

Peninsula Corridor Electrification

Frequently Asked Questions | Spring 2014

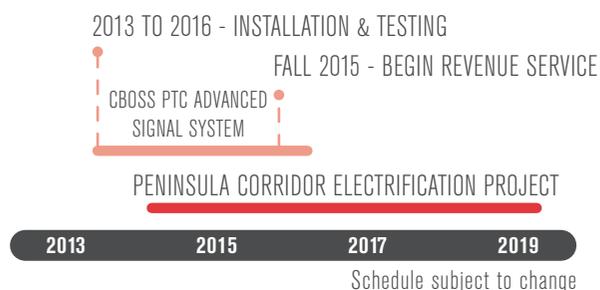


ABOUT THE PROGRAM

Q: What is the Caltrain Modernization Program?

A: The Caltrain Modernization (CalMod) Program will electrify and upgrade the performance, operating efficiency, capacity, safety and reliability of Caltrain's commuter rail service by 2019. The components of the CalMod program include the advanced signal system project (Communications Based Overlay Signal System Positive Train Control or CBOSS PTC) and the Peninsula Corridor Electrification Project (PCEP). These improvements will support increasing demand for Caltrain service. These projects are discussed in more detail below.

CALTRAIN MODERNIZATION PROGRAM SCHEDULE



Q: What is the Communications Based Overlay Signal System Positive Train Control (CBOSS PTC) Project?

A: The CBOSS PTC project is a communications based overlay signal system that will equip the corridor with federally-mandated safety technology to monitor and control train movements and improve system performance. Caltrain has already begun installing conduit and fiber optic cable needed for the system. CBOSS PTC is scheduled to be operational by the end of 2015 as mandated by the federal regulator.

Q: What is the Peninsula Corridor Electrification Project (PCEP)?

A: The PCEP is a key component of the CalMod Program and consists of converting Caltrain from diesel-hauled to Electric Multiple Unit (EMU) trains for services between San Francisco and Tamien Station in San Jose. The project includes installation of an overhead contact system (OCS) to connect electrical trains to the electricity source and supporting electrical infrastructure (e.g. electrical substations, a switching station, and paralleling stations) and operations of approximately 75 percent EMUs and 25 percent diesel locomotives. Full conversion will occur at a future time when funding is found and the remaining diesel trains reach the end of their service life. Electrified revenue service is scheduled for 2019.

Q: Why electrify Caltrain?

A: Electrification will modernize Caltrain and make it possible to increase service levels while offering several advantages in comparison with existing diesel power use, including:

- **Improved Train Performance, Increased Ridership Capacity and Increased Service:** Electrified trains can accelerate and decelerate more quickly than diesel-powered trains, allowing Caltrain to run more efficiently. In addition, because of their performance advantages, electrified trains will enable more frequent and/or faster train service to more riders.
- **Increase Revenue and Reduce Cost:** Service improvements achieved through electrification will increase ridership and fare revenues and decrease fuel costs. These efforts will substantially reduce the financial subsidy required to operate the system.
- **Reduce Engine Noise Emanating from Trains:** Noise from electrified train engines is measurably less than diesel train engines. Train horns will continue to be required at grade crossings, consistent with safety regulations.
- **Improve Regional Air Quality and Reduce Greenhouse Gas Emissions.** Electrified operations will produce substantial reductions in corridor air pollution emissions when compared with diesel locomotives, even when the indirect emissions from electrical power generation are included. Increased ridership will reduce automobile usage, resulting in additional air quality benefits. In addition, the reduction of greenhouse gas emissions will help meet the State's emission reduction goals.

Q: What will happen to service to Gilroy?

A: The PCEP project only includes electrification to a point approximately 2 miles south of Tamien Station. Caltrain will continue to provide diesel service to Gilroy.

Q: Why not electrify south of Tamien Station?

A: Caltrain does not own the southbound right-of-way beginning two miles south of Tamien Station. Union Pacific owns this section of the corridor.

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ABOUT THE PENINSULA CORRIDOR ELECTRIFICATION PROJECT (PCEP)

Q: When will this project start and finish?

A: The environmental review process is scheduled to conclude at the end of 2014. If Caltrain adopts the Electrification project and funding remains available, construction of electrical infrastructure could start as early as 2016. The first electrically-powered trains are scheduled to be in-service by 2019.

Q: Will the project reduce the need to use horns?

A: No. The use of horns is dictated by federal safety regulations for at-grade crossings. The project does not include changes in at-grade crossings and will not change the requirements for, or the use of, horns at these crossings.

Q: Are there other technologies (such as self-powered electric trains or third-rail electrification) that can provide the same benefits without an overhead contact system?

A: Third-rail electrified systems (like BART) do not have an overhead contact system. However, that technology would require Caltrain to build a whole new grade-separated system versus modernizing its existing infrastructure. BART-like technology is not compatible with the planned high-speed rail service. There are self-powered electric trains (such as trains powered from fuel cells or rechargeable batteries). These technologies are experimental at this time.

PCEP FUNDING

Q: What is the project cost?

A: The project cost is currently being updated. Based on 35% design completed in 2008, electrification and EMU procurement replacing approximately 75% of the diesel fleet was estimated to cost \$1.225 billion. \$785 million for infrastructure costs and the remaining \$440 million for the EMUs.

Q: Will the Project reduce taxpayer operational subsidies?

A: Yes, the PCEP will help support the financial sustainability of the system by increasing ridership and fare revenue, and reducing operating costs associated with replacing diesel fuel with electricity.

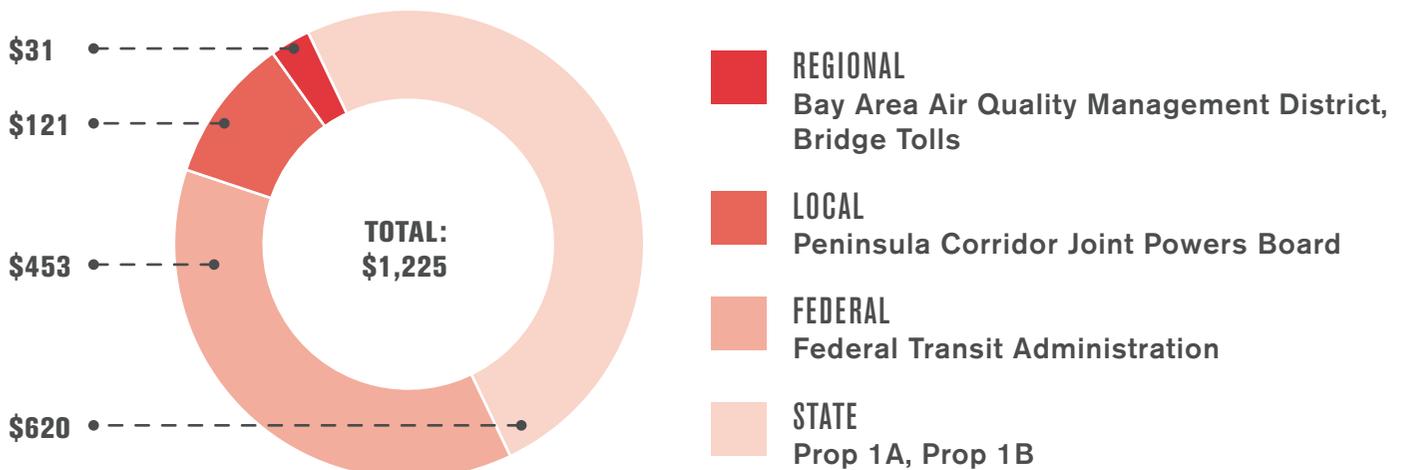
Q: Who's providing the funding?

A: The project will be funded through a combination of local, regional, state, and federal sources.

Q: Will fares increase as a result of electrification?

A: No, the PCEP is funded by a mix of federal, state and local funding sources that do not rely on fare increases. However, the Peninsula Corridor Joint Powers Authority will continue to adjust fares as appropriate.

FUNDING: MILLIONS (\$, YEAR OF EXPENDITURE)



(Other funding may be substituted for these sources.)

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ENVIRONMENTAL REVIEW

Q: What is evaluated in the DEIR?

A: The Draft Environmental Impact Report (EIR) has evaluated the environmental impacts of the project including the following: Aesthetics; Air Quality; Biological Resources; Cultural Resources; Electromagnetic Fields/Electromagnetic Interference (EMF/EMI); Geology, Soils, and Seismicity; Greenhouse Gas Emissions and Climate Change; Hazards and Hazardous Waste; Hydrology and Water Quality; Land Use and Recreation; Noise and Vibration; Population and Housing; Public Services and Utilities; and Transportation and Traffic. The Draft EIR considers both temporary construction-related and permanent impacts as well as cumulative impacts.

Q: Will trees need to be cut down for this project?

A: Caltrain conducted a tree survey in parts of the corridor with higher density of tree canopy and a tree canopy assessment of the entire corridor using aerial photography, video photography, and an assessment from the railroad tracks. An Electrical Safety Zone is necessary to provide a vegetation free zone for electrical safety within 10 feet of the energized portions of the overhead contact system. Based on a worst-case alignment of using outside side poles, the Draft EIR identifies the need for removal of approximately 2,200 trees and pruning of approximately 3,600 other trees. There are approximately 19,000 trees in the immediate areas along the Peninsula rail corridor to be electrified. Draft EIR mitigation includes a tree avoidance, minimization and replacement plan in cooperation with affected landowners and local jurisdictions.

Q: Will the service or schedule change under electrification?

The project includes an increase of peak hour service from 5 trains per peak hour per direction to 6 trains per peak hour per direction. In addition, electrically-powered trains can accelerate and decelerate faster than diesel trains thus providing the flexibility to increase the frequency of service without adding travel time and/or reduce the overall travel time from one end of the corridor to the other.

Caltrain has not yet developed a schedule that accounts for these important enhanced service capabilities. In the DEIR a "prototypical" or example schedule was used as part of the analysis. In the coming years, there will be robust public outreach to help determine the schedule that best balances the demands for more frequency and faster trip times.

Q: What will the visual impacts be?

A: In addition to tree removal, described above, the PCEP will include a new overhead contact system (OCS) consisting of poles and wires along the Caltrain ROW. Additionally, the new traction power facilities would be within the Caltrain ROW and/or outside the ROW in commercial/industrial areas. Mitigation is proposed in the Draft EIR to apply aesthetic surface treatments and provide screening vegetation at sensitive locations.



Q: What are the construction impacts?

A: A specific construction plan has not yet been developed. That will be prepared in the next phase of design. The DEIR evaluated the temporary environmental impacts associated with possible construction strategies for the PCEP. Most construction impacts will occur within the Caltrain right-of-way (ROW), with additional construction at limited areas outside the current right-of-way for portions of the overhead contact system, tree removal in certain locations, for two electrical substations and for some access and staging. Primary construction impacts include temporary construction noise, equipment and vehicle emissions, tree removal and minor disturbance of biological resources, soil disturbance and runoff, potential traffic diversions or delay and potential disruption of passenger and freight service. Construction will also require several staging areas for storage of equipment, materials, and vehicles that could be within the Caltrain ROW or in nearby areas outside the ROW.

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Q: What are the anticipated noise impacts along the corridor?

EMUs are quieter than diesel locomotives, but increased service will mean more train horn events at the at-grade crossings. The Draft EIR evaluated noise impacts along the project corridor and found that the project would lower noise levels at many locations, would not change levels at some locations and would result in small increases in noise at a few locations but the increases would be less than Federal Transit Administration (FTA) noise thresholds.

Q: What are the anticipated traffic impacts of the project?

The Draft EIR analyzes the potential traffic benefits and adverse effects of the project. In 2020, the project would reduce regional vehicle miles travelled (VMT) per day by 235,000 miles and would reduce VMT in every city along the corridor between San Jose and San Francisco. In 2040, with full electrification, VMT reductions would be even greater with a reduction of 619,000 daily vehicle miles.

Despite the overall traffic reduction benefits, the project would result in localized traffic impacts at certain intersections near at-grade crossings and around Caltrain stations. The impact at the at-grade crossings is a combination of more gate-down time due to more train service and less gate-down time due to faster acceleration and deceleration of the EMUS. With increased ridership, there will also be increased traffic around Caltrain stations.

Q: Will the Electrification Project Require New Right-of-Way?

A: The DEIR evaluates the potential right-of-way and easement needs based on the 35% design for the traction power facilities, the overhead contact system (OCS) poles and the electrical safety zone (ESZ).

Up to approximately 1.4 acres (in commercial/industrial areas) of right-of-way may be needed to support two new electrical substations. Additionally, based on the worst case outside pole configuration, up to 0.9 acres (0.2 acres private, all commercial / industrial; remainder road and rail rights of way) may be needed for the OCS poles and up to 18 acres (2 acres residential, 7 acres commercial, 0.3 acres of parkland and the remainder in road or rail rights of way) for the ESZ.

Q: How will freight be affected?

A: Freight will be able to use the Caltrain corridor but with the waiver Caltrain has from the Federal Railroad Administration (FRA) to operate the EMUs, freight would have additional restricted operational hours. It should be noted that the FRA is currently in a rulemaking process for "Alternative Compliant Vehicles" that is relevant to the EMUs in the Proposed Project. It is Caltrain's understanding that when the rule is in place, the additional restrictions on operations hours may not be necessary. Along Union Pacific owned freight line ("MT-1") from Santa Clara to San Jose, there are no restrictions. In the DEIR, it was determined that the current level of existing freight can be accommodated within the reduced operating window as outlined by the FRA waiver. Caltrain will continue to work with the Union Pacific and the freight users to address concerns and issues associated with shared use of the Caltrain corridor.

Q: What are the forecasted levels of ridership?

A: New ridership projections were completed for the Draft EIR. Ridership is anticipated to increase with or without the project, but will increase more with the project. By 2020, with the project, daily ridership would increase to 69,000. By 2040, with full electrification between San Jose and San Francisco (and including service to the Transbay Transit Center), ridership is forecasted to increase to 111,000.

Q: Will the EIR for the Electrification Project allow high-speed rail trains to use the Caltrain Corridor?

A: No. The Caltrain is the lead agency for environmentally clearing the PCEP. This EIR will not environmentally clear high-speed rail service in the Peninsula corridor. The California High-Speed Rail Authority (CHSRA) will be the lead agency for a subsequent a separate environmental clearance document at a future time to environmentally clear high-speed rail service in the Peninsula corridor.

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www.caltrain.com/electrification

