RFTA Planning Department Monthly Update
February 13, 2020

RFTA Vision

Connecting our region with transit and trails.

RFTA Mission

RFTA pursues excellence and innovation in providing preferred transportation choices that connect and support vibrant communities.

RFTA Strategic Outcomes

Safety, Accessibility/Mobility, Sustainable Workforce, Financial Sustainability, Environmental Sustainability, Satisfied Customers, High Performing Organization

Current Planning Projects

Glenwood Springs Corridor Study

Creating a balanced, safe, and affordable multimodal transportation system is a common goal to both the City of Glenwood Springs and RFTA. The two partners have hired a consultant team led by Parsons Transportation Group to identify, evaluate and implement transportation strategies and opportunities that will optimize the efficiency and utility of the transportation system through Glenwood Springs and that will align with the City's goals for mobility, land use, economic vitality, economic sustainability and quality of life.

The study will address several key and interrelated transportation elements: BRT extension, local transit service, intersection and traffic operations, pedestrian/bicycle mobility, and parking plans and facilities.

RFTA and the City conducted a Parking Kick-off meeting on January 23 and the first Technical Advisory committee meeting took place on January 30, 2020. A key part of the study scope is to understand parking supply and demand and determine how best to manage parking.

The parking-related efforts will be led by Fehr & Peers and include a parking inventory to identify the on-street and off-street parking supply in and around the West Glenwood, South Glenwood (27th Street) RFTA park & rides, and downtown Glenwood Springs (roughly the area

between 7th Street and 10th Street between Colorado Avenue and Cooper Avenue), the area around 6th Street north of the Colorado River, and several off-street public parking lots.

Fehr and Peers collect, map and document parking occupancy data downtown and at the two Glenwood park & rides up to five peak times during up to two separate weeks. The first week of the parking study will start February 27th.

On-Board Passenger Survey – Wednesday, March 11

RFTA has selected Marc Warner of Warner Transportation Consulting to conduct the On-board survey. Warner is no stranger to RFTA, having conducted many studies over the past 14 years for RFTA, for the EOTC, and for the Aspen Skiing Company. His recent projects include passenger surveys for transit agencies in Richmond, Tahoe, Hartford, Providence, and Orange County.

Warner will visit the Roaring Fork Valley February 10-13 to recruit on-board staff for the project, post notices, and follow-up with potential staff. Marc will have a draft survey for RFTA to review by the date of his visit. The survey form will be finalized by February 28 to ensure time for printing, numbering, folding, and delivery.

The survey will be conducted on Wednesday, March 11. Warner will come out to the Valley at least two days before the survey starts. This will allow for final staff training and scheduling, the preparation of survey material, and the posting of signs at Rubey Park, 27th Street, Snowmass Mall, West Glenwood P&R, and other key stops throughout the system.

27th Street Pedestrian Crossing, Glenwood Springs

RFTA and the City of Glenwood Springs will be submitting grants to design and construct grade-separated pedestrian crossings of SH 82 and 27th St. near the 27th St. BRT Station. Construction of this crossing is a high priority for RFTA, the City of Glenwood Springs and for the region. It was programmed for 50% funding in the Destination 2040 plan; RFTA committed to funding the remainder of the project through grants and partnerships.

Current cost estimate is roughly $8 million to $10 million, and will be refined as the design advances.

The following is progress on funding and grant submittals:

Funding Source	Progress
Transportation Alternatives Program (TAP)	Proposal for $1 million submitted on January 20
CDOT Multimodal Options Funds	Submitted and presented to IMTPR in January, received approximately $1 million
Garfield County Federal Mineral Lease District	Will submit a joint application with City of Glenwood Springs for the spring program of applications

RFTA Exploring Hydrogen Electric Bus (HEB) Feasibility

On December 3, 2020 RFTA and the City of Aspen cut the ribbon on eight New Flyer XE40 battery electric buses (BEBs). These buses are designated as zero emission vehicles (ZEVs) by State of Colorado sustainability guidelines. The buses continue to operate better than expected around 8,000 feet above sea level and the passengers enjoy the smooth and quiet ride. The primary operational challenge is that the BEBs must be fully charged each night and the battery life, or range, is considerably less than the duty cycle of traditional fossil-fueled buses operating on the same routes. The battery range can be also be affected by inconsistencies in driver patterns, cabin temperature, elevation, grade and ambient air temperature etc. The question that now arises is: How can RFTA further accelerate the adoption of ZEVs, without compromising the dependable and affordable public transit service that over 5 million passengers depend on each year?

One answer may be hydrogen fuel cell buses (FCBs). According to the United States Department of Energy, "fuel cells are similar to batteries in that they produce electricity without combustion or emissions. Unlike batteries, fuel cells do not run down or need to recharge—as long as there's a constant source of fuel and oxygen." Industry experts report that under ideal conditions FCBS can achieve double the range of electric buses, more on par with diesel buses. If this holds true, FCBs could be a way for RFTA to maintain fleet diversity, honor a rough fleet electrification goal of up to 30% and operate zero emission buses more interchangeably with diesels on longer commuter routes. It is also possible that RFTA could use its existing compressed natural gas (CNG) station in Glenwood Springs to steam methane reform (SMR) the gas to make onsite hydrogen. To reduce greenhouse gas emissions, the byproduct CO_2 could be sequestered or captured for onsite storage/reuse. This local hydrogen production would eliminate the expensive hauling of liquefied hydrogen from out of state and increase regional energy security year-round.

Per vendor estimates, RFTA is estimating that a Hydrogen Electric Bus (HEB) Pilot Project could be in the range of $25 million with hydrogen production infrastructure, fueling equipment, onsite capacity/safety improvements and 8-10 buses. RFTA is working with the Colorado Hydrogen Coalition to assess private and grant funding opportunities.

Only 27 FCBs are in revenue service at peer transit agencies across the nation, and the State of Colorado has aggressive 2030 electrification goals. RFTA is now coordinating with State of Colorado officials and the nascent Colorado Hydrogen Coalition to plan an onsite workshop at the National Renewable Energy Laboratory (NREL) in March 2020.

Resources

RFTA-Aspen Battery Electric Bus (BEB) Pilot Project: https://www.rfta.com/electricbuses/

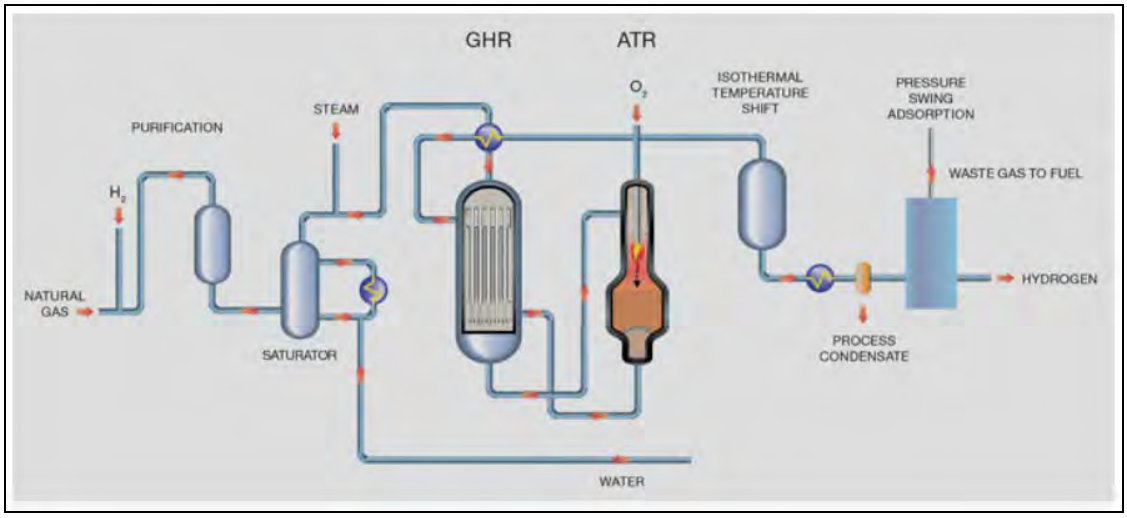
Clean Hydrogen. Part 1: Hydrogen from Natural Gas Through Cost Effective CO2 Capture

https://www.thechemicalengineer.com/features/clean-hydrogen-part-1-hydrogen-from-natural-gas-through-cost-effective-co2-capture/

5 Facts about Hydrogen and Fuel Cells
https://www.energy.gov/eere/articles/5-fast-facts-about-hydrogen-and-fuel-cells

CTE Leads Project with the Orange County Transportation Authority (OCTA) to Launch A Fleet of 10 Fuel Cell Electric Buses and the Largest Transit Hydrogen Fueling Station in the United States
https://cte.tv/octa-hydrogen-station-and-fcebs/

Colorado Hydrogen Coalition
https://coloradocleantech.com/ccia-incubates-colorado-hydrogen-coalition/



Basic Low Carbon Hydrogen (LCH) Process with Carbon Capture/Storage

Section 5339 Grant Program – Glenwood Maintenance Facility

On January 30, 2020, Federal Transit Administration issues a Notice of Funding Opportunity for the Section 5339(b) Program: Grants for Buses and Bus Facilities. Approximately $455 million is FY2020 funds will be awarded competitively to assist in the financing of capital projects to replace, rehabilitate, purchase or lease buses and related equipment, and to rehabilitate, purchase, construct or lease bus-related facilities.

RFTA intends to apply for $12.5 million in funding, to be matched by roughly $12.5 in funds committed by Ballot Measure 7A, to renovate and expand the GMF.

Rural applicants much apply through the State DOT, which will create consolidated applications on behalf of all rural transit agencies. Draft applications are due to CDOT on March 12.

Bicycle Colorado Moving People Forward Conference

On February 10, Jason White participated in a breakout panel at the Bicycle Colorado Moving People Forward conference in Denver. The panel focused on how Colorado communities are investing in finding better mobility solutions via the humble bus and what can reliable bus service do to help move more people efficiently, reliably, and affordably.

Speakers, in addition to Jason White, included:

Jaime Lewis, Transit Advisor, Colorado Cross Disability Coalition
Jeff Prillwitz, Program Manager, Bustang Outrider
Danny O'Connor, Senior Transportation Planner, City of Boulder
Jenée Donelson, Community Activator, Rocky Mountain Bus Riders Union