Select Q&A from Demystifying Finance: Opportunities to Scale the Adoption of ESBs

On November 8, 2023, WRI's Electric School Bus Initiative, the Alliance for Electric School Buses and Clean Energy Works partnered to host Demystifying Finance: Opportunities to Scale the Adoption of ESBs, a webinar focused on how school districts and fleet operators can leverage financing opportunities to transition to electric school buses. You can find more about the webinar here.

Below, please find content from the webinar Question and Answer field. In some cases, we have transcribed the answer provided during the webinar. In other cases, we have transcribed the answer provided and offered additional information. These are noted.

1. **Are any assumptions for infrastructure cost included in the total cost of ownership (TCO)?**
    - *Answered during webinar:* Yes, the TCO accounts for construction and equipment installation costs. Please check out Recommended Total Cost of Ownership Parameters for Electric School Buses: Summary of Methods and Data, which highlights the methodology and data sources of the assumptions used to calculate the TCO.

2. **The price of ESBs has gone up over the past two years. In the future it does not seem to be likely that, in the face of demand for ESBs far exceeding the expected supply, we'll see any reductions in battery costs to OEMs passed on to school districts. Why do you suggest that the acquisition cost of ESBs will reach parity in 6 years?**
    - *Answered during webinar:* Market experts anticipate that the lifetime TCO of electric school buses will achieve cost parity with diesel-burning school buses by the second half of this decade. With the many funding opportunities available to school districts at a state and federal level, such as the EPA's Clean School Bus Program, many ESB purchases already achieve TCO parity with diesel school buses.

3. **Would love to know if IRS is accepting rebate applications now and where to send them for government agencies, as we don't file federal taxes.**
    - *Answered during webinar:* Pre-filing registration unfortunately is not available yet.

4. **Can you provide an example of how much funding a non-priority school district might receive if they win an EPA clean school bus rebate and qualify for IRS credits? E.g., How much would a non-priority school receive if they purchased a $400,000 bus plus a $50,000 charger?**
    - *Answered during webinar:* If they receive a 2023 EPA Clean School Bus rebate and assuming they're looking at Class 7+ bus, they will receive $200,000 through the EPA. That could go toward bus and infrastructure, up to the district's discretion. On top of that, they could receive up to $40,000 toward the cost of the bus through the 45W IRA Tax Credit for Commercial Clean Vehicles.
    - *Additional Information: For* the 30C Alternative Fuel Vehicle Refueling Tax Credit, they could receive up to $100,000 per charger - but the district must be in a low-income or non-urban census tract. We're still waiting to see exactly what communities would be included.
    - *Additional Information:* Please check out Cheat Sheet on 2023 EPA Clean School Bus Program Rebate and New Tax Credits & Direct Payment for School Districts for more information.

5. **Are there currently any public utilities or co-operatives using Inclusive Utility Investments to support schools in financing electric school bus purchases?**

- *Answered during webinar:* Not at the moment, most examples come from public transportation. DTE is considering applying this model to school buses, but it has not been implemented.
- *Additional Information:* There are no utilities that are actively implementing Inclusive Utility Investments to finance electric school buses. However, last year, the Michigan Public Service Commission approved a utility inclusive investment program for transit buses. This action can serve as an example for other utilities to apply to school buses. For more information on inclusive utility investments, please check out Clean Energy Works' article on Inclusive Utility Investments for E-transport.

6. **What specific USDA programs were used in Knox County, MO to support purchases of electric school buses? Can you provide links to those programs?**
    - *Answered during webinar:* The USDA Community Facilities Program – please check the following link for more information: https://www.rd.usda.gov/programs-services/community-facilities.

7. **Our city's public school system does not own their own buses, but contracts with First Student, which as I'm sure you know is a large private company that runs school bus fleets throughout the country. Generally speaking, to the best of your knowledge, how aware are private school bus fleets of the range of financing options for ESBs you are presenting about here?**
    - *Answered during webinar:* Good question! We're trying to get the word out to ensure that all stakeholders in the electric school bus space are aware. Please help us spread the word by sharing the Electric School Bus Initiative's latest article: Powering Electric School Bus Adoption with Complementary Funding and Financing Solutions

8. **Who passed the 2030 resolution? The Austin City Council or the Austin School Board?**
    - *Answered during webinar:* The School Board of Trustees.
    - *Additional Information: The* School Board of Trustees passed the 2030 resolution. Please learn more about Austin's electrification journey here.

9. **My business aims to develop business opportunities in the pursuit of equitable transportation and clean energy. More recently we have been helping businesses develop plans to achieve their clean energy goals, specifically by setting up EV charging infrastructure. Is there an opportunity in the space of electrifying School buses for small businesses to develop business opportunities?**
    - *Answered during webinar:* With electric school buses, transportation business models are changing. We're seeing new companies enter the market to provide specific services. WRI has a paper that outlines the different business models, which might provide some insight into your question: Which Electric School Bus Business Model Is Right for Your District?

10. **Do you know of examples where multiple school districts partnered to procure and share electric bus charging infrastructure?**
    - *Answered during webinar:* I have not heard of anything being done on charging infrastructure as each site is different based on the existing electricity connection, fast charging/L2 charging etc. For charging though, there is a good list of vetted equipment done by the Electric Power Research Institute. That can be found here: https://www.epri.com/VPL. Source well is also providing cooperative procurement: https://www.sourcewell-mn.gov/. And Climate Mayors have an EV Purchasing Collaborative: https://climatemayors.org/ev-purchasing-collaborative. Not sure if these have been used for ESBs yet!

11. **Are the insurance costs higher for ESBs vs. diesels? I have heard that for other commercial EVs the insurance costs can be much higher.**
    - *Post-Webinar Answer*: Insurance costs are complex and, according to discussions with school bus operators, can vary significantly due to factors like deductible structure, market characteristics (character of local juries, repair costs, perceived danger), coverage, caps on payouts, and other considerations. Within our TCO analysis, we based our assumptions on the work of Argonne National Laboratory, which is referenced in the AFLEET Tool and Comprehensive Total Cost of Ownership Quantification for Vehicles with Different Size Classes and Powertrains by Andrew Burham. For fleets that decide to only take liability insurance, insurance costs should be relatively similar. However, for those that opt for expansion coverage, they should expect higher costs due to the higher replacement value of electric school buses. Please check out Recommended Total Cost of Ownership Parameters for Electric School Buses: Summary of Methods and Data for more information.

12. **What is the typical borrowing payback period? I have been seeing for 12 years when most of the ESB warranties I've seen are only 8.**
    - *Post-Webinar Answer:* It's hard to determine the repayment period as there are no cases we're aware of where loans have been used to procure electric school buses. The repayment period will vary depending on the financial institution and the financial terms agreed to. Nonetheless, it is expected to be longer than the average loan for a diesel school bus.

13. **We are a district in rural NY, so we are fortunate to have state funding in addition to federal funding for bus purchase and charging infrastructure. However, one of the biggest unknowns are hefty upgrades to the electrical service at our bus garage to accommodate charging our 18-bus fleet. Does any of these financing options cover this cost?**
    - *Post-Webinar Answer:* Electric utilities offer Make-Ready Programs that reduce the costs of infrastructure upgrades for charging equipment. In New York State, investor-owned utilities offer Make-Ready Programs and Fleet Assessments Services. Please check out our EV Make-Ready Program Guide.

14. **Is there any federal or state legislation that your organizations are co-sponsoring and/or wish to see introduced to achieve the goal of 100% of school bus fleets converting to ESBs by 2030?**
    - *Answered during webinar:* Several states have set goals to transition their fleets fully, including New York, Maine, Maryland, Connecticut, and most recently California. The dates vary, but New York looks to fully electrify fleets by 2035 and California's mandate requires new purchases be ZEV by 2035.
    - *Additional Information:* The ESB Initiative is collaborating with school districts, advocacy organizations, electric utilities, manufacturers, financing entities and policymakers across the U.S. to accelerate an equitable transition to electric school buses. As of September 2023, WRI's Electric School Bus Initiative is providing its highest level of tailored technical assistance in school districts in 8 states: California, Georgia, Maryland, Massachusetts, New York, North Carolina, Pennsylvania and Texas. The ESB Initiative has also identified priority states for dedicated advocacy and policy outreach: California, Georgia, Illinois, Massachusetts, Michigan, North Carolina, Oregon, South Carolina and Washington. We continue to work in additional states through partnership with other stakeholders as well. Please check out this article on state legislative wins in 2022. Additionally, check out the Alliance for Electric School Buses State Campaigns.

15. **There is a lot of interest & a lot of opportunity to help accelerate ESB deployment here in CO. At the CEO, we have been working with Katharine to make bridge loans available in connection with the state's EV charging infrastructure programs + the state is now offering ESB & vehicle / infrastructure grants for fleets, but all the grants reimbursement-based**
    - *Answered during webinar*: That is great to hear. Bridge loans are really important when we talk about state and utility ESB rebates and also federal tax credits.

16. **Could a rural electric co-op use 0% RESP loans or New ERA grants to support electric school buses?**
    - *Answered during webinar:* I am not sure about those options. I would recommend checking the websites of Rural Utilities Service (RUS) and Empowering Rural America (ERA) for info.

17. **Would it be possible to gather groups of state utilities to provide opportunities for providing financing to school districts (and/or other customers) across each of their territories? i.e., instead of just financing to 1 cooperative or 1 municipal utility, in coordination with the State Rural Electric Association that represents all the state's coops and/or the State Assn of Municipal Utilities.**
    - *Answer during webinar:* Interesting idea! We recommend reaching out to Beneficial Electrification League and the Edison Electric Institute, who have a pledge with EPA to help accelerate school bus electrification. We would love to address this in our Utility Working Group that we hold quarterly. This is an open working group that we invite all utilities and affiliated associations, trade organizations to join.

18. **Our state doesn't have a green bank in AK.**
    - *Post-Webinar Answer:* In 2022, Alaska legislative bodies passed a bill that will allow municipalities to establish energy and resilient improvement assessment programs. Eligible projects include construction, installation, or modification of electric vehicle charging stations in building renovations, new construction, or existing commercial and industrial properties (Alternative Fuels Data Center: Energy and Resilience Project Support). We also encourage you to look for federal programs that may provide access to low-cost financing, such as the Community Facilities Program by USDA.