PAGE 4: SAVING RAIL ALONG THE DEL MAR BLUFFS

California Rail News

Volume 29 Number 2 December 2019 - May 2020

Assembly: Let's Spend High-Speed Rail Money Where the People Are!

By David Schonbrunn
TRAC President

Los Angeles and Orange counties have nearly 14 times the amount of driving per square mile as the counties of the Central Valley. That vast difference in traffic made the decision contentious to build the first segment of the High-Speed Rail project in the Central Valley. That controversy, smoldering for at least a decade, has now burst into open flames. After spending $6 billion in the Central Valley with nothing much to show for it, state legislators are signaling their unwillingness to sink another $11 billion there. Legislators want that money spent where there are many more potential passengers and voters.

Assembly Democrats from Southern California are vocal about their increasing skepticism over spending $20+ billion on a Central Valley HSR line. Opinion pieces by Assembly Speaker Anthony Rendon (D-Lakewood) and Assemblymembers Laura Friedman (D-Burbank) and Tom Daly (D-Anaheim) call for holding off electrification of the Central Valley line until there is a larger completed project. "Greater investment in trains running from Burbank to Anaheim will help millions of riders get where they need to go quickly," they wrote.

This should sound familiar: As reported in 2012, "The objections spawn from the construction starting point being in the Central Valley. Several key Democrats — including State Senator Mark DeSaulnier of Concord, who is the chairman of the Senate transportation committee, and state Sen. Alan Lowenthal of Long Beach, who chairs a special committee about the high-speed rail project – want to move the funds away from the Central Valley and toward the northern and southern terminuses, which they say will have higher ridership out of the gate." Governor Jerry Brown was able to rally just enough Senate support to overpower these Chairmen. While he managed to keep a lid on this controversy for the rest of his terms, that period of enforced quiet is over.

The High-Speed Rail Authority (CHSRA) is pushing back hard against the growing dissent: It is now soliciting bidders for a contract to install track, signals *and electrification* systems on its Central Valley project. It is seeking to tie the State to a 30-year contract for maintenance of these systems.

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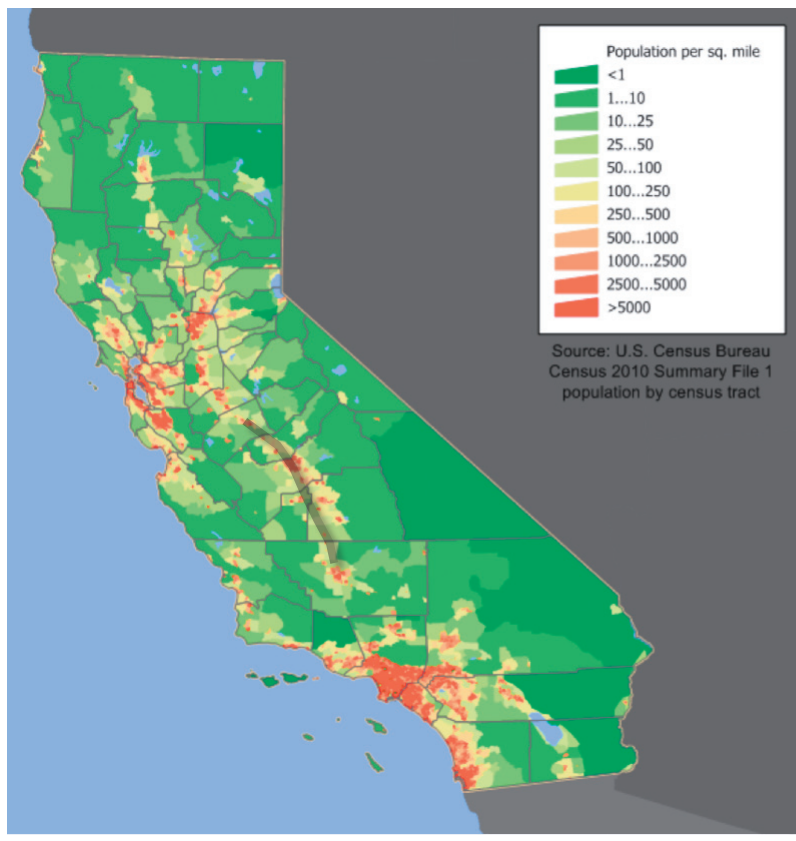

Historical Population		
Census	State Pop.	CV%
1850	92,597	—
1860	379,994	310.4%
1870	560,247	47.4%
1880	864,694	54.3%
1890	1,213,398	40.3%
1900	1,485,053	22.4%
1910	2,377,549	60.1%
1920	3,426,861	44.1%
1930	5,677,251	65.7%
1940	6,907,387	21.7%
1950	10,586,223	53.3%
1960	15,717,204	48.5%
1970	19,953,134	27.0%
1980	23,667,902	18.6%
1990	29,760,021	25.7%
2000	33,871,648	13.8%
2010	37,253,956	10.0%
Est. 2017	39,536,653	6.1%

Only 10% of Californians live in Central Valley counties near HSR. (Source: 2010 U.S. Census)

INSIDE

TRAC
Train Riders Association of California
1025 Ninth Street #223
Sacramento, CA 95814-3516

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HSR's Time Runs Out

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This looks to TRAC like the Authority is daring the Assembly to stop electrification. It remains to be seen whether the Assembly will move to block it. Adding to the drama, the Federal Railroad Administration sent a letter disapproving the release of the bid package, and asserting that its permission to do so is required under the $2.6 billion grant agreement. CHSRA moved forward anyway, in defiance of the FRA.

CHSRA is now attempting to sell the project as an "Everyone will want to ride it" phenomenon, but leaders like Assemblymember Friedman aren't buying it. She asked hard questions at a Fresno hearing: "Why does it matter that it goes fast, if not all that many people ride it?" The only response from Brian Kelly, CHSRA's Chief, was that the voters of the State had directed the Authority to build electrified High-Speed Rail.

"I don't think you change culture by demonstrating that you can run a fast train," Friedman added. "I think you change culture by giving people who need to get somewhere a way to get there quickly and that's more convenient than driving. ... Assuming that our goal is to build from San Diego to San Francisco ... the way we get there is by increasing ridership anywhere on the line where you have a large population saying, 'OK, we're now in on the train ... and we demand that you give us that whole system,'" she said.

The New Business Plan

While one would expect the agency to be providing some kind of service by now, all it is currently delivering is promotional pieces. CHSRA's 2020 Draft Business Plan is primarily a sales document. TRAC is unaware of any transportation project in the world that has spent so much money and so much time without entering into revenue operations.

CHSRA has made much about Virgin Train's HSR project to connect Victorville to Las Vegas. The Business Plan touts "350 miles of electrified high-speed rail under development." It turns out that the reality behind that surprising claim is that 130 miles of that total are being undertaken by Virgin Trains, and so, have nothing whatsoever to do with CHSRA's efforts.

Another 51 miles, Caltrain tracks on the San Francisco Peninsula, cannot be used for HSR without additional construction, and that is unfunded. Like all big projects, Caltrain's electrification project will probably have huge cost overruns.

To justify its decisions, the Authority typically has consultants prepare reports. The latest one, the *Early Train Operator's Side-by-Side Study Quantitative Report,* claims that investing in the Central Valley will yield greater benefits in ridership, congestion relief and GHG reductions than similar investments in Southern California or the Caltrain Corridor. These findings violate all common sense. It seems clear that Assemblymembers don't believe them.

HSR: No Business Case

TRAC applauds the Assembly for its leadership in breaking a decade-long taboo on questioning whether or how the CHSRA's project should go forward. However, we suspect they don't recognize that California's HSR project has no future. Even though it keeps moving forward, spending billions, it is already dead.

The project died when CHSRA insisted on sticking with its route decision despite the refusal of rail operators to invest. There is no way the current project can be expanded into a statewide HSR system without private sector investment. There is no business case for the private sector to invest in a route that is more expensive to build and too slow, because of its two major detours.

TRAC dismisses out of hand CHSRA's assertion that all it needs to do for the pipeline of private funding to flow is demonstrate the profitability of HSR between Bakersfield and San Jose. First, that approach unacceptably puts $34 billion of entrepreneurial risk on California taxpayers. Second, it fails to explain why it is possible for Virgin Train's HSR project to go forward now with only private sector equity funding, when CHSRA can't get to first base.

The private sector *will* invest in routes that are the most direct, the straightest and unburdened by obstacles. The fact that Virgin Trains is breaking ground indicates that sophisticated finance people have confidence that the ridership and revenue projections for a completed line will enable them to be repaid and earn a sizeable return on investment. The fact that there is no private investment in the CHSRA project is definitive proof that no one in the rail business believes CHSRA's ridership and revenue projections.

CHSRA presently doesn't have the funds to build its project connecting San Jose to Merced. Neither can it proceed to connect Northern California to Southern California. It is highly unlikely that the State will cough up an additional $60 billion. Without private investment, TRAC sees no realistic way forward for a statewide HSR project.

Because there is no prospect of grants from the Trump Administration, the Authority has given up on realistic planning. It instead is betting on the come. CHSRA will run out of major funding unless the Democrats win big

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HSR's Time Runs Out

(continued from Page Two)

in November, capturing the Presidency and both Houses of Congress. The question would then become, which Democrats would control the funding? Those willing to give CHSRA a blank check, or those that demand value for the money?

TRAC's Alternative

Ridership from an isolated Central Valley Line would be disappointing after spending $20+ billion. That much money could support a huge increase in intercity rail ridership in California. TRAC urges a major rethinking, focused on delivering value to Californians.

TRAC has recommended that the Governor invite experienced HSR operators to contact him about their interest in building rail projects in California. We know that HSR would be a viable business here. Because of its population size, HSR in California should be more successful than projects in Florida or Texas. Private sector equity participation--starting from the commencement of a new project--would open for the first time a *feasible path to a statewide HSR system.*

TRAC is aware of private sector operators that are interested right now in building a fast route from Sacramento to San Jose in the Altamont Corridor. While such a line could be eventually upgraded to high-speed, it would probably be built initially for 110-150 mph service. A Public-Private Partnership like this might only require public funds for the environmental review process, to eliminate that risk for a venture partner.

The investment of public funds in speed improvements for existing intercity corridors would provide fast local service for the cities of the Central Valley. For a fraction of the HSR project's cost estimate, the current San Joaquin Corridor would be upgraded to run 110 - 125 mph. A negotiated arrangement with BNSF could result in fast passenger-only tracks either in the railroad right-of-way, or adjacent to it.

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A faster, more frequent San Joaquin would yield a dramatically better cost/benefit ratio than the HSR Valley project, while being very attractive and much more affordable for current auto commuters. This would not be an abandonment of HSR. Rather, along with a fast Altamont Corridor connection to the Bay Area, it could stimulate a new privately built north-south HSR trunk line, possibly along the I-5, offering seamless connections between Los Angeles, the Central Valley, Sacramento, San Francisco and San Jose.

Speed improvements would massively increase ridership on an integrated Pacific Surfliner/Metrolink service between Ventura and San Diego. A funding package attractive to all the larger regions of the State could include:

- Convert LA Union Station from a stub-end terminal to an online station by adding run-through tracks.
- A tunnel under Rose Canyon, to speed up the Surfliner near San Diego by eliminating a lengthy slow-speed bypass.
- A tunnel to connect Caltrain in San Francisco to the new Salesforce Transit Center.
- A replacement rail route in response to the crumbling of the Del Mar bluffs. (See article on page 4.)

This package could be readily funded if the Legislature shifted the continuing appropriation of cap and trade funds from HSR to inter-city rail. TRAC proposes the HSR project be terminated after completing Construction Package 1, from Madera to Fresno. In preparation for such a major change in direction, TRAC suggests the Assembly pass a resolution signaling CHSRA that it does not support the track electrification contract going forward.

Policy & Political Considerations

- A business-friendly approach could win bipartisan support, making it possible to reach a settlement with the federal government on the looming grant issues that complicate HSR decision-making.
- This proposal would result in a 21st Century rail system for California that connects Sacramento to San Diego and San Francisco. This would be very attractive to legislators.
- With large new private sector investments as well as the same public dollars being spent around the state, this would be very attractive to unions and the construction industry.
- The dramatic increase in rail ridership resulting from these projects would provide larger and quicker GHG reductions than a Central Valley HSR project.
- These projects, with lower costs than the Central Valley HSR project, would be far more affordable for both commuters and travellers. Good ridership requires affordability.
- Controversy surrounding the CHSRA project has already tainted all rail projects in the eyes of the public. Public support for future investments in passenger rail is at-risk, threatening the State's options for congestion relief and GHG reduction. That could also reduce the union jobs generated by new rail construction.

TRAC believes the time is right for an entirely new approach to rail infrastructure. This could finally turn the HSR project into a success. By opening the door to the private sector, the State can overcome the current constraints on financial resources available for HSR.

Coast Observations

ELON MUSK IS THE "WILLY WONKA" OF TRANSPORTATION, according to Chuck Marohn of Strong Towns, a national urban advocacy non-profit. This is because Musk offers proposals like HyperLoop, which are sugary and shiny, but have no substance. Marohn says this distracts from solutions that may lack flash, but which are realistic...A SANTA ROSA DEVELOPER SPENT $1.7 MILLION TO KILL SMART'S 1/4 CENT SALES TAX EXTENSION MEASURE on the March Primary ballot. The $1 million spent by Federated Indians of Graton Rancheria, who own the Graton Casino & Resort in Rohnert Park, wasn't enough to undo the public's distrust of SMART, in part caused by its management's quirky refusal to release ridership numbers... SPEAKING OF SMART, SMART IS LOOKING AT LOW INCOME FARE DISCOUNTS in response to numerous public complaints that its fares are high…BART RIDERSHIP HAS DECLINED BY MORE THAN 10 MILLION ANNUAL RIDERS SINCE 2014. At least one editorial recommends full automation of BART trains, so BART can afford to run more frequent service without skyrocketing train driver costs…BART HAS RECENTLY IMPLEMENTED A TRIAL 'AMBASSADORS' PROGRAM TO IMPROVE SECURITY AND PASSENGER COMFORT. If BART trains can be fully automated, switching drivers over to these new positions would be cost effective, and no one would necessarily lose their jobs…SPEAKING OF THINGS THAT WILL PROVOKE RESISTANCE, A NEW BILL IN SACRAMENTO WOULD MANDATE BAY AREA TRANSIT AGENCIES TO INTEGRATE FARES, SCHEDULES AND MARKETING. This is despite–or maybe because of–an interagency group of transit agency managers put together by MTC having previously voted "no" on doing a transit integration study. It has been our observation that the priorities of too many bureaucrats are: (1) get the money; (2) get the money to go to agency salaries; (3) get the money to full fund the pensions; and (4) serve the public (a poor fourth)…WHILE TRANSIT RIDERSHIP HAS BEEN DECLINING IN PARTS OF CALIFORNIA, SACRAMENTO REGIONAL TRANSIT HAS DOUBLED YOUTH AND STUDENT RIDERSHIP due to free fares. Overall RT ridership is up 6% so far in FY 2020, reversing a worrying several-year trend…PRESIDENT TRUMP's PROPOSED FY 2020-21 BUDGET WOULD CUT $500 MILLION FROM AMTRAK, KILLING ALL LONG-DISTANCE TRAINS. As usual, this plan is DOA in Congress, even in Trump's Republican-controlled Senate…DON'T GO JAYWALKING IN PHOENIX, EVEN IF YOU HAVE TO WALK ANOTHER ½ MILE TO A "LEGAL" CROSSING. Our Arizona neighbors are planning to INCREASE the fines for jaywalking. No reductions in carbon emissions there!... MEANWHILE, LOS ANGELES METRO OBTAINS ANOTHER $1.3 BILLION FROM THE FEDS TO FINISH THE WILSHIRE AVENUE SUBWAY TO WEST L.A. Even L.A. is making slow, if steady progress in developing alternatives to the automobile…

SANDAG kicks off largest effort to stabilize Del Mar bluffs, protect rail line in nearly a decade

Roughly $10 million of repairs and construction expected to start in February. Top California officials pledge to find additional funding after recent collapse

By JOSHUA EMERSON SMITH
San Diego Union Tribune

Special to California Rail News. Article originally published January 27, 2020. Copyright 2020. Used with Permission.

The Amtrak Surfliner heads north along the tracks in Del Mar on Dec. 5, 2019. Trains were slowed down while passing through the area following a bluff collapse in November [2019] that required emergency stabilization of the cliff. *(K.C. Alred / The San Diego Union Tribune. Copyright 2020. Used with permission.)*

DEL MAR— The Del Mar bluffs have been plagued by a series of collapses over the last 18 months that have left residents and officials increasingly concerned about the stability of the busy railroad perched atop the cliffs.

Top transportation officials are now gearing up for the largest bluff stabilization effort in nearly a decade. The San Diego Association of Governments and North County Transit District have already dedicated roughly $10 million to repair stormwater drainage structures, replace parts of sea walls and install additional steel and concrete support columns to hold back the earth.

In December, the two agencies penned a letter to the state saying they need another $100 million over the next four years to ensure the safety of bluffs.

Top state officials have recog-nized the need for stabilization projects and are now also calling to accelerate a long-envisioned plan to relocate the tracks inland — a project that could cost as much as $4 billion.

SANDAG Executive Director Hasan Ikhrata said that his agency could be ready to break ground on building an underground train tunnel through Del Mar in just three years.

"This is a high priority," he said. "I'm shocked that we haven't done it before. To keep spending money on temporary solutions isn't a solution at all."

Ikhrata added that, because of the massive price tag, such an aggressive timeline would only be possible with coordinated support from local, state and federal officials.

That might be more likely than it sounds.

State officials take notice

California State Transportation Agency Secretary David Kim traveled to San Diego last week to launch a new multi-agency collaboration, dubbed the LOSSAN San Diego Regional Rail Corridor Working Group.

The tracks in Del Mar are part of the 351-mile Los Angeles-San Diego-San Luis Obispo (LOSSAN) Rail Corridor — which carries about 8 million passengers and more than $1 billion worth of freight every year. The line is a key connection between factories in Mexico and markets in the United States.

"Erosion of the bluffs threatens the stability and viabilty of the route," said Kim in an email. "I challenged the group to examine funding programs for the near-term stabilization of the Del Mar bluffs, as well as programs available for planning and constructing a long-term solution."

Kim signed a letter supporting a SANDAG grant application to the Federal Railroad Administration seeking about $12 million for the bluffs, money he said the state would match.

"The state is committed to this project and this region, and we already have significant skin in the game," he said.

The meeting brought together a broad array of elected officials and their representatives, as well as federal and state transportation officials, such as Christine Kehoe. The former member of the state Legislature who currently sits on the California Transportation Commission said she had long known about the instability of the Del Mar bluffs.

However, she said her sense of urgency increased dramatically after a failure in November that left a gaping hole just feet from the tracks. The event led to canceled routes and delays as officials scrambled to make emergency repairs.

A section of bluff in Del Mar collapsed on Nov. 29, 2019, just feet from the tracks. "When I saw that photo in the paper after the Thanksgiving washout, then it was, like, this is serious," Kehoe said. "I thought it's an issue that needs to be addressed immediately if we're going to maintain public confidence in our railroad."

Also part of the working group is state Senate President Pro Tem Toni Atkins, D-San Diego, who secured last summer more than $6.1 million in funding to help stabilize the crumbling cliffs. She has pledged to keep such cash infusions coming for at least another four years.

"I am committed to working in partnership with all interested parties to find a feasible solution for the Del Mar Bluffs and the rail line," she said in an email. "This will be a long-term undertaking, requiring a great deal of colla-boration across our state and local transportation agencies."

The new focus on Del Mar's 1.7 miles of track along the LOSSAN corridor has come as something of a relief to local officials. Del Mar Mayor Ellie Haviland said she's feeling "optimistic."

"Getting all the right people around the table will ensure we keep moving forward on the difficult decision that we need to make to get this done," she said.

"What I'm not excited about is seeing what's going to have to take place on the bluff to stabilize it," she added. "That's not easy to watch, but we don't have a choice. This is critical to our region."

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Construction on the bluffs

SANDAG has poured more than $15 million into stabilizing the Del Mar bluffs over the last two decades. The last major effort was in 2011 when the agency spent roughly $5 million largely to install solider piles.

There are now about 230 of the roughly 3-foot-wide columns inserted in the cliff side, some connected with steel cabling for added reinforcement.

To construct them, crews drill up to 60 feet into the bluffs, drop in a steel I-beam and then fill the hole with concrete. As erosion reveals the supports, wet concrete — known as shotcrete — is sprayed onto the cliff face to strengthen and mimic the look of the bluffs.

SANDAG plans to spend about $5.78 million starting in February to install new piles at 9th and 10th streets and near the south end of Stratford Court. The agency is also planning to reinforce sea walls at 13th, 12th and 7th streets.

At the same time, SANDAG and NCTD are also planning to spend roughly $4.5 million to upgrade many of the drainage structures.

Concrete collection basins and culverts along the bluffs capture rain water and funnel it out to sea before it can eat away at the cliffs from the top. However, pipes can become clogged during rain storms, such as during the Thanksgiving collapse.

Transportation officials are now hoping to expand the capacity of those structures and in some places replace a number of them to allow stormwater to move more freely.

"We really need to go in and completely clean them out," said John Haggerty, director of engineering and construction at SANDAG. "It's anywhere from heavy maintenance to new construction on the top of the bluffs."

The human factor

Urbanization appears to be greatly exacerbating the situation, from overwatering of lawns in the summer to rainwater in the winter rushing off roofs, streets and parking lots.

Officials estimate that more than 100 inches of water a year wash through the bluffs, compared to just 12 inches under natural conditions.

"Development to the east has created much more runoff than when the railroad was built in the early 1900s," said Haggerty with SANDAG.

The results can be spectacular and often dangerous, such as when about a year ago a 55-foot-wide section of cliff came crashing onto the beach in Del Mar.

The situation is compounded when the network of culverts along the bluffs become blocked with debris and water floods over the face of the bluffs, such as over Thanksgiving when the city received nearly two months' worth of precipitation in two days.

At the same time, ocean tides are eating away at the base of the cliffs, a situation expected to increase dramatically with sea-level rise from climate change.

"Wave erosion at the bottom of the cliff decreases overall cliff stability," said Adam Young, a researcher at UC San Diego's Scripps Institution of Oceanography studying cliff erosion in Del Mar and throughout California. "This instability allows elevated rainfall and groundwater conditions to trigger landslides in the upper cliff."

The bluffs are currently eroding at an average rate of about a foot every two years, according to SANDAG officials. But cliff failures are more likely in some spots. While parts of the bluffs are made of robust mudstone, others are more prone to collapse, such as those filled with materials when the railroad was first constructed.

"Arrow" Rail Line Between San Bernardino and Redlands to Open in 2021

Fleet Powered by Hydrogen by 2024

By Michael D. Setty

Editor, California Rail News

Hydrogen-powered regional commuter trains are set to begin operations in 2024 between the new downtown San Bernardino Transit Center and downtown Redlands, according to plans by the San Bernardino County Transportation Authority (SBCTA). A fleet of three 108-seat Swiss trainsets ordered in 2016 would serve the 9-mile "Arrow" route with 25 proposed daily round trips. Trains would run every 30 minutes during peak periods and every 60 minutes during the midday, evenings and weekends. Two trainsets would operate during peaks, leaving one trainset as a spare. Projected operating costs are from $8–$10 million annually.

Five stations will be served by the Arrow line: downtown San Bernardino Transit Center, Tippacanoe Avenue, Esri Station (New York St.), Downtown Redlands, and Redlands University Station. About 800 daily riders are projected under 2018 conditions, according to the project's Final Environmental Impact Report. Up to 1,350 daily riders are projected for the Arrow line by 2038. These projections are comparable to ridership experienced on the Riverside-Perris Metrolink extension, which opened in 2016.

SBCTA holds an option to purchase four additional trainsets should the hydrogen project prove successful. SBCTA began construction of the Arrow line between downtown San Bernardino and downtown Redlands in 2018, with completion expected next year.

This $360 million project is notable for its proposed vehicle strategy. The three trainsets supplied by Stadler Rail of Switzerland will commence operations as Diesel Multiple Units (DMUs) beginning in 2021. By 2024, SBCTA and Stadler will convert the trainsets to hydrogen fuel cell power. If the vehicles operate satisfactorily, the Arrow line will be the first self-powered zero-emissions rail line in California. As described in a Stadler Rail press release:

A contract signing between Stadler and the San Bernardino County Transportation Authority (SBCTA) cleared the way for the first hydrogen-powered passenger train to operate in the United States.

The agreement marks major progress in bringing zero-emission passenger rail technology to the U.S. The hydrogen-powered FLIRT H2 vehicle is planned to be introduced in 2024 as part of the Redlands Passenger Rail Project, a nine-mile connector between Redlands and San Bernardino's Metrolink station.

Under the agreement, Stadler will develop the first hydrogen-powered train. The ordered vehicle consists of two cars with a power pack in between. This holds the fuel cells and the hydrogen tanks. The train is expected to have seating space for 108 passengers and in addition, generous standing room. The FLIRT H2 is projected to transport passengers with a maximum speed of up to 79 mph (130 km/h).

Project costs include $25 million for research and experimentation necessary for conversion of the Arrow fleet from initial diesel power to retrofitting with hydrogen fuel cells. The design of the Stadler trains makes this possible due to the "power pack" in between the two cars of the FLIRT H2 trainsets. These modular power packs typically include two diesel engines and related electrical gear to power the train's wheels. The power pack modules can hold up to four diesel engines, or combinations of various clean technologies, such as batteries, supercapacitors, or fuel cells and hydrogen storage tanks.

The main advantage of power pack design is flexibility. For example, should the proposed conversion to fuel cells fail or prove not to be cost-effective, the Stadler design allows the trains to operate as self-contained electric multiple units powered by battery packs or supercapacitors. In 2020 fuel cells are still costly, complex and have issues with long-term durability; hydrogen fuel storage is complex and presents safety hazards if not designed properly. If hydrogen is obtained by reforming natural gas, greenhouse gas emissions and overall thermal efficiency are significant issues.

Metrolink's Big, Big Expansion Plans for Commuter Rail

County Freeway Existing Metrolink Network Existing Metrolink Stations Metrolink Projects

Source: SCAG 2019

By Paul Dyson
Former President, RailPAC

The Southern California Optimized Rail Expansion program, SCORE, is a $10 billion plan to improve regional rail by making service more reliable, consistent and quieter in time for the 2028 Los Angeles Olympic Games.

The California Transportation Commission approved a six-year grant for $875.7 million as the first phase of funding. The first SCORE projects will be completed in 2023. The numbers on the map represent projects that fall into several cate-gories, summarized in the box to the right.

In the context of this massive project, TRAC's sister rail advocacy organization, the Rail Passenger Association of California ("RailPAC"), recently put forward a proposal we wanted our readers to be aware of.

In November of last year the second platform at Van Nuys station was opened for service, eliminating a significant choke point on the Ventura County line. RailPAC is requesting an immediate scheduling exercise to determine whether it is feasible to begin operating a half-hourly interval Metrolink service between Union Station (LAUS) and Van Nuys.

This service should operate seven days a week from 5:00 a.m. to 11:00 p.m. and thus enable travel to and from Burbank Airport from before start of operations until after the last scheduled flight arrival. (Based on 7:00 a.m. to 10:00 p.m. flight operations). This would be a demonstration of the benefits of a full SCORE build out and conform with the State Rail Plan objective of integrated "pulse" service. As infrastructure projects are completed these trains can be extended to Chatsworth and Simi Valley.

A regular interval service will give BurbankBus and Glendale Beeline the chance to schedule effective connecting service for those critical first and last miles. You should also consider allowing Metro fare media for those connecting to and from Metro buses on Van Nuys Boulevard, possibly treating Metrolink as the equivalent of an Express bus.

While there may be the need for additional infrastructure improve-ments, including a passenger under-pass at downtown Burbank, RailPAC believes that it is important to deliver something to maintain interest in the SCORE program. Burbank Airport is handling close to 20,000 passengers a day and rail's current share is minimal. At the same time, improved service to downtown Burbank and Glendale is vital to those employment centers.

RailPAC has consistently supported the creation of an integrated public transportation system for southern California. Railpac has long been frust-rated by the failure of Metrolink to achieve its potential as a regional rail system, and we are encouraged that the SCORE proposal is at last being given consideration.

The Southern California Optimized Rail Expansion program, SCORE, is a $10 billion plan to improve regional rail by making service more reliable, consistent and quieter in time for the 2028 Los Angeles Olympic Games. The California Transportation Comm-ission approved a six-year grant for $875.7 million as the first phase of funding. The first SCORE projects will be completed in 2023.

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Key to Metrolink SCORE Map

Siding extensions
1, 2, 4, 14, 16, 54
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L.A. Metro Changes Its Rail Line Naming from Colors to Lettters

By Fred Glienna
TRAC Board Member

The 22-mile Blue Line from Los Angeles to Long Beach opened in 1990, and after almost thirty years has received a new name: It is now the A Line, or, more completely, A Line (Blue).

The change came about because Los Angeles's Metro officials are planning new routes, and fear the proliferation of colors might confuse patrons, or create difficulties for riders with color-perception disabilities.

Thus far, in addition to the A Line, only the Expo Line, now the E Line, has received the new name, although in the future the Green, Red, and Purple lines will get rebranded.

The Los Angeles Times reported in October 2019 that "with eight major bus and rail projects scheduled to open over the next decade, Metro officials said they were rapidly running out of colors that looked distinct. For example, on a sun-bleached transit map, lines that are pink and red, or lime and green, could be easily confused."

For ease of transition and continuity, the current color names will be retained as the new letters are added, and the original colors will still be used on system maps.

New York City, with the most complex subway system in the country, uses letters and numbers, with colored signage associated with particular lines. For instance, the A, C, and E lines are blue, and the 1, 2, and 3 lines are red, and the 4, 5, and 6 are green. (New Yorkers typically refer to their trains by number and letter, and not by color.)

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Whither the L.A. "Red Line" subway between Union Station and North Hollywood?

Boston's four subway lines uses colors: red, blue, orange, green. Its Green Line branches use letters, B, C, D, E.

Philadelphia uses colors (blue, orange, purple, green).

BART uses colors (yellow, blue, orange, green, red) on its maps, but not on its cars, and has destinations for most of its route names.

Chicago's fabled L system used names for 70 years, but switched to colors 26 years ago, to make the system "easier to navigate," according to Chicago Transit Authority (CTA) documents. Most–but not all–Chicagoans use the color names, but some cling to the old. (The Ravenswood line is the Brown Line, and the State Street subway is the Red Line.)

There is an apparent oddity here, since Los Angeles is moving away from colors for presumably the same stated reason of easier navigation.

The venerable tube in London uses colors for its legendary map, but most riders refer to the name of the lines, not the colors.

Los Angeles, in starting with colors and then moving to letters, seems to be creating a problem where one doesn't exist. Are they expecting to become more like New York?

The Last Train to Busan: Zombies Ride the Rails in South Korea

By Fred Glienna

Most folks aren't big fans of zombie movies ("Night of the Living Dead," et al) but there is a 2016 film from South Korea that's worth some notice from rail buffs.

"The Last Train to Busan," directed by Yeong Sang-ho, has all the requisite gore and lunacy one expects from the Zombie Apocalypse genre. What makes it noteworthy is that a very large percentage of it takes place on a high-speed rail (HSR) train. And what a train!

We hear a lot about Amtrak's struggles, and the battle for HSR in California—and we also hear all too often about U.S. superiority.

The passenger cars in this film simply put ours to shame. They are sleek, well-appointed, and fast. They have wide doors from car to car, plenty of large windows, with ample storage over luggage over the seats. Most are 20-car consists, with electric locomotives powered through overhead wires. Power cars are at each end of the train. There are 92 first class seats, and one car in each set features theater equipment. The first 12 trains were built in France, and the remaining 34 of the first generation were built in South Korea. These KTX-1 trainsets can each carry about 1,800 people at 190 miles per hour.

About 70 per cent of South Korea's population lives along the 200-mile rail corridor between Seoul and Busan. Its principal passenger lines were heavily used, so the need for a new line between the two cities was clear. South Korea began construction of its high-speed rail in 1992, to ease that congestion, and completed it in 12 years. Now the journey takes about two-and-a-quarter hours

The contrast with the U.S. couldn't be greater. Amtrak's Acela has its disappointing performance history, but at least the trains run. California is not even on the HSR map.

The California HSR project began in 2008, and in the cheeriest scenario, the first leg of operation won't be ready for another eight years, at a minimum. Admittedly, the distances in the Golden State are greater than in Korea, but the first operational segment of the California system is about the same length as Korea's. That system was built in twelve years, not twenty.

Worse, since the California bond issue was passed, China has built around 15,000 miles of high-speed trains, while California has spent a fortune on plans, studies, hearings and, especially, consultants.

One wonders who the zombie is.

European Railroads See Climate Change As An Opportunity

By Bill Stephens
Special to California Rail News,
Courtesy of Trains Magazine

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A private sector "open access" intercity passenger train in the Czech Republic and Slovakia.

Railroads across the pond see a huge opportunity to gain freight and passenger volume as part of a European Green Deal that aims to significantly reduce greenhouse gas emissions.

Viewed from an Italian high-speed train running from Florence to Venice, an Italian freight train heads north in 2016. Bill Stephens photo.

Last month the Community of European Railway and Infrastructure Companies, their version of our Association of American Railroads, argued that boosting rail's share of the freight market to 30% by 2030, up from 17% today, would go a long way toward making transportation carbon-free by 2050.

Already, the CER points out, 90% of rail ton-miles in Europe are powered by electric locomotives, with an increasing amount of electricity generated by renewable sources such as wind and solar.

With proper incentives and various carbon pollution penalties, the railway lobby group says, more freight could be diverted to rail intermodal as well as the carload network. Better integration between national passenger systems could support higher loads on trips of up to 620 miles, particularly when those journeys are across borders.

Transportation is the only sector of the European economy that has not decreased its greenhouse gas emissions since 1990, they note. And they say the European Union and its member states should prioritize investments in rail if the continent wants to meet its ambitious goal of reducing [passenger] transportation's carbon footprint to zero as a way to fight climate change.

If such a proposal for public investment were floated in the U.S. it would be dead on arrival.

With my railroad skeptic's hat on, I reached out to Christian Kuhn, a Berlin-based European rail consultant who is a former chief operating officer of Deutsche Bahn's freight business, to get a sense of whether this plan has a snowball's chance in hell of becoming reality.

The short answer is yes, in some form. The political climate in Europe is vastly different than in the U.S., and the Green Party is gaining ground, which makes the rail proposals fall into the realm of the possible.

"Climate change is massively moving voters here, and people who claim that there is no such thing as man-made climate change are looked at a bit like those who believe that the Earth is flat and babies are being brought by storks," Kuhn says.

The German government alone plans to spend 156 billion Euros – the equivalent of $176 billion U.S. dollars based on current exchange rates – on rail improvements over the next decade. And this is in a country that's half the size of Texas. "This is massive and absolutely unprecedented," Kuhn says.

Some of those billions will be spent to make long-distance passenger trains operate more frequently, with departures every 30 minutes instead of the current 60 minutes, to better connect cities in the core network across the country, Kuhn says. It's part of a goal to double rail passenger ridership in the next decade.

Imagine how that kind of financial support could help Amtrak, Virgin Rail, or Texas Central further develop regional passenger markets in the U.S.

On the freight side, CER sees rail as the backbone of a seamless intermodal system that should be improved to handle longer trains and heavier axle loadings. Truck trailers would be built so they can all ride in intermodal service.

European truckers, of course, would object to all of this. "True, but voters don't like trucks," Kuhn says.

And what about the potential for electric trucks powered by renewable energy sources? "Railroads need funding just as the road sector does in order to maintain their ecological advantage," Kuhn says. "Please don't forget that 90+% of railroad freight in Europe (by ton-miles) already moves electric. So it's the truck catching up, not us."

European rail systems are geared toward passengers, not freight. Wouldn't there have to be massive investment in new freight infrastructure, none of which is carbon-free? "In some cases yes. But there are also large chunks of infrastructure with spare capacity (especially in the East), and roads also require investment," Kuhn explains. "What CER wants is to get funding for these investments, as any good lobbying organization would."

Supply chain trends in Europe are the same as those in North America: Shipments are moving shorter distances in smaller sizes, which favors trucking instead of rail.

"True, but competition always occurs at the margins between modes," Kuhn says. "There is a lot that rail can take there, and for the environment it is also OK if the truckload of scrap switches to rail and parcels stay on the road."

The green argument has not been lost on the rail industry on this side of the Atlantic. North American freight railroads tout their energy efficiency, noting that they can haul a ton of freight nearly 500 miles on one gallon of diesel fuel.

Steel wheels rolling on steel rails are more environmentally friendly than roads, no matter what continent you're on. But the Europeans, thanks to widespread electrification, are way ahead of the U.S. on the greenhouse emissions front. They also have a greater desire to reduce emissions.

Oddly enough the CER's Green Deal report, Rail's priorities for the European Green Deal, was issued just weeks before the Atlantic magazine reported that the four big U.S. railroads and the AAR for three decades funded efforts to deny climate science. This should surprise no one, given the industry's historic reliance on revenue from coal traffic.

The AAR says it hasn't supported climate-change denial groups in two decades. "Railroads stand as the cleanest way by far to move freight over land. Despite moving a third of freight volumes, railroads represent just 0.6% of total U.S. greenhouse gas (GHG) emissions and only 2.0% of transportation-related GHGs," the AAR says.

True enough. But in the U.S. and Canada, being environmentally friendly doesn't translate into public support the way it does in Europe.

This article was originally published on the *trains.com* website on December 19, 2019. You can reach Bill Stephens at email: *bybillstephens@gmail.com* and follow him on Twitter *@bybillstephens*