

STEEL WHEELS

PASSENGER RAIL IN CALIFORNIA AND THE WEST

ISSN 2325-629X

MAGAZINE OF THE WESTERN PASSENGER TRAIN COALITION

RAILPAC • ALL ABOARD ARIZONA • PASSENGER RAIL KANSAS • NEW MEXICO RPC • MINNARP • PASSENGER RAIL OKLAHOMA



Metrolink MP36 accelerates from Burbank Junction, with F59 in the siding. Charles Freericks

Story p 21

SW 3Q21 Contents:

From the Editor

President's Commentary

Amtrak Dining - Steve McFerson

Infrastructure Priorities -

Yanity, Frampton, Roberts

Dumbarton Corridor - Roberts

Amtrak to Glacier Park - Selden

Battery and Hydrogen -
Yanity and Dyson

Arizona News

Nevada News

From the Back Platform - Dyson

Annual Meeting Information

3rd QUARTER 2021

PUBLICATION OF THE



RAIL PASSENGER ASSOCIATION OF CALIFORNIA & NEVADA



From the Editor's Desk

By Paul Dyson - RailPAC Editor

We have another packed edition this quarter, and many developments to cover, even some good news! It's always encouraging to have a federal government with a positive attitude

to passenger rail, and while hopes and aspirations will likely exceed what is delivered there is reason to believe that some progress will be made. On the other hand, local governments in California, counties in particular, are continuing to be the main barrier to the development of regional networks. Steve Roberts deconstructs the absurd people mover proposal for the Dumbarton Bridge, Caltrain governance is in chaos, and Metrolink finally has a new CEO, but (almost) no passengers. Amtrak dining is back, folks are digging trenches in the hydrogen/battery debate, and our neighbors in Nevada and Arizona are trying to make things happen.

Of greatest concern to me in the near term is the limited accommodation on the national network trains, especially sleeping cars. I have heard numerous explanations, including inadequate winterization leaving cars out of service and needing major repairs, staff shortage occasioned by on board staff not returning after furlough, and even expired air brake certification causing cars to remain sidelined. It's entirely possible that the reason for the trains of only eight cars or less and just two sleepers is a result of a combination of all these factors and more besides. The one common theme is that these are management problems, which will require skill and experience, a positive attitude, and the willingness to spend money on a product line that is in high demand. We all know about the age of the rolling stock and have called many times in this magazine for a new build, but that won't solve the short-term problem. Now is not the time for cost-cutting. Now is the time for long consists, lots of seats and berths, and carrying lots of passengers to reinforce the message that passenger trains are an important part of the mobility choices for this country. Otherwise, why bother?

pdyson@railpac.org



Dumbarton Rail Bridge, disused since 1982. Full story p8 Photo-Arne Brown



President's Commentary

By Steve Roberts –
RailPAC President

In last quarter's commentary I was upbeat with the confidence of vaccinations, a return to daily service on the long-distance trains,

growing ridership and forward momentum in Washington. This quarter the "bloom is off the rose" so to speak. The Delta Variant is exploding like a wildfire undermining confidence and creating the need for more caution. The long-distance trains are back daily but with track outages from wildfires and floods, and with continuous delays due to the explosion of freight traffic on-time performance has suffered.

Labor shortages in conjunction the dramatic ramp up in consumer goods and travel demand is driving a supply chain and transportation meltdown. It is also impacting the amount of Amtrak's serviceable cars and the Reservations Center. This is resulting in short consists and long call wait times. This situation is pandemic driven. When the hiring process was shut down there was no flow of new employees to replace retirements and furloughed employees who found other jobs. A more recent factor is furloughed employees close to retirement who took early retirement when recalled. The airlines have also been hard hit, with widespread delays and cancelled flights. Combined with demand that went from slow to full speed in two months, it is a perfect storm. Consensus is that eventually things will be rebalanced.

It looks like positive news in Washington on the legislative front. The Bipartisan Infrastructure Framework (BIF) (based on the Administration's infrastructure bill) was combined with the every five year Surface Transportation Investment Act (STIA) of 2021 into one bill that has passed the Senate. If the House concurs, the funding levels in these two bills will result in a substantial investment in addressing state-of-good repair issues and underlying an expansion in rail service. Just of word of caution, the spending levels in the bill are less than some original proposals and funding authorizations associated with the STIA are appropriated yearly. Often times in future years Congress will appropriate less funds than authorized. In addition the funding is spread over approximately five years. So funding for mega-projects will not be all at once, but in grants over a number of years.

On the appropriations side the House passed the FY 22 Transportation, Housing and Urban Development which includes Amtrak and the Federal Railroad Administration (for infrastructure capital grants). This is the yearly appropriation which the STIA authorizes. If the Senate concurs with the House funding levels this will increase rail funding by \$1.3 billion compared to last year. With ridership and ticket revenues increasing this should allow Amtrak to spend more on capital investments as compared to the this year when pandemic driven low ridership required greater spending on operations. Critical is continued multi-year capital funding at levels to keep assets in a state-of-good repair while also continuing to replace Amtrak's life-expired fleet. The oldest cars, the Amfleet are first, followed by single-level long-distance coaches and then the bi-level fleet.

New this year (if the Senate concurs) is the new PRIME (Passenger Rail Improvement, Modernization and Expansion) grant program. The level of CRISI (Consolidated Rail Infrastructure and Safety Improvements) grant program was increased by \$125 million. The CRISI program is critical for addressing those freight rail network bottleneck investments critical for improving on-time performance and increasing frequencies on the National Network.

Please note that Congress' key focus in both BIF and SITA is state of good repair. Expansion is a secondary consideration. As a result a significant amount of the funding in both bills is directed to the replacement of life-expired assets in the Northeast Corridor. While there is significant funding available for the National Network, it can be applied to existing state funded corridors and Amtrak's Corridors Initiative as well as the long-distance trains. Given state legislators bias toward service in their states and Amtrak's focus on its corridors initiative it will be a challenge requiring extra advocacy for the long-distance trains to compete for funding. A group of projects that enhance the existing network (i.e. Southwest Chief reroute via Pueblo, daily Cardinal and Sunset Limited) may have more chance of success than completely new routes. Many such enhancement projects were outlined in the route reports mandated by 2010's Passenger Rail Investment and Improvement Act. And replacing the Superliners certainly has high priority.

Speaking of equipment, Amtrak's purchase of hybrid Siemens locomotives (diesel/battery) - if they are true hybrids like a Prius - could represent a major move in making Amtrak more fuel efficient. In the 1st Quarter Steel Wheels Paul Dyson provided an overview of battery powered trains. In this issue he and Brian Yanity explore both hydrogen and battery powered trains.

The auto industry is going all electric and the airplane manufacturers are making huge gains in energy efficiency. The airliners coming into the fleets now, the A320 with new Pratt & Whitney engines and the 737 MAX with the CFM LEAP engines, are over 40% more fuel efficient than the airliners in the 1980's. While Amtrak has made gains each time it replaces its locomotives the gain is small (about 5%) and over a longer replacement cycle. One of Amtrak's key attributes is its energy efficiency, if it loses that attribute why have rail service? The other modes are closing the gap fast! That is why the 30% gain from a true hybrid locomotive combined with selected expansion of overhead catenary electrification (i.e. Washington – Richmond), would reset the landscape and provide more time for non-fossil fuel alternative power sources to mature.

Finally in the exuberant days last spring as Covid restrictions were removed the RailPAC Board decided to move ahead with a small scale in-person Annual meeting in October. There would only be one speaker and the required business meeting; attendance would be limited, masks and vaccinations would be required. Now we have the highly contagious Delta Variant. We are still moving forward, it is still two months distant, but we may have to default to Zoom meetings. If you plan to come make sure you book cancelable hotel reservations. More information will be on the RailPAC website in the near the end of August. See meeting notice on page 20.

Passenger Dining Onboard Amtrak's Coast Starlight

Steve McFerson – RailPAC Member Photos by the author except where noted.



Recent Dining Car History.

Remaining portions of real dining car service began ending on Amtrak when Contemporary Dining was launched in 2018, later expanded to remaining eastern routes, and rebranded as Flexible Dining. Though this menu was often revised, it lacked excitement and wasn't much more than a cold boxed meal or warmed Swanson T.V. Dinner style food. Eating these over several days would make any long-distance rail journey far

less desirable. Perhaps this type of meal is more appreciated while consumed in airlight because you'd enjoy a better meal within a few hours. During 2020, it expanded nationally except on Auto Train.

This was far from the first downgrade of Amtrak dining car service. About 15 years ago, Amtrak instituted its Simplified Dining concept. Most food loaded onto the dining car was precooked and reheated onboard – no longer cooked from raw supplies while enroute. Many chefs, food preparation specialists, and all dish washer personnel were removed from dining cars. Thereby, breakable plates, bowls, and beverage ware were replaced with throw-away items. For a brief period, plastic utensils and paper napkins were served on the dining tables, until metal utensils and cloth napkins were restored.

A few years ago, Amtrak branded Enhanced Dining Car Service on three long distance trains (Coast Starlight, Empire Builder, and Capitol Limited) where again passengers could dine on breakable china plates. That didn't last long. Amtrak removed dining cars from the Silver Star a few years ago. Cardinal passengers last experienced dining car service about 20 years ago.

HAS GOOD SERVICE RETURNED? Amtrak relaunched Traditional Dining Car Service on five western long-distance trains starting June 23, 2021. Amtrak promotes dining car service as chef-prepared meals for breakfast, lunch, and dinner. Improvements beyond pre-pandemic levels include



Southwest Chief Dining Car crew, Claudia Martinez and Richard Gotcha, celebrate flowers and real food. Photo, James Smith

complementary soft beverages between meals, "throughout your journey," and table service with glassware, cutlery, and white linen tablecloths. However, "ceramic dishware is set to debut later this year." At dinner, two appetizers are offered in place of a dinner salad, and lunch entrees are also available. Until full seating returns on dining cars, this service is offered only to sleeping-car passengers.

During July 2021, this writer experienced the Coast Starlight during two roundtrips between Los Angeles and the Bay Area to evaluate the reintroduced dining car service. Both roundtrips occurred while the Starlight did not operate immediately north of Sacramento due to reconstruction of Union Pacific's fire damaged tracks. I experienced services provided by three dining car crews serving 10 meals – four lunches, four dinners, and two breakfasts.

Roundtrip #1 occurred while there was no alternate bus transportation north of Sacramento. Therefore, the service staff turned with the train at Sacramento and the same dining car staff served in both directions. However, on roundtrip #2, two service crews rode the buses between Sacramento & Klamath Falls, Oregon with passengers. The service crew departing Sacramento on the southbound train early in the morning received inadequate sleep during the night, which resulted in reduced service to diners.



Table setup: Fresh flowers replaced the fake flowers used in prior years. Each tables' vase contained a white rose, red rose, and baby's breath. Only Lewis Carroll's Queen of Hearts could object. At mealtimes, dining tables were not always as advertised. White linen tablecloths were used only during dinner. Paper placemats were used

during breakfast and lunch. Food was served on throwaway dishware. This was expected because of a long supply chain many restaurants are experiencing in obtaining new ceramic dishware provided by fewer manufacturers. Beverages were not served in breakable glassware. Throwaway plastic cups and paper coffee cups are still too numerous in inventory, a dining car staff member explained. Communal dining was not utilized. Diners shared a table with the same passengers who share a room.

Lunches experienced were Angus Bacon Swiss Cheeseburger and Caesar Salad with Chicken. Angus Burgers served on both trips contained a beef patty slightly warm and cooled very quickly without signs of the juicy fats that burger diners enjoy. It appeared to be a warmed precooked beef patty continuing the Simplified Dining process. It did not appear to have originated from a raw beef patty cooked on the train enroute. The coleslaw served with the burger was overly sweetened, appearing to be an east coast style. On other days, lunch was



a Caesar Salad with chicken. On one trip, a piece of sliced precooked cold chicken fresh out of a refrigerator was served. On the other trip, the chicken was served warm – uncertain whether it was raw before

pan-roasting on the train or a warmed precooked version that never touched a frying pan while onboard. A somewhat warm sourdough roll was served only one of two days when Caesar Salad was requested.

Dinners experienced were Flat Iron Steak, Chicken Breast, and Salmon. The menu's custom starch and vegetables accompanying each entrée is a nice touch and improvement. Steak was small, Salmon was an adequate size, and Pan-Roasted Chicken Breast was generously larger than the similarly described chicken served with lunch's Caesar Salad. No specials were available for lunch and dinner.

Each entrée was dry, served somewhat warm, and cooled quickly. This suggested that each meat item was precooked before delivery by Aramark (supplier of Amtrak's food and beverage supplies) and warmed while enroute. The sauces served with entrées made them palatable. Several vegetables tasted water soaked, suggesting they were frozen and/or precooked before being warmed or cooked enroute.



Regrettably, Simplified Dining continues with the restored service. During one dinner, the salad appetizer was served with the dinner plate. When expressed displeasure with the SA, she apologized that their food preparation

specialist was new and inexperienced. After expressing this concern to the LSA, he explained that it's the chef's prerogative and we don't have any control over that. Appears this LSA exercises no influence on the Superliner Dining Car's lower-level operation.



Desserts continue to be offered with lunch and dinner. Dessert upgrades now include drizzled sauces on the plate, whipped cream on top with strawberry slices and blueberries. Second crew served fewer berries, and the last crew served no berries. Desiring a lower sugar dessert, this writer received some berries upon request instead of the menu desserts, thus avoiding a Caine Mutiny situation. Despite less than typical summer season dining car patronage, desserts continued to run out. However, offered desserts also included items not on the printed menu, such as traditional and Bundt chocolate cakes.

Breakfasts experienced were Scrambled Eggs and a Three Egg Omelet. During both breakfasts, scrambled eggs and an omelet were served piping hot and retained their heat well into dining. I concluded that breakfast entrées (unlike the dinner entrées) were cooked completely while enroute. Roasted Breakfast Potatoes were shriveled and tasteless, appearing precooked before departure continuing Simplified Dining. Including option of cheese, tomatoes, peppers, and onions with eggs is excellent, but only when the dining car staff is willing to provide this.



When the dining car staff spent the night in Sacramento and received adequate sleep, the entire breakfast menu was offered while traveling south. However, when the dining car staff rode the bus from Klamath Falls to Sacramento overnight, they did not obtain adequate sleep and may not have arrived on the train early enough to prepare all breakfast items for a timely opening. Therefore, a limited breakfast was served offering only Continental Breakfast and Scrambled Eggs – no omelets nor French toast. During this breakfast, Scrambled Eggs were obtained with cheese, but tomatoes, peppers, and onions were declined when requested. This writer believes these were not offered due to lack of preparation time, but the answer given was, 'they're only available with omelets, not with scrambled eggs, pursuant to the menu.' However, the printed menu states otherwise. Also, a croissant was not served this day.



p6 RailPAC's James Smith (L) with Richard Gotcha, rode the Chief to Riverside to check out the new menu. Photo, Claudia Martinez

Complimentary beverages between meals are an excellent service continued from Contemporary/Flexible Dining. Whenever I walked to the dining car requesting a beverage, someone was always there to provide it, when staffed with a crew that obtained adequate sleep the prior night. An exception was the dining car staffed by crew members who traveled on the bus. On this day, the dining car was empty between meals, likely catching up on needed sleep and rest. Could a sleeping car passenger receive a can of cola at 3am, whether they woke up in the middle of the night or had just boarded the train? "Throughout your journey," communicates they will.

Inventory. Dining car was not adequately stocked. Some items were depleted during a meal period. Little justification exists for a Coast Starlight (southern section) while having less patronage to run out of anything, while using the top-off inventory strategy at the Los Angeles and Oakland commissaries. On first day, iced tea was depleted during lunch – its first meal. Large plastic iced tea containers were not

placed on the train, but instead only four single-serving plastic bottles intended for between meal requests.

Commentary. I understand this is Amtrak's first step to restore Traditional Dining to a level provided long ago and what passengers expect. Full dining car service should have a minimal standard. Always use linen tablecloths. Eliminate throwaway dining ware. All primary meat entrées and most vegetables are cooked from raw supplies while enroute. Expand dining car service hours round the clock with staff scheduling. "Chef prepared" isn't good enough – Amtrak should commit to Chef Cooked food enroute. Some items can be cooked off the train, such as breads. A full dining car service must replace Flexible Dining on all other overnight routes, including the Cardinal. When it is safe to do so, dining car meals should be available to all other passengers.

Though variations can exist, chefs and food preparation staff must adhere to the basics on the printed menu. Different Menus should be implemented on different routes and in different directions. At least one special, a paleo meal, lower sugar desserts, and a pasta-free vegetarian item should always be offered. (As the name suggests, vegetarian items should primarily contain vegetables.)

Before the Amtrak Reform and Accountability Act of 1997, train's café lounge food was prepared by railroad employees in Amtrak kitchens. Since this legal requirement was removed, quality of café food was downgraded to cellophane wrapped prepackaged breakfast and lunch sandwiches, pizza, burgers, etc. of the type sold in gas station minimarts and tiny convenience stores. As an improvement, Amtrak and Aramark should develop preprepared healthy fresh food entrée items from catering companies nearby to each Amtrak commissary. Improved Contemporary boxed meals should be offered in the cafés.

Steve McFerson is Treasurer and Excursion Chairman of Railway & Locomotive Historical Society, Southern California Chapter, who manages passenger relations and caterers providing excellent food and beverages to hundreds of passengers onboard unique railroad excursions.

WANTED: Photographers for Steel Wheels

WE NEED YOU!

If you have a collection of hi-res jpeg photos, especially of passenger trains in California, or enjoy taking them, contact the Editor, pdyson@railpac.org.

Don't forget to check your subscription expiration date on the mailing label and renew your membership if it is due.

Thank you for your continued support for RailPAC and passenger rail.

Are you a RailPAC Member?

If yes, please check your address label on the back page for your renewal date, and renew today.

If not, WHY NOT?

We are frequently judged by our strength in members.

We need your support to pass more legislation like SB 742 and to continue our campaign for better service.

See back page for details.

Infrastructure Initiative California Priority Projects

By Brian Yanity, Robert Frampton and Steve Roberts

With the development of the combined Bipartisan Infrastructure Framework (BIF) and the Surface Transportation Investment Act of 2021 (STIA) substantial funding is anticipated to be available to move forward with improving rail transportation in California. However, there are constraints that will impact which projects can be funded and when. First, the Federal funding will be appropriated over at least a 5-year period so the total amount of funds is not immediately available. Second, only a select few projects, not yet funded, are far enough advanced in the planning process that design and construction funding can be put to use near-term. Third, due to limited agency staff resources and the effort required to submit grant submissions, only the highest high value projects can be advanced as a priorities. The priority list below is RailPAC's recommendation for near-term grant requests. It was developed as a consensus by the authors reflecting these constraints. The only exception to these guidelines was guidance recommending funding to begin the planning efforts for some critical mega-projects with long-lead times. This list does not preclude support for or further advocacy of additional projects in the years ahead.

Projects –

- **High-Speed Rail**
CHSRA - Chowchilla - San Jose pre-construction, 70% design, property acquisition, utility identification and relocation

Statewide

- **Coast Line Los Posas (Moorpark) – Lick (San Jose) –**
Acquisition of Union Pacific's Coast Line Los Posas to Lick. Funding for development of governance, rail line evaluation and appraisal, contract development and initial payment

Southern California Intercity and Commuter Rail

- **San Dieguito Bridge and Double Track, Del Mar** – Life-expired trestle, current design provides no resilience against sea level rise or storm surge – Environmental Impact Report, Design and Construction Funding
- **Del Mar Bypass Tunnel, Del Mar** - Environmental Impact Report
- **North Oceanside Double Track Bridge Replacement, Oceanside** – Replace Life - Expired Bridge, Double Track, Construction Funding
- **San Onofre/North Green Creek Beach Bridges Replacement Double Track Project, San Diego County** - Three life-expired timber trestles - Construction Funding
- **Ball Road Grade Separation, Anaheim** – Environmental Study, Design and Construction
- **17th Street/Lincoln Ave. Grade Separation, Santa Ana** – Construction Funding
- **Fullerton Junction Interlocking Project, Fullerton** – Construction Funding
- **LinkUS, Phase II** – Funding for Pre-construction and 100% design
- **Doran Street and Broadway/Brazil Grade Separation, Glendale and Los Angeles** – Design and Construction Funding

- **Raymer (Van Nuys) - Bernson (Chatsworth) Double Track** -, Los Angeles – Construction Funding
- **Rice Ave. Grade Separation, Oxnard** – Design and Construction Funding
- **San Geronio Pass Coachella Valley Rail Corridor Service Project** - Tier II Environmental Impact Report – Funding for EIR
- **Fullerton – Riverside – San Bernardino Complete Third Main Track, Riverside County** – Construction Funding
- **Jackson Street Grade Separation, Riverside** – Environmental Studies, Design, Pre-construction and Utility Identification and Utility Relocation, Construction
- **Lone Hill to White Ave Double Track Project, San Dimas/La Verne** – Construction Funding
- **Lilac Ave to Rancho Double Track Project, Rialto** – Construction Funding

Northern California Intercity and Commuter Rail

- **Capitol Corridor Third main track Sacramento to Roseville** – Construction Funding
- **New siding Agnew, Santa Clara** – Construction Funding
- **South Bay Connect. Alameda County** - Reroute of Capitol Corridor and UP freight trains in the East Bay – Design, Pre-Construction and Construction Funding
- **San Joaquin Corridor Capacity Enhancements for 8th and 9th Frequency** - Environmental Impact Site Specific Studies, Design and Construction Funding
- **Merced Connection BNSF to CHSRA** - Environmental Impact Report, Design and Construction Funding
- **Alviso Wetlands Causeway – Life-Expired Embankment and Bridge** – Conduct Outreach, Define Operating and Capacity Requirements, Environmental Impact Report
- **San Luis Obispo Service Capacity Enhancements, Salinas Thru Santa Margarita** – State of Good Repair, Siding Rehabilitation, Power Switches and CTC – Environmental Impact Site Specific Studies, Design and Construction Funding
- **Caltrain Extension to Salesforce Transit Center from 4th and Townsend Station – San Francisco** – Final Design, Pre-Construction, Construction Funding
- **Caltrain Growth Scenario – Additional Four-Track Segments for Overtakes and Multiple Grade Separations** – Phased Environmental Impact Site Specific Studies, Design and Construction Funding
- **Dumbarton Corridor Interregional Rail Bridge – Newark to Redwood City** – Tier !! Environmental Impact Report, Design and Pre-Construction Funding
- **Altamont Pass Tunnel – Alameda County** – Joint Altamont Commuter Express and Valley Link New Alignment and 3.8 Mile Tunnel lowering the grade, increasing the capacity and improving the alignment between Tracy, CA and Livermore, CA – Environmental Impact Study, Engineering and Design

Dumbarton Rail Corridor – Opportunity Being Squandered?

Steve Roberts – RailPAC President

The Dumbarton Rail Corridor project provides a once in a century opportunity to construct a vital link that would support an expanded and integrated public transportation network throughout the greater Bay Area region, including coordinated heavy rail connections linking the Peninsula with the East Bay, Tri-Valley, San Joaquin Valley, Northern California and the nation.

A high-capacity state-of-the-art heavy rail artery along the Dumbarton Rail Corridor (Corridor) is needed to realize this objective. RailPAC's concerns are centered around several of the current assumptions outlined in the recent (March 15, 2021) Dumbarton Rail Corridor Update. These are:

Regional Demand

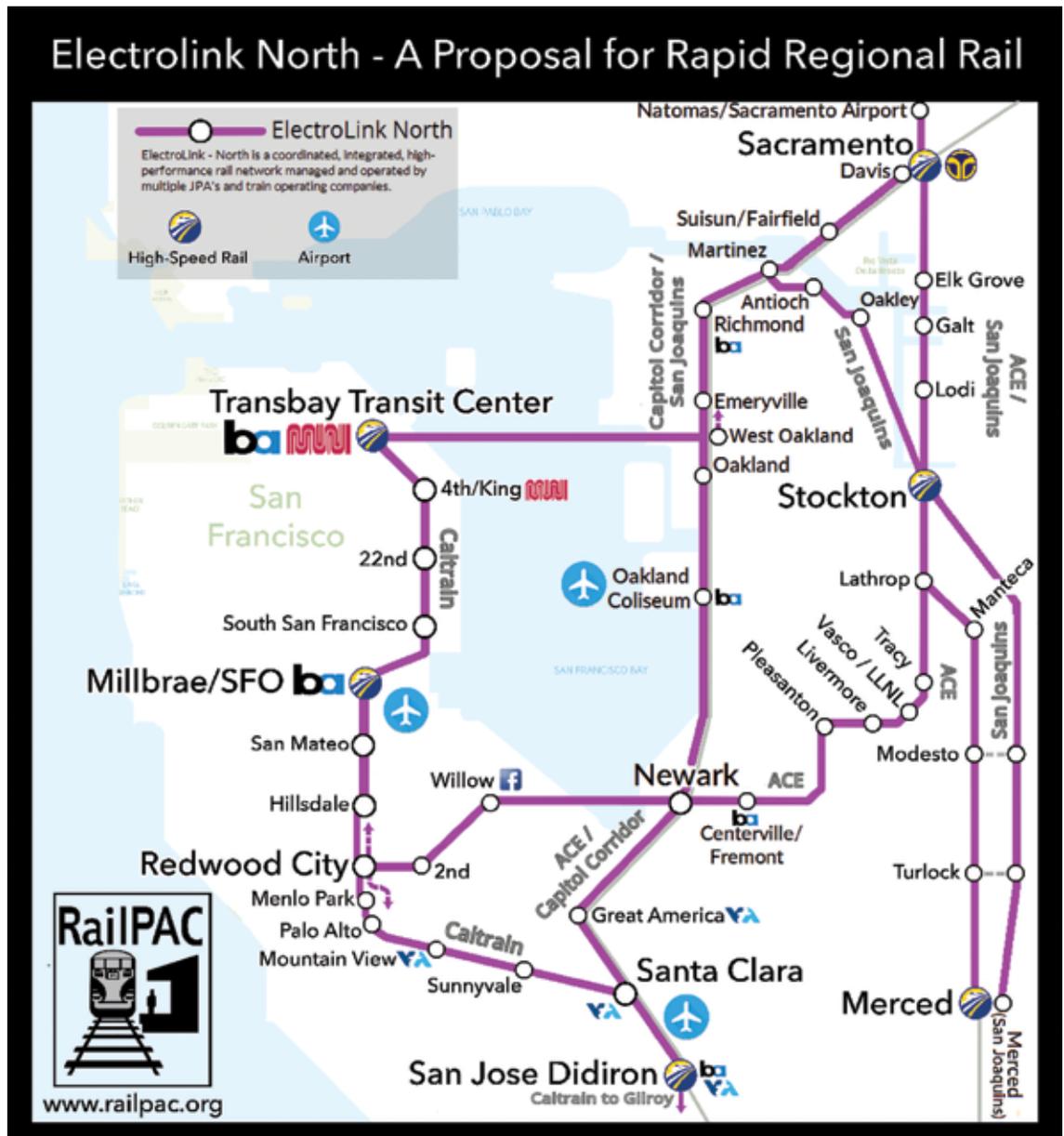
The scope of the demand forecasts in the Dumbarton Rail Corridor Update of March 15, 2021 (Update) limits the project to connecting only the 9-County Bay Area, including Marin, Napa and Sonoma counties, with the Mid-Peninsula. These three counties are only a small part of the Corridor's market and represent limited traffic. RailPAC views this approach to be an overly restricted utilization of an interregional asset. A truly balanced demand forecast should include market data from the 21-county mega-region.

Such an expanded forecast would include San Joaquin and Stanislaus Counties, suburban areas with affordable housing. Residents of these two counties represent a major segment of potential Dumbarton Rail Corridor commuters to jobs on the Peninsula. If this population were included in the demand forecast, the document would be able to forecast impact of one seat commuter rail service from the San Joaquin Valley to Redwood City, with direct connections to Peninsula cities via Caltrain. However, if the Update's limited analysis became a reality; it would make mandatory no fewer than two connections to reach Peninsula cities.

Thus it appears that the parameters of the Update's current demand scoping are structured to favor recommendation of a particular technology – a technology that is promoted by one of the analysis participants. For a balanced forecast the market demand from the 21-county mega-region should be estimated.

Transit Mode Alternatives

The enhanced level of additional one-seat service from an integrated network was not included in the forecasts for the Commuter Rail Transit (CRT) mode. This would have allowed the attribute of long-distance CRT San Joaquin Valley ridership to be added to its local ridership forecast, facilitating a direct comparison with the Autonomous Vehicle Transit (AVT) approach. The enhanced local service and ridership from the AVT model is included in the total ridership forecast which, in RailPAC's view, is misleading. Omitting consideration of San



Joaquin Valley ridership invalidates the AVT versus CRT forecast comparison in the Update.

The study's objectivity may be subject to question with respect to the definitions given for various transit modes - (CRT), (AVT), Light Rail Transit (LRT), and Bus Rapid Transit (BRT). For example the Update considers only AVT as offering autonomous operation. In fact AVT is a mode in the development stage by a particular vendor and is not yet mature. Analysis of other self-steering transit modes is not presented. Actually self-steering automated CRT (BART) and automated LRT (SF Muni Metro) have been in service for decades. Autonomous BRT is in test stage, similar to autonomous heavy haul highway trucks.

CRT, LRT and BRT are mature technologies with multiple equipment vendors and a real world record of performance and costs. In contrast, AVT is an emerging and unproven technology. Further testing and benchmarking are needed before AVT can be introduced as a reliable transportation option. For that reason AVT technology constitutes a high risk investment for stakeholders.

To date, closed route autonomous micro transit systems, also known as Personal Rapid Transit (PRT), have been proposed as a lower volume micro urban transit mode to reduce street traffic. These systems focus on personalized point to point transportation between public transportation hubs and dispersed destinations. By design they are not intended to serve as a higher volume line haul system. While PRT has been conceived to replicate the flexibility of the private automobile for urban areas, to date they have failed to attract much interest. The main obstacle is that cities have resisted installing the numerous elevated guideways needed to develop a true intra-urban network. On the other hand, there are many examples where high capacity transit systems like CRT are stimulating the development of transit-oriented housing and employment centers in urban and suburban localities.

Bridge Design

Bridge functionality must also be evaluated. Building the bridge exclusively for light weight vehicles would create a single purpose asset unusable for meeting alternative emergency related transportation needs. As a result the AVT technology represents a higher risk investment. Reducing the specific bridge risk with a more robust bridge would increase AVT's infrastructure costs.

A further consideration is that Autonomous Vehicle Transit modules are light weight and high profile. High winds on the Bay could possibly compromise the stability of vehicles traversing the bridge. If this is the case, cross-Bay operations would need to be suspended under windy conditions to safeguard occupant's safety.

Operational Considerations

Because AVT is as yet unproven, cost comparisons to other modes must be based on uncertain assumptions. For example, the Update's comparison of Operations Center costs to other modes' costs concludes that the operational costs for the AVT Operations Center are significantly lower than for seasoned modes. That seems questionable given that the AVT Operations Center has to monitor the status of a system with significantly

more vehicles than the other modes, has overtakes at local stations, and relies on the Operations Center to monitor the system for security as a result of having no personnel in the field. The eyes and ears of vehicle operators are critical during service disruptions and security incidents. Additionally the report does not document why the CRT mode would have a higher Operations Center cost than other modes.

Another issue is passenger capacity per vehicle. For local neighborhood riders arriving at the AVT station at random times low AVT wait times are a plus. For large groups of riders arriving off a BART, ACE or Caltrain connection the large capacity of CRT, LRT and BRT combined with timed transfers means low wait times for these riders. Except for the quickest of commuters, connecting passengers from BART, ACE or Caltrain to the AVT system would have to queue up, be sorted by destination and wait through the departure of several full AVT vehicles at rush hour. It is therefore critical that ridership demand projections be segmented between (a) local riders within Union City or Redwood City, and (b) Transbay riders traveling across the Bay.

Silo Issues

An issue often raised by stakeholders is the balkanized character of the Bay Area's public transportation network. The Dumbarton Rail Corridor presents an opportunity to address the issue with a rail line integrated into Northern California's extensive and expanding passenger rail network. But what is proposed is a completely different technology incompatible with any other Bay Area transportation mode, just another disjointed link that appears deliberately designed to serve only local interests. And it adds yet another agency whose mission is solely focused on the creation of a Peninsula-based micro transit urban network.

Conclusion

What should be the vision for the Dumbarton Rail Corridor? One option is for this project to be primarily a local shuttle to link Union City Station District property developments with BART, and Redwood City's tech offices with Caltrain with some trans-Bay riders in the mix. That approach means connections, often with time consuming waits for a trans-Bay rider who would commute using ACE, Capital Corridor, East Bay BART, and Caltrain. Multiple connections with long waits would inevitably disincentivize ridership, doing little to relieve highway congestion.

The alternative option is for the Dumbarton Rail Corridor to be transformed into a high-capacity link in Northern California's interregional passenger rail network – Caltrain, BART, Capitol Corridor and ACE. By expanding the utility of the interregional rail network greater travel opportunities would be achieved by links throughout the greater Bay Area, Tri-Valley and San Joaquin Valley. Finally, in case of a catastrophic event, a robust high capacity Dumbarton Rail Corridor would provide a critical transportation alternative for the Bay Area. RailPAC recommends this vision for the Dumbarton Rail Corridor. We believe the Dumbarton Rail Corridor must be restored as vital component in a comprehensive integrated Northern California passenger rail network.

steve@railpac.org

Amtrak Group Travel to Glacier National Park

Andrew Selden – President URPA

Like many colleges, mine sponsors an alumni travel program. In mid-2020, I proposed to the college a week-long trip to Glacier National Park, by rail from St. Paul, Minnesota. Planning proceeded, on the explicit assumption that the Covid epidemic would abate by summer 2022 and that anyone who signed on for the trip would have been fully vaccinated.

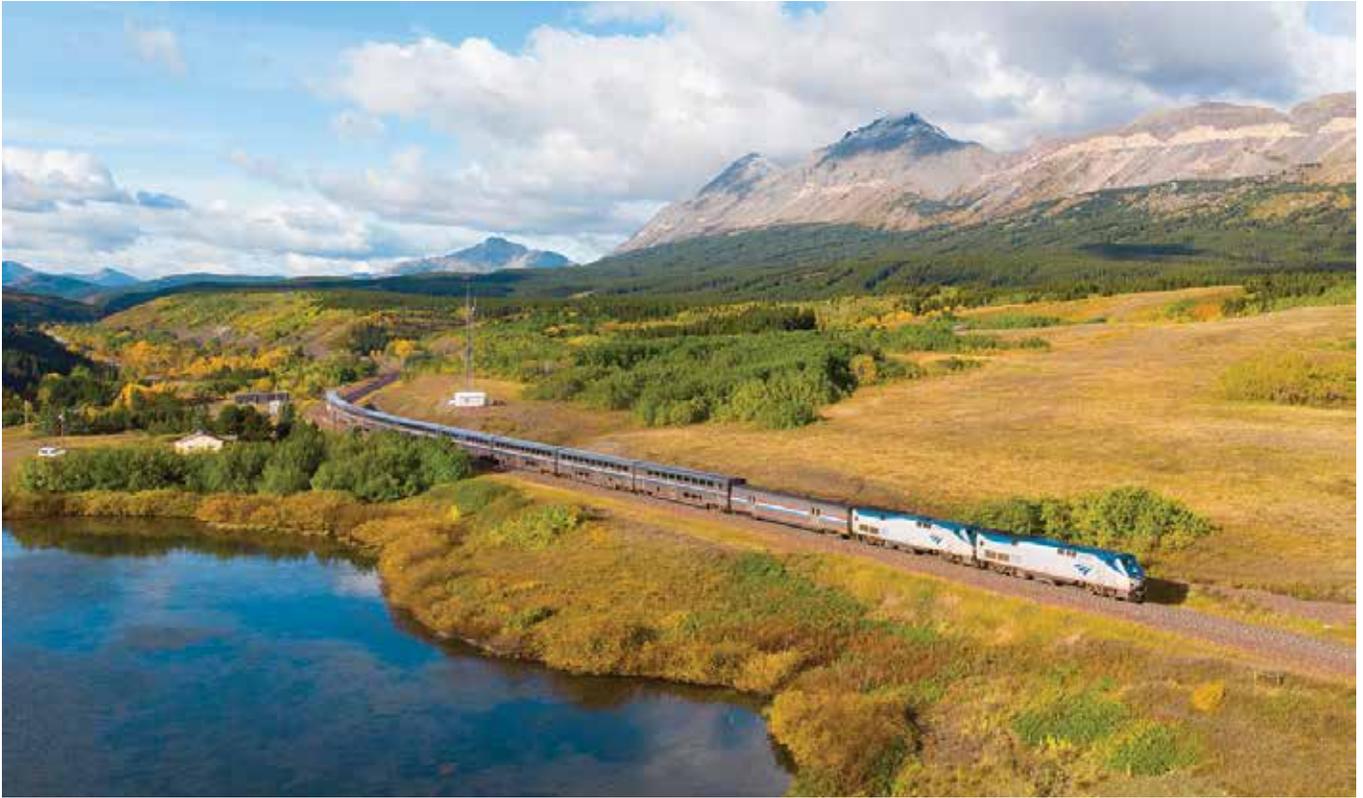
Glacier is the only non-urban National Park never to have lost direct access by passenger train.

We made the trip in late June, using the Empire Builder from St. Paul (MSP) to East Glacier, and returning from Whitefish to St. Paul. Our outward trip was one of the first to feature partial restoration of traditional meal service in the dining car (for sleeper passengers only).

A few random observations on the rail experience follow:

Our group was just big enough to qualify for group rates, which helped a bit on the base rail fare, but not on sleeping car space. We booked through Amtrak's group desk--the good news is that you deal with a live agent who, while not overly helpful at least knows what she was doing. The bad news is that for groups Amtrak still issues paper, cash-value, tickets that one turns in to the Conductor. The Conductors are no happier than the passenger to be handling a wispy slip of carbon paper worth in the low six figures. And the Conductors, at least on the Empire Builder, don't carry punches any more. Is e-ticketing really that hard to do for a group?

The Park is as crowded as it has ever been, and instituted a reservation/ticketing system for the first time this year to enter the Park in a private car. Observed volumes off and on the trains



Eastbound Empire Builder at East Glacier, MT September 2019, Photo - Doug Boudrow

at East Glacier, West Glacier and Whitefish were substantial. (Essex is more of a winter stop.) This traffic (on Amtrak) occurs in a marketing vacuum--how do non-railfans find out about Amtrak's service to the National Park?

Our eastbound, #8(7/01), had a baggage car, dorm, two Seattle sleepers (un-refurbished Superliner-IIs "Florida" and "New Hampshire"), a diner, a single Seattle coach, a Sightseer lounge, two Portland coaches and one Portland sleeper (un-refurbished S-II "Indiana"). The second Seattle sleeper (car line 831) was reinstated on 7/01; our outward trip on #7 had but a single Seattle sleeper and one coach, and the 8 overflow rooms in the dorm car. All compartments were sold and many turned over along the way.

The train (8(01)) was slightly oversold in coach in Montana, and several times the Conductor and the Portland coach attendant made PA announcements telling people they only had one seat not two and had to make room for new passengers boarding at the next stop.

All three sleepers were functionally sold out and all 8 of the overflow Roomettes in the dorm car were sold. The car attendants in the two Seattle sleepers split taking care of the Roomettes in the dorm car. Two bedrooms and five Roomettes in our car did what our attendant called "hard turns" at Whitefish, with people boarding into rooms vacated at the same stop. The same thing happened at MSP where more than 100 new passengers boarded (i.e., normal pre-epidemic summer traffic).

It was obvious that both trains could easily have sold out a second Seattle coach and a second Portland sleeper. The absence of the usual second Seattle sleeper on the westbound was bewildering. Crew said that so many employees were laid off last Fall that cars were just now being slowly maintained at Beech Grove and returned to revenue service, but they also said that was just as well because Amtrak doesn't have enough qualified car attendants to staff more cars, and the next training class wouldn't conclude until after Labor Day. Qualified car attendants are being asked to work trips on shorter rest breaks than normal (3-4 days rather than 5-6).

On the topic of short staffing: #8(01) had exactly ONE server in the diner, plus a working LSA and two chefs. They tried, but with three full sleepers, and a LOT of room service meal delivery going on, the service in the diner suffered greatly. It is clear that they are not ready to accommodate coach customers in the diners with this level of labor on board. (Severe labor shortages are common throughout the restaurant industry all around the country.)

We found the new food itself is pretty good. Most of the dishes come out of sealed pouches and are only heated and plated in the galley, but it's probably one notch better than two years ago, and on an entirely different planet from "Flexible Dining." The lunch menu has an adult grilled cheese-and-turkey sandwich served on toasted bread. We wondered if they have toasters back in the galley after 35 years, or if the bread is supplied that way.

At breakfast, the menu describes the "Signature Railroad French Toast" as being "Texas Toast" but it isn't--it's ordinary bread, a bit dry, and disappointing. The presentation is nice, with some whole berries. It's probably heated on the flat grill. The steak at dinner is called a "flatiron" steak. The people who ordered it rated it as "OK" and a bit tough. My salmon was pretty good.

Out-of-stock situations still occur, even though the trains are stocked at each end point. These included some wines, some desserts and a couple of entrees. Crew reported being frequently shorted on their orders from the commissaries.

The new one free drink at dinner feature is confusing on board. It was

applied smoothly on our outward trip on #7, but the one server on #8 tried to limit it to "one free per trip" not "per dinner", but backed down when someone read the menu to her (which says "one free at dinner").

Bare tables with paper placemats and napkins, and menus without prices, greet diners at breakfast and lunch; nice linens — white tablecloths and navy blue napkins--appear at dinner, and look classy and inviting. Plastic plates and glassware, with lightweight stainless flatware, are used at all meals. Wine is served in tulip-bulb glassware. Amtrak says real china plates and real glassware will return "later" in 2021.

The onboard masking rule appears to be: "Masks are required when Conductors are present." Conductors made all the right announcements, but actual enforcement was rare.

Coach passengers must fast while traveling, because we saw less traffic at the snack bar in the lounge car than one might expect.

Thanks to the wonder of recovery time, and nearly flawless dispatching by BNSF, we stopped at St. Paul about 20 minutes early.



The picturesque and historical depot at Whitefish MT. Built by the Great Northern Railway in 1928 Photo - Andrew Selden



RPS
RAIL PROPULSION SYSTEMS

Providing Zero Emissions Solutions for Switcher and Passenger Locomotives



For more information, contact us at info@railpropulsion.com or visit our website: railpropulsion.com

THE TRAIN SHACK, INC
SERVING ALL YOUR MODEL RAILROAD NEEDS SINCE 1985



ALL SCALES G-N VINTAGE TO NEW
AUTHORIZED FACTORY SERVICE
DIGITAL INSTALLATIONS
HOUSE CALLS & CUSTOM LAYOUTS
WORLD WIDE SHIPPING

1030 N. HOLLYWOOD WAY • BURBANK, CA 91505
www.trainshack.com (818) 842-3330

expertise. value. results.

dengate
design group

- custom logos
- design & graphics
- 1 to 5 color printing
- presentation folders
- stationary, envelopes & business cards
- brochures, flyers, postcards & newsletters
- checks, NCR forms & invoices
- labels & bumper stickers
- specialty items including...
- trade show displays & banners
- promotional items, t-shirts, hats & magnets

916.863.7625
fax 916.965.7152
8241 sunbonnet drive
fair oaks, california 95628
website: www.dengate.com
e-mail: design@dengate.com

BECOME A Volunteer Station Host

Host at select Amtrak
Capital Corridor &
San Joaquin stations.

★ Plus San Luis Obispo



stationhost.org/volunteer

Battery and Hydrogen for Passenger Rail Propulsion

by Paul Dyson and Brian Yanity

There's a lot of quite heated argument going on about hydrogen propulsion for passenger trains. It's enticing to think that any "fuel" produces zero emissions, and many politicians have jumped on this as a magic bullet. Unfortunately there is a very real environmental cost to transportation, both in construction of facilities, building of vehicles, and daily operations. In the passenger rail world, how green is hydrogen, and how does it stack against the main alternatives: batteries, and conventional overhead wire electrification .

The best way by far to "fuel" a train is with electrification based on high voltage overhead catenary wire, or overhead contact system (OCS). There is no weight penalty for carrying heavy fuel or batteries, and at least in theory limitless power is available to be drawn on to operate trains at very high speeds or to haul heavy freight trains. The negatives are high cost of installation, and unsightly wires and masts, especially in the USA if routes are used by tall container and automobile-carrying train cars. We remain convinced that for any route that has a reasonable frequency or tonnage, or steep or long gradients, the best long-term solution is full electrification with OCS. However, we are far from that happy day, and for the purposes of this discussion I am only going to look at hydrogen and battery, which are most likely to be used to replace diesel in the near future.

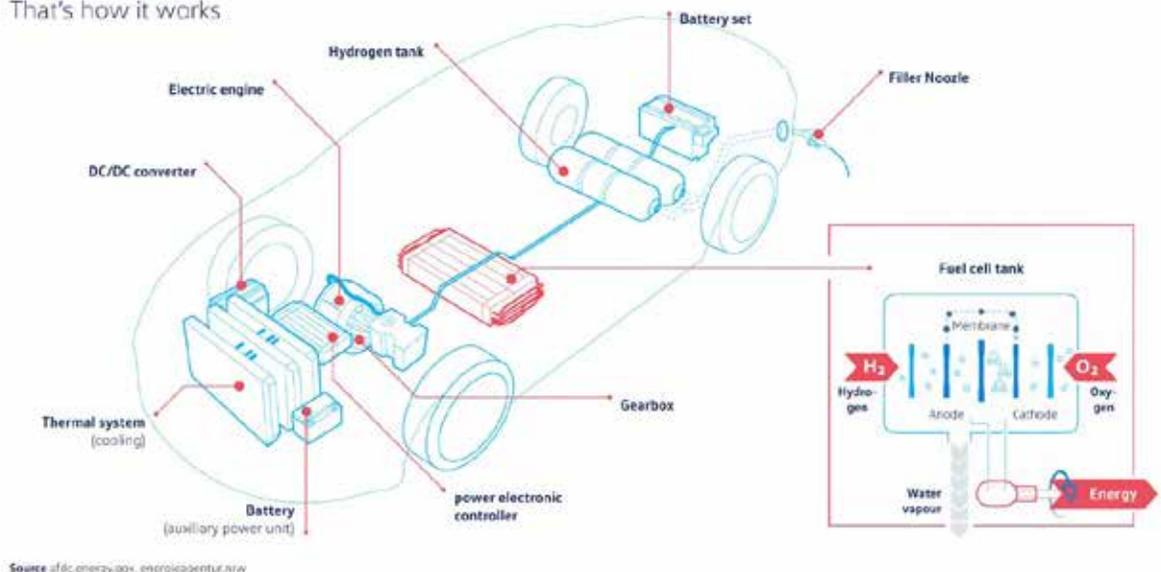
Of course, battery and hydrogen are based on the use of electricity, as is diesel. It's all a matter of how you get the original "fuel" from source to the electric motors on the axles that move the train. Let's go back up the chain a little for a brief discussion about electricity and the best use of surplus production. Whether electricity is generated from fossil fuels or the various "green" sources such as hydro power, wind and solar, there are times when the energy produced is greater than the immediate consumption within the area to which it can be transmitted. There are many choices regarding how best to use this surplus, each of which requires capital investment, and some significant and far-reaching decisions are required. These choices range all the way from making steel via hydrogen fixing, desalinating sea water, and cooling buildings. Surplus power can also be stored for later use, by pumping water up to

reservoirs for later hydro generation, compressing air to be used to drive a turbine, storing in battery packs, making hydrogen, or selling to new markets by extending the grid. Nothing is free, and as we expand wind farms and fill fields with solar panels, and run wires to harvest the watts generated, remember that there is an environmental cost of manufacture and installation. And, as with all forms of electricity production, distribution and consumption there is inefficiency. We never get out as much as is put in, most times by a very large margin. As with all the earth's resources, we have the responsibility to avoid waste and use what we have as efficiently as possible.

Back to passenger rail, where might hydrogen and battery fit into the picture? Both hydrogen and batteries are products that can store and transfer electrical energy. In the case of hydrogen, it can be manufactured from water via electrolysis where the electricity is generated and then transported via pipeline or other conveyance to where it is in demand, or it can be made close to the market at the end of a transmission line. For passenger rail we would need new infrastructure to bring the hydrogen to rail depots where it can be stored and pressurized in large quantities to be later transferred to locomotives or multiple units. Once on the train, in a highly pressurized tank, the hydrogen is then converted back into electricity via a fuel cell. Because fuel cells work better generating electricity at a constant rate and do not respond quickly to demand, the train also has a bank of batteries to receive the fuel cell output. These batteries in turn provide current to excite the traction motors "on demand", i.e. when the train driver opens the throttle, powering the axle and moving the train. A fuel cell vehicle is, by definition, a hybrid. A fuel cell cannot work effectively without batteries.

Hydrogen Drive

That's how it works



Typical drive train for hydrogen road vehicle.

Batteries are somewhat different. They too are manufactured, and the environmental cost of sourcing the raw materials is a matter of concern. Once made and installed on a locomotive or multiple unit the issue then becomes one of keeping the batteries sufficiently charged to propel the train through its daily cycle. The service life of batteries must also be taken into account as also is the ability to recycle them or place them in secondary use as storage units. There's a variety of means to recharge the batteries during daily operation. These include short sections of overhead wires (OCS) especially at and on the departure side of stations. The biggest draw on the batteries is acceleration from station stops, so having access to "grid" power for a few hundred yards on departure will significantly increase the range and service hours of a battery train. These sections of OCS may in turn be charged from repurposed ("second life") stationary batteries which are recycled from vehicle use, or direct from the grid. Other recharging options involve wireless power transfer from under the train at stations, a small onboard generator or fuel cell, regenerative braking from stops and coasting, and plugin charging at terminals, each of which contributes to extending the service range beyond what can be accomplished by regular overnight charging.

Range comparison of hydrogen and battery trains:

So how far can you go on a tankful? Here's the rub with hydrogen. The answer is, not very far.

The storage of a sufficient amount of hydrogen fuel onboard a locomotive or train is very challenging for multiple reasons. The low energy density is an unchangeable physical property of the lightest element in the universe, and an inherent limitation of storing hydrogen energy within a moving vehicle of any type. There are several different methods of storing it in tanks, all of which require energy and additional equipment. Storing it in tanks in gaseous form at high pressure has emerged as the most practical way to power hydrogen vehicles. The Alstom Coradia iLint hydrogen train, recently introduced in Europe, stores its onboard hydrogen fuel supply at pressure of 350 bar. Maintaining this pressure onboard uses up 9% of the hydrogen's energy. Compressing the gas at 700 bar only stores 60% more gas than 350 bar, while expending a lot more energy.

If a hydrogen-fueled locomotive (with hydrogen stored at 350 bar) were to have the same on-board fuel storage tank space as a typical diesel locomotive, without fuel tender cars, the fuel energy onboard would be 1/12th that of diesel. A train powered by such a locomotive would have a hard time making it the 70 miles from San Bernardino to Barstow uphill and over Cajon Pass before running out of fuel. If we want to be very generous and assume that new technological developments in the future could double the amount of usable hydrogen energy stored onboard the locomotive, that gives us maybe a 150-mile range. By contrast, a diesel locomotive can go 1,000 miles before needing to be refueled. As described in a recent UK Railway Industry Association report, "It is possible that emerging research might reduce the space needed for hydrogen storage. However, there are no known storage methods that could significantly increase the energy density of stored hydrogen

that is remotely comparable with diesel fuel".

As we have noted, the range of battery powered rail vehicles is extendible throughout the daily work cycle by means of plug in charging at stations, wireless power transfer, regenerative braking and small on board power packs. The majority of the power used is drawn from the grid overnight. An all-electric locomotive powered by an overhead wire of course eliminates the need for onboard conversion of chemical energy into tractive power, so needs no refueling. Today there are a few secondary line trains in Europe in revenue passenger service powered by hydrogen or battery. The main lines there are all electrified with overhead wires

Safety, hydrogen and battery:

We don't know yet what really happens when a hydrogen-powered train at high speed derails and its hydrogen tanks are shattered. The only way to properly evaluate the safety of a hydrogen locomotive in an accident would be to do an actual crash test with its fuel tanks fully filled. Hydrogen-powered trains inevitably have a large quantity of pressurized flammable gas on board that cannot be "shut off". Even short of a derailment, leaks can be a problem. Vibrations and shakiness on a train can rattle loose hydrogen hoses, gaskets, etc. Being a much smaller molecule than methane, hydrogen is more likely to leak than natural gas. One study suggests that hydrogen running through pipes would leak at a rate three times higher than methane (<https://www.nrel.gov/docs/fy13osti/51995.pdf>). Batteries have their moments, largely as a result of heat generated. Efficient cooling systems are a requirement for battery packs.

Energy efficiency of hydrogen:

Studies have shown that the "wire to wheels" efficiency of battery-powered vehicles is 70-90% while vehicles that use hydrogen have efficiencies of 25 to 35%. All-electric trains fed by an overhead wire have 'wire to wheel' efficiencies of over 90%. Thus a locomotive powered by hydrogen fuel cells use at least three times more energy than conventional all-electric locomotives, due to the losses in converting electricity to hydrogen, compressing it to high pressure and then converting it back to electricity in a fuel cell.

The staggering inefficiency of hydrogen rail propulsion deals a serious blow to the argument of green hydrogen (from renewably-generated electrolysis) that you would avoid costly electrical infrastructure. Given that it takes at least three times the amount of grid power to do the same job, you would need to build an 80 MW electrical substation, plus a hydrogen electrolysis and power-consuming storage facility, in order to provide the equivalent power that a 20 MW traction power system would provide via conventional catenary rail electrification system. That is a great deal more cost and land footprint. Laws of physics prevent the energy conversion efficiency of hydrogen from improving significantly at all. It is also hard to see the cost of hydrogen, from any source, dropping to make up the difference.

Hydrogen vs. electric rail supporting infrastructure requirements:

Hydrogen can be manufactured from water via electrolysis where the electricity is generated and then transported via pipeline or other conveyance to where it is in demand, or it can be made close to the market at the end of a transmission line. For passenger rail, we would need new infrastructure to bring the hydrogen to rail depots where it can be stored in large quantities to be later transferred to locomotives or multiple units.

The pitch for hydrogen trains usually centers around the fact that they do not require an overhead wire to be built for their zero-emissions operation. The implication is that widescale deployment of hydrogen locomotives would be less expensive than conventional railroad electrification with overhead catenary wire. What is seldom mentioned is that all the hydrogen infrastructure - plants to make the hydrogen, tanks to store it, pipelines to ship it - is very expensive, and take up a large amount of real estate (much greater than any rail electrification scheme). No one really knows how much this would all cost, or whose neighborhood you would have put it in. The supply chains for making and supplying clean hydrogen at a mass scale do not yet exist. The power grid already exists. While new electric substations, new transmission lines and other upgrades will be necessary for powering electric trains or charging their batteries, these infrastructure investments will be small compared to the size of the existing power grid as a whole.

Sources of hydrogen:

Hydrogen is only green and renewable if it is sourced from 100%-renewably-generated electricity, which is run through electrolyzers to produce it from water. However, almost all of the commercial hydrogen produced in the world today is produced by extracting (or 'reforming') it from natural gas, coal or oil. Hydrogen-powered trains are simply a more expensive way to use a fossil fuel with ultimately a similar level of greenhouse gas emissions. It is thus not surprising that much of today's push for hydrogen is from the natural gas industry and other fossil fuel interests. For example, the global Hydrogen Council lobby group counts various multinational oil and gas companies as members. The California Hydrogen Business Council's major sponsors include Pacific Gas & Electric and Sempra Energy (parent of both San Diego Gas & Electric and SoCal Gas). Interestingly, Alstom does not say that its Coradia iLint trains in Germany are powered by green hydrogen.

Those advocating green hydrogen using renewables seem to have overlooked the basic fact that it takes at least three times the amount of electricity to create the equivalent amount of hydrogen. At a stroke, this demolishes the claimed advantage. Existing technology indicates that batteries, combined with electrified line segments of OCS, represent the best replacement for diesel trains in the context of mixed passenger and freight operations as found in California and the USA in general.



Gov. Arnie Schwarzenegger and BNSF CEO Matt Rose inspect BNSF 1205 Hydrogen prototype at Hobart Yard, CA 2010. Rose does not look impressed! Lower Photo: Photo by Bruce Jacobs

Prototypes don't always succeed – Early Hydrogen Switcher Project

In 2009 BNSF Railway and Vehicle Projects, Inc. unveiled the HH20B at the BNSF shops in Topeka, Kansas, a Railpower GG20B *Green Goat* battery-diesel hybrid switcher locomotive, converted to use hydrogen fuel cells. The diesel generator set was removed, and the hydrogen fuel cell power unit was installed in its place. The project was funded by BNSF, the U.S. Department of Energy, and the U.S. Department of Defense, as the U.S. Army was interested in hydrogen locomotives for use on military bases. Two versions of the locomotive, differing in the battery type and fuel cell power output, were built. Compressed hydrogen at 35 MPa (350 bar) was stored at the roofline in lightweight carbon-fiber composite tanks within a heavily vented enclosure on top of the locomotive's long hood, above the batteries. One of the locomotives had its fuel cell fail during the final stage of testing. The other locomotive performed switching operations at a BNSF Hobart yard in Southern California, and also spent a few months at Hill Air Force Base in Utah, providing mobile backup power for infrastructure. The locomotive was decommissioned in 2016.



The remains of BNSF 1205 at Topeka KS shops, 2013. Photo by Jeff Carlson

Arizona News

Todd Liebman – President All Aboard Arizona

These are exciting times here in Arizona, with dramatic developments over the last few weeks. Let me put them in the proper context to better understand how we got here.

All Aboard Arizona has been working for years to advance planning for the Sun Corridor between Phoenix and Tucson. This has included meetings with mayors and presentations to elected officials throughout the region. When Amtrak announced ConnectsUS plan, we were ecstatic to see Tucson-Phoenix-Los Angeles in the plan. The simple fact is that this corridor makes as much sense as any other corridor in the US including the Northeast Corridor. If you look at Tucson to Phoenix, both cities have light rail/streetcar linking the stations. In Tucson, the station is right downtown, and the streetcar directly links the University of Arizona campus in one direction and the Caterpillar Southwest Headquarters and the Mercado shopping and residential area in the other. The proposed stops, including Marana, are fast growing areas, and the tracks are right in the center of the development. Moving north to Tempe, the tracks are adjacent to the Arizona State University campus, and the line continues to an already existing multi-modal station directly adjacent to Sky Harbor Airport. The next stop, downtown Phoenix, is home to major league sports franchises in the

Arizona Diamondbacks and Phoenix Suns and an area near the old Union Station that is prime for redevelopment ala LoDo in Denver. Wisely, Amtrak plans to continue the line through to the growing Phoenix west side. This is important, because navigating through Phoenix by auto can be a harrowing and frustrating experience, especially at rush hour. Traveling through Phoenix by train can be expected to be a huge selling point as can avoiding I-10 which is still four lanes in spots and prone to congestion.

Service west of Phoenix would be on the Wellton Cutoff or West Line which is still intact, but out of service. This could easily be rebuilt to 125 mph standards which is the top speed of Amtrak's new Charger locomotives. There would conceivably be no or little freight activity as the line is currently out of service. The Wellton Cutoff might be one of those lines best acquired directly by Amtrak for upgrading to higher speed service. In any event, moving some passenger trains off a portion of the busy Sunset Route and running them through Phoenix, and assisting UP with needed upgrades to the Sunset Route in other places is all to the good for the shipper, the passenger and the environment.

Yuma, the Coachella Valley, and LA are excellent destinations, and the large LA metro area is seemingly made

Amtrak's Arizona Vision: Connect Fast-Growing Cities with Frequent and Sustainable Amtrak Service



Vision: New Tucson-Phoenix-West Valley Service

- 3 daily roundtrips
- 2:25 Phoenix-Tucson trip time
vs. 2:30 peak driving time
- 3:05 Buckeye-Tucson trip time

Expand sustainable travel, create economic impact

- 200,000 riders annually
- \$77.7 million in annual economic impact
- \$2.3 billion in economic activity from capital investments
based on \$923 million projected total capital investment necessary
- 3 years estimated minimum time required to start service

Learn more at AmtrakConnectsUS.com





UP Phoenix - Tucson freight at Coolidge, January 2021.

for rail rather than air with its many dispersed communities. It would be hard to find a corridor in both Arizona and California with more potential.

All Aboard Arizona's other imperative has been the daily Sunset. A less than daily rail passenger service is unusable to many people. Over the last year, All Aboard Arizona raised funds to help Rail Passenger Association renew the IMPLAN study which allows reporting on the economic advantages of passenger rail service. As a result, we discovered that making the Sunset Limited/Texas Eagle daily would create about \$16 million in additional economic impact in Arizona alone. Forbes reported that Amtrak President Stephen Gardner stated, at a roundtable forum with area officials, that the Sunset Limited is slated to go to daily service. We do not have more facts about this, but it makes perfect sense. Operating the Sunset daily would actually reduce losses and build ridership. The tri-weekly Sunset is an oddity of history that needs to be changed. The daily Sunset Limited/Texas Eagle would improve service between southern Arizona, Texas, and the East and Midwest, and would link the State of Arizona from east to west.

Announcements and plans are great, but there is a lot to do to translate this into action. The State of Arizona and the local

units of government will need to figure out a framework for moving this plan forward. Fortunately, so far, it seems the plan has great public support. One TV station that did an on-line poll of viewers found that 93% supported the service.

I recently had the chance to ride Amtrak from Milwaukee to Indianapolis. It was a wonderful trip, and I splurged on a Roomette on the Cardinal. Our attendant was attentive and excellent, and while I am ecstatic that the dining car is coming back and improved food service is on the way, the flexible meal was not bad.

Shifting gears, please save the date of December 4th, 2021 for All Aboard Arizona's Fall Passenger Rail Summit at the Ramada Inn in Downtown Tucson. The Ramada is right on the streetcar line and is easily accessed from the Amtrak station via streetcar. We are working on a line-up of interesting speakers. We really believe that this event will be one of the best ever, and we really hope to see you there. Please also consider joining All Aboard Arizona and get access to our new newsletter edited by Earl Van Sweringen to keep you up to date on the latest in Arizona passenger rail developments. This quarter's issue features an article on Phoenix's multi-modal station just waiting for rail. See you on the rails!

Nevada News

by Ron Kaminkow and Paul Dyson

In the north of the Silver State the Toiyabe chapter of the Sierra Club has started forming a coalition of interested parties to call for increased passenger train service as well as improved/expanded freight service. This covers a wide range, from adding stops on the Zephyr at Wendover, Lovelock and Fernley, to reviving some old rights of way through Reno to accommodate a regional rail network of some kind, and building a more robust freight system that removes trucks from both highways and city streets. The coalition's formation comes as a direct response to the 2020 Nevada State Rail Plan that included a broad array of recommendations for improved/expanded rail service across the state.

The group held an initial conference call in July, and has a second meeting set for mid-August to pinpoint priorities, set goals and objectives, and formalize the coalition. Officers from more than a dozen organizations have taken part to date, including: Northern NV Central Labor Council (NNCLC); SMART-TD State Legislative Board; BLET NV State Legislative Board; Railroad Workers United; Teamsters Local #533; Solutionary Rail; Brightline: Regional Transit Commission (RTC); Strategic Rail Finance (SRF); Progressive Leadership Alliance of Nevada (PLAN); Rail Passengers Association (RPA); along with RailPAC and the Sierra Club.

RailPAC is especially interested in an old plan of ours for an additional frequency between Reno and California. If you a reader in northern Nevada and would like to participate please contact me.

Meanwhile "down south" the Brightline West Los Angeles-Las Vegas project has acquired a 110 acre parcel along Las Vegas Blvd. south of the city as the location for its Las Vegas terminus. This in spite of the fact that the company



has once again deferred the expected start date of construction, from June 2021 until 2022.

Election uncertainty, the lack of a COVID-19 vaccine approval, and the lack of liquidity in the stock market interfered with Brightline's attempt to sell private activity bonds allocated for the project by the U.S. DOT and the state of Nevada and California to pay for construction. The project made a hard stop in late 2020 and has held off selling state-based private activity bonds; Brightline was going to sell hundreds of millions of dollars worth

of bonds from both Nevada and California.

"The Brightline West team has made significant progress during the past year as California and Nevada dealt with the historic pandemic. We are working with a number of partners and have

great support in Nevada and California. COVID has impacted just about everyone, including our cooperating agencies, and as a result we've shifted our timeline for this request to 2022," Brightline spokesperson Ben Porritt is quoted as saying. "Private activity bonds are a great way to enable private sector investment to modernize America's passenger rail infrastructure at both the federal and state level and we expect they will play a meaningful role in the success of the project."

While disappointing, this is hardly surprising. Brightline in Florida has based its business around real estate development around stations just as much as the rail service itself. Focusing available resources now in what is probably a soft market in Las Vegas secures their base of operations, rather than allow it to be bid up after the project is under way. As for Amtrak's announced interest in the same route, I doubt if either State will sign up to help pay for an Amtrak alternative while there is a prospect of a privately financed scheme.





Boost passenger efficiency

Come aboard and discover the Charger diesel-electric passenger locomotive that forges new paths – with intelligence to ensure a successful future for your regional or intercity transportation.
usa.siemens.com/mobility

SIEMENS



CITIZENS FOR RAIL CALIFORNIA

dba RAIL PASSENGER ASSOCIATION OF CALIFORNIA

NOTICE OF ANNUAL MEMBERS MEETING

California State Railroad Museum, Stanford Gallery

111 I Street, Sacramento, CA 95814

(next to the rail museum)

Date: **Saturday October 16th, 2021**

Time: Doors open for conference at 10.00 AM (Formal business meeting scheduled for 1 PM)

(Conference will start at 10:15 AM upon arrival of guests on the #711 bus connection)

Agenda:

Welcome

In remembrance of Bruce Jenkins and Marcia Johnston.

The 2021 Annual Meeting is being held in the memory of these two dedicated RailPAC members

Guest Speaker

Lunch (Box lunch provided)

To conduct the regular business of the company

To elect the Board of directors.

To receive reports from the President and Secretary/Treasurer

Any other business

Conference Fee: \$40

Guest Speaker will be Jim Allison, Manager of Planning, Capitol Corridor JPA

See www.railpac.org for updates to program.

Note: Due to the rise of the Delta Variant the number of in-person guests will be limited and only vaccinated guests can attend. Masks will be required at all times. In-person meeting may be shifted to a Zoom meeting should conditions warrant.

Hotel rooms are generally more affordable in Natomas, 3 miles from the museum. Because of the pandemic uncertainty it is recommend that guests book a room at a cancelable rate.

Register at railpac2021.eventbrite.com or mail a check (with coupon below) to RailPAC, c/o Marcus Jung, P.O. Box 22344, San Francisco CA 94122

Name: _____ Email: _____

Address _____ Phone: _____

City/State/Zip _____

_____ ticket(s) @ \$40 (enclose check payable to RailPAC) October 2021 Conference

From the Rear Platform –

By Paul Dyson, Editor

Marcia Johnston: 1939 - 2021

The RailPAC Board must sadly report the recent death of active Board Member Marcia Johnston. Marcia has been a stalwart RailPAC member for more than 20 years, and a board member since 2002, representing us in the Sacramento area. She was a daily user of the light rail system and a strong advocate for its growth.

Marcia was born in Centerville, ID, on June 9, 1939. She graduated from Yorktown High School and Ball State University, earning a teaching degree. After moving to Wichita, KS, Ms. Johnston was employed at McConnell Air Force Base. Following marriage to Paul Johnston, they moved to Sacramento CA. Following their divorce, Ms. Johnston graduated from American River College and earned a degree in Food Services. She also graduated from Golden Gate University Business School with a business degree. Always having had an interest in law, Ms. Johnston began her employment with several law firms in the area. Finally she went to work for State of California, where she was still working at the Department of General Services / Real Estate Services Division until her recent illness. She had many interests including the Perennial Plant Club, the National Association of Railroad Passengers, the California Railroad Museum, and served as a Sacramento board member for RailPAC. She was also a member of Preservation Sacramento and served as a volunteer for historical home tours. She was a serious gardener and planted her entire front yard with bulbs, perennials, seeds, salvias, and penstemon.

Ms. Johnston worked with her neighbors to form a group known as "Friends of West Tahoe Park.

Her deep faith played a very important role in her life. She was a serious Bible scholar and studied daily. She attended Capital Christian Center and ultimately attended and became a member of Fremont Presbyterian Church. We will miss her cheerfulness and her dedication.

"Friends of Caltrain" reported in June that the JPA Board meeting "imploded", with members boycotting, one agency threatening a lawsuit, and attorneys telling board members not to make public statements. The fight is of course over money. Caltrain, like Metrolink and other agencies was formed as a Joint use of Powers combination of multiple agencies, in this case counties, or more specifically, county transportation agencies. While both Caltrain and Metrolink have stumbled along under this system it is clear that while they survive, they don't prosper without outside intervention. Counties are black holes when it comes to money. The State doles out funds for transportation, combined with local tax revenues, and the priority is for projects within the county. There are few votes for regional projects (except for RailPAC members) so the regional agencies rely on the crumbs that fall from the table.

There is discussion in the Bay Area of a reorganization or combination of some of these agencies to attempt to provide passengers with a rational, joined up system. I strongly recommend you follow sf.streetsblog.org to catch up on the efforts of "Seamless Bay Area". We won't see progress with imploding board meetings and agencies suing each other, that's certain.

Metrolink: RailPAC congratulates Mr. Darren Kettle on his appointment as CEO of SCRRA, (Metrolink). Kettle replaces Stephanie Wiggins, who is now CEO of LACMTA (Metro). Mr. Kettle was previously Executive Director of the Ventura County Transportation Commission, a post he held for fourteen years. Mr. Kettle's experience at Ventura will stand him in good stead as that County failed to pass a transportation sales tax, leaving the Commission with the need to stretch limited dollars and creatively seek State and federal funds wherever available. Our experience observing SCRRA for the past 28 years is that Mr. Kettle must perforce continue in the same mode. The County members of the agency can generally be relied on to avoid spending "their" dollars on regional projects, leaving regional rail on a starvation diet, with occasional "lottery" wins from outside sources.

First order of business for the new CEO is to rebuild patronage of the system. This will not be easy. Steve Roberts and Doug Kerr have previously noted in SW this year the challenges and the unknowns of post pandemic travel. We do not know how many classic commuter riders will return to rail, but we are



Caltrain arriving at Gilroy - Photo - Dom Blevins

almost certain that they will be fewer than pre-Covid. Even if the same numbers return to full time employment in downtown Los Angeles, Burbank, and other centers, many will be working a three or four-day week, playing havoc with rail agency budgets. Short of slashing or eliminating fares, is there a solution?

During her brief stay at Metrolink Stephanie Wiggins introduced SCORE, Southern California Optimized Rail Expansion. The idea is to create an all day, every day regular interval service on most lines. This is a tall order given the infrastructure needed and the long, tedious process to get even a couple

of miles of double track installed. Where to begin? Here's a suggestion. In January of 2020 I wrote to Wiggins and Metro's Phil Washington as follows:

In November of last year (2019) 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 7 days a week from 0500 to 2300 and thus enable travel to and from Burbank Airport from before start of operations until after the last scheduled flight arrival. (Based on 0700-2200 voluntary curfew). 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.

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.

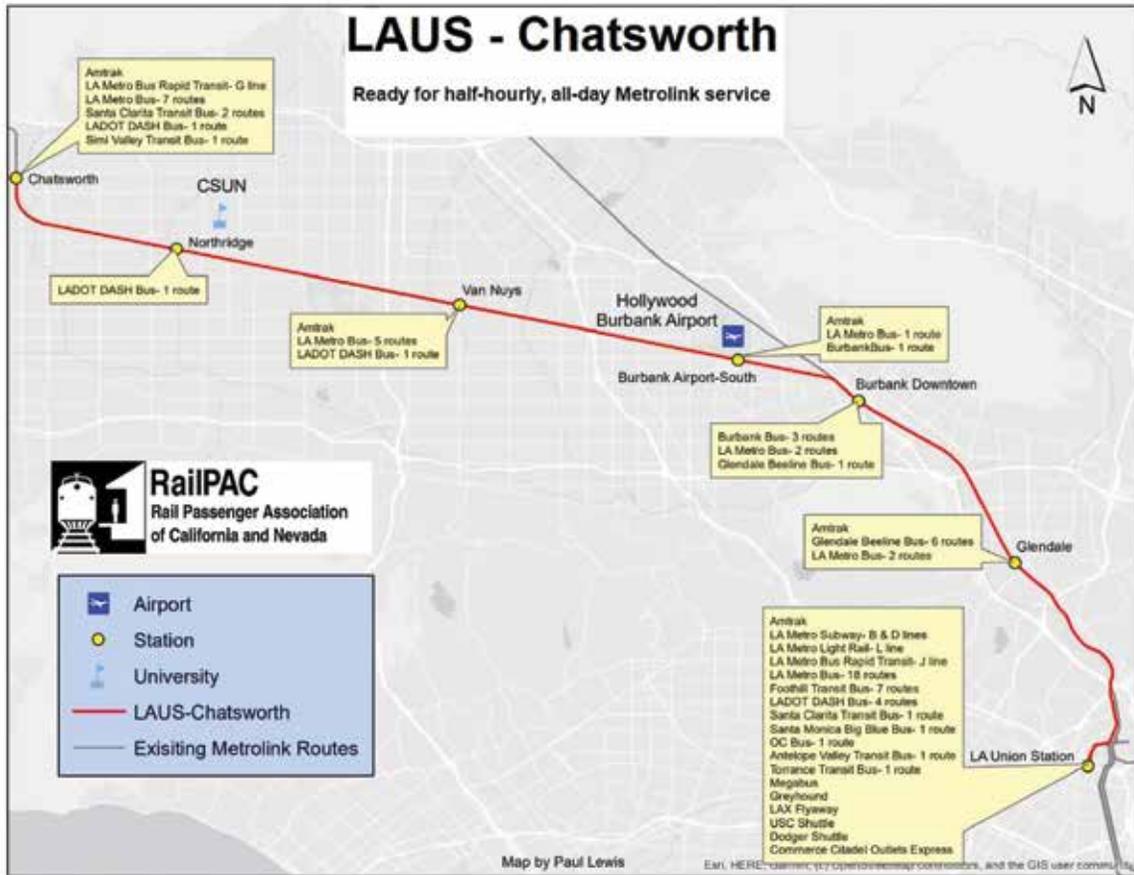
I recently resent this letter to the interim Metrolink CEO and to Wiggins now at Metro but with the addition of extending beyond Van Nuys to Chatsworth. I have also circulated the letter to a number of parties including the Burbank Airport Authority. Research indicates that even with the single track between Raymer and Bernson there is capacity to operate half hourly

intervals, and this will bring CSUN and the G line busway at Chatsworth into the mix. We have the trains, which otherwise are idle all day at the maintenance yard, and we have the track and the stations. We just need crews and fuel to put these assets to work. It is now up to Darren Kettle to take this up and either dismiss the idea or move it forward.

At the same time, I hope the new CEO will ask searching

questions as to why connections between lines at Los Angeles Union Station are so poor, or non-existent. This has been a perennial complaint of mine, with never an explanation or excuse. With passenger numbers at a disastrously low level, (April 2021 was at 16% of pre Covid), Metrolink needs to attract riders such as myself (Burbank to Fullerton r/t two or three times a month or more) and it won't work with existing schedules. If Metrolink doesn't recover quickly it will have a very hard time justifying its existence, let alone the hundreds of millions of investments needed for SCORE.

High Speed Rail: There has been some controversy in the blogosphere about my comments to Ralph Vartabadian at the Los Angeles Times about the attempt by Assembly speaker Rendon and Assy. Transportation Chair Friedman to move funds from HSR electrification to southern California. Let me clarify first of all that RailPAC policy is to support the plan of the High Speed Rail Authority to build a working, electrified railroad between Bakersfield and Merced. Let me also clarify that I hold a minority view, which is that we need to connect to the Bay Area before any service should be run. I simply do not see the viability of a short section of high speed with connections to buses or existing rail services. I don't think anyone thinks



that starting in the middle was a good idea, and views differ as to how to make the best of an ugly situation.

Fillmore and Western: June 26 was the final day of operations of the Fillmore and Western Railroad. The tourist operation between Fillmore and either Piru or Santa Paula used the old Southern Pacific main line, now owned by Ventura County. The lease of the line expired and the operator chose to retire. There had been a long running dispute between the County and the railroad (over money of course) and the county transportation commission clearly was leaning toward turning the line into a trail. There is a large collection of vintage rolling stock at Fillmore which had been used in various movies over the years, much of which was acquired from the studios, the future of which is uncertain.



Fillmore and Western train leaving Fillmore on the last day of operation, June 26, 2021 - Photo - Paul Dyson

**SILVER RAILS
COUNTRY.COM**



A Rail Themed Destination!

Take the Amtrak Southwest Chief to La Plata, MO, or the Amtrak California Zephyr to Ottumwa, IA, for FREE shuttle service provided by the Depot Inn & Suites to Silver Rails Country! To request a FREE 24"x18" map visit SilverRailCountry.com/enews - home of the Exhibition of Amtrak History, the Silver Rails Gallery, boyhood homes of Walt Disney & Mark Twain and much more!



Visit TrainWeb.com, TrainWeb.org and our Facebook Fan Pages for travelogues, rail photos, the latest rail news, live railroad webcams from across the nation plus much more!

TrainWeb.org is the home of over 1000 independently authored and managed rail related websites featuring information and photos on every aspect of railroading.

There has been discussion about the viability of a passenger service on the line, and even rebuilding the link at Saugus, severed by storms in 1979. The populations of Santa Paula, Fillmore and Ventura have grown considerably but I would hazard that there has been too much development at the Saugus end for reconnection to be feasible. However, Fillmore certainly needs this attraction to help the small downtown area and to give tourists a reason to visit. I hope that a new operator will be forthcoming.

Locomotives: I am thrilled to report that in recent emissions tests our member, Rail Propulsion Systems of Fullerton has achieved excellent results with an F59PH locomotive belonging to North Carolina DOT. They have demonstrated that existing passenger locomotives can achieve NOx emissions 80% better than Tier 4 using their Blended After Treatment System. The only emissions category to exceed Tier 4 is particulate matter (PM), for which they are developing additional options. PM is also reduced approximately 1/3 by using "renewable" diesel made from various waste streams. My belief is that, with electrification and battery hybrids on the horizon we should not be making 25 year investments in more new diesel locomotives. RPS has demonstrated that we can clean up existing locomotives at much lower cost and use the moneys saved on future electric/hybrid locomotives.

PD
pdyson@railpac.org

RAIL PASSENGER ASSOCIATION OF CALIFORNIA & NEVADA

1017 L Street, PMB-217
Sacramento, CA 95814-3805

Non Profit Org
US Postage
PAID
Permit No. 1616
Sacramento, CA



A PUBLICATION OF THE
**RAIL PASSENGER ASSOCIATION
OF CALIFORNIA & NEVADA**

The RailPAC Mission: *Passenger Rail advocacy, Publications...both print and electronic, Representation at regional meetings, and Rail education.*

Join us! More memberships increase our strength in presenting the case for rail to policymakers at all levels!

©2021 Citizens for Rail California, Inc. dba Rail Passenger Association of California & Nevada. Permission is granted to quote items in other publications with credit. Signed articles represent author opinions, not necessarily the official views of RailPAC or the member associations. Articles and photos may be submitted for publication to info@railpac.org or mailed to the official address. RailPAC is a non-profit corporation organized under 501(C)(3). *Donations are tax deductible.*

2021 RAILPAC OFFICERS AND BOARD OF DIRECTORS

President: Steve Roberts, Concord

Vice President, North:

Doug Kerr, Healdsburg

Vice President, South:

Brian Yanity, Fullerton

Vice President, Long Distance Trains:

James Smith, Los Angeles

Secretary/Treasurer:

Marcus Jung, San Francisco

Directors

Donald Bing, Moorpark

Noel Braymer, Oceanside

Robert Frampton, Pasadena

Robert Manning, Palm Springs

Simon Oh, Campbell

Dennis Story, Santa Barbara

Vaughn Wolffe, Pleasanton

Presidents Emeritus:

Noel Braymer, Paul Dyson

Treasurer, Emeritus:

William Kerby, Sacramento

Editor, Emeritus:

Russ Jackson, Texas

Website:
Brian Yanity

Weekly E-News:
Noel Braymer

Social Media:
Simon Oh

Steel Wheels Editor:
Paul Dyson

**Steel Wheels Design &
Layout:** Dengate Design

Want to be notified of the latest RailPAC news between issues?

Visit Our Website regularly:
www.RailPAC.org

Like us on Facebook:
www.facebook.com/RailPAC

Follow us on Twitter:
www.twitter.com/RailPAC

JOIN RAILPAC TODAY at RailPAC.org or mail to the address below!

RailPAC membership entitles you to:

- *Steel Wheels – Passenger Rail in California and the West* newsletter
- Weekly eNewsletter and periodic alerts via email
- Eligibility to attend our annual Steel Wheels conference and regional meetings

MAIL TO: RAILPAC c/o Marcus Jung
P.O. Box 22344, San Francisco, CA 94122

MEMBER INFORMATION

Name: _____

Address: _____

City: _____

State: _____

Zip: _____

Phone: _____

Email: _____

DUES LEVEL

- Regular (\$35-79)
- Student/Senior/Fixed Income (\$25-34)
- Sponsor (\$80-199)
- Patron (\$200-499)
- Organization (\$500 and above)

Members: Please notify the RailPAC Office if and when there is a change of address. RailPAC is not responsible for re-delivery if mailed to an outdated address.