CALIFORNIA
ENERGY
COMMISSION

California Energy Commission Information Technology Services Branch (ITSB)

INFORMATION TECHNOLOGY CAPITAL PLAN

September 8, 2008

Prepared by IT Services
Information Technology Services Branch
Version 4 (9/8/08)

Arnold Schwarzenegger,
Governor

Information Technology Capital Plan, Plan Year 2009-10 through 2013-14 Executive Approval Transmittal

Department Name

California Energy Commission

APPROVAL SIGNATURES

I am submitting the attached Information Technology Capital Plan as required by the State Administrative Manual Section 4904.

I certify that the IT Capital Plan was prepared in accordance with State Information Management Manual section 57 and that the proposed IT projects are consistent with our business strategies and information technology strategy.

I have reviewed and agree with the information in the attached Information Technology Capital Plan.

Chief Information Officer		Date Signed
Printed name:	Larry Smith	
Information Security Officer		**Date Signed**
Printed name:	Dale Chisum	
Budget Officer		**Date Signed**
Printed name:	Susan Aronhalt	
Department Director		**Date Signed**
Printed name:	Melissa Jones	

DEPARTMENT IT CAPITAL PLAN

Department Name and Org Code:	Plan Year:
California Energy Commission - 3360	2009-10 through 2013-14

1. **Summarize your organization's business goals and objectives below:**
   The California Energy Commission (Energy Commission) is involved in many energy related areas. The goals and objectives for each area are listed below:

Energy Efficiency

Goal:
The Energy Commission commits to making California's businesses, industries, schools, homes, and appliances more energy efficient. The Energy Commission plans to achieve this by developing and implementing energy efficiency building standards, identifying and developing ways to streamline energy use in agriculture, manufacturing, water systems, and processing functions. The Efficiency and Renewables Division exercises their responsibility for implementing renewable energy alternatives in new construction through outreach and education efforts keeping Californians informed on ways of using energy wisely as a good investment in the economy and the environment.

Objectives:
Adopt statewide energy efficiency targets for 2016 equal to 100 percent of economic potential, to be achieved by a combination of state and local standards, utility programs, and other strategies; Enlist publicly owned utilities in a collaborative relationship to further their efforts in aggressively ramping up energy efficiency programs. Publicly owned utilities can use their knowledge of local conditions and customers to craft new program ideas; Pursue legislation that would require energy audits and a cost-effective level of efficiency improvements at the time of sale of a building; Initiate a rulemaking, involving the CPUC and California ISO, to pursue the adoption of load management standards under the Energy Commission's existing authority; Enact appliance standards to improve the efficiency of appliances sold in California, including standards to increase the efficacy of general service lighting; Increase the efficiency standards for buildings so that, when combined with on-site generation, newly constructed buildings can be net zero energy by 2020 for residences and by 2030 for commercial buildings; Investigate market-based approaches to energy efficiency, such as "white tags" or "white certificates" (also known as energy efficiency certificates or credits), the companion to renewable energy credits.

Renewable Energy

Goal:
State law mandates that 20% of California's electricity be derived from renewable energy by the year 2010. Senate Bill 1078 (SB1078) and Senate Bill 1250 (SB1250) authorizes the Energy Commission to promote renewable electricity generation throughout the state of California. SB1078 (Sher, Chapter 516, Statutes of2002) introduced a Renewables Portfolio Standard(RPS) with the goal of increasing the portion of electricity derived from renewable resources and sold to retail customers to

20 percent by 2017. SB1250 (Perata, Chapter 512, Statutes of 2006) accelerated the 20 percent goal to 2010. To further focus on the importance of renewable energy, the passage of Assembly Bill 32 (AB32) mandates the Energy Commission to help provide California with the overall goal of 33% electricity production from renewable resources by 2020.

Objectives:
Leverage its renewable energy power plant licensing and transmission corridor designation authority, its environmental expertise, and its transmission planning and policy experience to guide further renewable resource development in California; Establish a more cohesive statewide approach for renewables development that identifies preferred renewable generation and transmission projects in a "road map" for renewable; Implement a feed-in tariff, set initially at the market price referent, for all RPS-eligible renewables up to 20 megawatts in size; Collaborate with the CPUC to evaluate feed-in tariffs for larger projects. Such tariffs should incorporate the value of a diverse mix of renewables as well as features of the most successful European feed-in tariffs; Collaborate with the CPUC to establish an appropriate feed-in tariff for excess generation from customer owned solar installations.

Energy Infrastructure

Goals:
Energy Commission provides: critical information and independent; objective analyses of the electricity and natural gas markets; electric and natural gas systems operations; electric, natural gas and environmental resource issues through energy data collection, analysis; reporting on energy trends, technical modeling; recommendations to improve functions of electricity and natural gas systems; markets and promote sound public policy; accurate and timely energy demand forecasts to policy makers by collecting; data analysis on electricity and natural gas consumption; forecasting for peak and total energy consumption by sector; relationship analysis of weather and peak electricity use; assessment of utilities having adequate year-ahead resources to meet demand; an estimate of conservation impacts on existing and proposed utility program activities as well as building and appliance standards and objective technical analyses and modeling to explain how energy is used in California.

Objectives:
Conduct a public process including the CPUC, utilities, and other stakeholders to determine an effective method to better delineate the energy efficiency savings assumptions in the Energy Commission's staff forecasts. Develop a common portfolio analytic methodology to clearly influence the long-term procurement plans filed by the investor-owned utilities. Refine in the *2009 Integrated Energy Policy Report* the input data used for developing technologies in the Cost of Generation Model and establish a process to regularly update changing technology costs over time. Include in the *2009 Integrated Energy Policy Report* a robust assessment of the effect of high levels of preferred resources on reducing natural gas prices. Ensure that California's interests in the nuclear process are protected by taking an active role in the Yucca Mountain licensing proceeding, challenging the United States Department of Energy's inadequate response to potential impacts identified by California, and continuing to participate in Department of Energy and regional planning activities for nuclear waste shipments. Incorporate Institute of Nuclear Power Operations (INPO) reviews and ratings of reactor operations into a meaningful public process while maintaining the value of the INPO

reviews as candid assessments. Assess the reliability implications of federal and state once-through cooling regulations for California's operating nuclear plants.

Improving Transmission System

Goal:
The Energy Commission ensures that adequate generating capacity exists in California to meet current and future electricity demand while protecting public health and safety, and the environment; reviews and licenses power plant and electric transmission line applications and monitors compliance with permit conditions; develops and implements a strategic statewide electric transmission plan; designates electric transmission line corridors; and analyzes environmental and energy issues impacting California's energy supply systems.

Objectives:
Integrate distribution planning with other resource procurement processes to support the use of new low-carbon resources and applications — renewables, demand response, efficient combined heat and power, distributed generation, energy storage, advanced metering infrastructure, and plug-in hybrid electric vehicles; Fund research to develop and demonstrate technologies that will accelerate the transformation of the distribution grid into an intelligent and sustainable network; Develop new rate designs that will encourage consumers and utilities to invest in promising technologies; Provide financial incentives for utilities to meet goals related to performance, achievement of designated goals, service reliability, and customer assistance to achieve greater efficiency of electricity use; Allow utilities to recover the remaining book-value costs of equipment rendered obsolete by the deployment of a qualified smart grid system.

Natural Gas

Goal:
The Energy Commission in collaboration with the California Public Utilities Commission (CPUC) issued Decision (D.) 04-08-010 provides funding to be available for public interest natural gas research and development (R&D) projects. The goal is to improve natural gas energy efficiency and environmental quality, and development of renewable technologies that will provide benefits to the public.

Objectives:
Improve the ability to forecast natural gas production, demand, and price, including:

- Conducting a rigorous verification of the models used to forecast natural gas supply and price.
- Developing probabilities and quantifying outcomes for demand scenarios to gain better insight into natural gas demand.

Increase natural gas research and development for ways to advance energy efficiency for both consumers and power plants; Support displacing natural gas with renewable sources to generate electricity and alternatives such as solar for water and space heating; Establish with the CPUC an appropriate feed-in tariff for pipeline-quality biogas.

Transportation

Goal:
The Energy Commission will ensure that adequate and reliable transportation energy is provided to the California transportation sector while balancing economic, public health, safety, and environmental consequences. The passage of Assembly Bill 118 (AB118) has created the Alternative and Renewable Fuel and Vehicle Technology Program, to be administered by the Energy Commission, to provide, upon appropriation by the Legislature, grants, loans, loan guarantees, revolving loans, or other appropriate measures, to public agencies, businesses and projects, public-private partnerships, vehicle and technology consortia, workforce training partnerships and collaborative, fleet owners, consumers, recreational boaters, and academic institutions to develop and deploy innovative technologies that transform California's fuel and vehicle types to help attain the state's climate change policies. In addition, Assembly Bill 1007 (AB1007) (Pavley, Chapter 371, Statutes of 2005) the Legislature directed the California Energy Commission (Energy Commission), in partnership with the Air Resources Board (ARB), to develop and adopt a State Alternative Fuels Plan (Plan) to increase the use of alternative fuels without adversely affecting air quality and water quality or causing negative health effects.

Objectives:
Propose legislation that allows state appeals in the petroleum marine infrastructure lease renewal process at the Ports of Los Angeles and Long Beach; Assess the impact on infrastructure development of the State Lands Commission Marine Oil Terminal Engineering and Maintenance Standards, especially on clean fuels marine terminals in the Ports of Los Angeles and Long Beach; Advocate for a federal funding mechanism to maintain an adequate depth for tanker traffic in the Pinole Shoal in San Francisco Bay.

Land Use

Goal:
Decisions affecting land use directly affect energy use and the consequent production of greenhouse gases, primarily because of the strong relationship between where we live and work and our transportation needs. Significant efforts are necessary to reduce vehicle miles traveled to meet the state's emission reduction goals. California must begin reversing the current 2 percent annual growth rate of vehicle miles traveled. Research shows that increasing a community's density and its accessibility to job centers are the two most significant factors for reducing vehicle miles traveled. The Energy Commission's goal is to dedicate additional resources to study opportunities and barriers to integrated energy and land use planning.

Objectives:
Adopt a unified statewide growth management plan, based on local and regional plans, aligning state planning, financing, infrastructure, and regulatory land use policies and programs; Require regional transportation planning and air quality agencies to adopt 25-year and 50-year regional growth plans that provide housing, transportation, and community services for projected population increases while reducing greenhouse gas emissions to state-determined climate change targets; Expand efforts to provide technical and financial assistance to regional agencies and local governments to facilitate climate-friendly and energy-efficient planning and development; Model climate-friendly and energy-efficient development patterns; Determine the extent to which state and local tax policies affect and guide land use practices and revise policies that

encourage growth that is inconsistent with the state's growth management plan; Direct California's utilities to play an active role with regional and local governments to encourage climate-friendly and energy-efficient development in their service areas; Work with California's Congressional delegation to ensure that future federal highway and other transportation and land use-related legislation and programs include energy reduction and climate stabilization considerations.

Distributed Generation

Goal:
Improve California's air quality by developing reliable, cost effective, emission-reduction technologies for reciprocating engines, small turbines and microturbines, fuel cells, and hybrid fuel cell-microturbine technologies.

Objective:
Work with the CPUC to eliminate non-bypassable charges for combined heat and power and distributed generation and punitive standby reservation charges for distributed generation; Develop a methodology for estimating distributed generation costs and benefits.

2. What are your organization's plans to upgrade or replace your IT infrastructure for the following? When responding, please indicate the timeframes of your intended upgrade or replacement efforts.

The Energy Commission completed a PC deployment in May 2008 and upgraded the desktop hardware and software listed below. The next upgrade for desktop PC hardware and software is planned for May 2012. An Apple deployment is planned for the 4th quarter of 2008. At that time, new Apple computers will be purchased and the current versions of the software listed.

2.1. Hardware

HP dc7800 Small Form Factor (SFF) Computer Specifications

Size	H:3.95" W:13.3" D:14.9"
Weight	19.5 lbs
Processor	Intel Core 2 Duo E6850 3.0GHz dual core processor
Memory	2GB
Hard Drive	80GB
DVD	CD/DVD Reader/Writer
Floppy	Not Included1
I/O Ports	(8) USB 2.0 ports (2 front & 6 back)
	(1) Serial port, (1) Parallel port
	(2) PS/2 ports (keyboard and mouse)
	(2) Headphone (front and back)
	(1) Mic in (front)
Audio	Integrated High Definition Audio
Graphics	Integrated Intel Graphics
Bays	(1) 3.5" bay, (1) 5.25" bay
PCI Slots	2 low-profile slots

PCI x16 Slots	1 low-profile slot
PCI x1 Slots	1 low-profile slot
Network	Integrated Intel Gigabit
Input	HP Standard PS/2 Keyboard, 2-Button USB Optical Scroll Mouse
Power	80% High Efficiency 240W Active PFC Power Supply

Apple Hardware (Desktop A)

Power Mac G5 Dual 1.8GHz
1GB DDR400 SDRAM (PC3200) - 2x512
Accessory kit
Apple Keyboard & Apple Mouse
NVIDIA GeForce FX 5200 Ultra w/64MB DDR SDRAM
Dual 1.8GHz PowerPC G5
80GB Serial ATA - 7200rpm
Combo (CD-RW/DVD-ROM)

Apple Hardware (Desktop B)

iMac 1.8GHz w/17" TFT
1GB DDR400 SDRAM - 2 DIMMs
Accessory kit
Power Supply
Apple Keyboard & Apple Mouse
80GB Serial ATA - 7200rpm
SuperDrive (DVD-R/CD-RW)

2.2. Software

PC Software Name and Version	Type of Software
Windows XP SP 2	Desktop Operating System
NetWare Client 4.9.1 SP4	Network Client
Microsoft Word (Office Suite) 2007	Word Processing
Microsoft Excel (Office Suite) 2007	Spreadsheet
Microsoft PowerPoint (Office Suite) 2007	Presentation
Novell GroupWise 7.0.2	Email/Calendar
WinZip 11.1	Utility
Adobe Acrobat Standard 8.0	Publishing
TrendMicro OfficeScan 7.3	Anti-Virus/Anti-Spyware
Internet Explorer 7	Internet Browser
Nero Basic 8	CD/DVD Burner
Windows Media Player 11	Media Player

Apple Software

Software Name	Version	Type of Software
GroupWise Client	5.2	Email/Calendar

Hard Disk Tool Kit	4.5	Utility
Microsoft Word	Office Suite 2004	Word Processor
Microsoft Excel	Office Suite 2004	Spreadsheet
Microsoft PowerPoint	Office Suite 2004	Presentation
Illustrator	cs	Publishing
Indesign	2.x	Publishing
Mac OS X	OS X v10.3	Desktop Operating System
MacLinkPlus Deluxe	14	Utility
Macromedia Studio MX	Suite Mix	Publishing
Netware Client	1.1.2	Network Client
Norton Ant-Virus	9	Anti-Virus
Photoshop	cs	Presentation
QuickTime Pro	29.99	Media Player
Retrospect Desktop	5.1	Desktop Backup
Retrospect WorkGroup	5.1	Workgroup Backup
Stuffit Deluxe	8.x	Utility
Timbuktu	6.0	Utility
Toast Titanium	6.0	CD/DVD Burner
Virtual PC	6.1	PC Emulation
FreeHand	8	Presentation

2.3. Network

ITEM	Server Minimum Configuration
Processor	3.0 Ghz (per socket)
RAM	2 - 24GB
Hard Disk	70GB – 300GB
Drive	CD\DVD-ROM Drive
Network Interface Card	Gigabyte Ethernet Adapters
Display	Super VGA supporting 800 x 600 or higher-resolution

ITEM	Network Software
Microsoft	OS: Standard 2003 R2; Enterprise 2003 R2; SQL 2000;2005
Novell	OS: Netware 6.5
Linux	OS: Redhat 4.0

3. Existing Approved Reportable IT Projects

Provide the following information regarding your existing approved reportable IT projects on Table 1 on the following page:

- **Existing IT Project;**
- **Approved Project Cost;**

- **Project Number; and**
- **Implementation Date**

4. Proposed IT Projects

After each proposed IT project has been documented by answering questions 4.1 through 4.15 of the attached IT Project Proposal Form, provide the following information on Table 2 on the following page:

- **The name of each proposed IT project;**
- **The priority ranking;**
- **The FSR submission date; and**
- **The estimated cost**

Table 1-Existing Approved Reportable IT Projects Summary by Department

Existing IT Project	Approved Project Cost*	Project Number	Implementation Date
Dynamic Transportation Simulation Model (DynaSim)	$ 3,159,687	3360-56	February 2009

***Note:** If a Special Project Report (SPR) was submitted for review in July 2008 that includes project costs that differ from the last approved project document, enter both the last approved project cost and the revised project cost from the SPR under review.

Table 2-Proposed IT Project Summary

Proposed IT Project	Priority Ranking	FSR Submission Date	Estimated Total Cost
Commission Enterprise Tracking System (COMETS)	1	December 15, 2008	$ 2,370,000

PROPOSED IT PROJECTS

Complete this IT Project Proposal Form (questions 4.1 though 4.15 below) for each proposed IT project that meets the definition of a reportable project as defined in the State Administrative Manual Section 4819.37:

4.1. Proposal name and priority ranking:

Commission Enterprise Tracking System (COMETS) / Priority Ranking:

4.2. Description of the proposed IT project:

COMETS will provide the California Energy Commission (Energy Commission) standardization for processing, approving, managing, reporting and closing out agreements (projects, contracts, grants, and loans). COMETS will initially provide project management support for two of the Energy Commission's most active agreement divisions, the Energy Research and Development Division (ERDD) and the Fuels and Transportation Division (FTD), and will ultimately serve as the Energy Commission's Enterprise System. In addition, COMETS will be a centralized repository with an accessible interface for viewing information and reports, and will allow Energy Commission staff to easily generate queries and provide information to decision makers, in the executive and legislative branches.

The Public Interest Energy Research (PIER) Program within ERDD awards up to $83 million annually to promote public interest energy research by partnering with energy research, development and demonstration (RD&D) organizations including individuals, businesses, utilities, and public or private research institutions. The ERDD is tasked with managing energy research in the public interest. The recent passage of AB118 has tasked the Fuel and Transportation Division within the Energy Commission to administer the Alternative and Renewable Fuel and Vehicle Technology Program. FTD will award over $100 million annually in grants, loans, loan guarantees, revolving loans, or other appropriate measures, to public agencies, businesses and projects, public-private partnerships, vehicle and technology consortia, workforce training partnerships and collaboratives, fleet owners, consumers, recreational boaters, and academic institutions to develop and deploy innovative technologies that transform California's fuel and vehicle types to help attain the state's climate change policies. Both the ERDD and FTD will use COMETS to track award expenditures and provide information to the Legislature and other external stakeholders as to how and where the funds are being used along with the current and future results of those expenditures.

4.3. Which of your department's business goals and objectives does this project support, and how?

The California Energy Commission is the state's primary energy policy and planning agency. This project will help track agreements and help fulfill the five major responsibilities of the Energy Commission:

Planning and forecasting future energy needs, power plant and transmission licensing, promoting energy efficiency, research and development of energy technologies and fuels and transportation technologies.

4.4. What are the expected business outcomes or benefits of the proposal as they relate to your organization's business goals and objectives?
COMETS will provide the divisions within the Energy Commission a means to monitor, manage, and report on all agreement expenditures that are critical to the success of the Energy Commission's programs.

The volume of activity and the nature of the agreements currently managed by the FTD and ERDD require efficient processing, thorough documentation, and robust reporting. Information about the agreements will be used by the Energy Commission to manage the creation, monitoring, and closure of the agreements. The Legislature, contractors, loan or grant recipients, the Energy Commission Policy Committees and other external stakeholders will be interested about how and where the appropriated money is being spent, along with results of those expenditures.

4.5. The following are from the State's IT strategic plan. Check the appropriate box(es) to identify the goals this proposal supports:

☒ **Supporting and enhancing services for Californians and businesses**
☒ **Enhancing information and IT security**
☒ **Reducing state operational costs (leveraging, consolidation, new technology, etc.)**
☒ **Improving the reliability and performance of IT infrastructure**
☒ **Enhancing human capital management**
☒ **Supporting state and agency priorities and business direction**

4.6. Is the proposal consistent with your organization's Enterprise Architecture?
☐ **Yes**
☒ **No**

If no, please explain why the deviation from the organization's Enterprise Architecture is necessary.
Upon the arrival (8/18/08) of the new CIO the department began the process to create and update the Enterprise Architecture.

4.7. Will the proposed system collect, store, transmit, or exchange confidential or sensitive information?
☐ **Yes**
☒ **No**

4.8. If this proposal is conceptually approved, what is the estimated date (mm/yyyy) the FSR will be submitted?
12/2008

4.9. What is the estimated project start date (mm/yyyy) if the FSR is approved?
02/2009

4.10. What is the duration of the proposed project?
24 months

4.11. Will the proposed project utilize the existing infrastructure?
☒ **Yes**
☐ **No**

If no, please explain.

4.12. Is the proposal related to another proposal or to an existing project?
☐ **Yes**
☒ **No**

If yes, describe the related proposal or project and how it is related:

4.13. Describe the consequences of not doing this proposed project at the planned timeframe:
The Fuels and Transportation Division (FTD) staff will not have an automated tool to effectively track awarded expenditures related to the Alternative and Renewable Fuel and Vehicle Technology Program (AB118). By not providing FTD staff an automated vehicle to track expenditures, problems may arise due to missed deadlines, forgotten projects, and/or lost information. The root causes include lack of sufficient training, high staff turnover, lack of consistent and documented procedures.

4.14. Check the appropriate box(es) to identify the proposal's funding strategy:
☐ **Augmentation needed**
☐ **Redirection of existing funds**
☒ **Other (describe):** ERPA, PIER, AB118 Technical Support

4.15. What are the estimated cost and funding source(s) by fiscal year through implementation (information should be provided in the following format):

Fund Source	2009-10	2010-11	2011-12	2012-13	2013-14 and future	Total
General Fund						
Federal Fund						
Special Fund*						
ERPA	$ 400,000	$ 150,000	$ 50,000	$ 50,000	$ 50,000	$ 700,000
PIER	$ 485,000	$ 250,000	$ 50,000	$ 50,000	$ 50,000	$ 885,000
AB118	$	$ 125,000	$ 50,000	$ 50,000	$ 50,000	$ 275,000
Total	$ 885,000	$ 525,000	$ 150,000	$ 150,000	$ 150,000	$1,860,000

*** Note: Identify the fund source and if the department is the sole user of the fund.**

Enterprise Architecture

A.1. Does your organization have documented Enterprise Architecture principles, strategies, or standards to guide decisions on technology projects?

☐ **Yes**
☒ **No**

A new CIO started at the Energy Commission on August 18, 2008 and began the planning process to create and establish an Enterprise Architecture.

A.2. Indicate on Table A-1 below, the completion status of the component Reference Models of your formal Enterprise Architecture efforts. If available, please submit a copy of your Enterprise Architecture document.

Table A-1, Enterprise Architecture Completion Status

Component Reference Model	Status			
	Implemented	**Implementation in Progress**	**Planned or Planning in Progress**	**Not Implemented and Not Planned**
Business			X	
Service			X	
Technical			X	
Data			X	

A.3. Describe the governance structure your organization uses to review and approve the Enterprise Architecture and any subsequent changes.

The Energy Commission's IT and executive management are currently creating an environment to create an IT Steering Committee to provide IT governance to the Energy Commission.

A.4. Does your organization have an Enterprise Architect? (if yes, provide their name, telephone number, and e-mail address below)

☐ **Yes**
☒ **No**

Name: _____

Classification: _____

Telephone Number: _____ **E-Mail:** _____

Information Security

B.1. How is your Information Security Officer involved in proposed project development efforts?

The ISO will be involved during project initiation, design approval and deployment.

B.2. What are your department's core business principles, policies and standards related to information integrity, confidentiality, and availability and the protection of information assets?

The Commission deploys a variety of IT security measures to protect its network systems and data. To achieve this goal the Commission has adopted and implemented many industry standard IT Security best practices. Using these IT security measures helps to ensure system and data reliability, confidentiality, availability and integrity. Below is an overview of the IT Security measures deployed at the Commission:

Physical Access and Security

The Commission's server room includes many physical security measures to protect its network systems and data. These measures include:

- The room is physically strong, is accessible by one entrance and contains no windows.
- The access door remains locked at all times to prevent unauthorized access.
- Access to the premises is controlled by designated ITSB staff.
- Air temperature and humidity are controlled by redundant A/C systems to within acceptable limits.
- All systems are electrically powered via a UPS system which provides:
  - Power conditioning to provide protection from surges and sags.
  - Sufficient battery power to run all systems during a blackout to allow for an automated, orderly and safe system shutdown.

Password Policies

To prevent unauthorized access to network systems and data the Commission enforces the use of complex passwords.

Passwords at the Commission must include:

- a minimum of eight characters;
- at least one alpha character (a,b,c,d….);
- at least one numeric character (1,2,3,4….);
- at least one special character (@, #, $, %….).

Other guidelines include:

- Memorize your password - never write it down.
- Keep your password private and never share it with others.
- Change your passwords every 3 to 6 months, or immediately if compromised.

Information Security

Simple passwords such as names of people or pets, words you can find in a dictionary and numbers in series are easily “cracked” in seconds by readily available software. More complex passwords provide better security against unauthorized access by malicious individuals intending to do harm.

Industry best practices suggest using a strong password called a “Pass Phrase”. A Pass Phrase is an easily remembered phrase or sentence. An example of a Pass Phrase is “the cow jumped over the moon”, string this together using numbers and special characters and you get “th3cowjumpedoverthem@@n”. The longer the number of characters in a password or Pass Phrase the harder it is for an intruder to crack.

Virus Protection

Viruses can cause a great deal of damage and interruption of services to networks, computers and data. To prevent virus attacks the Commission uses a layered approach to virus protection. These layers include:

- **Staff Awareness** – Information on the Commission’s Intranet educates staff on how to recognize viruses and what to do to prevent the spread of viruses.
- **E-mail Virus Protection Service** – Prevents virus infected e-mail from being delivered to the Commission.
- **E-mail Attachment Filtering** – Prevents e-mail messages containing certain types of attachments extensions (e.g. exe, bat ,etc.) from being delivered to the Commission.
- **Desktop/Server Virus Protection Software** – An enterprise client/server anti-virus software is used at the Commission. Client software is installed on all desktops and servers at the Commission. The server receives the latest virus definition file updates and pushes them to all devices on the network. If an infected file is detected the anti-virus software prevents the virus from infecting the desktops and network.

Network Firewall Protection

In order to keep the Commission’s network secure, the Commission protects and isolates its internal network from the outside Internet with an industry standard "firewall" architecture. The firewall analyzes inbound or outbound traffic to determine if it is authorized or not and then either permits or prevents access to the network. Two firewalls are used at the Commission for redundancy, in the event the primary firewall fails, a secondary firewall is automatically activated to maintain connectivity and protection.

Intrusion Prevention System

An Intrusion Prevention System (IPS) proactively monitors for any attempt to gain unauthorized access into the Commission’s network. If an attempt is detected, the IPS system can take defensive measures to prevent attacks by malicious individuals trying to do harm to the network or to gain access to network data.

Information Security

Data Backup System and Off-site Data Storage

The Commission utilizes an enterprise-class data backup system which provides nightly backup of all network systems and data. This backup system not only provides routine data backup and recovery but is an integral part of the Commission's Disaster Recovery and Business Continuity Plan.

Using this system, network staff can easily restore network files that staff may have lost or deleted by accident. The system also creates routine tape backups of mission critical data which are stored at a highly secure off-site location. This off-site storage provides the Commission the capability to fully restore all network systems and data in the event of a fire, natural disaster or any other event that might completely destroy the Commission's network.

Data Confidentiality

Data is a valuable resource vital to the performance of Commission's business functions and responsibilities. Proper management, protection, and control ensure maximum data security. The Commission's data confidentiality policy defines data security and protection requirements.

The essential elements of the Commission's Data Protection Policy include:

- **Data Classifications** - Data is classified as non-confidential or confidential by law.
- Data Ownership - All data must have a designated Data Owner, to assign security and to regulate access.
- **Secure Data Storage** - All data must be stored on the Commission's network to ensure data security. All confidential data is to be encrypted when being stored on portable devices or medium (e.g. Laptops, flash drives, DVD's, CD's, etc.).
- **Data Access** - The Data Owner ensures overall accountability for the use and security of the data.
- **Data Backup** - All data stored on the Commission's network is automatically backed up daily.
- **Data Security Breaches** - Security breaches should be reported to the Data Owner and ITSB. Unauthorized or inappropriate use of data and applications or lack of adherence to security policies and procedures will not be tolerated and may result in disciplinary action, which may include termination of employment.

External Audits and Testing

IT Security is an ongoing process. Periodic security audits are preformed on the Commission's systems by certified security professionals to evaluate existing security measures and to uncover potential security issues. The resulting audit reports provide IT with insights and countermeasures to prevent security incidents and provide a more secure IT environment.

Information Security

Staff Awareness

All Commission staff play an important role in preventing IT security incidences and protecting their data. Through awareness and training staff can make informed decisions on how they can do this.

Staff are encouraged to learn about basic computer security practices. Simple, easy to read computer security awareness information is available on the Commission's Intranet and can help staff to recognize the IT security risks that they face everyday both at work and at home.

Staff are also encourage to take training to learn how to use the Commission's standard software applications. Understanding how to properly use the computer tools available helps ensure that valuable data is properly stored and readily available. Having Statt save data to the network not only helps protect it from loss and corruption but can also facilitates sharing with other staff within a work group.

Help Desk and Information Security Officer

Routine IT security issues or concerns are reported to the Commission's Help Desk. Major IT security issues are reported and addressed by the Energy Commission's IT Security Officer.

B.3. If data within your department is shared with external entities, does your department implement data exchange agreements with these entities?

☐ **Yes**
☐ **No**

If no, please explain.

☒ **Not applicable**

B.4. How does your department ensure that software developers and programmers follow standards and best practices for Web, application, and system development?

IT drafted a Software Change Management procedures to provide oversight and governance to web, application, and system development.

Information Security

B.5. Does your organization have an Information Security Officer? (if yes, provide their name, telephone number, and e-mail address below)

☒ **Yes**
☐ **No**

Name: Dale Chisum

Classification: Staff Information Systems Analyst

Telephone Number: 916-654-4359 **E-Mail:** dchisum@energy.state.ca.us

Workforce Development, Workforce Planning and Succession Planning

C.1. Does your organization have a workforce development plan for IT staff?

☐ **Yes**
☒ **No**

If yes, briefly describe it.

C.2. Check the appropriate box(es) to identify which workforce development tools, if any, your organization is using for IT classifications:

☒ **Training**
☐ **Upward Mobility**
☒ **Mentoring**
☒ **Career Assessments**
☐ **Knowledge transfer program**
☒ **Performance Evaluations**
☐ **Other (please list)**

C.3. Does your organization have a workforce plan for IT staff (i.e., for Rank and File)?

☐ **Yes**
☒ **No**

If yes, briefly describe it.

C.4. Does your organization have a succession plan for IT staff (i.e., for Management)?

☐ **Yes**
☒ **No**

If yes, briefly describe it.

C.5. IT Staffing

Provide the following information in table C-1 on the following page:

- **The name of each IT classification currently in the organization.**
- **The number of staff in each IT classification in the organization.**
- **The number of staff in each IT classification eligible to retire in the next five years.**
- **The percentage of each IT classification eligible to retire in the next five years.**

Table C-1 — IT Staffing

IT Rank and File Staff Classification	Number of IT Rank and File Staff in Classification	Number of IT Rank and File Staff in Classification Eligible to Retire in Next 5 Years	IT Management Staff Classification	Number of IT Management Staff in Classification	Number of IT Management Staff in Classification Eligible to Retire in Next 5 Years
Associate ISA	12	0	Staff ISA Sup	4	2
Staff ISA	10	0	Senior ISA Sup	1	1
Staff Programmer	3	0	DPM III	1	1

Project Management, Portfolio Management and IT Governance

D.1. Does your organization have a process for improving the alignment of business and technology?

☒ **Yes**
☐ **No**

If yes, briefly describe it.
The Energy Commission has developed an IT Strategic Plan.

D.2. What is the status of implementing a formal portfolio management methodology for technology projects within your organization?

☐ **Implemented (Please describe)**

☐ **Implementation in progress (Please describe)**

☒ **Planned or planning in progress**
☐ **Not implemented and not planned**

D.3. List any automated tools being used for portfolio management. Enter "None" if no automated tools are being used.
None

D.4. What is the status of implementing a standard project management methodology for technology projects in your organization?

☐ **Implemented (Please describe)**

☐ **Implementation in progress (Please describe)**

☒ **Planned or planning in progress**
☐ **Not implemented and not planned**

Project Management, Portfolio Management and IT Governance

D.5. Does the organization require its project managers to be certified, either through a professional organization (e.g., PMI, ITIL) and/or through completion of specified project management coursework:

☐ **Yes**
- ☐ **PMI**
- ☐ **ITIL**
- ☐ **Agency-specified project management coursework (identify below)**

☒ **No**

D.6. Select from the list other areas of training your organization requires of its project managers:

☒ **Fundamental Project Management**
☒ **Systems Development Life Cycle**
☒ **Scheduling tool (identify below)**
- **– Microsoft Project**
- **–**
- **–**

☐ **Project Performance Management (e.g., Earned Value Management)**
☒ **Business Process Analysis**
☒ **Requirements Traceability**
☒ **Procurement/Contracts Management**
☐ **Other (identify below)**
- **–**
- **–**
- **–**

☐ **None**

D.7. Describe project-level governance practices, including change management, issue resolution, and problem escalation.

The project charter is the primary document for identifying scope, budget and resources. The Change Management Plan provides the process for change management and issue resolution. The Communication Plan provides for project escalation.

D.8. Does the project management methodology include processes for documenting lessons-learned and applying these to future projects?

☒ **Yes (Please describe)**

We are currently implementing project management methodologies.

☐ **No**