

THE CASE FOR BUILDING A PRT TEST FACILITY IN FRESNO
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One of the lessons Fresno has learned over the past few years is just how long it takes for a conventional transit project to move through the planning and development process. For example, Fresno's BRT project has been in the works for over 10 years and remains stalled, along with the projects of many other cities, awaiting uncertain funding from the Federal Small Starts program. With this time consuming process in mind, building a PRT system in Fresno, or any other U.S. city for that matter, will no doubt take many years, even under the most favorable circumstances.

America cannot wait. Our highest priority is to develop innovative transportation solutions that deliver energy independence, climate solutions and economic benefits as soon as possible. PRT is the one transit technology that offers this possibility. Fresno can play a key role.

Fresno is the only jurisdiction in the U.S. with funds currently available to develop PRT. This rare opportunity provides Fresno a historic opportunity to lead the nation at this moment of crisis. However, time and inaction is the enemy. There is a real possibility that Measure C New Technology Funds will be diverted to other uses. Therefore, an alternative strategy needs to be considered that preserves this funding and is consistent with the New Technology Funding Reserve (NTFR) requirements in the PTIS. The first step of this strategy is to build a PRT test facility. This course of action is strongly correlated with the NTFR priority "Identify Best Potential Projects for New Tech Funds" and is proposed for the following reasons:

1. Enable a high degree of Measure C leverage of matching funds *currently available* from the state and from federal sources in the future.
2. Shortest path to job creation and economic prosperity by leveraging public funds and attracting critical private investment for PPPs that manufacture and deploy PRT in Fresno.
3. Create operational platform to evaluate cost and performance capability of PRT for government, industry, consultants, academia, etc.
4. Establish PRT regulatory and safety evaluation platform for government, industry, consultants, academia, etc.
5. Cooperate with the CHSRA to build the showcase HSR PRT feeder-distributor system at the Fresno Station.
6. Assert Fresno CleanTech leadership in developing 21st century economic development by creating an industry nucleus that attracts ancillary businesses.
7. Develop ongoing PRT R&D center that can be the centerpiece of a coherent AB 32 and SB 375 compliance strategy for Fresno and the other cities of California desperately seeking solutions.

8. Buy American. Help the U.S. become competitive with the more highly developed PRT industry in Europe and Asia.

Enable A High Degree Of Measure C Leverage

Fresno has an opportunity to attract substantial matching funds currently available from the state of California and from traditional and non-traditional sources within the federal government. A test facility proposal is the ideal proposal to apply for such grant funds.

A key California agency has specifically identified PRT demonstration as a priority for major matching grant funding in this fiscal year. In addition, despite long lead times in getting traditional transit funding, non-traditional sources at USDOT and USDOE have emerged within the last two years and already granted billions for innovative technology that results in clean energy, reduced oil dependence, improved efficiencies, and sustainable, electric powered public transit modes that reduce vehicle miles traveled. PRT qualifies on all counts and stands to be able to leverage local funding possibly as high as 5 to 1.

Given this extraordinary window of opportunity, it behooves Fresno to establish a PRT test facility as soon as possible to qualify for state and federal grants. With electric vehicles as the current focus for billions of dollars in grants and subsidies, one approach to elevating PRT visibility is to emphasize that the system is essentially an electric vehicle that uses an automated guideway. The key advantage is that PRT results in lower costs, better energy efficiency, and greater safety than conventional EVs. Leveraging state and federal matching funds provides for sufficient Measure C funds to develop a test facility and build an eventual PRT system deployment in Fresno with matching government and/or private investment.

Shortest Path To Job Creation And Economic Prosperity

Attracting private investment is critical to the successful development of PRT. Measure C funding and matching state and federal money is a catalyst to signal private investors that government is serious about PRT. A test track is the first, essential step in the process. Jobs and economic prosperity are the desired result of the public-private partnerships that will manufacture and deploy PRT in Fresno.

However, at this stage an operational PRT system is years away and the need for jobs now is paramount. Because a PRT test facility can be deployed in a much shorter time than an actual PRT system, Measure C funds can be put to use immediately to create the jobs developing the test facility. The question of "feasibility" is moot. The funds are available. A PRT test facility has a much lower threshold of required approvals than a passenger-carrying public system. The economic benefits are clear.

Politically, the rationale for a PRT test facility is the same as the Fresno high-speed rail maintenance facility---jobs. It is worth noting the HSR facility has unanimous and vigorous support. \$25 million has been allocated to fund the HSR maintenance facility. However, a PRT test facility could be built long before the HSR maintenance facility and its badly needed jobs are likely to materialize. Further, Fresno would have control of the PRT test facility process and not be subject to the risk of delays or cancellation should the CHSRA decide that the HSR maintenance facility would not be built in Fresno.

Create Operational Platform To Evaluate Cost And Performance

As the PTIS Final Report will likely indicate, PRT system performance and costs are subject to speculation owing to the small number of operational systems to evaluate. That these systems are in Europe and Asia complicates the reliability and speed of evaluation tasks. A test facility in Fresno is essential to helping Fresno and its consultants have an on-going operational platform to clarify PRT costs and performance characteristics as the system develops

Establish PRT Regulatory and Safety Evaluation

Establishing "the rules of the road" is essential to PRT deployment in Fresno, the state of California and the United States. Currently, PRT exists in an uncertain regulatory environment without precedent. Ironically, the Morgantown PRT system at West Virginia University operates virtually unregulated due to its spotless safety record. As a result, this lack of regulation has done nothing to clarify the issues that will certainly arise with the broader deployment of PRT in the United States. In contrast, test facilities for PRT in Europe have resulted in regulatory approval by the Swedish Rail Authority for the Vectus PRT system and approvals by the United Kingdom for the ULTra PRT system at Heathrow Airport. Clearly, a Fresno PRT test facility is an essential tool for government, industry, consultants and academics to address the critical regulatory and safety issues here in the U.S.

Feeder Distributors at all HSR Stations

Rod Diridon, a leader in establishing the California High Speed Rail Authority (CHSRA), stated at the San Jose PRT conference in October 2010:

"The California High Speed Rail Board is asking the 24 cities (with HSR stations) to conduct PRT studies. These studies would help to determine how to serve stations more effectively without encouraging additional automobile traffic or constructing more nearby parking facilities."

Fresno should cooperate with the CHSRA to enable Fresno to use its advantage of being one of the earliest cities to build a station. Fresno could lead the way in establishing the first PRT feeder-distributor system. Such systems will substantially boost overall HSR ridership. Access would be improved a hundred fold. Rather than a single destination in a given city a PRT feeder-distributor system would effectively provide dozens of destinations. It solves the "last mile problem". For example one could catch the PRT at City Hall in Fresno. In 3 minutes she could be on the HSR platform. After a 50 minute ride she could walk across the HSR platform in Sacramento, catch the waiting PRT, and within 5 minutes be at the door of the State Capital. Total trip time from City Hall to State Capital under one hour.

To reward Fresno for taking the risks in being first we could negotiate with the CHSRA for a payback from all subsequent HSR PRT feeder-distributors.

Assert Fresno CleanTech leadership

For years, Fresno has strived to develop a presence in the advanced technology world. The region has made a few strides such as in the field of water technology. But the "brain drain" at CSU Fresno continues as graduates leave for greener pastures.

A PRT test facility asserts Fresno CleanTech leadership in developing a 21st century industry by creating a nucleus that attracts ancillary businesses (solar panels, power electronics, installers, etc.) and retains the

region's "best and brightest." Further, developing a PRT system in this city, or any city, will require citizen support. PRT is unfamiliar to the public and difficult to explain. A test facility will strengthen critical public support by providing an opportunity for folks to "kick the tires" to know firsthand what it looks and feels like.

Develop Ongoing PRT R&D Center

The PRT test facility has the potential to evolve into an on-going research and development center. The center could play an important role in the creation of a coherent AB 32 and SB 375 compliance strategy for Fresno and the other cities of California desperately seeking state mandated climate change, land use and sustainable transportation solutions. The Central Valley Business Incubator <http://cvbi.org> provides a template on which to model such a center. A PRT R&D center would provide a path for attracting private sector investment and be helpful to the planning and evaluation activities of government, industry, consultants and academia. Further, a Fresno PRT R&D center will attract international attention by drawing authorities from all over the world. The resulting seminars, conferences and conventions would be a significant stimulus to the regional economy.

Buy American

PRT systems that are near or at the deployment stage in Europe and Asia (ULTra, 2getthere, and Vectus) were the result of extensive test facilities. If the U.S. is to successfully compete in the global PRT industry establishing a test facility capability is an absolute requirement.

As authors Sam Lott and David Hathaway noted in "PRT: Ready To Roll" (Civil Engineering Magazine, May 2005):

"The principal challenge in bringing a good idea to the point of implementation is usually one of financing the product development phase since the firms marketing these technologies are typically start-up companies without the deep pockets of a major corporation."

"So if the application of PRT/GRT technology is to be a viable option in the near term PRT demonstrations to prove (or disprove) the apparent benefits will require a spirit of partnership to be successful."

"If funding does not become available, then many of the PRT/GRT developers will cease to exist, and the prospect of the technology's deployment will recede. An adaptation of the old adage seems to apply: which comes first, the funding or the proof of concept?"

Lack of a U.S. test facility is the primary bottleneck for every proposed PRT system in the country. Fresno is the only jurisdiction in the United States that has funds to take this first critical step forward with PRT development. In short, Fresno is the best hope to advance the U.S. PRT industry. We must find a path to work together to capitalize on this historic opportunity. To do nothing would be a tragic failure of leadership. The stakes couldn't be higher.