

STATE OF CALIFORNIA  
**Capital Outlay Budget Change Proposal (COBCP) - Cover Sheet**  
 DF-151 (REV 07/20)

<b>Fiscal Year</b> 2021-22	<b>Business Unit</b> 7730	<b>Department</b> Franchise Tax Board	<b>Priority No.</b> 2
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<b>Budget Request Name</b> 7730-026-COBCP-2021-A1	<b>Capital Outlay Program ID</b> Click or tap here to enter text.	<b>Capital Outlay Project ID</b> Click or tap here to enter text.
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**Project Title**  
 FTB Data Center Upgrades for Energy Saving Projects

**Project Status and Type**  
 Status:  New  Continuing      Type:  Major  Minor

**Project Category (Select one)**

<input checked="" type="checkbox"/> CRI (Critical Infrastructure)	<input type="checkbox"/> WSD (Workload Space Deficiencies)	<input type="checkbox"/> ECP (Enrollment Caseload Population)	<input type="checkbox"/> SM (Seismic)
<input type="checkbox"/> FLS (Fire Life Safety)	<input type="checkbox"/> FM (Facility Modernization)	<input type="checkbox"/> PAR (Public Access Recreation)	<input type="checkbox"/> RC (Resource Conservation)

<b>Total Request (in thousands)</b> \$ 20,306	<b>Phase(s) to be Funded</b> All phases	<b>Total Project Cost (in thousands)</b> \$ 20,306
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**Budget Request Summary**

The Franchise Tax Board is requesting \$659,000 General Fund (GF) and \$ 21,000 Special Funds (SF) in 2021-22; \$908,000 million GF and \$29,000 SF in 2022-23; \$18.1 million GF and \$578,000 SF in 2023-24. The total project costs are estimated \$20.3 million with \$43,000 in ongoing costs after construction is completed. This project will upgrade FTB's critical infrastructure at its Central Office Campus to address a series of modifications and upgrades designed to improve Data Center operation, reliability, and energy efficiency.

<b>Requires Legislation</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<b>Code Section(s) to be Added/Amended/Repealed</b> Click or tap here to enter text.	<b>CCCI</b> Click or tap here to enter text.
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<b>Requires Provisional Language</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<b>Budget Package Status</b> <input type="checkbox"/> Needed <input type="checkbox"/> Not Needed <input type="checkbox"/> Existing
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**Impact on Support Budget**

One-Time Costs <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Swing Space Needed <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Future Savings <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Generate Surplus Property <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Future Costs <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

**If proposal affects another department, does other department concur with proposal?**  Yes  No  
 Attach comments of affected department, signed and dated by the department director or designee.

<b>Prepared By</b> Click or tap here to enter text.	<b>Date</b> Click or tap to enter a date.	<b>Reviewed By</b> Click or tap here to enter text.	<b>Date</b> Click or tap to enter a date.
<b>Department Director</b> Click or tap here to enter text.	<b>Date</b> Click or tap to enter a date.	<b>Agency Approval</b> Click or tap here to enter text.	<b>Date</b> Click or tap to enter a date.

Pending Board Approval

<b>Department of Finance Use Only</b>	
<b>Principal Program Budget Analyst</b> Click or tap here to enter text.	<b>Date submitted to the Legislature</b> Click or tap to enter a date.

**A. COBCP Abstract:**

The Franchise Tax Board (FTB) Data Center is a 24 hours per day x 7 days per week, 365 days per year (24 x 7 x 365) operation that houses critical IT infrastructure allowing FTB to maintain day-to-day operations and generate revenue for the State of California. FTB currently maintains a Tier III equivalent Data Center (SAM Section 4982.1) that is housed in two locations in FTB's Sacramento Central Office Campus in Sacramento. The 'Los Angeles Building Data Center' was commissioned in 1985 and the 'Sacramento Building Data Center' was commissioned in 2005. The total space of the two locations encompasses approximately 26,000 square feet.

As a Tier III equivalent Data Center, FTB requires continuous, uninterrupted power and cooling. FTB Data Centers currently do not meet the following required California executive orders and statewide energy efficiency mandates. Resources requested in this COBCP will allow FTB to comply with these standards.

- Governor's Executive Order B-18-12, which requires State buildings to reduce grid based energy purchased by at least 20%.
- Management Memo 14-09, which requires that raised floor areas have a Power Usage Effectiveness (PUE) rating of 1.5 or less.
- IT Policy Letter 10-14, which requires reduced power consumption, carbon footprint and overall Data Center operating costs.
- 2020 DGS Sustainability Roadmap – reduce grid based energy purchases and Data Centers must operate within ASHRAE standards.

**B. Purpose of the Project:**

**Problem**

The FTB Data Center is a 24 x 7 x 365 operation that houses critical IT infrastructure necessary for FTB to provide critical services to California taxpayers. FTB's return and payment processing Services have a goal of zero downtime because they are utilized by California Taxpayers and almost 6,000 FTB staff in processing 21 million returns and 14 million payments per year along with FTB compliance and service functions. FTB collects approximately 78% of the General Fund, or approximately \$113 billion annually. In addition, FTB is responsible in administering other critical programs such as Healthcare Mandate, Earned Income Tax Credit (EITC), and non-tax debt collections.

**Inability to Meet Energy Efficiency Standards and Mandates**

As noted, FTB currently has two Data Centers on the Sacramento campus. As technology has advanced, equipment has become more efficient and requires a smaller footprint. As a result, much of the current raised floor space has become vacant creating an inefficient operating environment. These factors continue to impede FTB's efforts to meet the Governor's executive order and related statewide energy saving mandates. FTB is currently not in compliance with the following:

- Governor's Executive Order B-18-12, which requires State buildings to reduce grid based energy purchased by at least 20%.
- Management Memo 14-09, which requires that raised floor areas have a Power Usage Effectiveness (PUE) rating of 1.5 or less.
- IT Policy Letter 10-14, which requires that state Data Centers reduce their overall footprint by 50%.
- 2020 DGS Sustainability Roadmap – reduce grid based energy purchases and Data Centers must operate within ASHRAE standards.

### **Equipment in Existing Data Centers are End of Life**

The FTB Data Centers located on our Sacramento, CA campus consist of two distinct raised floor areas, the Los Angeles building raised floor (LARF) and Sacramento building raised floor (SARF). In both areas, much of the equipment that supports the Data Center is out of date and at or approaching end of life (EOL). EOL equipment is no longer supported by the manufacturer and presents a risk of failure to the department. The LARF infrastructure is 36 years old and the SARF infrastructure is 16 years old. Neither have had any significant upgrades and both need to be refreshed. In 2020 alone, FTB experienced 19 incidents due to aging equipment. The impact to business was minimized by using manual workarounds. However, these incidents exposed FTB's risks associated with SPOFs and utilizing aging equipment.

### **Multiple Single Points of Failures in Existing Data Centers**

Beginning in 2014 to date, FTB has worked with the Department of General Services (DGS) and an Energy Service Company to perform an Investment Grade Audit (IGA) of FTB Data Centers. The IGA reported nine single points of failure (SPOF) in the aging infrastructure. An equipment failure at any one of the SPOFs could result in a catastrophic failure of services and a shutdown of the Data Center. This would severely compromise FTB's ability to generate revenue to the California General Fund. Recovery from a failure event would also be difficult and costly depending on the type, location, and duration of failure and the scope of impacted systems and data.

### **Inability to Perform Routine Maintenance without Business Interruptions**

FTB's Data Center requires continuous, uninterrupted power and cooling throughout the year. This requirement presents challenges when DGS needs to perform routine maintenance on the power and cooling infrastructure. Currently, in order for DGS to maintain infrastructure that supports the Data Center spaces, FTB is required to either shut down Data Center operations or enter into costly contracts for temporary power and cooling solutions to ensure that the Data Center equipment is not affected by power loss or overheating. Both of these solutions present unplanned costs and potential risks to operations. In just the past year (2020), FTB experienced 2 incidents related to power loss and overheating.

FTB needs to upgrade its Data Center to resolve these issues. Failure to do so could impact FTB's ability to provide reliable and stable IT services to California taxpayers.

### **Program need**

In order to ensure that stable and reliable IT services are delivered to California taxpayers, FTB requires uninterrupted Data Center operations that meet statewide energy mandates, and address current deficiencies related to aging equipment and SPOFs.

FTB needs to implement a series of modifications and upgrades designed to improve Data Center operation, reliability, and energy efficiency. These modification and upgrades include:

- A redesign of the floor space to ensure optimal performance and energy efficiency.
- Refresh of EOL equipment.
- Addition of redundant power and cooling systems achieving Tier III equivalency.
- Addition of energy efficiency measures including hot/cold aisles, lighting sensors, and efficient battery backups.
- Updated physical security of the Data Center space
- Addition of modern accessible environmental controls.
- Dedicated utility electrical power

These upgrades will enable FTB to provide robust and reliable IT services critical to the delivery of essential government services; optimize energy efficiency to meet executive orders and statewide mandates; and provide maximum flexibility for ongoing maintenance with minimal disruption to operations.

**C. Relationship to the Strategic Plan:**

This proposal supports FTB’s Strategic Plan Strategic Goal #4 Operational Excellence, by modernizing our systems, hardware and software to ensure continuity of business operations. A stable and modern technology environment enables FTB to achieve its mission to help taxpayers file timely and accurate tax returns, and pay the correct amount to fund services critical to Californians. This effort also supports FTB’s foundational principle to protect the privacy and security of data entrusted to us.

Mandates	Objective
<ul style="list-style-type: none"> <li>• Executive Order B-18-12</li> <li>• Management Memo 14-09</li> <li>• IT Policy Letter 10-14</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure optimal performance and energy efficiencies.</li> <li>• Reduce power consumption and carbon footprint.</li> <li>• Reduce grid based energy purchased by at least 20%.</li> <li>• Achieve a power usage effectiveness (PUE) of 1.5 or lower in raised floor areas.</li> <li>• Move toward Zero Net Energy (NZE) by reducing energy use as a percentage of total site usage.</li> <li>• Ensure FTB Data Center maintains its Tier III-equivalent Data Center status.</li> <li>• Maintain robust and reliable IT services critical to the delivery of essential government services.</li> <li>• Provide flexibility for ongoing maintenance with minimal disruption to operations.</li> <li>• Improved physical security of the Data Center space.</li> </ul>

**D. Alternatives:**

**1. Approval of Capital Outlay BCP request.**

- a. Scope - This alternative will allow FTB to upgrade EOL equipment and consolidate FTB’s two Data Centers into one redesigned energy efficient space with no SPOFs. Alternative 1 would take approximately 3 years to complete.
- b. Cost - \$20,306,000.00
- c. Funding Source - General Fund and Special Funds
- d. Program Benefits - Addresses and mitigates risk of SPOFs, equipment failures and greatly increases energy efficiencies. FTB would be in compliance with Management Memo 14-09, bringing the PUE to 1.5 or less. In reducing the overall footprint of the Data Center, FTB would be in compliance with IT Policy Letter 10-14.
- e. Facility Management Benefits - All new construction will meet current building codes and energy standards. An estimated 37% reduced energy consumption from the Data Center saves an estimated \$230,000 in annual energy costs to help bring FTB in compliance with Executive Order B-18-12. Increased ability to perform routine maintenance when needed because the Data Center is not reliant on campus power and cooling.

- f. Impact on Support Budget -
  - o IT on-going Maintenance: \$43,000.00

**2. Replace aging Data Center equipment and consolidate Data Center into a single existing space.**

- a. Scope – This alternative replaces FTB’s aging Data Center equipment and consolidates Data Center operations into a single existing space. Because of the limited scope, this alternative would be considered the first of multiple Data Center projects and additional costs will be necessary for subsequent phases to fully address ongoing risks and compliance issues.

Alternative 2 *does not* address critical SPOFs nor will it bring FTB into compliance with Executive Order B-18-12, Management Memo 14-09, and IT Policy Letter 10-14. As a result, FTB will continue to be at risk of operational disruptions caused by failures with shared building infrastructure and would require costly (approximately \$225k per instance) temporary power and cooling services in order for routine campus maintenance to occur without disrupting FTB operations.

Alternative 2 would take approximately 5 years for Phase 1 and an additional 5 years to complete subsequent phases (10 years total). It would result in multiple (6 to 10) anticipated and unavoidable disruptions to FTB operations while critical power and cooling components are replaced. This alternative would also be considered a temporary investment as subsequent projects will be necessary to achieve the remaining goals of Alternative 1, which include: redesign of the Data Center space to eliminate the SPOFs and improve energy efficiency.

- b. Cost – Phase 1: \$8,000,000.00 (Additional cost for future phases: TBD)
- c. Funding Source - General Fund
- d. Program Benefits – Limited benefits including reduced risk of failure caused by aging equipment and reduction in square footage.
- e. Facility Management Benefits – Minimizes initial construction costs.

**3. Do Not Approve the Request.**

By not approving this request, FTB runs the risk of experiencing a catastrophic equipment failure due to SPOFs and EOL equipment. If FTB were to experience a catastrophic failure, the department would not be able to continue revenue generating operations until the Data Center is brought back online. Routine maintenance on the building’s power and cooling infrastructure would continue to be a challenge and FTB would need to obtain costly portable power and cooling prior to maintenance. Additionally, FTB would not be able to meet executive orders and statewide mandates related to energy efficiency.

**E. Recommended Solution:**

Alternative 1- Approve full funding request to consolidate into one raised floor space, refreshing EOL equipment and eliminate all SPOFs. This alternative will bring FTB into compliance with executive orders and statewide energy efficiency mandates and reduce FTB’s overall energy consumption.

Scope - FTB’s Data Center operations are critical to the State of California. If FTB were to experience a disruption, even for a short duration, it would cause a major financial impact. With this in mind, the scope of the Data Center Project is to ensure that FTB’s core business functions remain operational. Alternative 1 mitigates the most risk to FTB’s revenue generating operations thus helping to protect the state’s general fund while achieving energy efficiency goals.

Basis for Cost Information - The estimated cost is based on a budget package prepared by DGS.

Benefits of the Recommended Solution:

- Provides for continuity of operations for FTB and State of California by eliminating SPOFs and refreshing EOL equipment as identified in the IGA.
- Brings FTB into compliance with Management Memo 14-09 by greatly increasing energy efficiencies and reducing the PUE to 1.5 or less.
- Brings FTB into compliance with IT Policy Letter 10-14 by reducing the overall footprint of the Data Center.
- Brings FTB into compliance with Executive Order B-18-12 by providing an estimated 37% reduction in energy consumption from the Data Center, saving an estimated \$230,000 in annual energy costs.
- Increases ability to perform routine maintenance when needed because the Data Center is not reliant on campus power and cooling.

Project Risks - Any construction project carries a risk of increased cost, schedule, and scope due to discovery of unknown site conditions throughout the design and construction process. In addition, there is a risk of unanticipated IT service disruptions during the construction phase of the project. Furthermore, there are potential schedule risks associated with interdepartmental coordination and possible competing priorities affecting the availability of key resources.

Interdepartmental Coordination and/or Special Project Approvals needed:

- DGS/Real Estate Services Division for budget, plan creation and project management functions.
- State Fire Marshal for Fire, life safety.
- State Architect for ADA and code compliance.
- GovOps Agency/CDT for PAL approvals.