

# Transportation Investment Generating Economic Recovery

## California Application

**Sponsoring Organization:** Mendocino Transit Authority

**Project Name:** Alternative Fuel & Infrastructure

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**Type of Project:** Transit Facility

**Location:** Rural, near Ukiah, Mendocino County,  
California Congressional District 1.

**Map of Location:** [http://www.4mta.org/altfuel/ukiah\\_fig1.jpg](http://www.4mta.org/altfuel/ukiah_fig1.jpg)

**Project area:** [http://www.4mta.org/altfuel/ukiah\\_fig2.jpg](http://www.4mta.org/altfuel/ukiah_fig2.jpg)

**Grant Fund Request:** \$6,000,000

**Request for Waiver:** Mendocino Transit Authority serves rural Mendocino County with a population of 90,000. MTA's operating budget this fiscal year is just under \$4,000,000. MTA requests a waiver from the minimum grant request of \$20 million.

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## 4. PROJECT DESCRIPTION

The Mendocino Transit Authority (MTA) moved to our current Ukiah headquarters division in 1982. The site included offices and a small shop. It is strategically located at the end of several bus routes. Over the years, the office and shop have been expanded to accommodate growth, first to the south, then to the north, then to the south again and finally up.

**4.1a Need #1: Fuel.** Mendocino County is designated an Air-Quality attainment area for all Federal standards and for all State standards except PM-10. On December 14, 2000, the MTA Board of Directors formally selected the "Diesel Path" in conformance with California Air Resources Board requirements. During the course of a year, the public transit and non-revenue fleet uses 120,000 gallons of gasoline and 62,000 gallons of clean diesel.

Despite the continued reduction of emissions from diesel engines (see page 5 in [www.4mta.org/altfuel/feasibility.pdf](http://www.4mta.org/altfuel/feasibility.pdf) ) MTA staff has been directed by our Board to reduce emissions further. On May 28 2009, the MTA Board of Directors unanimously approved a new policy: shift vehicle purchases to hybrid drive systems as quickly and practically as possible, and eventually shift to electric propulsion for all vehicles that can run on battery power alone. In the interim, and always with hybrid vehicles, bio-diesel and ethanol may be used to further reduce emissions. See Chapter 2 Alternative Fuel Strategy, pages 3 and 4 in [www.4mta.org/altfuel/feasibility.pdf](http://www.4mta.org/altfuel/feasibility.pdf)

**4.1b Need #2: Buildings.** The MTA Administrative office and Maintenance facility are nearing 60 years old; they are overcrowded, ineffective, and terribly energy inefficient.

The core building was constructed in the early 1950s with wood frame, wood siding inside and outside of the office and corrugated metal siding and roof for the shop. Only modest improvements have been made to the insufficient wall and ceiling insulation. Single pane windows have never been changed. The original heating and air-conditioning system has not been replaced; additional systems were added to handle expanded office space. The buildings no longer meet building code or ADA requirements, and access is limited. What seemed like pragmatic, low-cost decisions at the time have also provided less than adequate working conditions for fourteen employees in the office plus six in the shop. Because of the lack of appropriate, accessible space, public meetings are held downtown, an

inefficient but necessary work-around. A modular building is being added this summer to relieve office congestion. One air-conditioner is being replaced this summer before it breaks down, because spare parts are no longer available. Improvements to our transit services are very much limited by our outmoded and cramped facility.

**4.2 Feasibility Study.** Using \$131,000 of our own, local funds, MTA contracted with a broad-based team of professionals, led by TLCD Architecture of Santa Rosa, in the spring of 2009. The team includes several LEED (Leadership in Energy and Environmental Design) certified architects and engineers. They specified our needs, produced a concept design and estimated construction costs. Their concise Final Report is available on our website: [www.4mta.org/altfuel/feasibility.pdf](http://www.4mta.org/altfuel/feasibility.pdf)

**4.3a Solution #1: Fuel.** To accomplish the new hybrid/electric policy, an array of solar panels will be installed at the Ukiah site, significantly larger than required to power only the buildings. Canopies will be constructed over bus, employee and visitor parking to support 18,270 square feet of solar panels. This will generate an average of 378,000 kWh of electrical energy per year. That energy will be used to charge the batteries of plug-in hybrid and electric vehicles. All excess energy generated above that will be sold to PG&E through their E-SRG Feed-in Tariff contract. That will cover the cost of electricity at MTA's three other, smaller operating divisions and produce some good income.

From an infrastructure perspective, the decision to shift to hybrid means that the existing fuel storage facility, dispensing equipment and purchasing arrangements will remain in place, unless all of MTA's fleet can shift to electric power which is not likely. The alternative fuel decision had a significant effect on space requirements for the conceptual design. The consultants concluded that the facility improvements, including buildings (below) would fit on MTA's existing 3.25 acre site. See pages 9 and 10 of the Feasibility Study Report at [www.4mta.org/altfuel/feasibility.pdf](http://www.4mta.org/altfuel/feasibility.pdf).

**4.3b Solution #2: Buildings.** In order to expand the amount of office space to relieve overcrowding, staff and consultants considered moving, and continuation of our style of adding on.

The alternative of a different location was rejected because our current location is strategically excellent (zero deadhead for nearly all Ukiah-based trips). Also, no other Industrially-

zoned land of appropriate size exists nearby. Approximately one-third of our property has been leased out but is now almost entirely unused, so sufficient excess property is available for expansion.

The alternative of more additions to the existing buildings was also studied. Enough room is available in the employee/visitor parking lot to construct a two storey wing with an accessible Board room and several new offices. That approach, however, would leave the core offices and shop in their current, ineffective, energy inefficient conditions. These buildings no longer comply with building codes. Expansion to the needed square footage would require compliance. In some instances, that would not be possible. See the Existing Conditions section on page 9 at [www.4mta.org/altfuel/feasibility.pdf](http://www.4mta.org/altfuel/feasibility.pdf)

Therefore, construction of new buildings is clearly the best long term solution. The Feasibility Study recommendation was to sustainably design all new structures on the existing MTA site. At a minimum, the design work would use the checklist from LEED standards, but the MTA Board will consider certifying the building to LEED Silver or Gold standards early on.

The concept design process used in the Feasibility Study considered long-range growth of the agency in terms of the number of employees and vehicles. The conclusion was for an increase of 37% in the number of parking spaces and tripling the amount of shop and office space, including an accessible public Board/meeting room and expansion of storage space. See pages 9 and 10 at [www.4mta.org/altfuel/feasibility.pdf](http://www.4mta.org/altfuel/feasibility.pdf)

Energy efficiency was the driving force in the orientation of the buildings, treatment of exterior surfaces and design of heating/cooling/ventilating systems. Since Ukiah is an excellent location for solar energy production, the roofs of the new buildings will be 70% covered by photovoltaic panels. Consultants estimate that this 10,710 square feet of panels will produce 222,000 kWh annually, enough for the 219,000 kWh per year the office and maintenance buildings would use. See [www.4mta.org/altfuel/feasibility.pdf](http://www.4mta.org/altfuel/feasibility.pdf) pages 27 and 28.

The hallmark of this project, however, is the inclusion of canopies over all parking areas. Besides providing energy required for charging vehicle batteries and earning income as described above, these structures have three other benefits. In summer, they will provide shade which will keep all vehicles cooler, reducing the energy required to air-condition them. In

winter, the canopies will protect bus windshields from frost, reducing time needed to de-ice. Finally, canopies will protect vehicles and drivers from rain, encouraging a most thorough vehicle check-out.

## 5. PROJECT PARTIES

The project sponsor is the Mendocino Transit Authority. No other public agencies will be involved outside of permitting. The project is limited to design and construction. The design team that conducted the Feasibility Study was selected based on qualifications for all phases of work through Construction Management.

## 6. GRANT FUNDS

Including Project Approval/Environmental Documents, Plans Spec's & Estimates and Construction, this project is expected to cost \$22,029,000. Note that the entire project will be located on MTA property, so no Right of Way acquisition is required. MTA is requesting \$6 million in TIGER funding or 27.2% of the total. An additional \$6.6 million of 5309 funds will be requested for a total federal share of 57.2%. Three sources of State funds would produce 28.3% of the revenue, and local sources would provide 14.5%. The table below includes more detail.

REVENUE SOURCES - \$000							
WORK	Requested Federal TIGER	State Prop 1B PTMISEA	State Prop 1B TSSSDR	State ENERGY COMMIS	Federal 5309	STA banked LOCAL	TOTAL
PA						131	131
ED						10	10
PS&E		600	33	169	600	161	1,563
CON	6,000	4,229	168	1,028	6,000	2,900	20,325
TOTALS	6,000	4,829	201	1,197	6,600	3,202	22,029
%	27.2	21.9	0.9	5.4	30.0	14.5	100.0

NOTE: The final \$2,900,000 in local funds would be financed.

## 7. PRIMARY SELECTION CRITERIA

**7.1 Long Term Outcomes.** MTA has occupied the Plant Road site for 27 years. We have always "made do" by squeezing, adding on and accepting less than ideal working conditions. We have reached the end of that road; the time has come to build new, from scratch.

State of Good Repair: This is not a case of lack of good repair. This project will replace the existing buildings with new. Over the next 30 years, the cost of constructing, maintaining and operating the proposed new facility will certainly be less than the same costs for the core buildings plus additions to create a comparably sized facility, if that were possible.

Economic Competitiveness: This project will improve the competitiveness of the MTA in attracting workers needed to provide mobility in Mendocino County. To the extent that applicants have a choice of jobs, a new and efficient facility will provide a far better advantage than the existing buildings. Expansion of office, shop and vehicle storage space is needed to improve the efficiency, reliability and cost effectiveness of our effort to transport workers and others, and to facilitate the increase in our services needed to transport a growing population.

Livability: This project will vastly improve the quality of the working environment for MTA employees as well as visitors to the facility. Current problems of overcrowding, inappropriate temperatures, fluctuation of temperatures, seepage of odors, dust and pollen, and inefficient relative locations of office and shop functions will all be resolved with sustainably planned and designed buildings. The public, especially those with disabilities, will find easier access, and the plan will allow public meetings to occur at the facility.

Sustainability: The project will create a highly sustainable transportation system in three ways. First, shifting to hybrid drive vehicles will reduce use of petroleum-based fuels by at least 30%. The eventual shift to electric drive will eliminate the use of fossil fuel for vehicles in services that can run on battery power alone. And all the electricity used for that function will come from solar sources. ***When our vehicles are powered by energy from the sun, we will transport our passengers with no greenhouse gas emissions.***

Second, the new buildings will be far more energy efficient. The solar arrays on the buildings will generate enough electric energy to power the entire Ukiah facility. Contracting with PG&E for their E-SRG Tariff, we will earn enough income to pay for our energy needs in MTA's Willits, Fort Bragg and Point Arena divisions, including battery charging.

And third, despite the need to heat a much larger building, natural gas consumption is expected to be cut in half, from 170 million to 84 million annual BTUs. [www.4mta.org/altfuel/gas.pdf](http://www.4mta.org/altfuel/gas.pdf)

In other words, all of MTA's existing use of PG&E-produced electricity would be replaced by solar. Our use of PG&E's natural gas would be reduced by half just through efficiency. And MTA's use of gasoline and diesel fossil fuels would be significantly reduced through use of hybrid and electric vehicles. ***This project will produce a new, highly sustainable transit facility. It will enhance the local environment, reduce dependence on foreign oil and cut emissions of greenhouse gasses.***

Safety: This project will improve workplace safety over the nearly 60 year old building by providing more modern stairways, hallways mechanical systems and electrical systems, and by reducing potential fire hazards.

**7.2 Expected Costs and Benefits.** This application requests only \$6 million, below the threshold requiring this item.

**7.3 Performance.** We expect that a \$20 million construction budget should potentially benefit many local contractors. We would track and report on the unemployment rate in the County in construction jobs. We could also provide a count of construction contractors on a quarterly basis.

The other measurements we plan to provide are mainly related to the environment. The following items are planned:

- Reduction in the use and cost of fossil fuels from a 2008/09 baseline by 10% in 5 years, 25% in 10 years, 50% in 15 years, 90% in 20 years.
- Reduction in the use of natural gas for building/water heating from a 2009/10 baseline by 50% in first year of full occupancy.
- Elimination of the use of PG&E electricity upon full occupancy.

- Reduction in the rate of sick leave taken by MTA Ukiah employees from a 2009/10 baseline by 5% after first year of occupancy and 10% after five years of occupancy.

**7.4 Job Creation & Economic Stimulus.** Mendocino County and the Ukiah Valley are clearly Economically Distressed Areas. The County unemployment rate rose to 10.1% in June 2009 <http://www.4mta.org/altfuel/mendocinocountyemployment.pdf> Using data from 2007 (latest available) for Mendocino County, per capita income was \$22,779. Finally, just the Ukiah area has suffered more than 200 layoffs in the past seven months alone.

The project should provide roughly \$10 million in construction wages over a period of 18 to 42 months, beginning in FY 2010/11. The question is: will Mendocino County firms be able to underbid larger firms from the San Francisco Bay Area or the Sacramento Valley without special help? If so, something on the order of 50 to 100 full time equivalent jobs would be created in this county. That compares to 1,260 jobs in construction in June 2009 in the County (down from 1,430 in June 2008), according to Mendocino County Workforce Investment Board. <http://www.4mta.org/altfuel/mendocinocountyemployment.pdf>

In the longer term, we have estimated our employment at 65, and designed the new facility to provide space accordingly. That's an increase of 19 over the current employment for MTA in Ukiah.

In addition to construction jobs, some needed materials will likely be procured locally. A very strong solar energy industry thrives in Hopland and Willits. We expect their solar panels and related equipment will compete well for this project.

MTA will comply with all third-party contracting guidelines.

**7.5 Quick Start Activities.** The project is ready to proceed with design, followed by 18 to 42 months of construction, subject only to development of adequate funding.

Schedule: Refer to pages 25 and 26 in the Feasibility Study. [www.4mta.org/altfuel/feasibility.pdf](http://www.4mta.org/altfuel/feasibility.pdf) Upon approval of \$1.4 million in funding, the previously selected consulting team could begin the Plans, Spec's & Estimates (Design) phase. That will support the part-time employment of about a dozen professionals for a period of approximately one-year.

With approval of an additional \$8.9 million or more, including this \$6 million TIGER request, MTA and its consultants will be

prepared to begin construction in fall of 2010. The conceptual design was produced to allow for construction to be done in phases, in case full funding can not be raised at an early stage. ***Phases I and II of construction could begin in fall of 2010, be completed by January 2012, and spend the full amount of TIGER funding. That would provide work for approximately 100 or more full-time equivalent construction workers for 14 months.***

With approval of the final \$11.4 million, construction could be completed. If funding approvals trickle in, work would last an additional two years to January 2014. That time frame would be much faster if all funding is approved before the start of construction. Total cost would also be lower. Construction employment could exceed 100 if the work is condensed.

Environmental Approvals: The **CEQA** document is posted at the County offices. Its 35-day run will be complete on August 4, 2009. See [www.4mta.org/altfuel/ceqa.pdf](http://www.4mta.org/altfuel/ceqa.pdf). The project status is a Categorical Exemption as Replacement or Reconstruction, section 15302.

The **NEPA** document is complete. See [www.4mta.org/altfuel/nepa.pdf](http://www.4mta.org/altfuel/nepa.pdf). The project was designated Categorical Exclusion under 23 CFR 771.117(d)(8) Construction of new bus storage and maintenance facilities in areas used predominantly for industrial or transportation purposes where such construction is not inconsistent with existing zoning and located on or near a street with adequate capacity to handle anticipated bus and support vehicle traffic.

"The Project appears to meet the specific criteria for exclusion:

- a) Minimal or no effect on the environment;
- b) No significant change to existing environmental conditions;
- c) No significant cumulative environmental impacts; and
- d) Similarity to actions previously assessed with a finding of no significant impact."

Legislative Approvals: Over \$5 million of project funding is budgeted to come from the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006, Prop 1B. That requires improvement in California's bond rating, issuance of bonds and legislative appropriation of the proceeds. We have scheduled use of these bond funds very late in the project.

Two other bills still working their way through the Legislature are AB 672 (Bass) and AB 1072 (Eng). Both of these bills will

facilitate the use of Prop 1B PTMISEA funds when they become available.

State and Local Planning: The MTA Board of Directors has incorporated this project into the Short Range Transit Development Plan. The Mendocino Council of Governments has supported the project and will be asked to adopt a resolution of support at their meeting August 31. See the Executive Director's letter at <http://www.4mta.org/altfuel/mcogsupport.pdf>

Technical Feasibility: Everything in this project has been accomplished before. Solar generated electricity is common, and the technology continues to become more efficient and less expensive. Generation and sale of excess energy is less common, but, as a public agency, MTA will be able to sell our excess energy to PG&E which will more than cover our cost of electricity at our other divisions. Using our own solar energy to charge our own batteries is also an improving technology.

Storage of electrical energy for long distance buses, or buses that are on the road for long periods of time, is not currently feasible. However, research is ongoing and the technology is improving. In the meantime, hybrid systems are a good improvement over straight gasoline engines.

Financial Feasibility: At this time, only \$302,000 in non-financed, local funds is committed. An additional \$600,000 of previously awarded FTA 5309 funds is awaiting reprogramming. Pending appropriation of Prop 1B Public Transit Modernization, Improvement and Service Enhancement Account dollars, \$1.25 million has been allocated to Mendocino so far. Pending approval of AB 672, MTA's total share will be \$4,829,000. MTA's total share of Prop 1B Transit System Safety Security and Disaster Response funding will be approximately \$805,000, one-quarter of which will be used for security features at the rebuilt facility. Unless the legislature and governor reinstate State Transit Assistance funding in the next year or two, MTA is prepared to borrow \$2.9 million through Public Financial Management, CSDA Finance Corporation or other source. Applications for federal and state energy grants have not yet been submitted. We have requested federal earmarks. See our Congressman's website <http://mikethompson.house.gov/issues/TranspoProjectRequests.pdf> for his list of high priority projects (top of second page).

Again, refer to pages 25 and 26 in the Feasibility Study [www.4mta.org/altfuel/feasibility.pdf](http://www.4mta.org/altfuel/feasibility.pdf) We believe this is an

appropriate and competitive project for TIGER funding. In order to be in a position to obligate the requested \$6 million, we will need to secure \$1.4 million for design, plus \$2.9 million for construction. That would complete Phases I and II which include significant preliminary site work and the new Maintenance Building. The total Phase I and II construction cost estimate is \$8.9 million, including non-design soft costs. See <http://www.4mta.org/altfuel/costbreakdown.pdf>

## **8. Secondary Selection Criteria**

**8.1 Innovation.** The most innovative strategy within the project is to take advantage of energy from the sun to power all of MTA's operating divisions and vehicles. In the process, we will enjoy some great new features like shaded parking for all and highly energy-efficient buildings. These improvements will create a comfortable attractive and healthy working environment, while saving the entire electric bill, roughly half the natural gas bill and eventually a huge portion of the fossil fuel bills.

At this point in the development of battery technology, a solution for energy storage for long distance, intercity bus service is not yet available. While improvements are underway, these services will have to stick with hybrid drive systems. However, the majority of MTA's services (local, in-town bus and paratransit) are close to being electric-ready with recent improvements in quick charging batteries.

**8.2 Partnerships.** MTA anticipates developing strong partnerships with PG&E plus Ukiah and Mendocino County Economic Development interests. MTA has always had strong partnerships with local social service agencies, especially Senior Centers, and the U.S. Veterans Administration for fueling, maintenance and vehicle storage. The design work in the feasibility study specifically continues to include space for those needs.

## **9. Program-Specific Criteria**

For this transit facility replacement project, the specific Federal Transit Administration criterion would be the useful lifespan of the facility. FTA policy is silent in the area of transit facilities and buildings. Useful life for facilities would be a local management decision. We have set the useful

life of buildings at 30 years. The existing facilities have clearly exceeded their useful lives.

## **10. Federal Wage Rate Certification**

MTA will comply with all relevant federal regulations including 40 USC 31, subchapter IV.

## **11. NEPA**

The Categorical Exclusion from the National Environmental Protection Act was completed on July 14, 2009. See <http://www.4mta.org/altfuel/nepa.pdf>

## **12. Environmentally Related Actions**

All federal, state and local actions have already been taken with the exception of items listed in section 7.5 above and a building permit.

## **13. Index of Websites**

TIGER California application:  
[www.4mta.org/altfuel/tigerapp.pdf](http://www.4mta.org/altfuel/tigerapp.pdf)

Map of location:  
[http://www.4mta.org/altfuel/ukiah\\_fig1.jpg](http://www.4mta.org/altfuel/ukiah_fig1.jpg)

Map of project area:  
[http://www.4mta.org/altfuel/ukiah\\_fig2.jpg](http://www.4mta.org/altfuel/ukiah_fig2.jpg)

Alternative Fuel Infrastructure Study Final Report:  
[www.4mta.org/altfuel/feasibility.pdf](http://www.4mta.org/altfuel/feasibility.pdf)

Notice of Exemption, California Environmental Quality Act:  
[www.4mta.org/altfuel/ceqa.pdf](http://www.4mta.org/altfuel/ceqa.pdf)

Categorical Exclusion, National Environmental Protection Act:  
[www.4mta.org/altfuel/nepa.pdf](http://www.4mta.org/altfuel/nepa.pdf)

List of requested Earmarks, Congressman Thompson:  
<http://mikethompson.house.gov/issues/TranspoProjectRequests.pdf>

Estimate of Natural Gas usage at new buildings:  
[www.4mta.org/altfuel/gas.pdf](http://www.4mta.org/altfuel/gas.pdf)

Letter of support from MCOG Executive Director, Phil Dow  
<http://www.4mta.org/altfuel/mcogsupport.pdf>

Combining hard and soft construction cost estimates  
<http://www.4mta.org/altfuel/costbreakdown.pdf>

Mendocino County employment details  
<http://www.4mta.org/altfuel/mendocinocountyemployment.pdf>

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