

NOACA Climate Action Priorities Workshop

Workshop Report

November 28-29, 2023

Background

The Northeast Ohio Areawide Coordinating Agency (NOACA) is the Metropolitan Planning Organization (MPO) for the counties of Cuyahoga, Geauga, Lake, Lorain, Medina, the City of Cleveland and the areawide water quality management agency for the same region.

In 2022, NOACA began developing a Regional Climate Action Plan (CAP). Through a service contract with ICLEI—Local Governments for Sustainability USA (ICLEI USA), the following foundational assessments were completed:

- An inventory of regional greenhouse gas (GHG) emissions
- A regional climate risk and vulnerability assessment (CRVA)

To further support CAP development, NOACA partnered with ICLEI USA to design and facilitate two full-day workshops for regional stakeholders.

- **Day 1 – Adaptation:** ICLEI USA presented the outcomes of the regional Climate Risk and Vulnerability Assessment and facilitated a stakeholder engagement session to identify climate adaptation actions.
- **Day 2 – Emissions Reduction:** ICLEI USA presented the outcomes of the regional GHG Inventory and facilitated a stakeholder engagement session to identify climate mitigation actions.

The workshops included a combination of top-down informational and educational content and small group interactive activities.

This report summarizes the ICLEI USA team’s recommendations, outputs from the activities, and participants’ insights.

Recommendations

To guide and support NOACA as it continues to engage stakeholders across the five counties on climate issues, the ICLEI USA team shares the below insights from our experience leading these workshops and developing the regional GHG inventory and CRVA.

Overarching Recommendations

- Climate actions that supported the following goals were **broadly popular** among attendees, in spite of ideological and political differences:
 - Ongoing engagement and education with residents throughout the region
 - Regional cooperation to pilot new technology and approaches; actions that expand consumer choice; incentives
 - Grid performance and resiliency
 - Solutions that acknowledge, support, and celebrate the the diversity of landscapes (e.g. urban, rural), ways of life (e.g. agriculture, commuters), and people and communities that call northeast Ohio home
 - Expansion, protection, and maintenance of green (e.g. parks) and blue (e.g. Lake Erie) spaces
 - Leveraging existing organizations and initiatives in the region to reach climate goals, engage community members, and expand coordination
- While the action prioritization activity was designed to build consensus on potential actions, participants frequently noted that co-benefits and feasibility could be **highly variable** across the five counties. For example, an action that is highly feasible in an urban setting may be impractical in a rural one. To build a diverse base of support for climate action, ICLEI USA recommends that NOACA continue working to ensure that intra-regional differences are acknowledged in planning materials.

CAP Development

- **Increase awareness:** ICLEI USA noted varying levels of awareness of local and regional actions already underway. For example, one discussion group asked whether there was cross-county coordination on emergency response to storms; at least one other discussion group was able to confirm that coordination structures exist and provided examples of existing programs. As the region advances the CAP and moves toward implementation, it will be essential that NOACA and regional stakeholders understand, recognize, and collaborate with existing initiatives. This avoids duplication, supports cost/resource savings, and will support more effective programming overall.

- During the action prioritization activity, participants commented that some actions were already underway in the region. ICLEI USA transcribed these comments in the prioritization sections of the report, and recommends that NOACA investigate these concerns as part of the CAP process. For example, it may make sense to modify the description of an action to tie it to existing work.
- **Emissions reductions and other benefits:** In general, there was awareness of and interest in the types of actions that can lead to the most GHG reductions, such as the electric vehicle transition, reducing VMT, and developing clean energy sources. Other actions prioritized have smaller emissions reductions, but multiple co-benefits; for example tree planting has a small effect on GHG emissions, but contributes to resilience, improved air quality, cooler temperatures and other benefits.
- **Cost and benefits:** Multiple participants expressed interest in quantifying the costs and benefits of climate actions in the region. Participants felt that arguments based on cost effectiveness may resonate with elected officials, businesses, and residents who are not motivated to act by climate change alone. There may be a role for the region in helping local governments better understand and quantify costs and benefits as a separate initiative or as part of the CAP process (at least one participant noted that local governments do not have the tools to do this work).

Support for Local Governments in the Region

- **Coordinated approach to actions:** Many of the actions prioritized by participants, from improving multimodal transportation networks to strategic protection of green spaces, require regional coordination to effectively implement. The local implementation may vary; for example demand responsive transit may be more effective in rural areas, but should connect and coordinate with other transit systems in the region. Combining coordination with local flexibility can leverage economies of scale in programs like group buy of solar, home efficiency improvements and heat pumps. Another area for coordination identified is between higher education and manufacturing on innovative low emissions manufacturing technologies.
 - Participants suggested additional potential implementers for some of the proposed actions. These can be viewed on the [original workshop materials](#).
- **Funding:** Lack of funding was a commonly-cited barrier to feasibility across the proposed actions. There may be a role for NOACA in identifying grant opportunities that serve local governments' climate change objectives. In its most simple form, existing grant opportunities could be promoted via a newsletter, while more complex offerings could be developed by working with a group of local governments to submit joint proposals. Convening groups of local governments and other

stakeholders that meet on a regular basis around particular topic areas and are prepared to respond to opportunities could be a valuable regional coordination role.

- **Advocating for change:** Participants noted that state-level rules and regulations hinder or prohibit some climate actions. Even in cases where the state has not erected barriers, lack of a supportive “enabling environment” at the state level slows climate progress in northeast Ohio. In some cases, this may require creativity at the local level to work around barriers.
 - Participants identified other levels where action may be more effective. For example, many felt that advocating for policy changes from PJM, the multistate electric grid operator, would be more effective than trying to change state policy. Although participants did not prioritize actions related to lobbying for state-level change in either the adaptation or emissions reductions workshops, continuing to monitor state actions and look for potential opportunities will be valuable.

Day 1 – Adaptation

Regional Visioning Interview Activity

ICLEI USA opened the morning session with a short presentation about visioning, after which workshop attendees participated in a regional visioning interview activity. ICLEI USA designed this activity as an icebreaker to get participants interacting with each other, aware of their shared goals (despite ideological differences), and excited about the region’s future.

During the activity, participants worked in groups of four to ask and answer questions about their visions for a resilient northeast Ohio. Participant responses are listed below, by question:

1. What do you hope will be true about Northeast Ohio and surrounding areas in the future?

- Economically sound
- Retain population
- Transit/transportation
- Connectivity across the region
- Local food
- Balance between retention + attraction
- “Steal our water”
- Value diversity (not fear it)
- Connected to green space
- Adequate infrastructure to adapt to future climate needs
- Lead in mitigation and adaptation
- Better leveraging assets
- Business, population
- Lake Erie

2. What about our region as it is today do you want to see preserved?

- Lake Erie as a resource (shipping) + all waterways
- Lake Erie environmental quality, quantity
- MetroParks + all green spaces throughout the region
- Property rights, private ownership as a means of good environmental stewardship (esp. farmland + forest land)
- Tree canopy
- Transit options, bike/pedestrian, community connectivity
- TOD, access
- Industrial + manufacturing base
- Strong union workforce + middle class
- Diversity
- Cultural institutions
- Grit
- Cost of living (for current residents)
- Small town feel
- Utilizing existing infrastructure for the energy transition

3. What about our region do you want to see improved, enhanced, or even created if it doesn’t exist now?

- Shoring up grid
- Continued investment in parks
- Better transit + connectivity (low emission options)

- Water features + green space (accessible)
- Clean energy + air quality
- Using existing infrastructure (smarter grid)
- Energy diversity (nuclear options)
- Electric school buses
- Attract talent, improve workforce
- Restore canopy
- Response to heat, run off (climate change impacts)

4. Which stakeholders (national, state, regional, or local) do you think need to be in the room to advance resilience in Northeast Ohio?

- Local is key since they are the implementers/connection to community
- School districts, electeds
- Great Lakes Alliance
- Local/regional - utilities are key (CPP)
- State/federal - for resources/policy (ODOT)
- All levels- business community
- Chambers of Commerce
- Building trades
- Ag community
- Infrastructure* all contributors

CRVA Results World Café Discussion Activity

After listening to a presentation that summarized the process and results of the regional CRVA, attendees participated in three rounds of World Café discussions broken out by climate hazard: heat, precipitation & flooding, storms, and air quality. For each hazard, participants were prompted to share their experiences with the hazard, thoughts on the CRVA results, and the challenges/opportunities the hazard poses for their communities and the region. Discussions are summarized below by hazard:

Heat

- Concern about urban areas and how they exacerbate hot conditions
- Resiliency of the grid, how impacted by EVs, AC
- Use of AC - other methods to cool, ways to use less, opportunities for better design
- How to reduce urban heat and help the grid
- Strengthen the grid – microgrids, demand side management, local solar, battery systems
- Need for preparedness, emergency management plan
- Can't mandate (e.g. w/ codes) but can pilot and incentivize (Cleveland and Lorain examples)
- Aging population, elderly residents, social isolation
- Cooling centers/rec centers, watering stations – issue of transportation
- Tree canopy & vegetation, how greenery can help solve this problem
- Local foods
- New pests, precipitation - impacts on agriculture
- Role of education
- MetroParks as a resource

- Incentivizing - conservation easements, carbon credits system
- Canopy decreasing in some areas, need for urban tree plans and funding

Heavy Precipitation & Flooding

- Opportunities
 - Stormwater utility to engage + innovate further
 - Nature-based solutions
 - Rainwater capture, striking balance on infrastructure for large rain events
 - Development patterns must change (esp. impervious surface dominance)
 - Emergency responders
- Challenges
 - Rural/ag areas → problem for farmers, economic viability, more nutrient runoff → algal blooms
 - Basement flooding (highly salient political issue), costly to mitigate
 - Residents on local septics
 - Transportation, areas of repeat flooding, flooding on neighboring properties
 - Vector-borne diseases, how to address standing water
 - Solutions are long term + expensive, sewerage infrastructure needs updates
 - Plant + ecological destruction
 - Risks during flood clean ups and hazards like mold
 - What to do about sprawl
 - Impacts on downstream communities
- Strategies
 - Reduce impervious surface, increase tree canopy
 - Homeowners/businesses – make resilience actions as accessible as climate change mitigation actions; encouraging action at all levels
 - Funding → rebates
 - What is the cost vs. benefits of each action
 - Increase resilience holistically (e.g. with parks)
 - More trees!
 - Permeable pavers
 - Snow → sidewalk is clearly a problem, can impair accessibility, bike lanes plowed over, how to prioritize clearance
 - Bioswales

Severe Summer Storms

- Group's experiences
 - Storms are complex systems, also include flooding
 - Power lines, sparking transformers → how to cope with sudden events?
 - 24 hour warnings → people ignore repeated warnings

- Tons of trees lost, power outages → costly
- Summer storms bring in the heat dimension
- Basement flooding (multiple participants experienced this)
- CSO warnings for Lake Erie
- Tornadoes + waterspouts on Lake
- Stronger wind = loss of old trees
- Challenges
 - Generators (diesel?) undermine climate goals
 - Lack of maintenance (e.g. storm drains) = disruption, flooding
 - Cost of clean up, time spent
 - High water, waves causing lots of erosion on the Lake Erie shoreline (warmer waters, not frozen over = more wave action)
 - EM response to large storms (group asks: is there regional coordination?)
 - Reactive to hazard, not proactive planning
- Opportunities
 - “Tiling” of power system (resilient local energy systems)
 - Resilience hubs for more vulnerable, resources for aging
 - Rec centers
 - Bioswales + “complete” green streets
 - Increasing multi-county coordination on EM
 - Being proactive
 - Consent decrees, tunnels created
 - Lots of gray infrastructure
 - How to translate this information so people understand the costs and benefits of action? People understand cost effectiveness, even if they don’t get climate change
- Strategies
 - Rain barrels
 - Underground power lines (cost??)
 - What incentives do we give to developers to come here? (getting ready for climate migration → need for proactive resilient development)
 - Make sure people know the options but don’t have info overwhelm
 - At the municipality level: providing information about a menu of solutions
 - Buy outs e.g. City of Parma
 - Restore the floodplain
 - Green infrastructure, tree canopy - Lakewood has done this, not very expensive
 - Even just planting a few trees on the property (no to grass) → still there are codes that support lawns
 - Private sector: improvements in predictions, advanced preparedness
 - Transportation measures - evacuation support

Air Quality

- Experiences
 - Never saw this before this year
- Challenges
 - Lack of control → coming from very far away
 - Lack of information - when is it safe/not safe?
 - Needing to keep kids indoors
 - Older houses with no AC can't keep windows closed
 - People who work outdoors
- Strategies
 - Forest management → indigenous practices
 - Tree canopy (filtering, multiple benefits) – may need staff to support, rental housing; awards + competitions - increase excitement; schools - kids involved in tree care; signage on trees with benefits
 - Local AQ sensors (more trusted) → where vulnerable people are
 - Real time alerts, displays in public locations
 - Science + data → largest emissions sources
 - Resources to help businesses reduce emissions

Adaptation Actions Prioritization

ICLEI USA opened the afternoon session with presentations about adaptation actions (examples, co-benefits) and an introduction to relevant federal funding opportunities. Afterwards, participants initially split up into three groups of about seven people each, with an ICLEI USA or NOACA consultant/staff facilitator for each group. An additional group (making a total of four groups with about four participants each) was added for the second and third rounds of this activity, as the initial groups were too large to finish their discussions in the allotted time.

The groups reviewed large-form worksheets listing potential adaptation actions that had been previously identified by NOACA's adaptation-focused stakeholder workstreams. Actions were divided into three thematic categories: 1) resilient people, 2) resilient environment, and 3) resilient infrastructure and built environment.

For each thematic category, participants first rated each action on co-benefits and feasibility using a red, yellow, or green dot for each. Participants were instructed that a red dot would indicate low co-benefits, a yellow dot medium, and a green dot high co-benefits. Similarly, for feasibility, a green dot would represent an action that is easy to implement, yellow action that is medium difficulty, and red an action that is difficult. Facilitators were instructed to, if possible, get agreement from the group on one color for each action for co-benefits and one color for feasibility. However, in some cases, a group assigned more than one color. This may indicate that the group was unable to agree, or that the group felt

that feasibility or co-benefits for the action were variable (for example, an action might be easy to implement in urban areas and harder to implement in rural areas). Facilitators also made written comments on the groups’ reasons for the ratings selected.

After rating co-benefits and feasibility for all actions in a category, tables identified their top five priority actions for that category with a blue sticker. Not all groups finished rating co-benefits and feasibility for all actions; in these cases, groups were asked to prioritize designating their top five priority actions.

Resilient People Actions

Four actions were identified as a top priority by all three of the groups:

1. Provide resources to households and small businesses to support emergency preparedness
2. Provide engagement opportunities with elected and public officials on climate change and disaster resilience (e.g. listening sessions, resident advisory committees)
3. Include frontline and disadvantaged communities in planning (e.g. through resident committees) and prioritize investments to protect them
4. Integrate heat, flooding, and other climate related impacts into relevant plans, codes, and regulations

Three additional actions were selected as a top priority by one group, and three actions were not prioritized by any of the groups.

Table 1. Ratings given for resilient people actions

Action	Co-benefits	Feasibility	Top 5?
Identify air pollution hotspots to target for interventions			
Provide resources to households and small businesses to support emergency preparedness			
Provide engagement opportunities with elected and public officials on climate change and disaster resilience (e.g. listening sessions, resident advisory committees)			
Establish a community-led process to identify and rectify the impacts of past discriminatory policies, and allocate resources for equitable development			
Establish and integrate existing community-based early warning and response systems across the region to provide timely information about hazards like storms and flooding			



Develop and implement extreme weather preparedness plans specifically tailored to the unhoused population; provide access to emergency shelters during extreme weather events	● ●	● ●	
Include frontline and disadvantaged communities in planning (e.g. through resident committees) and prioritize investments to protect them	● ●	● ● ●	● ● ●
Ensure community education messages are accessible in all languages and formats	● ●	● ●	
Integrate heat, flooding, and other climate related impacts into relevant plans, codes, and regulations	● ●	● ● ● ●	● ● ●
Develop indoor and outdoor air quality programs for area schools	● ●	● ● ● ●	●

The groups recorded the following comments on the potential resilient people actions:

- Identify air pollution hotspots to target for interventions
 - Identification itself seems feasible
 - Can lead to many co-benefits if air quality improves as a result
 - EJ alignment
 - Important to consider the entire region and multiple scales
 - Already done- may be needed in outlying counties
 - Public health
 - Engagement and health: co-benefits
- Provide resources to households and small businesses to support emergency preparedness
 - Is a proactive action
 - Could be more specific
 - What is a 'resource'?
 - Education will be critical
 - Problem of overflow of info/alerts
 - Broadness hampers feasibility
 - Would need a lot of buy in - challenging
 - Targeted implementation
 - High cost
 - Could be valuable, esp to vulnerable
 - Lakewood recommends 4 days emergency survival kit
 - Health and safety, engagement, equity



- Provide engagement opportunities with elected and public officials on climate change and disaster resilience (e.g. listening sessions, resident advisory committees)
 - Can bring people together on common issues
 - Sessions should also discuss solutions/strategies and emphasize funding, bring in action as much as possible
 - Takes time, low cost
 - Very important
 - Engagement opp. to have ear of public officials
- Establish a community-led process to identify and rectify the impacts of past discriminatory policies, and allocate resources for equitable development
 - 'Establish' seems inappropriate here: foster or coordinate would be better
 - Ensuring funding really reaches communities
 - Will take more thought and intention to get right
 - Feasibility depends on location
 - In some places, talking about discrimination would cause people to tune out
 - Vague, not specific action
 - Combine with # seven
 - Hard to talk about equity
- Establish and integrate existing community-based early warning and response systems across the region to provide timely information about hazards like storms and flooding
 - Improve existing systems
 - Coordinate
 - Target more vulnerable communities
 - Decrease confusion
 - 'Establish': need to evaluate and enhance first
 - Reverse all - people have to opt in
 - What to do when there is a warning
 - Already exists
- Develop and implement extreme weather preparedness plans specifically tailored to the unhoused population; provide access to emergency shelters during extreme weather events
 - Action is already occurring
 - How to tailor to climate change vs current actions
- Include frontline and disadvantaged communities in planning (e.g. through resident committees) and prioritize investments to protect them
 - Grassroots and tenant organizing is very difficult
 - Assumes we can lean on existing orgs
 - Difficult to get residents involved
 - Need compensation for participating
 - Being at the table is everything
 - Combine with #4

- Ensure community education messages are accessible in all languages and formats
 - Harder to have interpretation for live events
 - Reach most vulnerable population
 - Need to tailor message
 - Cultural ambassadors
- Integrate heat, flooding, and other climate related impacts into relevant plans, codes, and regulations
 - State-preemption
 - Plans ok: yellow
 - Codes and regulations: red
 - Hard to re-do everything
- Develop indoor and outdoor air quality programs for area schools
 - Exists but \$?

Resilient Environment Actions

Three actions were identified as a top priority by three of the four groups:

1. Support long-term protection and acquisition of large blocks of undeveloped land or parcels that strategically connect green spaces in the region
2. Remove unutilized pavement and other impervious surfaces, decompact soil and restore natural surfaces to support stormwater absorption
3. Support mature tree care by developing incentives to implement proper maintenance

Five actions were selected as a top priority by two groups and one was selected as a top priority by one group. All of the resilient environment actions were prioritized by at least one group.

Table 2. Ratings given for resilient environment actions

Action	Co-benefits	Feasibility	Top 5?
Support long-term protection and acquisition of large blocks of undeveloped land or parcels that strategically connect green spaces in the region	●●●●●	●●●●●	●●●
Provide connections between natural areas throughout the region, including river corridors, Lake Erie shorelines, the Portage Escarpment and the watershed divide between the Lake Erie and Ohio River drainages	●●●●●	●●●●●	●●

Remove unutilized pavement and other impervious surfaces, decompact soil and restore natural surfaces to support stormwater absorption	●●●●	●●●●●●	●●●●
Manage public and private landscapes to provide communities with accessible recreation and support habitat, biodiversity, and other ecosystem services	●●●●	●●●●	●●
Expand and increase coordination among tree planting programs in the region and disseminate knowledge (e.g. on suitable species) throughout the region	●●●●	●●●●	●
Actively address existing and new forest pests (e.g. Spotted Lanternfly) and pathogens (e.g. Beech Leaf Disease) aggressively and at an early stage to eradicate or at least minimize damage	●●●●	●●●●	●●
Protect and restore healthy, stable streams and water systems	●●●●	●●●●	●●
Support mature tree care by developing incentives to implement proper maintenance	●●●●	●●●	●●●●
Implement nature-based shoreline projects and coastal restoration	●●●●	●●●	●●

The groups recorded the following comments on potential resilient environment actions:

- Support long-term protection and acquisition of large blocks of undeveloped land or parcels that strategically connect green spaces in the region
 - More can be done in outlying counties
 - Should be tied to stormwater resilience
 - Only undeveloped? Under-developed could also be used
 - Cuyahoga vs the rest of the region have very different land resources
 - Densify where infra already is
 - Funding and political will are the difficulty
 - Feasibility - hard due to money, easy in theory
 - Co-benefits - recreation and environment
 - State \$ for greenspace
 - Need coordination
 - A lot of orgs working on it
 - Concerns with eminent domain, property owners
 - Co-benefit: bike, health, water, air



- Provide connections between natural areas throughout the region, including river corridors, Lake Erie shorelines, the Portage Escarpment and the watershed divide between the Lake Erie and Ohio River drainages
 - Need to navigate private land
 - Feasibility - the more rural you get, the more they want to be left alone. Multipurpose trails are hard due to the current infrastructure challenges. Need more community engagement.
 - Co-benefits - recreation and environment
 - Communities don't have tools to measure co-benefits
 - instit./polit. difficult
- Remove unutilized pavement and other impervious surfaces, decompact soil and restore natural surfaces to support stormwater absorption
 - Feasibility- it's easier to protect green space than to remove/replace impervious surfaces
 - Co-benefit- reduce flooding
 - Expensive
 - Uncompacting very hard
 - Green space
- Manage public and private landscapes to provide communities with accessible recreation and support habitat, biodiversity, and other ecosystem services
 - Difficult to implement on private land
 - More feasible on public land
 - Public-private may have very different feasibility
 - Not hard to do on a small scale, hard to manage across region
 - Ordinance requiring mitigation on increased impermeable surfaces
 - Example: Manage Natural Landscape Ordinance (Oberlin)
 - Private landscape?
 - Monetary incentives for private?
 - Multiple health co-benefits
- Expand and increase coordination among tree planting programs in the region and disseminate knowledge (e.g. on suitable species) throughout the region
 - Already a decent amount of collaboration
 - Education could be its own goal, very important to maintain canopy
 - Not controversial or polarizing
 - Feasibility- Cleveland has started this
 - Urban need vs rural need
 - A lot of knowledge and interest
 - Free trees in Medina
 - Not controversial but lacks coordination
 - Esp for grants

- Actively address existing and new forest pests (e.g. Spotted Lanternfly) and pathogens (e.g. Beech Leaf Disease) aggressively and at an early stage to eradicate or at least minimize damage
 - Good info and notifications exist
 - Funding lacking to control spread
 - Feasibility- emerald ash borer took too many trees, delay the inevitable
 - Preservation and restoration efforts can be wiped out
 - Funding and expertise not high
 - Fuel for forest fires from dead wood
 - Tech difficult
- Protect and restore healthy, stable streams and water systems
 - In region - many orgs that are doing great work
 - Can't control factors outside region/upstream
 - What is the exact goal?
 - Feasibility- currently happening
 - Groups are working on it
 - Easy to talk to people about, not easy to do
 - E.g. Doan Brook difficulty? Cuyahoga success
- Support mature tree care by developing incentives to implement proper maintenance
 - Problem: usually cheaper to remove trees with problems
 - Who will pay for it
 - Education and incentives
 - Education will be more feasible
 - Feasibility- it's easy to plant a tree, harder to maintain care
 - Need education on importance of maintenance vs planting
 - Don't invest in trees the way we invest in street or building maintenance
 - Maintenance
- Implement nature-based shoreline projects and coastal restoration
 - Must be systematic
 - Feasibility- not easy to maintain, funding, issues, time
 - Expensive, but on a lot of people's mind
 - Access to lake, recreation

Resilient Infrastructure and Built Environment Actions

Four actions were identified as a top priority by three of the four groups:

1. Implement shoreline protection projects that safeguard critical infrastructure (e.g. water supply facilities, marinas, roads/highways, etc.)
2. Incentivize smart development and land use planning (e.g. low impact development, Ohio Balanced Growth Program) to reduce sprawl and habitat fragmentation

3. Provide education, resources, and incentives to assist communities, businesses, and homeowners in building detention basins, rain gardens, permeable pavements and other stormwater management tools
4. Integrate climate resiliency into decision-making about capital expenditures

One action was selected as a top priority by two groups and one was selected as a top priority by one group. Three actions were not prioritized by any of the groups.

Table 3. Ratings for resilient infrastructure and built environment actions

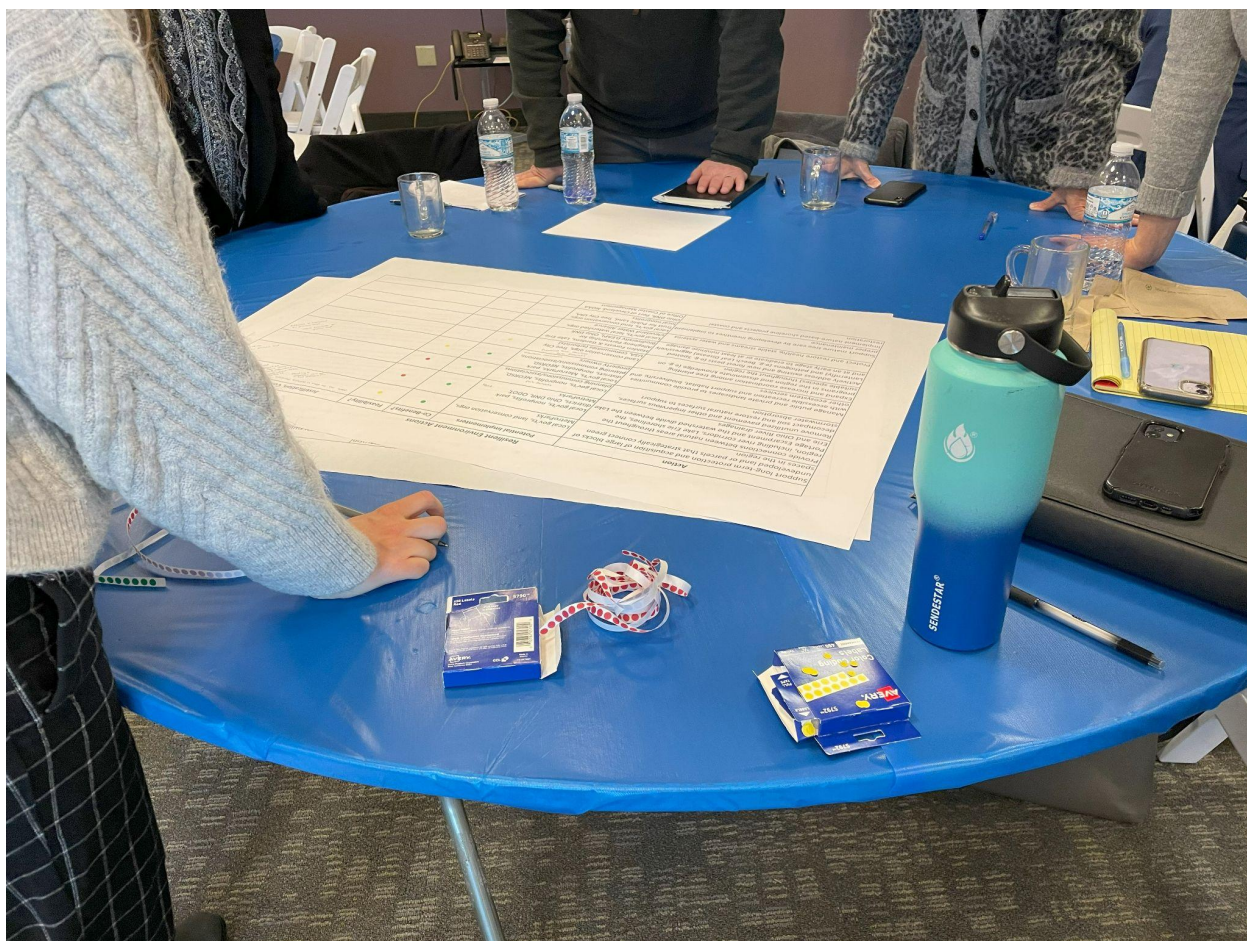
Action	Co-benefits	Feasibility	Top 5?
Assess climate vulnerability and risks to infrastructure; invest in construction of resilient infrastructure, including roads, bridges and irrigation systems	●●●	●●●	●●
Implement shoreline protection projects that safeguard critical infrastructure (e.g. water supply facilities, marinas, roads/highways, etc.)	●●●	●●●	●●●
Invest in expanding broadband infrastructure to underserved areas	●●●	●●●	
Identify vulnerable water and wastewater assets and develop plans to harden them against climate threats	●●●	●●●	●
Incentivize smart development and land use planning (e.g. low impact development, Ohio Balanced Growth Program) to reduce sprawl and habitat fragmentation	●●●	●●●●	●●●
Expand the NEORS Green Infrastructure Program and create similar programs throughout the region	●●●	●●●	
Provide education, resources, and incentives to assist communities, businesses, and homeowners in planting and maintaining trees and native landscaping	●●●	●●●	
Provide education, resources, and incentives to assist communities, businesses, and homeowners in building detention basins, rain gardens, permeable pavements and other stormwater management tools	●●●	●●●	●●●
Integrate climate resiliency into decision-making about capital expenditures	●●●	●●●	●●●

The groups recorded the following comments on potential resilient infrastructure and built environment actions:

- Assess climate vulnerability and risks to infrastructure; invest in construction of resilient infrastructure, including roads, bridges and irrigation systems
 - Ample political will and public support
 - Time and money are the issue
 - Assessing infrastructure may be feasible but the cost/investment to replace might be a challenge
 - Expensive - take advantage of current federal funding
- Implement shoreline protection projects that safeguard critical infrastructure (e.g. water supply facilities, marinas, roads/highways, etc.)
 - Emphasis on protection of critical infrastructure
- Invest in expanding broadband infrastructure to underserved areas
 - Problem is primarily affordability rather than access to infrastructure
 - Access to internet can increase income
 - Internet is critical infrastructure - e.g. covid
- Identify vulnerable water and wastewater assets and develop plans to harden them against climate threats
 - Water supply is at risk from algae blooms and other hazards
 - Is 'harden' the best wording - 'protect'?
 - Feasible to asses at least
 - This is happening - State EPA, NEORS, others
 - Expensive
 - Challenging for Cleveland Water, 25 pipe breaks/day
- Incentivize smart development and land use planning (e.g. low impact development, Ohio Balanced Growth Program) to reduce sprawl and habitat fragmentation
 - Feasibility depends on area within region
 - Those who are impacted don't want it. Cheaper to build outside of city than to retrofit office space to living space
 - Difficult due to fragmented govt landscape
- Expand the NEORS Green Infrastructure Program and create similar programs throughout the region
 - Needs and incentive structure
 - Has high barriers to entry currently
 - Cost of maintenance?
 - Also need education
 - How can we get other districts to follow?
 - Dependent on funding
- Provide education, resources, and incentives to assist communities, businesses, and homeowners in planting and maintaining trees and native landscaping
 - We don't do enough education on native landscaping



- Same as 'manage public and private landscapes' on Resilient Environment
- Provide education, resources, and incentives to assist communities, businesses, and homeowners in building detention basins, rain gardens, permeable pavements and other stormwater management tools
 - Restrictions vary and are unclear to property owners
 - Not enough education
 - A lot of orgs doing this, just need resources to expand
- Integrate climate resiliency into decision-making about capital expenditures
 - Feasible with the right people in charge
 - Helps everything above happen



Working with a facilitator to discuss and rate actions

Participant Commitments

At the end of the day, workshop participants were asked to complete a brief “participant commitments” individual reflection activity. Each participant was handed two large-size Post-It notes and asked to write down:



- 1) Two actions that they are committed to implementing in their community (if an elected official) or that they want to see implemented in their community (if not an elected official)
- 2) Two actions that they most support for the region.

“In Your Community” Actions:

- Purchase & use composter
- Investigate solar panels on roof
- Diverse involvement in CAP process
- Tree planting/maintenance/education in all parts of it
- Incentivize smart development
- Provide resources for communities to promote native landscapes + manage stormwater
- More transit shelters and transit frequency
- 15 min cities (ability to walk/bike/bus to many destinations)
- Invasive species / pest control
- Protect and restore healthy streams
- Protect and enhance tree canopy
- Restrict development of existing green space
- Helping my children, friends + family learn about ways to live sustainably
- Continue to garden, plant trees + support nature
- Incentivisation of pollinator gardens and non-grass lawns
- Installation of permeable pavers on public parking lots
- Get estimates for solar panels
- Continuing errands ... using transit driving less
- Convince neighbors to stop using pesticides + fertilizers on turf
- Educate drivers on bike lanes + bike infrastructure, create more of a bike friendly, less car centric culture
- Improve tree canopy - take care of existing + grow canopy
- Expand green space + build connections between green spaces
- Improve and maintain urban tree canopy.
- Ensure that policies, programs, plans, initiatives and projects are built and implemented in a manner that addresses the question of climate resiliency.
- Turn off + unplug lights, lamps, etc. when not in use or away
- Use our new rain barrel in spring & summer
- Planting more trees
- Looking for ways to save and store rainwater
- Replace appliances with low flow systems for water conservation
- Plant a rain garden
- Better lawn/garden native plantings and additional trees
- Less waste (energy consumption) vehicles and food waste plus reduction of trips

- Climate resilient risk assessment & investment in transportation system infrastructure (roads, bridges, pathways, bikeways trails, sidewalks) transit systems
- Funding for maintenance of tree canopy & other vegetated systems

Actions for the Region:

- Develop resiliency requirements for infrastructure improvements
- Protect coastal areas, water infrastructure and undeveloped spaces
- Commitment to transit connectivity
- Conservation of more public/private lands and waterways for increased biodiversity protection
- Nature-based shoreline protection
- Remove unused impervious structures
- Prioritization of reuse of brownfields
- Regional strategy to combat invasive species
- Expand pollinator garden, climate resilient natural restoration
- Increase awareness of climate resilient systems and education on value to human health and well-being
- More focus on TOD and land use planning
- Focus on resilience with all decisions and investments
- Conservation of land
- Addressing non-native, pest species
- Protect and enhance tree canopy
- Restrict development of existing green spaces
- Push county electric utility to be as green as possible
- Look for money for Cuy County infrastructure analysis and repair
- Coordination and cooperation of climate resiliency decision making
- Smart growth and sustainable building materials for transportation
- Learning and implementing decarbonization strategies within the utility industry, ie hydrogen, RNG, and responsibly sourced gas
- Being part of the community focused on reducing the effects of climate change by helping to find solutions
- Including climate resiliency as a factor in funding decisions/capital expenditures
- Preserving/expanding greenspace by limiting sprawl/incentivizing lower impact development
- Planting trees/education on forestry
- Forestry maintenance, mitigation of potential environmental threats
- Educate on building energy hvac systems that are more energy efficient, (information on) what is electrification
- Promote green space optimization more intentioned care and programming

Day 2 – Emissions Reduction

Funding Priorities Discussion

In the morning session, participants broke into three groups and discussed which federal funding opportunities are most valuable for the region and their own communities. The following considerations and suggestions were identified:

- Political will to electrify, but regulations lag (i.e. for EV infrastructure)
- Healthcare: opportunities for microgrids
 - How to approach applications - by facility, by group, by project?
- Abundance of talking and planning, lack of action
- Despite availability of funding, application process can be hard to navigate
- The longer we take to take action, we lose credibility
- Direct vs. tax credit is an advantage
- For transit, funding for facilities
- Managing electrical demand
- Bundling projects
- What about maintenance?
- Where to place new infrastructure
- Electricity rates are not currently friendly to EV charging (esp. buses)
- Coordination for implementation is a difficulty
 - How to approach systemic issues
- Healthcare: intense power demand that cannot be interrupted
 - Main campuses - most emissions by high risk to change grid
- Legacy buildings - master plans for campuses can ease energy transition, but still difficult
- Home weatherization + energy efficiency
- Support accessing tax credits for businesses (programs to support)
- Regional -> clean hydrogen hub
- Region: works on all levels -> supports individual and community level action
- Challenge: lack of corporate interest in smaller scale products
- Concern about cost prevents some counties (Medina) from pursuing infrastructure opportunities
 - Inequitable distribution
- Use existing grid infrastructure -> reliability, affordability, safety
- Build trust w/ community + ensure reliability with growth of renewables
- expectation/education to decrease consumption
- Recognize flexible public transit options (e.g. point to point in Medina)
- Concern: energy into EVs + interest in buying?
- Challenge of maintaining gas-fired generators
- Business opportunities + consumer choice
- Interest in incremental change

- For rural communities:
 - Zoning for solar. Effort to sabotage. Well funded. Don't deprive ability to do solar.
 - Should be funding for rural areas.
 - Look into Agrivoltaics for solar. Wind is harder locally, but also compatible with ag.
 - Create an economic incentive so it's harder to say no. Becomes a private property initiative.
- Suburbs: zoning code may prohibit solar/heat pumps.
- Would like to see more on storage and resilience. Phase out peaker plants. Add utility scale batteries. E.g. Green Mountain Power. Move to vehicle to grid.
- Good to talk about households: residential role and transportation.
- ODOT: EV charging stations throughout Ohio. Fast charging on highways
- Being at the Great Lakes conference. Concerns about battery manufacturing, toxins in solar panels, lack of recycling.
- Grid scale: priority on fostering co-ops to electrify houses. United solar: local solar co-ops. Do the same for heat pumps. Co-op does bulk purchase, get a bid, get a commitment.

Inventory Discussion

After the presentation of the inventory results, discussion was mostly about completeness of the inventory, in particular that some types of agricultural emissions are not included.

The scope of the inventory was determined following the Global Protocol for Community Scale Emissions (GPC) Basic approach, which is an international standard for how to measure community GHG emissions. Following this standard, emissions from off road agricultural equipment (such as tractors) are included in the inventory, as are emissions from stationary energy use in agricultural buildings. However, other emissions associated with agriculture, such as from the application and production of fertilizer, emissions from livestock and manure management, and emissions from or carbon sequestration by agricultural soils were not included.

Participants expressed that agriculture is very important in rural parts of the region, and addressing more categories of agricultural emissions is important to show that rural concerns are being paid attention to.

Based on the feedback received, ICLEI USA recommends that when the next GHG inventory for the region is completed (this will likely by 2025, based on requirements of the EPA planning grant) an effort be made to include additional agricultural sources of emissions, to the extent that suitable data sources can be found.

Emissions Reduction Actions Prioritization

In the afternoon session, participants broke into four groups of about four people each, with an ICLEI staff person as a facilitator for each group. The groups reviewed sheets listing potential emissions reduction actions that had been previously identified by the workstreams for transportation, buildings, and clean energy and industry.

The discussion groups were given the same instructions as for the adaptation actions on day one; see that section for details of the process.

Transportation Actions

Two actions were identified as a top priority by three of the four groups:

1. Include multimodal transportation infrastructure and complete streets in transportation planning
2. Incentivize land use patterns that use transit oriented development (TOD).

Five actions were selected as a top priority by two groups; four were selected as a top priority by one group, and three actions were not prioritized by any of the groups.

Table 4: Ratings given for transportation actions

Action	Co-benefits	Feasibility	Top 5?
Include multimodal transportation infrastructure and Complete Streets in transportation planning	● ● ● ● ●	● ● ● ● ● ●	● ● ●
Build out comprehensive regional bike network (protected bike lanes, trails, greenways) that serves all ages and abilities	● ● ● ● ●	● ● ● ● ●	●
Prioritize the safety of all road users by incentivizing the adoption of Vision Zero plans/policies	● ● ?* ●	● ● ? ●	
Require highway widening projects to undergo greenhouse gas analyses to ensure they do not interfere with regional climate targets	● ● ● ● ●	● ● ● ● ● ●	●
Incentivize land use patterns that use transit oriented development (TOD)	● ● ● ● ●	● ● ● ● ●	● ● ●
Identify and implement policies to improve parking pricing (e.g. property tax on commercial parking)	● ● ●	● ● ●	
Establish local e-bike subsidy programs	● ● ● ● ●	● ● ● ● ●	

Ensure school districts have current Safe Routes to School Travel Plans and work to develop plans for with districts without one	● ● ● ● ●	● ● ● ● ●	● ●
Develop transit hubs and integrations between transit providers and first/last mile modes (bikeshare, scooters, electric car share)	● ● ● ● ●	● ● ● ● ●	● ●
Develop model EV Ready Infrastructure ordinances or incentives for local governments	● ● ● ● ●	● ● ● ● ●	●
Create robust, reliable public EV charging network with an emphasis on areas with a high volume of multi-family homes	● ● ● ● ●	● ● ● ● ●	●
Educate residents and dealers about the benefits of EVs and available IRA tax incentives	● ● ● ● ●	● ● ● ● ●	● ●
Electrify region's school bus fleets	● ● ● ● ●	● ● ● ● ●	● ●
Develop joint purchasing agreements for zero emissions MDHVs	● ● ● ● ●	● ● ● ● ●	● ●

*One group wrote in question marks rather than choosing colored dots for co-benefits and feasibility of the Vision Zero action. From discussion afterwards, it was apparent that not all participants were familiar with what Vision Zero means. Vision Zero goals/plans seek to eliminate pedestrian injuries and fatalities from vehicles.

The groups recorded the following comments on the potential transportation actions:

- Include multimodal transportation infrastructure and Complete Streets in transportation planning
 - Harder in rural areas
 - Funding dependent
 - Feasibility - urban area easier vs rural
 - Co-benefits: personal choice, health
- Build out comprehensive regional bike network (protected bike lanes, trails, greenways) that serves all ages and abilities
 - Hard to be accessible to people of all abilities, esp. the blind and hard of hearing
- Prioritize the safety of all road users by incentivizing the adoption of Vision Zero plans/policies
 - Can implement plans but very hard to get to zero fatalities
 - The climate benefit is the co-benefit for this action. Primary benefit is reducing injuries/fatalities
- Require highway widening projects to undergo greenhouse gas analyses to ensure they do not interfere with regional climate targets
 - Analysis is easy, acting on it is harder



- Incentivize land use patterns that use transit oriented development (TOD)
 - This is already being done, can do more
- Identify and implement policies to improve parking pricing (e.g. property tax on commercial parking)
 - Action description should be clarified that 'improve' means increasing the price
 - Not really relevant outside Cuyahoga County
 - May combine with impervious surface fees
- Establish local e-bike subsidy programs
 - Limited audience
- Ensure school districts have current Safe Routes to School Travel Plans and work to develop plans for with districts without one
 - Already being done a lot
- Develop transit hubs and integrations between transit providers and first/last mile modes (bikeshare, scooters, electric car share)
 - Action description should be edited to include increasing transit service
- Develop model EV Ready Infrastructure ordinances or incentives for local governments
 -
- Create robust, reliable public EV charging network with an emphasis on areas with a high volume of multi-family homes
 - Funding is an issue
 - Developers don't want to pay
 - Concern about grid aspect and resiliency
- Educate residents and dealers about the benefits of EVs and available IRA tax incentives
 -
- Electrify region's school bus fleets
 - Need federal funding to support
 - One group identified this as the next top priority if they could designate six instead of just five
- Develop joint purchasing agreements for zero emissions MDHVs
 - Use state bid list

Buildings Actions

Three actions were identified as top priorities by all four groups:

1. Workforce development/contractor training for energy efficiency and building electrification opportunities

2. Install building envelope and electrification upgrade package (include electrical system upgrades) for low and moderate income residents (stack incentives for low/now cost)
3. Organics composting - establish composting centers, community drop-off sites, and commercial pick-up

District or neighborhood scale geothermal heat pilots were identified as a top priority by three groups. The remaining potential policies were each identified as a top priority by one group.

Table 5: Ratings given for buildings actions

Action	Co-benefits	Feasibility	Top 5?
Workforce development/contractor training for energy efficiency and building electrification opportunities	● ● ● ●	● ● ● ● ● ●	● ● ● ●
Install building envelope and electrification upgrade package (include electrical system upgrades) for low and moderate income residents (stack incentives for low/now cost).	● ● ● ●	● ● ● ●	● ● ● ●
Educational clearinghouse/website for homeowners to easily identify efficiency incentives and identify contractors	● ● ● ● ●	● ● ● ●	●
Lobby state to update building code	● ● ●	● ● ●	●
Identify opportunities and develop pilots for district/neighborhood scale geothermal heat networks	● ● ● ●	● ● ● ●	● ● ●
Benchmarking policy requiring larger buildings to report energy use (could optionally include energy tune-up requirements for low performing buildings).	● ● ● ●	● ● ● ●	●
Organics composting - establish composting centers, community drop-off sites, and commercial pick-up	● ● ● ●	● ● ● ● ● ●	● ● ● ●
Refrigerants - build a system and conduct education to ensure refrigerants are captured at end of equipment life. Work with HVAC contractors and provide consumer collection/dropoff for appliances.	● ● ●	● ● ●	●

The groups recorded the following comments on the potential buildings actions:

- Workforce development/contractor training for energy efficiency and building electrification opportunities
 - Need more coordination across region
 - Co-benefit - jobs (concern about quality)
 - Already being done
- Install building envelope and electrification upgrade package (include electrical system upgrades) for low and moderate income residents (stack incentives for low/now cost).
 - Need a lot of federal funding
 - Communicating benefits to residents is a challenge
 - Start with public housing (easier to work with small number of agencies)
 - Co-benefit: investment, reduce strain on grid, safety
 - Federal funding
 - With housing authority implementation centralized control makes this more feasible
 - Easier for housing authorities than private landlords
- Educational clearinghouse/website for homeowners to easily identify efficiency incentives and identify contractors
 - Suggested implementer: Ohio department of Energy
 - Want local experts
 - Already exists?
 - Energystar.gov, ReWire America
 - Would there be incentives?
 - How to vet contractors?
- Lobby state to update building code
 - Very hard
 - Question - what is the desired code change? Concern about energy choice, want more specifics.
 - Stretch code?
 - Little support in state legislature
 - Resistance from building association
- Identify opportunities and develop pilots for district/neighborhood scale geothermal heat networks
 - Very expensive, and limited areas where it can happen
 - Pilots are feasible
 - Could use existing infrastructure
 - Regulatory difficulty

- More feasible within Cleveland
- Benchmarking policy requiring larger buildings to report energy use (could optionally include energy tune-up requirements for low performing buildings).
 - Co-benefits: cost savings for businesses; better working environment
 - Also look at repurposing empty buildings
 - Interest in government operations approach as pilot
 - Co-benefit - grid resiliency
 - Concern about cost, and about making it a requirement
 - Data gathering is difficult
 - Buildings are reticent to increased reporting
- Organics composting - establish composting centers, community drop-off sites, and commercial pick-up
 - There are models working in the region
 - Interest in anaerobic digestion as additional action
 - Need zoning to allow land use in composting
 - Difficult to find/procure a suitable site. Could be closed landfills?
- Refrigerants - build a system and conduct education to ensure refrigerants are captured at end of equipment life. Work with HVAC contractors and provide consumer collection/dropoff for appliances.
 - Free takeaway with purchase of new appliance works
 - Co-benefits: electric resilience [related to upgrading of appliances themselves more than this action], education
 - Appliances are already being disposed of, quick
 - Currently required?

Clean Energy and Industry Actions

Four actions were identified as top priorities by three of the four groups:

1. Solarize campaign where homeowners across community or region receive group solar purchase price from prescreened contractors
2. Develop community solar projects
3. Partnership with School Districts to increase rooftop solar availability- coordinated procurement (bulk)
4. Expand participation in the Dept of Energy's better plants program (which identifies opportunities for industrial energy efficiency)

Two actions were identified as a top priority by two groups: a coalition to advocate at the PJM level for renewable energy, and a regional consortium of researchers and manufacturers to pursue federal grants. Expanding community choice aggregation and lobbying the state to support more solar and wind energy were each identified as a top priority by one group. In addition, one group added two top priority actions that were not

already on the list: energy storage and virtual power plant/demand management. These actions were not available for consideration by the other groups.

Table 6: Ratings given for clean energy and industry actions

Action	Co-benefits	Feasibility	Top 5?
Solarize campaign where homeowners across community or region receive group solar purchase price from prescreened contractors	● ● ●	● ● ●	● ● ●
Expand community choice aggregation	● ●	● ●	●
Develop community solar projects	● ● ● ●	● ● ● ● ● ● ● ●	● ● ●
Lobby state to support more wind and solar energy	● ●	● ●	●
Regional clean cities coalition that advocates at the PJM level for streamlining renewable projects, permitting, and stabilizing capacity markets	● ● ●	● ● ●	● ●
Partnership with School Districts to increase rooftop solar availability- coordinated procurement (bulk)	● ● ● ●	● ● ● ● ● ● ● ●	● ● ●
Expand participation in the Dept of Energy's better plants program (which identifies opportunities for industrial energy efficiency)	● ● ●	● ● ●	● ● ●
Build regional consortium of researchers and manufacturers to pursue federal grants like the recent hydrogen hubs	● ● ● ●	● ● ● ●	● ●
Electricity storage (utility scale and customer sited)*	●	●	●
Virtual power plant/aggregation/grid responsive demand management*	●	●	●

*Action added by one of the discussion groups

The groups recorded the following comments on the potential clean energy and industry actions:

- Solarize campaign where homeowners across community or region receive group solar purchase price from prescreened contractors
 - Need campaign for low-moderate income and renters
 - Co-op is available



- Combine with energy efficiency
- Suggested additional key implementer: Solar United Neighbors
- Key implementers suggestions: remove PUCO, add Cuyahoga County Solar Co-op
- Concern about campaign aspect; cost and choice; contractor screening
- Expand community choice aggregation
 - Good if it can be used to develop new solar/wind in the region
 - Seems to be more a tool for cost savings than emissions reduction
 - Key implementation suggestions: remove PUCO, add Cleveland, NOPEC, SOPEC, local governments
- Develop community solar projects
 - Accessible to low income in a way that solarize campaign is not
 - No regulatory authority from state to do this with existing authority
 - Assumes willing partner
 - Already happening, feasibility more challenging in rural areas
- Lobby state to support more wind and solar energy
 - Depending - success?
- Regional clean cities coalition that advocates at the PJM level for streamlining renewable projects, permitting, and stabilizing capacity markets
 - A lot of existing advocacy
 - Efficiency (all of the above) for energy projects
- Partnership with School Districts to increase rooftop solar availability- coordinated procurement (bulk)
 - Key implementer suggestions: remove PUCO, add counties, Ohio Schools Council, state department of education
 - Five districts are already installing on high schools
- Expand participation in the Dept of Energy's better plants program (which identifies opportunities for industrial energy efficiency)
 - Several higher ed partnerships already
 - Suggested additional key implementer: higher ed
 - Needs funding incentives -> would make expansion more feasible
 - Already used - marketing expand, support small businesses participation
 - Bandwidth to expand the reach of these efforts?
- Build regional consortium of researchers and manufacturers to pursue federal grants like the recent hydrogen hubs
 - Limited stakeholders
 - Too abstract
 - Open to other regional opportunities
 - Key implementers: include manufacturing extension partners throughout state
- Electricity storage



- Fund pilot projects that focus on both utility scale storage (e.g. Oxford Superhub) and decentralized storage (e.g. Tesla Powerwall)
- Increases resilience
- Virtual power plant/demand management
 - Increases resilience

Buildings Emissions Reduction Actions				
Action	Key Implementers	Co-Benefits?	Feasibility?	Justification, Comments, Questions
Energy Efficiency and Electrification - Potential reduction 3,280,000 MTCO₂e in 2030				
Workforce development/contractor training for energy efficiency and building electrification opportunities	Community Colleges, Electrical Trade Associations, PUCO Jobs Ohio	●	●●	Need more coordination across region
Install building envelope and electrification upgrade package (include electrical system upgrades) for low and moderate income residents (stack incentives for low/new cost).	Housing Authorities	●	●	Need a lot of federal funding communicating benefits to residents is a challenge start w/ public housing
Educational clearinghouse/website for homeowners to easily identify efficiency incentives and identify contractors	PUCO + Others	●	●	
Lobby state to update building code	Building & Trade Associations, Planners, Building Inspectors	●	●	Very hard
Identify opportunities and develop pilots for district/neighborhood scale geothermal heat networks	Geothermal Professionals Ohio, ODNR, Army Corps	●	●	Very expensive - limited impact areas where it can happen
Benchmarking policy requiring larger buildings to report energy use (could optionally include energy tune-up requirements for low performing buildings).	PUCO Cleveland 2030	●	●	Cost savings for businesses, better making EV repurpose empty buildings
Solid waste - Potential reduction 720,000 metric tons CO₂e in 2030.				
Organics composting - establish composting centers, community drop-off sites, and commercial pick-up	County Solid Waste Districts, Refuse Collectors, Local govts, Rust Belt Riders	●	●	Models locally are working
Refrigerants - Potential reduction 510,000 metric tons CO₂e in 2030				
Refrigerants - build a system and conduct education to ensure refrigerants are captured at end of equipment life. Work with HVAC contractors and provide consumer collection/dropoff for appliances.	County Solid Waste Districts, USEPA/Ohio EPA Private hauler	●	●	Free takeaway w/ replacement

Dale Miller Joyce Huang Eli Mady Metcalf Ciria Ramon
 Andy Boateng

Example completed worksheet

Participant Commitments

Actions from lists reviewed in discussion groups that were identified on commitment cards:

- Organics composting (identified by 5 people)
- Incentivize land use plans that use transit oriented development (3 people)
- Educational energy efficiency clearinghouse website for homeowners (2 people)
- Build out regional bike network (2 people)
- Electricity storage (2 people)
- Workforce development (2 people)
- Partnership with school districts to expand solar
- Solarize campaigns



- Virtual power plant/demand management
- Lobby state to support solar and wind
- Better plants program and incentives
- Community solar
- EV ready ordinances
- EV charging networks and infrastructure
- Complete streets and multimodal transportation
- Residential building efficiency and electrification package
- Regional consortium of researchers and manufacturers to pursue federal grants
- Electrify school bus fleets
- Lobby to improve permitting at PJM level for renewable energy
- Energy use reporting (benchmarking) for larger buildings
 - Add efficiency upgrades
- Transit hubs for first/last mile connections

Other actions identified on commitment cards:

- Look at solar for individual rooftops - slate roof issue
- Implements towards school districts
- Codes and laws to establish implementers
- Carbon emissions via residential, focus on residential and agricultural
- Collaborative networks across NOACA that seeks funding that encompasses larger selection of adaptation + mitigation goals. Connect solar with conservation with utilities.
- Find ways to motivate residential. Find ways for residential to implement change. Industrial/commercial will follow. Give the people the voice for the future!
- Tax incentives for building policy
- Increase transit ridership
- Prioritize energy efficiency and weatherization
- Continue to leverage federal dollars available to support an “all of the above” energy strategy
- Cuyahoga County utility buildout
- Foster purchasing groups for both solar and home electrification so that groups of people/orgs can go in together through process, review of contractors, and benefit from bulk purchasing. Contractors also benefit from economies of scale and incentive for workforce training.
- Energy efficiency, renewable energy promotion
- Reduce VMT, encourage multi-modal transportation (bike lanes, public transit, etc)
- Diversity of energy choices
- Proof of work
- Hybrid approach. In order to get all of the way to the goal, we have to get half-way there first - meet in the middle

- Advocate for better data inclusion to account for sustainability efforts (including flexible public transit) in non-urban counties. Example: the Fund’s [“Where Matters” website](#) excludes data on Medina County’s flexible public transit routes, so our emissions scores aren’t competitive.
- Transit bus electrification
- Food choice - reduce animal agriculture
- More attention to implementation - counties, municipalities, townships, non-profits, foundations working together. Multiple pathways, flexible
- Investigating onsite solar
- Investigating residual reuse options to . . . reuse waste as input
- Investigating carpooling/electric charge for employees
- Investigation of sewer heat as energy
- Region-wide no idling campaign
- Resilient environment actions that might have been discussed yesterday:
 - Manage forests, streams, wetlands + meadows for climate resilience
 - Retrofit impervious surfaces to capture stormwater and remove unnecessary impervious surfaces
- Add solar
- Improve energy efficiency
- Electrify our fleet
- Support complete streets, regional trails, multi-modal transportation
- I am excited to be in a position to have a meaningful impact on multiple aspects of the climate action plan in my role at work. Running a large facility that is a major consumer of both electric and gas I have an opportunity to make a small but meaningful impact and serve as an example. Specifically, we reclaim refrigerants, we have executed an expansive energy performance project including weatherization . . . and low flow fixtures. We are currently consulting a solar array.
- Provide funding for programs aimed a energy efficiency and renewable energy promotion (solar, geothermal, etc)
- Coordinate efforts aimed at reducing VMT and multimodal transportation
 - Prioritizing compact development and transit oriented development

Materials

Photos of the event and workshop materials are saved on the ICLEI USA Google Drive:

- [Event Photos](#)
- [Photos of Worksheets and Discussion Notes](#)