CHANGING THE GAME: COMMUNITY-BASED STRATEGIES AND CLIMATE MITIGATION

- SUMMARY OF REPORT FINDINGS -

This write-up summarizes the key findings from the full report prepared for the MacArthur Foundation, Marin Community Foundation, and Equation Campaign. This summary covers (1) background, (2) pathways to impact of community-based strategies, and (3) quantitative impact of these efforts, with a brief conclusion. For more details, please see the full report.

1. Background

In recent years, national philanthropies have directed increased resources to community-based climate strategies[*] – with a particular focus on marginalized communities, who are disproportionately harmed by the climate crisis across the globe. **Yet to date, there has been no systematic effort to compile and analyze the carbon impacts of these local and community-based climate strategies. This report aims to fill that gap** and serve as a bridge between funders and practitioners involved in community-based climate work and those who focus on measuring the carbon impact of mitigation efforts.

The analysis reveals that community-based strategies can yield meaningful mitigation impacts with strong returns on investment (ROI). Many of the efforts profiled will mitigate 1 to 8 million metric tons of CO_2e by 2030 (with some mitigating significantly more), at a cost of well under $1 of local philanthropic investment per ton of CO_2e mitigated by 2030.

This report does not seek to imply that community-based work is more important than national work – the two are typically most impactful when done together with thoughtful coordination. It also does not claim that carbon mitigation is the most important element of local efforts, which often have other economic, health, and equity benefits. Rather, this report aims to fill a gap in the field through a systematic effort to understand the mitigation impacts of community-based strategies. Philanthropy has an opportunity to become more involved in local efforts that complement essential federal policy. This sort of diversified portfolio can help philanthropy achieve results at the speed and scale that is required to meet the climate crisis. The examples in our analysis show how community-based strategies build upon and complement other types of investments, rather than working in isolation. When done well, local and national work can create a virtuous cycle (e.g., local efforts draw on federal subsidies or expertise from national institutions; national advocacy efforts mobilize and rely on communities who became climate supporters through local projects). The report draws on a synthesis of academic research on climate efforts and interviews with more than 40 climate experts, practitioners, organizers, and funders.

2. Pathways to impact of community-based climate mitigation efforts

Funders and experts consulted identified several ways that community-based work fits into their theories of change for climate mitigation. Community-based climate strategies can:

Build public support to create systemic change

Local projects can generate durable support based on the direct employment, health, or equity impacts the efforts have on residents' lives. For instance, in Ohio, a 2008 renewable energy law

[*] Please note that we use the term "community-based strategies" to encompass the wide variety of place-based strategies and solutions that funders can support to achieve Paris-aligned GHG reductions. This encompasses, among other things, support for litigation and legal advocacy; permitting, administrative, and regulatory processes; investigative journalism and media strategies; community outreach; education and organizing; rallies and protests; and arts and cultural events. This definition applies regardless of whether one calls these strategies grassroots, local, frontline, or community-led. Please also note that community-based strategies can operate at the local, regional, and/or national levels.

promoted by lawmakers and insiders was enacted without community support – making it easy for opponents to repeal the law in 2019. Then, local leaders made a new push – this time including community engagement – and built a more durable network of cities and towns committed to this work because they saw concrete health and economic benefits. When communities have a direct stake in an effort, they will stand up to protect it. And since self-interest in benefits like clean air or new jobs transcends ideological views on climate change, it is much more likely to persist in changing political climates.

Local successes can in turn bolster transformational national climate efforts. Residents who have seen the benefits of climate efforts in their community may be more likely to then support broader national climate efforts. In addition, some local efforts go on to have outsized national impact. While it is hard to predict which will gain national prominence, campaigns like Keystone XL and Standing Rock show that local efforts can sometimes lead to major national changes.

Implement national mitigation strategies

Local investments are needed to ensure that national strategies and policies produce their intended impact. The Beyond Coal Campaign's experiences showed that in locations where the campaign invested in meaningful community engagement, communities were able to ensure that coal plant closures stuck. In other locations, where community engagement was minimal, opponents were able to significantly delay closure timelines.

Local engagement is also critical for renewable energy development. Nationally, 15% of counties have blocked the development of utility-scale solar or wind projects, and several states have made it nearly impossible to build new projects. Effective local engagement is needed to secure support for these projects so the US can meet its renewable energy goals.

The implementation of the Inflation Reduction Act also illustrates this dynamic. The $27 billion Greenhouse Gas Reduction Fund depends on a network of financial institutions, nonprofits, and local agencies to finance building decarbonization, clean transit, and renewable energy projects. It requires providing loans, rebates/incentives, and technical assistance to individuals and small businesses, with a focus on disadvantaged communities. Doing this will require partnering with local organizations that have staff capacity, technical expertise, and trust in these communities.

Advance climate progress that can only happen at the local level

Some progress can only happen locally. Sometimes, the work depends on decisions in which state and local governments play a large role (e.g., building permits, public transportation, and land use authorizations for pipelines or renewable energy facilities). In other cases, efforts in cities – which account for a large share of emissions – can make progress in broader geographies that are unfriendly to climate issues. Bloomberg Philanthropies' American Cities Challenge showed how local efforts can add up to meaningful impact – the effort helped 25 cities reduce emissions by 74 million metric tons from 2020 through 2030, with a total investment of $70 million.

Develop, test, and prove scalable solutions

States and major cities can be laboratories for developing and testing new policy approaches that can subsequently be adopted more widely. For example, California pioneered vehicle emissions standards that the Environmental Protection Agency later adopted, and Colorado enacted the first set of methane regulations, which other states and the federal government eventually instituted.

3. Quantitative impact of efforts

The report analyzes 15 data points from the US and Canada to understand the carbon mitigation impact and ROI of community-based climate strategies. **The analysis reveals that community-**

based strategies can yield meaningful mitigation impacts (with many mitigating from 1 to 8 million metric tons of CO_2e by 2030) with strong ROIs (with many well under $1 of philanthropic investment in local efforts per metric ton of CO_2e mitigated by 2030). The table at the end of this summary document presents an overview of the analysis.

The analysis only captures the direct, quantifiable impact of each effort (e.g., directly reducing energy consumption or creating cleaner energy sources; not second-order impacts that an effort has on public sentiment, later policy adoption, etc.). The ROI estimates account for the total philanthropic cost of *local* efforts, since the activities of national NGOs and government are usually relatively well funded. The efforts analyzed spanned four categories:

1. **State and local legislation:** State and local policies can make a significant direct impact and lead to replication elsewhere. For example, New York State's 2019 Climate Leadership and Community Protection Act was driven by a broad coalition of grassroots groups. It commits New York to substantial reductions in emissions (85% decrease from 1990 levels), served as a model for legislation in other states (e.g., Illinois, Massachusetts), and helped shape the federal Justice40 initiative for investing in underserved communities.
2. **Renewable energy development:** Renewable energy development – including wind, solar, battery storage, and transmission lines – is crucial to meeting climate goals. Yet local communities sometimes oppose development in their areas due to environmental, social, and economic concerns (often magnified by fossil fuel industry campaigns). Examples of effective community engagement show that with the right coordination, communities can champion and expedite renewable development – and benefit financially from them.
3. **Supply-side strategies:** Many experts argue that to decrease fossil fuel use, work is needed on both the demand side (e.g., reducing consumption via more efficient cars) and the supply side (e.g., decreasing the share of energy from coal plants). While blocking pipelines will not fully solve the problem, it can make a meaningful difference. For example, developers no longer attempt to build pipelines in Appalachia because of regulatory processes and expensive, drawn-out legal battles initiated by community groups. This has effectively locked more than 210 trillion cubic feet of untapped natural gas in the ground. While other producers will ramp up production to replace any blocked supply, economic analyses indicate that successful pipeline cancellations significantly reduce total global oil production. And strategically chosen fights can also command public attention (e.g., Keystone XL, Standing Rock), change public opinion, and lead to new legal precedents.
4. **Implementation efforts:** Translating strong policies and incentives into reality (e.g., retrofitting homes and businesses, updating industrial equipment) often requires robust "last mile" support, including education and technical assistance. Strong local efforts are critical to providing the hands-on support and credibility that is key to adoption.

4. Conclusion

Community-based climate strategies have played a key role in mitigating climate change, through both their direct impacts and the transformative national changes they can bolster. They have typically done all of this on a shoestring budget. In recent years, these efforts have effectively absorbed increased attention and funding, showing that there is significant additional potential to expand this work and its impact. As interest in community-based strategies has grown, several intermediaries and community foundations have set up infrastructure to support this work by identifying promising local efforts (e.g., implementation of the Inflation Reduction Act), and by aggregating and re-granting funds to effective campaigns. Adequately funding both local and national efforts can ensure a holistic response to the climate crisis.

Overview of ROI of community-based climate strategies

Effort and description	Metric tons of CO_2e ($MTCO_2e$) avoided			Cost of local efforts	Cost per total $MTCO_2e$ avoided through 2030
	Per year	By 2030	By 2050		
State and local legislation					
New York's Climate Leadership and Community Protection Act: A landmark climate bill, drafted by a broad grassroots coalition, that sets emissions caps and funds disadvantaged communities	N/A	58-120 M	1.8-1.9 B	$10 M	**$0.08-0.17**
California's Advanced Clean Trucks regulation: Requires manufacturers to sell zero-emission trucks as an increasing percentage of their annual California sales from 2024 to 2035; was passed with input and support from community groups	N/A	17 M* (2040 estimate)	24 M	$4 M	**$0.24* (through 2040)**
New York City Local Law 154: A law that bans gas for new construction, and which was passed as the result of advocacy by local grassroots groups	N/A	2.1 M* (2040 estimate)	Not available	$1.5 M	**$0.71* (through 2040)**
San Jose electric policies (2019 reach code and ordinance, 2020 building code): Prohibit natural gas infrastructure in all new construction in San Jose; the regulations were supported by youth activists, labor representatives, parents' groups, and environmental groups	N/A	887 K	7.8 M	$1 M	**$1.13**
Renewable energy development					
Empire Wind 1: Offshore wind farm in New York designed with significant input from communities	1.4 M	5.4 M	32.6 M	$2 M	**$0.37**
Sunrise Wind: Offshore wind farm in New York that has a host community agreement with affected onshore localities, which local groups advocated for	1.5 M	7.7 M	38.7 M	$200 K	**$0.03**
Eagle Shadow Mountain Solar PV Park: A solar plant in the Moapa River Indian Reservation that was supported by and is operated by the tribe	600 K	4.2 M	16.2 M	$500 K	**$0.12**
South Fork Wind: Offshore wind farm in Long Island that faced opposition but was approved thanks to advocacy from local groups	222 K	1.3 M	6 M	$200 K	**$0.15**
California's Solar on Multifamily Affordable Housing program: Financial incentives to install solar panels on low-income rental buildings, which was advocated for and is now administered by local groups	N/A	600 K-1.4 M	2.2-7.2 M	$14 M	**$10.30-22.43**
Oak Run Solar Project: The largest agrivoltaic project in Ohio, which a coalition of community groups advocated for	1 M	5.1 M	25.5 M	$110 K	**$0.02**
Supply-side strategies					
Keystone XL pipeline cancellation: The pipeline, which would have transported crude oil from Canada to the Gulf Coast, was opposed by Indigenous peoples, farmers, ranchers, and environmentalists; the local campaign eventually gained significant national attention	6-12 M	52-105 M	168-337 M	$2.6 M	**$0.02-0.05**
Crawford and Fisk power plants shutdown: Residents near two coal plants in Chicago who were directly impacted by the plants' pollution organized with local groups and environmentalists to get the plants closed	2.2 M	39 M	82 M	$1 M	**$0.03**
Enbridge Northern Gateways pipelines cancellation: The pipelines, which would have connected Alberta and British Columbia, were blocked by strong coalitions of Indigenous peoples, municipalities, and environmentalists	4-7 M	51-103 M	124-250 M	$8.5 M	**$0.08-0.17**
Implementation efforts					
Industrial decarbonization in Pennsylvania: EPA grant written by a local nonprofit on behalf of the State of Pennsylvania; the grant would help industrial businesses adopt cleaner equipment and technologies ($396 M received via EPA's Climate Pollution Reduction Grants program)	N/A	5.3 M	9.2 M	$500 K	**$0.09**
Maine's heat pump program:** Financial incentives and consumer information to support household heat pump installation, which was advocated for by a local group and is now administered by a quasi-state agency	150 K	1.2 M	4.8 M	-	**-**

* Indicates value for a different time horizon than listed in the column heading, as noted in the cell, based on available data.
** In this case, philanthropy helped launch a quasi-governmental state entity that then led the heat pump work. While philanthropy's role was critical, it is hard to quantify how much philanthropic funding should be attributed to this effort.