



WORKING PAPER

Electric School Bus Initiative advocacy stakeholder analysis: A baseline report

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HIGHLIGHTS

- WRI's Electric School Bus Initiative aims to collaborate with partners and communities to build unstoppable momentum toward an equitable transition of the U.S. school bus fleet to electric by 2030.
- This baseline stakeholder assessment for the ESB Initiative gathered and analyzed qualitative responses from U.S.-based environmental, health, disability, and tribal rights and justice organizations on the equitable transition.
- This research focused on understanding participants' perceptions and experiences with the equitable transition to electric school buses (ESBs), WRI's involvement in the field, and the involvement of other stakeholders.
- Through 16 individual interviews and one focus group, the authors found that most participants were not familiar with efforts to electrify school buses but were interested in the topic and the equitable implementation of ESBs in the United States.
- To increase awareness, familiarity, and knowledge of current ESB efforts within and among equity and justice organizations, the authors recommend sharing stories through social media, hosting roundtables with national and local equity and justice representatives, and partnering with local organizations.

EXECUTIVE SUMMARY

Introduction

In collaboration with partners and communities, WRI's ESB Initiative aims to build unstoppable momentum toward an equitable transition to an electric U.S. school bus fleet by 2030. The transition will bring health, climate, and economic benefits to children and families across the country and normalize electric mobility for an entire generation.

This paper presents a baseline advocacy stakeholder analysis of U.S.-based environmental, health, disability, and tribal rights and justice representatives (hereafter referred to as “equity and justice organizations”). The primary objective of the stakeholder analysis is to gather and analyze qualitative information regarding the advocacy stakeholders’ views and involvement, WRI’s involvement, and the involvement of other groups, such as utilities and manufacturers, in the equitable transition to ESBs in the United States. The secondary objective of the stakeholder analysis is to provide the ESB Initiative team with an opportunity to identify and establish relationships with advocacy stakeholders and to assess their knowledge, interests, positions, alliances, and importance in relation to school bus electrification.

The stakeholder analysis also provides qualitative information to support the “Equity Framework to Guide the Electric School Bus Initiative” (Moses and Brown 2022) and complements the data gathered from the online survey and postsurvey focus group of the forthcoming “Electric School Bus Initiative’s U.S. School Districts Needs Assessment” (Brown and Jackson, forthcoming). The stakeholder analysis does this by ensuring that the voices and needs of under-served communities (for whom the equity and justice organizations serve as proxies) are considered in the ESB Initiative decision-making processes, marketing and communications, research and evaluation, and partnerships with local and national community-based organizations, advocates, and other key stakeholders. Additionally, it provides feedback from nonprofit equity and justice organizations that, in many cases, serve the communities or populations where these schools are located or partner with other local and national organizations that serve them.

About this working paper

In partnership with Equitable Cities, WRI’s ESB Initiative conducted a baseline advocacy stakeholder analysis between July and September 2022. The analysis involved individual interviews and a focus group with 22 participants representing 17 different advocacy organizations. The organizations were chosen from across the four equity and justice organization types identified by the authors: environmental justice, disability rights and justice, health equity, and tribal rights and justice. The insights gained through this research provide a deeper understanding of equity and justice organizations’ perceptions of ESBs as well as their current local and national ESB efforts. The information contained in this report will be used by WRI’s ESB Initiative team and its partners—including communities, school districts, nongovernmental organizations, businesses, and local, state, and national governments—to help build unstoppable momentum in the equitable transition to ESBs.

Key findings

- The overwhelming majority of participants are not familiar with or involved in any national or local efforts to electrify school buses. They also lack adequate knowledge and awareness to speak confidently and intelligently about the most recent Infrastructure Investment and Jobs Act or the Environmental Protection Agency’s Clean School Bus Program.
- Most participants are interested in the topic and the equitable implementation of ESBs within the communities they serve. Most view WRI as a potential partner in school bus electrification as well as in support of their organizational goals and objectives.
- Participants mentioned several barriers to the ESB transition. They include intergroup fighting and differences on how best to mitigate environmental concerns and challenges as well as structural racism; disagreement on an equity definition and ways to analyze environmental impacts; systemic and institutional racism; internal capacity (e.g., volunteer-driven organizations); funding, particularly for Black, Indigenous, and/or communities of color or for smaller organizations; unresponsive politicians; competing priorities and simply not enough time; and being inundated with new and overwhelming interests and inquiries that do not align with their organization’s current priorities or interests. These barriers make it difficult for organizations to support or advocate for the procurement of ESBs in their communities.
- These real and ever-present barriers also prevent these organizations from obtaining accurate and timely data or from acquiring the knowledge they need to support the electrification of school buses in their communities. Therefore, the overall lack of access to high-quality information and the rise in misinformation regarding ESBs may lessen their involvement in or lead to unfavorable views of WRI’s involvement and the involvement of other groups, including utilities and manufacturers, in the equitable transition to ESBs in the United States. For example, several participants expressed concern and shared misinformation regarding how often electric buses catch fire, how electric buses cannot function properly in colder climates, and how electric buses cannot handle various trip lengths and hilly terrains. However, it is important to note that, due to research limitations, it is difficult to clearly state whether these perceptions would hold true with a much larger sample of participants (see “Research limitations”).

- The stakeholder analysis reinforces the significance of the ESB Initiative following the guidance outlined in the equity framework by Moses and Brown (2022). It also demonstrates the importance of ongoing equity-centered research and engagement and partnership with national and local equity and justice organizations throughout the United States. The analysis does this by highlighting the advocacy stakeholder participants' willingness to engage in this work and by putting the ESB Initiative's value of equity into practice by engaging with groups that are or could be harmed by the transition to ESBs.
- Our findings indicate that an additional stakeholder analysis of U.S. equity and justice organizations is needed. The stakeholder analysis would be conducted via a mixed-methods approach of qualitative research (i.e., key informant interviews) and quantitative research (i.e., a representative survey) methods. The qualitative research component of the stakeholder analysis would include additional key informant interviews with U.S.-based equity and justice organizations. A national survey of these organizations would enhance the key informant interviews and give the research team important findings, understandings, and observations representative of the study's target community. For example, the stakeholder analysis shed light on the ESB Initiative's effectiveness in reaching equity and justice organizations and the potential impact current messages and outreach may already be having on them. In addition, the ESB Initiative could benefit from the exploration of an ESB training program designed specifically with these organizations in mind.
- Continue to advance the importance of justice, equity, and inclusion through internal equity learning sessions, ongoing and future research, monitoring and evaluation efforts, and the institutionalization of the equity framework.
- Follow up with past participants, or potentially a new group of disability rights advocates, to develop specific strategies for including people with disabilities within the ESB transition.
- Develop a communications and marketing strategy to ensure that as many equity and justice organizations as possible can learn more about the program, particularly Priority Outreach Districts.¹
- Address negative images of electric buses and misinformation through strategic marketing and communication channels.
- Ensure that equity and justice representatives are prioritized when replacing and adding ESB Advisory Council² members.
- Pursue opportunities to explore funding (e.g., partnering with philanthropies) for local organizations to advocate for and lead discussions regarding ESBs.

These internal considerations aim to promote the use of ESBs while ensuring that they are equitable, accessible, and sustainable for all communities.

INTRODUCTION

Background

In collaboration with partners and communities, WRI's Electric School Bus Initiative aims to build unstoppable momentum toward an equitable transition of the U.S. school bus fleet to electric by 2030, bringing health, climate, and economic benefits to children and families across the country and normalizing electric mobility for an entire generation. As documented in the ESB Initiative's "Equity Framework to Guide the Electric School Bus Initiative," the initiative is committed to leading with equity and centering intersectionality as its fundamental approach (Moses and Brown 2022). This means that the ESB Initiative will not only scale pathways for electrification but also help to address the racial, cultural, educational, safety and health, and socioeconomic disparities associated with school bus transportation across the United States.

The ESB Initiative also advances a partner-driven, accountable approach that recognizes how existing systems of power grant privilege and access unequally and must be continually addressed and changed. For example, wealthier school districts may have

Recommendations

Based on the key informant interviews with select U.S. equity and justice organizations, the ESB Initiative should consider taking the following internal actions:

- Increase awareness, familiarity, and knowledge of current ESB efforts within and among equity and justice organizations.
- Leverage the stated interest of equity and justice participants to be involved in the ESB efforts moving forward.
- Host strategic roundtables and listening sessions with these organizations; conduct an internal assessment of existing technical assistance deliveries and explore ways to deliver timely and reliable data on ESBs to these organizations.

disproportionate access to electric school bus (ESB) funding and procurement information or be more likely to have relationships with utilities, manufacturers, and politicians.

Another important consideration when it comes to school transportation is that 60 percent of low-income students ride the bus to school, whereas only 45 percent of non-low-income students do so (FHWA 2017). Black students, low-income students (FHWA 2017), and students with disabilities (Wheeler et al. 2009) rely on diesel school buses more than others, meaning these students are more likely to be exposed to dangerous diesel exhaust pollution.

In addition to developing and adopting the equity framework, the ESB Initiative has also conducted two additional baseline research efforts to understand and mitigate existing systems of power and access within the ESB transition: a needs assessment³ and a stakeholder analysis. This working paper focuses on the baseline advocacy stakeholder analysis of U.S.-based environmental, health, disability, and tribal rights and justice representatives (hereafter referred to as “equity and justice organizations”).

Purpose of this working paper

The primary objective of the stakeholder analysis is to gather and analyze qualitative information regarding respondents’ views and involvement in the ESB movement as well as their views on the involvement of WRI, utilities, and manufacturers in the equitable transition to ESBs in the United States. The secondary objective is to provide the ESB Initiative team with an opportunity to identify and establish relationships with key equity and justice actors at the national and local level and to assess their knowledge, interests, positions, alliances, and importance in relation to school bus electrification. This is imperative considering WRI’s global focus and limited relationship with national and local U.S.-based equity and justice organizations.

The stakeholder analysis provides additional qualitative information to support the equity framework and complements the data gathered from the online survey and postsurvey focus group of the abovementioned needs assessment. It does so in three main ways:

- First, the analysis ensures that the voices and needs of under-served communities (for whom the equity and justice organizations serve as proxies)—those who are often last to receive benefits of such a transition—are considered in the ESB Initiative decision-making processes, marketing and

communications, research and evaluation, and partnerships with local and national community-based organizations, advocates, and other key stakeholders.

- Second, it provides feedback from nonprofit equity and justice organizations that often serve the communities or populations where these schools are located or partner with other local and national organizations that serve them; this feedback provided the researchers with professional opinions on this movement.
- Third, the stakeholder analysis affords interview participants the opportunity to ask questions of the research team, dive deeper into issues that come up during the discussion, and articulate strategies and recommendations in their own words.

The remainder of this paper is organized into three key sections. The “Stakeholder interviews” section describes the study’s research questions, methodology, participant characteristics, and highlights from the key informant interviews. The “Discussion” section summarizes key findings, interprets the findings, and discusses the implications and limitations of the research effort. The “Conclusion and recommendations” section highlights several key recommendations needed to ensure an equitable ESB transition along with ideas for future research.

STAKEHOLDER INTERVIEWS: U.S.-BASED ENVIRONMENTAL, HEALTH, DISABILITY, AND TRIBAL RIGHTS AND JUSTICE ORGANIZATIONS

Between July and September 2022, the WRI ESB Initiative research team facilitated a series of one-on-one key informant interviews (16 participants) and one focus group (6 participants) via Zoom with U.S.-based environmental, health, disability, and tribal rights and justice (equity and justice) representatives from around the United States. The key informant interviews explored the following topics:

- Awareness and knowledge of existing school bus electrification efforts nationally and locally
- Involvement, or desire to be involved, with these efforts
- Effective ways to center equity in the transition to ESBs
- Competing local and national priorities, particularly as they relate to school bus electrification in under-resourced and under-served communities

- The Infrastructure Investment and Jobs Act and the charge to design and implement a Clean School Bus Program by the Environmental Protection Agency (EPA) to disburse funds

See Appendix A for the research questions used to guide and facilitate the discussion with representatives from these organizations.

Methodology

WRI's ESB Initiative research team compiled a master list⁴ of nearly 300 equity and justice organizations from across the United States. The contact list included each organization's name, primary point of contact, location, email address, and website. The ESB Initiative research team contacted organizations from the master list based on the team's desire to have an equitable cross-section of organizations by type and U.S. region. During the first round of outreach, the research team sent formal email invitations to 20 organizations from the master list. The first 20 prospective organizations were chosen to ensure diverse representation based on region and organization type (e.g., Northeastern environmental justice organization). When this first round of invitations was rejected or no response was received within a week, the research team randomly selected a replacement organization from the master list. Due to nonresponse and invitation decline, the research team determined to only differentiate between organization type, not organization type and region.

With the exception of the National Tribal Air Association (NTAA), the ESB Initiative research team decided not to interview any organization that already had an existing partnership with WRI; this reinforced the goal of engaging and establishing new relationships with equity and justice organizations. However, due to WRI's limited prior engagement (a few meetings) with the NTAA and its existing relationships with Tribal Nations and Native communities and organizations, the team decided to interview a member of the NTAA to ensure that the needs and concerns of Tribal Nations and Native communities were properly represented in this study.

Nearly all interviews were completed within 30 minutes and were conducted via Zoom by two or three ESB Initiative research team members; the exception was the focus group with the disability rights and justice organization, which lasted 90 minutes. All interviews were facilitated in English, and all participants were offered a US\$100 honorarium as compensation for their time. All participants were required to complete an electronic consent form either prior to or at the start of each interview (see Appendix B). After all the interviews were

complete, the research team used inductive methods to analyze interview transcripts. A narrative analysis was conducted using the interview and focus group transcripts to highlight the critical findings in this research effort.

Research limitations

The research limitations of this study include the study's timing, access to current and available literature on the topic, the newness of the topic, and the level of financial resources devoted to the project. Although this report explores themes captured from 22 individuals across 17 organizations throughout different regions of the country, the sample size, which is typical in qualitative analysis, is not representative of all U.S. equity and justice organizations. Nearly 300 organizations were identified, but it is unknown how many organizations exist on the national level. Likewise, the role that advocacy organizations might play in the equitable transition to ESBs has not been well researched. Therefore, the research team was limited in its ability to learn from past research efforts or existing literature on this topic, given the combination of the target audience and the topic of ESBs. In addition, national research efforts of similar sizes and magnitude typically require more resources and time to ensure a well-thought-out-and-executed plan.

However, despite these limitations, this research allows the ESB Initiative team to

- identify and establish relationships with the key actors at the national level and to assess their knowledge, interests, positions, alliances, and importance in relation to school bus electrification; and
- gather and analyze qualitative information regarding respondents' views and involvement in the ESB movement as well as their views on the involvement of WRI, utilities, and manufacturers in the equitable transition to ESBs in the United States.

Participant Characteristics

Table 1 lists the organizations, classified by area of interest, that participated in the stakeholder analysis. A total of 22 interview participants represented 17 different organizations. The makeup of those organizations is as follows: 5 environmental justice organizations, 5 health equity organizations, 4 tribal rights and justice organizations, and 3 disability rights and justice organizations (2 interviews, 1 focus group with 6 participants). Although the names of organizations are listed, individual participants will remain anonymous.

Table 1 | **Participating organizations**

ORGANIZATION	ORGANIZATION CLASSIFICATION
Advancing Indigenous People in STEM	Tribal rights and justice
Autism National Committee	Disability rights and justice
Black Women for Wellness	Health equity
Columbia Public Health	Health equity
Connecticut Association for Community Action	Health equity
Detroiters Working for Environmental Justice	Environmental justice
Disabled in Action	Disability rights and justice
Farmworker Association of Florida	Environmental justice
Girl Plus Environment	Environmental justice
Health Equity Solutions	Health equity
Kua'āina Ulu 'Auamo	Tribal rights and justice
Mobility International USA	Disability rights and justice
National Tribal Air Association	Tribal rights and justice
North Carolina Environmental Justice Network	Environmental justice
People Organized in Defense of Earth and Her Resources	Environmental justice
People's Institute for Survival and Beyond	Health equity
Standing Rock ("SAGE") Renewable Energy Power Authority	Tribal rights and justice

Note: SAGE = Strategic Advancement Goals for the Environment.

Source: Authors.

Highlights from the stakeholder interviews

Familiarity with and interest in ESBs

Interview participants were asked, “On a scale from 1 to 10, to what degree are you or your organization aware and knowledgeable of existing school bus electrification efforts nationally or locally?” In the majority of cases, participants expressed a lack of awareness of or knowledge about ESB efforts. However, participants representing tribal rights and justice and environmental justice organizations were more likely to be aware than other

participants. When asked by the research team to expound on their lack of awareness regarding current school bus electrification efforts, participants noted an overall lack of media coverage of ESBs and indicated that much of the work on ESB adoption appears to be at the national level, which conflicts with their focus on more local-level activities.

In addition to general familiarity, participants also stressed the need to ensure that equity and justice principles guide the conversation around the transition to ESBs, and that everyone agrees with how both terms—*equity* and *justice*—are defined. As one participant noted, “People need to know about this, but there needs to be principles to guide the conversation around the transition.”

The importance of agreed-upon definitions arose due to concerns with past projects and programs that were halted over disagreements about terminology. Most participants were interested in the topic and movement toward ESBs, but they expressed the need for those most impacted by past and current transportation and environmental decisions to lead and facilitate these discussions.

Involvement in the electrification of school buses

Participants were asked, “How involved is your organization in efforts to electrify school buses? Where do electric school buses fall on your organizational list of priorities?” An overwhelming majority of participants and organizations are not involved in current ESB transition efforts at either local or national levels. This was surprising because equity and environmental justice organizations have worked to reduce pollution in these communities. For example, the Moms Clean Air Force (a member of the Alliance for Electric School Buses) network of state-based community organizers advocates for ESBs as a mechanism to reduce pollution from diesel emissions.⁵ However, an overwhelming majority of participants and organizations would like to be involved in current ESB transition efforts. When asked to share reasons for their interest in ESBs, participants stated that ESBs could help uplift Black women and girls by providing new green job opportunities, save the environment, and create healthy people and communities. Conversely, others felt that ESBs could “pull” them away from more pressing issues (e.g., poverty). Organizations noted that their priorities, goals, and objectives were determined by their communities’ most urgent needs. For example, one participant noted, “We understand that all these climate issues do impact on our customers immediately and we do need long-term solutions. But I think at this point, we have to kind of hit the things that are the most immediate.” Similarly, another participant explained, “I, honestly, don’t think people care about what kind of school buses are about to hit the

streets. Communities are already overburdened by other issues that are happening near where they live, that impact their quality of life and other basic needs. Essentially, [ESBs are] not an urgent need so [they are] not top of mind [for under-served and under-resourced communities].”

Barriers to school bus electrification

Participants were asked, “What are the main barriers your organization faces when working on transportation and/or electric vehicle-related projects?” Participants noted the following barriers: intergroup fighting and differences on how best to mitigate environmental concerns and challenges as well as structural racism; disagreement on an equity definition and a lack of analysis; systemic and institutional racism; internal capacity (e.g., volunteer-driven organizations); funding, particularly for Black, Indigenous, and/or communities of color or for smaller organizations; unresponsive politicians; competing priorities and simply not enough time; and being inundated with new and overwhelming interests and inquiries that do not align with their current priorities or interests. For example, one participant from a tribal rights and justice organization shared that although they appreciate the vast, new federal- and state-level funding opportunities they receive from outside groups, it can be overwhelming because they do not have the capacity, time, or expertise to apply in a timely fashion. Similarly, the participant expressed how these new funding opportunities and initiatives may not align with more pressing priorities, such as food access, health care access, poverty, and safety. Participants also noted an overall lack of accurate, timely, and reliable data (i.e., misinformation about ESBs) to make informed decisions regarding their support and promotion of ESBs in the communities and districts they serve (e.g., the funding, cost, feasibility, benefits, and safety of ESBs). And although the importance of reliable and timely data was mentioned by most participants, the research team was frequently reminded by participants of the importance of funding and the role it plays in shaping organizational priorities. For instance, it was noted throughout most of the conversations that “funding shapes priorities.”

Effective ways to center equity in the ESB transition

Participants were asked to share their thoughts on effective ways to help make equity the focus in efforts to transition to ESBs. One participant noted, “Income is not the only factor that makes an environmental justice community;” other participants noted that the term *income (low-income)* was being used colloquially to mean “race.” The participants expressed this point to highlight the importance of not using proxy variables such as income or geography for race when both race and income are

what defines an environmental justice community. In addition, they stressed the need to focus on racial equity in the ESB transition given the historic and contemporary impacts of structural racism, which results from race-based policies rather than just income-based policies. Participants also emphasized the importance of clarity and intentionality in speech, research, and community engagement in the equitable transition to ESBs.

Another participant noted, “Do NOT separate us.” This was a repeated theme from conversations with disability rights and justice organizations, which strive to end the segregation of special education students from the general population on school transportation. With this sentiment came the explanation of fear of physical, sexual, and verbal assault when isolated from peers.

The sections below detail the other considerations and various ways participants believe WRI and other partners could effectively center equity in the ESB transition. The ideas are not listed in order of importance. Many of these ideas were also listed by one or more organizations from each organizational type, with a few exceptions.

Tribal sovereignty. Stakeholders, including advocates, looking to engage and work with Tribal Nations and Native communities on the ESB transition must understand the importance of tribal sovereignty.

Parental involvement. Advocates in the ESB space should seek to involve parents, particularly parents of color who may be less intimately involved in these and other decision-making processes.

Social justice, equity, and environmental sustainability. In centering social justice, equity, and environmental justice, participants noted the following: protect local communities and residential areas from existing diesel and gas buses traversing children to and from schools; conduct an “antiracist evaluation”⁶; promote the electric bus as a mechanism for the community to clear “toxins of racism”; gain a clearer understanding of the history and impact of hazardous waste facilities in and near low-income communities and communities of color to eliminate or mitigate harmful air pollution; look at where buses are manufactured and what communities are being affected by battery manufacturing pollution; do not silo and separate environmental justice and disability rights and justice issues and concerns; ensure that *green* and *accessible* mean the same thing: 100 percent inclusive, universal bus design.

Accessibility and inclusive design. Participants noted that for an equitable ESB transition, accessibility and inclusive design need to be addressed. Specifically, efforts should consider the use of sound or lack thereof inside and outside the bus—particularly

for people with vision disabilities who rely on sound to navigate—and ensure that ESBs are equipped with lights to help kids who are deaf or may have a learning disability.

Advocacy and awareness. When discussing awareness of ESBs, participants noted that education is important in grassroots organizations to overcome misunderstandings. In addition, it was recommended to develop clearer messaging around ESBs, pushing for more changes.

Sustainable transport and active living. Participants indicated that ESBs are not the only option for a healthier ride for children and recommended that ESB alternatives such as biking and walking be promoted.

Urban planning and infrastructure. Participants noted the need for and importance of infrastructure to go along with the ESBs.

Collaborative partnerships in advocacy. When discussing partnerships in advocacy, participants recommended that the ESB Initiative and other advocates engage with the National Indian Education Association.

Marketing and stakeholder engagement. Lastly, participants suggested an increase in “peer marketing” of ESBs to stakeholders.

Signs of a successful ESB transition

Participants were asked, “What does success of an equitable and inclusive transition to electric school buses look like to the communities you represent?” Participants noted the following as proof of a successful ESB transition: reductions in carbon emissions; increases in overall health and well-being; increases in the implementation of new renewable technologies; intentional inclusion of communities most affected; public transportation is not left behind, particularly the electrification of public transit vehicles; understanding that there is a need for transportation—green or otherwise—in rural or remote areas (this was emphasized by the various tribal and disability rights and justice organizations interviewed); and development of culturally and environmentally based educational resources.

Additional observations noted by the research team include the importance of ensuring that all children, regardless of their ability, are provided space and accommodations together on ESBs; older buses are relocated to places—nationally and internationally—that need them; ESBs are not provided only to middle-class and upper-middle-class communities or urban areas; and ESBs are present within Tribal Nations and Native communities. One participant observed, “Tribal communities are always left out of discussions because we don’t have sizable populations. We are here; we’re not invisible.”

Environmental Protection Agency (EPA) Clean School Bus Program

Participants also were asked to share their thoughts on the new federal Infrastructure Investment and Jobs Act and the EPA’s charge to design and implement a Clean School Bus Program to disburse funds. Overwhelmingly, most participants were not familiar with the Infrastructure Investment and Jobs Act or the EPA’s Clean School Bus Program; therefore, they did not feel comfortable discussing their potential equity implications.⁷

Community and stakeholder engagement

Participants were asked, “Do you have any advice on how best to engage with individuals in your community at the local level?” According to one participant, “It is important to be in the community, be present, and move at the speed of trust.”

Below is a comprehensive summary of the other ways participants believe WRI and other partners could engage with individuals and communities in the ESB transition. Please note that the strategies below are not listed in order of importance.

Community engagement. When discussing community engagement, participants recommended WRI identify and engage trusted advocates (e.g., community-based organizations, community leaders); leverage the relationship of local grassroots organizations; engage mothers and grandmothers, particularly those of color; meet communities where they are by going directly to them (e.g., churches, community centers); bring something (e.g., funding, resources, food if an in-person gathering) to the table to entice engagement; be humble and be available for community-led conversations; conduct focus groups and informational interviews with community gatekeepers and residents; host community listening sessions; leverage “community science”; and compensate people for their time.

Equity and inclusion. Participants noted the following when considering equity and inclusion in community and stakeholder engagement: understand that our priority is not or may not be theirs; be intentional and deliberate regarding the engagement of racial minorities and low-income populations; keep the focus on inclusion, not “separate but equal”; engage with Tribal Nation governments who will then direct you to people who oversee programs; be multilingual and multidimensional in your approach; and hire people directly from the community.

Collaboration and partnerships. When discussing partnerships, participants recommended leveraging coalition-building to bring in health considerations and organizations.

Communication and outreach. Participants recommended the ESB Initiative pursue opportunities to engage individuals at conferences as well as to leverage various social media platforms to reach diverse age groups and create virtual campaigns as part of communication and outreach strategies.

Participants provided a list of organizations and groups that the research team should speak with to help achieve the goal of a more equitable and inclusive ESB transition (Table 2). Participants also provided names of individuals; however, to protect their identity, individuals have been excluded from this list.

Table 2 | **Additional organizations recommended for ESB engagement**

ORGANIZATION	RECOMMENDED BY
Alaska Federation of Natives	Tribal rights and justice organization
American Foundation for the Blind	Disability rights and justice organization
Association of University Centers on Disabilities	Disability rights and justice organization
Autism Society	Disability rights and justice organization
Autistic Self Advocacy Network	Disability rights and justice organization
B+H Architects	Health equity organization
Bloomberg Associates	Environmental justice organization
Blue Hills Civic Association	Health equity organization
Coming Clean	Environmental justice organization
Connecticut Association of Boards of Education	Health equity organization
C2H	Environmental justice organization
Disability Rights Education and Defense Fund	Disability rights and justice organization
Downstate New York ADAPT	Disability rights and justice organization
Earthjustice	Environmental justice organization
Environmental Justice Health Alliance	Environmental justice organization
Environmental Justice Leadership Forum	Environmental justice organization
FaithActs	Health equity organization
Florida Brownfields Association	Environmental justice organization
Florida for a Green New Deal	Environmental justice organization
Florida Institute for Community Studies	Environmental justice organization
Florida Rising	Environmental justice organization
4J School Board	Disability rights and justice organization
Greater New York Council of the Blind	Disability rights and justice organization
Green Door Initiative	Environmental justice organization
Green Mountain Self-Advocates	Disability rights and justice organization
Guatemalan-Maya Center	Environmental justice organization
Gulf South for a Green New Deal	Environmental justice organization
Health Equity Solutions	Health equity organization
Miami Climate Alliance	Environmental justice organization
Midwest Tribal Energy Resources Association	Tribal rights and justice organization
Nā Lei Na'auao–Native Hawaiian Charter School Alliance	Tribal rights and justice organization
National Association of Councils on Developmental Disabilities	Disability rights and justice organization

Table 2 | **Additional organizations recommended for ESB engagement (Cont.)**

ORGANIZATION	RECOMMENDED BY
National Congress of American Indians	Tribal rights and justice organization
National Federation of the Blind	Disability rights and justice organization
Rural Women’s Health Project	Environmental justice organization
Safe Routes Partnership	Environmental justice organization
Self Advocates Becoming Empowered	Disability rights and justice organization
Southwest Detroit Community Benefits Coalition	Environmental justice organization
Southwest Detroit Environmental Vision	Environmental justice organization
Speaking Up For Us	Disability rights and justice organization
The Arc	Disability rights and justice organization
Tribal Education Departments National Assembly	Tribal rights and justice organization
WakeUP Wake County	Environmental justice organization
Watts Rising	Health equity organization

Source: Authors.

WRI’s support of these and similar organizations

Participants were asked, “Do you see the WRI ESB Initiative team as a potential partner? Also, how might WRI help you meet your need or reach your goals?” An overwhelming majority of participants do see WRI as a potential partner in ESB electrification as well as in support of their organizational goals and objectives. Participants noted the following ways in which WRI could be more supportive of them and similar organizations for Black, Indigenous, and/or communities of color as they pursue their goals: engage in partnerships and collaborations led by Black, Indigenous, and/or communities of color; provide trainings on ESBs and be open to receiving trainings from the community on topics that WRI is less familiar with; provide funding to support smaller organizations and those led by Black, Indigenous, and/or communities of color; provide tailored ESB resources and materials; promote and share stories from or within our communities; and fill the ESB knowledge gap across the nation.

DISCUSSION

The overwhelming majority of participants are not familiar with, knowledgeable of, or involved in any national or local efforts to electrify school buses, nor do they have enough knowledge and awareness to speak confidently and intelligently about the most recent Infrastructure Investment and Jobs Act or the EPA’s Clean School Bus Program. Most participants, however,

are interested in the topic and the equitable implementation of ESBs within the communities they serve, and they view WRI as a potential partner in school bus electrification as well as in support of their organizational goals and objectives.

In addition to highlighting what they perceived as signs of a successful ESB transition, participants offered effective ways to center equity in the ESB transition as well as advice on how best to engage individuals and organizations at the local and national levels. In doing so, they went so far as to name individuals and organizations that the WRI team should speak with to help it achieve the goal of a more equitable and inclusive ESB transition. Given that the ESB Initiative faces the challenges of reaching, engaging, building, and sustaining relationships with national and local equity and justice organizations, the strategies mentioned by the participants could aid in the equitable transition to ESBs. They could also assist in increasing these groups’ limited awareness and knowledge of WRI.

Although the challenges noted by the participants are typical of many nonprofits, particularly those focused on eliminating inequities and injustices in under-served and under-resourced low-income communities and communities of color in the United States, they make it difficult for these organizations to support or advocate for the procurement of ESBs in their communities. These real and ever-present barriers also prevent these organizations from obtaining accurate and timely data (e.g., on the funding, cost, feasibility, benefits, and safety of

ESBs), from increasing internal capacity and funding, and from acquiring the knowledge they need to support the electrification of school buses in their communities. Therefore, the overall lack of informed access to critical information and the proliferation of misinformation regarding ESBs may lessen their involvement or lead to unfavorable views of WRI's involvement and that of other groups, including utilities and manufacturers, in the equitable transition to ESBs in the United States. For example, several participants expressed concern and shared misinformation regarding how often electric buses catch fire, how electric buses cannot function properly in colder climates, and how electric buses cannot handle various trip lengths and hilly terrains. It is worth noting that many of these organizations are already overstretched and burdened by a lack of internal capacity and funding to address existing priorities; therefore, ESBs may rank below priorities such as poverty and crime.

The stakeholder analysis reinforces the significance of the ESB Initiative being guided by the most recent equity framework and demonstrates the importance of ongoing equity-centered research and engagement as well as partnership with national and local equity and justice organizations throughout the United States. The analysis does this by highlighting the advocacy stakeholder participants' willingness to engage in this work and by putting the ESB Initiative's value of equity into practice by engaging with groups that are or could be harmed by the transition to electrify the U.S. school bus fleet. This is particularly important for organizations that serve or represent low-income, minority, and disability populations as well as Tribal Nations and Native communities.

CONCLUSION AND RECOMMENDATIONS

Based on the participant interviews, the research team compiled a list of considerations to guide the next stages of the ESB Initiative.

The insights gained through this research provide a deeper understanding of stakeholder perceptions regarding ESBs as well as local and national ESB efforts. The WRI ESB Initiative research team and its partners—including communities, school districts, nongovernmental organizations, businesses, and local, state, and national governments—are encouraged to use the information within this report to help build unstoppable momentum in the equitable transition to ESBs.

Based on the research team's findings, additional research is needed. An additional stakeholder analysis should be conducted to build on this effort and reach more equity and justice orga-

nizations. However, ideally, the new stakeholder analysis would include a national survey of these organizations to complement a series of key informant interviews. This effort also could benefit from analysis of existing marketing and communications efforts to assess the ESB Initiative's effectiveness in reaching these organizations and the potential impact current messages and outreach may already be having on them. Furthermore, the ESB Initiative could benefit from the exploration of an ESB training program designed specifically with these organizations in mind given the need to develop and share valid information.

Recommendations

ESB awareness and familiarity. With the exception of a small number of environmental justice and tribal rights and justice organizations, the overwhelming majority of participants interviewed were not aware of or familiar with ESB efforts.

Recommendation: The ESB Initiative should work to increase the awareness, familiarity, and knowledge of current ESB efforts within and among equity and justice organizations by sharing stories through social media, hosting roundtables with national and local equity and justice representatives, subgranting to similar causes, partnering with local organizations, and designing and distributing "swag" such as clothing and other accessories.

ESB involvement. An overwhelming majority of stakeholders are not involved in current ESB transition efforts at either local or national scales. Most, however, did state that they would like to be involved in current ESB transition efforts. **Recommendation:** The ESB Initiative should leverage the stated interest of equity and justice participants to be involved in ESB transition efforts by recruiting them to participate in current and planned efforts moving forward. For example, participants can assist with the review and development of research questions as part of research efforts (i.e., the school district needs assessment and the stakeholder analysis). Participants can be invited to participate as speakers at internal equity learning sessions or as panelists in ESB Initiative-hosted webinars. Participants can be asked to review (with monetary compensation) ESB Initiative tools and research products; inform or participate in the ESB Initiative events; and inform, review, or participate in all marketing and outreach efforts, particularly the equity videos that are in development. In addition, participants may be called upon to assist the ESB Initiative in the development and execution of their annual work plans. It is important to note that participants should be compensated for their involvement.

WRI awareness and familiarity. The overwhelming majority of participants interviewed were not aware of or familiar with WRI. **Recommendation:** The ESB Initiative should host

strategic roundtables and other listening sessions with national and local equity and justice representatives to build awareness, familiarity, and trust with these organizations.

Partnership. The overwhelming majority of participants interviewed see WRI as a potential partner in school bus electrification and support WRI's organizational goals and objectives.

Recommendation: The ESB Initiative should host strategic roundtables and other listening sessions with national and local equity and justice representatives to see how a partnership or future collaboration might increase opportunities for ESB adoption locally and nationally as well as to explore ways that these organizations can help steer the ESB Initiative moving forward.

Knowledge advancement and data acquisition. In addition to not being aware of or familiar with existing ESB efforts, feedback collected during the stakeholder analysis also reveals that respondents are interested in knowledge advancement and data acquisition. They would like to learn more about ESBs and receive timely and relevant data (e.g., on the funding, cost, feasibility, benefits, and safety of ESBs) from the ESB Initiative to inform their discussions with key stakeholders and the public.

Recommendation: The ESB Initiative should conduct an internal assessment of existing TA deliveries to determine if gaps exist and to see if there are opportunities to advance the knowledge of equity and justice organizations. Similarly, the ESB Initiative should explore ways to deliver timely and reliable data on ESBs to these organizations to help advocate for the procurement of ESBs. The ESB Initiative currently provides TA to school districts, but the project should explore providing TA to equity and environmental justice organizations to help advance their knowledge in their data access. They, in turn, would be better equipped to advocate for ESBs in their communities.

Justice, equity, and inclusion. Feedback collected during the stakeholder analysis demonstrates the importance of justice, equity, and inclusion, particularly as it relates to low-income, minority, and disability populations as well as to Tribal Nations and Native communities. **Recommendation:** The ESB Initiative should continue to advance the importance of justice, equity, and inclusion through internal equity learning series, ongoing and future research, monitoring and evaluation efforts, and the institutionalization of the equity framework. Given the sensitivity of the discussion with disability rights and justice representatives, the ESB Initiative should follow up with past participants, or potentially a new group of disability rights advocates, to develop specific strategies to include people with disabilities within the ESB transition.

EPA's Clean School Bus Program. Stakeholder analysis feedback shows that most participants are not familiar with or aware of the EPA's Clean School Bus Program. This is alarming considering the amount of funding available (\$5 billion over five years). **Recommendation:** Where current efforts already exist, the ESB Initiative should share materials and other resources with equity and justice organizations throughout the United States.

Negative images. During the stakeholder analysis, it was evident that much misinformation exists regarding ESBs.

Recommendation: The ESB Initiative should work to address negative images and misinformation through strategic marketing and communication channels at the local and national levels, particularly because many participants noted that ESB efforts were not visible at the local level.

Advisory Council. Stakeholder participants discussed the desire to participate in current and ongoing discussions regarding the ESB transition, particularly from a place of power. **Recommendation:** The ESB Initiative should ensure that equity and justice representatives are prioritized when replacing and adding Advisory Council members. It is also important to consider them for leadership roles on the Advisory Council when positions become available.

Financial support. Stakeholder participants noted a lack of internal capacity and funding to fully participate in the ESB transition. **Recommendation:** The ESB Initiative should explore funding opportunities for local organizations to advocate for and lead discussions regarding ESBs. Where current efforts already exist, the ESB Initiative should continue to evaluate how equitable the distribution of funding has been to date and to assess the degree to which equity and justice organizations have received funding. The ESB Initiative should consider how to provide support—or leverage the support of others—for a greater pool of these organizations.

APPENDIX A. ADVOCACY STAKEHOLDER ANALYSIS INTERVIEW GUIDE

Introduction

Welcome

My name is <<name of interviewer(s)>>. I want to start by thanking you for your time and your willingness to share your knowledge and experience with us. During this interview we would like to hear your thoughts on the equitable transition of the United States school bus fleet from mostly diesel buses to electric buses. This interview will take no more than 30 minutes.

Project Background

To give you some background on the organization behind this interview, World Resources Institute (WRI) is a global nonprofit organization that works with leaders in government, business and civil society to research, design, and carry out practical solutions that simultaneously improve people's lives and ensure nature can thrive.

In 2020, WRI was awarded a \$30 Million gift by the Bezos Earth Fund to launch the Electric School Bus Initiative (ESB Initiative). In collaboration with partners and communities, WRI's ESB Initiative aims to build unstoppable momentum toward the transition of the United States school bus fleet to electric by 2030, bringing health, climate, and economic benefits to children and families across the country. The ESB Initiative seeks to engage with the broader constellation of e-bus stakeholders to influence and build on growing electrification momentum by offering technical assistance to school districts, convening industry experts in working groups, collecting data, providing analysis for research dissemination, advocating for policies at the federal and state level, and engaging in a variety of partnerships with environmental, equity and community organizations. The Initiative centers equity in all its work.

The ESB Initiative recognizes that the benefits and potential risks from the electric transition may not be felt equally by all communities or students because of existing inequities in education and school bus transport. Without considering equity, the transition to electric school buses could reinforce ingrained systems of inequality and further burden underserved communities. This Initiative, as a result, aims for equity in the process of school bus electrification, as well as an equitable distribution of electric school bus benefits, including operational cost savings and improved air quality.

Participant Role

You were invited to participate in today's interview because of your role as <<interviewee organizational role>> with <<organization name>>.

The goal of these interviews is for us to gain a better understanding of the following:

- The degree to which stakeholder organizations are *aware and knowledgeable* of existing school bus electrification efforts nationally and locally
- The degree to which organizations are *involved or would like to be involved* in local or national efforts to electrify school buses
- Organizational thoughts on *centering equity* in the transition to electric school buses as it relates to the communities you serve
- Competing local and national *organizational priorities*, particularly as it relates to school bus electrification in under-resourced and under-served communities
- The degree to which organizations work with and have relationships with local school districts, parent/teacher/student organizations, and other similar groups
- The organization's thoughts on the new federal Infrastructure Investment & Jobs Act and EPA's charge to design and implement a Clean School Bus Program to disburse funds for vehicle and infrastructure purchases and related costs

Housekeeping & Ground Rules

- We are video recording this session to ensure we accurately capture what you share with us. After today, the video recording will be used to transcribe our conversation. We will then permanently delete the recording after our transcript is complete.
- The final report will not include individual personal information, such as your name, image, and voice.
- Please let the interviewer know of any questions in need of clarification.
- There are no right or wrong answers.
- If there are any questions you do not wish to answer, you do not have to do so; however, we appreciate as much of your involvement as possible.

Before we move to the interview portion of today's conversation, do you have any questions or comments on the information just shared?

Interview questions

PARTICIPANT BACKGROUND

I would like to start with your experience in the disability rights/environmental justice/health equity/tribal rights space.

1. What is your current role with <<organization name>>?
2. How long have you been in your role with <<organization name>>, and what are you currently focused on?
3. Please describe your experience working to achieve disability rights/environmental justice/health equity/tribal rights in your work.

ORGANIZATIONAL BACKGROUND

Next, let's move to your organization's background and experience.

1. Please share a list of goals and objectives or projects that the organization is currently focused on?
 - Is this a full list of goals/projects or a shortened list?
2. Where does disability rights/environmental justice/health equity/tribal rights rank as an organizational priority?
3. How would you define disability rights/environmental justice/health equity/tribal rights, and what has been the biggest barrier to achieving it in your work?

SCHOOL BUS ELECTRIFICATION

On a scale from 1–10, to what degree do you think you or your organization are aware and knowledgeable of existing school bus electrification efforts nationally or locally?

Prompts:

1. What work, if any, has your organization done or is doing to advance transportation electrification in general?
2. What are the main barriers your organization faces when working on transportation and/or electric vehicle-related projects?

How involved is your organization in local or national efforts to electrify school buses? If you are not involved, would you like to be involved? If so, please tell us why.

Prompts:

3. Based on either your previous knowledge and/or the background we shared, how do you see your organization's work overlapping with the electric school bus transition?
4. On a scale of 1–10, with 10 being highest, where do electric school buses fall on your organizational list of priorities?
 - Please share any competing priorities in your organization, particularly priorities that compete with school bus electrification in under-resourced and under-served communities.

DISABILITY RIGHTS IN AN ELECTRIC SCHOOL BUS TRANSITION

Please share your thoughts on effective ways to center disability rights in the transition of electric school buses.

Prompts:

1. What does prioritizing transport for students with disabilities look like to you?
2. What does success on an equitable and inclusive transition to electric school buses look like to <<organization name>> and the communities you represent?
3. Please share your thoughts regarding current school bus standards and practices for students with disabilities.
 - Are there bus standards and practices you would like to see added, changed, and/or stopped?
4. Are there features electric school buses should have to support students with disabilities?
5. To what degree might you be concerned about the disproportionate amount of time students with disabilities ride the bus compared to other students?
6. Are there strategies or actions you would like to share to help ensure that the WRI ESB Initiative centers equity and inclusion in the electrification of school buses?

ENVIRONMENTAL JUSTICE (EJ) IN AN ELECTRIC SCHOOL BUS TRANSITION

Please share your thoughts on effective ways to center environmental justice in the transition of electric school buses.

Prompts:

1. What does success on an equitable and inclusive transition to electric school buses look like to <<organization name>> and the communities you represent?
2. What advice would you offer to WRI for our efforts to be more inclusive of <<group the organization represents>>?
3. What would be the first steps WRI can take that would address the needs of your community?
4. What school bus electrification policy and implementation components are important to you, and what's been overlooked?
5. How are government leaders in your community doing on the issue of school bus electrification and on EJ/CJ issues more broadly?
 - Who are elected officials in your state who are strong on EJ/CJ issues?
6. Are you aware of EJScreen and other equity mapping tools, and do they effectively capture the most vulnerable and historically under-served communities?
 - If yes, is there one specific tool you think best captures these communities?
 - What other methods do you recommend for identifying these communities and giving them a voice?
7. Knowing that the WRI ESB Initiative is committed to centering equity, what advice do you have for us as we work to ensure the transition to electric school buses is an equitable one for the EJ community?

HEALTH EQUITY IN AN ELECTRIC SCHOOL BUS TRANSITION

Please share your thoughts on effective ways to help make health equity the focus in efforts to transition to ESBs.

Prompts:

1. What does success on an equitable and inclusive transition to electric school buses look like to <<organization name>> and the communities you represent?
2. How might health equity look different for students, bus drivers and workers, and communities located near school bus depots?
3. To prioritize health equity related to the electric school bus transition, should the Electric School Bus Initiative prioritize where the oldest buses are operating, where bus depots are located, overburdened communities in other ways, or something else? Please put these options in order of priority for your community.
 - What kinds of early actions might the Electric School Bus Initiative take?
4. Are there other sources for health concerns related to the electric school bus transition beyond air pollution that we should be considering?
5. Are there strategies or actions you would like to share to help ensure that the WRI ESB Initiative centers equity and inclusion in the electrification of school buses?

TRIBAL RIGHTS IN AN ELECTRIC SCHOOL BUS TRANSITION

Please share your thoughts on effective ways to center tribal access and rights in the transition of electric school buses.

Prompts:

1. What does success on an equitable and inclusive transition to electric school buses look like to <<organization name>> and the communities you represent?
2. How can an electric school bus transition prioritize the needs of Tribal schools and communities?
3. How might we increase access to *funding for electric school buses* in Tribal communities? How might we increase *access to funding for the infrastructure* needed to support the electrification of school buses in Tribal communities?
4. How might you describe the current relationship between Tribal schools and local utility companies? How might the relationship vary depending on the Tribe or the utility provider?
5. How familiar are you with the process of procuring and funding school buses in Tribal communities?
6. If so, are there changes needed to make those processes more equitable and inclusive? Please share.
7. Are there strategies or actions you would like to share to help ensure that the WRI ESB Initiative centers equity and inclusion in the electrification of school buses?
8. Considering the goal of an equitable transition to electric, please share your organization's thoughts on the new Infrastructure Investment & Jobs Act and EPA's charge to design and implement a Clean School Bus Program to disburse funds.

EPA CLEAN SCHOOL BUS PROGRAM

Please share your organization's thoughts on the new Infrastructure Investment & Jobs Act and EPA's charge to design and implement a Clean School Bus Program (CSBP) to disburse funds.

Prompts:

1. How familiar are you with the CSBP?
2. Do you have any concerns about the EPA's current strategy for the disbursement of funds?
3. Are there any recommendations you have for the EPA for the CSBP?

CONCLUDING THOUGHTS

Before concluding this interview session, I would like to hear any thoughts you have on the next steps WRI's Electric School Bus Initiative can take when considering disability rights/environmental justice/health equity/tribal rights needs in an equitable transition.

1. Are there any other groups or individuals (NGOs, equity groups, government officials) we should speak with?
2. Do you have any advice on how best to engage with individuals in your community at the local level? We recognize each community is unique, but if you have any high-level advice, recommended resources, or informative stories, we would appreciate the guidance.
3. Please share any current educational materials or conferences you recommend.
4. Do you see WRI Electric School Bus Initiative as a collaborator with your efforts?
 - If so, how can we help meet your needs?
5. Is there anything we have not asked about yet that you would like to convey on this work towards an equitable school bus transition?

Closing

This concludes our interview session. Thank you for your participation and your time. The information you have provided is extremely valuable to our research. Please reach out to us if you have any follow-up thoughts or questions.

APPENDIX B. ADVOCACY STAKEHOLDER ANALYSIS INFORMED CONSENT FORM

You are invited to participate in a project being led by the Electric School Bus (ESB) Initiative from World Resources Institute (WRI).

The purpose of the study is to determine how advocacy stakeholder groups view school bus electrification, what their needs might be, and what their experience is with electric school buses. This project is part of WRI's ESB Initiative, which is collaborating with partners and communities to build unstoppable momentum toward an equitable transition of the U.S. school bus fleet to electric by 2030, bringing health, climate, and economic benefits to children and families across the country and normalizing electric mobility for an entire generation.

You are being asked to participate in this project because you are a representative from one of the following U.S.-based organization types: Environmental Justice, Disability Rights, Health Equity, or Tribal Rights. If you agree to be part of the project, you will be asked to participate in an interview. The interview will take 30 to 60 minutes to complete.

Participating in this project is completely voluntary. Even if you decide to participate now, you may change your mind and stop at any time. Also, you may choose not to complete this interview or not answer specific questions for any reason.

We will be video recording the interview session to ensure we accurately capture what you all share with us. After today, the video recording will be used to transcribe our conversation. We will then permanently delete the recording after our transcript analysis is complete.

The final report will not include individual personal information, such as your name, image, and voice. The final report may include your organization's name. Please let the interviewer know if you would not like your organization name to be included in any published materials or reports.

To consent to being in this study and completing the interview, please press continue, understanding that your survey responses will be used in WRI research products in an anonymous manner.

If you have questions about this project or would like a copy of this language emailed to you, please contact Charles Brown at charlesbrown@equitablecities.com with the subject line "Electric School Bus Advocacy Stakeholder Analysis." If you have questions or concerns about your rights as a participant, you can contact the WRI Human Subjects Director at humansubjects@wri.org or (+1) 202-729-7699.

By typing your name below, you are signing this consent form electronically. You agree that your electronic signature is the legal equivalent of your manual signature on this form.

ABBREVIATIONS

CSBP	Clean School Bus Program
EJ	environmental justice
EPA	Environmental Protection Agency
ESB	electric school bus
NTAA	National Tribal Air Association
SAGE	Strategic Advancement Goals for the Environment
TA	technical assistance

ENDNOTES

1. WRI defines Priority Outreach Districts as school districts that are tribal districts or those that are in the top quartile nationwide in all three of the following categories: income, race, and pollution. For more on Priority Outreach Districts, please see Worker and Cousar (2022).
2. The Advisory Council plays a key role in guiding the ESB Initiative toward the goal of equitably electrifying the full fleet of U.S. school buses by 2030. Comprising leading figures in fields such as nonprofit advocacy, education, public policy, utility management, environmental justice, and electrification, the Advisory Council provides invaluable insights and perspectives on priorities across the initiative (Roboff n.d).
3. The “ESB Initiative’s U.S. School Districts Needs Assessment” working paper documents the existing challenges and opportunities for school districts that have committed to procuring, operating, and maintaining ESBs (Brown and Jackson, forthcoming). It also discusses ways to enhance and strengthen WRI’s technical assistance deliveries, contact with, and relationships with school districts in the 1,007 Priority Outreach Districts.
4. Equitable Cities assembled a spreadsheet of prospective participants with contact information in May 2022. The master list was organized by the organizations’ area of interest. Beyond that, no filtering was used.
5. For more information on how Moms Clean Air Force advocates for ESBs, please see Duncan (2022).
6. Please note that participants did not provide nor recommend a specific antiracist evaluation resource or guidebook. See Jones and Okun (2003), which is one of the many examples available online for corporations and organizations to consider as they work to dismantle racism.
7. Note that the interviews and focus group took place from July to September 2022.

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Alyssa Curran is a transportation electrification research analyst with the Electric School Bus Initiative's financial solutions and equity teams.

ABOUT EQUITABLE CITIES

Equitable Cities is a U.S.-based urban planning, public policy, and research firm working at the intersection of transportation, health, and equity. Equitable Cities recenters the narrative of who moves, how people move, and where people move by conducting street-level research and collaborating with community partners and clients worldwide.

ABOUT WRI ELECTRIC SCHOOL BUS INITIATIVE

In collaboration with partners and communities, the Electric School Bus Initiative aims to build unstoppable momentum toward an equitable transition of the U.S. school bus fleet to electric by 2030, bringing health, climate, and economic benefits to children and families across the country and normalizing electric mobility for an entire generation. We are working with key stakeholders at all levels and across areas, including school districts, private fleet operators, electric utilities, public and private lenders, manufacturing organizations, policymakers, program administrators, and community members and groups.

ABOUT WRI

World Resources Institute is a global research organization that turns big ideas into action at the nexus of environment, economic opportunity, and human well-being.

Our challenge

Natural resources are at the foundation of economic opportunity and human well-being. But today, we are depleting Earth's resources at rates that are not sustainable, endangering economies and people's lives. People depend on clean water, fertile land, healthy forests, and a stable climate. Livable cities and clean energy are essential for a sustainable planet. We must address these urgent, global challenges this decade.

Our vision

We envision an equitable and prosperous planet driven by the wise management of natural resources. We aspire to create a world where the actions of government, business, and communities combine to eliminate poverty and sustain the natural environment for all people.

Our approach

COUNT IT

We start with data. We conduct independent research and draw on the latest technology to develop new insights and recommendations. Our rigorous analysis identifies risks, unveils opportunities, and informs smart strategies. We focus our efforts on influential and emerging economies where the future of sustainability will be determined.

CHANGE IT

We use our research to influence government policies, business strategies, and civil society action. We test projects with communities, companies, and government agencies to build a strong evidence base. Then, we work with partners to deliver change on the ground that alleviates poverty and strengthens society. We hold ourselves accountable to ensure our outcomes will be bold and enduring.

SCALE IT

We don't think small. Once tested, we work with partners to adopt and expand our efforts regionally and globally. We engage with decision-makers to carry out our ideas and elevate our impact. We measure success through government and business actions that improve people's lives and sustain a healthy environment.



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