

# Zero Emissions Fleet Transition Plan 2022



May 2022

prepared for  
South Central Regional Transit District

prepared By  
SBLB, LLC  
SCRTD Staff

with  
Gillig  
El Paso Electric Company  
Mesilla Valley MPO

Table of Contents

- Section A. Transit Agency Information ..... 3
- Section B. Rollout Plan General Information ..... 4
- Section C. Required Elements for Zero Emissions Fleet Transition Plan ..... 5
  - Element 1. Long Term Fleet Management Plan ..... 5
  - Element 2. Availability of Resources to Meet Cost..... 7
  - Element 3. Policy & Legislation..... 8
  - Element 4. Current and Future Facility Needs and Plans ..... 9
  - Element 5. Utility Provider Partnership ..... 15
  - Element 6. Impact on Applicant’s Workforce..... 16
- Section D. Zero Emissions Grant Application Additional Considerations..... 17
  - 1. Climate Change Impacts ..... 17
  - 2. Environmental Justice ..... 18
  - 3. Racial Equity & Barriers..... 19
  - 4. Good paying jobs (related to facility projects only)..... 19
  - 5. Workforce Development ..... 20
  - 6. Urban vs. Rural Funding..... 20
- APPENDIX A. Board Resolution ..... 22
- APPENDIX B. Zero Emissions Vehicle Information ..... 23
  - New Flyer ..... 24
  - Gillig ..... 24
  - State of the Market Maturation ..... 24
- APPENDIX C. Funding Opportunities ..... 27
- APPENDIX D. Letters of Commitment..... 333
- APPENDIX E. System Map ..... 35

## Section A. Transit Agency Information

South Central Regional Transit District (SCRTD) provides public transit services a multicounty area in the Doña Ana County and surrounding unincorporated rural and urban areas. SCRTD's service consists of 8 fixed routes and a new demand-responsive paratransit service scheduled to commence in January 2023. The SCRTD provides regional transit service with an annual operating and capital budget of approximately \$3.6 million.

SCRTD's fixed route fleet operates out of two facilities, one at 830 Anthony Drive, Anthony, New Mexico, and another at 295 Quinella, Sunland Park, New Mexico. This location includes the agency's main maintenance facility, operations center, and bus parking. Currently, the site can accommodate up to 75 buses.

The Anthony facility includes a small administrative building, maintenance garage and bus parking.

Transit Agency Name	South Central Regional Transit District
Mailing Address (number, street, city, county, zip-code)	830 Anthony Drive, Anthony, Doña Ana County, New Mexico 88027
Name of Transit Agency's Air Basin(s)	Mesilla Valley Air Basin
Total Number of buses in annual maximum service	15
Population of the urbanized area a transit agency is serving as last published by the Census Bureau before July 1, 2021.	221,508
Contact information of the general manager, chief operating officer, or equivalent:	
a) Contact name (last name, first name, MI)	David Armijo
b) Title	Executive Director, SCRTD
c) Phone Number	(575)325-1620
d) Email	<a href="mailto:darmijo@scrted.org">darmijo@scrted.org</a>

## Section B. Rollout Plan General Information

SCRTD'S zero emission bus (ZEB) rollout plan will enable the agency to fully transition its bus fleet to zero-emission by 2035. Transitioning to 100% zero-emission will provide significant air quality and health benefits to the local population as well as SCRTD staff. The agency operates a significant level of service in its southern service area which lies within a non-attainment air quality area of West Texas and Southern New Mexico. Improving air quality in this area is important to the residents of both New Mexico and Texas.

The final fleet composition will be a mixture of battery electric buses (BEB) that are both 35 and 25 feet in length. The exact mix was determined to ensure the current level of service will be maintained while minimizing cost. Each new ZEB was designed to join the fleet as a 1:1 replacement for a Diesel or Gasoline vehicle. SCRTD will utilize 35-ft BEBs on longer and more demanding bus routes because of the advantage of their greater range and peak power capabilities. The 25-foot BEBs will be assigned to routes with shorter distances.

The bus replacement schedule has been designed such that each bus will operate for its entire useful life to avoid any early retirements. It also seeks to limit the number of new bus purchases required in any single year to maintain the annual capital requirement for bus procurements at a relatively consistent level. As the plan is executed, it is likely the exact number of purchases will fluctuate from year to year based on the available funding, but the overall trend will be followed.

In May 2022, the El Paso Electric Company engaged with SCRTD to provide technical assistance in support of the District's Electric Vehicle Program. In addition, the El Paso Electric Company is offering rebates and special Electric Vehicle (EV) charging rates to SCRTD through its commission approved Transportation Electrification Plan (TEP). As a part of TEP's Public Transit and Customer Fleet Smart Charging Program, EPE offers a rebate of up to \$3,500 to offset 50% of the installation costs of a qualifying Level 2 charging station with up to \$13,000 to offset 50% of any necessary service upgrades.

All planned chargers are to be installed at the District's Sunland Park's existing facility. No on-route opportunity chargers will be needed. The rollout plan was designed to ensure ZEB deployment can be done with Level II charging station.

This ZEB Rollout Plan was approved by the South Central Regional Transit District at their Board Meeting on May 25, 2022, under Resolution ID 2022-26. The board approved resolution is attached in Appendix B. This Rollout Plan was developed by the SBLB, LLC in collaboration with the SCRTD staff, the El Paso Electric Company and the Mesilla Valley MPO. For additional information on the Rollout Plan, please contact:

David Armijo, Executive Director  
South Central Regional Transit District  
(575) 323-1620, admin@scrted.org

## Section C. Required Elements for Zero Emissions Fleet Transition Plan

### Element 1. Long Term Fleet Management Plan

This element describes how the Zero Emissions Fleet Transition Plan aligns with the SCRTD overall Fleet Management Plan. SCRTD’s fixed route fleet is composed of four standard 35’ buses, including 2 Diesel buses and 2 diesel hybrid buses. The average age of SCRTD’s fixed route fleet is seven years. SCRTD plans to replace all of its current buses with zero emissions buses as the buses qualify for replacement under the Federal Transit Administration (FTA) rules for replacement.

The chart below lists all SCRTD revenue vehicles, their current life miles, the miles required for replacement and their anticipated year of replacement.

SCRTD Revenue Vehicle Fleet								
Bus number	Number of buses	Year Model	Fuel Type	Vehicle Type	Current Odometer Reading	FTA Required years before replacement	FTA Required life miles before replacement	Projected year of replacement
1	1	2015	Gas	Star Trans	240,618	7	200,000	2023
2	1	2015	Gas	Star Trans	265,814	7	200,000	2023
3	1	2015	Gas	Star Trans	261,868	7	200,000	2023
4	1	2015	Gas	Star Trans	192,647	7	200,000	2024
5	1	2015	Gas	Star Trans	286,695	7	200,000	2023
6	1	2016	Diesel	Chevy	223,451	7	200,000	2024
7	1	2014	Gas	Star Trans	97,227	7	200,000	2026
8	1	2018	Gas	Aerotech	131,328	7	200,000	2026
9	1	2019	Gas	Aerotech	133,423	7	200,000	2026
10	1	2015	Diesel	International	10,064	7	200,000	2026
733	1	2011	Gas	Star Trans	247,021	7	200,000	2022
743	1	2013	Gas	Goshen	224,904	7	200,000	2023
2001	1	2020	Diesel Hybrid	Gillig 35’ Low Floor	54,108	12	500,000	2034
2002	1	2020	Diesel Hybrid	Gillig 35’ Low Floor	80,169	12	500,000	2034
<b>Total Buses</b>	<b>14</b>							

The following chart list the Procurement schedule for the District’s Bus Fleet by Year through the year 2031.

### SCRTD Future Bus Fleet Procurements by Year

SCRTD Future Bus Fleet Procurements by Year										
Fiscal Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fleet Size - Year Start	14	15	16	16	18	18	18	19	19	19
# of Gas/diesel Bus Buys	2	3	0	0	0	0	0	0	0	0
Gas/Diesel Cost per Bus	\$90,000	\$175,000								
Gas/Diesel Total Cost	\$180,000	\$525,000								
# of Full-sized ZEB Buys	0	3	0	0	0	0	0	0	0	0
Full-sized Cost per ZEB	\$833,300	\$858,299	\$884,048	\$910,569	\$937,886	\$966,023	\$995,004	\$1,024,854	\$1,055,600	\$1,087,267
Full-sized Total ZEB Cost	\$0	\$2,574,897	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
# of Mid-sized ZEB Buys	0	0	2	2	4	0	1	0	0	0
Mid-sized Cost per ZEB	\$270,000	\$278,100	\$278,100	\$278,100	\$278,100	\$278,100	\$278,100	\$278,100	\$278,100	\$278,100
Mid-sized Total ZEB Cost	\$0	\$0	\$556,200	\$556,200	\$1,112,400	\$0	\$278,100	\$0	\$0	\$0
Total Annual Cost	\$180,000	\$3,099,897	\$556,200	\$556,200	\$1,112,400	\$0	\$278,100	\$0	\$0	\$0
Number of buses retired	1	5	2	0	4	0	0	0	0	0
Fleet Size - Year End	15	16	16	18	18	18	19	19	19	19

### SCRTD Future Zero Emission Grant Purchases

SCRTD Zero Emission Bus Related Capital Purchases by Year										
Fiscal Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
# of ZEB Purchases	0	3	2	2	4	0	1	0	0	0
Total ZEB Vehicle Cost	\$0	\$2,574,897	\$556,200	\$556,200	\$1,112,400	\$0	\$278,100	\$0	\$0	\$0
Cost per charge station	\$159,317	\$164,097	\$169,019	\$174,090	\$179,313	\$184,692	\$190,233	\$195,940	\$201,818	\$207,873
Total Charge Station Cost	\$0	\$492,290	\$338,039	\$348,180	\$717,251	\$0	\$190,233	\$0	\$0	\$0
Bus Delivery Cost	\$0	\$12,000	\$8,000	\$8,000	\$16,000	\$0	\$4,000	\$0	\$0	\$0
Total Capital Cost	\$0	\$3,079,187	\$902,239	\$912,380	\$1,845,651	\$0	\$472,333	\$0	\$0	\$0
Employee Training	\$0	\$153,959	\$45,112	\$45,619	\$92,283	\$0	\$23,617	\$0	\$0	\$0
Total Program Cost	\$0	\$3,233,146	\$947,351	\$957,999	\$1,937,933	\$0	\$495,949	\$0	\$0	\$0
Federal Share	\$0	\$2,586,517	\$757,881	\$766,399	\$1,550,347	\$0	\$396,760	\$0	\$0	\$0
Local Share	\$0	\$646,629	\$189,470	\$191,600	\$387,587	\$0	\$99,190	\$0	\$0	\$0

SCRTD’s fixed route fleet transition plan will gradually phase in ZEBs over the next 15 years. The size of the fleet will increase from 14 buses to 19 between 2022 and 2028. The plan maximizes the number of BEBs deployed while ensuring the vehicles will be able to satisfy service requirements with a 1:1 replacement and without exceeding the available electrical capacity.

It was assumed that each fixed route bus typically lasts for 10 years, but the expected retirement date was sometimes staggard to minimize the fluctuation of bus purchases required between years.

All cutaway bus purchases prior to 2022 will be Gas/Diesel and the last gasoline bus will leave the fleet in 2035. All cutaway ZEBs are planned to be BEBs due to the limited amount of space at the Anthony facility. Following the ICT regulation required replacement schedule, SCRTD’s fleet will be 100% ZEV by 2035. SCRTD will continue to evaluate the transition plan for mid-size vehicles as new zero emission vehicle options become available.

## Conventional Bus Conversions

SCR TD is not considering converting any conventional buses in service to zero-emission buses. The transition plan is based on new purchases of ZEBs only.

## Element 2. Availability of Resources to Meet Cost

This element discusses how SCR TD will meet its requirements for provision of the match to Federal FTA funding of the Zero Emission Buses contained in both the current year grant request and future grant request covered in this plan. The match for Federal FTA funding will be provided through a combination of State of New Mexico and local funding sources.

The table below details how many buses SCR TD plans to purchase each year and their cost.

SCR TD Future Bus Fleet Procurements by Year										
Fiscal Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Fleet Size - Year Start	14	15	16	16	18	18	18	19	19	19
Gas/diesel fuel Bus Purchases	2	3	0	0	0	0	0	0	0	0
Zero Emission Bus Purchases	0	3	2	2	4	0	1	0	0	0
Number of buses retired	1	5	2	0	4	0	0	0	0	0
Fleet Size - Year End	15	16	16	18	18	18	19	19	19	19

The following table shows the total projected capital cost of all Zero Emission bus related purchases and activities per year. These line items include bus purchases, charging station purchases, vehicle delivery charges and employee training cost.

SCR TD Zero Emission Bus Related Capital Purchases by Year										
Fiscal Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
# of ZEB Purchases	0	3	2	2	4	0	1	0	0	0
Total ZEB Vehicle Cost	\$0	\$2,574,897	\$556,200	\$556,200	\$1,112,400	\$0	\$278,100	\$0	\$0	\$0
Cost per charge station	\$159,317	\$164,097	\$169,019	\$174,090	\$179,313	\$184,692	\$190,233	\$195,940	\$201,818	\$207,873
Total Charge Station Cost	\$0	\$492,290	\$338,039	\$348,180	\$717,251	\$0	\$190,233	\$0	\$0	\$0
Bus Delivery Cost	\$0	\$12,000	\$8,000	\$8,000	\$16,000	\$0	\$4,000	\$0	\$0	\$0
Total Capital Cost	\$0	\$3,079,187	\$902,239	\$912,380	\$1,845,651	\$0	\$472,333	\$0	\$0	\$0
Employee Training	\$0	\$153,959	\$45,112	\$45,619	\$92,283	\$0	\$23,617	\$0	\$0	\$0
<b>Total Program Cost</b>	<b>\$0</b>	<b>\$3,233,146</b>	<b>\$947,351</b>	<b>\$957,999</b>	<b>\$1,937,933</b>	<b>\$0</b>	<b>\$495,949</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
Federal Share	\$0	\$2,586,517	\$757,881	\$766,399	\$1,550,347	\$0	\$396,760	\$0	\$0	\$0
Local Share	\$0	\$646,629	\$189,470	\$191,600	\$387,587	\$0	\$99,190	\$0	\$0	\$0

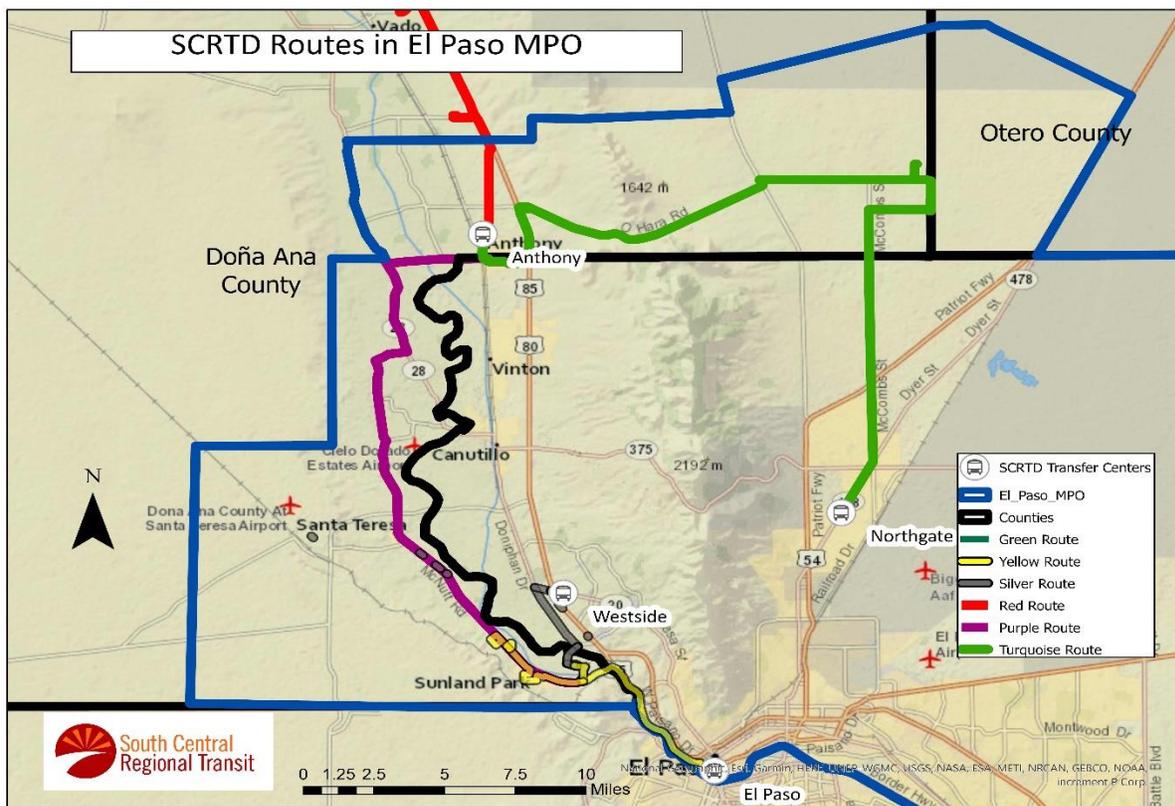
In addition to Federal funding of \$6,057,903 over the ten-year period, SCR TD will need to secure \$1,514,476 in special grant funding to cover the local share of the estimated capital expenditure to achieve its ZEB Rollout Plan. This grant funding will come from a variety of sources – including the local Dona Ana County MOU and Membership Fees. It is difficult to fully predict what programs and funding levels will be available in the future. SCR TD plans to apply for a combination of competitive grants and voucher programs to directly fund procurement of ZEBs and accompanying infrastructure. SCR TD Federal funds are provided through Urbanized Area Formula Grants (5307), Bus and Bus Facilities Program (5339) funding, and the Enhanced Mobility of Seniors & Individuals with Disabilities Program (5310) funding source.

### Element 3. Policy & Legislation

SCRTD has researched issues for its Zero Emissions Plan caused by current or proposed policies or legislation enacted either at its local governmental level or through statewide New Mexico legislation. It is not aware of any legislation currently on the books or proposed at either the local or state level that would cause a problem for or otherwise impact its ability to pursue its Zero Emissions Plan.

As a New Mexico state authorized transit district that is under the direction of and receives funding through the New Mexico Department of Transportation (NMDOT), it receives notice from the NMDOT whenever there is legislation under consideration that will in any way impact SCRTD and/or other local transit districts within New Mexico.

Further, as of Fiscal Year 2022, the Transit District is now a direct grant recipient and receives Section 5307 federal funds from Region VI Federal Transit Administration office. New Mexico transportation funds that flow through the El Paso Metropolitan Planning Organization (MPO) office are now directed to South Central Regional Transit District. These funds are reserved for transit services provided in the Southern part of Dona Ana County. This area includes Anthony, Chaparral, Sunland Park, and unincorporated communities in Dona Ana County.



## Element 4. Current and Future Facility Needs and Plans

### **Electrical Charging Infrastructure**

The BEB charging infrastructure will be deployed and scaled to match SCRTD’s BEB purchases. The deployment timeline can be split into two phases: Phase I, 2020-2030 and Phase II, 2030-2040. The engineering and design for Phase I is currently in development and will only encompass the Sunland Park facility at 295 Quinella. As part of SCRTD’s application for EPE’s TEP’s Public Transit and Customer Fleet Smart Charging Program, El Paso Electric can offer a rebate of \$3,500 to offset 50% of the installation costs of each level 2 charging station and a rebate for up to \$13,000 to offset 50% of the costs of any necessary infrastructure upgrades. In regard to SCRTD’s existing electrical infrastructure at the Sunland Park facility on 295 Quinella Dr, there are currently 2 transformers on the property, one single phase 10KVA 120/240V and the other 3 phase 150 KVA 120/208V. Based on the expected additional load from these level 2 charging stations and the existing electrical infrastructure, as seen in the image below, there are two options for providing service:

1. Upgrade the existing 150 KVA underground transformer to a 500 KVA to serve both the charging stations and SCRTD’s existing facility.
2. Run a new underground line from the back overhead (O.H.) lines to a separate service just for the EV charging stations.

The first option will require an outage which can take a few days and the SCRTD will need to rebuild the existing service up to code. The second option won’t cause an outage but will require more work on our end, with either option we may need to upgrade our O.H. lines from 1/0 ACSR to 336 ACSR to withstand the new added load. SCRTD will maintain communication with El Paso Electric so that any future power limitations are understood well in advance so that the plan can be reevaluated, as necessary.

### **Projected Cost Per Charging Station and Total Cost Per Year**

The projected cost per charging station and total charging station cost per year is shown in the below table. Total cost of the charging stations over the 10-year period is \$2,554,715.

SCRTD Charging Station Purchases By Year										
Fiscal Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Charging Stations Installed	0	3	2	2	4	0	1	0	0	0
Cost per charge station	\$159,317	\$164,097	\$169,019	\$174,090	\$179,313	\$184,692	\$190,233	\$195,940	\$201,818	\$207,873
Total Charge Station Cost	\$0	\$492,290	\$338,039	\$348,180	\$717,251	\$0	\$190,233	\$0	\$0	\$0
Federal Share	\$0	\$393,832	\$270,431	\$278,544	\$573,801	\$0	\$152,186	\$0	\$0	\$0
Local Share	\$0	\$98,458	\$67,608	\$69,636	\$143,450	\$0	\$38,047	\$0	\$0	\$0

The Sunland Park facility with the utilities present and required changes proposed. The facility is located across from Futurity Drive. The aerial photo below shows the prospective changes required for the project.



### Zero Emission Bus Projected Gas/Diesel Fuel Savings Per Year

SCRTD Zero Emission Bus Projected Gas/Diesel Fuel Savings Per Year										
Fiscal Year	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
SCRTD Zero Emission Buses	0	3	5	7	11	11	12	12	12	12
Miles operated with Battery Operated Buses	0	105,000	175,000	245,000	385,000	385,000	420,000	420,000	420,000	420,000
Total Yearly Gallons Fuel Saved	0	26,250	43,750	61,250	96,250	96,250	105,000	105,000	105,000	105,000

Phase I requires SCRTD to purchase and install a dedicated as well as BEB charging infrastructure.

## **Anthony Maintenance Facility**

Major repairs on SCRTD's Anthony facility are scheduled for summer 2022. Fixed route buses are currently performed in the maintenance facility, including exterior painting and major engine overhauls. The facility is designed to meet the national and regional code requirements to be designated as a "major repair garage" for Gas/Diesel buses.

The Anthony bus facility supports four bus bays and parking for ten buses. A new parking lot was constructed in 2021 and a new maintenance shop room will be constructed and complete in the summer 2022. Below are photos of the facility surface area.



The facility is located near the center of the service area and across the street from the Anthony Transfer Station. As such, this reduces deadhead to less than one percent of service and allows buses to be exchanged in the midday as well as provide bus operators with breaks and lunch breaks during the day. Further, in the second phase of the plan as midsize electric buses are acquired, they will operate from this location. This will mitigate the need to charge buses during the service day. Consequently, the charging stations will be Tier II and will support the requirements of the service day in the off peak or overnight charging.

The photo below shows the maintenance doors, there are four bays for supporting the bus fleet.



### **Sunland Park Facility Modifications**

No modifications are required to incorporate ZEBs into SCRTD's fixed route fleet. There are currently 10 dedicated 25' to 35' bus parking stalls at the site and the final transitioned fleet is projected to be 20 buses in 2035, not including any contingency. Below is an aerial photo of the bus maintenance facility and the future site of the Administrative headquarters and training center. This facility will be the location for the first three zero emission electric buses followed by two additional buses in 2024. The facility is ample space for the fleet and the associated charging stations to be installed and for employee training.



The Sunland Park Maintenance facility is located on an 11 acre parcel with forty percent of the area undeveloped and available for future construction and development. The two buildings located per the aerial photo below are used for vehicle maintenance of the 35 foot Gillig buses and as a training center. The larger administrative building will serve as the District’s administrative offices and training center. Conference rooms and advanced IT is in place to add a centralized control center for vehicle operations.



The BEB charging infrastructure will be designed for SCRTD’s existing overnight parking arrangement. The BEBs will be parked with open area charging stations.

### Infrastructure Summary

The table below identifies the type of buses that will operate out of each of SCRTD’s facilities.

#### NOx-Exempt Area and Electric Utilities’ Territories

Division Name	Type(s) of Bus Propulsion System	Located in Nox Exempt Area? (Yes/No)
Sunland Park	Gas/Diesel, Battery Electric	Yes
Anthony	Gas/Diesel, Battery Electric	Yes

## Facility Information

### Charging

GILLIG's experts will provide full turnkey infrastructure support, including consulting, project management, and streamlined equipment procurement to support SCRTD's transition to electric buses. Gillig offers broad access to state-of-the-art charging technology and expedited lead times from the leading U.S. manufacturers for plug-in, overhead conductive, and inductive charging solutions. They provide rigorous testing of non-proprietary chargers assures compatibility and performance, while providing maximum flexibility.

### Gillig Electric Bus Options

Gillig Bus Information		
Bus Length	35 foot bus	40 foot bus
Battery Capacity	490 kWh, 588 kWh, 686 kWh	
Motor	Cummins Direct Drive, Permanent Magnet Motor	
Passenger Capacity (seated / total)	31 / 62	38 / 75
Gross Vehicle Weight Rating	48,200 lbs	48,200 lbs
Maximum Height	135"	135"

## Element 5. Utility Provider Engagement

In May 2022, the El Paso Electric Company engaged SCRTD in provision of technical assistance in support of the District's Electric Vehicle Program. In addition, the El Paso Electric Company is offering rebates and special Electric Vehicle (EV) charging rates to SCRTD through its commission approved Transportation Electrification Plan (TEP). As a part of TEP's Public Transit and Customer Fleet Smart Charging Program, EPE offers a rebate of up to \$3,500 to offset 50% of the installation costs of a qualifying Level 2 charging station with up to \$13,000 to offset 50% of any necessary service upgrades.

All planned chargers are to be installed at the District's Sunland Park's existing facility. No on-route opportunity chargers will be needed. The rollout plan was designed to ensure ZEB deployment can be done with Level II charging stations.

Documentation showing El Paso Electric Company's support of the project is provided as an attachment to this plan. Below is an example of the charging stations that may be used for this project to fuel the Gillig Electric buses. Fortunately, the Sunland Park facility has able space for the buses to be parked and charged overnight or during the day.



## Element 6. Impact on Applicant’s Workforce

SCR TD will design its training program and schedule with a “train the trainer” approach. The goal of this approach is to select key operations and maintenance personnel, such as lead technicians and supervisors, to take part in the OEM and vendor training programs to bring the technical expertise and knowledge in-house. The selected personnel will then train the rest of SCR TD’s operations and maintenance staff on the specific knowledge and skills required for each role. The key training topics are summarized below.

### Battery Electric Bus Training

Training will be provided by the selected OEM (Gillig) in the following areas:

1. General bus overview introduction training
2. High voltage safety training
3. Bus maintenance and repair training
4. Bus driver and operations staff training

### BEB Charging Infrastructure Training

Training will be provided by the selected equipment vendor (Gillig) in the following areas:

1. Charging infrastructure maintenance training
2. Emergency first responder training for Sunland Park and Doña Ana County Fire Department representatives as well as SCR TD onsite first responder staff.

BEB Training Plan							
Date	Course Title	Purpose	Conducted By	Participants	Number of Participants	Frequency	Cost
2023	Operator Training	Operator orientation	BEB OEM	Operator trainers, supervisors, or bus operators	16	One time	\$4,000
2023	Bus Introduction	Overview of the bus	BEB OEM	Maintenance technicians or other yard personnel who need to be aware of bus operation during initial acceptance and launch period	16	One time	TBD
2023	Structural Composites Training	Hands-on training for structural composites repairs on buses	BEB OEM	Maintenance technicians	24	One time	TBD
2023	Bus Maintenance Training	Training of bus maintenance technicians on routine servicing	BEB OEM	Bus maintenance technicians	32	One time	\$10,000

Electric Charging Infrastructure Training Plan							
Date	Course Title	Purpose	Conducted By	Participants	Number of Participants	Frequency	Cost
2023	Charger Maintenance Training	Training of charger infrastructure maintenance	Electric Charger Vendor	Charger Infrastructure maintenance technicians	4	One time	TBD
2023	Emergency First Responder Training	First responder training on electrical buses and infrastructure	Electric Charger Vendor	Charger Infrastructure maintenance technicians	4	One time	TBD

# Section D. Zero Emissions Grant Application Additional Considerations

## 1. Climate Change Impacts

SCRTD’s Zero Emissions Fleet Transition Plan will reduce fuel emissions, improve systemwide energy efficiency, and provide a transition plan to full electrification of its revenue vehicle bus fleet over the next 15 years.

EPE continues to be a coal-free utility after completing the sale of the Company’s ownership interest in the Four Corners Power Plant in 2016. EPE also continues its efforts to utilize cleaner resources such as natural gas and nuclear as well as expand its renewable portfolio.

The replacement of gasoline and diesel buses with battery operated buses powered with El Paso Electric electricity will result in reductions of an estimated 122,500 gallons of carbon-based fuel annually by the tenth year of the plan.

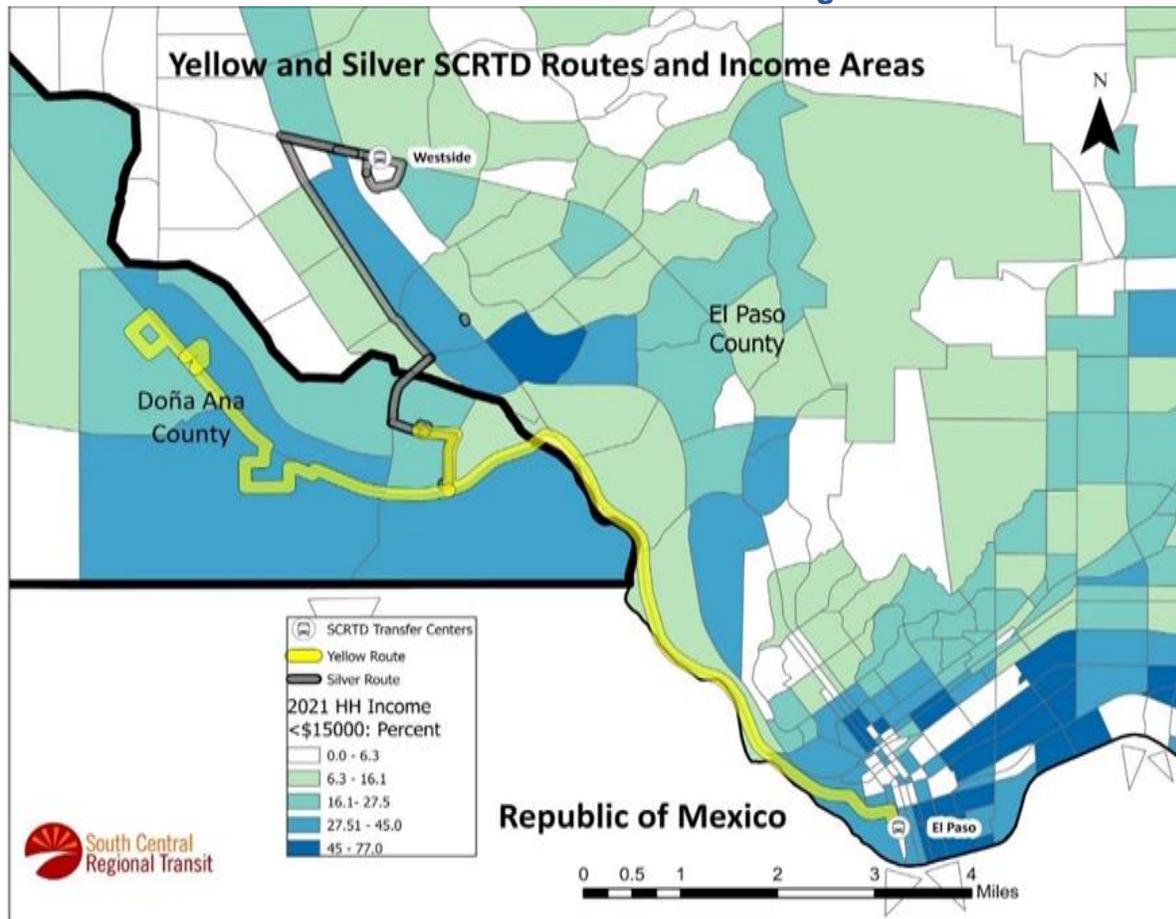
SCRTD Zero Emission Bus Projected Gas/Diesel Fuel Savings Per Year										
Fiscal Year	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
SCRTD Zero Emission Buses	0	3	5	7	11	11	12	12	12	12
Miles operated with Battery Operated Buses	0	105,000	175,000	245,000	385,000	385,000	420,000	420,000	420,000	420,000
Total gallons saved	0	26,250	43,750	61,250	96,250	96,250	105,000	105,000	105,000	105,000

The District’s Sustainability Plan also includes reductions in energy at each facility. This may include adding solar power to the buildings at both the Anthony and Sunland Park facilities. Reducing the carbon footprint of these bus facilities will be an integral part of the climate change impact as part of the requirement to provide transit services to the region.

## 2. Environmental Justice

Figure 13 shows the disadvantaged communities in SCRTD's service territory and the fixed routes that pass through them. This includes a large proportion of communities which fall under the top 5% and top 25% disadvantaged communities within Doña Ana County.

### SCRTD transit routes over low income and disadvantaged communities



Sunland Park – El Paso County is part of the West Texas regional and Mesilla Valley air basin and does not meet EPA air quality standards and is non-attainment. It is designated as an ozone, PM<sub>2.5</sub>, and PM<sub>10</sub> non-attainment area. Ozone is formed from a chemical reaction between nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO) and volatile organic compounds (VOCs) in the presence of heat and sunlight. Ozone acts like a corrosive gas, burning lung tissue and damaging the respiratory tract. It causes coughing, shortness of breath, can trigger asthma, lung and heart disease and potentially premature death. Pollutants emitted by fossil fuel combustion vehicles are a key contributor to the formation of ozone.

### 3. Racial Equity & Barriers

Disadvantaged communities are disproportionately burdened by multiple sources of pollution and typically have population characteristics that make them more sensitive to pollution than the wider population. As SCRTD transitions gasoline/diesel vehicles to BEBs, it will improve local air quality by reducing critical emissions of criteria pollutants NO<sub>x</sub>, VOC, and CO that contribute to the production of ozone. These reductions directly support state and local government efforts to achieve EPA's "attainment" classifications. In addition, zero emission vehicles do not emit particulate matter (PM<sub>2.5</sub>) and contribute significant reductions in GHG emissions, further contributing to improved local air quality. SCRTD will prioritize deploying ZEBs on routes servicing disadvantaged communities wherever possible in the early stages of the transition.

Local air quality will improve by reducing critical emissions of NO<sub>x</sub>, VOC, and CO that contribute to the production of ozone. Zero emission buses also do not emit particulate matter (PM 2.5) contributing significant reductions in GNG emissions.

### 4. Good paying jobs (related to facility projects only)

The construction of the three battery charging stations at the SCRTD Sunland Park bus garage will provide employment for those involved with the installation of the charging stations during construction. Periodic maintenance and repair of the charging stations will provide opportunities for either in-house or outside contracted employment.

Throughout the process of converting the entire SCRTD bus fleet to Zero Emissions buses, there will be a need for construction of further charging stations, related equipment, and facilities. Additional temporary construction or periodic contracted labor will be required for future phases of the transition.

## 5. Workforce Development

SCRTD has communicated its plan for future Zero Emissions Bus fleet to its employees. SCRTD maintains an open-door policy where all employees are encouraged to provide input on future transit plans to management staff including the SCRTD Executive Director.

The principal area of need for SCRTD staff training and development is in regard to the preventive maintenance and repair of low and Zero Emissions buses. SCRTD will focus its training and workforce development efforts in this area. SCRTD will consider all avenues to improving its workforce including through labor – management joint partnerships, maintenance division apprentices, and improved strategies to recruit, retrain and retain skilled employees.

SCRTD intends to leverage training offered by vehicle OEMs and infrastructure providers wherever possible. SCRTD will supplement vendor training with course offered by other transit agencies and outside programs.

SCRTD'S first ZEBs will be BEBs provided by Gillig, who will deliver the vendor training for these buses. SCRTD will evaluate multiple bus original equipment manufacturers (OEM) and equipment vendors as more ZEBs and fueling infrastructure are procured.

The outline training plan was based on generalized training information provided by the OEMs and vendors during preliminary discussions.

## 6. Urban vs. Rural Funding

The SCRTD service area includes both urban and rural areas. SCRTD receives both 5307 (Urban Area) and 5311 (Rural Area) funding through the Federal Transit Administration.

The percentage of urban to rural mileage of SCRTD fixed bus routes is 35 percent to 65 percent rural. There are three intercity or urban bus routes to five rural routes. The latter operate longer routes and generate more total miles.

As SCRTD transitions to a fully Zero Emissions bus fleet, these buses will be used in all service areas. SCRTD currently projects that both its needs for transit service within its region and its provision of services will remain roughly equivalent to its current mix of urban area and rural area services and service levels.

In fact, the expansion of service outlined in the District's Ten Year Service and Financial Plan identifies increases service frequency and the addition of one route. All of these changes will be within the urbanized area but will include service connections that will also increase service in the urban areas collectively.

Below are the Zero Emission Bus Related Capital purchases by year which includes all cost for buses, charging stations, training costs for the program. This table provides a snapshot of the Zero Emission Bus Capital and related program costs.

### Zero Emission Bus Related Capital Purchases

SCRTD Zero Emission Bus Related Capital Purchases by Year										
Fiscal Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
# of ZEB Purchases	0	3	2	2	4	0	1	0	0	0
Total ZEB Vehicle Cost	\$0	\$2,574,897	\$556,200	\$556,200	\$1,112,400	\$0	\$278,100	\$0	\$0	\$0
Cost per charge station	\$159,317	\$164,097	\$169,019	\$174,090	\$179,313	\$184,692	\$190,233	\$195,940	\$201,818	\$207,873
Total Charge Station Cost	\$0	\$492,290	\$338,039	\$348,180	\$717,251	\$0	\$190,233	\$0	\$0	\$0
Bus Delivery Cost	\$0	\$12,000	\$8,000	\$8,000	\$16,000	\$0	\$4,000	\$0	\$0	\$0
Total Capital Cost	\$0	\$3,079,187	\$902,239	\$912,380	\$1,845,651	\$0	\$472,333	\$0	\$0	\$0
Employee Training	\$0	\$153,959	\$45,112	\$45,619	\$92,283	\$0	\$23,617	\$0	\$0	\$0
Total Program Cost	\$0	\$3,233,146	\$947,351	\$957,999	\$1,937,933	\$0	\$495,949	\$0	\$0	\$0
Federal Share	\$0	\$2,586,517	\$757,881	\$766,399	\$1,550,347	\$0	\$396,760	\$0	\$0	\$0
Local Share	\$0	\$646,629	\$189,470	\$191,600	\$387,587	\$0	\$99,190	\$0	\$0	\$0

The plan balances the route planning needs of both longer and shorter bus routes. This allows for the purchase of smaller buses when appropriate to the service requirements while reserving the use of larger buses for the longer service day when more miles will be required.

The costs are reflective of the current inflation costs of bus purchases but will require an update to the plan once the adverse effects of the pandemic have run their course and when the cost for vehicles levels off.

# APPENDIX A. Board Resolution

## South Central Regional Transit District

### Resolution No. 2022-23

#### **A RESOLUTION AUTHORIZING THE SOUTH CENTRAL REGIONAL TRANSIT DISTRICT STAFF TO APPLY FOR FEDERAL FUNDING THROUGH THE FY2022 LOW NO EMISSIONS PROGRAM FOR THREE ELECTIC BUSES TO REPLACE EXISTING FLEET VEHICLES AND FACILITY IMPROVEMENTS**

**WHEREAS**, the USDOT issued a notice for funding opportunity for the FY2022 Low No Emissions program on December 1, 2021; and

**WHEREAS**, the SCRTD staff has submitted its application to NMDOT (to be included in the State's consolidated application); and

**WHEREAS**, the SCRTD has identified capital improvements related to the efficient and effective day-to-day operations and maintenance of fleet; and

**WHEREAS**, upon selection to receive FFY2022 Section Low or No Emission Grant Program funds, the SCRTD is committed to provide a twenty (20) percent match (\$608,071) of the project cost (\$3,040,354).

**NOW, THEREFORE, BE IT RESOLVED** by the SCRTD Board that, the request for SCRTD Board authorization and support of Staff submitting for a FY2022 Low or No Emission Grant for Buses and Support Equipment in the amount of \$3,040,354 with a SCRTD match of \$608,071 to fund the purchase of three electric buses to replace existing fleet vehicles.

**PASSED, APPROVED AND ADOPTED BY THE GOVERNING BODY OF THE SOUTH CENTRAL REGIONAL TRANSIT DISTRICT ON THIS 25th DAY OF May 25, 2022.**

  
Javier Perea, Chair

Approved as to form:

  
David Armijo, Executive Director

## APPENDIX B. Zero Emissions Vehicle Information

### **Smaller Vehicle Option (Ford E-Transit Vehicles)**

*Small electric transit vehicles, with targeted range designed to fulfill fleet needs based on insight from 30 million miles of customer telematics data – and at a price that helps make it easy to switch to electric. The average daily range for commercial all-electric vans in the U.S. is 74 miles. With a usable battery capacity of 68 kilowatt-hours, E-Transit has an available targeted range of 126 miles in the low-roof cargo van configuration. E-Transit cutaway models have a starting MSRP of \$43,295 – and come with an eight-year, 100,000-mile electric vehicle component warranty.*

*Ford Pro Charging is the only North American solutions provider that combines light-duty electric vehicle chargers with a single source for design/build services and offers a variety of solutions to fit fleet and driver needs, including home, public and depot. E-Transit comes with access to the BlueOval™ Charge Network – North America’s largest public charging network – providing drivers with seamless public payment capability and providing fleet managers with central account and billing management.*

### **Capability plus lower cost of ownership**

*Designed for uncompromised cargo capacity, the E-Transit battery is located underneath the vehicle body, allowing for up to 487.3 cubic feet of cargo space inside the high-roof, extended-wheelbase configuration.*

*Ford engineers designed the E-Transit rear-wheel drive and rear suspension to optimize cargo space, creating a heavy-duty semi-trailing arm suspension system enabling better steering precision and more confident handling, plus better traction both in laden and unladen conditions.*

*E-Transit cargo vans offer commercial customers the capability they need to get the job done, delivering a maximum payload of 3,880 pounds, and up to 4,428 pounds for cutaway versions – with a powerful electric motor providing 266 horsepower/198 kilowatts of power and 317 lb.-ft. of torque across all configurations.*

*E-Transit is backed by Ford’s powerhouse network of more than 650 Commercial Vehicle Centers across the U.S. plus over 2,300 electric-vehicle certified dealers.*

*Cities around the world – from London to Los Angeles – are pledging to create emissions-free zones to improve air quality, reduce greenhouse gas levels and improve noise pollution. California has also mandated that all new cars and passenger trucks sold in the state be zero-emission vehicles by 2035.*

*E-Transit is part of a Ford investment in electrification of more than \$30 billion through 2025. The all-new, all-electric Mustang Mach-E arrived last year, while for the all-electric F-150® Lightning™ production begins this spring.*

*Ford intends to achieve carbon neutrality globally by 2050. It is the only full-line U.S. automaker committed to doing its part to reduce CO2 emissions in line with the Paris Climate Agreement and working with California for stronger vehicle greenhouse gas standards.*

*E-Transit will not only help companies operate with the benefits of electrification, but it also offers clear cost-of ownership advantages. Scheduled maintenance costs for the all-electric E-Transit are estimated to be 40 percent less than the average scheduled maintenance costs for a gas-powered 2020 Transit over eight years/100,000 miles. And with lower maintenance requirements and the opportunity to avoid fill-ups, SCRTD can help improve uptime and productivity.*

### **Standard Vehicle Option (New Flyer, Gillig)**

#### **New Flyer**

Xcelsior CHARGE NG is New Flyer's next generation battery-electric, zero-emission bus. It is lighter, simpler and has longer range with better energy recovery. It has a capacity of 32-61 passengers with 2 wheelchair locations. It is available in 35', 40', and 60' configurations. It has a Siemens ELFA3 traction motor, Lithium Manganese Cobalt (NMC) batteries, and electric roof-mounted HVAC(s)

New Flyer's Xcelsior CHARGE NG™ battery-electric buses provide up to 525kWh of power and 220 miles of range on a single charge.

#### **Gillig**

Gillig uses AKASOL, a leading manufacturer of high-performance battery systems, for its next-generation battery. With available configurations of 490 kWh, 588 kWh and 686kWh, together with the largest selection of available charging options, GILLIG can configure the bus to meet any agency's requirements. Gillig is partnering with Cummins, who provides the bus's highly efficient and reliable powertrain system to integrate and validate the new batteries with the bus ahead of the 2023 production start date.

The Gillig battery-electric buses provide up to 686 kWh of available energy and 290 miles of range on a single charge, the largest capacity in a North American transit bus.

### **Electric Bus Considerations**

#### **State of the Market Maturity**

The electric bus market size exceeded \$28 billion in 2020 and is expected to grow at 11% compound annual growth rate (CAGR) between 2021 and 2027. The market is forecast to grow

at an exponential rate due to the rapid increase in uptake of electric buses as a sustainable mode of transport.

Electric buses are primarily operated by the integrated electric batteries. This also includes plug-in hybrid buses and fuel-cell electric buses. The report says stringent emission regulations and directives imposed by governments across the globe will propel the adoption of electric buses. In 2019, France announced its 100% zero-emission vehicle target for 2040. As a part of the Paris Climate agreement, the country passed a law to ban ICE vehicle sales by 2040.

Electric buses are 100% eco-friendly as they operate on electrically-powered motors. They do not release smoke or toxic gases into the environment as they operate on a clean energy obtained from battery packs. Several benefits of electric buses, such as low maintenance costs and reduced pollution by emissions, are augmenting their representation in the market.

### **Full-size buses**

Proterra Inc 35ft, 40ft

BYD Motors Inc 23ft, 35ft, 40ft, 45ft

NFI Group Inc 35ft, 40ft, 60ft

GILLIG LLC 35ft, 40ft

Nova Bus 40ft

ARBOC (Now a Part of NFI) 30ft, 35 ft

Green Power Bus 30ft, 40ft

### **Medium-sized buses**

BYD Motors Inc 23ft, 35ft, 40ft, 45ft

ARBOC (Now a Part of NFI) 30ft, 35 ft

Ebus 22 ft

Green Power Bus 30ft, 40ft

### **Proven Vehicle Emissions Improvements**

Battery electric buses significantly improve a fleet's air quality profile because they have no tailpipe. Any emissions related to the bus's operation are sourced at the point of where the electricity is generated. Shifting to this technology immediately improves local air quality.

Battery electric buses improve the Green House Gas (GHG) profile of a fleet by improving the efficiency of the vehicles. Well-to-wheels, electric buses are more efficient than their Internal Combustion Engines (ICE) counterparts and have fewer GHG emissions associated with running them off grid-sourced electricity. As grids improve and reduce their carbon intensity, the operations only get cleaner.

### **Arguments for Maintenance and Fuel Savings**

Electric buses are more expensive than fossil fueled buses, electric buses can provide cost savings over the long run. An average purpose built, heavy-duty diesel transit bus costs around \$500,000, compared with \$1,000,000 for an electric bus

Electric bus could save \$400,000 in fuel expenses and \$125,000 in averted maintenance costs, according to figures from bus manufacturer New Flyer. Electric buses could provide fuel and maintenance savings of up to \$50,000 a year over fossil fuel powered buses, resulting in a five year payback period, according to estimates from another bus manufacturer, Proterra. Electric buses have significantly fewer parts than fossil fuel buses. They do not have an exhaust system, their braking systems last longer, and they do not require oil changes.

The Federal Transit Administration's Low or No Emission Program provides funding to state and local government agencies to purchase or lease zero-emission and low-emission transit buses and related infrastructure. In 2019, the program allocated just under \$85 million in grants to 38 projects in 38 states.

Seneca, South Carolina switched to an electric fleet in 2014. The city's transportation agency has found the charging time for the buses to be quicker and the range longer than expected.

In a comparison between its electric buses and diesel buses operating in other locations it serves, the transit agency found the fuel efficiency of the electric fleet to be 16.5 miles per gallon equivalent compared with 3.8 miles per gallon for the diesel fleet and the fuel per mile cost \$0.28 for the electric buses compared with \$0.59 for diesel. Maintenance costs for the electric buses was \$0.55 per mile compared with \$1.53 for the diesel fleet.

Albuquerque, New Mexico, on the other hand, experienced a string of mechanical problems and inadequate infrastructure planning, as well as a rocky relationship with the bus manufacturer. The city's experience, however, provides valuable lessons and Albuquerque in August announced plans to relaunch its electric bus efforts.

Gillig will provide buses and training for maintenance and operations staff prior, during and after vehicle rollout. Technical support is critical to the partnership between the manufacturer and SCRTD staff. Gillig currently provides two hybrid electric buses to the District and has a certified contractor in El Paso to support the bus fleet in Sunland Park.

## APPENDIX C. Funding Opportunities

The most significant challenge facing SCRTD in the execution of this transition plan is the availability of funding. Procuring and operating ZEBs will be more expensive than conventional Gas/Diesel buses, which will increase the agency's annual capital and operating budgets. Financial support from the federal, state, and local governments will be necessary to achieve the targets in the Zero Emissions Transition Plan.

The incremental cost of replacing Gas/Diesel buses with ZEBs will increase the financial burden to the agency on a yearly basis. Over the next few years, the price of ZEBs is expected to drop as technology improves and the scale of manufacturing increases, but the cost of ZEBs is always likely to be greater than Gas/Diesel vehicles. Funding in the near-term is particularly important because of the high incremental cost.

SCRTD will need support to fund the installation of the required BEB charging infrastructure. These costs are likely to be lower for SCRTD than some other agencies due to the available space for new infrastructure. As described in Section C, the Anthony facility is highly space constrained, and will be particularly so during the ZEB transition.

SCRTD has not deployed ZEBs in the past, so quality workforce training will be essential for ensuring a smooth transition. Classes will be required to train staff on the operations and maintenance of new ZEBs and accompanying infrastructure. Driver behavior can have a large impact on ZEB performance – impacting the range of BEBs as much as 10-20%. In addition to training, it will be important to establish buy-in on the new technologies from all aspects of the labor force through education and outreach activities.

Long-term planning of ZEB deployments is difficult due to many sources of uncertainty. Commercially available ZEBs are new, and the number of deployments is somewhat limited. Continuing access to data showing real-world performance of ZEBs will help determine the ideal fleet mix. It is essential to understand how BEBs perform under a range of conditions including during inclement weather when cabin heating/cooling demand is high, and at the end of life when the batteries and other components have degraded. Performance is also likely to change as technology improves in future vehicle generations, so continued evaluation is required. SCRTD will monitor performance of their own fleet, but it would be useful to share information across agencies to maximize the learning potential and inform purchase decisions.

### **Use of FTA 5307, 5311, 5339c**

The main purpose of the Low-No Program is to support the transition of the nation's transit fleet to the lowest polluting and most energy efficient transit vehicles. The Low-No Program provides funding to state and local governmental authorities for the purchase or lease of zero-emission and low-emission transit buses, including acquisition, construction, and leasing of required supporting facilities. Additionally, recipients are permitted to use up to 0.5 percent of their requested grant award for workforce development activities eligible under federal public

transportation law (49 U.S.C. 5314(b)) and an additional 0.5 percent for costs associated with training at the National Transit Institute.

Federal public transportation law (49 U.S.C. 5339(c)) authorizes FTA to award grants for low or no emission buses through a competitive process, as described in this notice. The Low-No Program provides funding to State and local governmental authorities for the purchase or lease of zero-emission and low-emission transit buses, including acquisition, construction, and leasing of required supporting facilities such as recharging, refueling, and maintenance facilities.

FTA recognizes that a significant transformation is occurring in the transit bus industry, with the increasing availability of low and zero emission bus vehicles for transit revenue operations. This program supports FTA's strategic goals and objectives through the timely and efficient investment in public transportation. This program also supports the President's Build Back Better initiative to mobilize American ingenuity to build a modern infrastructure and an equitable, clean energy future. In addition, the Low-No Program and this NOFO will advance the goals of the President's January 20, 2021, Executive Order on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis.

Eligible applicants include designated recipients, States, local governmental authorities, and Indian Tribes. Proposals for funding projects in rural (non-urbanized) areas may be submitted as part of a consolidated State proposal. To be considered eligible, applicants must be able to demonstrate the requisite legal, financial, and technical capabilities to receive and administer Federal funds under this program. States and other eligible applicants may submit consolidated proposals for projects in urbanized areas. Proposals may contain projects to be implemented by the recipient or its eligible subrecipients. Eligible subrecipients are entities that are otherwise eligible recipients under this program.

As permitted by the Consolidated Appropriations Act, 2021, applicants to the Low-No Program may submit applications that include partnerships with other entities that intend to participate in the implementation of the project, including, but not limited to, specific vehicle manufacturers, equipment vendors, owners or operators of related facilities, or project consultants. If an application that involves such a partnership is selected for funding, the competitive selection process will be deemed to satisfy the requirement for a competitive procurement under 49 U.S.C. 5325(a) for the named entities.

Applicants are advised that any changes to the proposed partnership will require FTA written approval, must be consistent with the scope of the approved project, and may necessitate a competitive procurement.

The maximum Federal share for projects that involve leasing or acquiring transit buses (including clean fuel or alternative fuel vehicles) for purposes of complying with or maintaining compliance with the Clean Air Act is 85 percent of the net project cost. The maximum Federal share for the cost of acquiring, installing, or constructing vehicle-related equipment or facilities (including clean fuel or alternative fuel vehicle-related equipment or facilities) for purposes of

complying with or maintaining compliance with the Clean Air Act is 90 percent of the net project cost of such equipment or facilities that are attributable to compliance with the Clean Air Act. The award recipient must itemize the cost of specific, discrete, vehicle-related equipment associated with compliance with the Clean Air Act to be eligible for the maximum 90 percent Federal share for these costs.

The Federal share of the cost of other projects shall not exceed 80 percent. Eligible sources of match include the following: cash from non-Government sources other than revenues from providing public transportation services; revenues derived from the sale of advertising and concessions; amounts received under a service agreement with a State or local social service agency or private social service organization; revenues generated from value capture financing mechanisms; funds from an undistributed cash surplus; replacement or depreciation cash fund or reserve; new capital; or in-kind contributions. Transportation development credits or in-kind match may be used for local match if identified and documented in the application.

Under the Low-No Program (49 U.S.C. 5339(c)), eligible projects include projects or programs of projects in an eligible area for: 1) purchasing or leasing low or no emission buses; 2) acquiring low or no emission buses with a leased power source; 3) constructing or leasing facilities and related equipment for low or no emission buses; 4) constructing new public transportation facilities to accommodate low or no emission buses; 5) or rehabilitating or improving existing public transportation facilities to accommodate low or no emission buses (49 U.S.C. 5339(c)(1)(B)).

As required by Federal public transportation law (49 U.S.C. 5339(c)(5)), FTA will only consider eligible projects relating to the acquisition or leasing of low or no emission buses or bus facilities that make greater reductions in energy consumption and harmful emissions than comparable standard buses or other low or no emission buses and are part of the recipient's long-term integrated fleet management plan.

A low or no emission bus is defined as a passenger vehicle used to provide public transportation that significantly reduces energy consumption or harmful emissions, including direct carbon emissions, when compared to a standard vehicle. The statutory definition includes zero emission transit buses, which are defined as buses that produce no direct carbon emissions and no particulate matter emissions under any and all possible operational modes and conditions. Examples of zero emission bus technologies include, but are not limited to, hydrogen fuel-cell buses and battery-electric buses.

All new transit bus models must successfully complete FTA bus testing for production transit buses pursuant to FTA's Bus Testing regulation (49 CFR part 665) in order to be procured with funds awarded under the Low-No Program. All transit vehicles must be procured from certified transit vehicle manufacturers in accordance with the Disadvantaged Business Enterprise (DBE) regulations (49 CFR part 26). The development or deployment of prototype vehicles is not eligible for funding under the Low-No Program. Recipients are permitted to use up to 0.5

percent of their requested grant award for workforce development activities eligible under Federal public transportation law (49 U.S.C. 5314(b)) and an additional 0.5 percent for costs associated with training at the National Transit Institute.

Applicants must identify the proposed use of funds for these activities in the project proposal and identify them separately in the project budget. If a single project proposal involves multiple public transportation providers, such as when an agency acquires vehicles that will be operated by another agency, the proposal must include a detailed statement regarding the role of each public transportation provider in the implementation of the project.

### **Use of EPA funds**

EPA's Office of Transportation and Air Quality is soliciting applications nationwide for projects that achieve significant reductions in diesel emissions.

Eligible diesel vehicles, engines and equipment may include buses, Class 5 –Class 8 heavy-duty highway vehicles, marine engines, locomotives and nonroad engines, equipment, or vehicles such as those used in construction, handling of cargo, agriculture, mining, or energy production.

Eligible diesel emissions reduction solutions include verified retrofit technologies such as exhaust after-treatment technologies, engine upgrades, and cleaner fuels and additives, verified idle reduction technologies, verified aerodynamic technologies, verified low rolling resistance tires, certified engine replacements and conversions, and certified vehicle or equipment replacement.

Eligible entities include regional, state, or local agencies, tribal governments (or intertribal consortia) and native villages, or port authorities, which have jurisdiction over transportation or air quality, and nonprofit organizations or institutions that: a) represent or provide pollution reduction or educational services to diesel fleets or b) have, as their principal purpose, the promotion of transportation or air quality. Although private fleet owners are not eligible to apply directly to EPA for DERA funding, both public and private fleets can benefit from the programs implemented by DERA national grant recipients.

Priority for funding is given to fleets operating in areas designated as having poor air quality and fleets which service goods movement facilities. Further priority for funding is given to projects with outcomes that benefit affected communities, those that engage affected communities in the design and performance of the project, and those which demonstrate the ability to promote and continue efforts to reduce emissions after the project has ended. Full information is available at <https://www.epa.gov/sites/production/files/2021-01/documents/2021-1-8-dera-national-grants.pdf>

### **Use of RAISE funds**

The Rebuilding American Infrastructure with Sustainability and Equity, or RAISE Discretionary Grant program, provides a unique opportunity for the DOT to invest in road, rail, transit, and port projects that promise to achieve national objectives. Previously known as the Better

Utilizing Investments to Leverage Development (BUILD) and Transportation Investment Generating Economic Recovery (TIGER) Discretionary Grants, Congress has dedicated nearly \$8.9 billion for twelve rounds of National Infrastructure Investments to fund projects that have a significant local or regional impact.

In each competition, DOT receives hundreds of applications to build and repair critical pieces of our freight and passenger transportation networks. The RAISE program enables DOT to examine these projects on their merits to help ensure that taxpayers are getting the highest value for every dollar invested.

The eligibility requirements of RAISE allow project sponsors at the State and local levels to obtain funding for multi-modal, multi-jurisdictional projects that are more difficult to support through traditional DOT programs. RAISE can fund port and freight rail projects, for example, which play a critical role in our ability to move freight but have limited sources of Federal funds.

RAISE can provide capital funding directly to any public entity, including municipalities, counties, port authorities, tribal governments, MPOs, or others in contrast to traditional Federal programs which provide funding to very specific groups of applicants (mostly State DOTs and transit agencies).

This flexibility allows RAISE and our traditional partners at the State and local levels to collaborate directly with a host of entities that own, operate, and maintain much of our transportation infrastructure, but otherwise cannot turn to the Federal government for support.

### **Additional Alternative Funding Opportunities**

Electric Buses and Clean Energy Financing: How Transit Authorities Can Leverage State and Federal Funds to Buy More Zero-Emission Buses.

<https://www.law.georgetown.edu/environmental-law-review/wp-content/uploads/sites/18/2020/01/GT-GELR190049.pdf>

Future formula funding from these three sources was estimated based on the level of funding previously received and the percent allocation of these funding sources historically to capital purchases. It was assumed that the 5307 and 5339 funding would increase annually at a rate of 1.5% while the 5310 funding remains constant, which is consistent with historical trends.

## Summary of Potential Competitive Special Funding Sources

Name	Purpose	Offering	Available Funds
FTA 5339(b) Bus & Bus Facilities	Bus procurement and related facilities	80% of capital cost	\$1.1 billion (FY 2022)
FTA 5339© Low or No Emission Vehicle	ZEB procurement and fueling / charging infrastructure	85-90% of capital cost	\$1.1 billion (FY 2022)
FTA 5310	Small bus procurement and related facilities	80% of capital cost	

## Potential Voucher Type Funding Sources

Name	Purpose	Offering	Funds Available
VW Mitigation	ZEB Procurement	\$500,000/FCEB, \$180,000 BEB	\$130 million (until exhausted)
HVIP	ZEB Procurement	\$300,000/FCEB, \$175,000 BEB	\$142 million (FY2019 currently exhausted)

# APPENDIX D. Letters of Commitment

## Gillig Corporation – Buses and Charging Station



April 15, 2022

David Armijo  
Executive Director  
South Central Regional Transit District  
PO Box 2104  
Las Cruces, NM 88004  
575-323-1620 Work

Subject: GILLIG, LLC Letter of Commitment  
For FTA's FY2022 Low-No Emission Vehicle Program

Dear David:

In support of the FTA's Low-No Emission Vehicle Program, GILLIG LLC is pleased to join South Central Regional Transit District as your OEM Partner to assist in the successful completion of this exciting project. GILLIG is committed to serving as the Battery Electric Bus Manufacturer on the project to ensure efficient and effective deployment of Battery Electric Buses as well as our commitment to reduce harmful emissions as part of your long-range fleet plan. GILLIG has extensive experience in the design, manufacture, deployment and service of heavy-duty transit buses including low emission and no emission buses. As GILLIG continues its aggressive deployment of Zero Emission Bus technology to pursue its benefits, we realize that we are seeking to achieve similar goals to that of South-Central Regional Transit District, thus presenting a great partnering opportunity. This would also fulfill the requirement of the competitive procurement process as outlined by FTA in the FY2022 NOFO.

GILLIG has vast experience and knowledge of the requirements of South-Central Regional Transit District as we have been your bus supplier for many years. Our 35' and 40' Battery Electric Bus's utilize the same Low Floor bus platform that has proven its reliability and durability throughout your service environment. In our role as the bus manufacturer for the project, GILLIG will provide our technical design expertise in advanced bus engineering, manufacturing, and design expertise with the latest technological advancements available at our state-of-the-art bus manufacturing facility in Livermore, CA and our industry leading aftermarket parts and service support. We can also assist with Zero Emission Transition Planning, in route and plug in charging solutions as well as bus deployment strategies including training and Workforce Development Activities as applicable from the OEM side. Our Battery Electric Bus technology will allow South Central Regional Transit District and Gillig to collect and analyze operational data to ensure successful bus operation and the achievement of all project goals.

Thank you in advance for your consideration of this project. GILLIG looks forward to partnering with South Central Regional Transit District on this project and deploying Battery Electric Zero Emissions Buses throughout your communities.

Sincerely,

William Fay Jr  
Vice President Sales  
GILLIG LLC



## El Paso Electric Company – Local Utility and Engineering Support Services



May 23, 2022

Ms. Amy Volz  
Low-No/Bus Grant Program Manager  
Federal Transit Administration  
1200 New Jersey Ave. SE  
Washington, DC 20590

Dear Ms. Volz:

El Paso Electric (“EPE” or the “Company”) is pleased to support the South Central Regional Transit District (“SCRTD”) grant application for the Federal Transit Administration’s (“FTA’s”) “Low or No Emission Vehicle Program” funding opportunity. The EPE point of contact for this potential collaboration is Angie Rodriguez, 100 N Stanton, El Paso, TX 79901.

EPE is a regional, vertically integrated electric utility providing generation, transmission, and distribution service to approximately 437,000 retail and wholesale customers in a 10,000 square mile area of the Rio Grande valley in west Texas and southern New Mexico. Its service territory extends from Hatch, New Mexico, to Van Horn, Texas.

As the electric utility serving SCRTD in New Mexico, EPE is uniquely positioned to support SCRTD application for this grant with available rebates for the installation of Level 2 charging stations as well as rebates for potential service upgrades, offered by the company as a part of its Transportation Electrification Plan (“TEP”). Additionally, the Company can assist with the evaluation of any potential infrastructure upgrades necessary for the timely interconnection of charging stations needed to support SCRTD. Finally, and arguable most importantly, EPE will help evaluate the various rate options available to SCRTD in order to determine the most cost-effective means of incorporating electric buses in SCRTD operations.

EPE is excited to participate in this endeavor with SCRTD as we address common challenges with deployment of electric vehicle charging infrastructure and work toward common goals of advancing initiatives that positively contribute to regional air quality. Should you have any questions or need additional information contact Angie Rodriguez at (915) 487-4893 or [angie.rodriguez@epelectric.com](mailto:angie.rodriguez@epelectric.com).

Sincerely,

A handwritten signature in blue ink that reads "Jessica Christianson". The signature is fluid and cursive, with the first name being the most prominent part.

Jessica Christianson  
Vice President of Innovation and Sustainability

# APPENDIX E. System Map

