



California ISO
Shaping a Renewed Future

2015 Budget and Grid Management Charge Rates

September 18, 2014

PRELIMINARY

Prepared by Department of Financial Planning
California Independent System Operator Corporation



2015 Budget and GMC Rates

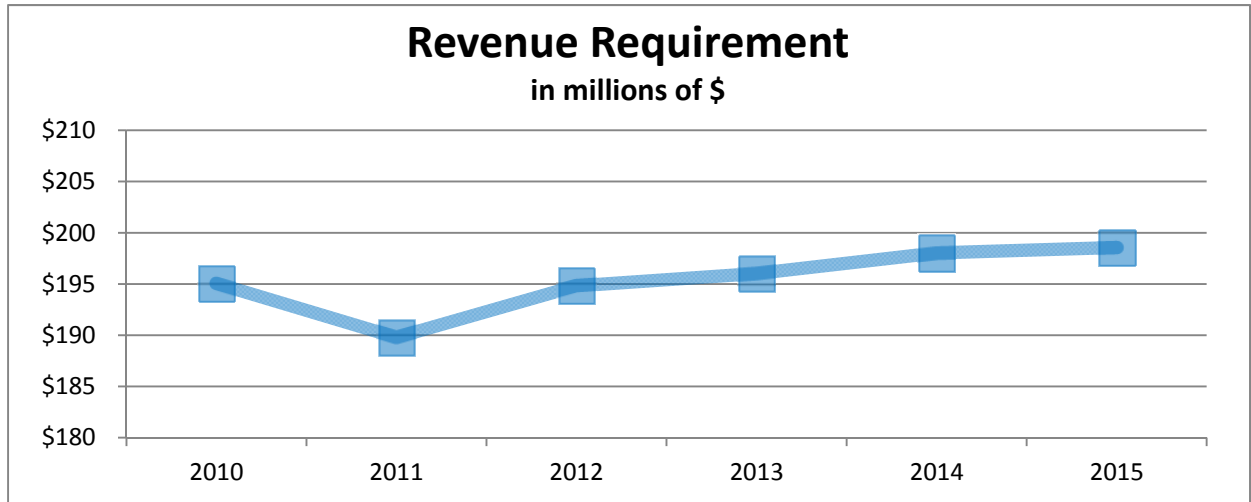
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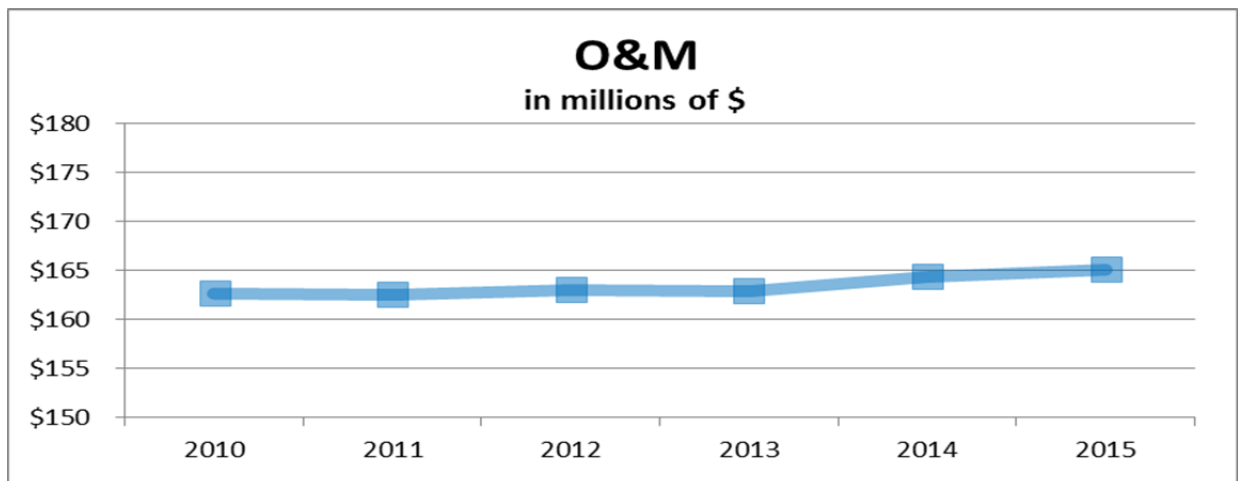
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I. 2015 REVENUE REQUIREMENT

The 2015 budget provides for a revenue requirement of \$198.5 million. Fiscal discipline remains a priority at the California Independent System Operator Corporation as evidenced by the continued stability of the revenue requirement. The 2015 revenue requirement is 16 percent lower than the peak in 2003 and has averaged an annual increase of only 0.6 percent since 2007. The ISO has absorbed several major initiatives during this time with no material impact to the revenue requirement, which included launching the new market and constructing its secure primary location.



The operations & maintenance (O&M) budget is the major component of the revenue requirement and is proposed to be \$165.1 million. The O&M budget makes up 83 percent of the 2014 and 2015 revenue requirements. Managing O&M is critical to keeping a stable revenue requirement. Since 2010, management has kept the increase in O&M to an annual growth rate of only 0.3 percent.



Components of 2015 Revenue Requirement

The 2015 revenue requirement compared to 2014 summary is as follows:

Revenue Requirement (\$ in millions)	2015 Budget	2014 Budget	\$ Change	% Change
O&M Budget	\$165.1	\$164.4	\$0.7	0.4%
Other Costs and Revenues	(9.4)	(8.3)	(1.1)	13.3%
Subtotal net O&M	155.7	156.1	(0.4)	(0.3)%
Debt Service including 25% Reserve	16.9	16.9	-	-%
Cash Funded Capital	30.0	26.0	4.0	15.4%
Subtotal before Reserve Adjustment	202.6	199.0	3.6	1.8%
Operating Cost Reserve Adjustment	(4.1)	(1.0)	(3.1)	310.0%
Total Revenue Requirement	\$198.5	\$198.0	\$0.5	0.3%
Transmission volume in TWh	248.5	247.3	1.2	0.5%
Pro-forma Bundled GMC per MWh	\$0.799	\$0.801	\$(0.002)	(0.2)%

Transmission volume declined during 2010 through 2011, but has increased over the past several years, which resulted in stabilizing the grid management charge (GMC) rates. The ISO projects that transmission volume will increase by one-half percent from 2014, to 248.5 terawatt hours (TWh), which results in a forecasted bundled GMC of \$0.799 per megawatt hour (MWh), or a decrease of \$0.002 per MWh from 2014.

The ISO recovers its revenue requirement through the unbundled GMC. Each unbundled service has corresponding rates paid by users of that service. Determining the rates follows this formula of calculating 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 2015 cost of service that consists of the following:

- O&M budget (sections III thru V)
- debt service costs (section VI)
- capital and project funding and cash funded capital (section VII)
- other costs and revenues (section VIII)
- operating cost reserve adjustment (section IX)

The O&M budget, the primary focus of this report, is the largest of these components and consists of costs incurred for ongoing operations. The 2015 O&M budget of \$165.1 million is \$739,000 more than the 2014 O&M budget of \$164.4 million. The O&M budget presentation is in three views as noted below:

- 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 to the 2013 bonds, and collection of a 25 percent debt service reserve. The 2013 bonds refinanced the 2009 bonds, which the ISO issued in 2009 to build a new headquarters facility in Folsom, California, and to fund other capital expenditures. The total debt service to be collected in the 2015 revenue requirement of \$16.9 million remains unchanged from 2014.

Cash funded capital included in the revenue requirement is \$30.0 million with any unencumbered amounts carried over to fund future years' capital requirements. Collecting capital as a component of the revenue requirement avoids additional costs with tax-exempt debt financing, which includes debt issuance costs, interest expense and the 25 percent debt service reserve.

Capital and project requirements for 2015 are budgeted for approximately \$20.0 million. Significant work is anticipated for 2015, as shown on the proposed project list, and includes the need for systems development related to expanding market capabilities and integrating renewable resources.

The Federal Energy Regulatory Commission (FERC) approved the energy imbalance market tariff on June 19, 2014 and implementation is set for October 1, 2014. The ISO has entered into the following implementation agreements approved by FERC.

Entity	Implementation Fee (In thousands)	Date approved by FERC	Participation effective date
PacifiCorp	\$2,563	June 28, 2013	October 1, 2014
Nevada Energy	\$1,100	June 13, 2014	October 1, 2015

Other costs and revenues that are offsets to the revenue requirement are budgeted to increase \$1.1 million in 2015 to \$9.4 million. These transactions include interest income, billings for generator interconnection studies, forecast fees collected from intermittent

resources, path operator fees for the California-Oregon Intertie and the energy imbalance market administrative charge

The operating cost reserve adjustment is forecast to be a credit of \$4.1 million in 2015. In any year that the ISO operating reserve account exceeds 15 percent of the prospective year's O&M budget, the excess reduces the revenue requirement for the coming year. This adjustment also includes the 25 percent debt service reserve collected in 2014 and the difference between actual and budgeted revenues and expenses from 2013.

The current GMC rate design went into effect in 2012 and provides for three volumetric charges and five transaction fees. The design was updated in 2014 to be effective January 1, 2015. The amendment is being filed at the FERC. The amendment changed the percentages of the System Operations and Congestion Revenue Rights (CRR) service charges, the Transmission Ownership Rights (TOR) charge and the revenue requirement maximum. The three volumetric charges are as follows:

- Market Services charge, which makes up 27 percent of the revenue requirement;
- Systems Operations charge, which comprises 70 percent of the revenue requirement; and
- CRR services charge, which makes up 3 percent of the revenue requirement.

The Market Services charge applies to MWh and MW of awarded supply and demand in the ISO markets. The Systems Operations charge applies to MWh of metered supply and demand in the ISO controlled grid. The CRR services charge applies to MWh of congestion.

Budget Guidance

The ISO held its budget kick-off meeting with stakeholders in June 2014. The ISO took input from stakeholders into account in building the 2015 budget. Notes of that discussion and subsequent stakeholder questions are available on the ISO website. The ISO's commitment to fiscal responsibility called for each ISO division to develop an O&M budget consistent with the ISO's strategic plan that keeps the rate of growth to less than 1 percent.

The overall ISO budget results in a revenue requirement under the proposed \$202 million threshold that triggers a review filing with federal regulators. The budget achieves the goals outlined above and funds ISO operations and initiatives as set forth in the company's strategic plan.

The ISO Board of Governors (Board) reviews the budget in September. The ISO then posts the budget to its website for stakeholder review. Comments are also welcome in a workshop set for October 9, 2014 (notes of that discussion and subsequent stakeholder questions will be available on the ISO website). The Board will consider approving the final budget in its December meeting.

Strategic Outlook

The ISO remains constant in its unwavering focus on maintaining the reliability of the high voltage grid that serves California and market participants throughout the West. This core function has expanded in recent years to include transforming the power markets and grid infrastructure that can use green renewable generation resources efficiently. The ISO is leading the way in meeting state energy goals by working with generators, utilities, state energy agencies and a diverse range of stakeholders in creating a flexible system that effectively uses all resources, generation and transmission alike, to the benefit of consumers.

At this time, the ISO grid has nearly 15,200 megawatts (MW) renewable generation connected to the grid, including nearly 5,500 MW of solar and 6,000 MW of wind powered capacity.

The ISO is working hard — and will continue to do so — to envision and implement a market structure that encourages demand response, storage and other new energy products to participate in the wholesale market with flexible and innovative technologies.

Not so far in the future, the ISO is confident the power market will create the price signals that will enable consumers to make smarter electricity choices such as installing programmable thermostats to determine when and how to use power.

Aligning with the ISO's strategic plan

The ISO takes seriously its commitment to contain operating costs while improving services and enhancing the reliability of the ISO transmission grid. This includes performing the increased responsibilities and necessary planning the ISO must do to integrate the thousands of megawatts needed to meet California's 33 percent renewables portfolio standard.

The 2015 budget aligns with the ISO's strategic plan, which is a guide to meet organizational and operational goals. The plan has the following three strategies:

1. Lead the transition to renewable energy;
2. Reliably manage the grid during industry transformation; and
3. Expand regional collaboration to unlock mutual benefits.

Underlying initiatives with metrics that support each strategy that moves the ISO and its industry partners toward a more secure and sustainable grid. The strategic plan helps position the ISO to flexibly deploy new technologies and launch new energy products, such as storage, demand response, energy efficiency, distributed generation and sometime in the future, microgrids.

While the strategic plan outlines common goals, the budget explains how the Corporation funds and allocates its resources to support its business plans. The 2015

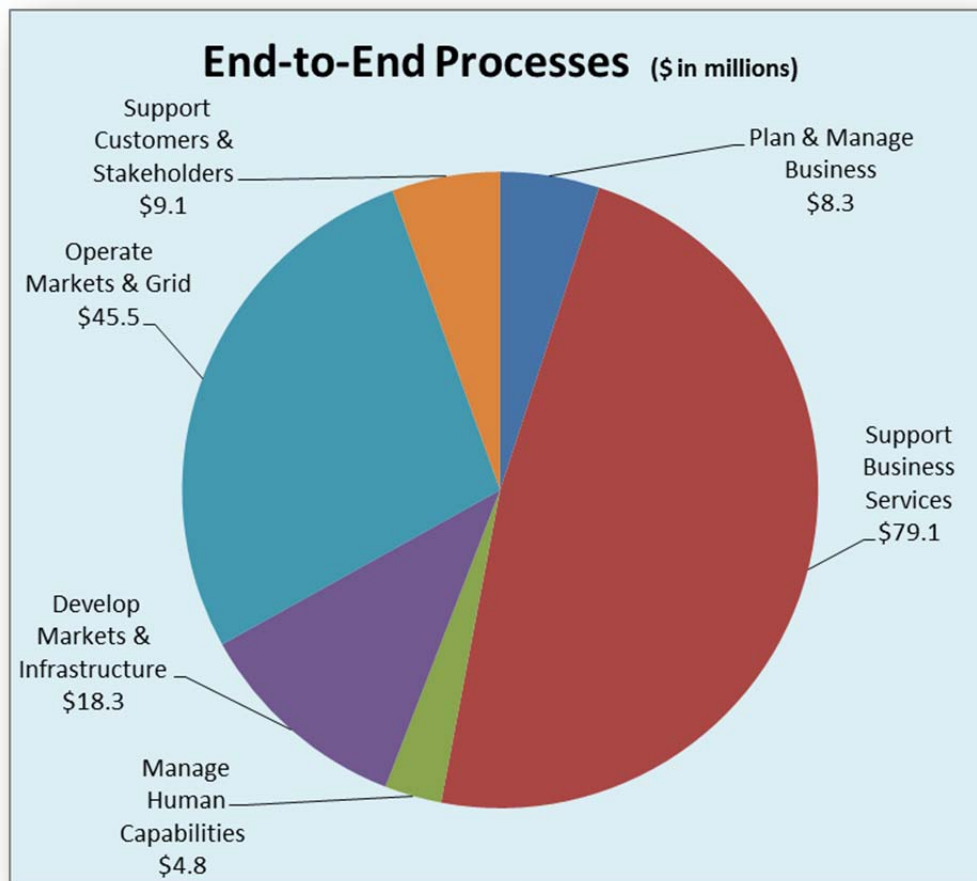
budget supports the strategic plan with the right mix of talent, skills and financial resources to be effective and successful.

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.

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

III. PROCESS VIEW

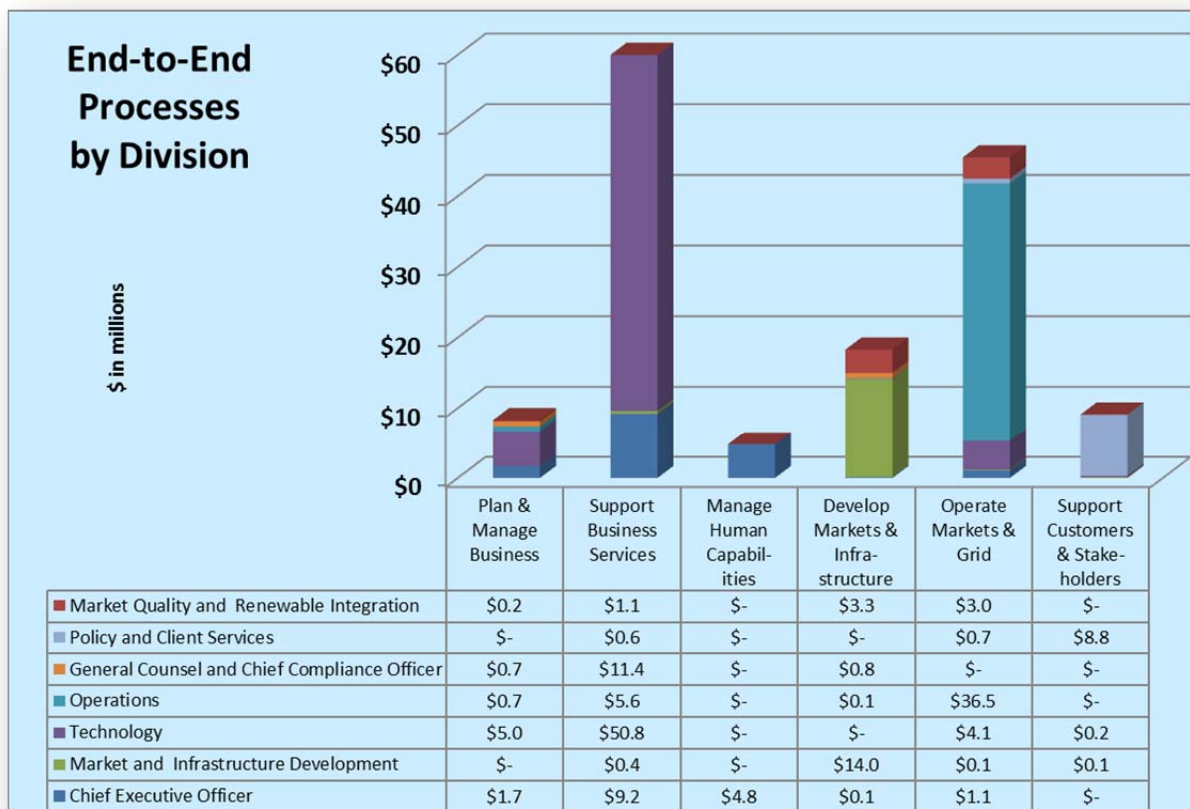
The ISO has leveraged the activity based costing system to provide greater transparency and granularity in how the budget supports corporate business plans. Nine processes have been consolidated into six primary processes for this presentation, which are further broken down into second level activities. All employees charge time worked to second level activities. Aggregating the time reported by employees results in percentages for each of the processes (the hours used were for the first six months of 2014). Applying these to the 2015 budget results in costs for the six processes as shown below.



- 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 division costs into the end-to-end processes as follows.



The ISO Board has approved the following seven formal corporate goals for 2015.

- 1. Sustain improved reliability and compliance levels:**
 - improve compliance levels by reducing incidents that affect grid reliability and violations of reliability standards; and
 - enhance ability to manage high levels of variable resources.
- 2. Advance state clean grid policies:**
 - enable greater participation of distributed energy resources, such as rooftop solar and demand response, while continuing to improve weather forecasts used in optimizing grid resources.
- 3. Expand regional collaboration:**
 - work with industry partners and stakeholders to extend the ISO's real-time energy imbalance market to non-ISO entities throughout the West.
- 4. Enhance market performance:**
 - minimize the number of price corrections, exceptional dispatches and real-time congestion offset costs.

5. Enhanced ISO customer satisfaction:

- improve stakeholder service by analyzing trends in customer inquiries and establish appropriate performance response baselines.

6. Advance corporate leadership capabilities by empowering employee engagement:

- complete specialized employee training and align employee performance plans to reflect core competencies and leadership goals.

7. Demonstrate fiscal responsibility:

- contain operating and maintenance expenses compared to the previous year's budget.

Support Customers and Stakeholders

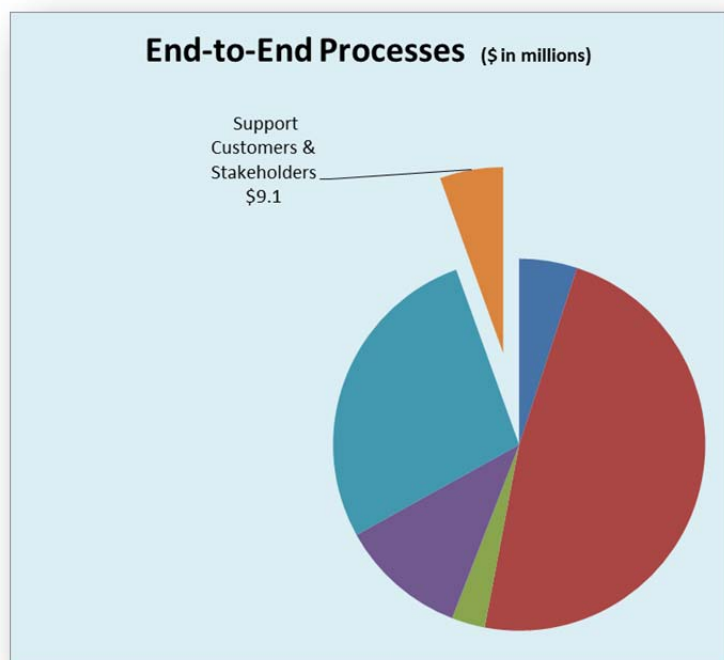
Support Customers and Stakeholders, amounting to \$9.1 million and 35 staff, consists primarily of the efforts of the Policy and Client Services Division and elements of the Technology, Operations, General Counsel and Chief Compliance Officer, Market and Infrastructure Development and Market Quality and Renewable Integration Divisions.

The ISO remains firm in its commitment to provide the highest quality of service to its customers, market participants and stakeholders. This includes resolving customer issues in a timely manner and streamlining access to market information when possible.

Primary Activities

This process improves the overall business experience stakeholders and market participants have with the ISO, as well as sharing clear and consistent corporate information. Besides surpassing previous goals to resolve inquiries quickly and encouraging quality dialogue between the ISO and its key customers, this activity provides the framework to make improvements in the stakeholder processes as well as build proactive outreach to new market participants that in turns encourages their active participation in the ISO market.

Another effort includes improving government affairs activities to more effectively share ISO technical expertise and communicate advice to government and regulatory bodies to advance policies and mandates that also protect grid reliability.



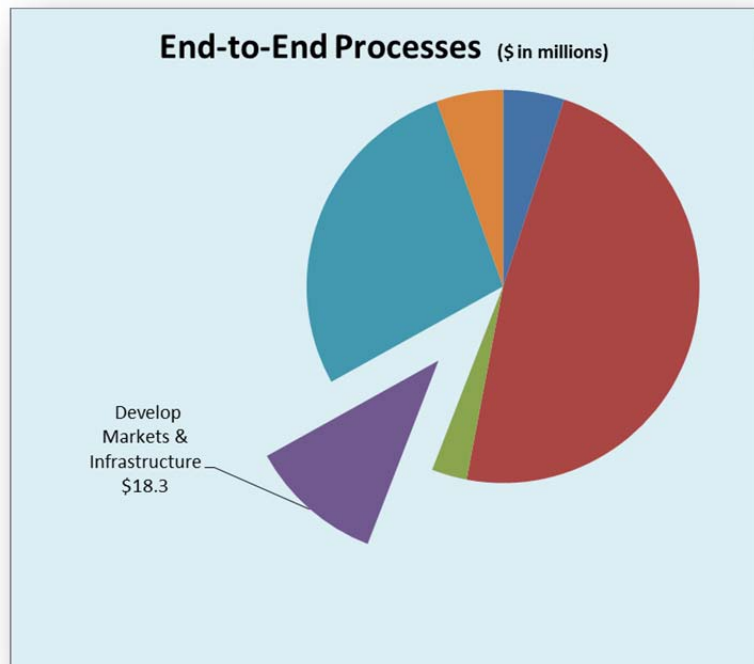
Develop Markets and Infrastructure

Develop Markets and Infrastructure are two separate processes that cover ISO activities that create value-added enhancements to the market design as well as proactively plan and facilitate grid upgrades, such as those needed to reliably integrate renewable resources.

Develop Markets

Develop markets, amounting to \$7.4 million and 23 staff, consists primarily of the efforts of the Market Infrastructure and Development and Market Quality and Renewable Integration Divisions with elements from the Operations, General Counsel and Chief Compliance Officer and Policy and Client Services Divisions.

This activity includes improving our abilities to review and analyze the efficiency and quality of market results, as well as identifying needed market design enhancements that increase efficiencies and transparency.



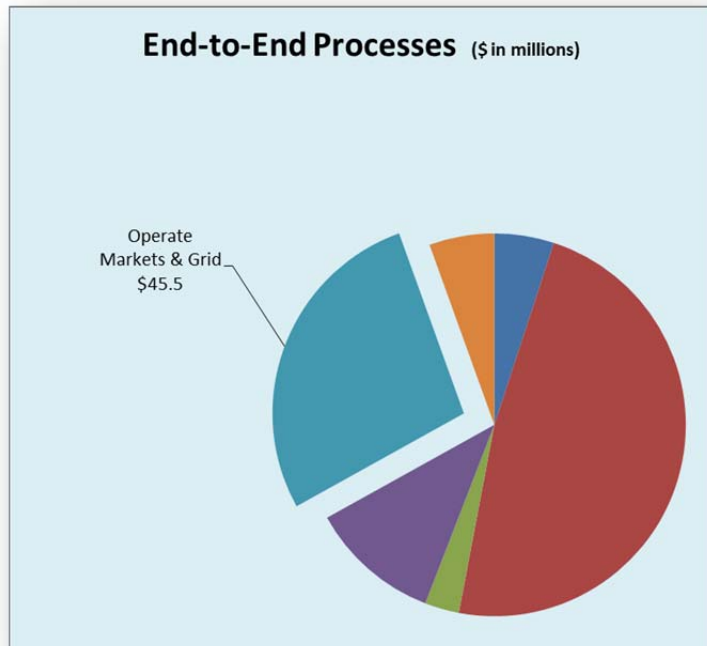
Among the initiatives under this banner are ones that are building the business and operational framework that accommodates demand response and renewable resources in the ISO market, and includes distributed generation, energy efficiency and storage technologies participation.

Develop Infrastructure

Develop infrastructure, amounting to \$10.9 million and 44 staff, consists primarily of the efforts of the Market Infrastructure and Development Division and elements of the Market Quality and Renewable Integration, Operations and Chief Executive Officer Divisions. The budget supports a comprehensive approach to transmission and generation interconnection planning that considers reliability and public policy needs.

Operate Markets and Grid

There are three end-to-end processes that make up Operate Markets and Grid: Manage Market and Reliability Data and Modeling, Manage Markets and Grid, and Manage Operations Support and Settlements.



Manage Market and Reliability Data and Modeling

Manage Market and Reliability Data and Modeling, amounting to \$12.1 million and 51 staff, is primarily comprised of functionalities of the Operations, Technology, and Chief Executive Officer Divisions with elements of the Market and Infrastructure Development and Policy and Client Services Divisions.

The ISO diligently rechecks its network modeling policies and protocols to reduce as much as possible out-of-market energy dispatches, assure

models reflect all grid constraints and produce timely and accurate prices.

Manage Markets and Grid

Manage Markets and Grid, amounting to \$23.6 million and 110 staff, is primarily comprised of functionalities of the Operations and Technology Divisions with elements of the Market Quality and Renewable Integration Division. A challenging ISO responsibility is to manage transmission and generation outages, especially those that are unplanned, as it takes well-honed grid expertise to ensure continuous flow of power to all customers. Managing the market includes executing the day-ahead market and interchange scheduling that meets all local energy needs and delivers the power at the most reasonable cost possible.

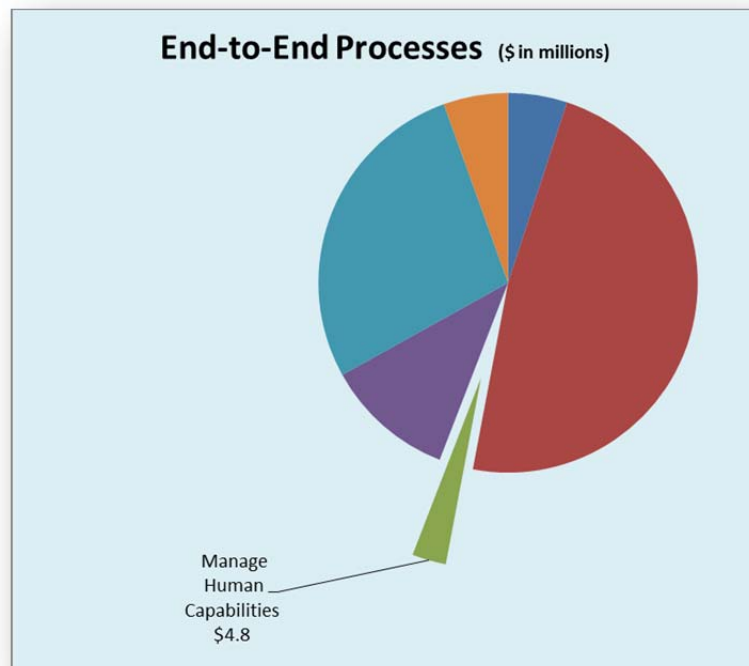
Manage Operations Support and Settlements

Manage Operations Support and Settlements, amounting to \$9.8 million and 40 staff, is mostly comprised of functionalities of the Operations and Market Quality and Renewable Integration Divisions along with elements of the Chief Executive Officer, Technology, and Policy and Client Services Divisions. The budget provides the resources that result in creating new market efficiencies. 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 \$4.8 million and 14 staff, consists of the efforts of the Chief Executive Officer Division with elements of the Technology and

Operations Divisions. It consists of five primary end-to-end processes that combine to ensure the ISO attracts and retains the skills and talent necessary to achieve business objectives. The processes are compensation, benefits, recruitment, training and development, and employee relations.



The budget provides resources to support the Company’s ability to attract and retain uniquely skilled and highly sought-after professionals by continually assessing the quality of compensation and benefit packages. The benefits menu reflects cost containment measures while at the same time preserving the competitive options needed to meet the needs of a diverse employee population.

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

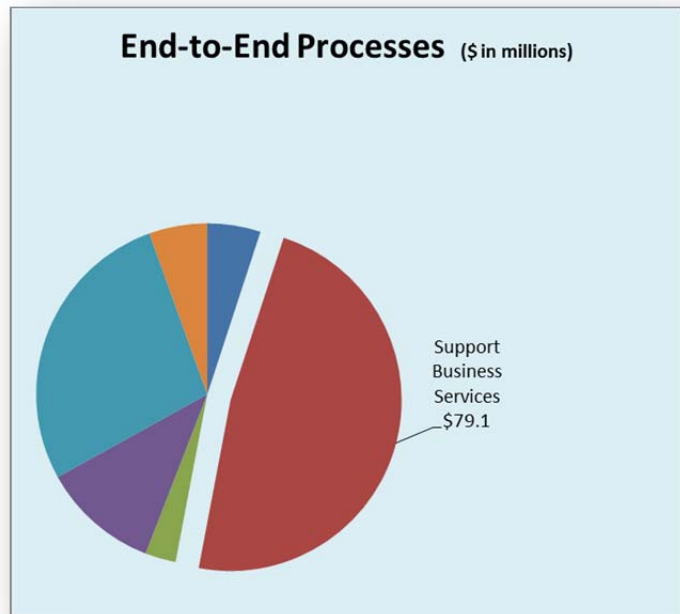
In addition, the budget provides resources to support management and employees in maintaining a high-performance and respectful workplace environment where employees are highly engaged in pursuing their highest potential as well as contributing to the success of the corporation.

Support Business Services

Support Business Services, amounting to \$79.1 million and 249 staff, is comprised primarily of functionalities of the Chief Executive Officer, Technology, Operations, General Counsel and Chief Compliance Officer and Market Quality and Renewable Integration Divisions and elements of the Market and Infrastructure Development and Policy and Client Relations Divisions.

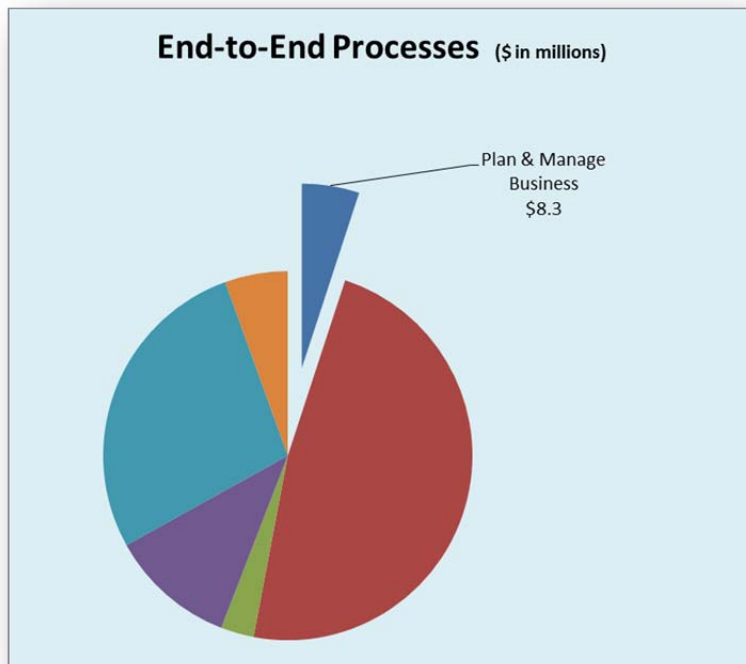
This process provides the resources to improve the ISO's ability to carry out its business duties by developing well defined, measured and controlled processes (workflow and information technology), as well as nurturing disciplined business decision making, maintaining quality assurance and efficiently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

In addition, this process 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 \$8.3 million and 27 staff, consists primarily of the efforts of the Chief Executive Officer, Technology, Operations, and General Counsel and Chief Compliance Officer Divisions and elements of the Market Quality and Renewable Integration, Operations and Policy and Client Services Divisions.

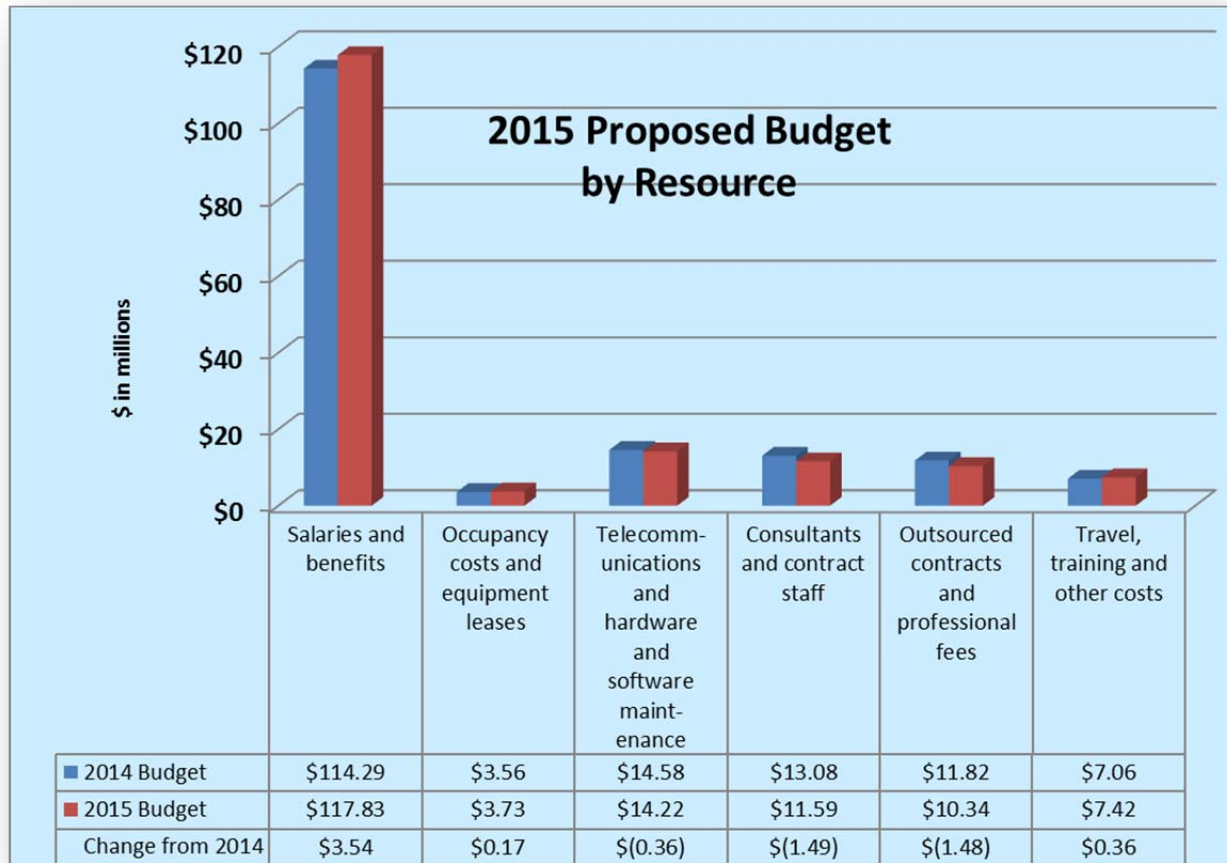


The ISO measures every process, project or policy against identified benefits. This activity finds support in part by aligning the strategic planning process with budget planning, as outlined in Section II: Aligning with the ISO's strategic plan.

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

IV. ISO RESOURCE UTILIZATION

This section deals with the resources used in the O&M budget to accomplish strategic objectives and goals. The 2014 budget reflects reclassifications in order for it to be comparable to the 2015 budget presentation. The chart below shows the major resource components.



Staffing

The ISO depends on its highly educated employees to operate the grid, which makes staff a critically important resource with salaries and benefits comprising 71 percent of the 2015 O&M budget and 70 percent of the 2014 O&M budget.

The staffing plan concentrates on attracting and retaining the best and brightest individuals in the industry. At times, the ISO revises the organizational structure to help keep pace with changing resource needs. The ISO also makes periodic organizational changes to align resources to focus on the important matters identified in the ISO's strategic plan, and better reflect end-to-end business processes.

The staffing level for 2015 is 593 employees (which include eight operators in training); the staffing remains unchanged from 2014.

As of the end of July 2014, there are 580 full time employees. As that equals 98 percent of the budgeted staffing level, the 2015 budget makes no provision for vacancies. A summary of the budgeted headcount for 2015 and 2014 is as follows.

Projected Staffing Levels	2015 Budget	2014 Budget	Change
Chief Executive Officer	50	50	-
Market and Infrastructure Development	59	59	-
Technology	188	188	-
Operations	203	203	-
General Counsel and Chief Compliance Officer	31	31	-
Market Quality and Renewable Integration	22	22	-
Policy and Client Services	40	40	-
Gross headcount	593	593	-
Less Program Office staff included in capital	(5)	(5)	-
Net headcount	588	588	-

Staffing costs are projected to be \$117.8 million in 2015, which is an increase of \$3.5 million or a 3 percent increase from \$114.3 million in 2014.

Staffing Related to Capital

As in past years, the O&M budget does not include the costs of ISO staff dedicated full-time to capital projects, which are components of a separate capital budget. The capitalized staff amounted to five full-time staff in the Program Management Office of the Technology Division. The cost of other staff engaged in capital projects is budgeted in their respective cost centers; however, the financial statements that are prepared in accordance with generally accepted accounting principles include the capitalization of this labor.

Compensation Structure

The 2015 compensation budget includes funding for employee base salaries, benefits and payroll taxes, as well as other compensation elements, such as overtime and performance compensation, and related costs such as relocation and tuition reimbursement. The budget also includes funds for 2015 salary adjustments for merit, equity and market adjustments, as well as for increased healthcare costs. These costs have been budgeted for each position.

In setting the annual merit, equity and market adjustments budget, the Human Resources Department participates in salary surveys that qualified third party vendors confidentially administer to gather information on competitive market pay rates. The

ISO ability to attract and retain talent with the necessary skills and knowledge links directly to our ability to maintain competitive pay practices.

The total compensation packages provided to employees include performance compensation with payouts in the subsequent year based on individual and corporate performance. A summary of the components of compensation is as follows (\$ in millions).

Compensation Components With Benefit Burden	2015 Budget	2014 Budget	Change
Base compensation	\$96.5	\$93.1	\$3.4
Overtime (includes structured overtime for grid operators)	6.8	6.7	0.1
Performance compensation	13.2	12.9	0.3
Other	1.3	1.6	(0.3)
Total	\$117.8	\$114.3	\$3.5

To fund the benefits, employee benefits are budgeted at 35 percent of salary costs as summarized in the table below, which is the same as 2014. 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 benefits burden is broken down as follows.

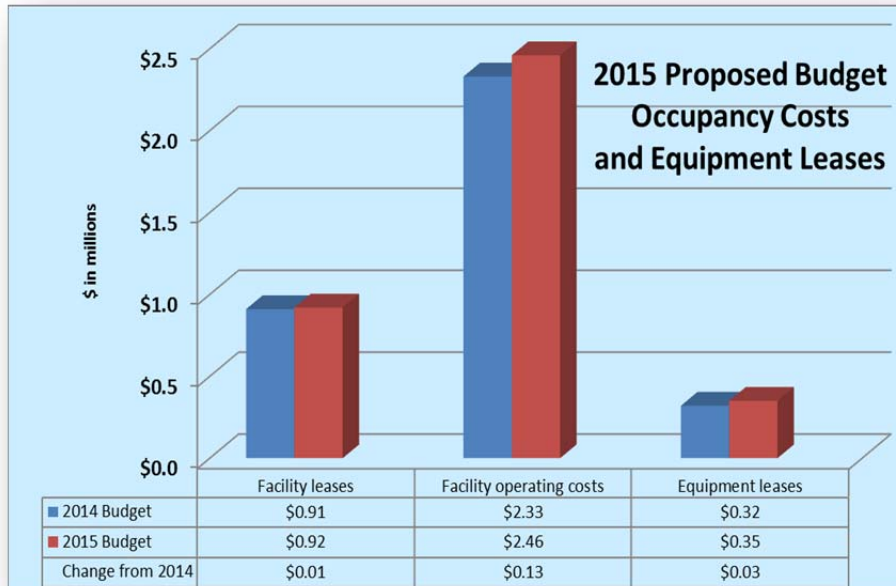
Benefit Obligation	ISO Cost Components	Rate
Health and Welfare plans Medical, Dental and Vision	Medical, dental and vision; life, accidental death and long-term disability insurance; state unemployment insurance; and worker's compensation	13%
Retirement Benefit Plans	Retirement Savings Benefit Plan 401(k); Federal social security and Medicare; executive retirement plans; and Retiree Medical Benefit Plan	21%
Other obligations	Administration related costs	1%
Total Burden		35%

Occupancy and Equipment Leases

Occupancy and equipment lease costs increased by \$173,000, or 5 percent, to \$3.7 million in 2015 from \$3.5 million in 2014. These costs make up approximately 2 percent of the 2015 and 2014 budget.

Facility leases increased by \$12,000, or 1 percent, to \$918,000, which reflects lease increases at the Alhambra backup facility.

Facility operating costs increased by \$130,000, or 6 percent, to \$2.5 million in 2015 from \$2.3 million in 2014. Whereas operating the new headquarters facility is more efficient, there is a need to increase preventative maintenance as we enter our fifth year at the Folsom site



Equipment and equipment leases increased by \$30,000, or 9 percent, as planned expendable equipment purchases are higher for 2015.

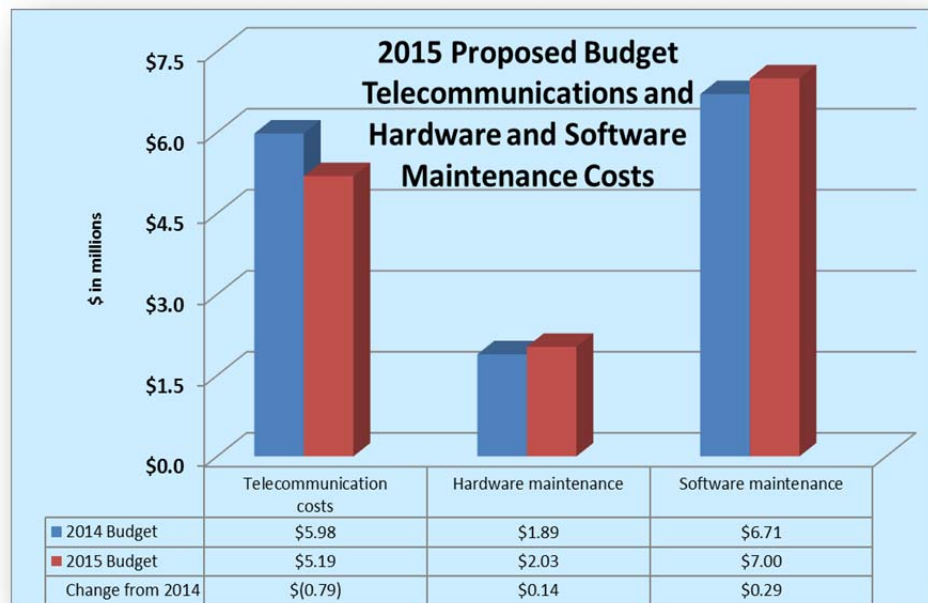
Telecommunications and Hardware and Software Maintenance Costs

Telecommunications, hardware and software maintenance costs decreased \$368,000, or 3 percent, to \$14.2 million compared to \$14.6 million in 2014. These costs make up approximately 9 percent of the 2015 and 2014 budgets.

Telecommunication costs decreased \$795,000, or 13 percent, to \$5.2 million in 2015 from \$6.0 million in 2014. The reduction resulted from enhanced management of wired line and mobility services.

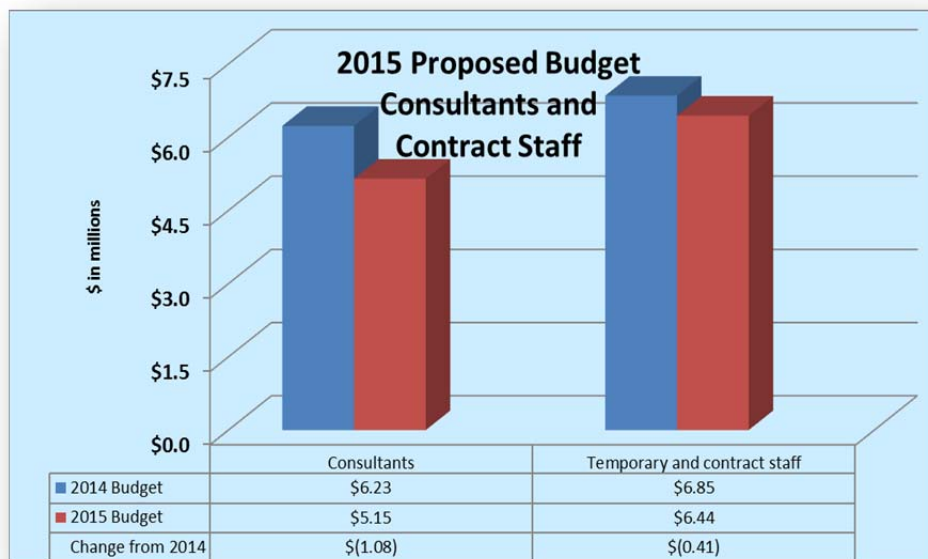
Hardware and software maintenance costs increased by \$427,000, or 5 percent, to \$9.0 million in 2015

compared to \$8.6 million in 2014. The increase is attributable to increased software and hardware maintained by the ISO. A Technology Division initiative for 2015 will be to review the appropriate levels of maintenance carried by the Corporation.



Consultants and Contract Staff

Consulting and contract staff costs decreased \$1.5 million, or 11 percent, to \$11.6 million in 2015 compared to \$13.1 million in 2014. The consulting and contract staff budgets make up 7 percent of the 2015 budget and 8 percent of the 2014 budget.



The reduction is in part due to managing projects out of the appropriate budget (capital vs. O&M). As well as a corporate initiative to manage down the need for contracted services. An example of which is internalizing

services like auxiliary forecasting services that were previously outsourced.

The ISO regularly evaluates how to meet its responsibilities while remaining cost effective and providing the highest service quality whether through hiring full-time employees or using outside resources (contractors, consultants or temporary staff). At times, the Company may bring contractor work in-house when it is of an ongoing nature and lowers overall cost with the same or better service quality.

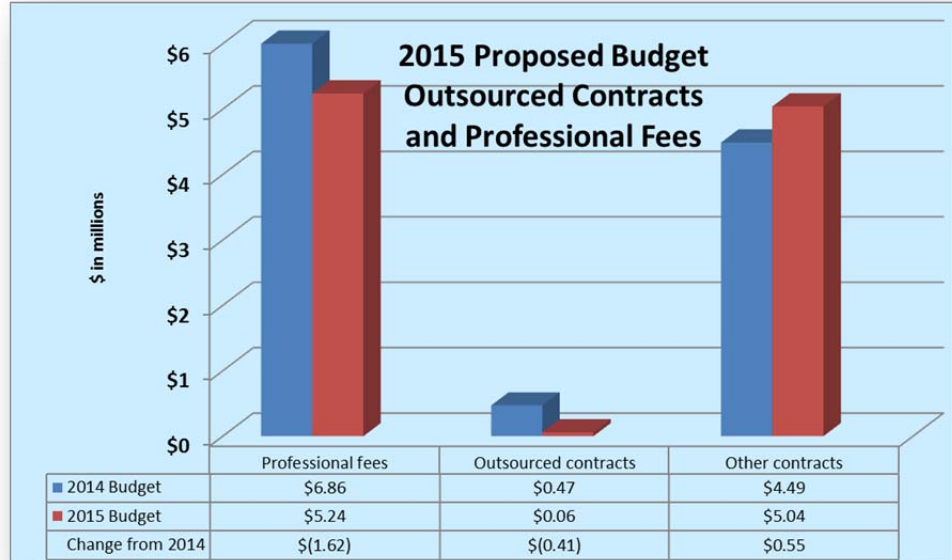
Outsourced Contracts and Professional Fees

Outsourced contracts and professional fees decreased by \$1.5 million, or 13 percent, to \$10.3 million in 2015. The budget category makes up 6 percent of the 2015 budget and 7 percent of the 2014 budget.

Professional fees decreased \$1.6 million, or 24 percent, to \$5.2 million in 2015 from \$6.8 million in 2014. The decrease is attributable to a reduction in the anticipated need for outside legal services in 2015 in addition to fewer requirements for external audits.

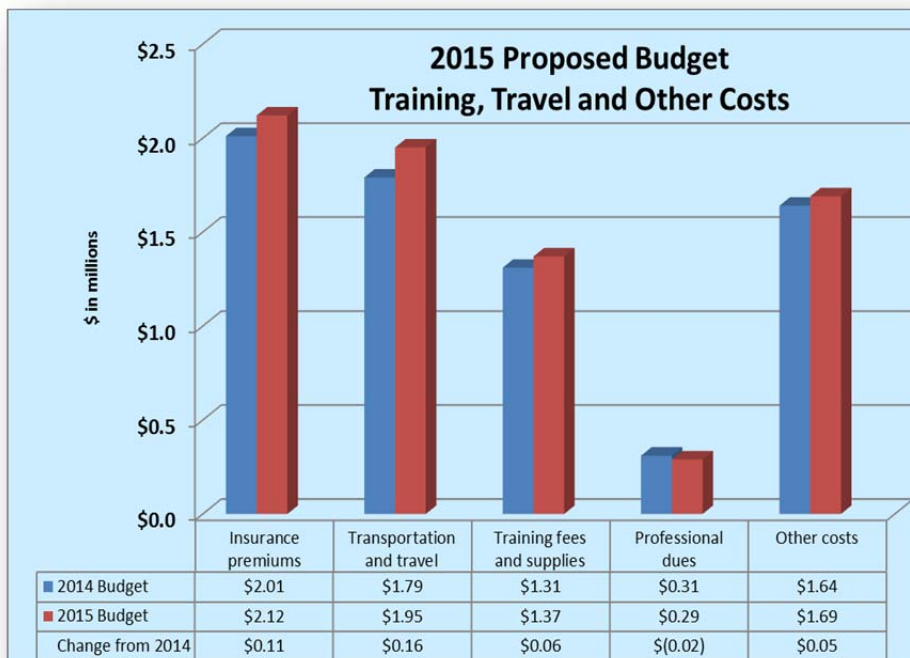
Outsourced and other contracts combined increased \$140,000, or 3 percent, to \$5.1 million in 2015 from \$4.9 million in 2014. Major outsourced contracts include locational marginal price validation, weather and wind forecasting, and credit rating services. The increase reflects the substantial growth of intermittent resources projected to come on

line in 2015. Intermittent resources pay a forecasting fee to the ISO of 10 cents per megawatt of generation. Such fees are budgeted for a total of \$2.1 million in 2015. These fees received from the variable resources are included in miscellaneous revenues to offset the related forecasting costs.



Training, Travel and Other Costs

Training, travel and other costs increased \$356,000, or 5 percent, to \$7.4 million in 2015 from \$7.1 million in 2014. These costs make up approximately 4 percent of the 2015 and 2014 budgets.



Insurance premiums increased \$115,000, or 6 percent, to \$2.1 million in 2015 primarily related to cyber security.

Transportation and travel increased \$161,000, or 9 percent, to \$2.0 million in 2015 due to increased regional activities and training.

Training fees and supplies increased \$60,000, or 4 percent, to \$1.4 million in 2015 reflecting the increasing knowledge requirements of operating the ISO.

Professional dues and other costs (primarily bank fees, conference fees, office supplies and meeting costs) increased \$20,000, or 1 percent, to \$2.0 million in 2015.

Reconciliation with 2014 O&M Budget

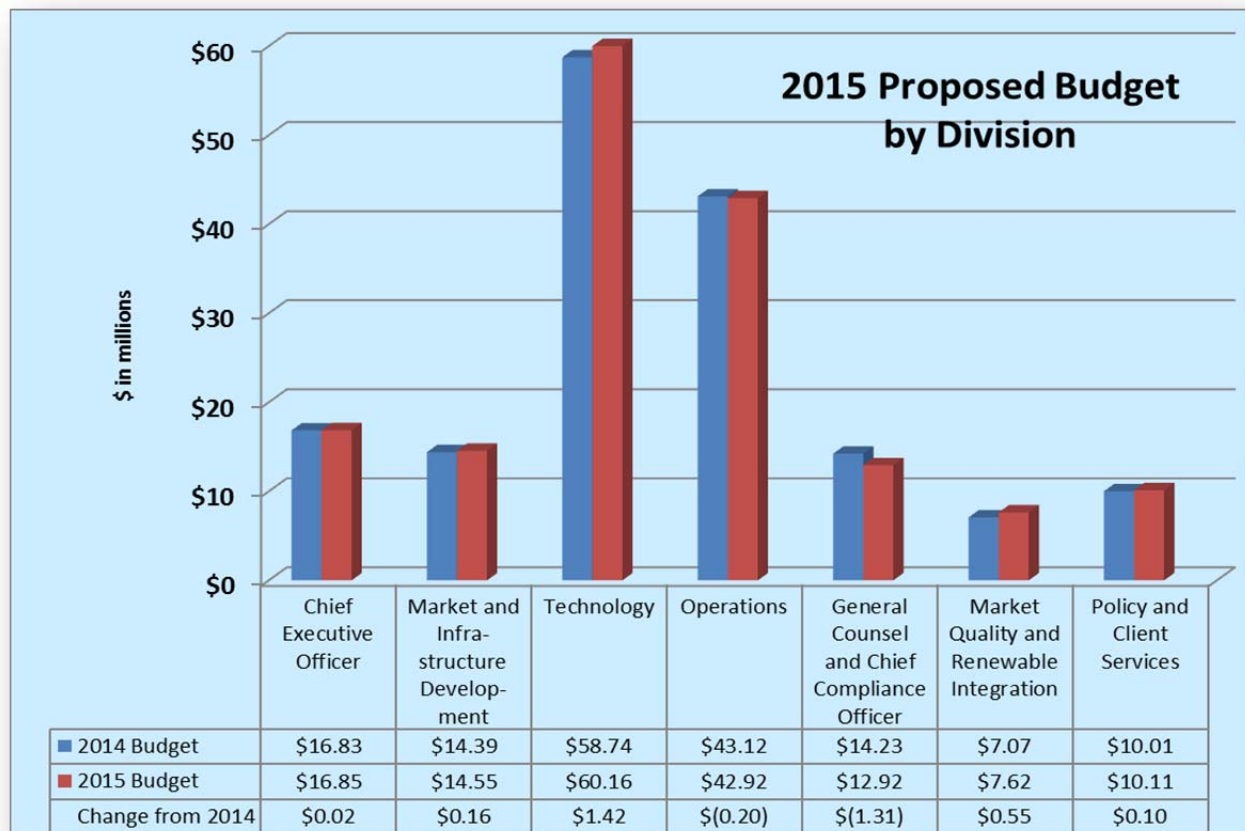
The 2015 proposed O&M budget increased by \$739,000, or less than one-half percent, to \$165.1 million compared to \$164.4 million in 2014. A reconciliation of the change follows (\$ in millions):

2014 O&M Budget	\$164.4
Increases in the budget	
Merit and other compensation increases	3.7
Increase in hardware and software maintenance contracts	0.4
Increase in travel expenses	0.2
Overtime expenses increases	0.1
Increase in facility operating expenses, leases and property taxes	0.1
Increase in other contracts and services	0.1
Insurance premium increases	0.1
Increase in training fees and supplies	0.1
Other	0.1
Net increases in the budget	4.9
Decreases in the budget	
Reduction in outside legal and audit services	(1.6)
Reduction in consultants	(1.1)
Reduction in telecommunication expenses	(0.8)
Reduction in temporary staff	(0.4)
Reduction in other payroll expenses	(0.3)
Net decreases in the budget	(4.2)
Proposed 2015 O&M Budget	\$165.1

V. ISO DIVISIONAL BUDGET OVERVIEWS

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

- Chief Executive Officer
- Market and Infrastructure Development
- Technology
- Operations
- General Counsel and Chief Compliance Officer
- Market Quality and Renewable Integration
- Policy and Client Services.



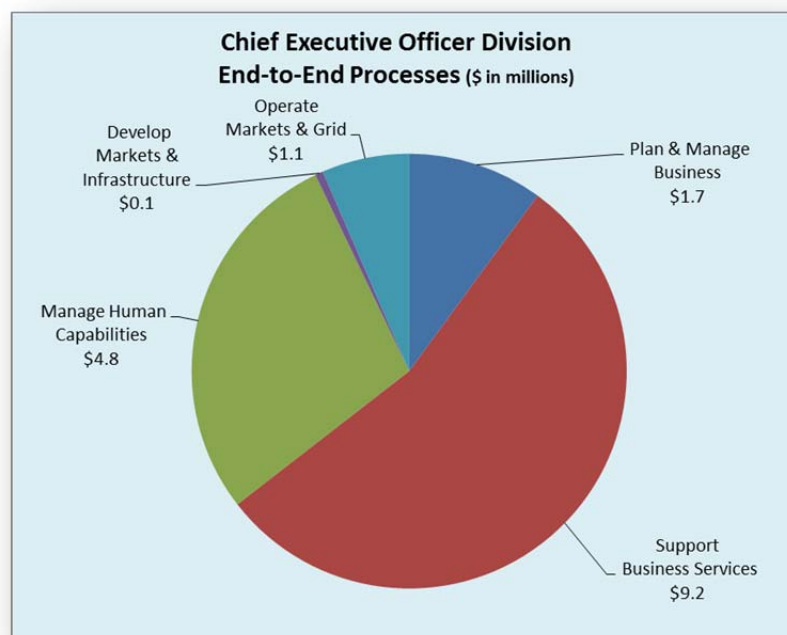
The 2015 budget of \$165.1 million is \$739,000, or less than one-half percent more than the 2014 budget of \$164.4 million. Staffing remains at 593 FTEs.

The Technology and Operations Divisions account for 36 percent and 26 percent, respectively, of the 2015 O&M budget, while the Chief Executive Officer Division comprises 10 percent. The Market and Infrastructure Development Division accounts for 9 percent of the 2015 O&M budget, while the General Counsel and Chief Compliance Officer Division accounts for 8 percent, the Policy and Client Services Division accounts for 6 percent and the Market Quality and Renewable Integration Division makes up 5 percent.

There were various organizational changes made during 2014 with the general ISO goal to optimize efforts, resulting in staff transfers among and within the divisions. For comparability purposes, the 2014 budget reflects reclassifications to align with the 2015 budget presentation.

Chief Executive Officer Division

The division comprises the office of the Chief Executive Officer, Department of Market Monitoring, Human Resources and Finance departments. The Finance and Human Resources departments joined the division in 2014.



The Market Monitoring department is active in shaping policies to help establish provisions to ensure market efficiency and mitigate the exercise of market power, especially with new market features and services that facilitate the integration of renewable resources.

In 2015, the Department of Market Monitoring (DMM) will continue to focus closely on monitoring market performances and behaviors, and continue to

provide input and review on major design initiatives. The department will be particularly active in monitoring and developing the energy imbalance market as well as several products and requirements the ISO is developing to ensure sufficient flexible capacity is available to integrate increasing amounts of variable renewable energy. The department also plans on working extensively with the Market Quality and Renewable Integration Division to bring internally the reference and index level calculations currently performed by an external entity.

The Finance Department consists of the chief financial officer, treasury, credit, accounting, financial planning, and procurement and vendor management. It is responsible for managing ISO cash and investments, insurance, credit and collateral management, clearing of the ISO markets, general accounting and external financial reporting, payables processing, financial planning and forecasting, budgeting, and administering the GMC. It also procures goods and services for the corporation by efficiently selecting vendors and managing costs.

The Human Resources Department establishes the policies, programs and “people” strategies that enable the Corporation to attract and retain the uniquely talented professionals needed to reliably operate the electric grid and meet ISO strategic objectives and goals. Developing the next generation of ISO people includes a dedicated focus on enhancing their knowledge and skills; continuing to develop technical experts; strengthening leadership and managerial capabilities; retaining and recruiting targeted skills for critical areas; and sustaining an engaging workplace environment.

Discussion of Proposed Budget

The 2015 budget of \$16.9 million increased by \$12,000, or less than 1 percent, from the 2014 budget. Staffing remained the same in 2015 at 50.

Personnel costs decreased by \$42,000 and consultants and contract staff decreased \$231,000.

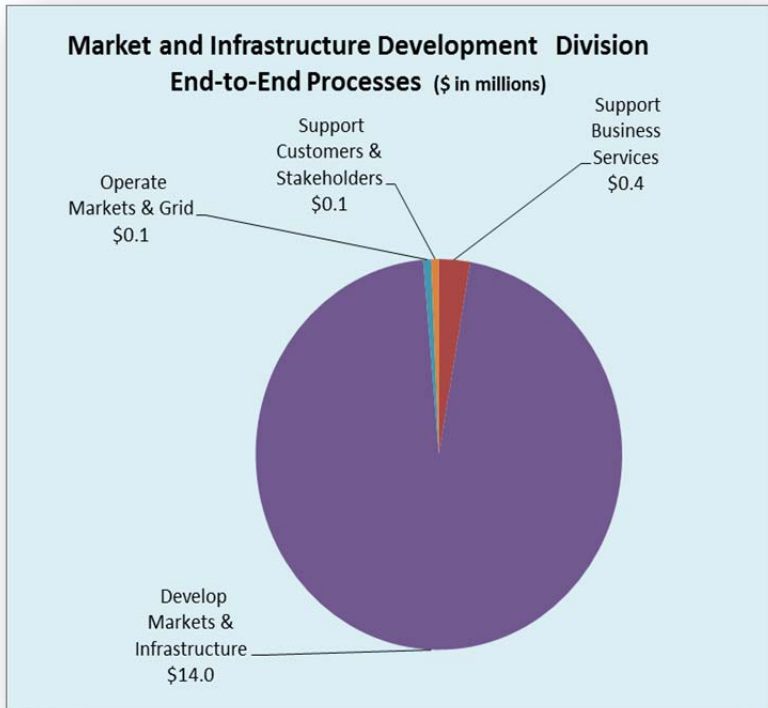
Reductions in consultants and

contract staff were offset by a \$160,000 increase in training, travel, and other costs primarily related to increased corporate training efforts by the Human Resources Department and a \$135,000 increase in outsourced contracts and professional fees in support of process improvements in the Finance and Human Resources Departments.



Market and Infrastructure Development Division

The Market and Infrastructure Development Division grid planners develop a 10-year forward-looking, comprehensive and fully compliant transmission plan each year that includes accommodating the growth in renewables, demand response and energy storage. Additionally, they complete interconnection studies for resources seeking to interconnect to the ISO grid. The division’s professionals (economists and business analysts) also play a central role in creating the policies and rules that support a robust market, and timely and efficient infrastructure development. They also negotiate, execute and track compliance with various contractual agreements between the ISO and external entities, such as generation interconnection customers.



This division provides subject expertise and regulatory support to state regulators implementing legislative mandates such as reducing greenhouse gases, meeting RPS goals and increasing demand response participation in the wholesale market.

The Market and Infrastructure Policy Department designs enhancements to ISO markets and infrastructure policies that support efficient functioning of the ISO's spot markets and the reliable operation of the grid, to facilitate industry changes driven by state and federal

policies and technological advances, and to respond to identified market inefficiencies or operational issues.

The Infrastructure Contracts and Management Department develops and manages the contracts that support the efficient functioning of ISO markets. This includes generator interconnections and reliable grid operations to support the industry evolution driven by state and federal policies, and technological advances. In addition, the department responds to identified market inefficiencies and stakeholder issues.

Ongoing duties include developing policy positions on regulatory issues and responsibility for over 2,700 ISO regulatory contracts, including their negotiation, drafting and administration.

The division as a whole is focusing a substantial amount of resources in developing the rules and mechanisms to integrate renewable resources. Related initiatives are moving forward that include meeting goals to advance smart grid technology, distributed resources and greater implementation flexibility for renewable resource integration. In addition, the division's work on transforming the transmission planning and generator interconnection processes has resulted in a new process that substantially helps meeting state renewable portfolio standard targets as well as maintaining reliability during the major shift of diversifying the state's generation fleet with green fuels such as wind and solar. The division will also focus on facilitating greater flexibility in contractual arrangements for ISO customers consistent with the ISO tariff, information transparency and automating manual processes

Discussion of Proposed Budget

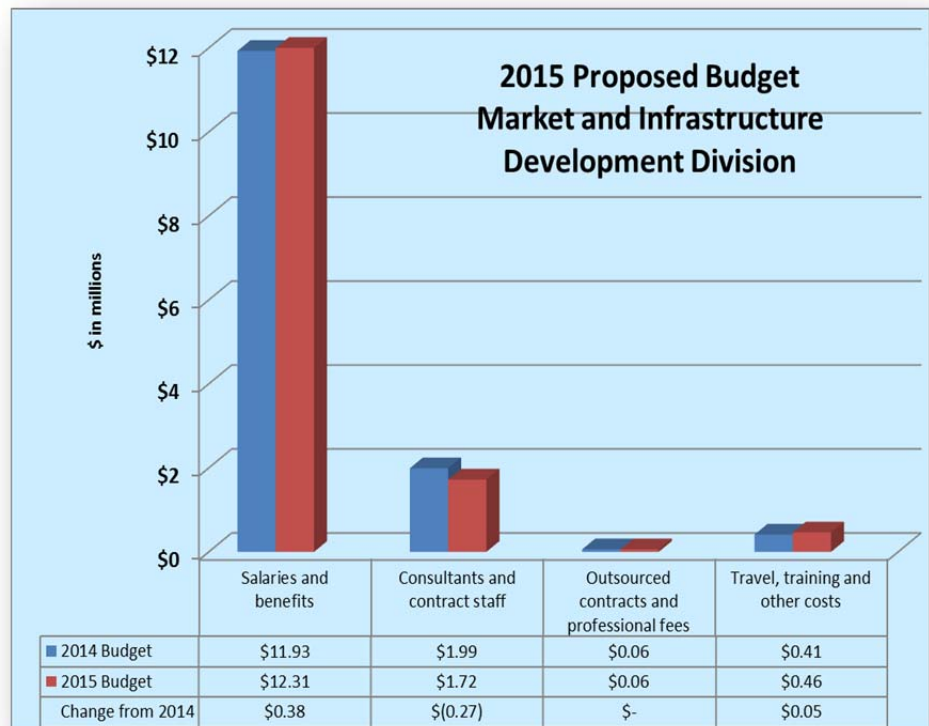
The 2015 budget of \$14.6 million is \$165,000, or 1 percent, higher than the 2014 budget of \$14.4 million. Staffing remained the same as 2014 at 59.

Salaries and benefit expenses increased by \$384,000 primarily due to merit increases.

Consulting and contract staff costs decreased by \$275,000 primarily due to contracted

services for supporting the transmission competitive solicitation process now being covered by fees from participating bidders.

Travel, training, and other costs increased by \$53,000 to \$462,000 while all outsourced contracts and professional fees increased slightly to \$63,000.

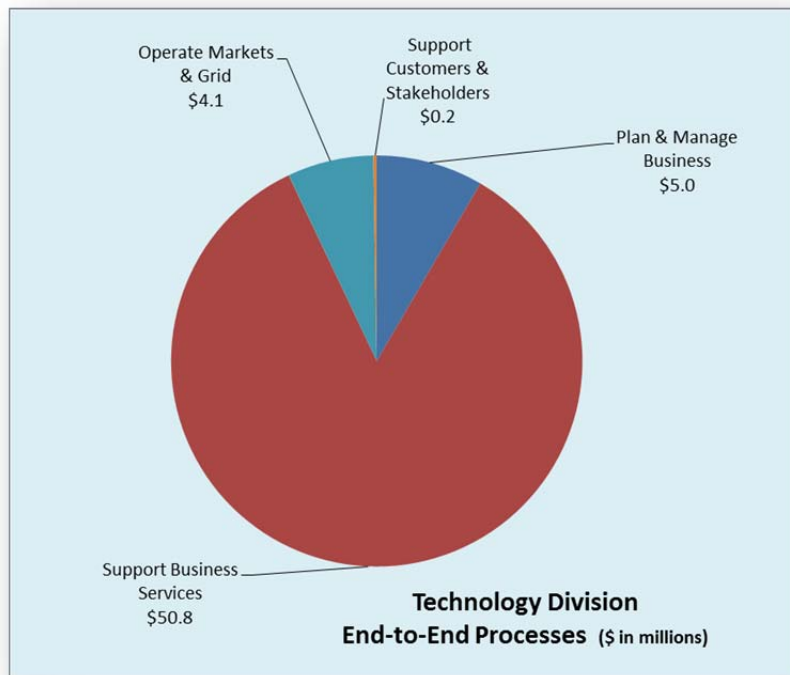


Technology Division

The Technology Division encompasses information technology, power systems technology, campus operations, and program management. The division provides reliable, cost efficient and world-class services that deliver exceptional system performance and new functionalities that support corporate goals and objectives.

The division's priorities in 2015 are as follows:

- to implement strategic initiatives by making appropriate process, procedure and system changes;
- to make incremental technology improvements, especially for market and reliability operations;
- to proactively identify system problems and to fix them; and
- to predict system vulnerabilities and strengthen them before they become problems.



The Technology Division is the ISO foundation that supports the many changes needed to integrate renewable resources and has key 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 network architectural changes so that ISO systems are easier to maintain, reduce

maintenance costs and leverage technologies to improve cost effectiveness.

The Program Management Office leads and manages key initiatives and projects that focus on enhancing customer service and processes. Core functions include release planning, program management, business and system analysis for the strategic plan and the market initiatives roadmap. All Program Management Office efforts have a strong process and quality focus based on Project Management Institute and Capability Maturity Model Integration standards.

The Power Systems and Smart Grid Technology Development Department leads the ISO effort to identify emerging technologies, which also includes better leveraging mature technologies that enhance grid efficiencies and monitoring capabilities. These technologies are critical in enabling the ISO to interconnect and manage the variability of renewable resources. It is also responsible for reviewing and approving technical requirements, software design, and tests the scheduling infrastructure business rules, integrated forward market, real-time markets, and market quality service applications.

The IT Enterprise Support and Campus Operations Department manages ISO buildings and infrastructure that supports a safe, efficient and comfortable work environment. Campus Operation works to minimize costs while developing best practices and maintain the ISO's 277,000 square foot Leadership in Energy and Environmental Design certified building that sits on 27 acres.

The Infrastructure Engineering and Network Operations Department responsibilities go to systems engineering and administration, database engineering and storage administration network and data center operations including change problem, and asset management

The Security, Architecture and Model Management and Quality Department is involved in enterprise model management, information security, software quality and information technology architecture.

The Business Solutions Department is responsible for delivery of software solutions in the Technology Division. Key functions include product management, software development, customer relationship management, vendor management, and production support for corporate and enterprise applications. The scope includes software applications supporting internal customers from every division of the ISO, all enterprise applications and most applications supporting external customer interactions with the ISO. The scope does not include those applications provided by the Power Systems organizations. In 2015, Business Solutions will contribute to most of the efforts on the ISO's capital project list.

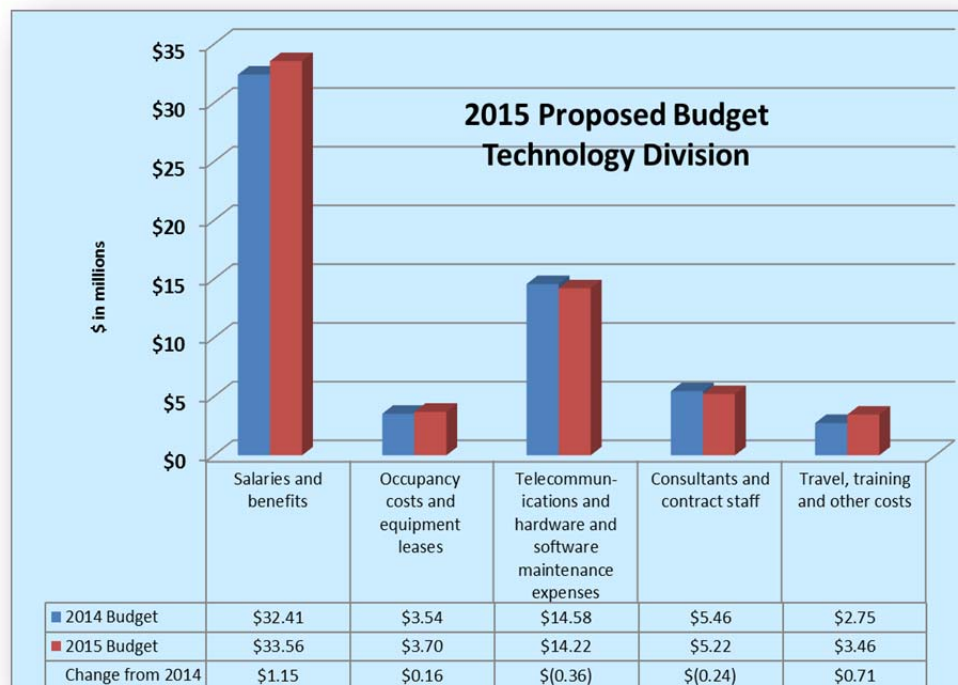
The Power System Technology Operations Department is responsible for providing information technology support for Operations. In addition, it develops and supports critical cyber assets and real-time systems required to keep operations going. Key functions include product management, software design, and production support for real-time and operations applications. The department will maintain high availability, robustness, reliability, and resilience to all Operation needs from the division while making sure all releases, patching, upgrade enhancements smoothly transition to production without disrupting operations.

In 2015, the division will focus on implementation initiatives, including modifications required from policy initiatives such as resource adequacy and demand response programs. In addition, we will be making enhancements to the forecasting system.

Discussion of Proposed Budget

The 2015 budget of \$60.1 million is an increase of \$1.3 million, or 2 percent, over the 2014 budget of \$58.8 million. Staffing remained the same as 2014 at 188.

Salaries and benefit expenses increased \$1.2 million, which reflects merit



and other increases offset by an overtime reduction of \$57,000.

Occupancy costs and equipment leases increased by \$167,000 to accommodate increased preventative maintenance costs as we enter our fifth year at the Folsom site as well as a slight increase in leasing costs for our Alhambra facility.

Telecommunication costs decreased \$795,000, or 13 percent, to \$5.2 million in 2015 from \$6.0 million in 2014. The reduction resulted from enhanced management of wired line and mobility services. This savings is offset by an increase of \$427,000, or 5 percent, in hardware and software maintenance costs in which the budget went from \$8.6 million in 2014 to \$9.0 million in 2015. This is attributable to increased software and hardware maintained by the ISO. A division initiative for 2015 will be to review the appropriate levels of maintenance carried by the Corporation. The net impact to the budget is a \$368,000 reduction in this category in 2015.

Consulting and contract staff costs decreased by \$237,000 to \$5.2 million in 2015. The reduction is attributable to managing projects out of the appropriate budget (capital vs. O&M) as well as a corporate initiative to manage down the need for contracted services.

Travel, training, and other costs increased by \$710,000 to accommodate items such as an increase in fee for service contracts and the shift of printing services into this division.

Operations Division

The Operations Division's mission is reliably operating the bulk electric system and energy markets and providing operations support. It is comprised of System Operations, Operations Engineering Services, Regional Operations Initiatives, Market Services, and Operational Readiness.

The bulk electric system is evolving quickly to accommodate rising amounts of renewable and distributed resources connecting to the grid, as well as managing imports and exports as well as the participation of demand responsive resources in the wholesale market.

In addition, mandatory reliability standards affect how the ISO reliably operates the grid. With advanced tools, the division proactively manages the changing system characteristics and generation fleet changes, which includes managing the variability of renewable resources. The ISO control center, which boasts awarding winning geospatial technology and advanced visualization capabilities provide system operators with a more granular view of grid conditions and the capability to identify potential problems and solve them in advance of real time. The Systems Operations Department operates the Integrated Forward Market and the real-time market to deliver the most cost effective energy to California consumers while maintaining grid reliability.

The professionals staffing the Systems Operations and Operations Engineering Services Departments are highly skilled in using the advanced technologies and tools necessary to reliably operate the grid and facilitate efficient markets in complex environments while evolving the grid to meet policy goals.

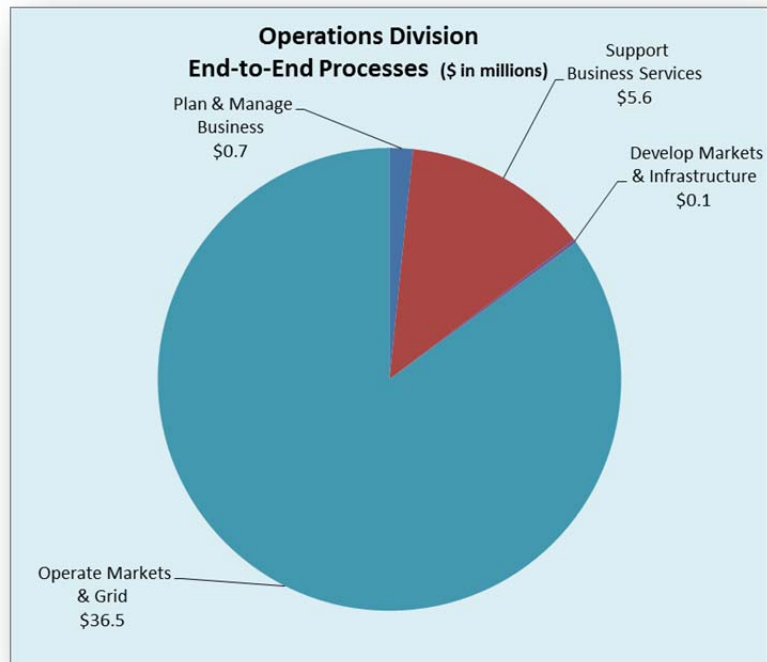
The System Operations Department also includes the Operational Readiness business unit. This group meets the demands of new company initiatives and ensures system operator readiness in the areas of change management, procedure maintenance and development, and system operator training.

The department includes the following functional areas: simulation training program, operations change initiatives and training, systematic approach to training development and administration, and strategic information development program.

Operations Engineering Services provides engineering and technical operational planning support directly to System Operations. This includes performing annual and monthly resource adequacy validation and replacement requirement analysis, seasonal assessments, outage management and coordination analysis, day-ahead and real-time engineering analysis. The team also provides services in developing operating procedures and tools that support the department.

The Regional Operations Initiatives Department works with state, regional and national entities to balance policy direction with operational capabilities to achieve implementable solutions. This team is also the ISO point for gas and electric coordination policy, representing the West in national forums on related gas and electric market changes.

The Market Services Department works with the ISO participants to maintain the parameters of all resources used in the markets, oversees interconnecting resources, manages the network model, assures the accuracy of real-time and revenue metering, and designs and resolves participant's settlement disputes. Among its most important responsibilities is implementing market software and technology enhancements that produce transparent, consistent and efficient operations and settlements as well as working to reduce the settlement timeline to achieve greater market efficiencies.



The Market Services Quality and Control group manages the Rules of Conduct program providing an oversight of certain market participant behaviors. In addition, several department units are involved in the extensive effort underway to deploy the modeling software needed to support expanding the western energy balance market, which will go live on October 1 with the first participant, Portland-based PacifiCorp.

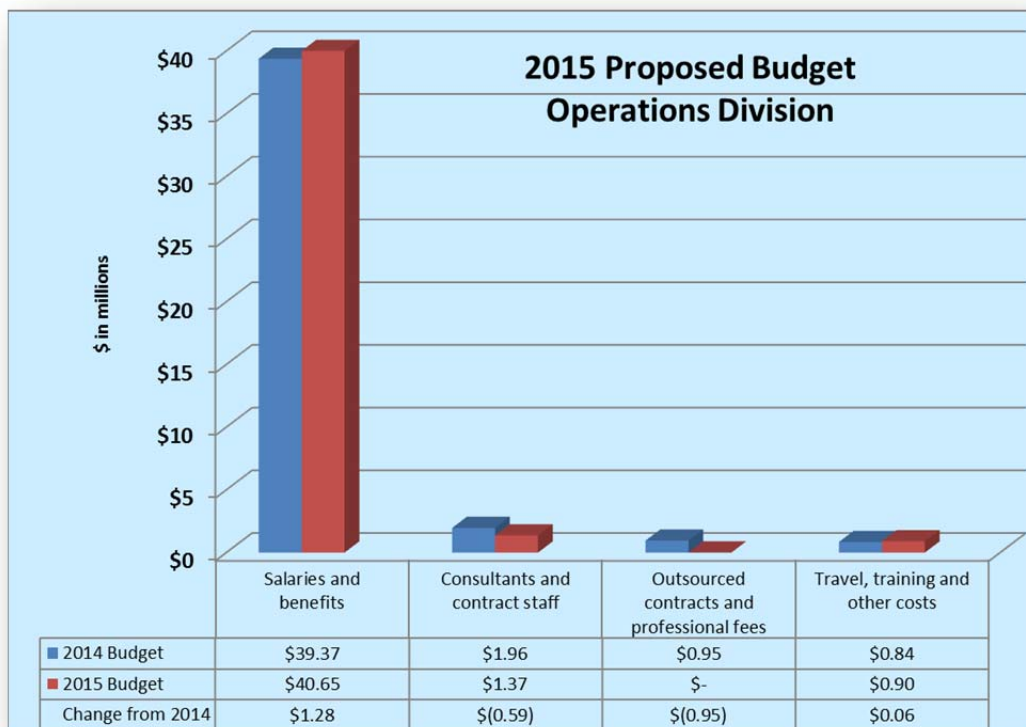
The Business Planning and Operations Department (BPO) manages and maintains the corporate business process architecture (end-to-end business processes) and works across the organization on process improvement projects, while instilling a culture of continuous improvement and quality. They also work with ISO officers to develop company goals and ensure that all metrics are properly reported in the corporate dashboard. BPO is also responsible for developing and implementing business continuity plans across the organization and ensuring that we have sufficiency of incident management plans, which are tested each year.

Discussion of Proposed Budget

The 2015 budget of \$42.9 million decreased by \$193,000, or less than 1 percent, from the 2014 budget of \$43.1 million while staffing remained the same as 2014 at 203.

Salaries and benefit costs increased \$1.3 million to \$40.7 million primarily due to merit increases.

Consulting and contract staff costs decreased by \$587,000 in 2015 to \$1.4 million primarily due to the corporate initiative to manage down the need for contracted services



Outsourced contracts and professional fees decreased by \$945,000 due in part to the transfer of the external reference and index level calculations from the Operations Division (under outsourced computing contracts) to the Market Quality and Renewable

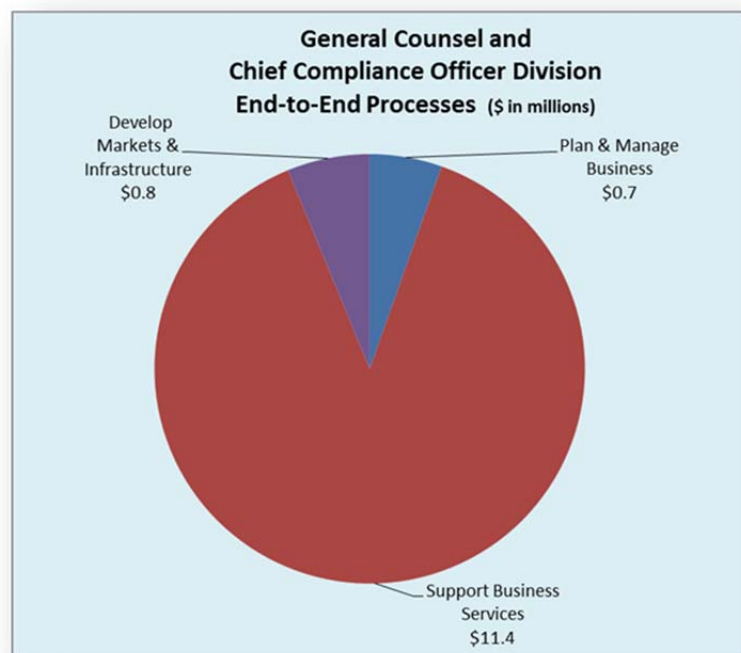
Integration Division (under consultants). The reduction is also due to fewer requirements for external audits.

Transportation, training and other costs increased \$53,000.

General Counsel and Chief Compliance Officer Division

The General Counsel and Chief Compliance Officer Division encompasses the legal department, corporate compliance, internal audit, corporate business operations, and the corporate secretary.

This division strives to provide high quality counsel throughout the organization, as well as to ensure compliance with rules and regulations that govern the ISO. The division's expertise is integral in resolving complex matters affecting all areas of the company's business. It represents the organization in regulatory and legal proceedings to protect the ISO's interests and to ensure that the company can meet its objectives while maintaining compliance with the tariff and other legal requirements.



The Deputy General Counsel - Regulatory oversees all legal and regulatory functions, and advises on and provides support for all regulatory matters throughout the department.

The Assistant General Counsel - Regulatory oversees legal and regulatory functions, including tariff amendments, state and federal regulatory matters and litigation. The lawyers in this area work closely with policy development teams to create market, transmission and operations services and features that conform to

existing tariffs, or work in parallel to draft, stakeholder and file tariff additions and modifications.

The Assistant General Counsel - Tariff is primarily responsible for all tariff related activities including stakeholder processes, drafting tariff amendments, interpretations and advising on tariff compliance assessments and investigations. The lawyers in this area are also responsible for all interconnection related work and regulatory contracts.

The Assistant General Counsel - Legal oversees state and federal court litigation, appellate work, dispute resolution and other adversarial proceedings; and advises the corporate compliance team regarding mandatory standards, investigations and regulatory audits. The lawyers in this area also advise the company on vendor contracts, intellectual property, finance, tax, corporate governance, ethics, and human resources issues.

The Director Federal Regulatory Affairs is responsible for managing regulatory relationships with the Federal Energy Regulatory Commission and other federal agencies as needed. He also provides advice and counsel on federal regulatory issues and works with internal business units to obtain regulatory approval of initiatives.

The Paralegal and Office Administration Department provides paralegal, administrative and technical assistance to the legal department and assists in supporting the Human Resources Department on immigration matters.

The Corporate Compliance Department assesses and ensures business units implement new and revised reliability standards and tariff requirements by documenting and monitoring processes, procedures and tools used to validate compliance. It promotes a corporate culture of compliance with all laws, regulations and corporate policies.

The Internal Audit Department is responsible for developing and implementing the annual internal audit plan and conducting audits to evaluate the effectiveness of management practices and controls. The department also has the responsibility for facilitating the ISO's enterprise risk activities and provides briefings to management and the Board on the ISO's enterprise risks, risk response and status of mitigation plans.

The Corporate Business Operations Department is responsible for developing and implementing the corporate records management program as well as developing the strategic plan and associated long-term performance goals.

The Assistant Corporate Secretary coordinates Board-related matters that include all Board of Governor meetings and materials, as well as other Board communications. This department is also responsible for maintaining the official corporate record and overseeing Board compensation.

Discussion of Proposed Budget

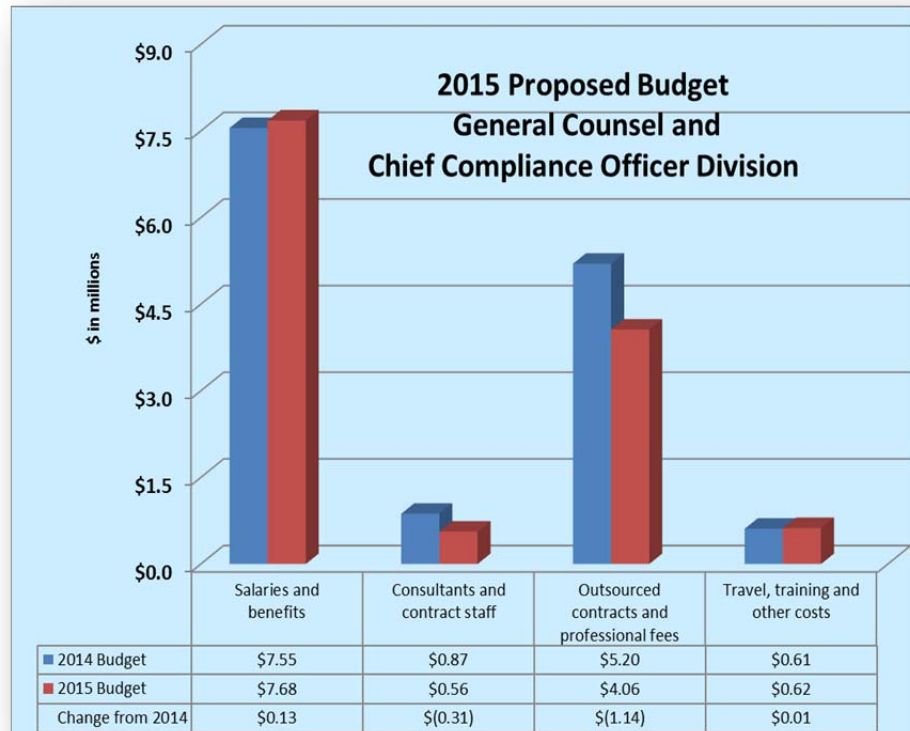
The 2015 budget of \$12.9 million decreased by \$1.3 million, or 9 percent, from the 2014 budget of \$14.2 million. Staffing remained the same as 2014 at 31.

Salaries and benefit costs increased by \$128,000 to \$7.7 million in 2015 primarily due to merit increases.

Consultants and contract staff decreased by \$314,000 to \$557,000 due to less need for external resources driven by the corporate initiative to manage down the need for contracted services.

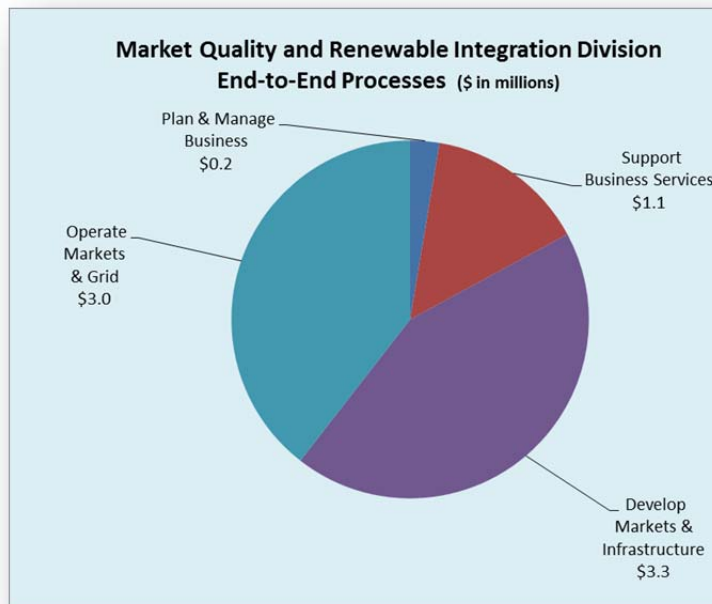
Professional fees decreased by \$1.1 million primarily due to the General Counsel and Chief Compliance Officer's goal to reduce the use of outside legal services where possible.

Travel, training and other costs increased slightly by \$11,000.



Market Quality and Renewable Integration Division

The Market Quality and Renewable Integration Division tracks and reports market performance metrics performs price analysis and validation with the objective of providing transparency and confidence in market results. The division performs short-term load, wind and solar forecasting and is responsible for performing system flexibility assessments in support of integrating renewable resources.



Along with performing and reporting in-depth market analysis, the division employs advanced short-term demand and supply forecasting technology to maximize meeting grid needs through the competitive wholesale energy

market. The division is responsible for conducting generation fleet studies that test whether there is adequate "flexible capacity" installed to meet future electricity needs. In 2015, the focus for the division will be to enhance the consistency of modeled

conditions between the day-ahead and real-time market, which increases market efficiency.

The Market Development and Analysis group monitors the market, identifies systemic issues, and develops and solutions to address them. The group is also responsible for supporting policy developments and implementation of new market designs. In addition, the group co-hosts the Market Performance and Planning Forum web conference, which provides updates and observations on, market performance with an emphasis on coordinating plans with stakeholders to implement market enhancements, services and features. The outreach reflects ISO efforts to improve its communications with stakeholders and encourage feedback.

The Market Validation and Quality Analysis group monitors, analyzes and validates daily market results for quality. The group is also responsible for price corrections as well as identifying and addressing root causes of erroneous prices and other market quality issues. New in 2015, the group will also be responsible for the automated process of producing and determining default energy bids and associated costs.

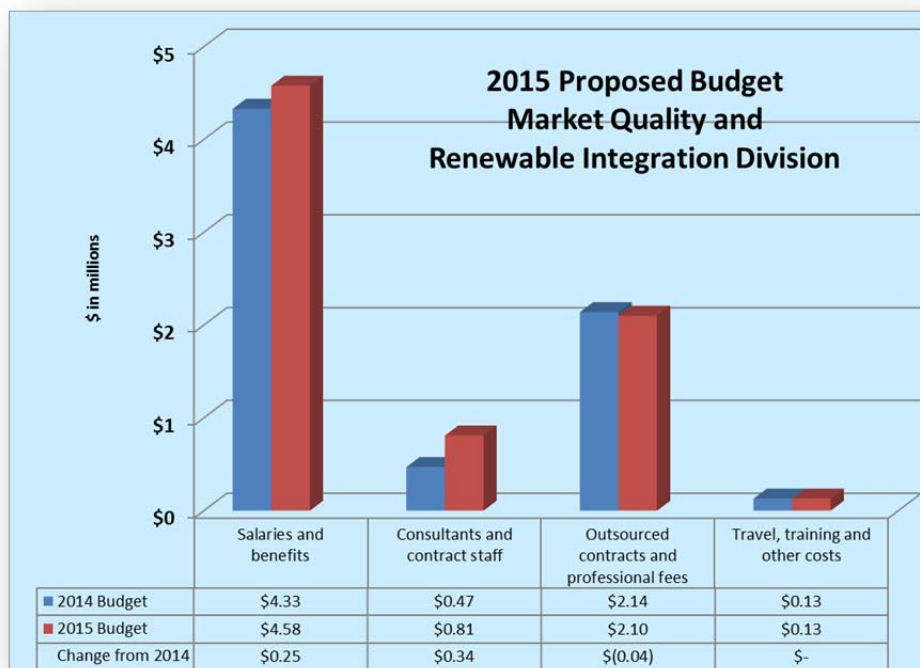
The Short Term Forecasting group produces accurate short-term forecasts for load and variable energy resources such as wind and solar generation for the ISO electricity market. New in 2014 and 2015, the group will be responsible for producing forecasts for the expanded CAISO energy imbalance market.

Discussion of Proposed Budget

The 2015 budget of \$7.6 million increased by \$546,000, or 8 percent, from the 2014 budget of \$7.1 million. Staffing remained the same in 2015 at 22.

Personnel costs increased in 2015 by \$248,000 to \$4.6 million primarily due to merit increases.

Consulting and contract staff costs increased by \$335,000 in 2015 to



\$808,000 primarily due to the transfer of the external reference and index level calculations from the Operations Division (previously categorized under outsourced computing contracts).

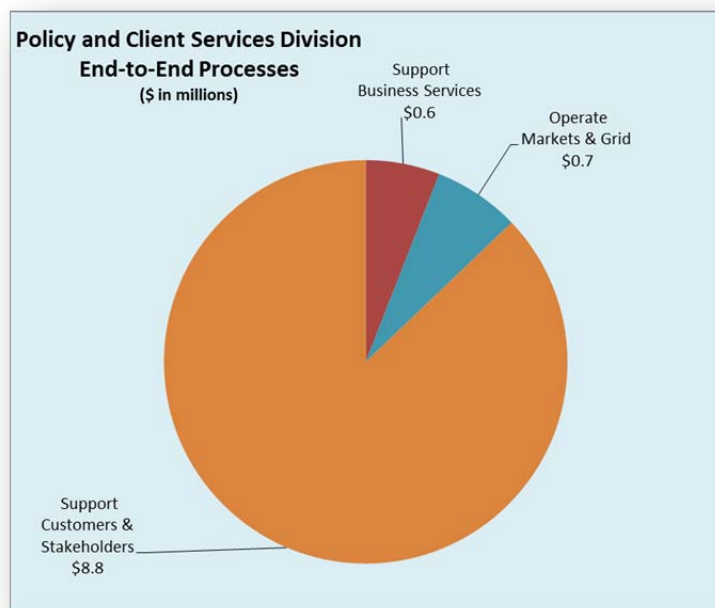
Outsourced and other contracts decreased by \$37,000 to \$2.1 million primarily due to due to streamlining third party contracts.

Transportation, training and other costs remained the same at \$127,000.

Policy and Client Services Division

The Policy and Client Services Division builds high quality collaborative relationships with a wide variety of stakeholders, regulators and consumer groups to effectively represent ISO positions. It strives for excellence by providing timely and accurate information for public dissemination, fosters value added customer service, anticipates and addresses issues in a timely manner, and advances Company objectives that benefit retail consumers and the electric industry. The division collaborates with other ISO business units to reach its goals and to quickly resolve wholesale market customer issues and improve communications with stakeholders.

The division facilitates integrating renewable resources by clearly presenting ISO advice, analyses and grid needs to technical and non-technical audiences. This



includes producing fact sheets, corporate brochures and info graphics that transform highly technical grid terms and concepts into simple language that supports better reading comprehension and retention. Other activity includes coordinating and consulting with state and federal agencies and the Governor's office to help shape regulatory policies that preserve or enhance grid reliability.

The division also updates and manages the ISO Business Practice Manuals, which contain the information that explains underlying tariffs and are

critical in providing stakeholders and customers the details they need to interconnect and operate renewable facilities, as well as be an effective energy market participant.

The Communications and Public Relations Department oversees internal and external communications that includes producing printed, digital, social media and video

materials. The department is responsible for all Web communications and website management, as well as 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 Strategic Alliance Department focuses on support for the corporate initiative promoting regional coordination and cooperation across the West. Western entities are at a crossroads and face new needs caused by renewable development and various initiatives promoting regional transmission planning. This department leads activities aimed at meeting these needs while maintaining and increasing value to all affected parties, including existing entities served by ISO. Strategic Alliances lends assistance to entities seeking alternative forms of participation with the ISO. The 2015 regional initiatives build on efforts from 2014 to further the development of the energy imbalance market that will serve utilities in the West beginning in fall 2014.

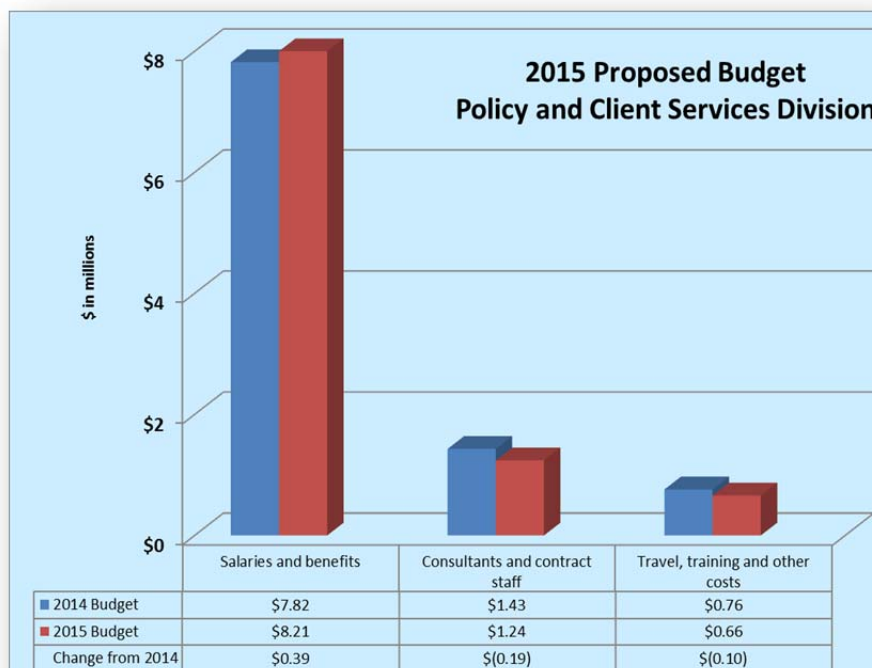
The external affairs departments (federal, state, regional and regulatory) oversee interactions with state and federal legislators, governors' offices, and federal and state agencies regarding matters that could affect the reliability or economics of the ISO grid and markets. The departments' activities include building and maintaining relationships with regulatory agencies such as the California Public Utilities Commission, the California Energy Commission, and the California Air Resources Board, as well as monitoring and managing federal legislative and regulatory matters that could influence ISO practices and policies. The departments also work with legislatures to advise and educate lawmakers on policies that could affect the power system.

The Customer Service and Stakeholder Affairs Department is the primary business interface between the ISO and its clients and stakeholders, which includes a program to support newcomers. Web-based resources, linkages to trade associations and personal support for incoming newcomer issues is making it easier for market entrants to navigate the ISO.

The department will refine its newcomer programs in 2014 to help make the transition to active participation in the ISO markets as seamless as possible.

Discussion of Proposed Budget

The 2015 budget of \$10.1 million reflects a \$106,000, or 1 percent, increase over the 2014 budget of \$10.0 million. Staffing



remained the same as 2014 at 40.

Salaries and benefit costs increased \$387,000, primarily due to merit and overtime increases.

Consultants and contract staff decreased \$189,000. The reduction is attributable to managing projects out of the appropriate budget (capital vs. O&M).

Travel, training, and other costs decreased by \$98,000 primarily related to less travel planned in 2015

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VI. DEBT SERVICE

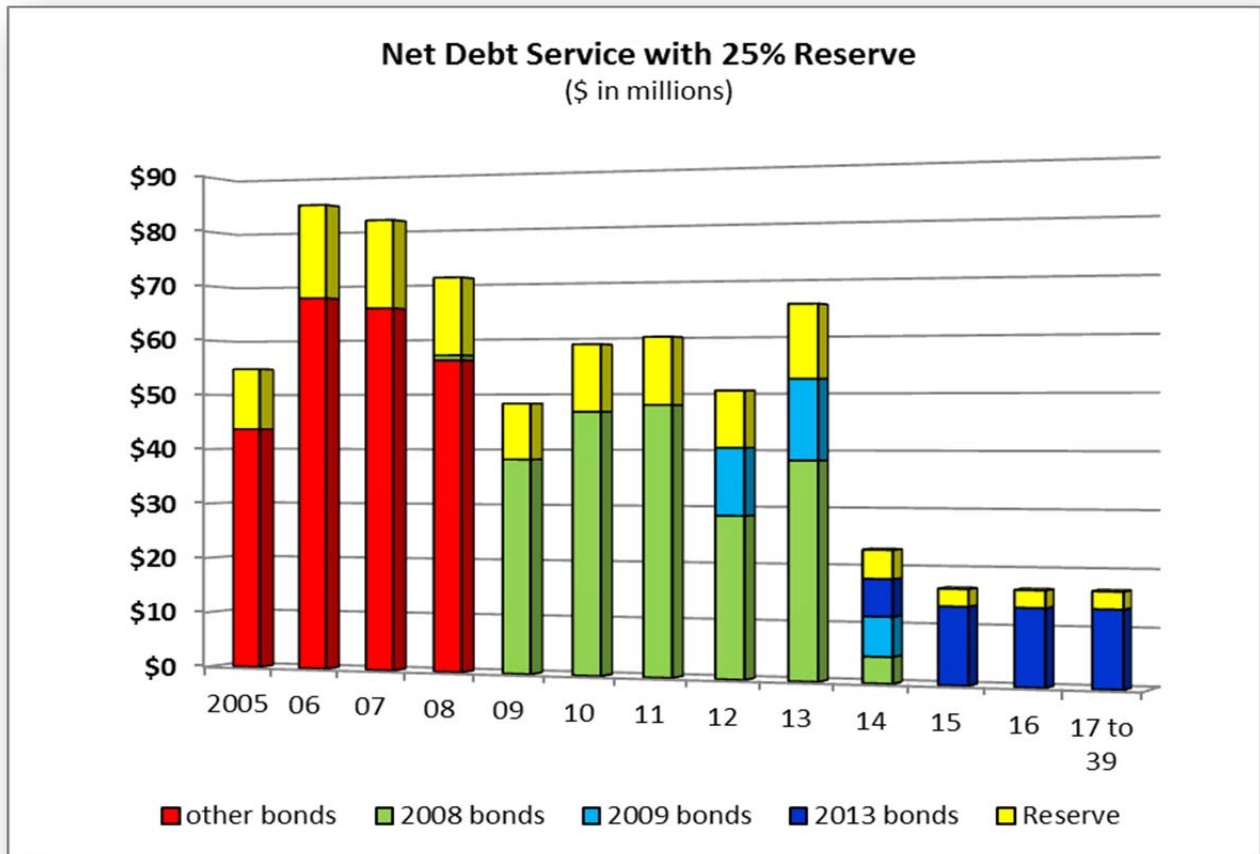
Debt service budgeted for inclusion in the 2015 revenue requirement includes the principal and interest payments due on the Series 2013 bonds and the 25 percent debt service reserve. The total equals the sum of the semiannual interest payment due in August of the budget year, the principal and semiannual interest payment due in February of the ensuing year and the 25 percent debt service reserve amount required by the tariff. A summary of the debt service components for 2015 and 2014 contained in the revenue requirement is as follows.

Debt Service (\$ in millions)	2015 Budget	2014 Budget	Change
Principal payments	\$4.4	\$4.4	\$ -
Interest payments	9.1	9.1	-
Subtotal	13.5	13.5	-
25 % Debt Service Reserve	3.4	3.4	-
Total	\$16.9	\$16.9	\$ -

The Series 2013 bonds were issued in November 2013 to refinance the 2009 bonds. The refinancing resulted in approximately \$1.25 million in lower annual debt service payments and over \$30 million in total savings. The 2009 bonds had been issued to finance the ISO's new headquarters facility in Folsom, California and to fund other capital expenditures. The future amortization schedule of the 2013 bonds is listed below.

Amortization schedule for 2013 bonds (\$ in millions)	Principal	Interest	Total
2015	\$4.4	\$9.1	13.5
2016	4.5	9.0	13.5
2017	4.6	8.8	13.4
2018	4.8	8.6	13.4
2019	5.0	8.5	13.4
2020-2039	168.5	97.7	266.3
Total	\$191.8	\$141.7	\$333.5

The chart below shows the net debt service of the ISO from inception.

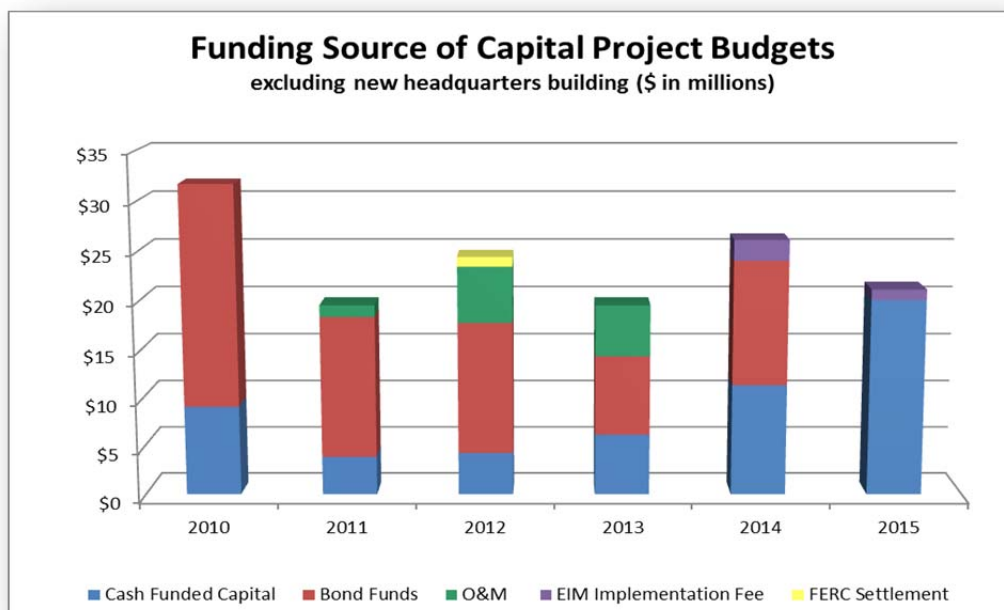


VII. CAPITAL / PROJECT BUDGET AND CASH FUNDED CAPITAL

The 2015 capital and project budget of up to \$20.0 million will fund projects as detailed on the following pages. The Board approves separately the capital and project budget, along with the revenue requirement. The Corporate Management Committee made up of the Chief Executive Officer, Chief Financial Officer and General Counsel authorizes individual projects within the approved budget. Any increases in the budget must be brought back to the Board for approval.

The cash funded capital collected via the revenue requirement is \$30.0 million with the excess, after utilization of the remaining bond proceeds, to be used to fund future projects. The funds set aside for future projects will enable the ISO to maintain a stable revenue requirement for an extended period. Capital project budgets are forecast to be approximately \$18 million to \$24 million per year and paid for from several sources as shown in the chart below. In recent years, bond funds have been the primary source; however, as bond funds are exhausted, the cash funded capital reserves will become the primary source.

The ISO has entered into an implementation agreement with PacifiCorp and NV Energy as the first step in their participation to enable them to participate in the western energy imbalance market. PacifiCorp will enter the market on October 1, 2014. FERC approved the agreement with NV Energy on June 13, 2014 and it provides that the utility will reimburse the ISO \$1.1 million for implementation costs based on achieving specified milestones. NV Energy's anticipated participation in the western energy imbalance market is set for October 1, 2015.



Capital / Project Budget Development Process

The 2015 project prioritization process runs from August 2014 through November 2014. The program office collaborates with the internal business units and maintains a list of projects throughout the year. The list aligns with the three-year strategic plan, the information technology roadmap, and the ISO market initiatives roadmap. On a periodic basis, strategic initiative owners and managers review the progress of active projects, identify issues and risks, and propose changes to the master project listing.

During the budgeting process, combining the information technology roadmap items with the strategic projects scheduled for the following year result in an initial master listing. A prioritization and ranking process determines preliminary project cut off when the project list exceeds the available budget. The following chart shows the criteria for ranking projects. The ISO website contains the full ranking criteria schedule.

Ranking Criteria		
Strategy	Strategic Initiative	Weight
Ensure continued reliability during grid transformation (capacity on the system)	Evolve the market Markets and performance (MAP) Develop infrastructure and tools	10%
Strengthen California's global leadership commitment to renewable, responsible and reliable energy (regulatory coordination)	Advance state energy and environmental initiatives	10%
Explore opportunities for regional collaboration and technological innovation	Incorporate renewable resources Improve forecasting capabilities MAP	10%
Grid reliability	Enhances reliability of the grid by addressing and existing or potential operational issue	15%
Market Efficiency	Addresses a current or potential market inefficiency	10%
Contributes to increased customer service		10%
Compliance	Establish a culture of compliance	15%
Development of staff / talent pipeline	People strategies	5%
ISO process improvement	Process and quality	10%
Information Technology system qualities	System and tools	5%

The following are the business and financial case criteria:

- Does the project require market participant development efforts?
- Does the project deliver cost savings?
- How much are the project implementation costs?
- Does the project reduce operations and maintenance costs?
- Does the project mitigate any corporate risk?
- A factor for executive discretion is included.

Proposed Project List

The current project list now exceeds the proposed funding level but will be prioritized and brought within the proposed budget level. The following listing provides an indication of the projects proposed for initiation during 2015. The final prioritized listing will be in the final budget presentation. This year's list includes the following five areas and initiatives:

- enhancement of markets and performance;
- enhancement of the technology foundation;
- evolve the market and infrastructure;
- operational excellence; and
- information technology and other costs.

Before funding approval, a review is made of all projects on the final 2015 proposed list, including further consideration of project need, a cost-benefit analysis and completion of a project plan. Specifically, the Corporate Management Committee reviews and approves all projects considered for funding in 2015. The 2015 priorities may change depending on developments during the remainder of 2014. The actual projects completed during 2015 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.

Proposed Projects for 2015	Amount
Enhancement of Markets and Performance	
Operations enhancements 2015	Large
Market design comprehensive review	Large
Market quality system (MQS) Redesign	Medium
Market validation tools (phase 2 and 3)	Medium
Multi-stage generation (MSG) Improvements 2015	Small
Enhance real time unit commitment to 9 or 10 hours	Small
Remedial action schemas (RAS) special protection system (SPS) modeling in market applications	Small
Advanced hot-start per iteration within the same run	Small
Market services enhancements 2015	Small
Enhanced generation contingency model for markets	Small
Constraint parameter enhancement	Small
Mitigate pricing impact of multiple overloaded transmission constraints	Small
Price corrections automation	Small
Total	\$5,100,000
Enhancement of the Technology Foundation	
Energy management system (EMS) replacement – (a multi-year project)	Large

Proposed Projects for 2015	Amount
Existing transmission contract calculator (ETCC) replacement	Large
Integration layer and improvements	Medium
2015 web service standardization	Medium
Market and grid integrated information (MAGII) - data modeling (includes market validation tool phases 2 & 3)	Medium
Logging system replacement	Medium
WebSDK framework development	Medium
Network and security improvements	Medium
Windows 2003 replacement	Medium
Records retention software purchases 2015	Small
Replacing and/or consolidating database software	Small
Upgrade MV90 to newer version	Small
Stabilize market inputs	Small
Architecture projects	Small
Develop eCredit portal	Small
Rerun stabilization	Small
CAISO.COM mobile & web Improvements	Small
Support efficiency improvements	Small
North American Electric Reliability Corporation (NERC) Critical Infrastructure Protection (CIP) assessment	Small
Enterprise services bus (ESB) proof of concept	Small
Move interest calculations from market clearing (MCP) to settlements systems	Small
Alerts, Warnings, and Emergencies (AWE) messaging	Small
Market participant portal (MPP) redesign	Small
Application technologies security assessment	Small
Remedy force improvements	Small
Total	\$12,160,000
Evolve the Market and Infrastructure	
Flexible ramping (market product) / simultaneous residual unit commitment and integrated forward market	Large
Reliability services (includes standard capacity products(SCP) phase 3 in 2015 and subset of hours	Large
Capacity Procurement Mechanism (CPM) Replacement	Large
Contingency modeling enhancements	Medium
Energy imbalance market economic studies	Medium
BAL 003 Frequency Response	Small
Commitment cost enhancements	Small
Marginal loss surplus allocation	Small
Transmission register enhancements	Small
Non-generator resources in ancillary services market requirements	Small

Proposed Projects for 2015	Amount
Administrative pricing rule	Small
Economic study tool enhancements and consulting services	Small
Total	\$6,000,000
Operational Excellence	
Enterprise model management systems (EMMS) Phase 3	Large
Operational meter analysis and reporting (OMAR) replacement	Large
Automated load forecast system (ALFS) forecasting improvements	Medium
Exceptional dispatch 3.0 phase 2	Medium
Incorporate the multi-stage generation (MSG) transition and aggregate transition	Medium
System operating limits phase 2	Medium
Allow phase shifter modeling in energy management system (EMS) & market application	Small
Intelligent user interface (UI) - operations	Small
Load distribution factor (LDF) enhancement	Small
Forecasting improvement project / ramp forecasting application (flex ramp and regulation)	Small
Incorporate the market system workarounds, handed to Siemens, to become part of Siemens final design plans to improve performance and support.	Small
Real time contingency analysis (RTCA) enhancements phase 2	Small
Incorporation of operations non-core tools into final destination	Small
Expand voltage stability analysis (VSA) to include renewable variability & generate alerts to identify potential angle violations following a contingency	Small
Compensating injections revamp to accommodate full network model expansion	Small
Group constraint enhancement	Small
Commitment reasons final phase	Small
Master generation database/master file migration project	Small
Move miscellaneous market tools into market systems.	Small
Compare and validate projected market results to State Estimator Results	Small
State estimator enhancements	Small
Upgrade WebSDK along with save-sets feature to v3.1	Small
Geo database enhancement to consume enterprise model management system (EMMS) incremental changes	Small
Improve patching and deployment to minimize planned unavailability	Small
Total	\$13,542,000
Customer Service and Other Costs	
Annual 2015 hardware and network equipment and software purchases	Large
Program Office project management costs – capital labor costs	Large
Improve transparency of operating instructions	Small
Access identity management (AIM) for internal user access	Small
Annual request for facilities costs	Small

Proposed Projects for 2015	Amount
Project Initialization funding	Small
Voice of the customer projects	Small
Total	\$6,765,000
Total Proposed Projects for 2015	\$43,567,000

Note: The costs of the individual projects are not shown, but are categorized by size as follows: small projects under \$500,000, medium projects from \$500,000 up to \$1 million, and large projects over \$1 million. The actual projects completed during 2015 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. OTHER COSTS AND REVENUES

Other costs and revenues for 2015 is budgeted at \$9.4 million, \$1.1 million higher than 2014 primarily due to fees from the new energy imbalance market. Energy imbalance administrative charges of 19 cents per MW of load and generation are estimated to be \$1.6 million in 2015, which is an increase of \$1.3 million over 2014. Intermittent resource forecasting fees of 10 cents per MW of generation are estimated at \$2.1 million the same amount as 2014. The fees offset the forecasting costs for each resource incurred by the ISO that is included in O&M. Fees for completing studies of large generator interconnection projects (LGIP) requests decreased \$400,000 from 2014 to \$1.4 million in 2015. The decrease better reflects the volume of work estimated for 2015. The details of this category are as follows.

Other Costs and Revenues (\$ in millions)	2015 Budget	2014 Budget	Change
Intermittent resource (wind and solar) forecasting fees	\$2.1	\$2.1	\$ -
California-Oregon intertie path operator fees	2.0	2.0	-
Interest earnings	2.0	1.9	0.1
Large generation interconnection fees	1.4	1.8	(0.4)
Energy imbalance market administrative charges	1.6	0.3	1.3
Scheduling Coordinator application and other fees	0.3	0.2	0.1
Total	\$9.4	\$8.3	\$1.1

IX. OPERATING COST RESERVE ADJUSTMENT

The operating cost reserve adjustment is a reduction or offset to the ISO revenue requirement for 2015. In any year that the ISO operating reserve account exceeds 15 percent of the prospective year's O&M budget, the excess goes toward reducing the revenue requirement for the coming year. Additionally the adjustment includes the 25 percent debt service reserve collected in the previous year and the difference between budgeted revenues and expenses in prior years. For 2015, the ISO forecasts a credit from the operating reserve account of \$4.1 million. A summary of the adjustment is shown below.

Operating Cost Reserve Adjustment (\$ in millions)	2015 Budget	2014 Budget	Change
Increase/(decrease) in 15% reserve for O&M budget	\$(0.1)	\$ (0.1)	\$-
25% debt service collection from prior year	3.4	8.5	(5.1)
Reverse credit taken in 2010 to 2013 for amortization of bond premium	-	(7.1)	7.1
Accrual of interest expense on generator fine refund liability	(0.2)	(2.2)	2.0
True-up of actual to forecast revenues and other expenses	(0.5)	1.9	(2.4)
Over collection of 2009 debt service on refinancing in 2013	1.5	-	1.5
Total	\$4.1	\$1.0	\$3.1

The calculation of the 15 percent change is as follows.

Change in 15% Operating Reserve (\$ in millions)	2015 Budget	2014 Budget	Change
Change in O&M budget from prior year	\$165.1	\$164.4	\$0.7
Percentage	15%	15%	
Increase in Operating Reserve requirement	\$24.8	\$24.7	\$0.1

The balance of the Operating Reserve at December 31, 2013 is as follows.

Operating Reserve Balance at December 31, 2013 (\$ in millions)	Amount
Operating reserve for 2013 - 2013 O&M budget of \$162.9 x 15%	\$24.4
25% debt service reserve collected in 2013 to be returned in 2014	8.5
Debt service payment collected in 2013 to be paid in February 2014	8.8
True up of 2012 budget to actual to be returned in 2014	(7.4)
True up of 2013 budget to actual to be returned in 2015	0.8
Operating Reserve Balance	\$35.1

X. UNBUNDLED GRID MANAGEMENT CHARGE CALCULATIONS

The ISO recovers its costs through separate GMC charges to market participants. The design originally approved in 2011 provides for three service categories and five associated fees and charges. The rate design was updated in 2014 effective January 1, 2015 and consisted of changes in two cost categories: the system operations and CRR services charges, a change in the rate for the TOR charge and an increase in the revenue requirement maximum to \$202 million. The update was approved by the Board in July and is awaiting approval at FERC. The ISO derives the rate by dividing the recoverable costs for the category by the estimated billing determinants.

Components of GMC and billing determinants

The three service categories, five associated fees and charges, and their billing determinants are as follows:

Type	Bill Determinant	Charge Code
Service Categories		
Market Service Charge	Awards in MWh or MW of supply and demand excluding Transmission Ownership Rights (TORs)	4560
Systems Operations Charge	Metered flows in MWh of supply and demand in the ISO balancing authority with the following two exceptions, TORs and qualifying grandfathered supply contracts	4561
CRR Service Charge	MWh of congestion	4562
Fees and charges		
Bid segment fees	Number of bid segments in the ISO market for supply or demand	4515
Inter-SC Trades fee	Number of trades by scheduling coordinator (SC)	4512
SCID fee	Monthly charge if statement produced for an SC	4575
TOR charge	Minimum of metered supply or demand in MWh on TORs	4560
CRR auction bid fees	Number of accepted bids in CRR auctions	4516

Rate Calculation

There are eight steps to calculate rates, as noted below:

1. estimate billing determinant volumes for fees and charges;
2. multiply volumes by rates to derive revenues for individual fees and charges;
3. allocate over or under collection of GMC revenue to the three service categories;
4. allocate remaining revenue requirement into three service categories;
5. deduct fee and charge revenue from associated service category costs;
6. estimate billing determinant volumes for three service categories;
7. deduct grandfathered supply volumes from system operations charge; and
8. divide residual revenue requirement from Step 4 by adjusted billing determinant volumes from Steps 6 and 7 to derive individual service category rates.

Calculation of Fee Revenue

Fee or Charge	Rate	Estimated Volumes	Estimated 2015 Revenue (\$ in thousands)
Bid segment fee	\$0.005	45,534,931	\$228
Inter-SC trade fee	1.00	2,732,925	2,733
SCID fee (monthly)	1,000	192	2,304
TOR fee	0.24	3,141,185	754
CRR auction bid fee	1.00	310,741	311
Total			\$6,330

Calculation of Service Category Rates

Component	Market Services	System Operations	CRR Services	Total
Allocation of revenue requirement (\$ in thousands)				
Total revenue requirement				\$198,560
Adjust for over/under collection of 2013 rates	\$205	\$762	\$(304)	663
Remaining to allocate				197,897
Percentages	27%	70%	3%	100%
% allocation of costs	53,432	138,528	5937	197,897
Combined costs	53,637	139,290	5633	198,560
Deduct fee revenue				
Bid segment fees	228	-	-	228
Inter-SC trade fees	2,733	-	-	2,733
SCID fees	2,304	-	-	2,304
TOR fees	-	754	-	754
CRR auction bid fees	-	-	311	311
Total fees	5,265	754	311	6,330
Calculation of recoverable costs				
Costs less fees	\$48,372	\$138,536	\$5,322	\$192,230
Estimated volumes				
Volumes	551,425,255	473,894,246	675,705,807	
Deduct exceptions				
Less grandfathered supply	-	7,227,000	-	
Adjusted volumes	551,425,255	466,667,246	675,705,807	
Resulting rates				
	\$0.0877	\$0.2969	\$0.0079	

Summary of GMC Costs, Volumes and Rates for 2015

Net Revenue Requirement, Volume Forecast and Rate by Service Category (\$ in millions, volumes in thousands and rates in \$ per unit)

Charge Code	Service Category or Fee	2015 Budget	2015 volumes	2015 rates
4560	Market Service Charge	\$48.4	551,425	\$0.0877
4561	Systems Operations Charge	138.5	466,667	0.2969
4562	CRR Services Charge	5.3	675,706	0.0079
4515	Bid segment fees	0.2	45,535	0.005
4512	Inter-SC trades fees	2.7	2,733	1.00
4575	SCID fees	2.3	192	1,000
4563	TOR fees	0.8	3,141	0.24
4516	CRR auction bid fees	0.3	311	1.00
Total		\$198.5		

Comparison of Net Revenue Requirements by Service Category (\$ in millions)

Charge Code	Service Category or Fee	2015 Budget	2014 Budget	\$ Variance	% change
4560	Market Service Charge	\$48.4	\$48.7	\$(0.3)	(0.6)%
4561	Systems Operations Charge	138.5	135.2	3.4	2.5%
4562	CRR Services Charge	5.3	7.6	(2.3)	(30.3)%
4515	Bid segment fees	0.2	0.3	-	- %
4512	Inter-SC trades fees	2.7	2.8	(0.1)	(3.6)%
4575	SCID fees	2.3	2.3	-	- %
4560	TOR charges	0.8	0.8	(0.2)	(20.0)%
4516	CRR auction bid fees	0.3	0.3	-	- %
Total		\$198.5	\$198.0	\$0.5	0.3%

Comparison of rates (\$ per unit)

Charge Code	Service Category or Fee	2015 Rate	2014 Rate	\$ Variance	comments
4560	Market Service Charge	\$0.0877	\$0.0867	\$0.0010	2% lower volumes projected for 2015
4561	Systems Operations Charge	\$0.2969	\$0.2890	\$0.0079	1% increase in share of revenue requirement from 2014
4562	CRR Services Charge	\$0.0079	\$0.0112	\$(0.0033)	
4560	TOR charge	\$0.24	\$0.27	\$(0.03)	Change in rate for 2015

The rates for bid segment fees, inter-SC trade fees, SCID fees and CRR auction bid fees are fixed.