



California ISO
Your Link to Power

10 Year Anniversary 1998-2008

Five-Year Strategic Plan

Planning Horizon: 2008-2012

DRAFT
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The California ISO sees an industry facing sweeping changes in relation to global climate challenges. As a result, the organization is modifying its mission statement to reflect its work to help meet the environmental goals of the state and region through the objectives contained in this FIVE-YEAR STRATEGIC PLAN.

California ISO Mission

For the benefit of our customers, we:

- Operate the grid reliably and efficiently
- Provide fair and open transmission access
- Promote environmental stewardship
- Facilitate effective markets and promote infrastructure development

All through the provision of timely and accurate information.

California ISO Vision

California ISO strives to be a world-class electric transmission organization built around a globally-recognized and inspired team providing cost-effective and reliable service, well-balanced and transparent energy market mechanisms, and high-quality information for the benefit of our customers.

California ISO Core Values

INTEGRITY

We are honest, ethical and trustworthy with each other and stakeholders in all business dealings, reflecting the highest professional standards.

TEAMWORK

We strive for one common vision and are inspired by working together, with clear points of accountability, to be a world-class organization in meeting corporate objectives and serving our customers.

EXCELLENCE

Internal and external excellence—we earn customer trust based on our understanding of needs, implications of decisions, quality, competence, innovation and discipline in our business dealings.

PEOPLE-FOCUS

We value diversity, promote employee development, support work/life balance and foster an invigorating and fulfilling work environment.

OPEN COMMUNICATION

We seek diverse ideas and opinions, value transparency, promote “thought leadership” and openly share information both internally and externally.



FIVE-YEAR STRATEGIC PLAN

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I.

INTRODUCTION

More than two years ago, the California Independent System Operator Corporation (California ISO) set out on a journey of corporate transformation. In 2008, while also celebrating its tenth year of operations, the organization continues to mature while approaching a new goal of *Organizational Effectiveness*. This important phase of the transformation will capitalize on the progress made by the corporation to improve overall efficiency, strive for excellence and leverage technology to better meet the needs the California electricity industry and the consumers it serves.

This FIVE-YEAR STRATEGIC PLAN (the Plan) covers the 2008 to 2012 planning horizon, illuminating the path the California ISO will follow to respond to important environmental, regulatory, workforce and energy supply/delivery challenges that compel the organization to find innovative and more efficient ways of doing things. The Plan embraces the challenges facing California and the nation, and proposes strategies to address them while continuing to enhance transparency and excellence in grid and market operations, affording open and non-discriminatory grid access and improving service to our customers.

When Californians switch a light on, they may not know who to thank—but behind every glowing lamp, the people of the ISO, in partnership with the industry, are reinventing grid operations, strengthening the transmission infrastructure, enhancing the markets and deploying new technologies—to the benefit of all who depend on the reliable flow of electricity and the responsible use of resources that feed into the power grid. “Keeping the lights on” for the most populous state in the nation and the eighth largest economy in the world is integral to the mission of the California ISO. This Plan conveys the recent successes, future opportunities and strategic direction of the California ISO.

The STRATEGIC PLAN builds upon the 2007 FIVE-YEAR BUSINESS PLAN by renewing external and internal deliberations and updating market and industry drivers. The effort led to revised objectives, new initiatives and the advancement of previously approved, ongoing efforts. This process framed the contents of this Plan which is organized into five sections:

- **The Executive Summary** providing a high-level overview of this Plan including a list of the Strategic Objectives and Corporate Initiatives.
- **Drivers** describing the key factors expected to shape the industry over the next five years. This section also reveals key risks that have been identified through the corporate enterprise risk management process.
- **Organizational Transformation** highlighting the corporation’s process of continuous improvement and the current goal of *Organizational Effectiveness*—all of which will help establish the California ISO as a world-class transmission organization.
- **Strategic Objectives, Sub-Objectives and Corporate Initiatives** presenting the organization’s three broad strategic objectives, along with the associated sub-objectives and initiatives that are key to the achievement of these objectives.

The key to successful implementation of the Plan's strategies is managing the corporation's talent, technology and processes in a way that ensures the right people with the right tools and the right leadership are in place to take the organization to the next level of success.

The California ISO is an organization with a unique and proven ability to take on the big issues and involve others in the drive to solutions. This ability is a measure of the commitment and dedication of its people who believe that this industry has a key role in finding answers to today's challenges.



II.

EXECUTIVE SUMMARY

This FIVE-YEAR STRATEGIC PLAN covers 2008 to 2012 and describes the path the California ISO will follow to respond to important environmental, regulatory, workforce and energy supply/delivery challenges. The Plan proposes strategies to address these challenges while maintaining excellence and transparency in grid and market operations, affording open and non-discriminatory grid access and improving service to our customers.

A Journey of Transformation

Celebrating its tenth year of operation in 2008, the California ISO is at an important junction on a journey of corporate transformation advancing to a new goal of *Organizational Effectiveness*. This important phase of the transformation will capitalize on the progress made by the corporation in prior years. *Organizational Effectiveness* will be achieved through optimization of business processes and the resulting cross-functional efficiencies that better processes will achieve.

Drivers Identified and Considered

This Plan was developed against a backdrop of drivers including industry technological advances, an increasing focus on renewable resources and other emerging environmental issues, new mandatory reliability standards and national/industry workforce trends. Information was collected regarding industry assumptions, trends, and challenges and customer needs from candid conversations with more than fifty industry leaders representing a cross-section of the interests served. The effort included looking internally for input and encompassed an enterprise-wide risk assessment and development of specific mitigation initiatives.

Plan Objectives

The key objectives and sub-objectives that will guide the California ISO in the next five years are:

1. Excellence in grid and market operations through the reliable delivery of electricity from diverse energy sources at a competitive cost, compliance with all applicable standards, transparent markets and operations and innovative use of technology.
2. Transparent market prices that drive efficient utilization and development of grid resources—including demand, supply and transmission—that are aligned with state and federal policies and priorities. This includes three supporting sub-objectives.
 - 2.1. Grid infrastructure that is sufficient, used efficiently and coordinated with market signals and economics to improve reliability and support the addition of diverse energy sources to keep pace with electricity growth and policy directives.
 - 2.2. Robust and transparent electricity markets that foster demand and supply participation, facilitate renewable resource integration, encourage technological innovation, provide appropriate risk sharing and inform investment decisions.

- 2.3. Alignment with state and federal policies, including environmental goals, climate change regulation and California’s preferred resource loading order, by understanding the implications of these policies on the electric system and markets.
- 3. *Organizational Effectiveness* built around a team of professionals that strives to achieve excellence and gives focused attention to customers’ priorities consistent with the California ISO mission, vision and core values. This includes three supporting sub-objectives.
 - 3.1. People strategies that enable the organization to attract, retain and motivate professionals who design, operate and support the ISO grid and its markets.
 - 3.2. Maturity in key disciplines that promote *Organizational Effectiveness* and include business process management, technology capabilities and program management.
 - 3.3. Superior customer service and enhanced relationships with stakeholders, policy makers and market participants.

The Planning Process

To develop this FIVE-YEAR STRATEGIC PLAN, the ISO employed a six-step strategic planning process illustrated below. Collecting input from market participants, policy makers and other stakeholders, the ISO identified the key drivers and risks associated with the organization’s strategic objectives. Based on those drivers, the organization developed strategic objectives designed to enable the organization to succeed under any of the conditions considered. Development of related initiatives followed. The process culminated in a draft Plan presented to the ISO Board of Governors (Board) for input and guidance.





Execution of this Plan requires corporate strategic objectives and initiatives to be incorporated into the performance plans of every employee of the organization through the design of appropriate measures of success. These measures are in place and will be monitored on a quarterly and annual basis to ensure successful implementation.

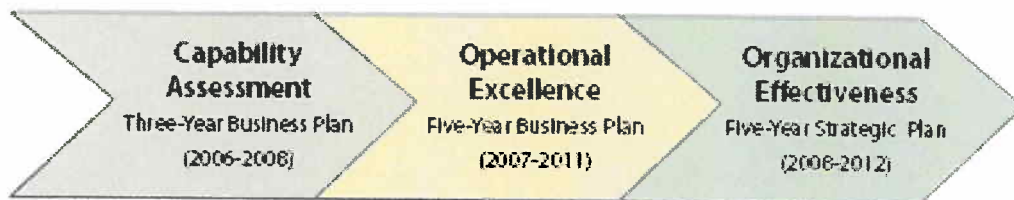
III.

ORGANIZATIONAL TRANSFORMATION

The California ISO began the business planning process in 2005. As a result of that assessment, the ISO updated its organizational structure to align its primary functions and essential capabilities to better support customer needs, reliable operations and public policies. The goals were reducing costs, extracting system and process efficiencies, improving customer service and sharpening the focus regarding state and federal policy goals. These structural changes were accomplished in tandem with a significant reduction in full-time staff and contractors.

The organization's first-ever THREE-YEAR BUSINESS PLAN (2006-2008) was approved by the Board and published in early 2006. That same year, the ISO successfully executed an aggressive set of initiatives to address structural and process gaps and others areas of improvement, establish a risk management process and develop corporate metrics for measuring success.

The California ISO Transformational Process



For the last three years, the California ISO has embarked on a journey of organizational transformation. The contents of this Plan are designed to move the corporation solidly into phase three of this transformation -- *Organizational Effectiveness*.

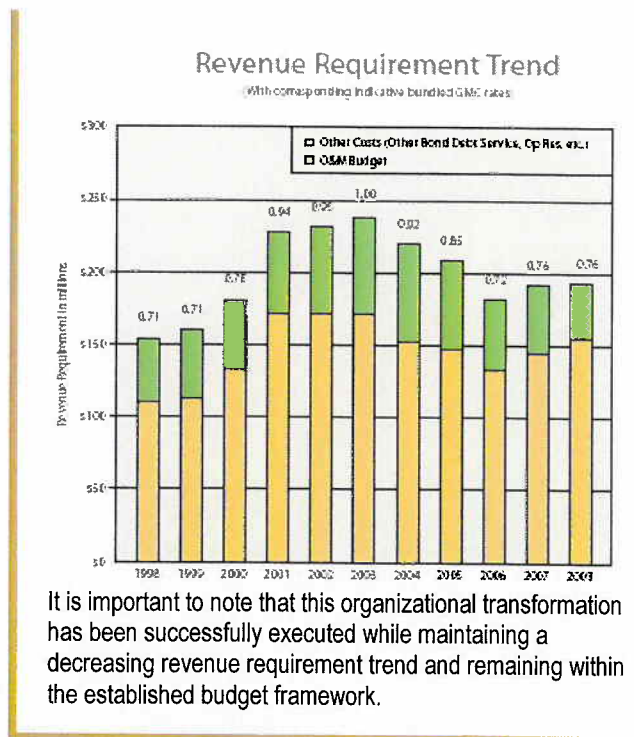
The second phase of the organization's transformation targeted *Operational Excellence* and was articulated in the CALIFORNIA ISO FIVE-YEAR BUSINESS PLAN (2007-2011). This phase focused on improved performance of core functions—grid and market operations, market development, infrastructure planning and customer service. The organization's performance continued to improve, as evidenced by an impressive list of accomplishments that include:

- Exemplary grid and market operations that kept the lights on during an unsurpassed heat wave in 2006 and the 2007 fires in southern California.
- A significant reduction in reliability management costs attributable to process improvements and grid reinforcements.
- Completed conceptual design and tariff development for Market Redesign & Technology Upgrade (MRTU) and received Federal Energy Regulatory Commission (FERC) approval.
- New engineering studies describing what is necessary to successfully integrate renewable resources into the grid sufficient to meet the state's 20 percent Renewable Portfolio Standard.



- An upgrade of the Alhambra control center into a fully-functioning operational facility that contributes daily to grid operations and stands ready to take on full system and market operations at any time of the day or night.
- Improved system reliability through the introduction of systematic IT processes and improved system availability.
- Development of a new policy for financing the interconnection of renewable generation to the grid and cultivation of the state’s valuable Resource Adequacy (RA) program in conjunction with state regulators.
- Increased focus on customer service and enhanced stakeholder and Board of Governors’ processes.

In addition, the California ISO introduced an advanced technical training program through the ISO Academy as well as a new pay-for-performance plan that links employee compensation to measures of both corporate and individual performance. Moreover, the ISO annual revenue requirement was trimmed by 20 percent since 2003 and the level of debt assumed by the corporation has decreased by 37 percent since 1998 despite the need for significant investment in new systems.



The Strategic Objectives and Corporate Initiatives discussed in this Plan build on the achievements of prior transformational phases and launch the ISO toward the established goal of *Organizational Effectiveness*. The single most important initiative on the path to *Organizational Effectiveness* for the California ISO is the successful implementation of the MRTU program in 2008. Other important efforts will focus on the development of new processes that appropriately integrate related work across the organization, improve cross-organizational collaboration and achieve full compliance with new federal reliability requirements.

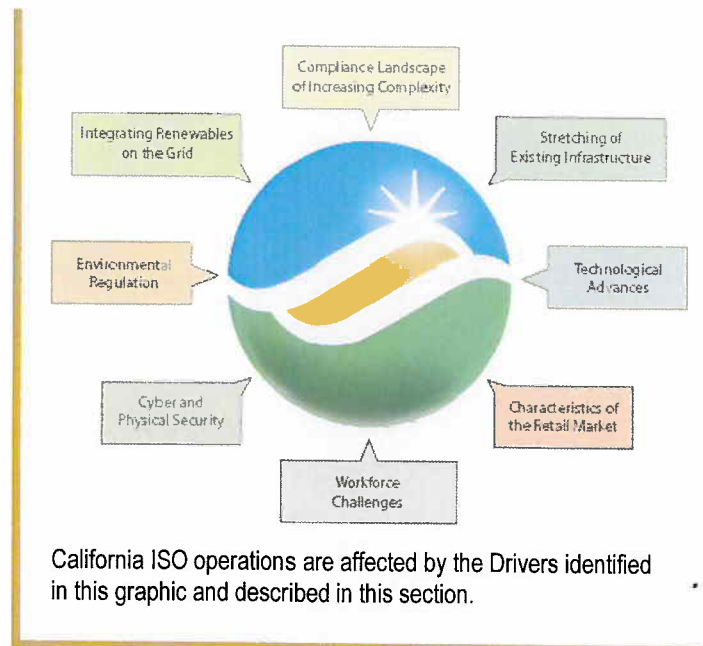
The importance of this next segment of the corporation’s journey is underscored by the inclusion of *Organizational Effectiveness* as one of the three main objectives of this Plan. As the power industry continues to mature and evolve, a dramatic shift will be required of the California ISO and its team of professionals. Over the years, ISO employees have demonstrated great skill and extraordinary commitment to the organization’s success. This spirit is one of the corporation’s greatest assets and is critical to achieving the transformation that the California ISO seeks.

IV. DRIVERS

The CALIFORNIA ISO FIVE-YEAR STRATEGIC PLAN was developed against a backdrop of industry technological advances, emerging requirements for greenhouse gas reductions, increased levels of renewable resources and new mandatory reliability standards. This evolution, in combination with ever-increasing competition for uniquely skilled professionals, will transform how the ISO and the industry meet future electricity needs.

With this in mind, information was collected and absorbed regarding industry assumptions, trends, and challenges and customer needs from candid conversations with more than fifty industry and policy leaders. This broad outreach included policy makers, investor-owned utilities, municipal utilities, consumer groups, generation owners and developers, power marketers, financiers and other market participants. An enterprise-wide risk assessment also identified key risks that produced specific mitigation initiatives.

The following is a brief presentation of the key factors affecting the California ISO and driving the strategic objectives and corporate initiatives discussed in this Plan.



Compliance Landscape of Increasing Complexity

The nature of reliability regulation within the industry has changed dramatically in recent years. The Energy Policy Act of 2005 gave the FERC authority to oversee and regulate national grid reliability through mandatory standards that replaced previously voluntary compliance mechanisms. Under FERC-delegated authority, the North American Electric Reliability Corporation (NERC) now serves as the Electric Reliability Organization responsible for establishing and enforcing mandatory national reliability standards. New industry-wide NERC standards are administered and enforced in the west by the Western Electricity Coordinating Council (WECC), under authority delegated by NERC. The California ISO is subject to these standards and there are now significant financial penalties for non-compliance. Furthermore, the ability of the ISO to comply with these standards is highly dependent upon the performance of transmission owners and market participants.

The compliance landscape for the corporation contains more than reliability standards. It includes a FERC-approved tariff that includes the rates, terms and conditions associated with ISO grid and market operations, market mechanism development and recommended infrastructure enhancements. The organization also coordinates closely with various state and federal entities—The Department of Energy, California Public Utilities Commission (CPUC), California Energy Commission and others—regarding the efficient and cost-effective delivery of wholesale energy for more than 80 percent of the state’s consumers. These forces combine to create an increasingly complex operating environment that challenges the entire industry.

Environmental Regulation

California leads the nation in advancing environmental and climate change policies with laws that require utilities to meet 20 percent of their load with renewable resources by 2010 and all California industries to reduce greenhouse gas emissions to 1990 levels by 2020. In addition, the state is considering a proposal to ban once-through-cooling technology used by coastal power plants under authority delegated by the Federal Clean Water Act. This proposed ban would significantly affect the operational viability of nearly one-half of the state's installed generation capacity that provides essential reliability services, including services necessary to integrate renewable resources onto the Grid.

The California ISO is committed to aligning with these important state and federal environmental goals. This increases the importance of effective communication about the reliability implications of proposed policies and creative thinking about the mitigation of any adverse affects. With proper alignment, the ISO market structure will not only be compatible with these objectives, but will help facilitate their implementation. Recognizing that these issues are not bounded by state borders, the California ISO must also work with California agencies to advance multi-state and regional coordination to achieve these important policy goals.

Integrating Renewables on the Grid

The increasing level of intermittent renewable resources requires close attention. The California ISO must follow through on its 2007 study, *INTEGRATION OF RENEWABLE RESOURCES*, and implement the measures it recommends. This will require the installation of additional capacity and the deployment of new market mechanisms for load-following and regulation services, new and advanced forecasting capabilities, new tools to integrate renewable power into the system and other changes to the existing market structure. The California ISO has an important role in educating policy makers about the system and reliability implications of these changes and the possible role of new supply, demand response programs, energy storage and delivery technologies.

Stretching of Existing Infrastructure

Demand growth, new restrictions on existing generation, aging power plants, a potential decline in the availability of imported power and the need to gain access to remote renewable generation combine to place increased stress on the existing infrastructure. At the same time, public opposition to new generation and transmission continues to make the siting of new facilities problematic. Taken together, these factors tax the limits of the existing infrastructure and increase the urgency of developing mechanisms to stimulate investment in generation, demand response and transmission facilities.

Technological Advances

Technological innovation is greatly accelerating and holds the key to the success of many industry initiatives such as more efficient renewable generation, integration of intermittent generation, enhanced system operations and the deployment of demand response programs and energy storage devices. These innovations represent great opportunity for the ISO, and present many challenges as well. The ability of operators to "see" the grid more accurately and proactively will facilitate more efficient grid management. The installation of smart meters and new sensors will be necessary for the deployment of demand response tools throughout the

market. New standards and collaborative planning with market participants will be critical to the success of these initiatives.

Characteristics of the Retail Market

Considerable uncertainty exists regarding the future characteristics of the California electricity market. For example, community choice aggregation—where a city or county (or a group of cities and counties) aggregates residential and commercial electric loads and participates directly in the electricity markets—creates uncertainty for those entities currently serving those customers. Uncertainty also exists regarding the possible re-introduction of direct access—an issue currently pending in the state. These potential developments create pressure to develop new mechanisms to facilitate capacity trading so that load serving entities have the opportunity to adjust their portfolios in response to changes in their customer base and other shifts in consumer behavior as the industry continues to evolve.

Workforce Challenges

The entire electricity industry faces challenges associated with a shrinking pool of qualified workers and an aging national workforce. At the same time, electricity system operations are becoming increasingly complex putting an increased premium on employees with certain types of experience, skills and advanced academic training, especially in the field of power systems engineering. As a result, the competition for well-trained, skilled employees is fierce on a national and global level.

Cyber and Physical Security

Electricity service is critically important to public health and safety and is foundational to the country's business and manufacturing sectors. There are significant concerns about possible threats of physical and cyber attacks on critical electricity infrastructure. These threats, in combination with the ever-present possibility of natural disasters, make it necessary for system operators to mitigate risks with secure operating networks, facilities and infrastructure in addition to effective crisis management plans.



V.

**STRATEGIC OBJECTIVES, SUB-OBJECTIVES
AND CORPORATE INITIATIVES**

The foundation of this Plan is the following three strategic objectives that were formulated to align with the organization's business priorities over the next five years.

- 1.0 Excellence in grid and market operations through the reliable delivery of electricity from diverse energy sources at a competitive cost, compliance with all applicable standards, transparent markets and operations and innovative use of technology.
- 2.0 Transparent market prices that drive efficient utilization and development of grid resources—including demand, supply and transmission—that are aligned with state and federal policies and priorities.
- 3.0 *Organizational Effectiveness* built around a team of professionals that strives to achieve excellence and gives focused attention to customers' priorities consistent with the California ISO mission, vision and core values.

These objectives are further divided, in some cases, into sub-objectives and initiatives that are described in detail within the sections that follow. Each objective and sub-objective is introduced with background information and a discussion of related issues and implications. Specific initiatives to be executed over the five-year planning period in order to achieve each objective are listed with brief descriptions.

Together, these objectives and initiatives constitute the California ISO strategy for addressing the uncertainty created by the driving forces within the electricity industry. The organization's overarching strategic goal, as outlined in this Plan, is to be successful regardless of how these industry changes materialize in the coming years.

Strategic Objective 1.0

EXCELLENCE IN GRID AND MARKET OPERATIONS

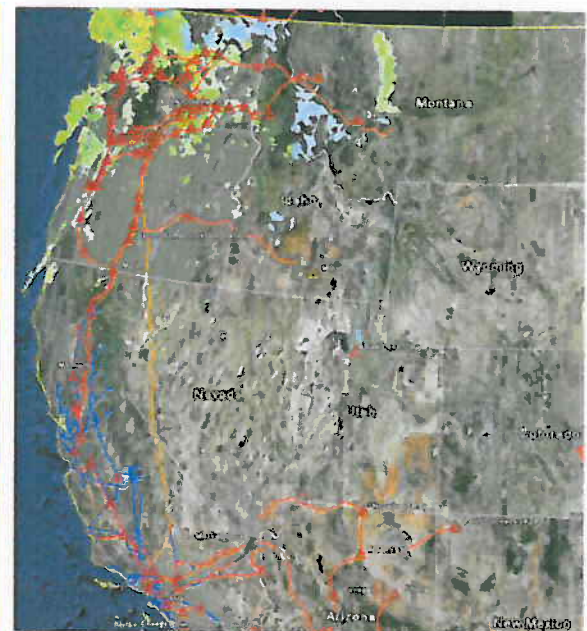
Excellence in grid and market operations through the reliable delivery of electricity from diverse energy sources at a competitive cost, compliance with all applicable standards, transparent markets and operations and innovative use of technology.

Grid and market operations are at the core of the California ISO role and mission, and excellence in this area is first among its objectives. The operating environment, however, is becoming increasingly complex at the same time that new federal reliability standards and mandatory reporting requirements demand better processes to achieve detailed documentation of operations.

In addition, the MRTU platform, which provides enhanced operational capabilities and a new model of supply and delivery dynamics, will enable operators to rely on advanced technologies and new processes to manage the grid. MRTU will place new demands on market monitors, especially as the markets start up. At the same time, MRTU benefits the system by allowing the ISO to respond earlier and more efficiently to system conditions in advance of real time.

This new and complex operating environment requires new training for grid operators and creates the need to incorporate new technologies to support them. Other conditions also expected to affect the operating environment include:

- California load growth is expected to average 1,000 megawatts per year over the next five years.
- Changing weather patterns continue to produce extreme temperature events that increase demand, affect grid and market operations and simultaneously limit transmission capabilities
- Fires and other possible natural disasters will test our responsiveness to rapidly changing conditions and overall readiness for emergency situations.



New screen displays in ISO control rooms overlay weather patterns, burning wild fires and other potential impacts with the transmission system. Such advanced visualization technologies help operators faced with the increasingly complex task of grid management.

Operational excellence is also connected to the organization’s ability to leverage technology and improve its business processes. For example, Smart Grid technologies will improve operators’ ability to see grid conditions sooner and respond more effectively. In addition, bringing greater efficiency to the settlement process will address a long-standing concern of many market participants



INITIATIVES FOR STRATEGIC OBJECTIVE 1.0: *Excellence in Grid & Market Operations*

1.0 A Establish a compliance monitoring framework. (2008–2012)

Establish monitoring and oversight measures that follow ISO and industry participant operations, planning and security compliance with NERC/WECC standards and audits.

1.0 B Leverage and integrate advanced analysis tools and new control room technologies. (2008–2012)

Integrate Smart Grid technologies to enhance control room visibility and access to information to “see and monitor” the grid with more specificity, providing operators earlier warnings of trouble and providing more flexibility in maintaining system stability, dispatch and frequency control. Implement advanced tools that allow effective and efficient resource usage and expand training programs to develop the advanced skills required to manage an increasingly complex environment.

1.0 C Implement projects to facilitate integration of renewable resources. (2008-2010)

Implement the operational capabilities to support climate change goals and renewable resource integration to the grid through advanced forecasting tools, analyses and market improvements.

1.0 D Institute actions to achieve an efficient cash clearing timeframe. (2009)

Reduce the initial settlement statement timeframe from 38 business days to nine. This includes invoice generation, credit policies and designing the financial clearing process necessary to implement virtual bidding by 2009.

Strategic**Objective 2.0****GRID RESOURCE DEVELOPMENT**

Transparent market prices that drive efficient utilization and development of grid resources—including demand, supply and transmission—that are aligned with state and federal policies and priorities.

The California ISO is committed to alignment with state and federal policies and priorities through the development of mechanisms that allow demand, supply and transmission to compete on an equal footing. Today, a mechanism does not exist to allow competition among these alternatives. Launching the MRTU program is chief among the initiatives within this section because it provides the foundation for fair comparisons of these alternatives as well as achieving many of the other objectives contained in this Plan. Demand response, renewable integration and identification of local resource needs all benefit from the new and improved operational and market environment of MRTU.

Some parties, including several municipal utilities, are concerned that California ISO markets could undermine today's largely bilateral energy market or unintentionally contribute to rising contract prices. The ISO is sensitive to this issue and will continue to work with market participants to address these concerns as they arise.

Three sub-objectives are essential to the continued development of grid resources:

- 2.1** Grid infrastructure that is sufficient, used efficiently and coordinated with market signals and economics to improve reliability and support the addition of diverse energy sources to keep pace with electricity growth and policy directives.
- 2.2** Robust and transparent electricity markets that foster demand and supply participation, facilitate renewable resource integration, encourage technology innovation, provide appropriate risk sharing and inform investment decisions.
- 2.3** Alignment with state and federal policies, including environmental goals, climate change regulation and California's preferred resource loading order by understanding the implications of these policies on the electric system and markets.

Effective implementation of these objectives will provide significant cost reductions to California consumers, as shown by the many benefits reaped in past years. Identification and implementation of cost effective transmission upgrades have helped lower reliability costs to California consumers from a high of over \$1 billion in 2004 to less than \$200 million in 2007. In addition, 2005-06 wholesale market prices for electricity, when normalized for fuel costs, were the lowest since 1998.

Successful implementation of the MRTU program is the chief priority of the ISO in 2008. It is foundational to all other goals and initiatives within this Plan.

As with all the activities of the ISO, these objectives need to be pursued in a manner carefully and conscientiously aligned with state and federal policy priorities.



Sub-Objective 2.1

**INFRASTRUCTURE
GUIDED BY PRICE TRANSPARENCY**

Grid infrastructure that is sufficient, used efficiently and coordinated with market signals and economics to improve reliability and support the addition of diverse energy sources to keep pace with electricity growth and policy directives.

In today's market, the California ISO focuses on physical solutions to meet system reliability needs. However, this may not always be the most cost-effective solution. Rigorous evaluation methods have been developed and implemented to determine the most economic physical solutions and these will be integrated into the ISO planning process over the course of this Five-Year Plan. The goal is to align the planning process with the market structure in a way that allows resources such as demand response to compete on an equal footing with infrastructure improvements. This should shift some of the risk away from consumers and onto the business interests which are in a better position to understand and manage it. To do this, greater price transparency is needed to inform investment decisions that will produce lower cost solutions to the reliability needs of California.

As a part of achieving this objective, the ISO is committed to providing the proper tariff framework, advanced technology, transparent data and coordinated planning procedures. This builds upon the organization's accomplishments of previous years. For example, the ISO TEN-YEAR TRANSMISSION PLAN, first issued in 2007, provides pertinent data and information to the market regarding reliability needs and the economic opportunities to enhance the California transmission grid.

The state's rapid growth in renewable development poses several challenges the ISO is proactively working to overcome. New ISO tariff provisions facilitate transmission expansion to provide for the integration of renewable resources through the new FERC-approved Location-Constrained Resource Interconnection (LCRI) policy. Additionally, an overhaul of the application and approval process for grid interconnections is underway to allow the many renewable and other projects to move more quickly through the interconnection process.

Another category of transmission projects was recently developed to ensure the continued feasibility of Long-Term Congestion Revenue Rights which are included in the ISO TEN-YEAR TRANSMISSION PLAN. These initiatives achieve the objective contemplated by EPACT 2005 related to long-term bilateral contracting. Integration of these concepts into the ISO long-term planning process will provide greater flexibility to address transmission needs in a way that also facilitates consideration of demand response and generation options.

Transparent price signals alone may not be sufficient to encourage efficient infrastructure investment. Opportunities exist to coordinate the ISO transmission planning processes more closely with related state and federal efforts such as the CPUC Long-Term Resource Adequacy program. If a sufficient process is adopted, it could be informed by the ISO TEN-YEAR TRANSMISSION PLAN so that market participants and investors would have the information necessary to evaluate the opportunities—both transmission and non-transmission alternatives.

INITIATIVES FOR SUB-OBJECTIVE 2.1: <i>Infrastructure Guided by Price Transparency</i>	
2.1. A	Maintain long-term transmission rights feasibility through the transmission planning process. (2008)
	Develop a process to assure long-term transmission rights are feasible in the transmission planning process.
2.1. B	Reform the Large Generator Interconnection Process (LGIP). (2008)
	Lead an expedited stakeholder process to reform and streamline the LGIP to eliminate the backlog in the generator interconnection queue and provide process certainty going forward. Required tariff changes will be filed with the FERC immediately following the conclusion of the stakeholder process.
2.1. C	Establish a framework for enabling competition between generation, transmission and demand response in the transmission planning process. (2008-2012)
	In 2008, review recently filed tariff changes associated with FERC Order 890 compliance to identify additional changes needed to enable competition between generation, transmission and demand response in the transmission planning process. Initiate a stakeholder process to consider the changes, including possible changes to the related Business Practice Manual.
2.1. D	Ensure maximum delivery of renewable resources with transmission additions and upgrades. (2008-2012)
	Implement transmission recommendations outlined in the INTEGRATION OF RENEWABLE RESOURCES REPORT, released in November 2007, to assure that the necessary infrastructure is in place to meet state requirements. Explore operational synergy opportunities with the Pacific Northwest and address other long-term operational control issues associated with the integration of renewable generation.

Sub-Objective 2.2**ROBUST AND TRANSPARENT
ELECTRICITY MARKETS**

Robust and transparent electricity markets that foster demand and supply participation, facilitate renewable resource integration, encourage technology innovation, provide appropriate risk sharing and inform investment decisions.

MRTU offers a new market design for California that is both an integration of the best practices of energy market designs currently operating across the country and a rebuild of the organization's underlying technology. Its implementation is a primary and pivotal step in the development of California electricity markets that will improve operating efficiency and reliability, achieve the most economic mix of resources to meet electricity needs, foster demand and supply participation, and serve as a platform for increasing demand response. In addition, by aligning financial incentives with the physical capabilities of the power system, the new market design will help guide new investment in generation and transmission infrastructure. Successful implementation of MRTU in 2008 provides the foundation for all that follows – it is the single most important element of this STRATEGIC PLAN.

Post implementation, the ISO will carefully monitor the performance of the MTRU markets and work with participants to quickly resolve issues. In addition, the organization will move forward with the design and implementation of certain market enhancements to complete the market structure, provide increased transparency and deliver more efficient price signals. Directed by FERC, these new market components include convergence bidding, scarcity pricing and facilitation of additional demand response programs.

Collaboration between the ISO and CPUC staff resulted in the California ISO outlining the benefits associated with a multi-year centralized capacity market structure. Such a market would provide transparent Resource Adequacy (RA) capacity prices and simplified RA compliance requirements that should produce further efficiencies in transmission and generation investment. Liquid and competitive spot markets for energy and ancillary services provide accurate signals for short-term operating decisions, as well as certain types of investment. RA capacity markets will be more economical with a standardized product procured over a multi-year forward time horizon and prices will be more transparent when centralized auctions complement the current bilateral emphasis of RA procurement.

Evolving environmental policies highlight the need for greater regional coordination, as does the growing operational complexity of electricity system operations and markets. The California ISO envisions wholesale markets that maximize efficient use of the existing electricity infrastructure as well as provide vital information about relative prices at locations on the grid to inform the complex investment decisions needed to further economic, reliability and environmental goals.

INITIATIVES FOR SUB-OBJECTIVE 2.2: *Robust and Transparent Electricity Markets*
2.2. A Implement the Market Redesign and Technology Upgrade (MRTU) program.
Enhance MRTU communication and readiness efforts. (2008)

Coordinate a comprehensive internal and external support effort to prepare people, process and technology for the MRTU launch.

Launch the MRTU program. (2008)

Go-live with the new market and technology structure following the completion of final system testing, market simulations and stakeholder collaboration.

Monitor performance and resolve issues post MRTU launch. (2008-2009)

Ensure that software, market design and other issues identified in the first year of MRTU operations are resolved in a timely manner. Form a new multi-disciplinary strike force to diagnose and resolve potential issues. Introduce a series of real-time metrics to measure the performance of key design components and anticipate market issues.

2.2. B Implement value-added market design enhancements as guided by the *Market Initiatives Road Map*.
Implement market elements for Long-Term Resource Adequacy. (2008-2011)

Work with the CPUC to define a market structure for Long-Term Resource Adequacy and develop the necessary market elements with stakeholders. Provide multi-year assessments of resource needs for the ISO balancing authority and local reliability areas.

Increase demand participation in the ISO markets. (2008-2012)

Produce a manual of key characteristics necessary for demand to participate fully in the energy markets and implement software design changes to support this capability. Encourage greater understanding of demand response opportunities by showcasing technologies and solutions within the ISO Demand Response Lab-DR365.

Improve market monitoring capabilities as associated with new market design enhancements. (2008-2012)

Improve monitoring capabilities for new market design enhancements such as scarcity pricing and convergence bidding to quickly address potential issues and confirm that intended benefits are realized. Includes development of a new market simulation tool to assess how market outcomes would be affected by different bidding and scheduling behaviors.

2.2. C Enhance regional coordination and facilitate improvements to regional energy markets. (2008-2012)

Collaborate with neighboring areas to establish effective procedures for west-wide scheduling and congestion management, minimize the problem of unscheduled flows in real time and improve the accuracy of the Full Network Model at the boundaries. In coordination with the state, advance the formation of regional environmental regulatory approaches that utilize the ISO markets in meeting environmental policy objectives. This includes the Regional Western Climate Initiative begun in 2007, which is expected to develop policy approaches in 2008.



Sub-Objective 2.3

**ALIGNMENT WITH
STATE & FEDERAL PRIORITIES**

Alignment with state and federal policies, including environmental goals, climate change regulation and California's preferred resource loading order, by understanding the implications of these policies on the electric system and markets.

Successful alignment with state and federal policies depends on clearly articulating a complete understanding of related electricity system issues and implementing mechanisms to maintain grid reliability and efficient markets consistent with those priorities. Recent improvements have been achieved in the following areas:

- FERC proceedings have been increasingly successful thanks to an improved stakeholder process that is more consistent and provides greater stakeholder access during Board deliberations.
- The ISO is increasingly recognized and consulted by state and local agencies for technical expertise in relation to reliability issues as well as generation and transmission alternatives under their consideration.
- Helping to inform state and local deliberations has produced improved relationships with state and local officials that enable the ISO to be more effective in maintaining system reliability.

Proactive alignment efforts have also helped the ISO to make progress on shared objectives such as the successful integration of renewable resources, development of an effective greenhouse gas regulatory program and identification of greater opportunities for demand side resources to participate in wholesale electricity markets. The ISO is committed to building upon and continuing this momentum by ensuring that our market design initiatives are supportive of these policy goals.

In addition, the organization recognizes the critical importance of transmission siting considerations in the viability of proposed transmission solutions to reliability and economic needs. Thus, efforts to improve the siting process—including implementation of the requirements for obtaining a rebuttable presumption for ISO findings of project need, newly afforded to the ISO by the CPUC—are critical to the successful implementation of approved transmission plans.

INITIATIVES FOR SUB-OBJECTIVE 2.3: *Alignment with State and Federal Priorities***2.3. A Collaborate and help develop environmental policy consistent with reliable system operations.****Integrate state and federal environmental policies with ISO wholesale energy markets. (2008-2012)**

Continue strategic engagement on renewable integration issues, once-through-cooling policies, greenhouse gas regulation and demand response mechanisms to ensure an efficient interface between wholesale markets and environmental policy, consistent with maintaining system reliability.

Identify obstacles to market participation by combined heat and power. (2008-2012)

A recent CPUC decision ties utility contract pricing for combined heat and power (CHP) facilities to ISO market prices, yet few CHP projects participate directly with the ISO. This initiative will analyze related tariff issues and reach out to the industry to better understand the obstacles to their increased engagement with the ISO and identify next steps.

2.3. B Implement Rebuttable Presumption (2008-2009)

Implement a process for aligning the ISO transmission planning process to the CPUC decision describing the features necessary to obtain a rebuttable presumption for ISO findings of economic need. Contribute to state deliberations regarding improvement to the overall siting process for electric facilities, as appropriate.



Strategic

Objective 3.0

ORGANIZATIONAL EFFECTIVENESS

Organizational Effectiveness built around a team of professionals that strives to achieve excellence and gives focused attention to customers' priorities consistent with the California ISO mission, vision and core values.

As described in Section III of this Plan, the California ISO began its transformation in 2005 by realigning the organization to match people and capabilities with our core functions. In 2007, the maturation continued with a focus on *Operational Excellence* including identification of gaps in people, process and technology. With this foundation, the California ISO has set its sites on the goal of *Organizational Effectiveness*. This is about addressing challenges with innovation, working effectively across the organization to deliver optimal results and enabling the ISO workforce to achieve new levels of individual and corporate success. Achieving *Organizational Effectiveness* encompasses three sub-objectives.

- 3.1 People strategies that enable the organization to attract, retain and motivate professionals who design, operate and support the ISO grid and its markets.
- 3.2 Maturity in key disciplines that promote *Organizational Effectiveness* and include business process management, technology capabilities and program management.
- 3.3 Superior customer service and enhanced relationships with stakeholders, policy makers and market participants.

The California ISO will continue to employ effective people strategies to ensure that the right people are in the right positions and supported with the right tools for success. Continuously building the workforce and advancing their knowledge and talents will help the organization meet the challenges of today and tomorrow.

New synergies must also be developed between functional areas of the organization to improve effectiveness and maximize the opportunities for knowledge transfer, expertise sharing and cross-training. This requires expanding key disciplines and capabilities in process-centered management and effectively integrating risk management. This objective also demands development of processes to fill critical gaps in the handling of business issues and disciplined project management to ensure that processes and critical projects are delivered on time and within budget. It is also important to continue leveraging advanced technologies to increase automation and improve overall effectiveness.

Organizational Effectiveness is characterized by efficient processes, cross-functional teamwork, a focus on long-term objectives and mechanisms to measure results and reward successes.

The goal of the ISO is to maintain a “bundled Grid Management Charge” at or below its current level while also meeting the objectives within this Plan. It is important for the organization to satisfy customer expectations while remaining within established financial parameters.

The transition to *Organizational Effectiveness* also requires continuous attention to processes surrounding customer service and proper introduction and use of new tools that will help identify the root causes of business issues. The goal is to fix the problems that underlie business issues and thus reduce customer concerns and improve customer service across the board.

Sub-Objective 3.1

PEOPLE STRATEGIES

People strategies that enable the organization to attract, retain and motivate professionals who design, operate and support the ISO grid and its markets.

The California ISO is uniquely situated to provide employees with opportunities that require innovative thinking and the development of creative solutions to key industry and societal issues. The ISO recognizes that people are an organization's greatest asset and has implemented an EMPLOYER OF CHOICE program to help recruit and retain top talent. The strategies contained in this section, reflect the organization's commitment to employees and the level of importance ascribed to the retention and sustained performance of a highly-skilled, educated and experienced team.

As the industry continues to evolve, requirements associated with management of the grid and markets, design and implementation of products and customer support will call for the continual development of skills, especially in the area of applying new technology and providing advanced tools and systems. These include new skills in power system and transmission modeling and analysis, locational marginal pricing, energy losses, congestion management and ancillary services cost calculations. Additionally, many of the complexities anticipated in the next five years may require a better understanding of state and federal regulatory processes and access to outside experts in industry and academia as new regulatory requirements emerge and reliability standards are developed.

Two national employment trends are of particular concern:

- The U.S. Department of Labor estimates that as many as 50 percent of the current energy-related workforce will be eligible for retirement in the next five years. A recent industry survey confirmed that 67 percent of respondents ranked the risk associated with the aging of the energy workforce and the lack of skilled workers as the number one reliability risk factor facing the grid. The ISO projects some degree of impact in this area in the next five years.
- The energy industry is full of employees from the baby boom generation who, in large part, were attracted to companies that offered pensions and job security. In contrast, today's Generation X and Y workers demand flexibility, job enrichment, work-life balance and affiliation with business entities engaged in addressing the needs of the environment, community and the well-being of people.

The people objectives that follow are designed to attract global talent and enhance the retention, sustained performance and motivation of current ISO employees. Programs for continual development of critical knowledge and skills, career and talent management and enhanced recruitment efforts will help cement the reputation of the ISO as a highly-innovative and sought after EMPLOYER OF CHOICE.

INITIATIVES FOR SUB-OBJECTIVE 3.1: *People Strategies***3.1.A Plan, design, construct and occupy a new facility.****Construct a new facility to meet essential physical security needs and provide a functional and pleasant work environment. (2008-2011)**

If approved by the Board, move forward with the design and construction of a new California ISO facility that meets physical security needs, is functional, and demonstrates energy efficiency features and technology.

Upgrade current control rooms and design/occupy a new one. (2008-2011)

Continue the phased implementation of upgrades to the existing Folsom and Alhambra facilities providing monitoring equipment, simultaneous visualization tools and screens and reconfiguring work stations to improve operator performance.

3.1.B Expand California ISO Academy. (2008-2012)

Expand academy offerings to include the design of the ISO markets, generation adequacy evaluation, benefit-cost analysis of transmission projects, the regulatory process, quality fundamentals and project management principals and practices.

3.1.C Manage ISO employee talent pool to optimal efficiency.**Mature the ISO Talent Management Strategy. (2008-2012)**

Sustain executive-level ownership and consistent alignment of the newly approved Talent Management Strategy.

Develop a Corporate Rotation Program for Professional Development. (2008-2012)

Equip highly-capable professionals with hands-on working knowledge of core business areas during an 18- to 24-month rotation period as a means of building bench strength and developing new leadership talent.

3.1.D Expand Corporate Internship Program. (2008-2012)

Establish alliances with domestic universities distinguished by credible masters' level engineering programs to recruit high potential interns each year and introduce them to California ISO mission, vision and core values and engage them in challenging and rewarding work as a means to sustain a robust pipeline for new talent.

3.1.E Develop Global Recruitment Strategy. (2008-2012)

Develop and launch an aggressive global recruitment strategy establishing alliances with credible international learning institutions to market the California ISO as an exciting and viable employer for talented engineers with advanced academic training.



Sub-Objective 3.2

MATURITY IN CAPABILITIES

Maturity in key disciplines that promote *Organizational Effectiveness* and include business process management, technology capabilities and program management.

The California ISO is committed to excellence at all levels of the organization and recognizes the critical roles that improved business processes, strategic management and better project management play in achieving *Organizational Effectiveness*. The initiatives in this section will help advance and mature the organization's capabilities to the world-class stature described in the corporate vision statement.

The California ISO has identified 68 key capabilities of the business and has developed division-level processes to support them. Last year, a corporate end-to-end process diagram was created to connect processes across the enterprise and identify opportunities for improvement. The next step for solidifying process-centered management throughout the organization will be to identify metrics, develop a performance baseline in connection with the core processes and begin the change process associated with activity-based accounting.

Overlaying process-centered capabilities and strategic planning is a framework of risk management, which is a major aspect of the California ISO commitment to *Organizational Effectiveness*. The organization's comprehensive risk inventory will be integrated with the core processes, strategic management and metrics to ensure optimal performance and risk mitigation.

Disciplined project management is another essential layer of maturity associated with superior performance results. At the program and project management level, the ISO has relied heavily on external resources, particularly in the case of MRTU. The Program Management Office (PMO) and IT Division now have the ability to use internal resources in support of new initiatives. The PMO defined the first draft of its core processes and going forward, will establish and deploy standards and certification for all project and program managers.

IT will continue its pursuit of delivery excellence in support of ISO business functions by taking the next steps associated with the following service improvements:

- Introduction of a standardized infrastructure framework that assists with problem detection and remediation and root cause analysis. This addition has contributed to a significant improvement in system availability and is expected to reap additional benefits in the future.
- Integration of IT standards to achieve a level of maturity that indicates project processes can be effectively repeated and that supporting quality review processes and measurement systems are in place. In 2007, the IT team successfully demonstrated a Capability Maturity Model Integration Level 2 maturity—the first time in ISO history and plans to continue to mature processes even further in coming years.
- Extension of the system detection capabilities of the base software and processes already in place and implementation of advanced tools that will better manage resources, help the corporation achieve its objectives and identify opportunities for improvement.

INITIATIVES FOR SUB-OBJECTIVE 3.2: *Maturity in Capabilities***3.2. A Enhance organizational effectiveness with improved processes, project management and integration of risk analysis.****Build on existing *Process Centered Management* to improve cross-organizational collaboration. (2008-2009)**

In 2008, expand business process management capabilities by validating core processes and the end-to-end process, confirming identified metrics and developing a performance baseline. In 2009, build on that baseline using new process/quality skills and metrics. Set performance goals and use the process structure to manage effective use of resources.

Increase measurement capabilities by implementing activity-based accounting. (2008-2009)

Execute the phased implementation of activity-based accounting to fully understand the end-to-end cost of processes and projects.

Mature technology capabilities. (2008-2010)

With IT process frameworks fully introduced, mature the processes by implementing further measurement systems and additional capabilities.

Further develop program management capabilities. (2008-2009)

Further mature program management capabilities that benefit from lessons learned in the MRTU project. Integrate program management with the software development life cycle, consolidate into a common tool kit and introduce project management certification.

Expand enterprise risk management capabilities. (2008-2009)

Integrate enterprise risk management with process-centered management through the identification of risks and mitigation measures at the core process level. Mature the integration of risk management capabilities in the strategic planning process by identifying and evaluating possible events and critical scenarios that impact the execution of the strategic objectives.

3.2. B Improve strategy execution. (2008-2012)

Improve the integration of strategic considerations in the execution of key initiatives to ensure they align with corporate objectives. Start in 2008 by forming a cross-organizational team to design the process and begin implementation.

Sub-Objective 3.3

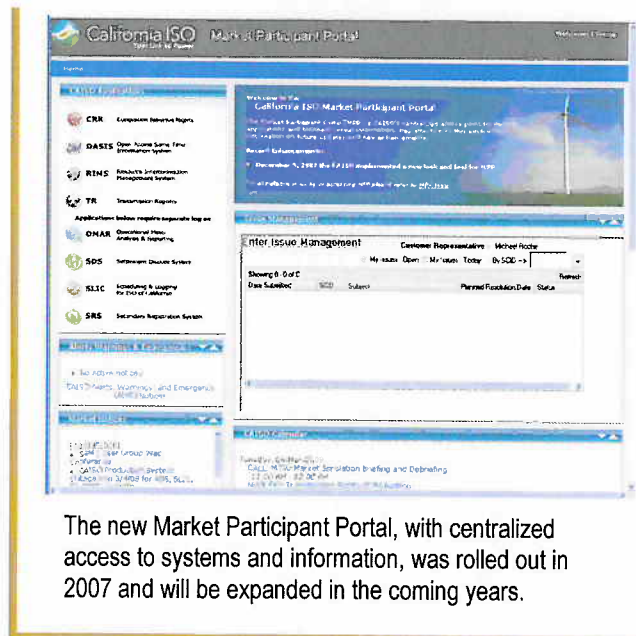
SUPERIOR CUSTOMER SERVICE

Superior customer service and enhanced relationships with stakeholders, policy makers and market participants.

Superior customer service is critical to the *Organizational Effectiveness* of the California ISO and must be “owned” by every employee of the organization. Despite the far reaching and ongoing client contacts across the organization, the need to provide customer service was, until a few years ago, viewed by many as the sole responsibility of the Customer Services group. Then the transformation began. In 2006, the California ISO adopted improved customer service as a corporate objective and initiated an effort to start the cultural change. In 2007, the effort evolved to include deployment of a system and related processes for tracking incoming customer issues and resolution enterprise-wide, implementation of guidelines for managing stakeholder processes and implementation of a new internet portal that provides market participants with easy access to ISO system interfaces and information sources.

In order to continue to improve responsiveness to our clients, we must listen carefully in order to become more knowledgeable about the basis of their concerns and respond appropriately. These efforts should continue to incorporate internal recognition of employees who are particularly responsive to customer inquiries and help transform the organization in this area. In the stakeholder process, this also means continuing to improve our discipline in providing adequate notice and opportunities for participation in stakeholder forums, being genuinely open to the issues raised by market participants and facilitating communication between the Board and stakeholders.

Key to improving the client responsive culture at the ISO is the development of processes to determine and address the root causes of recurring customer issues. Cross-organizational deployment of an issue tracking tool provides a foundation for continuous improvement in this area. Although continuing attention is essential to ensuring its use and reaping the benefits it provides, the tool already facilitates improved management of customer inquiries and is key to meeting customer needs for quick responses to their issues when MRTU is launched in 2008.



Transparency of information for market participants and deployment of enhancements in response to client needs are important ways to provide ongoing improvement in this area. The California ISO web site and new portal are critical tools to serving these needs.

INITIATIVES FOR SUB-OBJECTIVE 3.3: *Superior Customer Service*

3.3. A Expand the customer issue resolution process to move from measures of timeliness to measures of service quality. (2008-2009)

Begin analytic effort to identify the root cause of recurring issues. Work with clients to better understand their perception of service “quality”, including the timeliness and overall management of issue resolution and design related metrics, as appropriate. Design new processes and technologies to support the analysis and mitigation of recurring customer issues in 2008. In 2009, with data on new MRTU processes available, enhance the organizational efficiency of processes that touch customers.

3.3. B Continue the transformation of the stakeholder process to better meet customer needs. (2008-2009)

Implement the process for considering and making customer-identified changes to business practice manuals, improve meeting notice and document availability and develop new mechanisms to improve internal and external openness, transparency and consistency.

3.3. C Expand customer portal to access market information and issue resolution data. (2008-2010)

Expand the customer portal to provide access to additional market information. Continue to consult with stakeholders to understand their preferences for new portal functionality and in 2010 implement a new electronic file distribution method to minimize e-mail and fed-ex delivery of secure data/information files.

The California ISO is a not-for-profit public benefit corporation charged with managing the flow of electricity along California's open-market wholesale power grid. The mission of the California ISO is to safeguard the reliable delivery of electricity, and ensure equal access to 25,000 circuit miles of "electron highway." As the impartial operator of the wholesale power grid in the state, the California ISO conducts a small portion of the bulk power markets. These markets are used to allocate space on the transmission lines, maintain operating reserves and match supply with demand in real time.

A five member Board of Governors oversees the California ISO. Members are appointed by the Governor, after consideration of recommendations from stakeholders, and are confirmed by the California State Senate.

Management Team

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