

# Low or No Emission Bus Program (5339(c))

## Applicant and Proposal Profile

Is this a resubmission due to an invalid/error message from FTA? ☐ Yes ☒ No

### Section I. Applicant Information

Organization Legal Name: Incorporated County of Los Alamos / Atomic City Transit

FTA Recipient Number: N/A (County Government)

Applicant Eligibility: ☒ Direct or Designated recipient  
☐ State  
☐ Local Governmental Authority  
☐ A Federally-recognized Native American Tribe

Population Served: ☐ Small Urbanized Area  
☐ Large Urbanized Area  
☒ Rural

Description of services provided and areas served.

Service Area:

For the local public transportation program, the service area incorporates all of Los Alamos County, which includes the communities of Los Alamos and White Rock.

Route Design:

Routes are designed on a timed transfer system similar to how packages are distributed by Federal Express. Routes come together at the Transit Center where passengers can then transfer to other routes.

It is the goal of Atomic City Transit to ensure that the elderly, mobility limited, low-income and school age children are well served. It is also a goal to serve those citizens who have a choice in transportation modes, for example, those that are environmentally conscious, financially prudent and health aware. Due to these demographics the County's transit system is reliable, coordinated, consolidated, rapid and direct.

Schedule:

- Hourly service on six neighborhood routes (Main Hill to/from White Rock, Truck Route to/from White Rock, Canyon/Central, North Community, Barranca Mesa and North Mesa) between 6:00 a.m. and 7:00 p.m. Monday through Friday.
- Twice an hour service on one neighborhood route (North Mesa) during peak periods.
- Service every 30 minutes on three routes (Downtown Circulator, North Community and Canyon/Central) between 6:00 a.m. and 7:00 p.m. Monday through Friday.
- Service every 15 minutes on the Downtown Circulator during peak periods.
- ADA Complementary Paratransit Service for individuals with disabilities during the same days and hours of the fixed route service.
- Dial-a-Ride service for the general public between 6:30 p.m. and 9:00 p.m. Monday through Friday.
- Seasonal service mid May through mid October, between White Rock and Bandelier National Monument 7 days per week from approximately 9:00 a.m. to 5:10 p.m. Frequency is every 30 minutes on weekdays and 20 minutes on weekends.
- Afternoon Express service operates only on school days and is open to the general public. In addition to scheduled drop off locations, Afternoon Express buses drop riders off at other marked bus stops along each of the routes, with the exception of bus stops located on Trinity Drive.

Regional Transit partnerships include North Central Regional Transit District (NCRTD) which provides transfers to Northern New Mexico

and State of New Mexico Park and Ride providing transfer to Santa Fe and Albuquerque.

## Section II. Project Information/Evaluation Criteria

### About the Project

Project Title: In an effort to reduce noise pollution and CO2 emissions, Los Alamos County, Atomic City Transit are  
(Descriptive title of this project) requesting to purchase two (2) Electric Power Buses for the land "Where discoveries are made".

#### Project Executive Summary:

Los Alamos County, partnering with Proterra propose the project to procure two (2) 35-ft, heavy duty, low floor, electric power transit buses. One to replace an older bus that has exceeded its useful life in transit service. The second proposed project is an expansion vehicle. This project has a scalability option, as one bus can be purchased one year and a second bus the following fiscal year. This procurement can not be accomplished the the DOT annual formula grant process.

#### Project Statement of Work:

The proposed project is for the procurement of two (2) 35 - ft, heavy duty, low floor bus electric power transit bus. Along with two 120 kw in-depot charging systems. The buses will replace an older bus that have exceeded their useful life in transit services and a second expansion vehicle. The project has a scalability option, as one bus could replace one eligible vehicle as step one, with the second vehicle expansion to occur in a subsequent year.

Project Type: ☒ Vehicle

☐ Facilities

☐ Other

If Other, specify:

Technology: ☒ Battery electric

☐ Diesel-electric hybrid

☐ CNG

☐ Hydrogen fuel cell

☐ Other

If Other, specify:

#### List of Supporting Documentation



**\*\*\*Address each of the evaluation criteria as described in the Notice of Funding Opportunity.\*\*\***

## Demonstration of Need

The proposed project is for the procurement of two (2) 35 – ft., heavy duty, low floor, electric powered transit buses. The buses will replace one older vehicles that has exceeded its useful life in transit services. The project is scalable, as one bus could replace one vehicle as step one, with the second trolley replacement to occur in a subsequent year as an expansion vehicle.

This project is the initial effort of the Incorporated County of Los Alamos to include low or no emissions vehicles into the transit fleet. The units would be deployed in a downtown circulator service where they would benefit from very high visibility furthering the environmentally friendly message of transit, generally, and the no-low emissions message, specifically. Creating a culture that strives to reduce noise and CO2 emissions pollution to add to the current County fleet of electric vehicles.

The Incorporated County of Los Alamos, whose tagline is “Where discoveries are made”, is an ideal location to introduce alternative fuel vehicles which are supported by the County Council’s Quality of Life Priority that focuses on Environmental Stewardship as a strategic focus area. Specifically, the action plan calls on staff to analyze the potential for fuel efficient vehicles – including electric and hybrid options – perfectly aligned with the Low No Grant Program.

However, the project cannot reasonably be funded from the annual FTA program formula allocations administered by the New Mexico Department of Transportation (NMDOT). Without this discretionary grant opportunity, Los Alamos County would have to defer replacement of the older bus for one or more additional years. Current spare ratio is 25% on fixed route services.

As a sub-recipient of FTA operating and capital funding assistance under 49 U.S.C. Section 5311 (Formula Grants for Rural Areas), the County is submitting this proposal for inclusion in the New Mexico Department of Transportation’s (NMDOT’s) consolidated application for this discretionary grant opportunity.

Los Alamos County, through the Atomic City Transit System (ACT), provides transit service that strives to meet the diverse needs of its population. Delivery of regular weekday routes, express routes, peak hour service, and seasonal services are all important to the quality of life of residents because they connect various parts of our community, from the Los Alamos town site, to White Rock, and in cooperation with regional service providers, to areas beyond our County borders.

ACT is used by workers, students, commuters and shoppers with quick connections to Los Alamos National Laboratory from White Rock and the residential neighborhoods on the mesa tops of Los Alamos. The system also provides valuable transportation options for children to attend after-school programs or access the Teen Center in downtown Los Alamos. Our senior demographic relies upon the bus service for safe and easy access to medical services, shopping and recreational programs.

In addition Los Alamos County is a developing tourist destination with the town site, served by ACT’s circulator service, being the focal point of activity for the Manhattan Project National Historical Park. In addition, ACT provides seasonal shuttle service to nearby Bandelier National Monument, and the Valle Caldera National Preserve is but a twenty minute drive from downtown Los Alamos.

In sum, the addition of two (2) 35 – ft., heavy duty, low floor, electric powered transit buses would greatly improve the transit service we are able to deliver to both community residents and visitors alike, while at the same time, promoting the benefits of No Low emission electric buses in working toward our Council’s priority of Environmental Stewardship through the use of alternative fuel vehicles such as electric buses.

**For vehicle replacement/facility rehabilitation projects only:**

Vehicle Description	QTY	Vehicle Year	Vehicle Mileage
Glaval E350 - Superduty - transit bus	1	2011	268,217

  

Facility Description	Years Facility Used by Applicant	Facility Construction Date	Last Renovation Date

## Demonstration of Benefits

Atomic City Transit's vehicle manufacturing partner, Proterra is the leader in the design and manufacture of zero-emission vehicles that enable bus fleet operators to eliminate the dependency on fossil fuels and to significantly reduce operating costs while delivering clean, quiet transportation to the community. Proterra has sold 547 vehicles to 67 different municipal, university, and commercial transit agencies in 30 states across the USA. This project will introduce these new vehicles technologies to Atomic City Transit and reduce energy consumption and reduce harmful and carbon emissions.

### Atomic City Transit's Proterra Buses Will Reduce Energy Consumption

The Proterra Catalyst battery-electric bus is the most energy-efficient heavy duty transit vehicle ever tested at Altoona, registering an overall average efficiency of 1.70KWh/mile or 22.14MPGe. In comparison, the latest 40' low-floor diesel buses tested at Altoona registered less than 5MPG fuel economy. The average fuel economy of the buses that Atomic City Transit will replace with Proterra buses is 9 MPG. By deploying a Proterra Catalyst electric bus, Atomic City Transit will reduce our overall energy consumption by reducing the amount of energy required to move our buses. In addition to the efficiency of the electric bus, the generation and transmission of electricity is much more efficient than extracting, refining and distributing either diesel or compressed natural gas.

### Atomic City Transit's Proterra Buses will Reduce Harmful Emissions

The Proterra Catalyst vehicle produces zero harmful emissions. In contrast, diesel, compressed natural gas (CNG), and diesel-hybrid transit vehicles all produce harmful emissions; including varying ranges of Nitrogen Oxide (NOx), Methane (CH<sub>4</sub>), Carbon Dioxide (CO<sub>2</sub>), Hydrocarbon (HC), Particulate Matter (PM<sub>10</sub> & PM<sub>2.5</sub>), and Black Carbon (BC). Atomic City Transit will be replacing unit #4111 gasoline powered bus. The Proterra Technology will reduce harmful emission that will greatly reduce local air pollution by eliminated all dangerous particulate emissions.

### Atomic City Transit's Proterra Buses will Reduce Direct Carbon Emissions

The Proterra Catalyst transit buses produce zero tailpipe emissions. In comparison, a single diesel bus running 36,000 miles per year (national average) produces an astonishing 201,000 pounds of CO<sub>2</sub> every year. thus, over the 12-year life of a typical transit vehicle, replacing a single diesel transit bus with a Proterra Catalyst zero-emission transit bus will save over 2.4 million pounds of direct emissions. Atomic City Transit will be replacing two buses resulting in (201,000 X 2 X 12 = 4,824,000+ total) pounds of carbon emissions during the useful life of the Proterra buses.

## Planning and Local/Regional Prioritization

The New Mexico State Management Plan has included the following language regarding alternative fuels usage.

The federal government encourages the State to investigate the use of alternative fuels, including propane, compressed natural gas or electricity. NMDOT encourages its Section 5310 and 5311 sub-recipients to use alternative fuels where appropriate. The Transit and Rail Division recognizes that alternative fuels may not be



available in all areas of the State.

In addition, the Incorporated County of Los Alamos, whose tagline is "Where discoveries are made", is an ideal location to introduce alternative fuel vehicles which are supported by the County Council's Quality of Life Priority that focuses on Environmental Stewardship as a strategic focus area. Specifically, the action plan calls on staff to analyze the potential for fuel efficient vehicles – including electric and hybrid options – perfectly aligned with the Low No Grant Program.

Currently the County uses electric vehicles in our fleet motor pool with welcome response from our County employees on the comfort and reliability in both the vehicle and charging stations. The County is now ready to take the next step to further our County fleet adding electric powered buses with zero-emissions.

## Local Financial Commitment

Los Alamos County, Atomic City Transit proposes to provide a commitment of 20% match as opposed to the requirement of 15% for purchase of each bus as well as a 20% match for charging station and installation as opposed to the 10% requirement through Regional Transit Gross Receipts Tax that is collected by Los Alamos County and redistributed by the North Central Regional Transit District (NCRTD), per the service plan submitted by the County and approved by the NCRTD board of directors. In FY 2019 (July 1, 2018 - June 30, 2020), the amount of transit gross receipts tax estimated to be returned to the County is \$1,466,600. (see Attachment 1). The plan for FY 2019 has been approved by Los Alamos Council as well as the NCRTD Board of Directors. The redistribution monies are allocated for local Capital grant match as well as match for the 5311 Rural Formula Operating Grant administered by the New Mexico Department of Transportation.

### Project Budget

Description	QTY	Federal Amount	Other Federal Funds	Local Match	Total Cost
35 ft' Electric Powered Bus FY 19	1	653,748		163,437	817,185
120 kW Plug-in Charger and Installation FY19	1	90,000		22,500	112,500
35 ft' Electric Powered Bus FY 20	1	653,748		163,437	817,185
120 kW Plug-in Charger and Installation FY20	1	90,000		22,500	112,500
Total:		1,487,496	0	371,874	1,859,370

### Matching Funds Information

Matching Funds Amount: 371,874

Source of Matching Funds.

The Incorporated County of Los Alamos designated Regional Transit Gross Receipts Tax that is collected by Los Alamos County and redistributed by the North Central Regional Transit District (NCRTD), per the service plan submitted by the County and approved by the NCRTD board of directors. In FY 2019 (July 1, 2018 - June 30, 2020), the amount of transit gross receipts tax estimated to be returned to the County is \$1,466,600. (see Attachment 1). The plan for FY 2019 has been approved by Los Alamos Council as well as the NCRTD Board of Directors. The redistribution monies are allocated for local Capital grant match as well as match for the 5311 Rural Formula Operating Grant administered by the New Mexico Department of Transportation. The County request to scale the award for two years purchasing an electric powered bus and on plug in charger for FY 19 and a second vehicle and plug in charger in FY 2020. The first vehicle 20% match would be \$163,437 and the capital charger and installation 20% match would be \$22,500 for a total fiscal year match of \$185,937.

Supporting Documentation of Local Match.

Resolution from Los Alamos County Council accepting funding from the redistribution by the North Central Regional Transit District as well.

## Project Scalability

Is Project scope scalable? ☒ Yes ☐ No

If Yes, specify minimum Federal Funds necessary:

Provide explanation of scalability with specific references to the budget line items above.

This project can be scaled with the purchase of a vehicle and plug in charging station FY19 and FY20. The estimated amount of purchase for vehicle and charging station at a 20% match for each would be a federal amount of \$743,748 and a local match of \$185,937 for a total cost of \$929,685 per fiscal year and a total grant amount of \$1,859,370.

## Project Implementation Strategy

Los Alamos County staff will work diligently to assure a simultaneous vehicle purchase and electric charging station occur within the 12 to 15 month estimated project life. Using bi-weekly update on progress and milestones to assure adherence to the proposed time schedule proposed.

Is this application a partnership between an eligible applicant and one or more private section partners? ☒ Yes ☐ No

## Partner

## Qualification

Proterra Bus Company

Proterra is the leading innovator in heavy-duty electric buses and the American leader in the design and manufacture of zero-emissions buses that reduce operating costs while delivering lean, quiet transportation. Proterra has sold more than 546 vehicles in 67 different municipal, university, and commercial transit customer in 30 states.

Proterra will be able to deliver new battery-electric buses in a twelve (12) to fifteen (15) month timeframe from date of award/contracting. Proterra anticipates all buses funded from FY 2018 Low-No Program will be delivered in 2019 through 2021 based on customer preference.

## Project Timeline

## Timeline Description

## Timeline Item Date

Notice of Award from FTA through Contract Execution for Bus 1

01/24/2019

Bus Configuration review through Inspection, Delivery and Acceptance

01/31/2020

Design through Installation and commission of plug-in chargers

12/02/2019

Training through Revenue Launch

02/21/2020

If selected, can this project be obligated within 12 months from the time of award? ☒ Yes ☐ No

## Technical, Legal, and Financial Capacity

Los Alamos County, Atomic City Transit strives to be the best agency possible. As a sub-recipient of the New Mexico DOT, we have received a technical review every two years as well as a Drug and Alcohol review yearly. All findings and recommendations have been addressed and we continue to be in "compliance". In addition, in 2017 the Los Alamos County Transit Division was selected for an in-depth audit of FTA Section grant from the New Mexico DOT Office of Inspector General. NM DOT did inform Los Alamos County of one (1) minor finding and correction action taken to correct.

## Congressional Districts (Project Location)

Congressional District

NM-003