Tackling Social Opposition:
Can the Fossil Fuel Pipeline Playbook Work for the Grid?

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Executive Summary

The ability to move power between power regions through interregional HVDC transmission could have prevented the February 2021 blackouts in Texas. That lack of reliable energy led to power outages to 4.5 million households, approximately 57 deaths, and $195 billion in property damage.

Unfortunately, interregional HVDC transmission projects are complicated, slow to develop, and expensive to build due to key barriers in the current energy infrastructure system originally designed to regulate fossil generation. These barriers include: a lack of comprehensive interregional transmission planning that leads to successfully approved projects that are ready for construction; a slow and cumbersome permitting process for new transmission lines; and difficulties in acquiring capital for transmission projects and allocating costs to customers that reflect the multiple benefits they provide. With 3 million miles of pipeline in the U.S and only 160,000 miles of transmission lines, lessons from the oil and gas industry's prolific development can help pave the way for increasing large-scale transmission projects.

This publication does not discuss national policy changes in-depth, as reforms for permitting, planning, and financing transmission projects are well documented. Furthermore, this publication does not address national policy changes because the challenge of reducing local opposition to grid infrastructure development is best tackled at the ground level, in the communities impacted by these potential projects.

Tackling Social Opposition: Can the Fossil Fuel Pipeline Playbook Work for the Grid? focuses on actionable strategies that transmission developers can implement, and may be required to implement if participating in certain Department of Energy funding opportunities, through planning and early engagement to help build community support, while also limiting the impacts of local opposition in communities where projects are sited.

This publication explores the history of the U.S. electric grid, the need for infrastructure improvements, recent substantial federal funding in support of grid development, and barriers to HVDC transmission buildout.

After reviewing the status of the grid and transmission roadblocks, the remaining sections of this publication focus on overcoming the barrier of social opposition by analyzing the root causes of opposition, dissecting polling data to understand rural

American's sentiments towards renewable energy projects, and identifying actionable strategies for navigating local opposition with the goal of improving transmission project outcomes.

The community engagement practices outlined in this document were adapted from the American Petroleum Institute's (API) Community Engagement Guidelines for Pipeline Projects. This publication demonstrates that the similar characteristics and challenges faced by fossil fuel pipeline development and HVDC transmission *can* be reliably and effectively used to tackle social opposition to renewable grid development.

Index

Abstract

This Playbook will discuss the importance of transmission and the U.S. electric grid, starting with an examination of its history. The Playbook will review the historical funding from the Federal government to support new HVDC transmission development and the three leading barriers to its buildout. Going beyond the policy and financial barriers to transmission development, the Playbook will consider the impact of NIMBYism, the root causes of social opposition towards transmission infrastructure, and the importance of community engagement matters for limiting opposition. The Playbook will then review polling data surveying rural Americans to understand perspectives on the energy transition, levels of support for renewable energy, concerns about renewable energy projections, and potential messaging to garner support. Next, this Playbook will compare the characteristics of intrastate HVDC transmission lines and intrastate fossil fuel pipelines. The Playbook will utilize the American Petroleum Institute's (API) Community Engagement Guidelines to identify techniques and strategies that can be adapted by transmission developers to overcome social opposition in local communities. The community engagement recommendations from the API Guidelines includes three phases of a community engagement plan. The Playbook also adapts exercises to begin stakeholder management, message development, and encourages continued evaluation and adaptation of the plan throughout the project's lifecycle. After an analysis of the API Guidelines for community engagement, the Playbook will consider how to align the best practices with survey results from the rural Americans polling data. Finally, the Playbook will share additional resources for transmission developers as they develop their community engagement plans and work to reduce social opposition in project communities.

1) INTRODUCTION: THE NEED FOR TRANSMISSION

Introduction: The Need for Transmission

America's electric grid powers our economy and way of life, it is quickly becoming outdated and overwhelmed. The grid is built on aging infrastructure that is vulnerable to cyber-attacks, physical incidents, and extreme weather. Over the last 20 years as the U.S. has increasingly electrified, power outages from severe weather have more than doubled.[1] High-voltage interregional transmission development can address these threats. Moreover, future transmission development can transform the U.S. electric grid to prepare for modern demands by allowing power to be moved across long distances in times of need.

The ability to move power between power regions through interregional transmission could have prevented the February 2021 blackouts in Texas that led to power outage to 4.5 million households, approximately 57 deaths, and $195 billion in property damage.[2] A study published by The American Council on Renewable Energy (ACORE) in 2023 highlights the absence of interregional transmission connecting Texas to neighboring power markets as a leading factor for the weeks long power crisis and blackout events.[3]

Unfortunately, interregional transmission projects are complicated, slow to develop, and expensive to build due to key barriers in the current energy infrastructure system, as it was designed to regulate fossil generation.[4] These barriers include:

- a lack of comprehensive interregional transmission planning that leads to successfully approved projects that are ready for construction;
- a slow and cumbersome permitting process for new transmission lines; and
- difficulties in acquiring capital for transmission projects and allocating costs to customers that reflect the multiple benefits they provide.

In the following sections, we will discuss the history of the U.S. electric grid, the need for infrastructure improvements, federal funding in support of development, and barriers to transmission buildout. This publication will not discuss national policy changes in-depth, as reforms for permitting, planning, and financing transmission projects are well documented and because policy reforms would not make a meaningful difference on the ground, in-terms of reducing local opposition to infrastructure development. The remaining pages of this Playbook will focus on actionable strategies that transmission developers can implement (and may be required to implement if participating in DOE funding opportunities) through planning and early engagement to help build support, while limiting the impacts of

local opposition in communities where projects are sited. The community engagement practices outlined in this document are adapted from the American Petroleum Institute's (API) Community Engagement Guidelines for Pipeline Projects, due to the similar characteristics and challenges faced by fossil fuel pipeline development and HVDC transmission. With three million miles of pipeline in the U.S and only 160,000 miles of transmission lines, lessons from the oil and gas industry's prolific development can help pave the way for increasing large-scale transmission projects, however, pipeline's single permitting authority is likely the primary driver for this success. After reviewing the status of the grid and transmission roadblocks, the remaining sections will focus on overcoming the barrier of social opposition by analyzing the root causes of opposition, polling data to understand rural Americans' sentiments towards renewable energy projects, and actionable strategies for navigating local opposition with the goal of improving transmission project outcomes.

Origins of the Grid

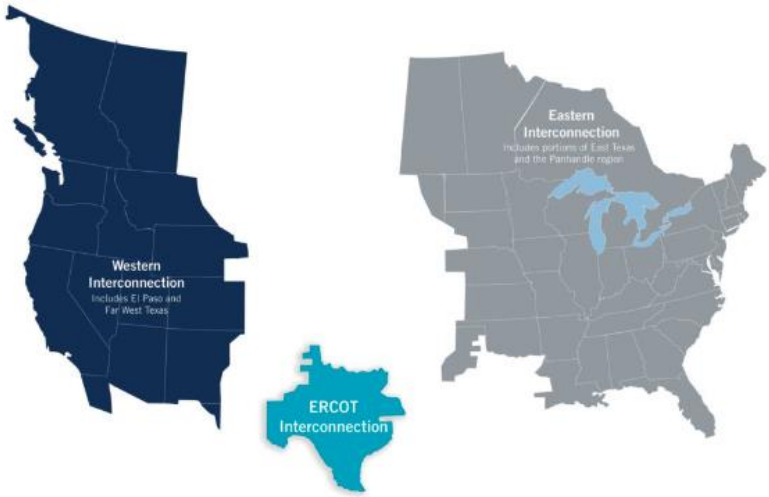


Figure 1. Source: ERCOT[5]

Electricity travels through transmission lines in the power grid, like cars on a highway. These lines carry energy from where it is made to places like homes, schools, and businesses. The U.S. energy system is comprised of several separate systems, rather than one universal grid.[6] The three main transmission systems are the Eastern Interconnection, stretching from the Atlantic Coast to the foothills of the Rocky Mountains, the Western Interconnection spanning West of the Rockies to the Pacific Coast, and the Electric Reliability Council of Texas (ERCOT), which covers most of Texas.[7] As the U.S. demand for electricity increased and the utility industry consolidated, the three transmission systems became interconnected over time, and regional energy markets were created.[8]

The first major High Voltage Direct Current (HVDC) transmission line in the U.S. was approved in 1961 by President John Kennedy to deliver hydroelectric power from the Columbia River in Oregon to Los Angeles, California.[9] The Pacific DC Intertie was completed in 1970, with a capacity of 3.1 gigawatts, and is still in operation today.[10] Following its completion, the Pacific Intertie was estimated to save the Los Angeles area $600,000 per day by importing less-expensive hydropower to millions of households.[11] In the 1970s to 1990s, more companies outside of traditional utilities entered the electricity market. A law called Public Utilities Regulatory Policies Act (PURPA) in 1978 required utilities to buy power from non-utility companies if cheaper, allowing independent power producers (IPPs) to enter the market.[12] Then, in 1996, Federal Energy Regulatory Commission (FERC) issued Order 888, which mandated utilities to allow IPPs to use their electric lines, eventually leading to the creation of

wholesale regional markets. This separation of electricity generation and transmission allowed more players to participate in the market.[13]

Today, despite the increased competition in the electricity market, there are very few long-distance transmission lines connecting different regions and most new transmission projects are built by local utilities for local needs. While utilities are spending four times more on transmission lines than 20 years ago, their investments focus on low-voltage projects and upgrading existing lines instead of building new high-voltage lines.[14] The lack of new transmission development in the U.S. is exacerbating the challenges facing today's grid, while the demand for electricity is exceeding projections.[15]

Why Now? The Need for Improvement

The Energy Transition

The limited expansion of transmission lines poses another substantial challenge for making the electric grid cleaner. High-voltage lines are crucial to tap into the potential of clean energy in the U.S. and they connect large amounts of affordable renewable energy from far-off places to where people live. To meet President Joe Biden's Administration's goal of 100 percent clean energy by 2035, studies suggest the U.S. needs to increase the capacity of the U.S. transmission system by 1.3 to 2.9 times its current ability.[16] [17] Additionally, a study from Princeton in 2022 warned that if the U.S. does not speed up how fast it is expanding transmission lines, the U.S. could lose 80 percent of the benefits in reducing emissions from the 2022 Inflation Reduction Act (IRA)(2022).[18]

Waiting to Connect

Because many more clean energy projects are trying to connect to the grid, new wind and solar projects are facing delays and higher costs for grid upgrades.[19] When a renewable project developer asks to connect to the grid, they must undergo several studies to make sure the grid stays reliable and to identify if any upgrades are required.[20] The costs for these studies for the Pennsylvania-New Jersey-Maryland Interconnection (PJM) increased from $42 per kilowatt before 2020 to $84 per kilowatt between 2020 and 2022.[21]

In 2022, the number of projects waiting to connect to the grid went up by 40 percent, which means there is 1,280 gigawatts of clean energy waiting to be connected.[22] The average time these projects must wait has grown from 2.1 years between 2000 and 2010, to 3.7 years between 2011 and 2021.[23] As a result, fewer than a quarter of the projects trying to connect between 2000 and 2016 were built because many projects dropped out of the waiting line.[24] There is concern among industry participants that many clean energy projects might not happen, as demonstrated by a decline in renewable energy installations in 2022 for the first time in five years, mostly due to delays in connecting to the grid.[25]

Keeping the Lights On

With more frequent and severe weather events happening in the United States, it is crucial to have a strong and connected power grid capable of delivering electricity to areas that need it most. For instance, during Winter Storm Elliot in 2022, over one million people in the Southeast dealt with rolling blackouts because of power shortages. Meanwhile, in the Midwest, the Southwest Power Pool (SPP) had to cut

back on using 3,000 megawatts of wind power because the local grid could not handle the extra electricity.[26]

Electrifying Everything

In the coming decades, the demand for electricity in the U.S. is expected to grow by 40 percent by the year 2050.[27] To meet this growing demand, the U.S. will need to expand its electric grid capacity threefold by 2050.[28] Additionally, the current grid is getting older and needs improvements.[29] About 70 percent of the grid is over 25 years old (generally, the life of the grid is designed to last around 50 years).[30] Moreover, power outages in the U.S. have more than doubled in recent years, going from an average of about 4,600 per year before 2015 to nearly 9,700 per year between 2015 and 2020.[31]

Congestion & Rising Costs

The expenses related to grid congestion have gone up substantially in the last few years. Grid congestion costs add up when there is not enough space to bring affordable electricity from where it is made to where it is needed across the country. Instead, more expensive electricity sources, like fossil fuel peaker plants, are used, making electricity prices go up. In 2022, these congestion costs added up to $20.8 billion across all Regional Transmission Organizations (RTOs) and Independent System Operators (ISOs), which cover 58 percent of the U.S. grid.[32] Factors contributing to grid congestion include severe weather, transmission outages, and the growing electricity demand.[33]

Time to Act: A Boost from the Federal Government

In recent years, the U.S. federal government has taken historic action to support the development of transmission and clean energy infrastructure. Two landmark laws were passed by Congress and signed into law by President Joe Biden in 2021 and 2022: the Infrastructure Investment and Jobs Act (IIJA) (P.L. 117-58), and the Inflation Reduction Act (IRA) (P.L. 117-169), respectively. The programs created and funded under these laws in support of transmission deployment are substantial, and will shape future generations.

Infrastructure Investment & Jobs Act (2021)

The IIJA includes three main transmission components:[34]

- *Transmission Facilitation Program*: This $2.5 billion revolving fund was created for the Department of Energy (DOE) to overcome financial hurdles to large-scale transmission development.
- *Designation of National Interest Electric Transmission Corridors*: Enables DOE to designate National Interest Electric Transmission Corridors (NIETCs) and for FERC to issue a federal permit in those corridors if a state rejects a project. While DOE already had this authority, it was severely limited due to several court orders. The IIJA revamped its authority and opened the door for renewed action on designating NIETCs.[35]
- *Grants*: This targeted funding of $13+ billion will support grid development, including $5 billion for innovative transmission development and $3 billion for grid-enhancing technologies.

Inflation Reduction Act (2022)

The IRA includes three main transmission highlights:[36]

- *Direct Federal Loans*: $2 Billion in loans, available through the Transmission Facility Financing program overseen by the Grid Deployment Office within DOE, to support the development of NIETC-designated transmission lines.
- *$760 Million*: Established grants to facilitate the siting of interstate electric transmission lines.
- *$100 Million*: Allocated funding for DOE to conduct interregional and offshore wind transmission planning, stakeholder engagement, and analysis.

As of spring 2024, the ability to measure the impact of the transmission provisions in IIJA and the IRA is difficult as these laws are still being implemented. It is also possible that FERC could revise its transmission regulations at any time, obligating further changes on current and future transmission developers and utility companies.

Moreover, the utility sector is responding to numerous reliability issues and could influence the transmission buildout in the coming years, such as the expanded use of artificial intelligence (AI) and datacenters, and supply chain issues for grid upgrades and/or severe weather.[37]

2) TRANSMISSION ROADBLOCKS

Transmission Roadblocks

With an average timeline of 10 years or more to plan, design, construct, and energize a new transmission project, the process of building new transmission infrastructure is a time-intensive endeavor.[38] There are critical barriers for transmission buildout, including planning new lines, permitting them, and paying for them, which can extend a project's timeline.[39] Moreover, transmission projects often struggle to gather support in the current political environment, and local communities might oppose individual projects, as discussed in further detail below.

Planning

Planning for the future of our electricity grid is currently not well-coordinated among regional organizations and utility companies.[40] The planning processes focuses on solving local issues to ensure reliability, while overlooking the broader needs of the future grid.[41] Connecting different regions of the grid through transmission lines is crucial for its overall improvement. However, this is often neglected. Despite significant investments in upgrading grid infrastructure in the last decade, most of the funds have been directed towards smaller, local projects with limited advantages. As a result, the existing policies have discouraged the expansion of interconnection across grid regions. This is because larger transmission projects trigger a regulatory requirement, FERC Order 1000, which mandates a competitive bidding process, making the development more complicated and time consuming. [42] As a result, utility companies and transmission development firms may be less motivated to invest in large-scale transmission lines connecting different regions.

Permitting

Receiving permission for transmission projects involves the approval from every local area and state in which the line passes through.[43] This means that just one jurisdiction, like a state or county, can stop a project by withholding the needed permission. This permitting process is more complicated than the one for natural gas and petroleum pipelines, which only need approval from FERC.[44] Transmission's permitting process is also different from the way the U.S. built its national highway system, which would not have been built if one county could stop a part of the road project.[45] Some projects also must go through an environmental review, like the National Environmental Policy Act (NEPA) process, which can take up to several years. NEPA, enacted in 1970, requires federal agencies to think through the environmental impacts of the plans, including energy transmission projects which cross federal lands. While NEPA ensures a thorough review, it can cause substantial delays and even has the potential to stop a project.[46] The Environmental

Assessments (EA) and Environmental Impact Statements (EIS) part of this process can take six months to several years, depending on factors like the design, field surveys, and stakeholders feedback.

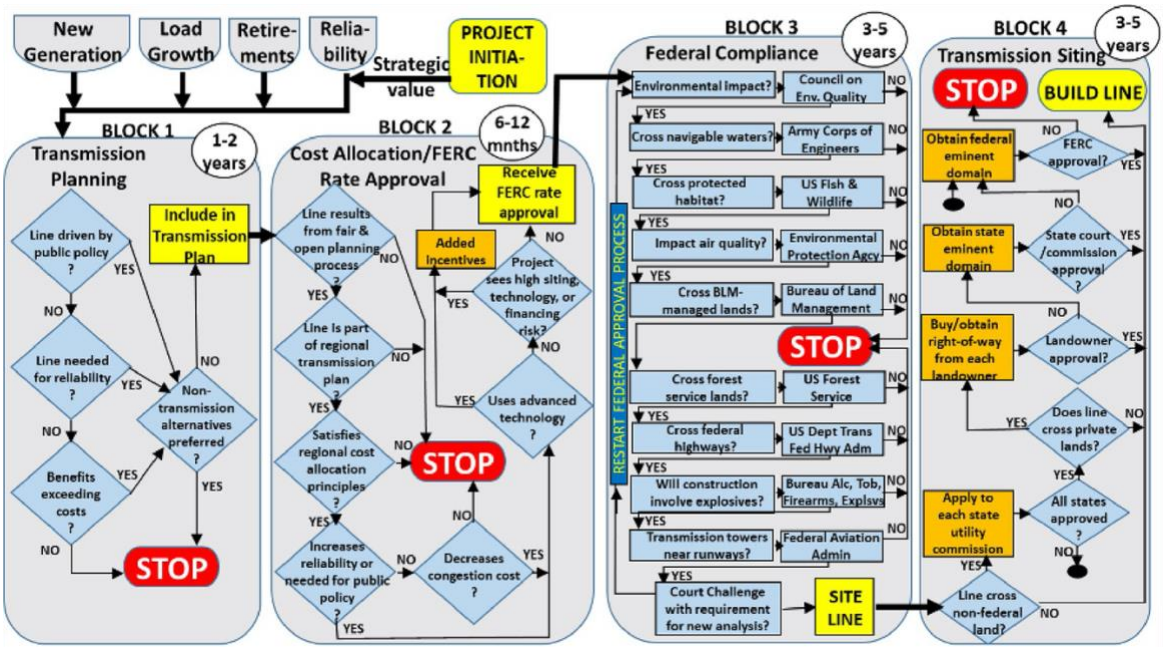


Figure 2. Source: Breakthrough Energy[47]

Importantly, in the last few years, there have been a handful Congressional bills attempting to reform the permitting process for transmission lines. So far, these efforts have not gained enough momentum to make it across the finish line. However, more people continue to agree that the federal government should act. In fact, as of spring 2024, there were federal bipartisan proposals to improve permitting. These proposals include rules such as establishing a maximum time for reviewing permits, creating the smallest amount of capacity required for moving energy between regions, and removing the regulatory power of state and local authorities to stop transmission projects. In the summer of 2023, a deal over the debt ceiling created small reforms intended to speed up permitting by giving agencies one year to review the environmental impacts of most projects, a quicker turnaround time.[48]

Paying

Building transmission lines is very costly, ranging from $1 to $8 million for each mile.[49] Identifying who should pay for these new lines is tricky. With the rate-based model, the cost of building the lines is added to customer's electricity bills. But it is hard to decide which customers should pay for lines that benefit people all over the country. With this pay structure, only customers in certain areas end up paying higher rates.[50]

In contrast, the merchant development model attempts to make the companies buying electricity from these lines pay for the construction. However, this approach has not worked well for big projects that connect different regions.[51]

Another problem regarding costs is identifying the true value of these transmission projects. New projects bring many benefits to the grid, like reducing traffic jams in the electricity system, making energy more reliable during disasters, cutting down on pollution, and making electricity cheaper. However, the way costs are allocated by state regulators tasked with determining who pays for new transmission, does not provide enough credit to all these different benefits.[52] Calculating potential benefits narrowly does not fully recognize all the benefits a transmission line can provide, so projects are not as highly valued as they could be if all the benefits were taken into account.[53]

3) SOCIAL OPPOSITION

Social Opposition

While new high-voltage interregional transmission development has the potential to transform the U.S. electric grid and ensure that it is prepared for modern demands, not everyone is on board.[54] Some groups, including local grassroots organizations, landowners, and environmental groups, can oppose developing new transmission infrastructure, and wind and solar development.[55] Individuals may worry about the possible environmental, social, and economic impacts of these projects for a variety of reasons.[56] Opposition to a transmission project can result in campaigns against the projects, legal action, and even damage to the physical assets of a project, such as shooting insulators and cutting the legs of installed towers.[57]

While the motivation for opposing a new project is based on each person's personal motivations, incentives, and beliefs, those against these projects generally say that building and running transmission infrastructure, like power lines and pipelines, can harm ecosystems. Opponents are concerned about negative externalities like destroying habitats and disrupting wildlife migration patterns.[58] These groups may also worry about health risks from being close to the electromagnetic fields created by power lines. Additionally, opponents may vocalize that these projects can negatively affect local communities. This includes changes in how communities and properties look, arguments over land, the potential for depreciating property value, and disrupting local jobs and industries, like farming. In some instances, groups against these projects may receive money from fossil fuel interests or incumbent utilities companies to organize.[59]

Not In My Backyard!

"NIMBYism" which stands for "Not in My Backyard" is a popular label to explain the sentiment of communities when they are notified of the potential for future transmission development.[60] While there is not one uniform definition of NIMBYism, the term generally refers to the attitude where a person "supports something in general or in the abstract, but not if it is to be located close by, it is often broadly construed to reflect any type of locally based opposition."[61]

When costly transmission lines are built in rural areas that will not directly receive electricity from the lines, people can also feel left out of the benefits. They may express messages of "not here" or "not in my backyard."[62] The companies who build lines often have teams that communicate with and try to lessen opposition from locals. However, as discussed below, the message and mechanisms of communication is critical to building successful transmission lines in communities across the U.S.

Root Causes of Social Opposition

"*In many instances opponents seek to block a specific project using means other than local legislation, including strategies that are commonly used to challenge many kinds of development…These include projects that have faced opposition by individual residents, community-based groups, or nonprofit organizations with a local presence. This opposition takes many forms, including comments at public hearings, letter writing campaigns, petitions, participation in administrative proceedings, and lawsuits filed against local governments or developers. In many cases, opponents have succeeded in delaying a project's approval, scaling down a project's size, or achieving a project's cancellation*."[63]

Social opposition is often dismissively referred to as NIMBYism, but assuming opposition to new transmission and renewable energy infrastructure is NIMBYism can be superficial, as concerns about a project are often more complex.[64] Opposition to new transmission projects is complex, as stakeholders may be a mix of residents who live near the project who are concerned about visual impacts or health effects, landowners whose land may be taken by eminent domain, environmental groups concerned with environmental impacts, or people who use nearby land for commercial uses or recreation.[65]

To identify the sources of conflict and opposition toward renewable energy projects, a 2022 study published in Energy Policy examined 53 projects in 28 states that were either paused, delayed, or canceled due to local opposition.[66] The study conducted statistical and root cause analysis of solar, wind, geothermal, and transmission projects and identified seven major sources of opposition to renewable energy development:

1. **Concerns over possible environmental impacts, including impacts to wildlife**
    - *Challenges to thoroughness of impact assessments when projects appear to violate local management plans.*
2. **Challenges to project financing and revenue generation**
    - *Occurs when a project's return on investment is undercut by regulators, or disputes over tax revenue benefits.*
3. **Public perceptions of unfair participation process or inadequate inclusion in light of regulatory requirements.**
    - Failure to acknowledge or adequately address community concerns voiced during the siting process.

4. **Failure to respect Tribal rights, including rights to consultation**
    - *Neglecting Tribal right to sovereignty and self-determination.* (For example, read more about the Enel wind farm on Osage land in Oklahoma.)[67]
5. **Health and safety concerns**
    - *Health effects of wind turbine noise, chemical exposure from solar panels, or impacts of electromagnetic force from transmission lines.*
6. **Intergovernmental disputes**
    - *Confusion and disagreement over siting, permitting, and impact assessment jurisdiction between local, state, and federal governments.*
7. **Potential impacts on land and property value**
    - *Impact of project on property values (impacting resale) once completed.*
    - *Impact the project will have on other values connected to the land.* (For example, soil quality for farming, or recreational use.)

The study found that 80 percent of the samples involved multiple sources of opposition. The most significant sources of local opposition are concerns over environmental impacts and land values.[68] These concerns were prevalent across 60 percent of the projects and accounted for 50 percent of the total opposition.[69]

Additionally, the study found that only 13 percent of the projects that were delayed or stopped by opposition were ultimately completed.[70] The authors also noted finding little evidence that project developers could overcome opposition despite prescriptive measures to address concerns.[71] Importantly, the study found no evidence of developers and opposition groups finding a way to productively work together.[72]

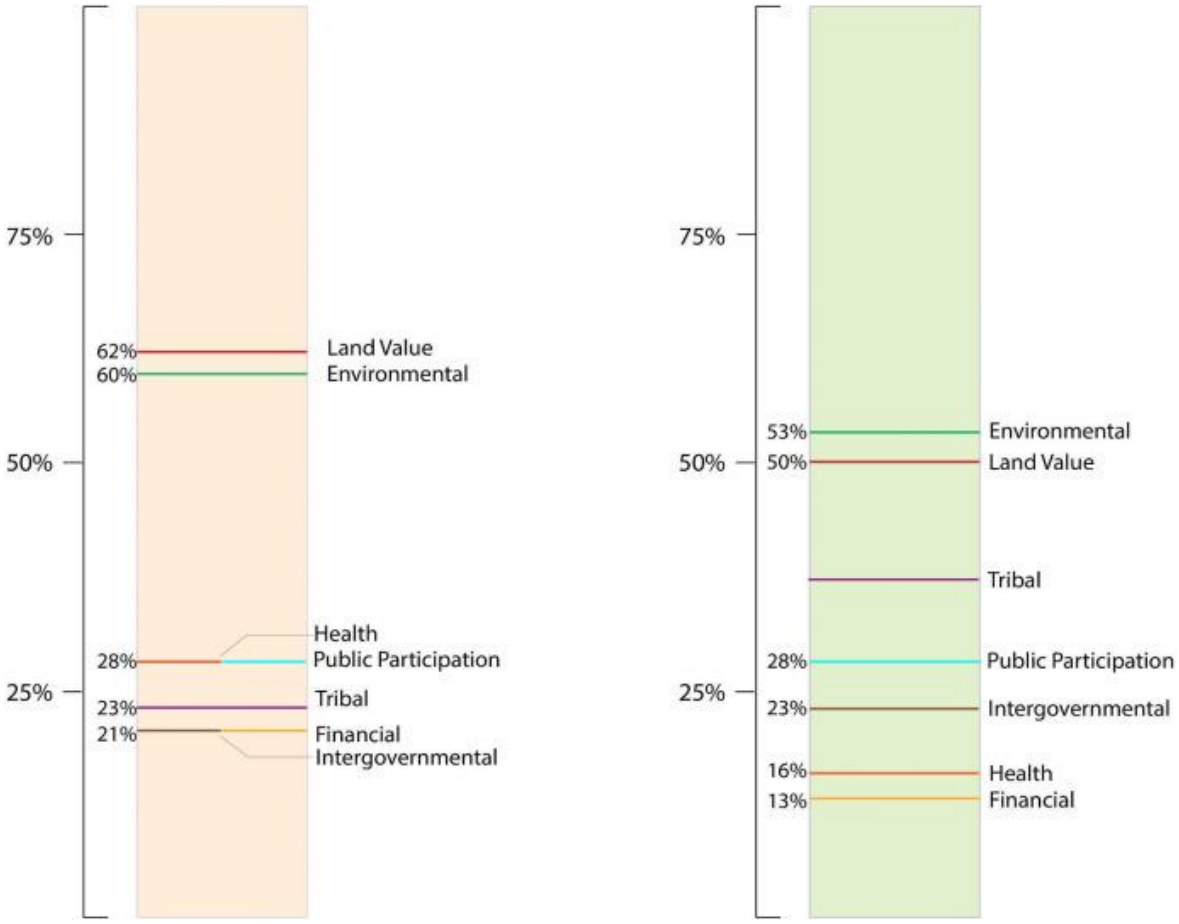


Figure 3. Source: Susskind et al., "Opposition to Renewable Energy[73]

Evidence for Early Communication

The report concluded the best outcomes occurred when project developers addressed stakeholders' perceptions of risks and the possible benefits before opponents formed their opinions and organized together to stop the project.[74]

While opponents' concerns are often not evidenced-based, their concerns must be taken seriously.[75] The findings suggest when developers attribute local opposition as simply NIMBYism, it dismisses important stakeholder perspectives that could lead to greater opposition, including delays or project cancellation. Next, the findings of a 2023 survey of Rural Americans will demonstrate similar findings and provide similar suggestions for future development success.

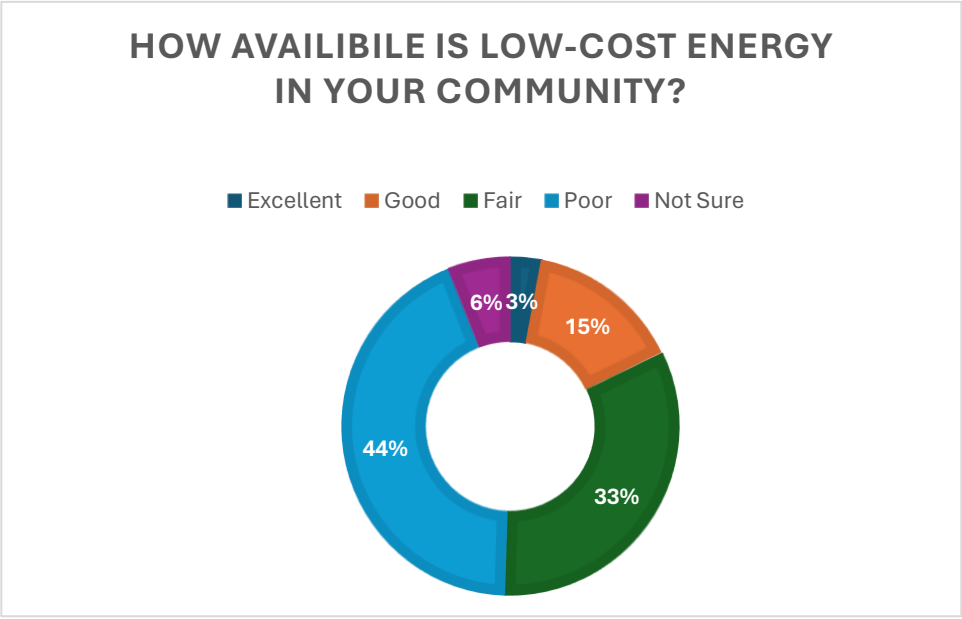
4) WHY COMMUNITY ENGAGEMENT MATTERS: ASSESSING THE CURRENT PULSE OF RURAL AMERICA

Why Community Engagement Matters:
Assessing the Current Pulse of Rural America

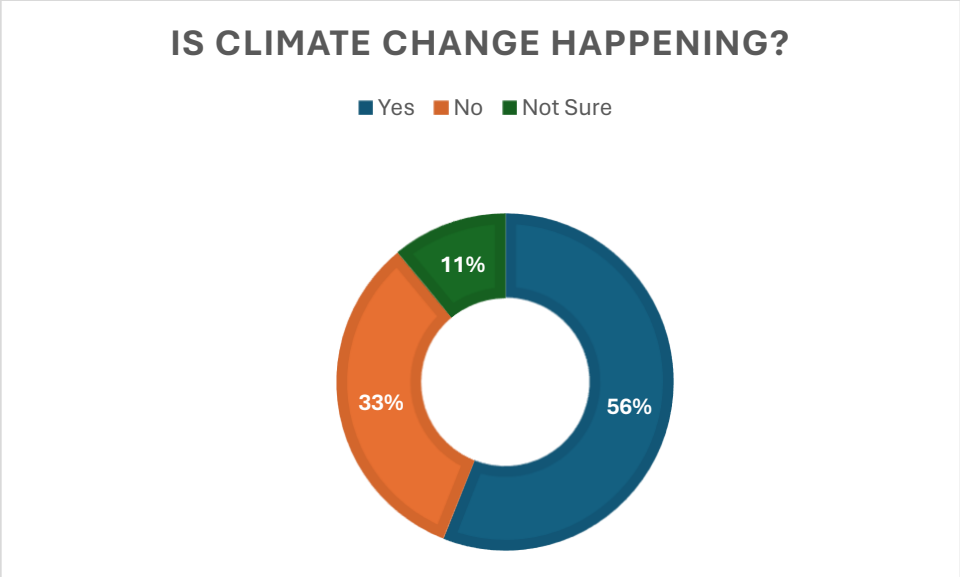
Polling conducted by Embold Research, in partnership with Tigercomm, conducted in August of 2023 surveyed 2,645 residents in rural communities nationwide. The purpose of the poll was to examine rural Americans' support for renewable energy projects in their communities as well as perceptions of their community and the country's renewable energy transition.[76]

Broadly speaking, the survey found rural communities are seen as lacking economic opportunities, with responses showing that only one in four rural residents evaluated the availability of good jobs in their communities as "excellent" or "good." Perceptions of the opportunities for young people in these communities are even worse, with 47 percent of respondents reporting "poor."

Moreover, according to the survey results, one in five of rural residents in the survey rated the cost of living in their community as "excellent" or "good." Interestingly, despite the economic survey results, a majority of survey respondents rated the "quality of life" and "sense of communities" in these areas as "excellent" or "good." Looking specifically to the role of energy, survey respondents were asked how they would rate the availability of low-cost energy in their community. The results demonstrated an interesting divide.



Reviewing Perceptions of a Renewable Energy Transition



The survey found that the majority of rural Americans believed that climate change was happening. However, one in three rural residents do not believe that climate change is occurring, while around 10 percent reported that they were "not sure." Among those who believed in climate change or were "not sure" whether it was occurring, two-thirds believe it is (or will be) a serious threat to them. Overall, more than one-third (37 percent) of rural Americans believed that climate change poses a serious threat to them or their way of life.[77]

When discussing U.S. energy source preferences, Embold Research concluded, "[r]ural Americans are skeptical of renewable energy's ability to meet the country's energy needs and believe the U.S. should rely on a mix of energy sources."

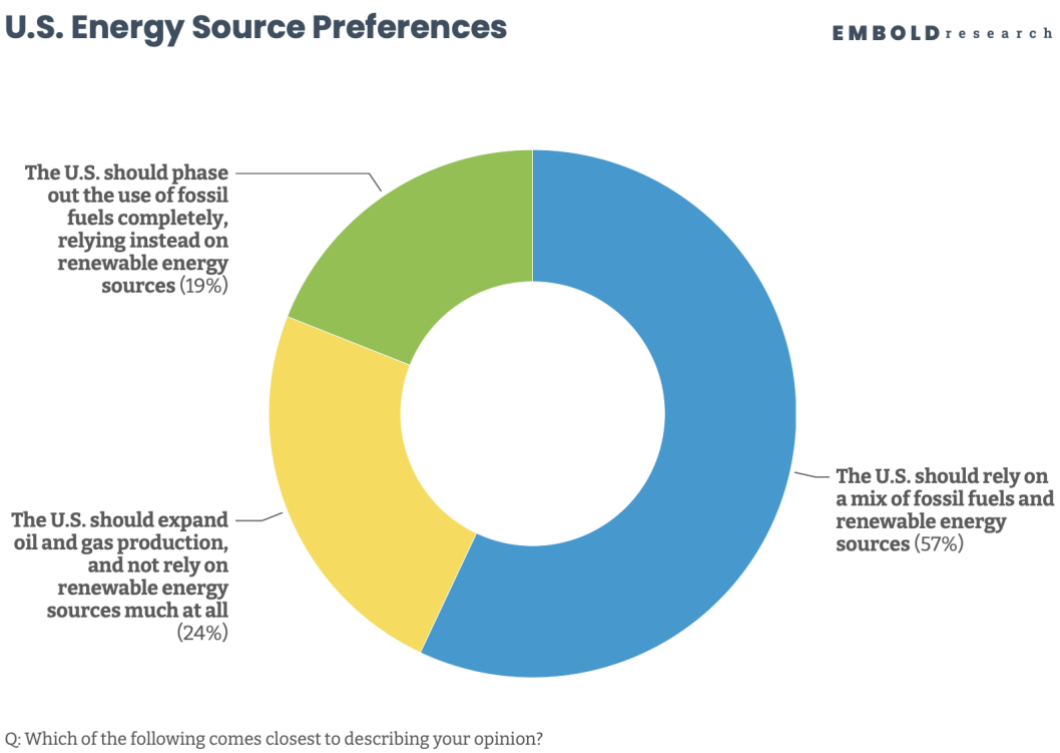


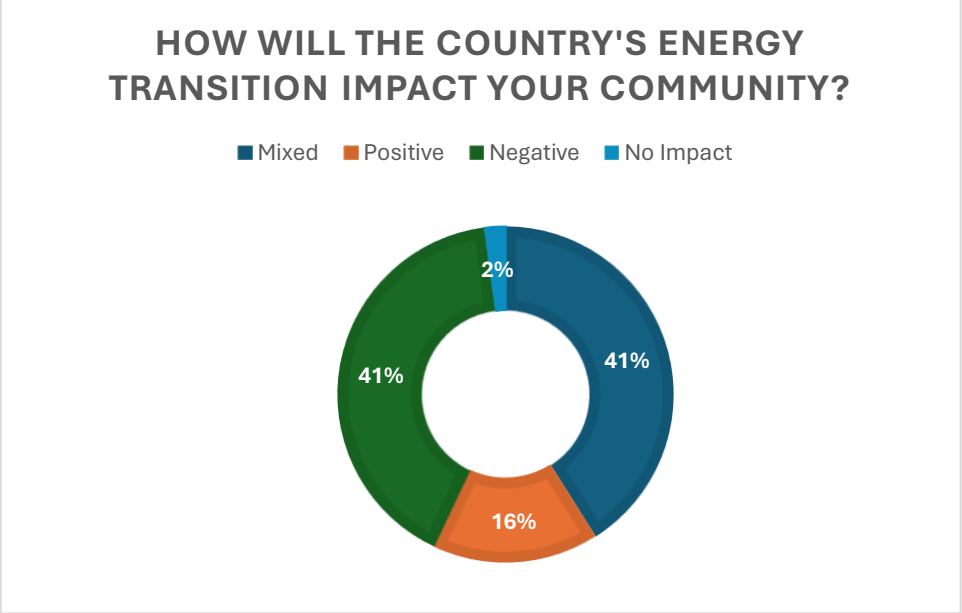
Figure 4. Source: Embold Research[78]

Additional Survey Findings:

The 2023 Embold Research survey also looked in depth at the following topic areas: 1) concerns about energy transition, 2) support for renewable energy projects, 3) analyzing doubts and concerns, and 4) finding messaging and messenger pathways to support.

1) Concerns about Energy Transition

Survey findings illustrated that "[n]early all rural Americans believe the country's energy transition will have an impact on their community[.]" The divide arose out of opinions regarding if the transition's impact will be positive or negative, or both. In what appeared to be contradictory results compared to other questions highlighted below, 41 percent of rural residents reported that energy transition will have a negative impact on their community, and 41 percent reported that energy transition will have both positive and negative impacts on their community. A very low number, at 16 percent of respondents, reported that the energy transition impact on their community will be positive. The prevalent opinion of "negative" impact from survey respondents demonstrates the substantial need for education and improved messaging through community engagement. For best practice recommendations related to addressing community concerns, see the Playbook's section on Studying the Fossil Fuel Playbook.



2) Support for Renewable Energy Projects

The Embold Research study demonstrated that, when asked about support or opposition of solar/wind energy projects being built in communities across the survey taker's state, the responses were majority in support. As demonstrated in the chart, overall support for both solar and wind decreased sharply when the solar or wind project would be "near" the respondent. Of note, in general support for a hypothetical renewable energy project, regardless of geographic proximity to the survey responder, 62 percent supported (solar) and 49 percent supported (wind) projects on a property "near yours." As shown in this data, and addressed in this Playbook, the sentiment of "not in my back yard" or "NIMBYism" demonstrates that those who many generally support an idea in theory, become less supportive when the project personally impacts (or is perceived to impact) them.

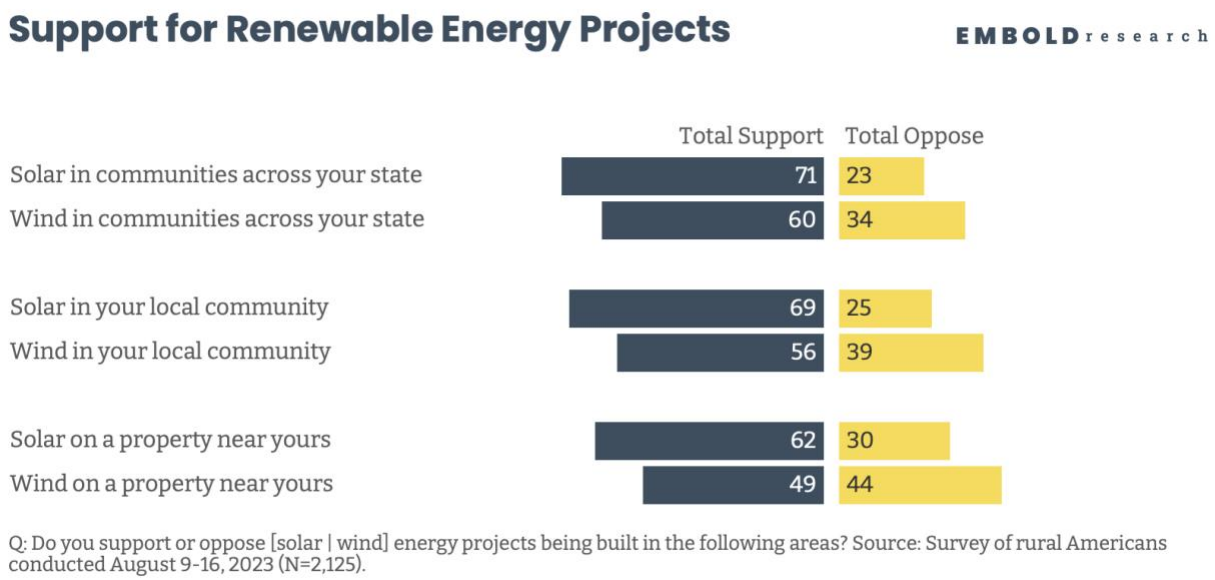


Figure 5. Source: Embold Research[79]

For best practice recommendations related to address "not in my back yard" concerns, see the Playbook's section on Social Opposition.

3) Analyzing Doubts & Concerns

The Embold Research survey results illustrate how rural Americans may see renewable energy projects as not beneficial to themselves or their communities. In contrast to survey results addressing general support or opposition to solar and wind projects across their state (total support of 71 percent for solar, 60 percent for wind), the questions aimed at potential economic incentives and benefits demonstrate an overall level of skepticism.[80]

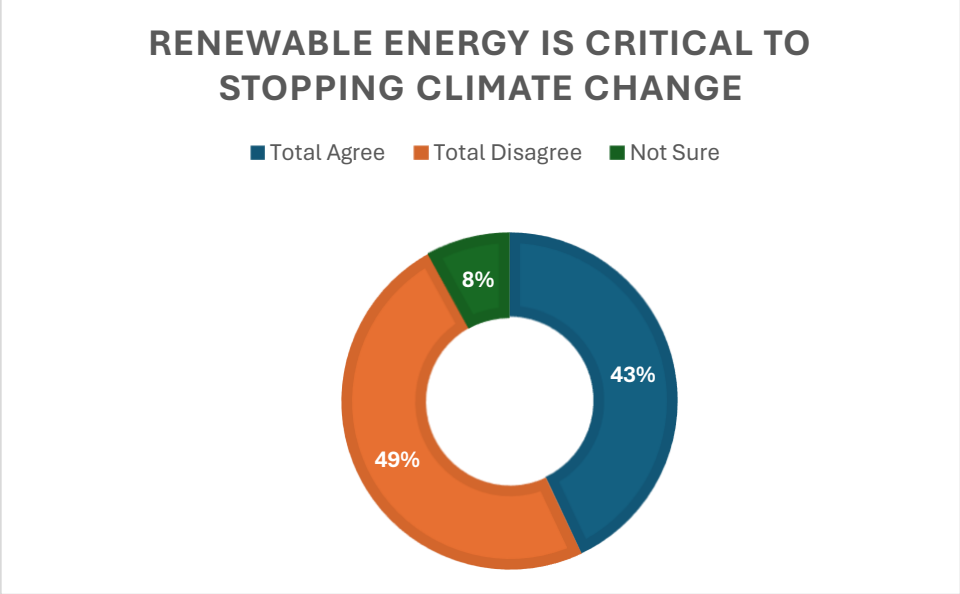
Q17. Do you agree or disagree with the following: (Sorted by *Total Agree*)

	Agree		Disagree				
	Strongly	**Smwt**	**Smwt**	**Strongly**	**Not sure**	***Total Agree***	***Total Disagree***
Rural communities are being asked to host renewable energy projects, but other communities will see most of the benefits.	31	31	12	8	17	63	20
Renewable energy projects will not bring as many high-paying jobs to rural communities as developers promise.	36	26	14	11	13	62	25
Renewable energy is being pushed by foreign companies and political elites.	42	16	9	19	14	58	28
The shift to renewable energy is inevitable, and rural areas will produce more renewable energy as the world moves away from fossil fuels.	22	27	15	24	12	49	39
Renewable energy projects will decrease the value of neighbors' properties.	23	22	18	19	18	45	37
Renewable energy projects bring good jobs to their communities. That means that some young people can build lives in their hometown, instead of having to move away to find a good job.	16	28	20	24	12	44	44
Renewable energy is critical to stopping climate change.	27	16	11	38	8	43	49
Development of renewable energy projects help support small businesses and the local economy.	13	25	18	28	15	39	47
Renewable energy projects provide communities more tax revenue to help pay for schools, law enforcement, roads and other local infrastructure.	11	23	17	27	22	34	44

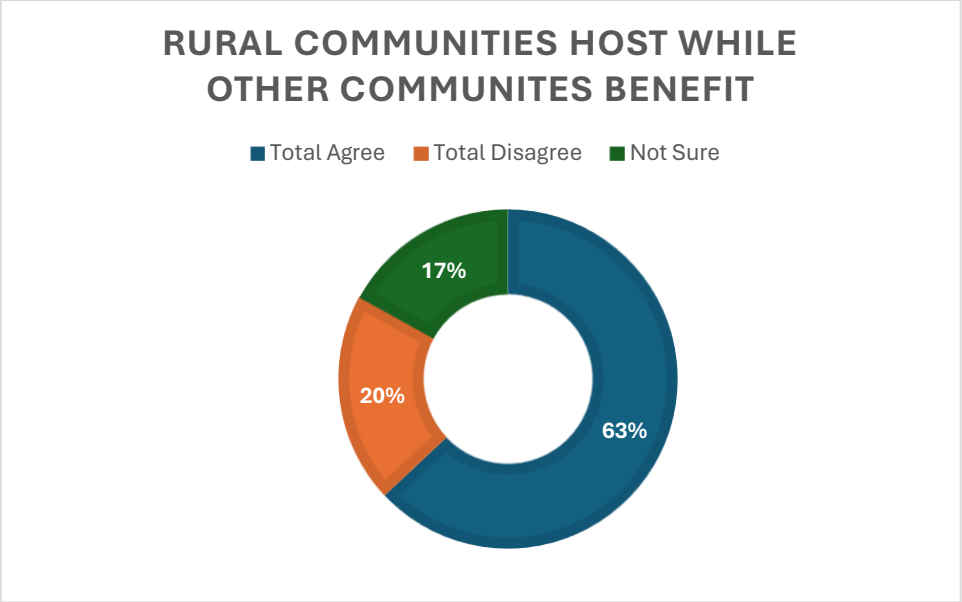
Figure 6. Source: Embold Research[81]

Benefits to Address Climate Change and Support Communities

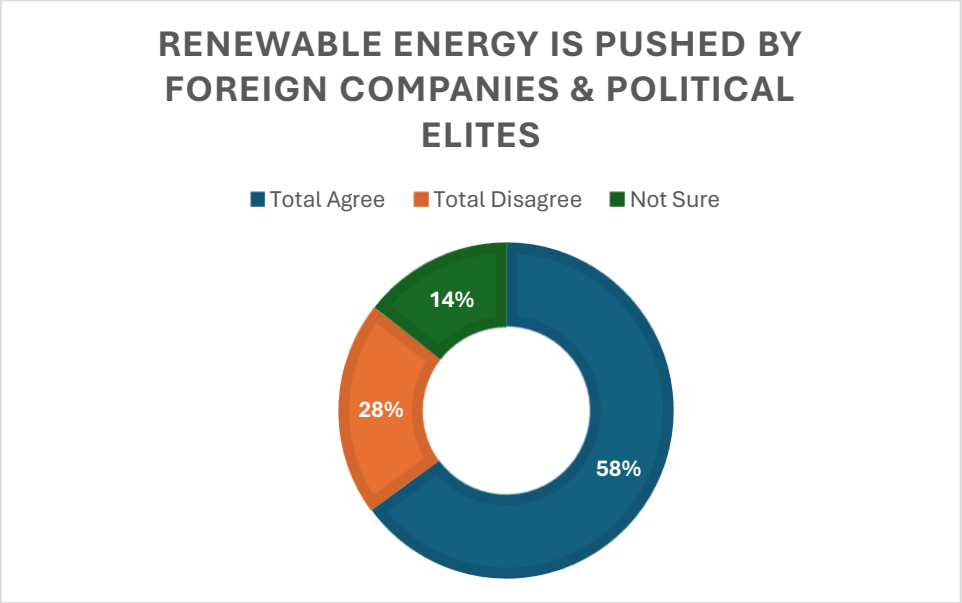
To provide further insight to understanding the role of renewable energy, it is important to highlight survey respondent's perceptions about climate change. The very strong response of 49 percent disagree, including 38 percent who strongly disagreed, represents a large group of individuals who do not see the concerns surrounding climate change, and therefore may be opposed to establishing renewable energy projects in general.



Survey respondents also had a strong perception of feeling as they were being asked to host renewable energy projects when other communities will see the most benefit. The strong "agree" response of 63 percent shows the strong perception of rural Americans who see renewable energy projects as taking place in their communities, to primarily benefit other communities. Additionally, the 17 percent of "not sure" respondents is also insightful for considering those who have yet to solidify an opinion about who benefits the most in renewable energy projects. Fortunately, the negative and neutral perceptions among rural Americans can be combated by clearly demonstrating benefits to local communities hosting the projects, as further discussed below.



Survey respondents were asked if they agreed or disagreed with the following statement:
"Renewable energy is being pushed by foreign companies and political elites."

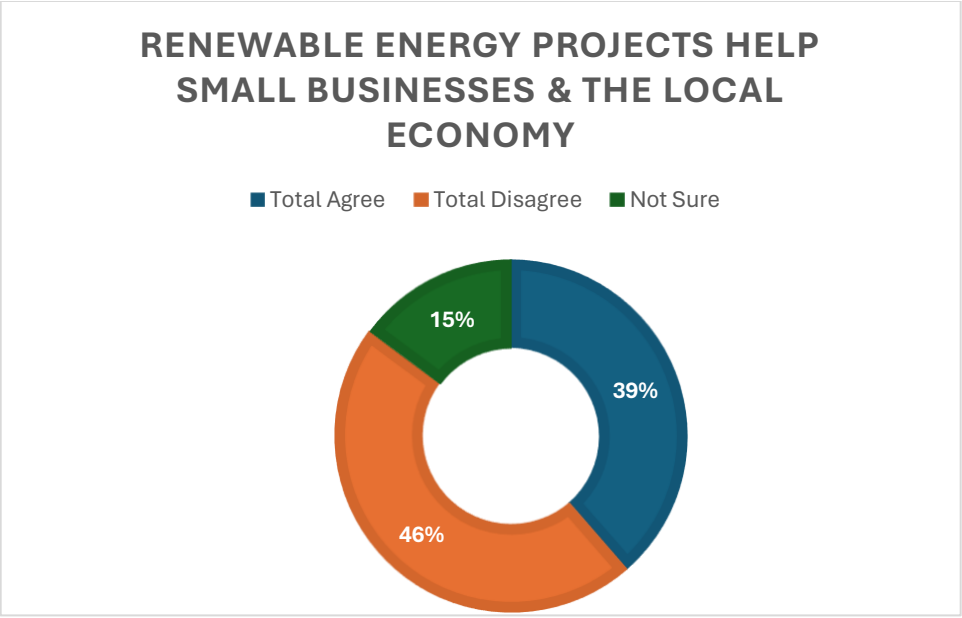


These findings show the opportunity to build support through the right advocates, in particular, by American-based companies. Findings show that the majority of respondents do believe projects are supported by foreign entities, demonstrating the need for transmission projects to highlight their domestic roots when applicable.

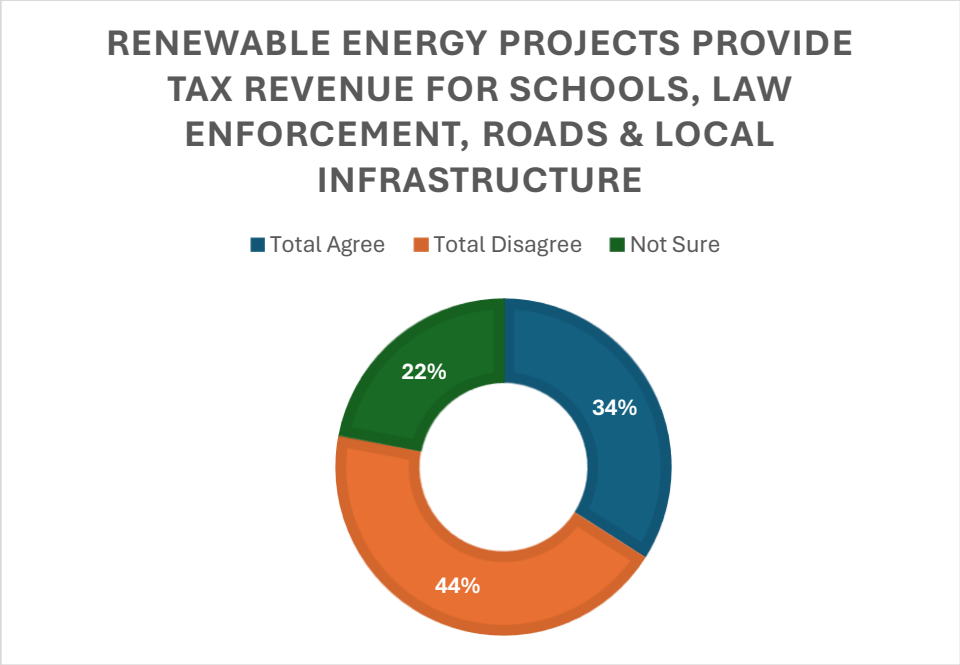
Survey respondents were also asked if they agreed or disagreed with the following statement:
"Renewable energy projects bring good jobs to their communities. That means that some young people can build lives in their hometown, instead of having to move away to find a good job." For this question, results were even, with 44 percent in agreement, and 44 percent in disagreement. These results illustrate the potential for increased support through education and local advocacy.

Economic Support and Tax Revenue

Survey takers were also asked about their position in response to the statement "[d]evelopment of renewable energy projects help support small businesses and the local economy." The high disagreement rate of 47 percent and the 15 percent of "not sure" responses presents another group whose position could change with additional information, including messaging to provide awareness of positive economic impacts for local communities.



Lastly, survey takers were also asked about their position on the following:
"[r]enewable energy projects provide communities more tax revenue to help pay for schools, law enforcement, roads and other local infrastructure."



These results may show that the actual fiscal benefits to communities have not been realized amongst survey takers as 44 percent of respondents disagreed, and 22 percent stated they were "not sure." Information shared with the community regarding a projected increase in revenue for local governments can and should be calculated and shared widely.

For best practice recommendations related to addressing perceptions on renewable energy project ownership, economic benefits and cost, and local impact concerns, see the Playbook's section on Studying the Fossil Fuel Playbook.

4) Finding Messaging and Messenger Pathways to Support

The Embold Research survey highlights important details about messaging for rural survey participants regarding renewable energy. The two most effective messages emphasized energy independence (30 percent) and the ability to increase resiliency through increasing sources of energy (29 percent). Also of note, was the 36 percent finding of "none of the above" demonstrating the presence of other effective messages not included on the list of six response options. The high rate of "none of the above" is an example of the importance of engaging with local communities to identify their root causes for support, opposition, and other factors.

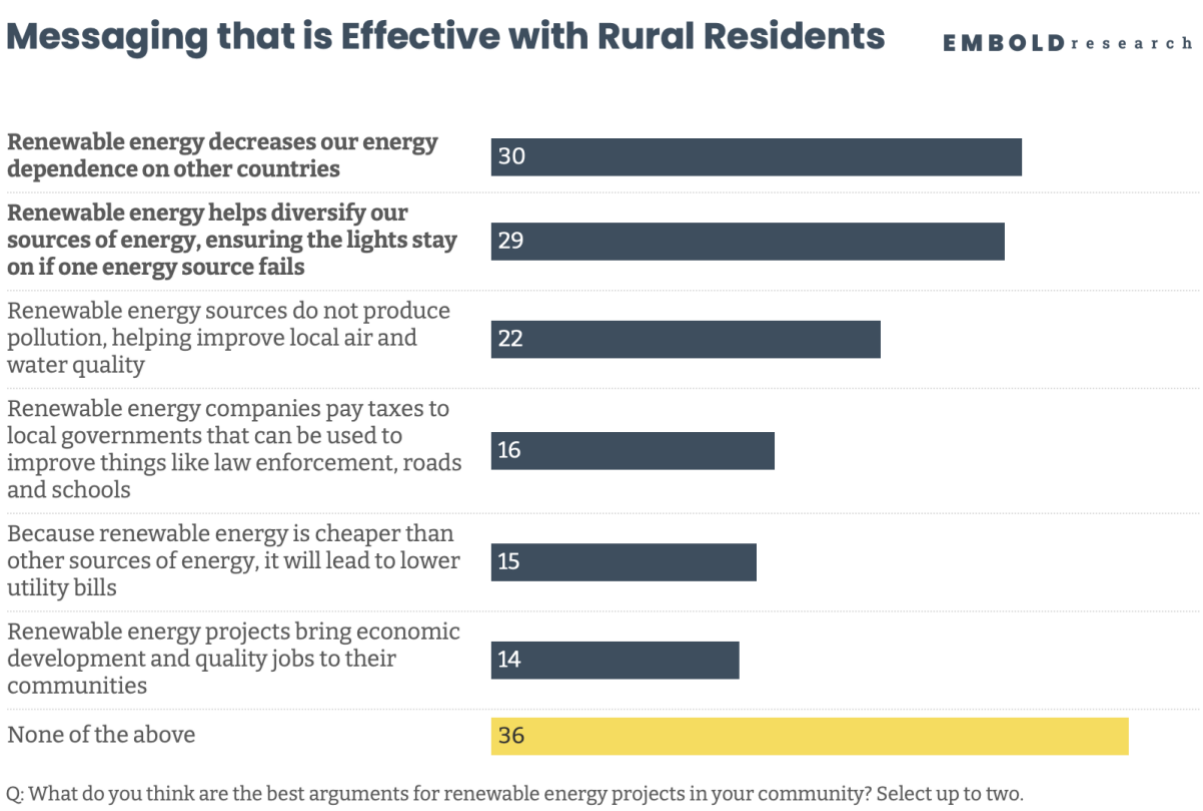


Figure 7. Source: Embold Research[82]

Additional insight addressed by the Embold Research survey was a question regarding messengers, such as friends and family, local news, and state government. By a large majority, survey respondents identified "farmers and ranchers" as the most trusted sources. In contrast, 75 percent of survey respondents said they did not trust "people in state government" and 65 percent do not trust "renewable energy companies."[83]

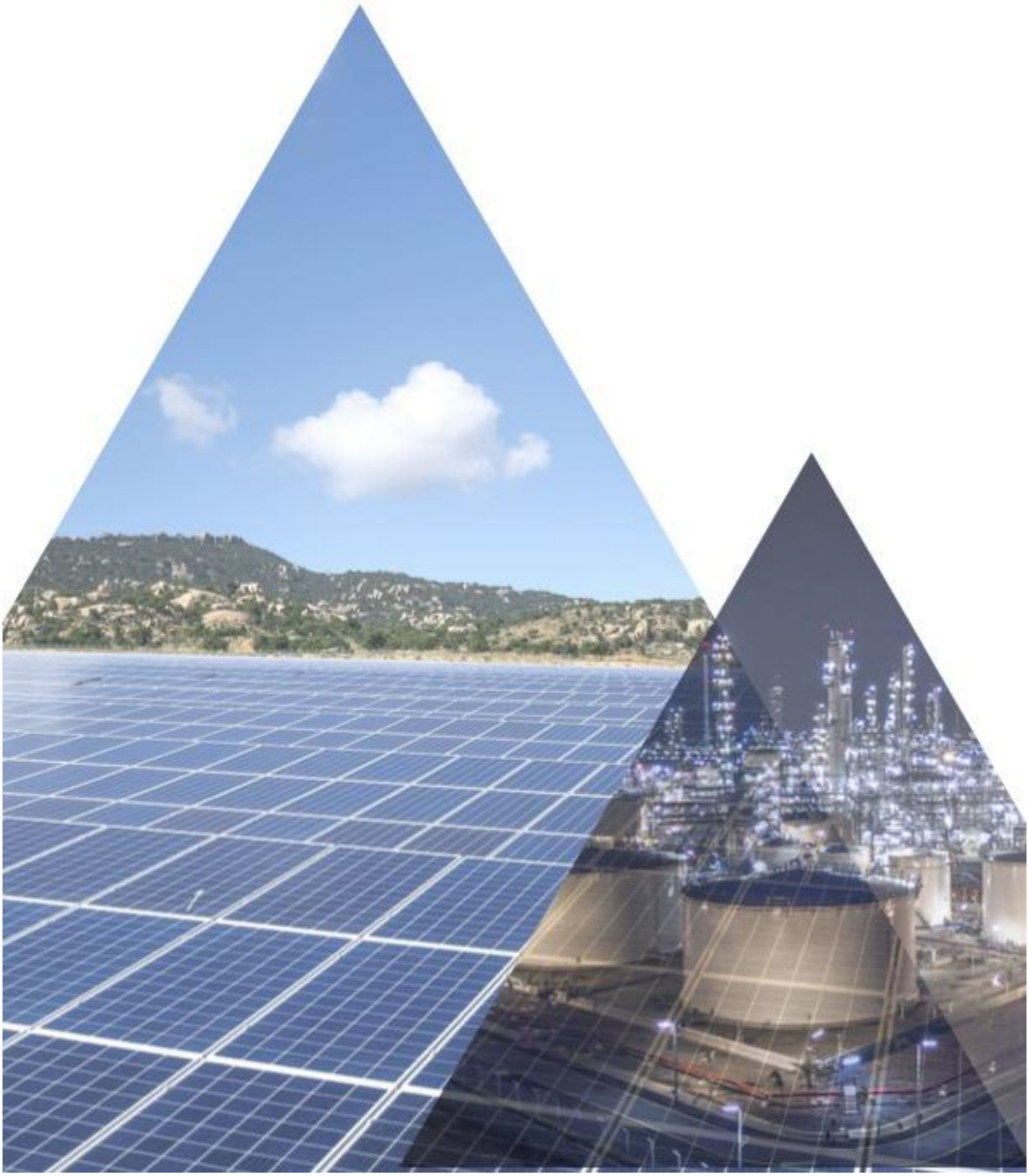
Q21. In general, how much do you trust the information from the following sources? (Sorted by "A lot")

	A lot	Some	Not too much	Not at all	Not sure	*Total A lot / Some*	*Total Not too much / Not at all*
Farmers and ranchers	32	46	13	4	4	78	18
Veterans in your community	23	49	15	5	7	72	21
Friends and family	21	55	19	3	2	76	22
Agriculture extension services	13	49	18	7	13	61	26
Teachers	13	42	25	17	4	55	41
Local business owners	11	57	21	7	4	68	28
Your neighbors	9	52	24	10	5	62	33
Local newspapers	5	37	31	23	4	42	54
Members of your county commission or board of supervisors	4	34	33	24	5	38	58
Your utility provider	3	32	32	29	4	35	61
Local TV news	3	31	29	32	4	35	62
Renewable energy companies	3	27	26	39	6	30	65
People in state government	1	21	33	42	2	22	75
Social media sites	1	13	38	45	3	14	83

Figure 8. Source: Embold Research[84]

Responses to this question further illustrate a general distrust of outsiders, which must be understood by renewable energy developers and state and local governments. For best practice recommendations related to addressing effective messaging and messengers for renewable energy, see the Playbook's section on Studying the Fossil Fuel Playbook.

5) ANALYSIS



Identifying Common Characteristics: Pipes vs. Wires

The following chart compares key characteristics between HVDC Transmission and Fossil Fuel Pipelines.

Large Energy Infrastructure Characteristics	Interstate HVDC Transmission	Interstate Fossil Fuel Pipeline
Transport Energy	Yes	Yes
Connects Multiple States	Yes	Yes
Expensive to Build	Yes	Yes
Single Permit	No	Yes
Connect to Distribution Lines	Yes	Yes
Centrally Planned	No	No
Regional Markets	Yes	No
Rate-Based	Yes	Yes
Merchant Transmission	Yes	Yes
Require FERC Approval	Yes	Yes
State Resource Approval	Yes	Yes
Require Private Land ROW	Yes	Yes
Eminent Domain	Yes	Yes
Required to Keep Lights On	Yes	Yes
Support Modern Economy	Yes	Yes
Allow Transportation	Yes	Yes
Benefit Local Communities	Yes	Yes
Generates Tax Revenue	Yes	Yes
Creates Jobs	Yes	Yes
Energy Security	Yes	Yes
Environmental Impact Assessment	Yes	Yes
Water Pollution Risk	No	Yes
Fire Risk	Yes	Yes
Negative Habitat Impact	Yes	Yes
Electromagnetic Fields	Yes	No
Increase Greenhouse Gasses	No	Yes
Ongoing Maintenance	Yes	Yes
Mostly Underground	No	Yes
Allow Continued Farming	Yes	Yes
Face Social Opposition	Yes	Yes

Project Status Updates: Pipes vs. Wires

The following chart compares HVDC Transmission and Fossil Fuel Pipeline projects.

	Constitution Pipeline	Dakota Access Pipeline	Keystone XL Pipeline	Mountain Valley Pipeline	Grain Belt Express	Plains & Eastern Clean Line	SunZia Transmission	TransWest Express
Status	Canceled	Operational	Canceled	Ongoing	Ongoing	Canceled	Ongoing	Ongoing
Owner	Williams	Energy Transfer Partners	TC Energy	Equitrans Midstream Corp.	Invenergy	Clean Line Energy Partners	Pattern Energy	The Anschutz Corporation
Locations	Pennsylvania, New York	North Dakota, South Dakota, Iowa, Illinois	Alberta, Canada; Montana, South Dakota, Nebraska	West Virginia, Virginia, North Carolina	Kansas, Missouri, Illinois, Indiana	Oklahoma, Arkansas, Tennessee	New Mexico, Arizona	Wyoming, Colorado, Utah, Nevada
Proposed	2012	2014	2008	2014	2014	2010	2006	2005
Operating	No	2017	No	Mid-2024	No	No	No	No
Type	Natural Gas	Crude Oil	Crude Oil	Natural Gas	HVDC	HVDC	HVDC	HVDC
Length	125 miles	1,172 miles	875 miles	303 miles	800 miles	720 miles	550 miles	732 miles
Capacity	650 MMcf/d	750,000 bpd	830,000 bpd	2 Bcf/d	5,000 MW	4,000 MW	3,500 MW	3,000 MW
Permit Authority	FERC	FERC	FERC	FERC	Kansas, Missouri, Illinois, Indiana	Oklahoma, Arkansas, Tennessee (FERC*)	New Mexico, Arizona	Wyoming, Colorado, Utah, Nevada
Primary Opposition	Environ., Public, Health	Environ., Tribal, Public	Environ., Tribal, Public	Environ., Land Value, Public	Land values, Public, Health	Land values, Public, Intergovernmental	Environ., Tribal, Public	Land values, Intergovernmental, Public

Project Status Updates: Pipes vs. Wires

After a review of eight energy projections, four HVDC Transmission and four Fossil Fuel Pipeline projects, certain patterns emerged.

Observations

1) All projects faced opposition to their use of eminent domain.
2) Opposition to major pipeline infrastructure projects generally centered around environmental concerns, including the exacerbation of climate change, and Tribal engagement for projects in the western portion of the U.S.
3) Opposition to large transmission infrastructure projects primarily focused on land value (concern over visual impacts and surrounding land use) and benefits rural communities receive from hosting the infrastructure.
4) Regardless of opposition, project permitting was the major driver for a project's success.
5) The success of the Dakota Access and Mountain Valley Pipelines would not have been achieved without political maneuvering.[85] [86]
6) Projects requiring multiple permitting authorities take much longer to develop; timeline delays impact the economic viability of projects as development costs rise over time.
7) Opposition to the Keystone XL, Dakota Access, and SunZia Transmission lines was primarily due to projects' impacts on Tribal communities and developers' failure to engage Tribes early in the development process.
8) Opposition increased in rural communities where eminent domain was authorized, but the majority of benefits associated with the project are delivered to areas not impacted by eminent domain.

Despite the shortcomings of the high-profile pipeline projects above, the fossil fuel industry has had greater success building interstate infrastructure projects. This fact is evident by the about three million miles of existing pipelines,[87] compared to 160,000 miles of high-voltage transmission.[88]

It is possible that after the challenges of the pipeline projects above, the industry realized that they needed to take a different approach to building new pipelines. In 2020, the American Petroleum Institute (API) published the "Community Engagement Guidelines for Pipeline Projects" workbook, which is explained in detail next.

6) STUDYING THE FOSSIL FUEL PLAYBOOK

Studying the Fossil Fuel Pipeline Playbook

In 2020, the American Petroleum Institute (API) published the Community Engagement Guidelines for Pipeline Projects (the "API Guidelines") to support and provide a common petroleum industry accepted approach to community engagement.[89] The API explained that their Guidelines "compiled numerous pre-construction best practices that pipeline operating companies might consider in their interaction with communities and stakeholders." Furthermore, they explained that the Community Engagement Guidelines is "an accumulation of efforts currently undertaken throughout the natural gas and oil pipeline industry to proactively engage with communities during the project development process."[90] API explained their philosophy on community engagement:

"In order to promote natural gas and oil infrastructure development that results in a positive and beneficial experience for communities, recommended development activities can align with community concerns and priorities, grounded in responsible practices and lessons learned from past experiences."

Understand, Plan, and Engage

As explained throughout this Playbook, the three-phase approach creates a community engagement framework previously endorsed by the API: understand, plan, and engage. Do to the specific similarities shared between petroleum and renewable energy, this same three-phase approach can and should be used for renewable energy projects.[91]

Figure 9. Source: API Guidelines[92]

Plan-Do-Check-Act

In addition to a three-phase approach, the API recommends utilizing a Plan-Do-Check-Act (PDCA) cycle to manage projects, designed to encourage continuous improvement. This cycle includes the "creating of strategies and plans, execution of those strategies and plans in line with guidelines, checking those actions for conformity, and using those results to adjust the next generation of plans."[93]

Figure 10. Source: API Guidelines[94]

The API Guidelines focus on pre-construction best practices, and as applied to renewable energy, efforts by renewable advocates would also begin prior to construction, at the start of the planning phases. As explained by the API, the three phases of Understand, Plan, and Engage "cover much of the 'Plan' and 'Do' phases." They also explain that the 'Check' and 'Act' phases are covered through evaluations and improvements as demonstrated in the circular chart.[95]

Oil Checklist Phase #1: Understand

In order to plan a successful project, developers must conduct thorough and accurate community assessments during the initial project scoping and planning.

It is important to conduct a community assessment before announcing your project or interest to the community. Critically, the assessment can result in information about the region and community, and allow for the evaluation and anticipation of future challenges.

The following are key suggestions, adapted from the API Guidelines:[96]

- *Research the community:* Consider and quantify prior energy assets, operations, and issues in the community.
    - Consider all past energy infrastructure development attempts in the region.
    - Review what environmental studies have been previously conducted, or what studies will be required in the future, and begin to consider how the results can be communicated.
    - Cautionary tale: Learn from prior development projects (including projects which were not successful) to learn what motivated past concerns, understand the "perceived impacts." When projects were successful, study how those operators addressed community concerns.

- *Understand Needs and Motivations*: Understanding the needs of the community and its residents will include a review of demographics, leaders, and local priorities.
    - Consider what may set this community apart, and identify the largest employers.
    - Based on research, including demographics and an assessment of any past energy development projects, what types of groups should development teams contact?
    - Identify what else may be going on in the community, such as current political races, ballot initiatives, and community development plans.

- *Stakeholder Acceptance*: Knowing the community, including key stakeholders (e.g. landowner groups, labor unions, political and interest groups) will inform a future outreach strategy. For project success, the outreach must facilitate "positive" and "long-lasting relationship" with stakeholders and the larger community.

    - Note: Effective communication requires both the right message and the right messenger. Even the right information with the wrong delivery tactic can result in project failure. See the Playbook's Project Status Updates: Pipes vs. Wires for a summary of past petroleum and renewable projections.

- *Plan for Media:* Future media coverage will inform local perception.
    - Plan ahead to know which outlets will be helpful in communicating the right information in the right way, based on the information gleaned from your community engagement research.
    - Use the methods of communicating used by the community, which may be different than those channels previously used.
    - Consider how the right channels may be demographic-specific, such as Facebook for some audiences and Tik Tok for others.

Exercise Suggestion: Stakeholder Mapping

Identify the following key stakeholders and information to begin your community engagement planning.

Organization: Group, affiliate, local, elected official?	**Representative:** *Who is the best communicator from this group?*	**Concerns:** *What are the concerns?*	**Facts:** *What facts do they convey?* *Does this align with your goals?*	**Reach:** *What is the reach?* *Local, state, federal, other?*

Figure 11. Adapted from API Guidelines[97]

Oil Checklist Phase #2: Plan

After conducting the research, it is tempting to jump right into a projection, however this is a mistake. As documented by API, "Public impressions of infrastructure projects come from regional politics, economics, demographics, and history." After conducting Phase 1 to understand the community of a future site, the next step is to build a community engagement plan, responsive to stakeholders priorities. Phase 2 corresponds with the "Plan" step of the PDCA cycle. Building the plan requires anticipating what could happen, and how different actors can and should respond.[98]

To kickstart the Phase 2, API suggests considering the following areas, adapted for this Playbook:[99]

1) *Identifying Stakeholders with Concerns*
    - Pinpoint key concerns, and prepare to answer how these concerns will be eliminated or mitigated.
    - Ask the team how pre-existing relationships impact community engagement.
    - Consider the plan to mitigate concerns that cannot be fixed, from the point of view of the community.

2) *Identifying Potential Supporters*
    - Identify the key benefits of the development project, and document which groups (types of individuals and organizations) who benefit from project development.
    - Answer how likely supporters will engage with community leaders (such as elected officials and organization leaders) to share project benefits and alleviate community concerns.

3) *Defining the Community Engagement Parameters*
    - Define the outreach plan to identify who will be a messenger (local residents/influencers, lobbyist advocacy, etc.).
    - Consider what voices will be helpful in conveying the planned message, which may include a mix of endorsements, local or non-local volunteers, or industry representatives, to name a few examples.

4) *Determining the Tactics and Activities*
    - Community engagement may require a combination of education and awareness raising, which can be delivered via multiple communication channels (public forums, videos, written fact sheets, etc.).
    - Tip: Provide information and answer Frequently Asked Questions (FAQs) using resources that are easily accessible to community members, such as a website.
    - Establish a mechanism to "collect, assess, and manage" stakeholder concerns, such as an email inbox, local field office location, telephone number, or community survey.
    - Reminder: All communication must be community-specific, accounting for the unique economic and cultural factors in the area.

Exercise Suggestion: Building the Team

Identify the following potential team members, including their role and deliverables. Utilize two charts, one for internal team members, and one for trusted external partners.

What role could each member of the team play?

Team Member	Role	Deliverables

Source: Adapted from API Guidelines[100]

Topics to consider while identifying the internal and external teams include:

- The readiness of rapid response plans and materials.
- Key messages, communication channels, and authorized messengers.
- Process and timeline for releasing information, including talking points, statements, and interviews.

Note: Responses for internal team members will likely look different than external teams.

Oil Checklist Phase #3: Engage

"Engage" is the third and final phase, corresponding with the "do" phase of the PDCA cycle. Engaging is the roll out or launch of community engagement efforts. Launching may include multiple efforts, such as events, earned, paid, and digital media publications, distributing correspondence to community members, face-to-face interactions with community members (called "canvassing"). Each of these engagement mediums should be tailored to the community, and should utilize messaging that addresses the concerns and motivations of the community. As previously noted, the right information delivered in an ineffective way can derail or even put an end to a development project.

As API notes, good communication is clear, concise, and importantly, credible. Message framing is one tool to accomplish these communication goals. In the Community Engagement Guidelines, API explains its suggested "Values-Based Narrative Frame Worksheet":[101]

"A message frame visually allows you to see potential messages from both sides of an issue—detailing what your team says about the proposed project, what your team says regarding concerns raised about your project, what is said about your project, and what the concerned stakeholders say about themselves. This exercise may help you anticipate and think through your strengths, weaknesses, opportunities, and potential issues, leading to improvements in your messaging and potential mitigation strategies."

A message frame challenges the message crafter to consider:
- How do they want to describe "the plan" in two sentences?
- How do they want to describe "concerns" in two sentences?

The exercise of developing brief, two sentence responses requires thoughtful consideration, adopting a less is more approach. The following Message Frame example has been adapted from the API Guidelines.

Exercise Suggestion: Tackling the Message Frame

Utilizing the example above, create a message frame, considering the advantages of supporters and concerned stakeholders. This exercise challenges participants to think from multiple points of view, which will ultimately lead to a more informed communication plan for the Engage Phase.

What supporters say: (usually positive) • Sugar consumption from beverages is a major contributor to diabetes and obesity in the U.S. • Sugary beverages provide excess calories and little nutritional value leading to poor health outcomes. • The revenue from the tax can be used for education programs that promote healthy eating and the importance of exercise.	**What concerned stakeholders say:** (usually negative) • People should be able to drink what they want without being punished by the government. • Any new tax has a negative impact on working families and senior citizens living on fixed incomes. • Taxing sugary drinks will only increase how much artificial sweeteners people drink causing heart disease and cancer.
What concerned say against supporters: (usually negative) • Even if you tax soda by a few cents, people are going to continue drinking it. • It seems there is a new product every day that causes poor health outcomes. • Government should be focused on fixing potholes and reducing crime, not tell people what they should have for lunch.	**What supporters say against concerned stakeholders:** (usually positive) • The tax is not intended to be punishment, but rather to promote awareness and health habits. • Low or no sugar beverages are often cheaper and more readily available to low-income families. • This tax would treat all carbonated sodas the same, so we are not encouraging people to switch to drinking diet soda.

Source: Adapted from API Guidelines[102]

Exercise Suggestion: Tackling the Message Frame

Utilizing the example above, create a message frame, considering the advantages of supporters and concerned stakeholders. This exercise challenges participants to think from multiple points of view, which will ultimately lead to a more informed communication plan for the Engage Phase.

Note: Review the API Guidelines for additional examples, tips, and questions to consider.[103]

What supporters say:	**What concerned stakeholders say:**
What concerned say against supporters:	**What supporters say against concerned stakeholders:**

Check and Act: Going Beyond the Three Phases

Effective community engagement requires ongoing improvements. Community engagement work is not "done" after the launch phase. On the contrary, after launch, assessment and adjusting is vital to creating an evolving plan. Ongoing research, such as polling, may be tools to inform the "Check" process in the PDCA cycle.[104] Digging into the analytics can provide an advantage when responding to political and cultural sentiments, including seeing and responding effectively to social opposition.

Reflecting upon "lessons learned" can highlight areas of improvement, and support continuous improvement efforts under the "Act" step of the PDCA cycle.[105]

Figure 11. Source: API Guidelines[106]

7) APPLYING THE FOSSIL FUEL PLAYBOOK TO THE GRID

Applying the Fossil Fuel Pipeline Playbook to the Grid

As demonstrated by the information presented in this Playbook, both petroleum and renewable energy projects share many characteristics, including projects across multiple state and federal jurisdictions, the use of private land, including through eminent domain, and opposition to development by communities who believe projects will have adverse outcomes on their communities. The August 2023 Embold Research study of 2,645 rural Americans nationwide provides a useful lens to assess current sentiments and opinions on renewable energy, as well as the perceived benefits or costs to rural communities. Informed with this recent data, this Playbook applies the API Guidelines, including the Understand, Plan, Engage three-phrase framework, to renewable energy projects with suggestions on how to measure, plan for, and ultimately tackle social opposition, which continues to delay or cancel sustainable renewable energy development projections across the U.S.

Applying Phase 1) Understand: Identifying and Addressing Concerns about Energy Transition

A successful project requires understanding the community. A community assessment must be conducted before launching the renewable energy project. The assessment will provide valuable information about the community, and facilitate the evaluation of future challenges.

Similar to many new technologies, the idea of adopting a new practice or plan in the energy sector has been met with social opposition.

Community and stakeholder assessments inform a future renewable energy developer's understanding of the site community. For example, the results of the Embold Research polling on climate change in rural communities, where 49 percent of respondents in rural America disagreed (43 percent agreed) with the statement that renewable energy is critical to stopping climate change, provides insight into the perspectives of residents. Such polling demonstrates that many community members do not understand the urgency and importance of energy transition.

Additionally, part of the Understand phase is about understanding the "perceived impacts" of a project. Perceived impacts may be created using community experiences from past projects, which may have been positive or negative, depending on the unique community or stakeholder experience. Using the Embold Research example, a Stakeholder Mapping activity can dig into the specific

attributes of those who agree or disagree that renewable energy is critical to stopping climate change, and see what demographic data indicators may explain about the community's perspectives on renewable projects.

Applying Phase 2, Part 1) Plan:
Identifying Stakeholder Support and Concerns

Historically, support, including financial support from the federal government, has never been greater for renewable energy projects such as solar and wind development. However, the presence of Congressional funding alone will not solidify the creation of large renewable energy transmission projects.

The Embold Research survey highlighted an important economic sentiment undercurrent in rural communities: a perception of few economic opportunities. The survey also demonstrated how rural Americans may see renewable energy projects as not beneficial to themselves or their communities. When asked if the development of renewable energy projects help support small businesses and the local economy, "disagree" accounted for 47 percent of responses, and "not sure" made up 15 percent of responses. On a similar note, when asked if renewable energy projects provide communities more tax revenue to help pay for schools, law enforcement, roads and other local infrastructure, the survey results showed that 44 percent of respondents disagreed, and 22 percent stated they were "not sure."

The "Plan" phase is meant to identify, understand, and address stakeholder concerns and to identify potential supporters. Although not all concerns can be eliminated or mitigated, it is important to speak to the community about their concerns. While a future project cannot guarantee a certain household income for all residents or a three-fold tax revenue increase, tangible economic benefits may result for a site community, and those benefits can be shared using community advocates who are supporters of the project. As discussed in the API Guide, identifying potential supporters in the planning stage can prepare the project for messaging success when the "Do" phase is launched.

Applying Phase 2, Part 2) Plan:
Community Engagement Parameters, and Tactics

As a continuation of Phase 2, focusing on community engagement parameters and tactics, the Embold Research survey can help inform the engagement plan, specifically to define who will be messengers, such as local residents/influencers,

lobbyist advocacy, etc. For example, the Embold Research survey demonstrated that for rural Americans who took the survey, when asked whether they agree or disagree with the statement "People living in cities don't understand the problems rural Americans face" 87 percent agreed, and only nine percent disagreed. Based on this finding, a community engagement activity utilizing renewable energy executives flying in from Chicago or New York would likely not be effective voices to help convey the future economic opportunities for rural communities.

Similarly, the survey found that when asked about politicians, 83 percent agreed that politicians largely ignore rural Americans. Only 12 percent disagreed with the statement. Just as a company executive may not prove to be an effective communicator, rural residents may also reject an issue, like new development, because politicians discussed the idea. An example of this would be Congressional discussions branded as the "Green New Deal." As referenced throughout this document, when establishing the "Plan" phase, all communication must be community-specific, accounting for the unique demographic, economic, political, and cultural factors in the area.

Applying Phase 3) Act:
Launching Effective Messaging and Messengers

Renewable energy projects receive both local and nationwide media coverage. The API Guidelines emphasized the important role of anticipating and planning media coverage, as media has historically had the power to shape public opinion about the project.

Before starting Phase 3, including engaging with media, it is important to consider the results of the Embold Research about survey respondent's perception of a trusted source. As an example of a data-informed method, the survey results demonstrate that a written media campaign through a local newspaper (42 percent trust, 54 percent do not trust) may be more trustworthy than the local TV news (35 percent trust, 62 percent do not trust).

To implement the most effective renewable energy campaign, it is also very important to enlist the advocacy support of trusted community members, such as those rated most highly in the Embold Research survey, farmers and ranchers, veterans in the community, friends and family, and agriculture extension services, who all came in at more than 60 percent trust. As a very important note, those individuals who ranked lowest in the survey included people in state government (22 percent trust) and

members of the local county commission or board of supervisors (38 percent trust). With the low levels of trust for those groups, a media campaign utilizing those voices may be less successful than the more trusted messengers. When unveiling the project plan in the "Act" phase to the community for the first time, based on the research, it would be most effective for a local trusted individual such as a landowner or farmer to share information about the proposed project. While a renewable energy company representative may be well versed in the project and a polished public speaker, this does not mean they will be an effective messenger to the community.

8) CONCLUSION

Conclusion

This Playbook has discussed the history of the U.S. electric grid, the need for infrastructure improvements, the availability of historic federal funding to support development, and barriers to transmission buildout.

Adapting the American Petroleum Institute's (API) Community Engagement Guidelines for Pipeline Projects, the Playbook has highlighted how their recommended actionable strategies, originally utilized in the petroleum industry, can be utilized by transmission developers for future renewable energy development.

Comparing the three million miles of pipeline in the U.S to the modest 160,000 miles of transmission lines, the oil and gas industry's prolific development can provide effective tactics to plan and deliver community engagement plans, and encourages diligent planning to anticipate and combat social opposition in order to successfully expand large-scale transmission projects.

9) ADDITIONAL RESOURCES

Additional Resources

American Petroleum Institute (API) – Community Engagement Guidelines for Pipeline Projects (PDF)

Council on Environmental Quality – Climate and Economic Justice Screening Tool (CEJST)

- Mapping tool to help identify disadvantaged communities, also known as Justice40 communities.

Columbia Law School, Sabin Center for Climate Change Law – Community Benefits Agreements Database

- Database of publicly available CBAs (also known as Community Benefit Plan or CBPs) as part of the publication of Expert Insights on Best Practices for Community Benefits Agreements.

Columbia Law School, Sabin Center for Climate Change Law – Opposition to Renewable Energy Facilities in the United States: May 2023 Edition

- Compilation of state and local restrictions that challenge the siting of renewable energy projects.

U.S. Department of Energy – Community Benefit Plan FAQs

U.S. Department of Energy – Community Benefit Plan Resource Guide

U.S. Department of Energy – Community Benefit Plan Template

U.S. Department of Energy – Community Benefit Plan 101 Webinar

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