

Utility Logo
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ELECTRIC SCHOOL BUS UTILITY RESILIENCY ACTION PLAN TEMPLATE

Electric School Bus Utility Resiliency Action Plan Overview

This document is a framework for utilities to begin to incorporate electric school buses (ESBs) into their resiliency planning. It is meant to supplement existing utility emergency documentation and planning. Creating an Electric School Bus Utility Resiliency Action Plan allows this information to exist within the company beyond the tenure of any individual involved with its implementation. This project is a result of the work of a cohort of members from [The Electric School Bus Initiative's Utility Working Group](#) over the course of six months in 2025.

As ESBs continue to be deployed across the United States and technology surrounding them advances, there will be growing opportunities for ESBs to provide emergency transportation, energy, and other services. This action plan guides utilities to identify potential disasters and jointly create approaches that increases community resiliency by seeking input from local stakeholders. It should continue to be revisited and updated as community needs shift, potential disasters evolve, and ESB technology improves.

For any questions on this resource, please contact Robert Stafford (Robert.stafford@wri.org) or Gregory Kresge (Greggory.kresge@wri.org).

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Utility Resiliency Action Plan Stages

Executive Sponsorship

The intent of this document is to exist within a utility's organizational structure, rather than being the work of an individual. This is to ensure continuity and continued evolution of the action plan in the event a member of the planning team assumes another role or leaves the company. As such, the first step of the process is to get initial interest from an executive sponsor for developing a plan.

Partnering with Community Organizations

School buses are community resources. Plans including them should involve broad public input to ensure that their use outside of student transportation meets the needs of the community. Also, local groups are going to be able to help better identify community risks and needs in the next stage of the plan. We recommend identifying at least four groups to engage with using our [Community Organization Engagement Framework](#). Some examples include community foundations, organizations assisting vulnerable populations, and historically marginalized groups. List organizations, contacts, and areas of interest for each in the space below (add more lines if needed):

- 1.
- 2.
- 3.
- 4.

Identifying Local Risks

Working with partnered organizations, identify what are the most pertinent risks for your community (e.g., hurricanes, snowstorms, wildfires) and what groups are most vulnerable to service interruptions when these occur (e.g., groups with acute medical needs, the elderly). Information on local risk categories can also be found in publicly available sources, such as the [FEMA National Risk Index Map](#). Using this information, generate a matrix of groups and their vulnerability to specific disasters. We also recommend adding utility infrastructure and processes to this matrix to understand where risks might compound. An example matrix from Lawrence Berkeley National Labs' [Grid Resilience Plans: State Requirements, Utility Practices, and Utility Plan Template](#) is listed in the appendix under [Session 1](#).

Planning Applications for ESBs

While providing power is the first thought for emergency applications of ESBs, the technology environment around ESB vehicle-to-load or vehicle-to-building is still nascent

unlike vehicle-to-grid applications. However, there are still applications for ESBs in emergencies while the field develops. Emergency transportation is the most apparent, with ESBs already serving a community transportation purpose outside of emergencies. Many newer ESBs are also equipped with air conditioning, allowing them to run and keep cool for days at a time, providing a lifeline to heat-stressed communities. These interim applications can be prioritized until such time technological solutions become more widely available, at which point the Electric School Bus Utility Resiliency Action Plan can be amended to include ESBs providing emergency power.

Partnering with ESB Operators

The final step for the action plan is to formalize a relationship with ESB operators in your service territory. The Electric School Bus Initiative maintains a [dashboard](#) of ESB deployments across the United States if you need information on who is actively or intends to operate ESBs in your community. We have additional resources on [Mutual Aid Agreements](#) that can serve as a formal tool to describe emergency use cases for ESBs, incorporate local emergency managers, and have written commitments from all involved parties.

Appendix

Community Organization Engagement Framework

Utility name: Click or tap here to enter text.

External organization name: Click or tap here to enter text.

External organization Point of Contact Information

Name (First and Last): Click or tap here to enter text.

Title: Click or tap here to enter text.

Phone: Click or tap here to enter text.

Email: Click or tap here to enter text.

Organization type: Choose an item.

If “Other” please explain. Click or tap here to enter text.

Is the organization equity-driven? Choose an item.

If “Yes,” please provide a traceable statement and where you obtained it from. If this is from a website, please provide the link to the URL.

Click or tap here to enter text.

Definition: Any of 1) Over 50% of the organization’s Board or U.S.-based senior staff is comprised of Black, Indigenous, and people of color (BIPOC) members. Alternatively, for an individual, the individual has a BIPOC identity. 2) The organization’s or individual’s mission statement, guiding principles, strategy, or other foundational texts are explicitly committed to building power within historically underserved communities. Underserved communities may include Black, Latino, Indigenous and Native American persons, Asian Americans, Pacific Islanders, other persons of color, members of religious minorities, LGBTQ+ persons, persons with disabilities, persons who live in rural areas, persons adversely affected by persistent poverty or inequality, persons adversely affected by immigration status, persons adversely affected by age, persons adversely affected by disproportionate environmental harms and risks. Categorization is either self-identified by the organization or individual or assessed by ESBI review of the organization’s or individual’s mission statement in the absence of a self-identification response, or in the case of self-identification, aligning with ESBI equity assessment.

Underserved communities the organization serves (check all that apply):

- ☐ Black, ☐ Latino, ☐ Indigenous and Native American, ☐ Asian American, ☐ Pacific Islanders,
☐ Other Persons of Color, ☐ Religious Minorities, ☐ Disability, ☐ LGBTQ+, ☐ Rural Areas, ☐

Adversely Affected by Poverty or Inequality, ☐ Adversely Affected by Immigration Status, ☐
Adversely Affected by Age, ☐ Adversely Affected by Environmental Harms and Risks, ☐ Other,
☐ Unspecified, ☐ N/A

Is the organization a minority, women, veteran, disabled, or underserved community-run/owned business? (check all that apply):

☐ Yes–Race/Ethnic Minority, ☐ Yes- Woman, ☐ Yes-Veteran, ☐ Yes-Disabled, ☐ Yes-Other
Underserved Group, ☐ No

Definition: [Small Disadvantaged Businesses, Disadvantaged Business Enterprises, and Minority Business Enterprises: Definitions and Differences in Terms Used by Government Programs | Congress.gov | Library of Congress](#)

Cohort Meeting Objectives, Agendas, and Resources

Session 1

- Meeting Objectives:
 - Introduce the purpose and scope of the Utility Resiliency Action Plan (URAP)
 - Review relevant climate and hazard data
 - Identify priority assets and operational functions for vulnerability assessment
 - Establish working group roles and expectations
- Agenda:
 - Welcome and Introductions
Brief introductions from all participants and overview of meeting goals
 - Overview of the Utility Resiliency Action Plan (URAP)
Purpose, timeline, and outcomes of the action plan process
 - Climate and Hazard Context
Presentation of regional climate projections and hazard trends relevant to utility infrastructure
 - Review of Existing Vulnerability Assessment Frameworks
Introduction to assessment categories and example metrics
 - Discussion: Key Utility Assets and Functions
Identification of critical infrastructure, operations, and services to include in the assessment
- Next Steps
 - Finalize the list of assets and processes to be assessed
 - Assign roles for data gathering and initial vulnerability scoring
 - Schedule follow-up meetings and establish communication protocols
- Table I. Example Vulnerability Matrix*

Category of Utility Infrastructure or Processes	Hazards Included in Vulnerability Assessment (Vulnerability Rating)			
	High Winds	Floods	Heat Waves	Cybersecurity

Substations		x	x	
Transmission lines	x			
Transmission towers	x			
Distribution lines	x			
Distribution poles	x			
Distribution transformers			x	
Key company facilities		x		
Asset management		x	x	
Load forecasting	x		x	
Workforce safety	x	x	x	
Emergency response		x	x	
Vegetation management	x		x	

Session 2

- Meeting Objectives:
 - Share outcomes from executive outreach and stakeholder engagement
 - Explore the role of resiliency in supporting communities
 - Introduce best practices in EV infrastructure and load management
 - Facilitate dialogue around equity in utility planning and communications
- Agenda:
 - Review of Assigned Action Items from Previous Meeting
 - Utility personnel roles and contacts
 - Executive engagement outcomes and feedback
 - Presentation: *Resiliency for the People*
 - Guest speaker (TBD; potential speaker from the Footprint Project)
 - Case studies and strategies for community-centered resiliency initiatives
 - Breakout Discussions: Equity in Utility Resiliency Planning
 - Small-group discussions to explore how equity considerations are being incorporated
 - Questions to consider:
 - Who is most vulnerable in your service territory?
 - How are equity outcomes measured or tracked?
 - What partnerships or tools are being used to reach underserved communities?
 - Presentation: *Charging Done Right*

- Guest speaker (TBD; potential speaker from TMH)
 - Technical considerations and operational lessons in EV charging deployment
 - Emphasis on the importance of site controllers for effective load management
- Discussion: Lessons from the Field
 - Participant insights and experiences related to community resiliency and EV infrastructure
 - Barriers, successes, and collaboration opportunities
- Next Steps

Participants are asked to prepare for the next meeting by completing the following:

 - Identify publicly available utility resources related to EVs (e.g., charging infrastructure, EV programs, rates, tariffs)
 - Engage with community and government relations staff to understand customer communication strategies
 - Document current messaging channels and outreach tools
 - Bring examples of effective community engagement or EV outreach efforts (internal or external)

Session 3

- Meeting Objectives:
 - Share updates from participating utilities
 - Explore challenges and unintended consequences related to demand charges and grid integration
 - Deepen understanding of bidirectional charging and its operational implications
 - Begin preparing for deeper engagement with interconnection processes and customer guidance
- Agenda:
 - Review of Assigned Action Items from Previous Meeting
 - Cohort member report-outs on publicly available EV resources and communication strategies
 - Summary of standout outreach examples and communication channels
 - Discussion: V2G/V2L/VGI Breakdown
 - Case for V2L compared to V2G and general VGI
 - Discussion on interconnection practices for consumer generation (e.g., solar, backup generators)
 - Identifying gaps, opportunities, and shared concerns around grid flexibility and customer-side technologies

- Next Steps

For the next session, participants are asked to bring the following insights and materials:

- Describe how your utility currently handles two-way power flow (e.g., policy, metering, safety standards)
- Identify whether your utility has a dedicated interconnection team for distributed energy or EV applications
- Bring a sample of your utility's current interconnection application (PDF or printout)
- Share whether your utility offers contractor recommendations to customers
- Reflect on and be prepared to discuss: What are the characteristics of a "good contractor" from your utility's perspective?

Session 4

- Meeting Objectives:

- Understand charging resiliency and planning alternate charging locations
- Discuss immediate opportunities and long-term planning for ESB resilience uses
- Review example action plan
- Closing and scheduling for individual meetings

- Agenda:

- Review of Assigned Action Items from Previous Meeting
 - Utility updates on interconnection processes and contractor engagement
 - Highlights from shared application forms and lessons learned
- Working Session: Action Plan Development
 - Hands-on, step-by-step development of each utility's action plan
 - Participants will use provided templates or internal frameworks to begin documenting key components
 - Facilitated Session: (TBD – Internal or external facilitator to be confirmed)
 - Focus areas may include risk prioritization, communication planning, technical integration, community engagement
- Discussion: Early Observations and Common Challenges
 - Group debrief on what's working, what's unclear, and where support may be needed
- Next Steps

Prior to the next meeting, participants are asked to:

 - Review the draft action plan with internal teams and relevant executives
 - Identify all internal departments or staff who should contribute to or approve the plan
 - Define your external stakeholder groups (e.g., local governments, community partners, regulators, advocacy organizations)

- Develop an initial engagement approach for each external group
- Collect internal feedback on the plan:
 - What aspects of the plan are viewed positively?
 - What concerns or challenges have been raised?
 - What strategies could be used to address or overcome those concerns?