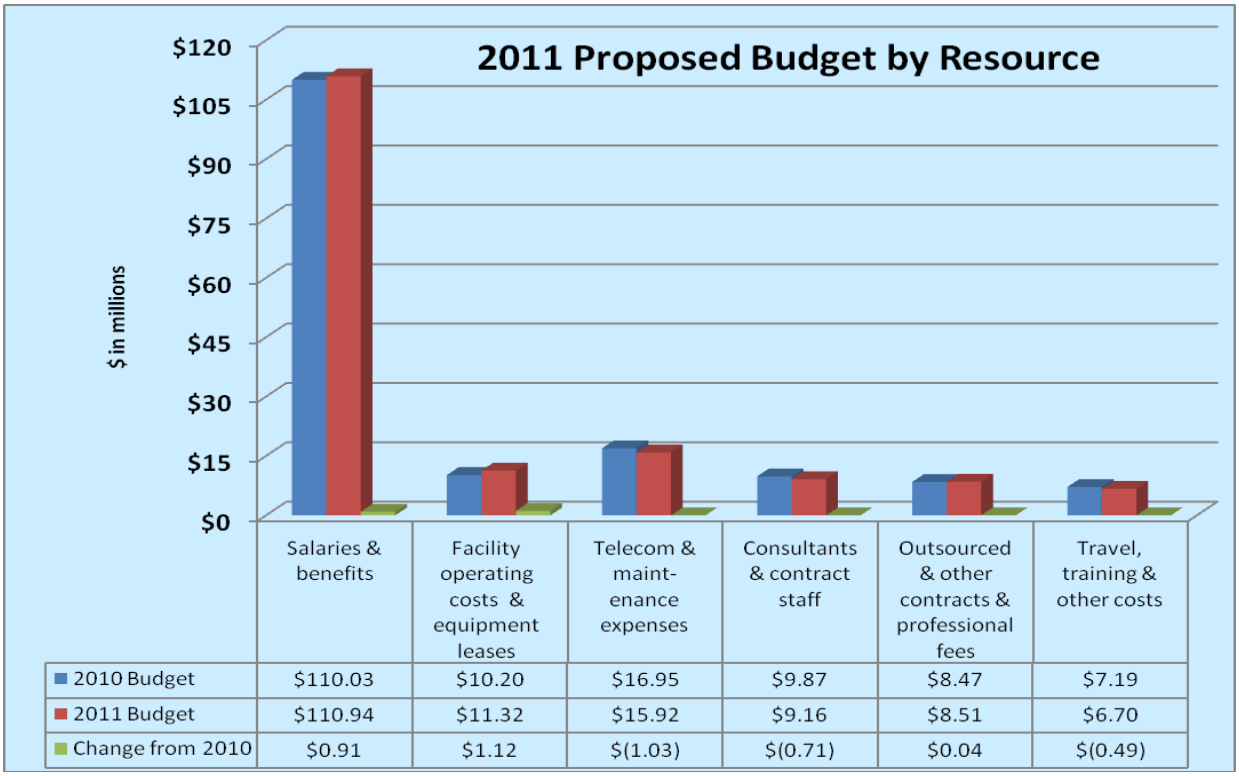
Every process, project or policy the ISO has or is considering is measured against the identified benefits. This activity in part is supported by aligning the strategic planning process with budget planning, as outlined in Section II: Aligning with the Strategic Plan.



It is the budget process that drives revenue requirement needs, which is translated into rates charged to scheduling coordinators and other market participants.

IV. ISO Resource Utilization

This section deals with the resources consumed by the ISO in its O&M budget to accomplish its strategic objectives and goals. The major resource components are outlined in the chart below. Changes in the 2010 budget components reflect reorganizations during 2010 although the total amount of the 2010 budget was not changed.



	Salaries & benefits	Facility operating costs & equipment leases	Telecom & maint-enance expenses	Consultants & contract staff	Outsourced & other contracts & professional fees	Travel, training & other costs
2010 Budget	$110.03	$10.20	$16.95	$9.87	$8.47	$7.19
2011 Budget	$110.94	$11.32	$15.92	$9.16	$8.51	$6.70
Change from 2010	$0.91	$1.12	$(1.03)	$(0.71)	$0.04	$(0.49)

Staffing

To operate the grid, the ISO depends on its highly educated employees, which makes staff a critically important resource with salaries and benefits comprising 68% of the O&M budget for both 2011 and 2010.

The staffing plan premise is to attract and retain the best and brightest individuals in the industry and at times, the ISO will revise the organizational structure to accommodate such talent. The Company also makes periodic organizational changes to align resources to focus on the important matters identified in the Strategic Plan, and to better reflect end-to-end business processes.

The staffing level for 2011 is 598 employees and 3 trainees, 14 less than the budgeted 2010 staffing level. As of August 30, 2010, there are 593 full time employees. As that equals 99% of the budgeted staffing level, no provision for vacancies was made to the 2011 budget. A summary of the budgeted headcount for 2011 and 2010 is as follows:

Projected Staffing Levels	2011 Budget	2010 Budget	Change
Chief Executive Officer	16	18	(2)
Human Resources	19	19	-
Market and Infrastructure Development	63	67	(4)
Technology	159	162	(3)
Operations	244	252	(8)
General Counsel and administration	59	56	(3)
External Affairs	41	41	-
Gross headcount	**601**	**615**	(14)
Less Program Office staff included in capital	(7)	(10)	3
Less vacancy factor	-	(15)	15
Net headcount	**594**	**590**	4

Staffing costs increased $912,000 or 1% to $110.9 million in 2011 from $110.0 million in 2010. The elimination of the vacancy factor and merit increases amounted to a $2.2 million increase in the 2011 budget over 2010, which was partially offset by a $1.7 million reduction stemming from a lower headcount. Anticipated overtime increased $781,000 or 13% to $6.9 million in 2011 from $6.1 million in 2010. Other payroll costs, primarily performance compensation, decreased $384,000 or 3% to $11.4 million in 2011 from $11.8 million in 2010.

Staffing Related to Capital

As in past years, the costs of ISO staff dedicated full-time to capital projects have been removed from the O&M budget, and will be charged to capital projects, which are funded separately. The capitalized staff amounted to seven full-time staff in the Program Office department of the Technology division. Other ISO staff engaged on capital projects is budgeted in their respective cost centers, but will be capitalized for the financial statements that are prepared in accordance with generally accepted accounting principles.

Compensation Structure

The 2011 compensation budget includes funding for employee base salaries, benefits and payroll taxes, other compensation elements such as overtime and performance compensation, and related costs such as relocation and tuition reimbursement. The budget also includes funds for 2011 salary adjustments for merit, and equity and market adjustments. These costs have been budgeted for each position.

In setting the annual merit, equity, and market adjustments budget, the Human Resources division participates in multiple salary surveys that qualified third party vendors administer confidentially through to obtain information on competitive market pay rates. The ISO ability to attract and retain talent with the necessary skills and knowledge is directly linked to our ability to maintain competitive pay practices. The

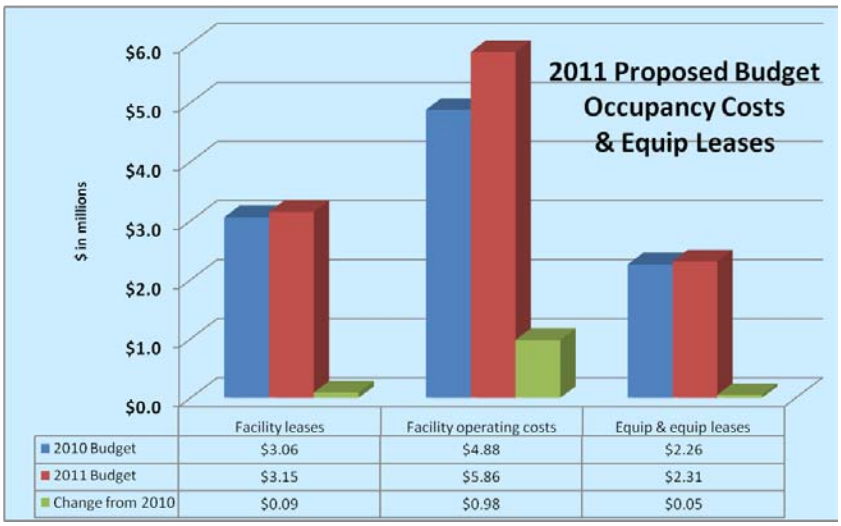
total compensation package provided to employees includes performance compensation with payouts in the subsequent year based on individual and corporate performance.

Employee benefits are budgeted at 35% of salary costs to fund the benefits summarized in the table below. Management will enter into contracts with selected vendors to ensure these benefits are available to eligible employees with the costs primarily depending on employee population levels and participation.

The 35% burden is broken down as follows:

Benefit Obligation	ISO Cost Components	Rate
Health and Welfare plans Medical, Dental and Vision	Medical, dental and vision; life, accidental death and long-term disability insurance; state unemployment insurance; and worker's compensation	12%
Retirement Benefit Plans	Retirement Savings Benefit Plan 401(k); Federal social security and Medicare; executive retirement plans; and Retiree Medical Benefit Plan	22%
Other obligations	Administration related costs	1%
Total Burden		**35%**

Occupancy and Equipment Leases

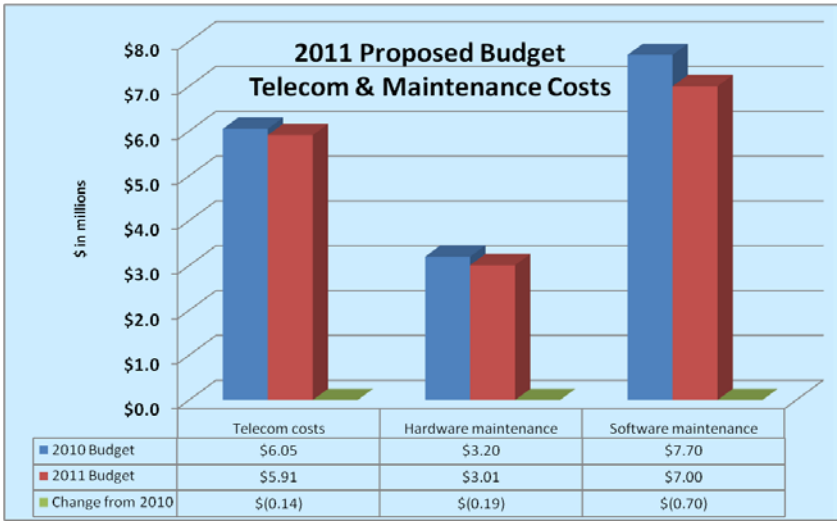


Occupancy and equipment lease costs increased by $1.1 million for the 2011 budget to $11.3 million from $10.2 million in 2010. Occupancy and equipment lease costs makes up approximately 7% of the 2011 and 2010 budget. Facility costs increased by $1.1 million or 13% to $8.7 million in 2011 from $7.6 million in 2010. The increase is primarily related to the addition of the new headquarters building in 2011 while still maintaining the leased facility in Folsom through 2012. Equipment leases held steady from 2010 at $2.6 million.

Telecommunications and Hardware and Software Maintenance Costs

Telecommunications and hardware and software maintenance costs decreased $1.1 million or 6% for the 2011 budget amounting to $15.9 million compared to $17.0 million in 2010.

Telecommunications, hardware and software maintenance costs make up approximately 10% of the 2011 and 2010 budgets.



	Telecom costs	Hardware maintenance	Software maintenance
2010 Budget	$6.05	$3.20	$7.70
2011 Budget	$5.91	$3.01	$7.00
Change from 2010	$(0.14)	$(0.19)	$(0.70)

Telecommunication costs decreased $140,000 or 3% for the 2011 budget amounting to $5.9 million compared to $6.1 million in 2010. Hardware maintenance costs decreased $189,000 or 6% to $3.0 million in 2011 from $3.2 million in 2010.

Software maintenance costs decreased $700,000 or 9% to $7.0 million in 2011 from $7.7 million in 2010. Maintenance contracts to support the new market software were not as high as originally anticipated.

Consultants and Contract Staff

Consulting and contract staff costs were reduced by $700,000 or 7% in 2011 to $9.2 million from $9.9 million in 2010. Consulting and contract staff makes up approximately 6% of the 2011 and 2010 budgets.

The decrease of 7% was primarily in the Market and Infrastructure Development and Operations divisions, which decreased their budgets a combined $824,000 offset by a $415,000 increase in the Technology division. The increase was primarily for West Wide model development, renewable studies, market analyses, transmission planning, and RPS integration study.

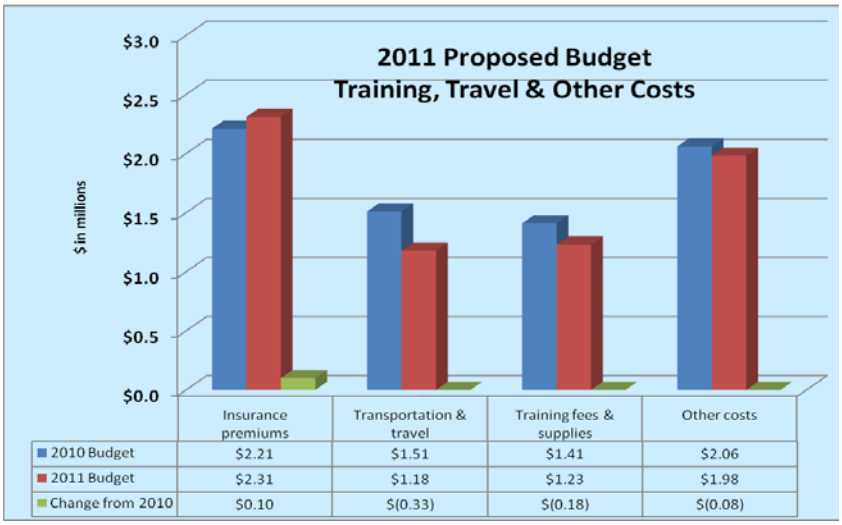
The ISO evaluates on an ongoing basis how to fulfill its responsibilities in a manner that is cost effective while providing the highest service quality, whether this is through hiring full-time employees or using outside resources (contractors, consultants, or temporary staff). At times, the Company may bring in house work that was previously performed by contractors when the work is of an ongoing nature and can be performed at lower overall cost and with the same or better service quality.

Outsourced Contracts and Professional Fees

Outsourced contracts and professional fees stayed steady from 2010 at $8.5 million. Outsourced contracts and professional fees make up approximately 5% of the 2011 and 2010 budgets. Professional fees decreased $325,000 to $5.3 million in 2011 from $5.6 million in 2010. The decrease of 5% resulted from lower outside legal costs.

Outsourced and other contracts increased $360,000 to $3.2 million in 2011 from $2.9 million in 2010. Major outsourced contracts are security certificate management, locational marginal price validation, weather and wind forecasting, and credit rating services.

Training, Travel and Other Costs



	Insurance premiums	Transportation & travel	Training fees & supplies	Other costs
2010 Budget	$2.21	$1.51	$1.41	$2.06
2011 Budget	$2.31	$1.18	$1.23	$1.98
Change from 2010	$0.10	$(0.33)	$(0.18)	$(0.08)

Training, travel and other costs decreased $484,000 or 7% to $6.7 million in 2011 from $7.2 million in 2010.

Training, travel and other costs make up approximately 4% of the 2011 and 2010 budgets. Insurance premiums increased $100,000 or 5% to $2.3 million in 2011 from $2.2 million in 2010.

Transportation and travel decreased $326,000 or 20% to $1.2 million in 2011 from $1.5 million in 2010. Training fees and supplies decreased $181,000 or 14% to $1.2 million in 2011 from $1.4 million in 2010. The remaining costs (primarily office, office supplies and meeting costs) decreased $78,000 or 4% to $2.0 million in 2011 from $2.1 million in 2010.

Reconciliation with 2010 O&M Budget

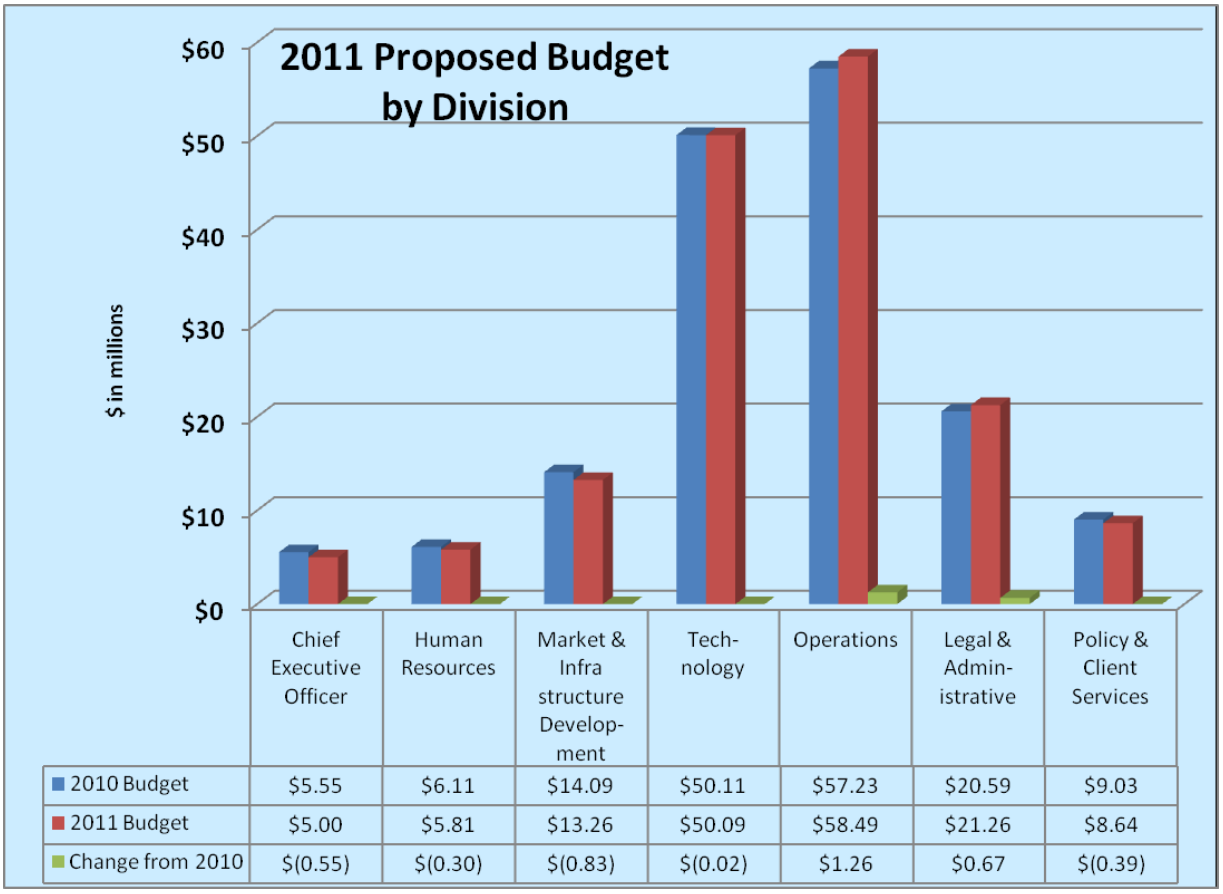
The O&M budget decreased by $0.2 million or 0.1% to $162.5 million in 2011 compared to $162.7 million in 2010. A reconciliation of the change follows ($ in millions):

2010 Operations and Maintenance Budget	**$162.7**
Increases in the budget	
Merit increases and elimination of vacancy factor	2.2
Increased facility operating costs as both Folsom locations will be maintained for 2011	1.0
Increase in overtime for project implementation	0.8
Increase in other contract services for weather forecasting and credit rating	0.3
Net increases in the budget	**4.3**
Decreases in the budget	
Lower compensation due to reduced headcount	1.7
Lower hardware and software maintenance costs	0.9
Reduction in consultants and contract staff	0.7
Reduction in other personnel costs	0.4
Reduced level of professional fees for outside counsel	0.3
Reduced transportation and travel	0.3
Other decreases	0.2
Net decreases in the budget	**4.5**
2011 Operations and Maintenance Budget	**$162.5**

V. ISO Divisional Budget Overviews

Each corporate division provides a description of their department, functions, staffing, and proposed budget. The divisions are presented in the following order:

- Chief Executive Officer
- Human Resources
- Market and Infrastructure Planning
- Technology
- Operations
- Legal and Administrative
- Policy and Client Services



	Chief Executive Officer	Human Resources	Market & Infra structure Develop-ment	Tech-nology	Operations	Legal & Admin-istrative	Policy & Client Services
2010 Budget	$5.55	$6.11	$14.09	$50.11	$57.23	$20.59	$9.03
2011 Budget	$5.00	$5.81	$13.26	$50.09	$58.49	$21.26	$8.64
Change from 2010	$(0.55)	$(0.30)	$(0.83)	$(0.02)	$1.26	$0.67	$(0.39)

The 2011 proposed budget of $162.5 million compares with the 2010 budget of $162.7 million, which is a decrease of $200,000 or 0.1%. Operations and Technology accounted for 36% and 31%, respectively, of the 2011 O&M budget while Legal and Administrative comprised 13%. Market and Infrastructure Planning accounted for 8%, Policy and Client Services accounted for 5% and Human Resources and Chief Executive Officer made up 4% and 3%, respectively, of the 2011 O&M budget. Staffing decreased by 14 to 601 from 615.

A restructuring of the executive team was the most notable corporate change in 2010. The reorganization was in response to filling the executive position left open with the resignation of the long-serving vice president of Operations and other needs. Some responsibilities of five divisions were transferred to more directly align the divisions with ISO core missions. For instance, all technology-related departments were combined to form a new division, Technology. Staff dealing with renewables integration and smart grid technologies have been reassigned to the Technology division as well, which will also be responsible for the full end-to-end testing of new market applications.

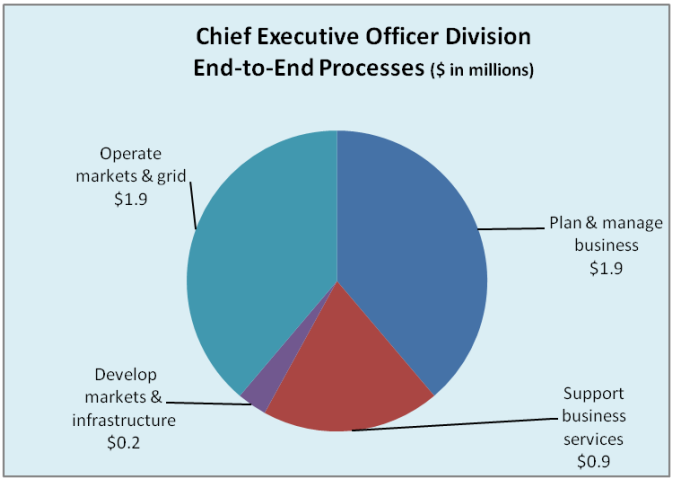
In addition, the financial planning, accounting and procurement departments were combined under the General Counsel and Chief Administrative Officer, who also serves as the Chief Compliance Officer and Corporate Secretary. While the ISO is maintaining its corporate compliance function, the organizational changes also included the creation of a Director of Operations Compliance and Control position with supporting staff that reports to the vice president of Operations and Chief Operating Officer.

Other organization realignments in 2010 include decommissioning the Organizational Effectiveness department because its mission of creating a strategic framework business plan ended with the divisions and departments now directly responsible for implementing strategic planning initiatives.

The 2010 budget reflects theses changes to be comparable with the 2011 budget.

Chief Executive Officer Division (including Department of Market Monitoring)

The division comprises the office of the Chief Executive Officer and the Department of Market Monitoring.

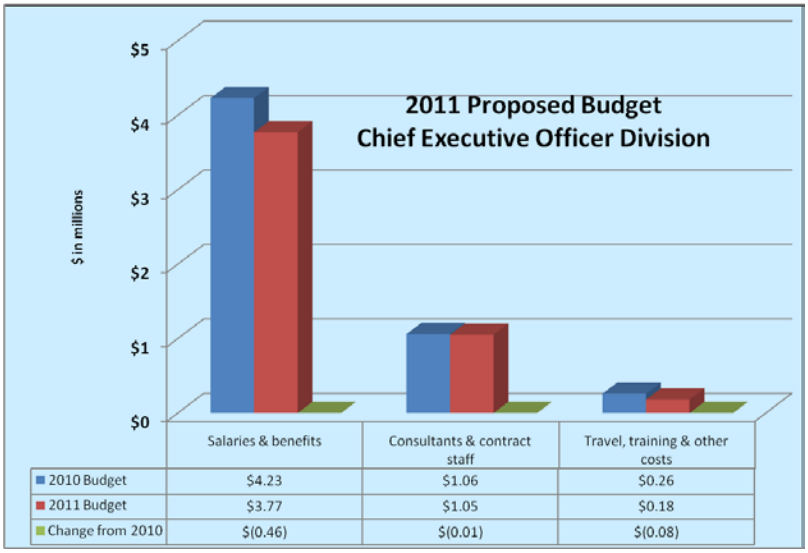


The Department of Market Monitoring provides independent oversight and analysis of the ISO markets by identifying market design flaws, potential market rule violations and market power abuses.

The department is staffed with a highly skilled group of analysts with advanced degrees in engineering and economics who publish quarterly and annual reports on market issues and performance as well as periodic ad-hoc reports. The market monitor is active in shaping policies to help ensure provisions are in place to mitigate the exercise of market power, especially with new market features and services that facilitate the integration of renewable resources.

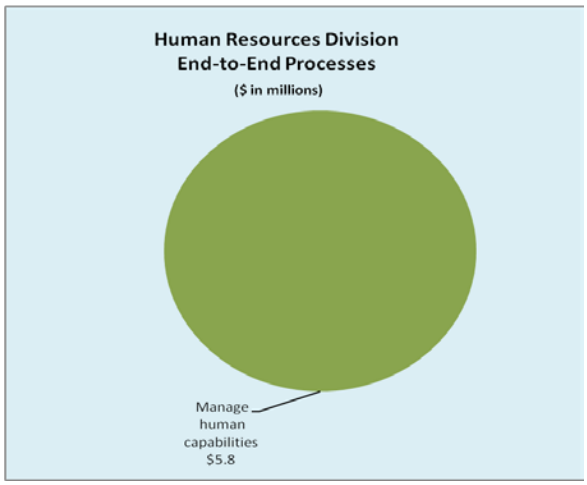
Discussion of Proposed Budget

The 2011 proposed budget of $5.0 million compares with the 2010 budget of $5.6 million, which is a decrease of $555,000 or 10%. Staffing decreased by 2 to 16 from 18. Personnel costs decreased $463,000 while other costs decreased $92,000.



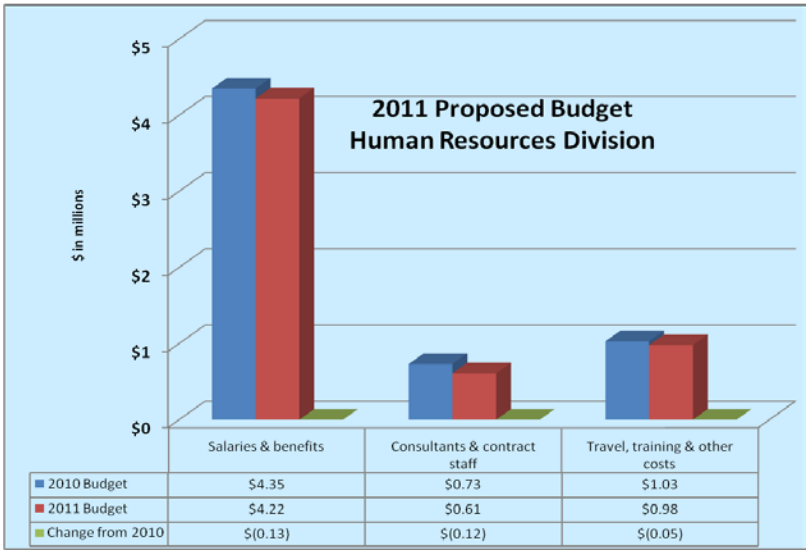
Human Resources Division

The Human Resources Division establishes the policies, programs and "people" strategies that enhance the Corporation's ability to attract and retain the uniquely skilled and highly talented professionals needed to operate the Company and meet its objectives.



In addition to managing the division with the best industry practices, Human Resources will advance the corporate focus on developing the next generation of ISO people. Driven in part by the United States Department of Labor's continued prediction of diminishing resource pools in engineering and other technical fields, Human Resources will leverage the ISO Academy to advance the technical skills and capabilities of selected employees in engineering, operations, markets, economics and business.

Retention and succession development takes center stage in 2011 as the initiative to develop the next generation of ISO people matures. Our focus is on ensuring that key employees gain hands-on experience, situational awareness, coaching and mentoring in critical areas. Additionally, via the Leadership Academy, employees with people-management responsibilities will continue to be challenged to grow leadership capabilities such areas as collaboration, mentoring and developing others, interpersonal skills and team building.



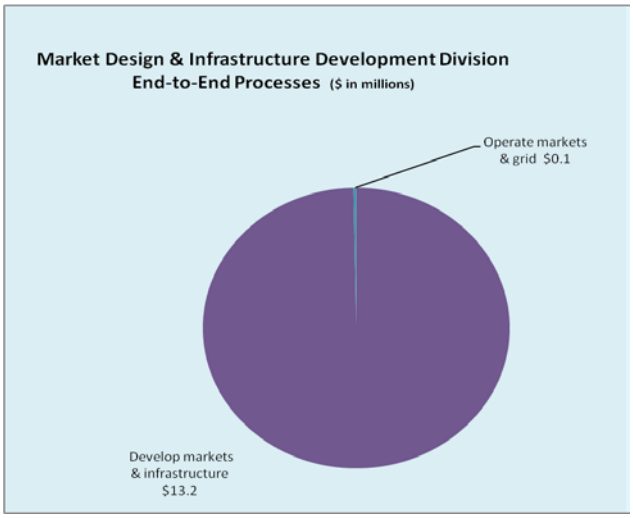
Discussion of Proposed Budget

The 2011 proposed budget of $5.8 million compares with the 2010 budget of $6.1 million, which is a decrease of $285,000 or 5%. Staffing remained unchanged at 19. Personnel costs decreased $128,000, while consulting costs decreased $112,000 and other costs decreased $45,000.

Market and Infrastructure Development

The division develops a forward-looking, comprehensive and fully compliant transmission plan that incorporates initiatives that facilitate a robust market, support the state's Resource Adequacy program, generator interconnection studies and renewable resource integration analysis. Other responsibilities include performing seasonal operating studies, maintaining operating procedures, supporting real time operations, and coordinating with surrounding control area operators on engineering issues.

Ongoing responsibilities include developing policy positions on regulatory issues and responsibility for over 1,700 ISO regulatory contracts, including their negotiation, drafting and administration.



This division provides subject expertise and regulatory support to policymakers developing state initiatives such as greenhouse gases, increasing demand response participation in the wholesale market and setting capacity requirements. It also provides technical support to Market Services (Operations division) on congestion revenue rights and to Market Operations (Operations division) on full network modeling capabilities.

The Market and Infrastructure Policy Department is responsible for the design of market rules and mechanisms including those mandated for enhancement, such as convergence bidding, expanded functionality for demand response participation in the

wholesale markets, real-time dispatch and pricing rules for constrained generation and decremental generation bidding rules.

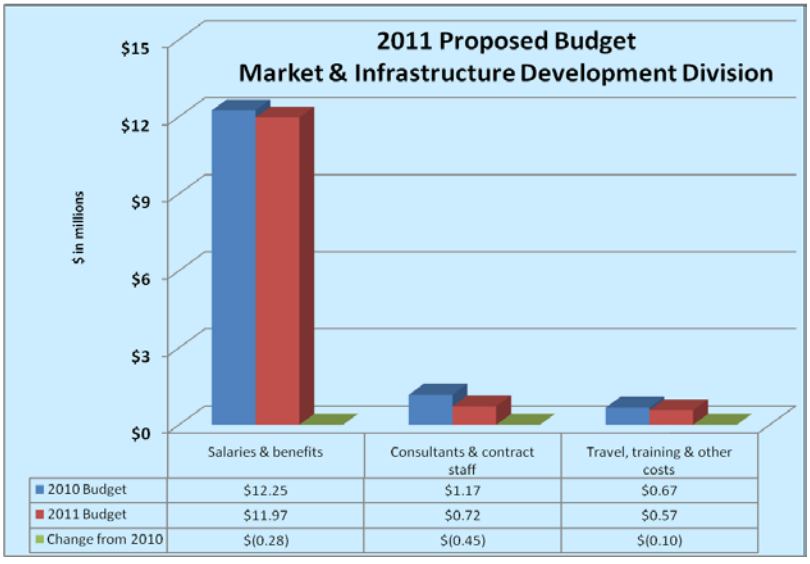
The Market Analysis and Development Department monitors the market and identifies systemic issues that may need attention. When issues are identified, the department develops conceptual solutions to address them. The department holds a stakeholder Web conference about every six weeks that provides updates and observations on market performance with an emphasis on coordinating plans with stakeholders to implement market enhancements, services and features. The outreach is reflective of the ISO efforts to improve its communications with stakeholders and encourage feedback.

The division as a whole is focusing a substantial amount of resources to developing the rules and mechanisms to integrate renewable resources. Progress is being made on several related initiatives that include completing an important study on interconnecting 20 percent renewables and reforming the transmission planning process so that infrastructure upgrade plans include meeting state renewables portfolio standard targets as well as reliability needs.

Also, the ISO was fully engaged in 2010 with investor and municipal owned utilities via the California Transmission Planning Group in establishing the metrics that led to publishing a conceptual statewide transmission plan that fed into the ISO regulatory compliant 2011 transmission planning process.

Discussion of Proposed Budget

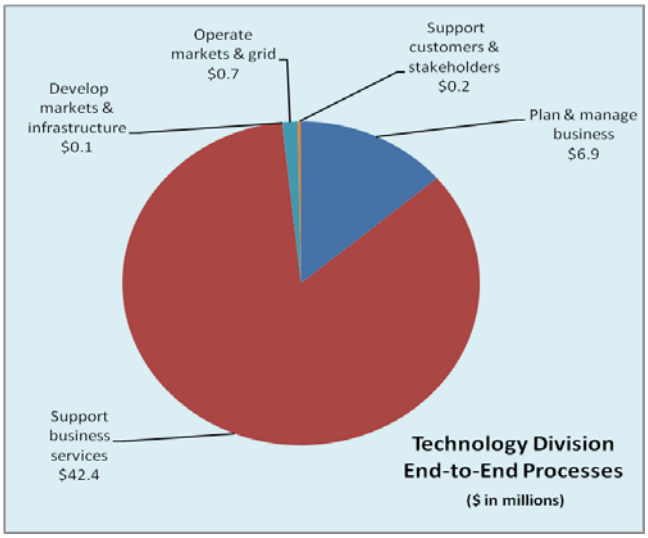
The 2011 proposed budget of $13.3 million compares with the 2010 budget of $14.1 million, which is a decrease of $827,000 or 6%. Staffing decreased by 4 to 63 from 67. Personnel costs decreased $286,000, while consulting costs decreased $445,000 and other costs decreased $96,000.



	Salaries & benefits	Consultants & contract staff	Travel, training & other costs
2010 Budget	$12.25	$1.17	$0.67
2011 Budget	$11.97	$0.72	$0.57
Change from 2010	$(0.28)	$(0.45)	$(0.10)

Technology

The Technology division encompasses Information Technology and the Project Office. Technology provides reliable, low-cost and world-class services and innovation through technologies that delivery exceptional system availability and new functionalities that support corporate goals and objectives.



The division's priorities in 2011 are as follows:

- to make incremental technology improvements, especially for market and reliability operations
- to proactively identify system problems and to fix them
- to predict system vulnerabilities and strengthen them before they become problems.

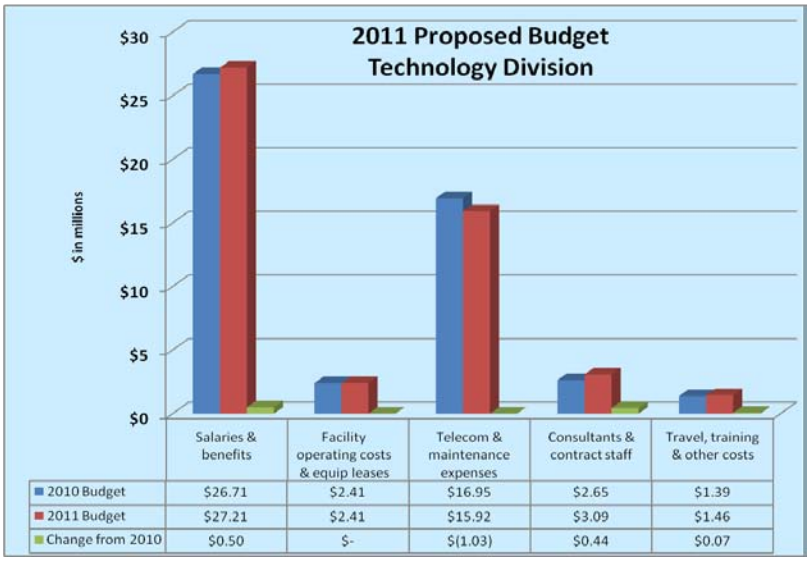
The Technology division is a lynchpin in managing the many changes needed to support renewables integration and has several initiatives directly related to facilitating new generation and transmission construction in California.

In the mid- to long-term future, the division is developing plans to make architectural changes so that ISO systems are easier to maintain, reduce maintenance costs and leverage technologies to improve cost effectiveness.

The Program Office department leads and manages key initiatives and projects that focus on enhancing customer service and processes. Core functions include release planning, program management for the Strategic Plan and the market initiatives roadmap, and providing project delivery via a standardized program lifecycle approach. All Program Office efforts have a strong process and quality focus based on Project Management Institute and Capability Maturity Model Integration standards.

The Smart Grid Technologies and Strategy Department leads the ISO effort to identify emerging technologies, which also includes new uses for mature technologies that enhance grid efficiencies and monitoring capabilities. These technologies are critical in enabling the ISO to interconnect and manage the intermittency of renewable resources.

The Power Systems Technology Development Department is responsible for the functional testing related to market-related projects. Working with the Program Office, the department makes sure that project implementation plans are feasible. This department leads the advanced technology applications development efforts such as voltage stability and dynamic stability applications projects.

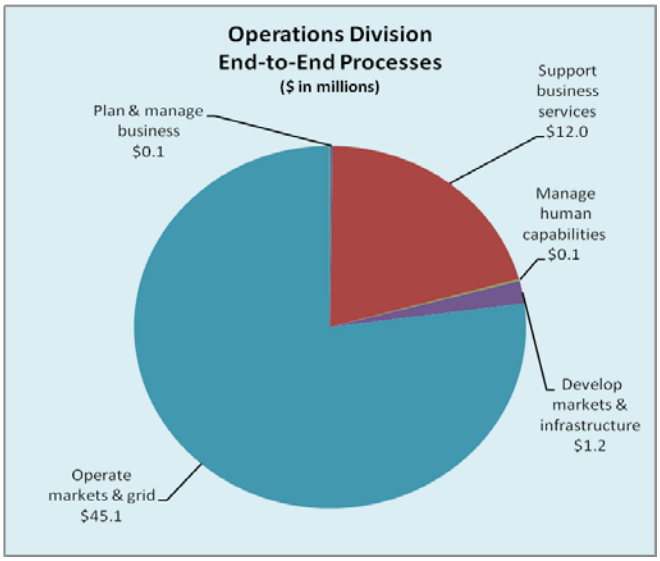


Discussion of Proposed Budget

The 2011 proposed budget of $50.1 million remained unchanged from the 2010 budget of $50.1 million. Staffing decreased by 3 to 159 from 162. Personnel costs increased $498,000, which was primarily related to additional expected overtime. Telecom costs decreased $140,000 or 3% for the 2011 budget amounting to $5.9 million compared to $6.1 million in 2010. Hardware maintenance costs decreased $189,000 or 6% to $3.0 million in 2011 from $3.2 million in 2010. Software maintenance costs decreased $700,000 or 9% to $7.0 million in 2011 from $7.7 million in 2010. Maintenance contracts arising out of the new market software were not as high as originally anticipated. Other costs increased $71,000.

Operations

The division's main mission is the reliable operation of the power grid, markets and operations support and it is comprised of Systems Operations, Reliability and Market Modeling, Market Services, and Operations Compliance and Control, as well as the Campus Operations Department.



The power system is evolving to accommodate an increasing amount of renewable resources connecting to the grid, rising levels of imports and exports, and the participation of demand resources in the wholesale market. In addition, new applicable reliability standards may impact how the ISO reliably operates the grid. With advanced tools, the division will proactively manage the changing profile and characteristics of the power system, which includes managing the intermittency of renewables.

A new state-of-the-art control center (as part of the headquarters construction project) staffed by industry leading professionals will enable the ISO to provide a more transparent view into the status of the real-time grid and market and solve potential

reliability problems well in advance of real time. The Systems Operations Department operates the forward and real-time markets in a manner that minimizes the cost of delivering energy to California consumers.

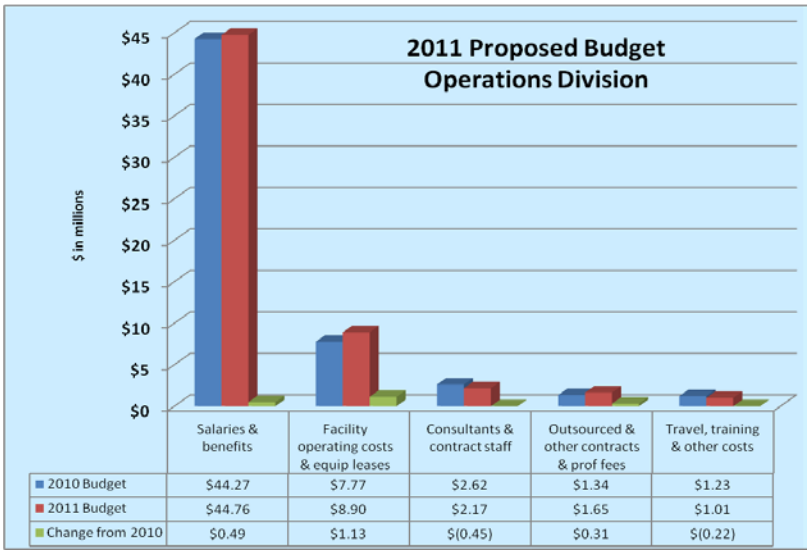
The Systems Operations and Reliability and Market Modeling Departments are becoming a center of excellence by further developing a professional staff that is highly skilled using the advanced technologies and tools necessary to reliably operate the grid and facilitate efficient markets in complex environments.

The Market Services Department performs the market settlement function as well as metering. It supports implementing market enhancements that facilitate transparent, consistent, and efficient operations as well as ones that reduce the settlement timeline to achieve efficient market outcomes.

The Operations Compliance and Control Department further develops and implements cross-training, market based training, forward analysis simulation training and individual career progression programs in order to empower our people to operate in a more complex, technical and challenging operating environment.

The Campus Operations Department manages the ISO building and infrastructure that supports a safe, efficient and comfortable work environment.

Discussion of Proposed Budget



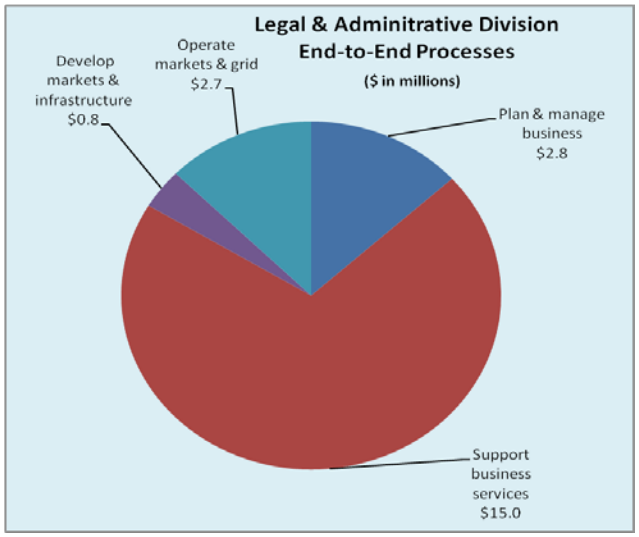
	Salaries & benefits	Facility operating costs & equip leases	Consultants & contract staff	Outsourced & other contracts & prof fees	Travel, training & other costs
2010 Budget	$44.27	$7.77	$2.62	$1.34	$1.23
2011 Budget	$44.76	$8.90	$2.17	$1.65	$1.01
Change from 2010	$0.49	$1.13	$(0.45)	$0.31	$(0.22)

The 2011 proposed budget of $58.5 million compares with the 2010 budget of $57.2 million, which is an increase of $1.3 million or 2%. Staffing decreased by 8 to 244 from 252. Personnel costs increased $493,000, which was primarily related to additional expected overtime. Facility costs increased by $1.1 million or 13% to $8.7 million in 2011 from $7.6 million in 2010. The increase is primarily related to the addition of the new headquarters building in 2011 while still maintaining the leased facility through 2012. Consulting and contract staff was reduced $451,000 while outsourced contracts increased $303,000 and other costs decreased $222,000 primarily related to transportation and travel.

General Counsel and Chief Administrative Officer

The Legal and Administrative Division is comprised of the legal, compliance, internal audit, corporate secretary, finance, accounting and procurement departments. The General Counsel department is a highly skilled, highly ethical team of professionals sought after by other ISO divisions and departments for their sound judgment, ability to solve problems, as well as its ability to add value in the legal and other areas of the company's business.

The Corporate Counsel Department is responsible for key vendor contracts and other agreements, as well as providing counseling on regulatory contracts, corporate, employment, intellectual property, finance, tax, governance, and other general legal matters including conflicts and ethics advice.



The Regulatory Counsel Department oversees legal and regulatory functions (including tariff amendments), regulatory matters, and litigation. Its duties include working closely with policy development teams to create market services and features that conform to existing tariffs or work in parallel to draft tariff additions and modifications.

This work was especially important in 2010 in reforming the ISO transmission planning process and enhancing current rules on integrating renewables, storage technologies and demand response.

The Tariff Compliance Department is primarily responsible for tariff interpretations, maintenance and compliance.

The Litigation and Mandatory Standards Department oversees all state and federal court litigation and appellate work and handles adversarial proceedings. The duties also include providing advice to the Compliance

The Corporate Secretary Department coordinates Board-related matters, including communications, setting meeting agendas, and reviewing and coordinating the submission of Board documents. This department is also responsible for maintaining the official corporate record. The Paralegal and Office Administration Department is responsible for providing paralegal, administrative assistant and technical assistant support to the Legal Department.

Corporate Compliance is the department that assesses and ensures business unit readiness for implementing new and revised mandatory reliability standards and ensuring a framework for tariff compliance as well as a corporate culture of compliance with all laws and corporate policies. The Internal Audit Department is responsible for developing and implementing the annual internal plan and conducting audits to evaluate

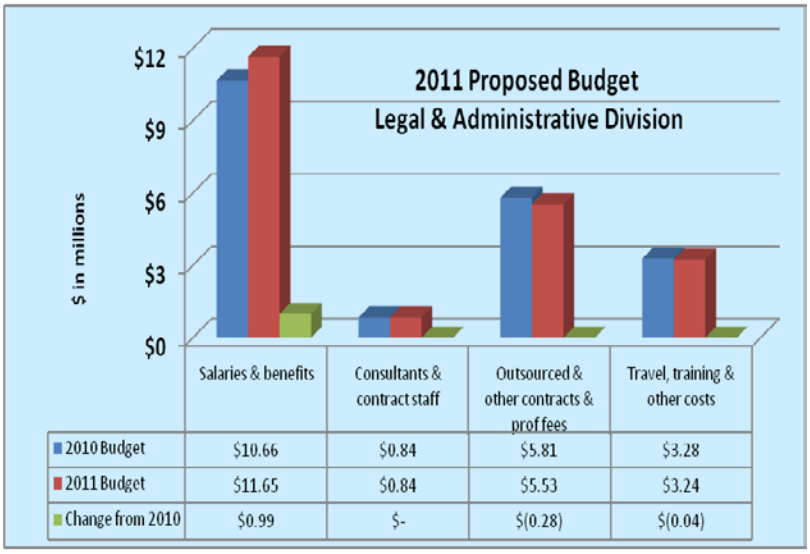
the effectiveness of management practices and controls. This department also has the responsibility for the annual risk management assessment that feeds into the organization's initiatives to mitigate identified risks.

The Accounting Department is responsible for implementing internal control policies, general accounting and financial reporting, and payables and receivables.

The Treasury and Credit Department is responsible for credit management and investments. Financial Planning is responsible for debt, financial administration of capital projects and financial planning, budgeting and rates.

Procurement and Vendor Management Department supports cost containment policies by purchasing goods and services through competitive vendor selection and cost management.

Discussion of Proposed Budget



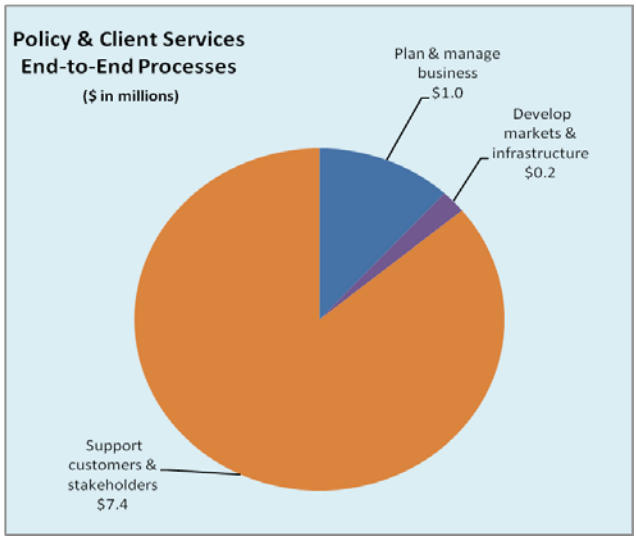
The 2011 proposed budget of $21.3 million compares with the 2010 budget of $20.6 million, which is an increase of $678,000 or 3%. Staffing increased by 3 to 59 from 56.

Personnel costs increased $998,000, which was primarily related to the elimination of the vacancy factor. Professional fees decreased $325,000 to $5.3 million in 2011 from $5.6 million in 2010. The decrease of 5% resulted from lower outside legal costs. Other costs decreased $38,000.

Policy and Client Services

The Policy and Client Services Division builds high quality collaborative relationships with a wide variety of stakeholders, regulators and consumer groups. It strives for excellence by providing timely and accurate information for public dissemination, fostering value added customer service, anticipating and addressing issues in a timely manner, and advancing objectives benefiting consumers and the electric industry. The division works toward these goals by collaborating across the ISO to quickly resolve customer issues, improve communication with stakeholders and effectively represent the ISO before state agencies, regional organizations and federal energy regulators.

The division is also responsible for key aspects in facilitating the integration of renewable resources by clearly explaining ISO positions and grid needs to technical and



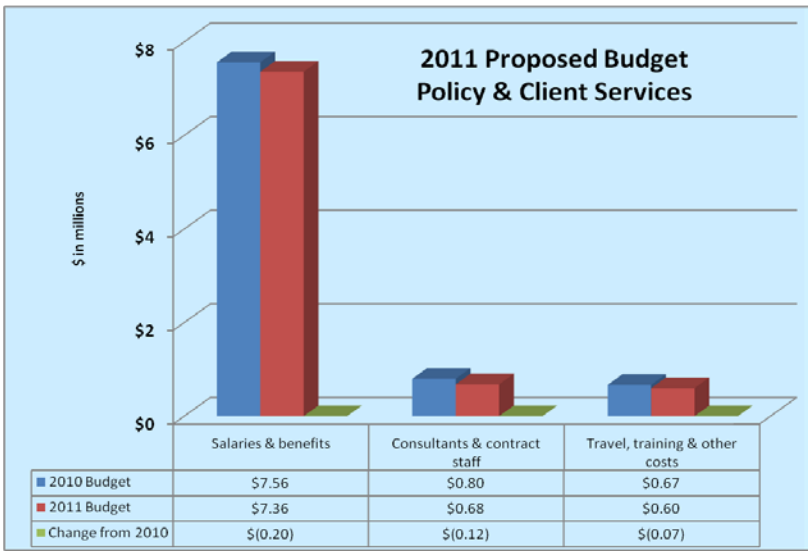
non-technical audiences. This has included such things as developing the "green pages" on the external ISO website and producing fact sheets that recast high technical grid terms and concepts into easily understandable language.

The division also performs important work to update and manage the ISO Business Practice manuals, which contain the information underlying tariffs and is critical in giving stakeholders and ISO customers the information they need to interconnect and operate renewable facilities, among other things.

The Communications and Public Relations Department manages internal and external communications, including all Web communications, and employee and media relations. The department also issues stakeholder communications and develops new information products and services that add value to customer and stakeholder businesses.

The external affairs departments (federal, state and regulatory) oversee interactions with the state legislature and governor's office regarding matters that could impact ISO. The activities include building and maintaining relationships with regulatory agencies including the California Public Utilities Commission, the California Energy Commission, and the California Air Resources Board, and monitoring and managing federal legislative and regulatory matters that could influence ISO practices and policies. The ISO collaborated closely with the Air Resources Board as it developed the rules to implement California's landmark greenhouse gas emissions reduction law, Assembly Bill 32. The departments work with the state legislature to advise and educate lawmakers that are introducing new or modified statutes that impact the power system.

The Customer Services and Industry Affairs Department is the primary business interface between ISO and its clients and stakeholders. It was able to cut the amount of time it takes to resolve customer enquiries by 50% in 2009. The department has initiatives that continue in 2011 implementing a customer relations management system.



Discussion of Proposed Budget

The 2011 proposed budget of $8.6 million compares with the 2010 budget of $9.0 million, which is a decrease of $386,000 or 4%. Staffing remained unchanged from 2010 at 41. Personnel costs decreased $200,000. Consultants were reduced by $125,000 and other costs decreased $61,000.

VI. Debt Service

Debt service budgeted for inclusion in the 2011 revenue requirement includes principal and interest on the ISO's outstanding Series 2008 and 2009 bonds. The 2008 bonds will be retired in full by February 2014, bear interest at 5%, as summarized below:

Amortization schedule for 2008 bonds ($ in millions)	Principle	Interest	Proceeds from debt service fund	Total
2011	$42.3	$6.5	$(0.7)	$48.1
2012	25.1	4.3	(0.7)	28.7
2013	36.0	3.0	(0.7)	38.3
2014	23.5	1.2	(20.2)	4.5
Total	**$126.9**	**$15.0**	**$(22.3)**	**$119.6**

In 2009, the ISO issued debt to finance building a new facility in Folsom on land owned by the ISO. The 2011 revenue requirement includes a portion of debt service costs related to this offering, as a portion of the interest carrying costs would be funded from the proceeds of the offering (as capitalized interest). The structure of the bonds is a fixed rate debt at rates from 4.5% to 6.25% with a term of 30 years. Lease payments on current facilities in Folsom will expire at the end of 2012. Amortization of the 2009 bonds is shown below:

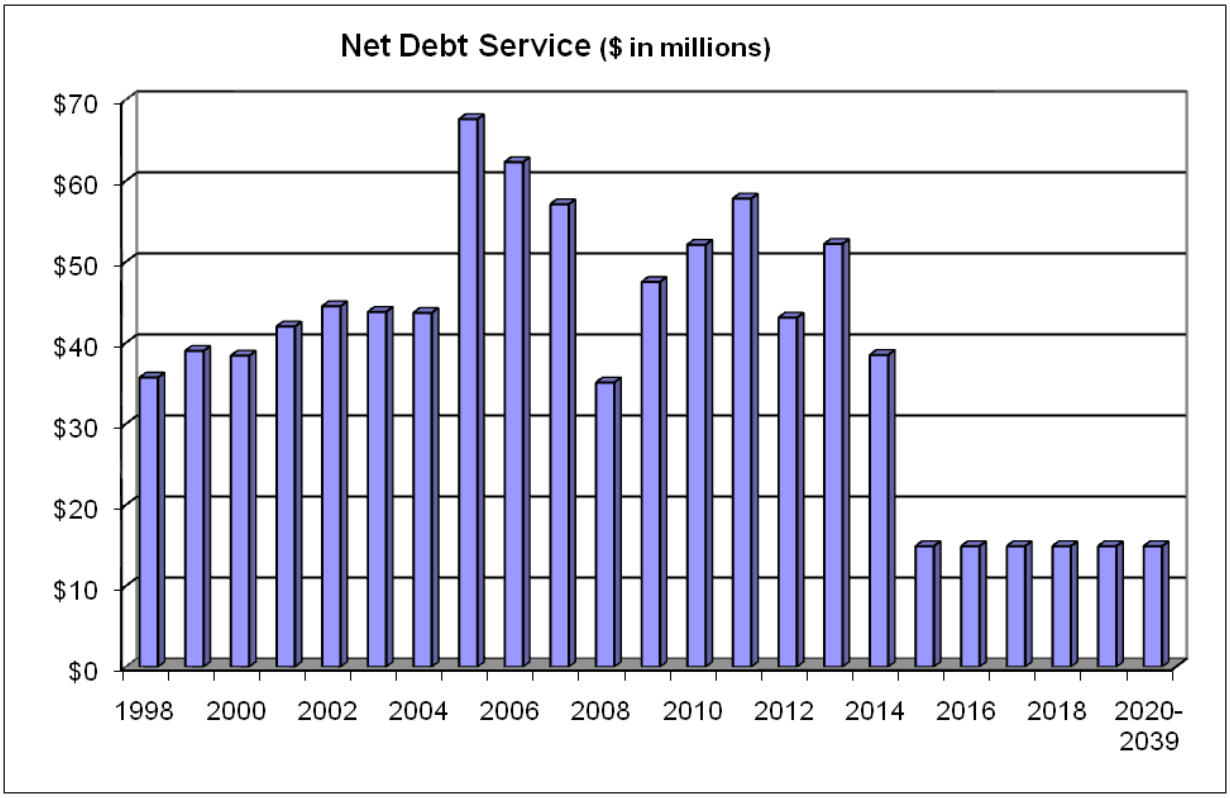
Amortization schedule for 2009 bonds ($ in millions)	Principle	Interest	Proceeds from debt service fund	Total
2011	$ -	$11.3	$(11.3)	$ -
2012	3.5	11.3	(8.5)	6.3
2013	3.6	11.2	(0.5)	14.3
2014	3.7	11.1	(0.5)	14.3
2015	3.8	11.0	(0.5)	14.3
2016	4.0	10.8	(0.5)	14.3
Thereafter	181.4	158.3	(11.3)	328.4
Total	**$200.0**	**$225.0**	**$(33.1)**	**$391.9**

The collection for the bonds in the revenue requirement occurs the year before the bond payments are made. Principle payments occur in February and interest is paid semiannually in February and August.

A summary of debt service is as follows:

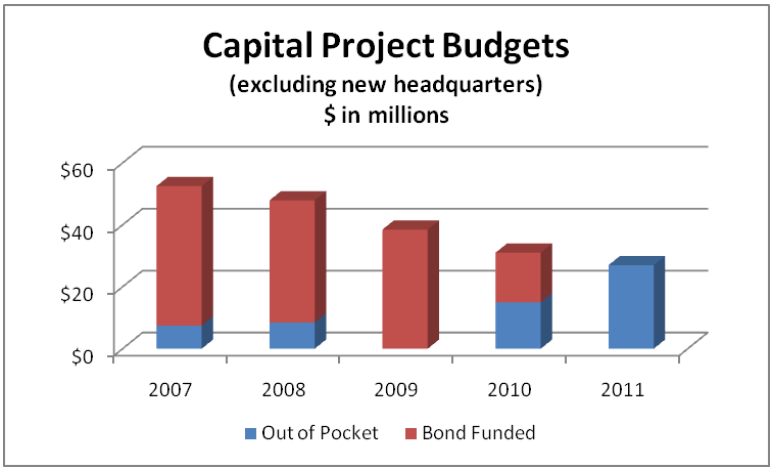
Debt Service ($ in millions)	2011 Budget	2010 Budget	Change
Principle payments on 2008 and 2009 bonds	$28.6	$42.3	$(13.7)
Interest payments	15.6	6.5	9.1
Less amounts from debt service reserve	(9.2)	-	(9.2)
Subtotal	**35.0**	**48.8**	**(13.8)**
25% Debt Service Reserve	8.7	12.2	(3.5)
Total	**$43.7**	**$61.0**	**$(17.3)**

Net debt service from ISO inception is shown below:



VII. Capital Project Budget

The planned 2011 capital budget of up to $27 million will fund projects as detailed on the following pages. All of it will be funded out of operating funds. Additional assessment of capital spending needs will continue over the coming months. The current project list excludes the ISO facility of $160.0 million, which is funded separately from the 2009 bonds.



Capital / Project Budget Development Process

The 2011 capital budgeting process will be held August – November of 2010. Throughout the year, the Program Office collaborates with the internal business units and maintains a list of projects. The list is based on the Five-Year Strategic Plan, the Information Technology roadmap, and the ISO market initiatives roadmap. On a monthly basis, strategic initiative owners and managers, along with an advisory committee, review the progress of active projects, identify issues and risks, and approve changes to the master project listing. During the budgeting process, the information technology roadmap items are combined with the strategic projects scheduled for the following year and a budget is developed. A prioritization and ranking process is evoked in the event that the budget amount is exceeded

Capital Project List

The list of projects put forward is consistent with the proposed funding level, and provides an indication of the projects to be initiated during 2011. This year's list includes renewable integration projects to help California reach the state mandated 20% and 33% renewable energy goals, as well as projects to help with identifying, proving and leveraging smart grid technologies. Also included are items mandated for implementation within three years after the new market launch (March 31, 2009) by the Federal Energy Regulatory Commission. All projects identified for 2011 will be subject to additional review before funding is approved, including further consideration of project need, a cost-benefit analysis and completion of a project plan. Specifically, the Corporate Management Committee made up of the Chief Executive Officer, Chief Financial Officer and General Counsel (with Chief Technology Officer attending) reviews and approves all projects considered for funding in 2011. The priorities set forth for 2011 may change depending on developments during the second half of 2010.

Proposed Capital Projects for 2011	Amount
Alignment (Customer, Stakeholder, External)	
Renewable integration market products	medium
Smart Grid projects	medium
Enhanced forecasting tools (congestion management display, short term event predictor and ramp planning tool)	medium
Day ahead scheduling of intermittent resources	medium
Rules to encourage the dispatch of wind and solar resources	medium
Customer relationship manager - phase 2	small
Total	**3,200,000**
Operational Excellence (Process)	
Year three mandated items (load aggregation point, bid in demand, export of ancillary services and two tier real time uplift)	large
Operational improvements to market systems	large
Implement enterprise model management systems	medium
Voltage stability analysis — look ahead and real time (includes increase flow-gate capacity)	medium
Bid cost recovery for units running over multiple operating days	medium
Outage management system enhancements	medium
Phasor measurement infrastructure and wide area monitoring	medium
Energy management system: grid operations training simulator	medium
Aggregation of pumps and pump storage	medium
Implement network application tools — dynamic stability	medium
Operational meter analysis and reporting new features, corrections and automation	medium
Reliability demand response product	medium
Replacement requirement for resource adequacy resources planned outages	medium
Energy management system enhancements , automatic generation control, tuning tool, increase telemetry and frequency obligation	medium
Congestion revenue rights enhancements	medium
Changes in commitment costs	medium
Standard capacity product — phase 3	medium
Multi day unit commitment and 72 hour residual unit commitment	medium
Ancillary services substitution	medium
Multi hour block bidding in residual unit commitment	medium
Simultaneous residual unit commitment and integrated forward market	medium
Interim capacity procurement methodology and exceptional dispatch bid mitigation	medium
Ancillary services for non generation resources	medium

Proposed Capital Projects for 2011	Amount
Operational Excellence (Process) (continued)	
California Energy Commission phasor project	small
Market information data release — phase 3	small
Total	**16,200,000**
Institutional Sustainability (People/Technology)	
Consolidation of multiple overlapping applications to improve efficiency	medium
Implement a standard graphical user interface for all tools	medium
Efficiency and performance enhancements for settlement systems	medium
Integration — common information model standards alignment and enterprise architecture implementation	medium
Test automation tools	small
Total	**2,500,000**
Reasonable Cost and Essential Projects (Financial)	
Hardware, software and office equipment	large
Capitalized labor for portion of project office	large
Upgrades to Oracle eBusiness suite software — human resources, finance, procurement and market clearing	medium
Facilities — furniture purchases	small
Total	**5,100,000**
Total Proposed Capital Projects for 2011	**$27,000,000**

Note: The costs of the individual projects are not shown but are categorized by size as follows: small projects under $250,000, medium projects from $250,000 to $1 million and large projects over $1 million. The actual projects completed during 2011 will vary, including the potential addition of projects not on this list, the deferral of projects on this list to future years, or the elimination of projects on this list if no longer necessary.

VIII. Miscellaneous Revenue

Miscellaneous revenue for 2011 is budgeted at $7.6 million, a $0.5 million decrease from 2010 primarily to reflect lower earnings on the investment portfolio. The details of this category are as follows:

Miscellaneous Revenue ($ in millions)	2011 Budget	2010 Budget	Change
Scheduling Coordinator application and training fees, metered sub-system deviation fees, station power and wind forecasting and other fees	$0.5	$0.5	$ -
Interest earnings	2.6	3.8	(1.2)
Large generation interconnection fees	2.5	1.8	0.7
California-Oregon Intertie path operator fees	2.0	2.0	-
Total	**$7.6**	**$8.1**	**$(0.5)**

IX. Reserve Credit from 2010

The operating reserve credit is a reduction or offset to the ISO revenue requirement for 2011. In any year that the ISO's operating reserve account exceeds 15% of the prospective year's O&M budget, the excess goes toward reducing the revenue requirement for the coming year. For 2011, the ISO forecasts a credit from the operating reserve account of $30.5 million. The principle change was the collection of an extra month's grid management charges in January 2010 arising from the implementation of the payment acceleration market software enhancement in November 2009. The collection of an extra month's grid management charge will allow the expenditure for capital projects without the associated borrowing costs and 25% interest reserve. The reserve credit is calculated separately for each grid management charge category. A summary is below.

Reserve Credit from prior year ($ in millions)	2011 Budget	2010 Budget	Change
Increase in 15% reserve for O&M budget	$-	$(0.9)	$0.9
25% debt service collection from prior year	12.2	11.9	0.3
Collection of additional months grid management charges from implementation of payment acceleration	15.9	15.4	0.5
True-up of actual to forecast revenues and expenses and in 2009 a reduction in interest owed on generator fines arising from FERC ruling in 2001 refund case.	2.4	9.1	(6.7)
Total	**$30.5**	**$35.5**	**$(5.0)**

X. Unbundled Grid Management Charge Calculations

The ISO recovers its costs through separate grid management charges to market participants. Service categories and billing determinants are listed on the following page.

Rate Calculation

The rate for each service category is calculated as follows:

$$\frac{\text{Costs Allocated to Service Category}}{\text{Billing Determinant Volume}} = \text{Grid Management Charge Rate}$$

Error! Bookmark not defined.

Components of Grid Management Charge

The numerator for the above equation has been determined by summing ISO components of the revenue requirement for each service category, as the following:

- Operating and maintenance costs
- Miscellaneous revenue
- Debt service costs
- Cash funded capital project expenditures
- Operating reserve account credit

Changes to Grid Management Charge

In 2010, the structure for the Market Usage Forward Energy (MUFE) was changed to be based on the maximum MW of supply or demand scheduled in the day ahead market. The structure became effective June 1, 2010. Convergence bidding is planned for implementation in February 2011 and there will be two charges associated with this new functionality. The first is a bid charge of $0.005 per bid segment. Proceeds from this charge will offset the next year's costs for the convergence bidding MWh charge. The second charge will be applied to the gross MWh of supply and demand awarded in the day ahead market. The revenue requirement for this category will be nine percent of the sum of the costs associated with the market usage forward energy and forward scheduling categories.

Billing Determinants

The billing determinants for the rate structure are as follows:

GMC Rate Structure			
Function	**Rate Name**	**Bill Determinant**	**Charge Code**
Core Reliability Services (CRS)	CRS-demand (peak)	Monthly non-coincident peak (NCP) hour ending (HE) 7 – HE 22	4501
	CRS-demand (off-peak)	Monthly NCP all other hours	4502
	CRS-energy export	MWh of exports, excluding exports on transmission ownership rights (TOR)	4503
Energy Transmission Services (ETS)	ETS-net energy	MWh of metered control area load, excluding load on TORs	4505
	ETS-uninstructed deviations	MWh of uninstructed imbalance energy (UIE) netted over the settlement interval (except UIE associated with Participating Intermittent Resource Program PIRP)	4506
CRS/ETS	TOR	Metered control area load MWh on TORs	4508
Forward Scheduling (FS)	FS	Count of hourly schedules (including awarded RUC schedules)	4511
	FS-inter-Scheduling Coordinator (SC) trades	Count of hourly trades (including trades of Integrated Forward Market uplift obligations)	4512
	FS-PG&E-PGAB inter-SC trades	Count of hourly trades for PG&E-PGAB	4513
Market Usage (MU)	Purchases and sales of ancillary services (AS)	Day ahead and hour ahead scheduling process and real time MWh	4534
	Instructed energy (IE) (real time)	MWh of IE	4535
	Net uninstructed deviations, (Real Time)	MWh of UIE netted over the settlement interval (except UIE associated with PIRP)	4536
	Forward Energy	Maximum MWh of supply or demand scheduled in day ahead market	4537
Convergence Bidding	Bid charge	Bid charge of $0.005 per bid segment	4520
	Volumetric charge	Gross amount of MWh of supply or demand awarded in day ahead market	4533
ETS/MU	Monthly netted deviations – PIRP	MWh of IUE netted over the month for PIRP	4546
Settlements, Metering, and Client Relations (SMCR)	SMCR	Monthly customer charge of $1,000 per business associate ID	4575

Component Rates

The rates that result from the budget are as follows:

Net Revenue Requirement by Service Category ($ in millions)

Charge Code	Service component	2011 Budget	2010 Budget	$ Change	% Change
4501	CRS – demand (peak)	$34.4	$35.0	$(0.6)	(1.7)%
4502	CRS – demand (off-peak)	1.0	0.9	0.1	11.1
4503	CRS – energy exports	8.9	8.7	0.2	2.3
4505	ETS – net energy	69.9	75.2	(5.3)	(7.0)
4506	ETS - deviations	11.7	13.0	(1.3)	(10.0)
4508	CRS / ETS - TOR	0.9	0.9	-	-
4511-13	Forward Scheduling	13.6	22.2	(8.6)	(38.7)
4534-38	MU – AS and real time energy	34.2	16.9	17.3	102.4
4537	MU – forward energy	15.8	20.5	(4.7)	(22.9)
4533	MU – convergence bidding	2.9	-	2.9	new
4575	SMCR	1.8	1.8	-	-
Total		**$195.1**	**$195.1**	**$ -**	**0%**

Billing Determinant Volume Forecast (in thousands of Units)

Charge Code	Service component	2011 Budget	2010 Budget	Unit Change	% Change
4501	CRS – demand (peak) - MW months	407.4	445.6	(38.2)	(8.6)%
4502	CRS – demand (off-peak) – MW months	18.8	16.3	2.5	15.3
4503	CRS – energy exports – MW of exports	5,087.8	7,439.7	(2,351.9)	(31.6)
4505	ETS – net energy – MW of load	228,945.2	239,426.8	(10,481.6)	(4.4)
4506	ETS – deviations – MW of net uninstructed energy	9,132.5	11,247.2	(2,114.7)	(18.8)
4508	CRS / ETS – TOR – MWh of exports	3,899.9	4,003.8	(103.9)	(2.6)
4511-13	FS – number of hurly schedules and awarded AS bids	9,003.8	12,999.7	(3,995.9)	(30.7)
4534-38	MU – AS and real time energy – MWh of awarded AS, IE and net UE	77,073.4	73,672.6	3,400.8	4.6
4537	MU – Forward energy – MWh of net purchases and sales in day ahead market	325,186.8	325,186.8	-	-
4533	MU – convergence bidding	44,975.3	-	44,975.3	new
4575	SMCR – Customer months	1.8	1.8	-	-

Grid Management Charge (Rate per Unit) (note rate calculations may vary due to rounding)

Charge Code	Service component	2011 Budget	2010 Budget	$ Change	% Change
4501	CRS – demand (peak)	$84.34	$78.51	$5.83	7.4%
4502	CRS – demand (off-peak)	55.66	51.82	3.84	7.4
4503	CRS – energy export	1.75	1.17	0.58	49.6
4505	ETS – net energy	0.30	0.31	(0.01)	(3.2)
4506	ETS - deviations	1.28	1.16	0.12	10.3
4508	CRS / ETS - TOR	0.23	0.23	-	-
4511-13	FS	1.51	1.71	(0.20)	(11.7)
4534-38	MU – AS and real time energy	0.44	0.23	0.21	91.3
4537	MU – forward energy	0.05	0.06	(0.01)	(16.7)
4533	MU – convergence bidding	0.06	-	0.06	new
4575	SMCR	1,000.00	1,000.00	-	-

The following table provides comments on the changes in grid management charge rates from 2010 to 2011 for those charges that make up more than 5% of the revenue requirement. The overall rate change is attributable to two components:

- Changes in the components of the revenue requirement (O&M budget, debt service, other revenue and operating reserve credit) attributed to each grid management charge service category and
- Changes in the billing determinant volume estimates.

Comments on Changes in Grid Management Charge Rates

Charge Code	Service component	Change in Rate $	% of Revenue Require-ment	Comments on Change
4501	CRS	$5.83	17.6%	Increase attributable to drop in estimated volumes
4505	ETS – net energy	(0.01)	35.8	Minimal change from 2010
4506	ETS - deviations	0.12	6.0	Increase attributable to drop in estimated volumes
4511-13	FS	(0.20)	7.0	Under collection in 2009 increased revenue requirement for 2010. Condition did not occur in 2010 leading to lower revenue requirement in 2011.
4534-38	MU - AS and real time energy	0.21	17.5	Over collection in 2009 reduced revenue requirement for 2010. Condition did not occur in 2010 leading to higher revenue requirement in 2011.
4537	MU – forward energy	(0.01)	8.1	Structure changed in 2010 as result of FERC settlement
	Total		92.0%	