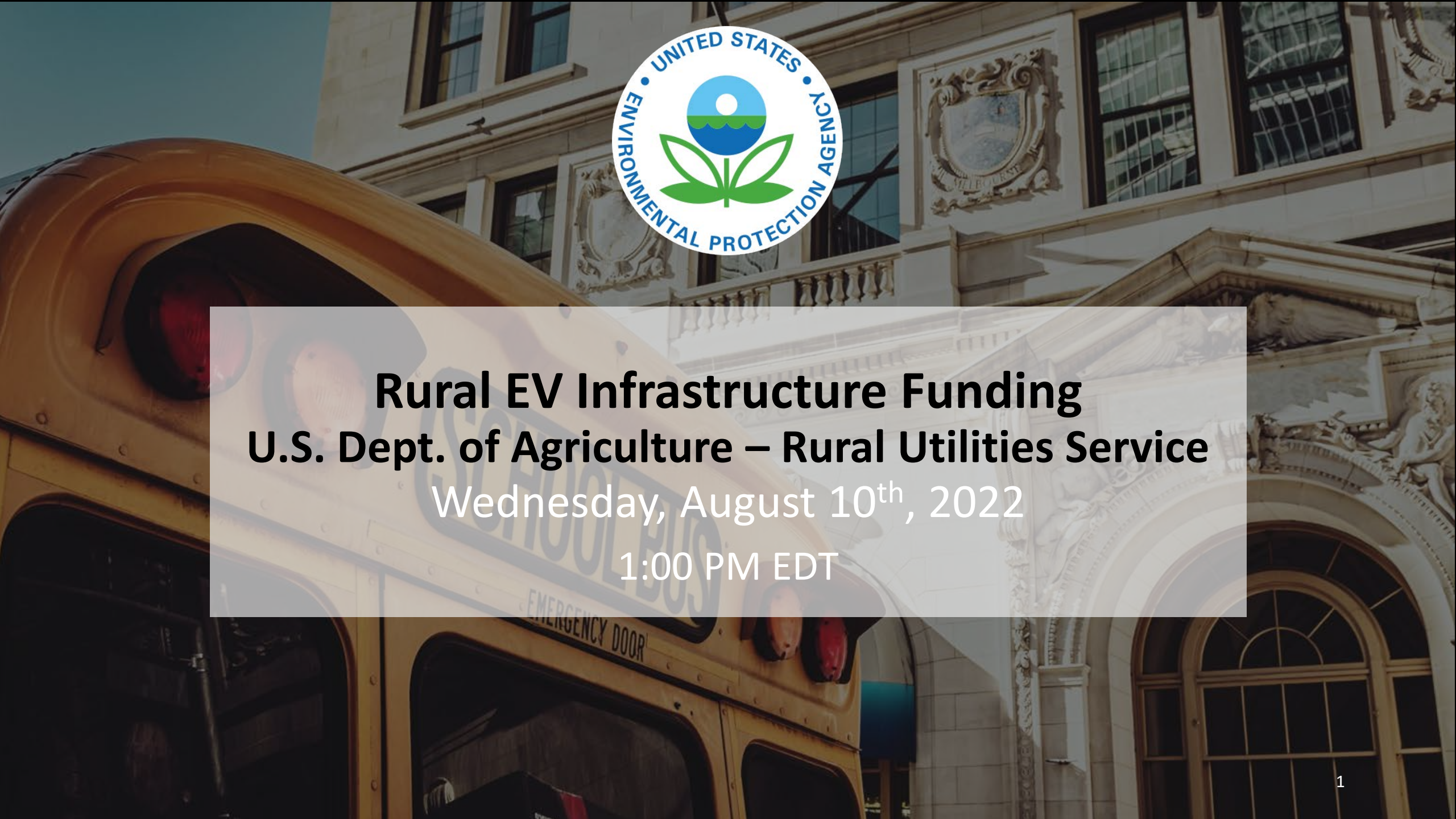


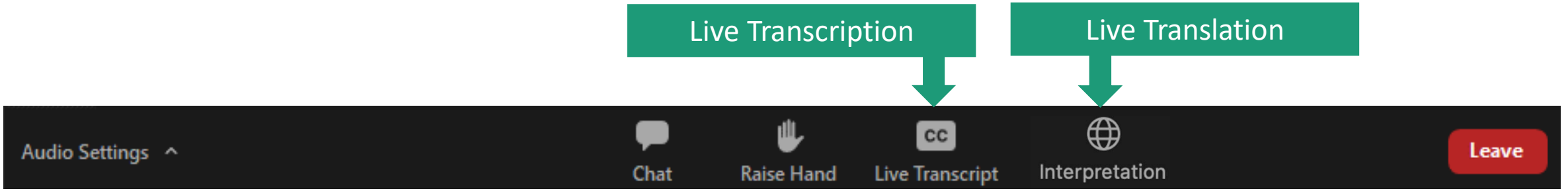
Rural EV Infrastructure Funding

U.S. Dept. of Agriculture – Rural Utilities Service

Wednesday, August 10th, 2022

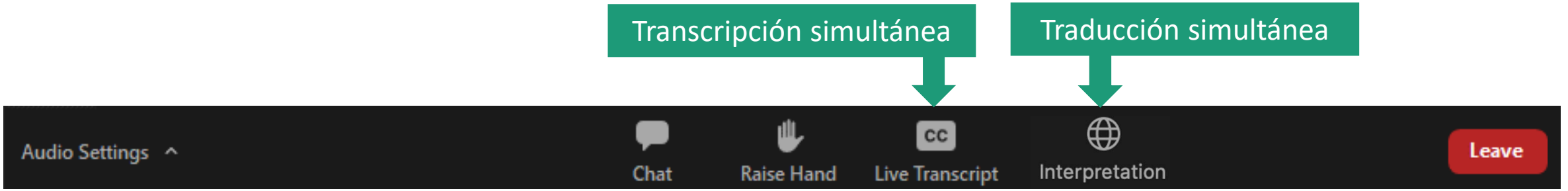
1:00 PM EDT

Zoom Webinar Logistics



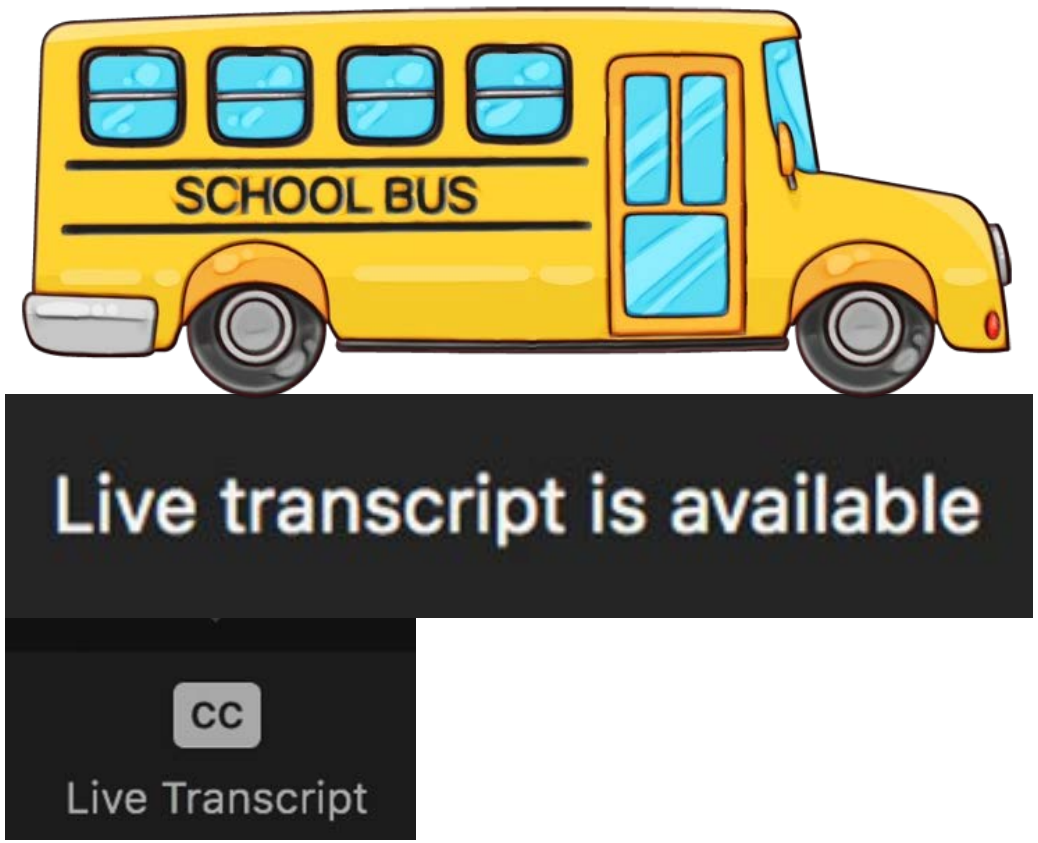
- **This session is being recorded.** EPA will make a copy of the recording and presentation slides available on their website in the near future (https://www.epa.gov/cleanschoolbus).
- **All attendees are in listen-only mode.** Audio is available through your computer speakers or by phone.
- **Technical difficulties:** If you are having technical difficulties, please email cleanschoolbus@epa.gov.
- **Live transcription:** Automated live transcription is available by clicking the “Live Transcript” icon in your Zoom toolbar.
- **Live translation:** Live Spanish translation is available by clicking the “Interpretation” icon and selecting Spanish.
  - Note, to mute English audio when listening in Spanish, click “Mute Original Audio.”
- **Questions:** Submit written questions to the EPA Clean School Bus Program helpline at cleanschoolbus@epa.gov.

Logística del Webinario de Zoom



- **Esta presentación está siendo grabada.** La EPA publicará una copia de la grabación y las diapositivas de la presentación en su sitio web en un futuro próximo (https://www.epa.gov/cleanschoolbus).
- **Todos los participantes están en modo solo de audio.** El audio está disponible a través de los altavoces de su computadora o por teléfono.
- **Dificultades técnicas:** Si tiene dificultades técnicas, envíe un correo electrónico a cleanschoolbus@epa.gov.
- **Transcripción simultánea:** La transcripción simultánea automatizada está disponible al hacer clic en el icono “Live Transcript" en la barra de herramientas de Zoom.
- **Traducción simultánea:** La traducción simultánea al español está disponible al hacer clic en el icono "Interpretation" y seleccionar español.
  - Tenga en cuenta que para silenciar el audio en inglés cuando escuche en español, haga clic en "Mute Original Audio".
- **Preguntas**: Envíe sus preguntas por escrito a la línea de ayuda del Programa de Autobuses Escolares Limpios de la EPA a cleanschoolbus@epa.gov.

Live Transcription / Transcripción simultánea



Live Translation / Traducción simultánea

Overview of the Bipartisan Infrastructure Law Clean School Bus Program

Under **Title XI: Clean School Buses and Ferries**, the Bipartisan Infrastructure Law (BIL) provides **$5 billion** over five years (FY22-26) for the replacement of existing school buses with clean school buses and zero-emission school buses.

These new clean school bus replacements will produce either zero or low tailpipe emissions compared to their older diesel predecessors.

School bus upgrades funded under this program will result in cleaner air on the bus, in bus loading areas, and in the communities in which they operate.

The first funding opportunity under this program is the 2022 Clean School Bus Rebates.

Funding Pools and Number of Applications

School districts applying directly for funds may only submit one application to replace up to 25 buses.

EPA will not fund multiple applications for bus replacements that will serve the same school district.

$500 Million in Available Funding for 2022 Clean School Bus Rebates	
Zero Emission Funding Pool:	Clean School Bus Funding Pool:
Applications **exclusively requesting zero-emission** buses	Applications requesting **zero-emission, propane, and/or compressed natural gas (CNG)** buses

The application deadline is August 19, 2022.

School Bus Replacement Funding

The maximum rebate amount per bus is dependent on:

- Bus Fuel Type
- Bus Size
- Whether the school district served by the buses meets one or more prioritization criteria

The table displays maximum funding levels. EPA will not disburse rebate funds in excess of the actual cost of the replacement bus and any costs above the maximum funding level are the sole responsibility of the applicant/awardee.

Maximum Bus Funding Amount per Replacement School Bus

School District Prioritization Status	Replacement Bus Fuel Type and Size					
	ZE – Class 7+	ZE – Class 3-6	CNG – Class 7+	CNG – Class 3-6	Propane – Class 7+	Propane – Class 3-6
Buses serving school districts that meet one or more prioritization criteria	$375,000	$285,000	$45,000	$30,000	$30,000	$25,000
Buses serving other eligible school districts	$250,000	$190,000	$30,000	$20,000	$20,000	$15,000

https://www.epa.gov/cleanschoolbus/school-bus-rebates-clean-school-bus-program

Infrastructure Funding

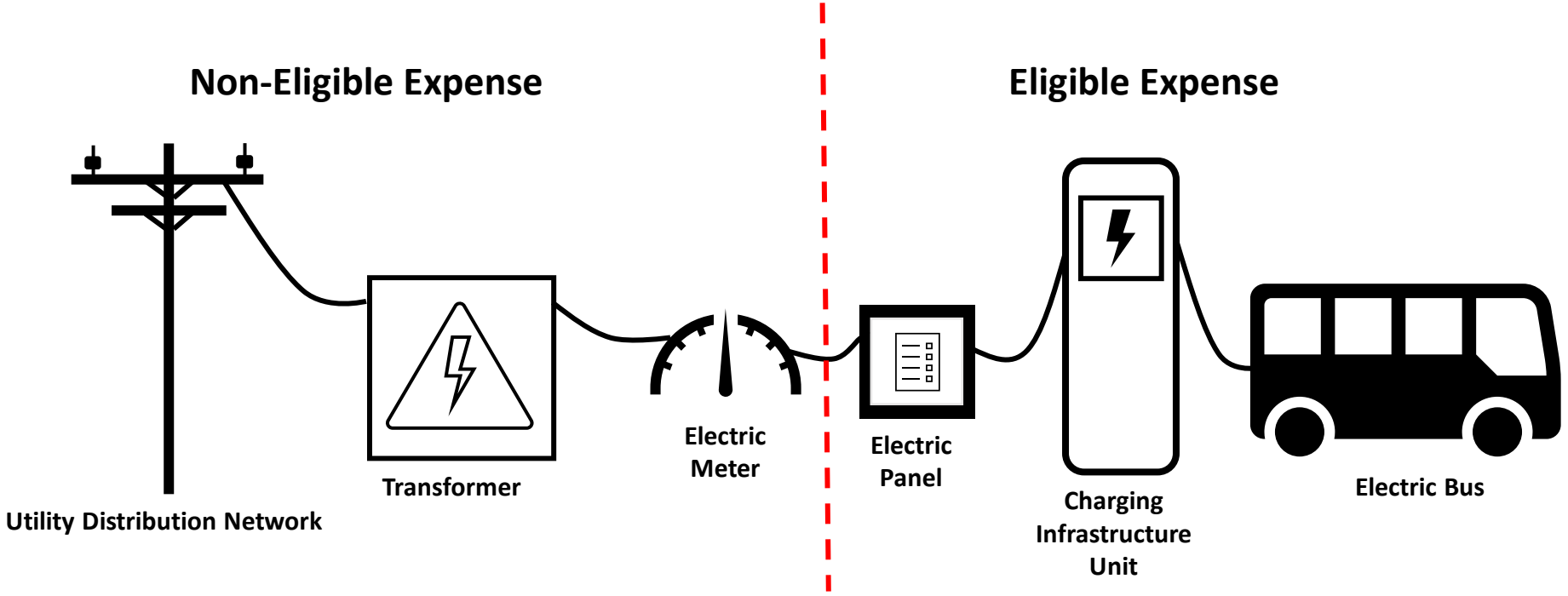
Talk to your utility now if you are interested in zero-emission, electric buses!

This table displays the maximum funding levels per ZE, electric bus. EPA will not disburse rebate funds in excess of the actual infrastructure costs. Funds can be combined.

School District Prioritization Status	ZE, Electric – Class 3+ Infrastructure Funding
Buses serving school districts that meet one or more prioritization criteria	$20,000/bus
Buses serving other eligible school districts	$13,000/bus

Infrastructure Funding Restrictions

- EPA funding for infrastructure is limited to the fleet's side of the meter (as shown on the right side of the diagram).
- All Level 2 charging infrastructure purchased under this program must be EPA ENERGY STAR certified chargers.
  - EPA strongly recommends that all other charging infrastructure (for example DC Fast-Charge) purchased under this program be listed by a Nationally Recognized Testing Laboratory (NRTL).



2022 Clean School Bus Rebates

Sign up for the Clean School Bus Listserv and continue to check www.epa.gov/cleanschoolbus for updated resources and information on additional webinars.

After reviewing the Program Guide, if you still have questions, please contact cleanschoolbus@epa.gov. Questions will be incorporated in an update to the Q&A document.

If you have any questions related to electric or clean school bus infrastructure, please email our partners at the Joint Office of Energy and Transportation for technical assistance: cleanschoolbusTA@nrel.gov.

The application deadline is August 19, 2022, at 11:59 PM ET.

Charging Forward: Funding Electric Vehicle Charging Infrastructure in Rural Communities

USDA Rural Development
U.S. DEPARTMENT OF AGRICULTURE

Why the Emphasis on Electric Vehicles?

- Administration interest in reducing carbon in transportation
- American's interest in Electric Vehicles (EV's)
- Infrastructure Investment and Jobs Act (IIJA) aka the Bipartisan Infrastructure Law (BIL) passed on November 15, 2021.
  Highlights:
  - EV charging network infrastructure
  - EV school bus replacement program

Text - H.R.3684 - 117th Congress (2021-2022): Infrastructure Investment and Jobs Act | Congress.gov | Library of Congress

Bipartisan Infrastructure Law Programs

- Major Electric Programs:
  - DOE/DOT for National Electric Vehicle Infrastructure ($7.5B)
    - Interstate Highways First
    - Communities
    - Site Specific
  - EPA for Electric Bus Replacement Initiative ($5B)
    - ($2.5B for electric buses; $2.5B for low emission combustion engine buses).
  - Office of Clean Energy Demonstrations ($20B)
    - New DOE office to support clean energy technology demonstration projects in the areas of clean hydrogen, carbon capture, grid scale energy storage, small modular reactors, and more.

Federal Family Partners

- Department of Energy (DOE)
- Department of Transportation (DOT)
- Environmental Protection Agency (EPA)
- Department of Agriculture (USDA)
- Department of Education
- Various Commissions/Authorities
  - Appalachian Regional Commission (ARC)
  - Tennessee Valley Authority (TVA)
  - Bonneville Power Administration (BPA)

Bipartisan Infrastructure Law EV Highlights – Electric Bus Replacement Program ($5 Billion)

- **Up to 100% grant, rebates, and contracts** to replace buses and install charging infrastructure
- Administered by EPA
- **Priority for rural or low-income areas**
- Eligibility:
  - State and local governments
  - Eligible contractors
  - Nonprofit school transportation associations
  - Tribes

Federal Anti-Stacking Rules-Caveat to utilizing other Federal resources

- EPA EV bus initiative awardees may not utilize other Federal funds to finance behind the meter ***(consumer side)*** infrastructure improvements for which the awardee has utilized the EPA EV funds.
- Includes any work/equipment listed on an invoice/billing statement that the grantee paid with EPA EV ***grant*** funds.
  - If the awardee intends to utilize non-EPA Federal funds to finance any behind (customer side of) the meter infrastructure improvements, that work and/or equipment purchase must be on a separate invoice.
- The Federal anti-stacking rules apply to both loan and grant funds.
- The awardee must ensure that any funds it receives from a third-party is not a pass through of Federal funds if the awardee intends to utilize those funds to pay for work on an invoice that it has paid in part with EPA EV funds.

Unique Role of Rural Development

Rural Development's three agencies (Rural Housing, Rural Business Cooperative and Rural Utilities Service) offer rural oriented financing options to support the electrification of the transportation sector and can leverage other federal investments in eligible rural areas.

USDA Rural Power Drive Initiative

USDA/Rural Development programs can be used to leverage federal, state, and private sector investments to support the development and deployment of electric vehicle (EV) charging stations serving rural areas. USDA will collaborate with federal agencies to achieve this goal.

RD can use existing programs and authorities to:

(1) Provide affordable financing to expand the availability of EV charging infrastructure in rural areas

(2) Leverage EV infrastructure investment into further rural economic development

(3) Foster a network of EV infrastructure **leaders and local expertise** in rural communities

EV Rollout Players

- Federal Family (EPA, DOE, DOT, USDA, others)
- States – Including state Transportation & Education departments
- Electric Service Providers
- Municipalities
- Local School Systems
- Public or Private Entities

USDA is here to help cover EV Gap funding!

- Community Facilities – Buildings, EV's and EV chargers, Community Improvement
- REAP – Farm and Small Business Energy Efficiency Projects
- RUS Infrastructure Loans– Loans to utility provides to finance necessary infrastructure improvements for EV's on the utility side of the meter.
- RUS Project Loans – Loans for Renewable Energy & Storage Projects on the utility side of the meter.
- RESP – Behind the meter EV chargers and Gap funding above BIL, ***but subject to the anti-stacking rules.***

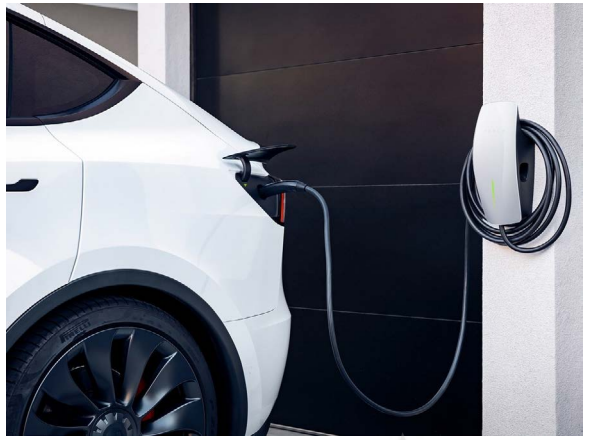
What USDA's Community Facilities Program Can Do

Community Facilities (CF) can finance:

- Non-profit and municipal vehicles serving community needs
- Related community-based charging infrastructure
- Community-owned and serving charging stations

CF Funding Options:

- Grants
- Direct Loans
- Loan Guarantees



Impact on EV Rollout in Rural Areas

- Electric Cooperatives serve 20% of Americans
- Electric Cooperative service territory covers 70% of America's highway route miles
- Many rural areas do not have sufficient power lines to handle DC Fast chargers
- Tight implementation timeline
- Funding questions

The **Electric Infrastructure Program** can finance electric utility owned charging stations and network infrastructure including:

- Charging stations ***owned by the borrower***
- **The borrower's construction of service lines to the meter**
- SG (fiber) connections to charging stations
- Heavying up of power lines
- Demand side management
- Implementation of smart metering
- Energy storage
- Renewable power supply such as solar and storage.

Electric System Planning Considerations

TABLE 1

CHARGING LEVELS

	Level 1 (L1)	Level 2 (L2) Single Port[a]	Direct Current Fast Charger (DCFC) Single Port
Type of current	Typically for residential, personal vehicle charging; not suitable for ESBs due to low rate of charge relative to the time it takes to charge a battery	Alternating Current	Direct Current
Voltage (V)		208/240	200–600
Power level (kW)		~7–20	~24–150
ESB recharge time		5.5–13 hours[b]	1–4.5 hours[b]
Charger equipment cost[c]		$400–$6,500[d]	$10,000–$40,000[d]
Installation cost[e]		$600–$12,700[d]	$4,000–$51,000[d]

Notes: Abbreviations: V = volt; kW = kilowatt; ESB = electric school bus; [a] Potential for dual port offering; [b] See Tables 2, 3, and 4; [c] Costs are largely dependent on the power output (kilowatts) of the charger, the degree of control over charging, and other advanced features; [d] Smith and Castellano 2015; ITSJPO 2019; [e] Installation costs will be site and geography dependent. Estimates do not include potential grid upgrade costs.

Electric System Planning Considerations

- EV Charger load and locations
- Generation and/or load could affect distribution grid, necessitating a significant (and time-consuming) design/build process.
- On top of that, add:
  - GHG reductions (retirement of base load generation)
  - Designing for Distributed Energy Resources
  - Environmental Review - could affect design and timeline
  - Supply chain issues

Other Considerations

- Prepare for conversion of construction and farm equipment to electric power
- Addition of semi trucks and other vehicles (mass transit buses) with different charger types
- Separate rate schedules may need to be developed and approved by Board, PUC, etc.
- Prepare for site expansion and/or growth
- Renewable and battery storage at charging sites

What the Rural Utilities Service (RUS) Can Do – RESP

Eligible entities can use the **Rural Energy Savings Program (RESP)** to finance charging stations and related infrastructure owned by the customer.

- *Eligible entities:* all utilities, energy efficiency entities, Tribes
- *Customer:* businesses, municipalities, individuals, Tribes, schools
- *Eligible Activity:* Any improvement to real estate or a fixture that results in the reduction of energy costs or usage of the customer. This includes the construction of EV chargers and the supporting behind the meter infrastructure.
- Provides 0% financing to the borrower. Borrower relends to the consumer at a rate no higher than 5% for up to 10 years. On-bill financing for consumer.

(*I would eliminate EECLP from the discussion).*

RESP Can Cover:

- ***Behind the*** meter ***infrastructure*** shortfalls above grant allocation *provided such financing does not violate the anti-stacking rules.*
- Solar and Battery Storage on same site – increased reliability
- Cost reimbursement for the broadband (fiber) connection for the charger ***if the utility charges the cost of construction to the consumer as cost in aid of construction (CIAC)***
- Cover the cost of line extension and/or service drops ***if the consumer pays those costs as a CIAC***

RESP Eligible Activities (Energy Efficiency Measures)

i. Lighting Improvements (Residential and commercial)
ii. HVAC Systems
iii. Building Envelope Improvements
iv. Water Heaters
v. Compressed Air Systems
vi. Motors
vii. Boilers, Dryers, Heaters and process related equipment
viii. Energy Audits
ix. On or Off Grid Renewable Energy Systems
x. Energy Storage Devices
xi. Energy Efficient Appliance Upgrades (fixed to real property)
xii. Irrigation or Water and Waste Disposal System Efficiency Improvements
xiii. Replacement of Manufactured Homes
xiv. Electric Vehicle Chargers in behind the meter applications
xv. Other Approved Activities and investments directly related to Energy Efficiency Implementation

Key Takeaways from this Presentation

- Electric powered vehicles, transportation and equipment is now mainstream
- Anyone interested in installing EV chargers should contact your Electric Service Provider as early in the process as possible
- USDA is here to help with loan program offerings for EV charging and energy efficiency
- We have provided helpful web links at the end of this presentation

Related Web Links

- BIL Link: Text - H.R.3684 - 117th Congress (2021-2022): Infrastructure Investment and Jobs Act | Congress.gov | Library of Congress
- DOT Toolkit: www.transportation.gov/rural/ev/toolkit
- EPA Clean bus initiative: https://www.epa.gov/cleanschoolbus
- RESP website: Rural Energy Savings Program | Rural Development (usda.gov)
- USDA Community Facilities Program: Community Facilities Programs | Rural Development (usda.gov)
- REAP website: Rural Energy for America Program Renewable Energy Systems & Energy Efficiency Improvement Guaranteed Loans & Grants | Rural Development (usda.gov)

Contact

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RUS Electric Program GFR Link:
https://www.rd.usda.gov/contact-us/electric-gfr
Customer Service email:
ElectricProgramCustomerService@rd.usda.gov

USDA Rural Energy Savings Program Link:
https://www.rd.usda.gov/programs-services/rural-energy-savings-program