



**LITTLEFIELD UNIFIED SCHOOL DISTRICT #9
ELECTRIC SCHOOL BUS
COMMITTEE MEETING
Administrative Services Site
3490 East Rio Virgin Road
Tuesday, May 16, 2023
1:00 P.M.**

Note: There could possibly be a quorum of the Littlefield Unified School District Governing Board Members at this Committee Meeting. No action will be taken at this meeting by the Governing Board.

Mission Statement

The Littlefield Unified School District is committed to excellence. Therefore, we are committed to providing opportunities for all students to learn and develop socially, emotionally, and academically. We are committed to providing resources to our students, parents and teachers in an ongoing effort to help students transition from childhood to adulthood.

1. CALL TO ORDER:

Mr. Fagnan, Committee Chair, called the meeting to order at 1:00 p.m. There were no members of the public in attendance.

2. ROLL CALL:

Michael Fagnan, Board Member
Rena Moerman, Community Member
Nicole Frisby, PTO President

Kevin Boyer, Business Manager
Sheree Goessman, District Secretary
Rigo Cobian, Facility & Maint. Dir.

ACTION ITEMS AND/OR DISCUSSION

3. Discussion with the EPA regarding Electric School Buses.

Mathew Hanson and Lauren Badertscher from the EPA introduced themselves. Ryan Frasier and Jessie Bennett from the National Renewable Energy Laboratory introduced themselves.

Mr. Hanson said they would like to discuss the concerns that the district is facing with implementing electric buses.

Rena Moerman asked if the buses are AC or DC. Mr. Frasier asked if we've decided on which manufacturer. Mrs. Moerman said no we will need to put it out to bid and wondered if the Governing Board will have the options to pick which one they want. Mr. Frasier said there's a lot with selecting which battery size the district wants. The AC will be a lot less expensive to install. The DC charging will be needed for longer routes. Mr. Frasier said this is something they can help the district with and can help with the route analysis. Mrs. Moerman said it looked like it requires 3 phase power and currently we only have single phase. Mr. Boyer said Dixie Power will be able to bring in the additional



power. Mrs. Moerman asked if the bus will be able to operate under 2 phase power. Mr. Frasier said DC charge requires 3 phase charging and AC will operate on single phase power. Mrs. Moerman said we are also trying to figure out how to design this without problems when we have 125 degree days. Mr. Frasier noted that climate has an effect on the efficiency of the bus. He noted this is another area they can discuss with the district as well as case studies. Mr. Frasier said running the air conditioning or heat will affect the range of the charge as well. He said he can get more information on hot weather concerns. He said on extremely hot days, he's heard the transient operations in Los Angeles have had issues. Mrs. Moerman said she noticed Clark County School District is getting some school buses and asked if they did any studies because they have a similar heat problem. Mr. Frasier said they haven't been involved. Mrs. Moerman asked if the breaks will impact the life of the tires on the electric buses. Mr. Frasier regenerative breaking should not have an impact of the tires. Electric school buses are a little heavier which may have some impact.

Mr. Fagnan noted we make a lot of trips to Las Vegas which is 90 miles one direction and asked if we will be able to do that on one charge. Mr. Frasier said that will depend on the bus you select and the distance of the trip. He said they suggest placing the electric buses on shorter routes and make sure the routes can be completed. He said they are also advising fleets to keep their spare buses for long distance trips. Mrs. Moerman asked about the adapter for the charging and if you need a special outlet than what cars are using. Mr. Frasier said cars use a level 2 charge and that there are also DC fast chargers in public areas. He said again it would depend on what bus the district chooses.

Nichole Frisby asked what buses we qualify for under that grant. Mr. Boyer said we've had several vendors reach out to us and the process stopped when the Governing Board turned it down.

Mr. Fagnan asked if there's any out of the norm maintenance with the electric school buses. Mr. Frasier said that's the advantage of the electric buses. He said the typical maintenance is for brakes and the HVAC System. He noted it is very new technology with the anticipation that you will save money on regular maintenance. Mrs. Moerman asked what the life of the battery would be. Mr. Frasier said that would depend on the manufacturer. He said he has heard some warranties that will go up to 10 years on the battery.

Mrs. Frisby said she would like to know the benefits of the electric school buses. Mr. Frasier said he was a fleet manager before coming to NREL. He said electric school buses are the way of the future and the drivers and kids will love them. He said right now the district has a significant funding mechanism that they probably won't see again to put towards this. The right planning is very essential in this.

Jessie Bennett, NREL, noted the electric buses have zero pipe emissions. He said one of the reasons they may have range concerns in the winter is because they may use a little more energy to heat the cabin up. Mrs. Badertscher said children breathe quicker than adults and the electric buses would reduce pollution they are breathing. Mrs. Moerman asked if the district can look into a cost savings for fuel. She also asked how much the district would save in fuel over the diesel buses. Mr. Frasier said that will depend upon the length of the routes and fuel costs at the time.

Mr. Boyer asked the cost to replace the electric batteries. Mr. Frasier said he doesn't know what that would be but knows it's expensive. He also noted there will be a warranty with the bus. Board Member Moerman said if the district decides to go forward and put out to bid, that it's important to understand the routes, needs for recharging, and to make sure whoever is bidding the electric buses understands the heat factor. She then asked how long our current routes are. Mr. Boyer said they are two hours in the morning and two hours in the afternoon. He said they are around 60-70 miles a day. Mr. Frasier said he would be happy to look at some route information and go over all the essentials. He said the route is essential to know the battery sizes and the climate. He further noted it's important enough to



get a large enough battery in the buses.

Mr. Fagnan asked if they have a ballpark number on lead time for new electric buses. Mr. Frasier said he's heard some are taking 9 months to a year because they are in high demand right now.

Mr. Boyer said the road conditions here are pretty bad because they are bumpy dirt roads. Mr. Frazier said he hasn't heard any concerns about the effect on batteries. There are fewer components on electric buses and they are heavier. Mr. Boyer said in the grant they allow \$20,000 per bus for infrastructure. He noted our current buses are in the ADOT yard and that we would need to create our own bus yard. He asked if there is any funding to create a bus yard on our own property. Mr. Hanson asked if there's any DOT money for that. Mr. Frasier said there are some funding mechanisms available and he would need to look into it. Mr. Hanson said they will note that for the Governing Board and get back to them.

Mr. Hanson said the date to submit purchase orders has already passed. He said if the district wants to move forward with this rebate then they would need to request an extension. He said they currently have a new grant open and can share more information on that. He said they are planning on opening this same rebate program but it will not be until later in the year. He said the District can also withdraw and apply again.

Mr. Boyer said the issue with withdrawing is the new funding has to be a minimum of 15 buses ordered. He said we would need to apply with another district to meet those requirements. Mrs. Badertscher also noted the bid will be a competitive process instead of a lottery system. She said if the district is interested in staying in the rebate program they can provide extensions until August 15th.

Mr. Boyer said we will apply for the extension. He noted the committee will present to the Governing Board in June and we will go from there.

4. Suggestions for Future Meetings.

Mrs. Frisby asked what some of the concerns have been. Mr. Fagnan said he had the concerns. He said there were a lot of questions he had when it was first brought up in November that he didn't get answered. He thought the government was forcing it on us. He has become a little more open minded. His only concern is the trips for the sports teams. He believes this committee's recommendation to the board would be to maintain one diesel bus for sporting events. Mr. Boyer said we want at least 2 backup diesel buses. He said we currently have 7 buses and 6 are available. He noted there are 4 buses with air conditioning. The 3 older buses will be replaced.

Mrs. Moerman said she thinks it would be beneficial to the district to do everything in their power to get these buses. She suggested having Dixie Power work with the EPA and figure out what the district needs to bid these. She said she thinks they will need to add a transformer and thinks that will be one of the larger costs. She suggested getting volunteers to help. You could probably gravel the yard and put a chain-link fence up. Mrs. Moerman said one of the things she read is that it works better if they have a facility closer to a building. She noted the yard will also need to be lit. Mr. Boyer said the plan is to have it on the District Office Campus.

Board Member Moerman said it would be optimum to have a shade structure. Mr. Fagnan said if we don't do this we will still need to look at purchasing a bus. Mrs. Moerman suggested including in the bid that training is provided as well as assistance with the structure of the lot. Mr. Fagnan said he listened to a podcast from NRECA that said you can request a bus to go for a ride so they can see what they are stepping into. Mrs. Frisby said she thinks this is an opportunity that will be gone in the next 3-5 years. Mrs. Moerman suggested speaking to Clark County School District about their electric school



buses. She said she thinks they are using their buses in a more urban setting. Mr. Fagnan said there are some schools in Texas running electric school buses.

Mrs. Moerman said not having to buy a bus will make this cost effective for 3 years. Mr. Boyer said it is time to buy another trip bus that has the racks on the inside.

Mrs. Frisby asked if we would consider raising the bus driver pay. Mr. Boyer noted the wages went up \$2.25 for this next year and the Governing Board is looking at a stipend for hard to fill positions.

Mr. Fagnan said he plans on going before the Board in June and suggesting they move forward with the electric buses. Mr. Boyer said he will request an extension. Mrs. Moerman suggested having Mr. Reyes and an engineer have a call with Dixie Power. Mr. Fagnan said we might want to look at getting a DC bus if we will need to charge them after the morning route.

ADJOURNMENT

Rena Moerman made a motion to adjourn the meeting, seconded by Committee Chair Mike Fagnan. The motion passed unanimously.

Adjourn 1:55 p.m.

Michael Fagnan, Committee Chair

Respectfully Submitted by:

Sheree Goessman, District Secretary