Community Benefits Plan
DE-FE0032360
Carbon Solutions
Wyoming Trails Carbon Hub (WyoTCH) - Developing a Roadmap for a Sustainable Carbon Hub

Purpose

The purpose of this document is to summarize the specific SMART objectives that Carbon Solutions is committing to in its Community Benefits Plan for their project: Wyoming Trails Carbon Hub (WyoTCH) - Developing a Roadmap for a Sustainable Carbon Hub.

A. General Project Information

1. **Construction Information**

   This project will develop a Roadmap for how to design a collaborative, sustainable carbon management hub, including the integrated infrastructure and workforce capacity necessary to capture, transport, store, and utilize millions of tonnes of CO2 each year. This project does not contain any construction activities.

2. **Project Location and Communities Affected**

   The proposed scope of work does not include any data acquisition or construction activities and therefore is not expected to directly impact communities. However, if the project advances to future stages, data acquisition and construction activities would occur along hundreds of miles of land in Wyoming, potentially impacting dozens of communities. As the project is still in its feasibility stage, the specific areas that would be impacted have not been finalized. Given the current location of potential geologic sequestration sites, current and proposed sources of CO_2, and current and proposed pipeline locations, only the two Northwestern counties in Wyoming, Teton and Park, will not be considered during this project. Each of the other 21 counties in Wyoming will be considered, to some degree, for the impacts that a regional carbon storage hub might have on them. Several of these counties have disadvantaged communities (DAC) within their boundaries, as defined by the Council on Environmental Quality's Climate and Economic Justice Screening Tool (CEJST) and the DOE Disadvantaged Communities mapping tool. The number of tracts, along with their 2010 Census populations, are summarized Table 1. Figure 1 identifies disadvantages communities in the state.

Table 1. Summary of the count of disadvatanged community tracts and population total, by counties, in Wyoming.

County	# DOE-DCR Tracts	DOE-DCR tract population	# CEJST Tracts	CEJST tract population
Albany County	2	4635	0	0
Big Horn County	2	6097	1	3555
Carbon County	0	0	2	5965
Fremont County	5	22438	3	14298
Goshen County	3	11453	1	4861
Laramie County	3	14034	4	18660
Lincoln County	1	1994	1	1994
Natrona County	2	8570	4	12952
Niobrara County	1	2484	1	2484
Platte County	1	6575	0	0
Sweetwater County	3	11440	2	8599
Wyoming	0	0	1	7761
Uinta County	1	6852	0	0
Weston County	1	3314	0	0

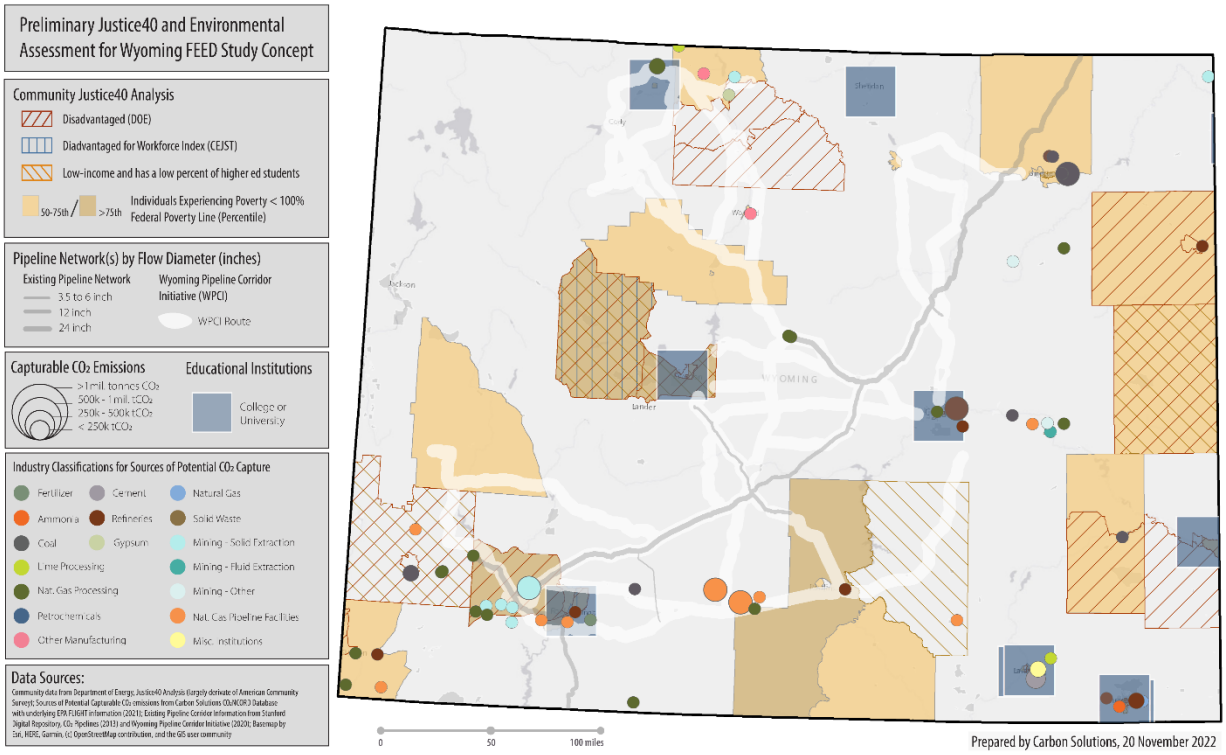

Figure 1: Location of existing pipelines, proposed CO_2 pipeline, existing CO_2 sources, and disadvantaged communities.

B. Community and Labor Engagement

1. Community and Labor Stakeholders Engaged to Date

The Project Team has numerous community partners that will prove critical to implementing the Community and Stakeholder Engagement plan. Carbon Solutions already has existing relationships with:

- Local Utilities (PacifiCorp, Rocky Mountain Power)
- Industry (Dave Johnston Power Plant, Jupiter Oxygen Corporation)
- Native Nations (Northern Arapaho Tribe)
- Federal Government (Bureau of Land Management)
- State Government (Wyoming Department of Environmental Quality, Wyoming Energy Authority)
- Academia (University of Wyoming, Enhanced Oil Recovery Institute, High Plains American Indian Research Institute, Little Big Horn College, Wind River Tribal College)
- Non-profits (Clean Air Task Force, Environmental Defense Fund)

The Project Team has obtained letters of support from the Jupiter Oxygen Corporation, Northern Arapaho Tribe, High Plains American Indian Research Institute, Little Big Horn College, Wind River Tribal College. The Wind River Tribal College will play an active role in the execution of the project. High Plains American Indian Research Institute and Little Big Horn College may become involved during the development and execution of the project's workforce development pilot program.

2. Community and Labor Stakeholders to be Engaged

The Project Team's Community and Stakeholder Engagement Team will apply principles and practices outlined in the NETL's Best Practices: Public Outreach and Education for Geologic Storage Projects and World Resources Institute: Guidelines for Community Engagement in Carbon Dioxide Capture, Transport, and Storage Projects. The Project Team has assigned two Project Team members as well as a local facilitator to lead the Community and Stakeholder Engagement Team. The Community and Stakeholder Engagement Team will consider engaging with the stakeholders identified in Figure 2. Emphasis will be given to community members from historic fossil-fuel communities, disadvantaged tracts identified in Table 1, areas with relatively high unemployment or areas where a high proportion of individuals are experiencing poverty. The final community and stakeholder engagement list will be refined during project execution. The Project team already has existing relationships with the stakeholders identified with an asterisk (*).

Type	Organization	Type	Organization
Utilities	• PacifiCorp* • Rocky Mountain Power (RMP)* • Black Hills Energy (BHE)	**Academia / Research Institutions**	• Enhanced Oil Recovery Institute (EORI)* • The University of Wyoming* • Wyoming Community College Commission • High Plains American Indian Research Institute* • Little Big Horn College* • Wind River Tribal College*
Industry	• Dave Johnston Power Plant* • Jupiter Oxygen Corporation* • Sargent & Lundy • EOR Operators • Pipeline Owners • Reaction Engineering • Genesis Alkali	**Non-Profits**	• Clean Air Task Force* • ClearPath • Environmental Defense Fund* • Sierra Club • Wyoming Outdoor Council • Western Watersheds Project
		Unions / Labor	• Local Pipefitters Union 182 • Wyoming AFL-CIO
Local and Regional Governments	• Advisory Council on Historic Preservation • County Commissioners • County Health Departments	**Local Community-Based Organizations**	• Local school board members • Powder River Basin Resource Council • Nature Conservancy of Wyoming • Rock Springs Grazing Association
Native Nations	• Eastern Shoshone Tribe • Shoshone-Bannock • Northern Arapaho Tribe * • Crow Nation • Northern Cheyenne	**State Government**	• Wyoming Industrial Siting Division • Wyoming Infrastructure Authority • Wyoming Governor's Office • Wyoming ENDOW (Economically Needed Diversity Options for Wyoming) • State Land Board • Wyoming Highway Department • Wyoming State Engineer's Office • State Historic Preservation Office • Wyoming Industrial Siting Division • Wyoming Department of Environmental Quality (WDEQ) * • Wyoming Office of State Lands and Investments • Wyoming Energy Authority*
National Government	• U.S. EPA Region 8 • U.S. Department of Agriculture • Bureau of Land Management* • U.S. Fish and Wildlife Service • Federal Highway Administration • U.S. Army Corps of Engineers • U.S Department of Transportation • PHMSA		
Other Stakeholders	• General Public • Landholders • Legal community supporting any of these stakeholders		

Figure 2: Community and Labor Stakeholders

3. Workforce and Community Agreements

The Project Team has not yet committed to negotiating a formal workforce and/or community benefits agreement (CBA). As part of the scope of work under this project, the Project Team will undertake an evaluation of all relevant stakeholder groups. If during the project period it appears that a formal CBA or other agreement would be beneficial for the impacted communities, the Project Team will reassess the appropriateness or feasibility of such an agreement. Notwithstanding the absence of a formal CBA, the

Project Team will devote significant resources toward developing relationships with relevant stakeholders to determine appropriate points of entry into impacted communities and to identify opportunities for building trust, generating support, and incorporating community concerns into project development. These commitments are discussed in Section C – Investing in Job Quality and a Skilled Workforce and Section D – Diversity Equity Inclusion and Accessibility.

C. Investing in Job Quality and a Skilled Workforce

1. Collective bargaining

The proposed scope of work does not include any data acquisition or construction activities and therefore the Project Team does not intend to hire additional workers outside of the core Project Team necessary to execute the project scope. However, if the project advances to future stages, data acquisition and construction activities would occur and would necessitate re-evaluation of collective bargaining.

2. Union support

The proposed scope of work does not include any data acquisition or construction activities and therefore the Project Team does not intend to hire additional workers outside of the core Project Team necessary to execute the project scope. However, if the project advances to future stages, data acquisition and construction activities would occur and would necessitate re-evaluation of union support.

3. Job quality

The project will require the hiring of graduate students, professors, scientists, engineers, and financial, business, and policy professionals to execute the project scope.

Beyond this effort (outside the scope of this project), it is anticipated that the construction, operation, and maintenance of capture facilities, linear infrastructure, and injection facilities will require a diverse workforce consisting of both skilled and unskilled laborers. The necessary skills for successful construction and operation are readily available in the project region due in large part to the expansive oil, gas, and coal industry. For example, engineers, geologists, drillers, operators, environmental scientists, and Environment, Health, and Safety (EHS) professionals are all adequately positioned to contribute to commercial project development. However, a robust engagement strategy is required to effectively communicate CCUS job opportunities and career paths to underrepresented groups and members of disadvantaged communities.

A preliminary Energy and Environmental Justice (EEJ) assessment revealed that communities near the proposed point source emitters (e.g., electricity, chemical manufacturing, mining, pipeline facilities, etc.) and the proposed pipeline right-of-way and storage sites have historically relied on the fossil fuel industry for jobs. Further, many of the communities located near point source emissions are burdened with negative environmental outcomes. It is anticipated that capture facilities will be collocated with point source emitters and, as a result, jobs will be located in these historically economically and environmentally distressed communities.

i. Competitive Wages and Benefits

It is anticipated that the skillset required for the jobs that will be created during construction and operations will be similar to those in the oil, gas, and coal industries. The capture equipment will be tailored to the existing chemical processes and will be an add on to the existing process equipment. To attract personnel to operate the new capture equipment, compensation will need to be competitive with that of the existing workforce. During the construction phase of the project a large workforce will be required to install and build capture equipment, compression and transportation equipment, and storage facilities. The jobs will vary from construction to highly skilled and specialized labor. Market forces will determine the prevailing wage but due to the location and nature of the skills required it is anticipated that the wages will be at the higher end of the range.

A preliminary estimate indicates that as many as 31,000 temporary construction jobs could be created to support the construction of Project WyoTCH at full build out. Estimates indicate that nearly 800 of these jobs would be permanent jobs in operations, maintenance, and inspection. Annual salaries for permanent jobs are anticipated to be around $100,000 during operations.

ii. Workforce Education and Training

Refer to Section C.4 (Other Workforce Development Activities).

iii. Workplace Safety and Health

As the project scope does not include any data acquisition or construction activities, workplace safety and health will mainly be limited to the confines of a typical office setting. The Project Team will follow and execute their individual company policies regarding worksite safety, hazard prevention and control, safety and health training, and anti-harassment training. Future project phases (e.g., construction and operation) would require detailed worker safety and health plans.

4. Other Workforce Development Activities

The Project Team will host a pilot workforce education and mentorship program on carbon management at the Wind River Tribal College. This program will be modeled after the DOE's Research Experience in Carbon Sequestration (RECS) program and career network for young professionals and graduate students. The pilot will provide hands on, interactive training on the technical fundamentals and business case of CCS and expose participants to the range of workforce opportunities including trade and technical roles, project management, public engagement, etc. Based on participant feedback, different training tracks and workforce pipelines will be established including skills development, mentorship, and internship opportunities. RECS alumni, including Tribal members, will contribute to a mentorship network and help to build capacity for the job opportunities that will become available as this technology is deployed.

Commitment C4.i – Establish Tribal CCS Network

A leadership team will be established consisting of the RECS director, a Tribal RECS alumnus, a Wind River Community College staff member, and a representative from the University of Wyoming. The leadership team will develop an engagement strategy to work with Tribal representatives, including the Northern Arapahoe, Eastern Shoshone, and Southern Ute. With Tribal liaisons, the leadership team will identify Tribal educational, workforce development and mentorship program leaders in the region and directly engage them in a Tribal CCS Network. Based on input from network participants, the project team will establish a preferred means (website, mailing list) and frequency (e.g., once per month or quarter) of communication.

Commitment C4.ii – Conduct Needs Assessment

The project team will align the pilot project activities and creation of workforce pipelines to the needs of the students and community. By working with the leadership team and Tribal liaisons on a needs assessment, the project team will structure focus areas based on direct community feedback and an alignment to current educational opportunities, carbon management in the community college, and the types of carbon management opportunities most likely to be sited in the Wind River area.

Commitment C4.iii – Develop Pilot

The project team and leadership team will develop a workforce education and mentorship program for carbon management modeled after the RECS program and network. Initially, this program will cover the fundamentals of CCS and have three workforce tracks: technical, project management, and trades. The project team will align RECS alumni and other CCS experts to serve as mentors and secure commitments from businesses to present at the pilot program, host student interns, and establish an educational program.

Commitment C4.iv – Conduct Pilot Event

The project team will conduct a pilot workforce education and mentorship program for carbon management, bringing together students, businesses, and researchers currently working in CCS. This event will take place at a Tribal community college, with a mix of hands-on, networking, and listening and learning activities.

Commitment C4.v – Pilot Evaluation and Refinement
The project team will conduct an evaluation of the pilot program with a focus on securing community inputs to shape further workforce development priorities and activities. This includes reflecting quantitative information, such as how many people attended, how many businesses were present or offered mentors or internships, and how many individuals chose specific workforce tracks. Qualitative information will also be gathered via individual discussions and open-ended written feedback. All of the evaluation materials will be used to improve the pilot project. These learnings will be shared with other FECM-funded programs to encourage region-wide programs for communities adopting new carbon management technologies.

Commitment C4.vi – Development of Sustainable Financing
The project team will engage with public/private stakeholders at the local, state, and federal levels and private foundations for sustainable financing for the workforce education program beyond the life of the project.

D. Diversity, Equity, Inclusion, and Accessibility

The Project Team commits to making Diversity, Equity, Inclusion, and Accessibility (DEIA) a cornerstone of Project WyoTCH. The Project Team will build upon their already existing DEIA culture to create a more diverse workforce for CCUS in Wyoming. This will be accomplished by building a network of vendors, subcontractors, and tribal colleges and universities to explore what CCUS opportunities are most aligned with their interests.

Much of the DEIA initiative will be to support developing a pilot project education/workforce experience based on the Department of Energy's RECS program. This work will be critical to creating an integrated approach to workforce development for CCUS throughout the regional hub proposed in Project WyoTCH. The Project Team will focus on creating a pilot educational/workforce development program that brings together industry, CCUS, community members, students, and educational institutions to start a preliminary workforce pipeline to support a regional carbon hub. To support DEIA, the Project Team is partnering with Kanata America, RedStreak, and Wind River Tribal College.

Commitment D1. Project partner Kanata America is an Indigenous founded organization that will assist with project Tasks 2 (Community Benefits Plan) and 5 (Evaluating regional infrastructure).

Commitment D2. Project vendor RedStreak is U.S. Native American (Navajo) owned, and minority-owned and operated consulting firm. Redstreak will provide support for project Task 2.

Commitment D3. The Project Team will partner with Wind River Tribal College to create a pilot educational/workforce development program that brings together industry, CCUS, community members, students, and educational institutions to start a preliminary workforce pipeline to support a regional carbon hub.

Commitment D4. Create a database of workforce development organizations, tribal colleges and universities, apprenticeship programs, educational institutions, labor unions, and job centers throughout the state. By the end of year 1, host one virtual meeting with at least ten local, tribal colleges and universities, and state organizations to present the work-related opportunities available for CCS.

Commitment D5. Develop an advisory board to help organize the workforce development portion of the pilot program. Conduct at least two virtual meetings with workforce development and tribal colleges and university contacts to advise on how to create a meaningful, long-term process for recruiting and retaining a CCUS workforce in Wyoming.

E. Justice40 Initiative

The Project Team will complete an EEJ assessment and an Implementation strategy. It is anticipated that there will be minimal direct community benefits or disbenefits associated with the proposed project as this phase of the project does not involve field data acquisition or construction. As a result, the Project Team may also consider subsequent project phases that have a higher likelihood of impact on the surrounding communities.

The Project Team seeks to understand the community's understanding of benefits related to carbon-reduction activities, and how these in turn relate to the social, environmental, economic, and energy goals of the greater community. Two areas of need will drive the research needed to execute the J40 initiative.

1. Data Needs: Understand necessary data for transparent, community-engaged siting and analysis. Additional information is required to develop a comprehensive understanding of community benefits, risks, and disbenefits, including potential environmental impacts of infrastructure development. The Project Team intends to collect data related to local health and environmental factors (such as additional soil characteristics, fire risk, critical habitats, location of rivers, lakes, or streams), physical characteristics of any proposed development site(s) (geology, water composition, faults), cultural and social landscape (archeological sites, location of important community resources), and economic data (including information on training center and schools). In addition, anticipated benefits from a regional carbon hub could include reductions in CO_2 and other co-pollutants, which

will require establishing baseline estimates for emissions at every plant in the region, potential co-benefits resulting from capturing CO_2, and anticipated economic impacts of capture equipment.

Commitment E1. Complete research needed to understand necessary data for transparent, community-engaged siting and analysis, included risks and co-benefits.

2. Community/subject matter expert feedback regarding potential risks and benefits: An important source of information regarding the viability of the carbon hub infrastructure will come from community and subject-matter-expert (SME) feedback. To integrate community perspectives into the project work, two project team members will work with a local facilitator to plan and attend four in-person events in communities throughout Wyoming; these will tentatively take place in Riverton, Casper, Rock Springs, and Gillette. These modifications will be incorporated into the Geographic Information Systems (GIS) and communicated to the technical and modeling project team, along with information gathered in DEIA (Section D) and Labor Engagement (Section C). The team will use a continuous improvement process throughout the project, iteratively adjusting the user interface and data inputs to reflect the needs and interests of the community advisory board.

   Commitment E2. Obtain community and SME feedback to characterize potential risks and benefits associated with the carbon hub infrastructure. Incorporate feedback into GIS.

   Community feedback will become especially important as the Project Team begins to characterize and propose ways to measure community benefits and disbenefits. An important outcome of this process will be to develop metrics for how community risks and benefits can be measured, and how the qualitative (e.g., perceptions of CO_2 management, construction disturbance) and quantitative (e.g., jobs, local taxes, pipeline locations) can be recorded, tracked, and communicated to communities, community leaders, and the project team.

   Commitment E3. Propose and develop qualitative and quantitative metrics to track how risks and benefits flow to communities, including those that are and are not disadvantaged communities using the DOE-DCR or the CEJST screening tools, in order to support Justice40 goals and goal-tracking.

The current anticipated primary benefits of Project WyoTCH are a decrease in environmental exposure and burdens; an increase in the clean energy job pipeline and job training for individuals; increases in clean energy enterprise creation (e.g., minority-owned or diverse business enterprises); and increased parity in the access to and adoption of clean energy technologies. These benefits will be finalized and quantified during project execution.

It is not anticipated that there will be any direct community disbenefits associated with the proposed scope of work. However, the construction of capture facilities, CO2 pipelines, and other facilities to support subsequent project phases and commercialization may impact surrounding communities. To minimize these disbenefits, the proposed carbon hub favors routes that are either away from population centers or that leverage existing rights-of-way identified through the extensive Wyoming Pipeline Corridor Initiative (WPCI). The WPCI has received approval from the Bureau of Land Management (BLM) following an extensive Environmental Impact Statement (EIS) review process. The WPCI consists of approximately 2,000 miles of pipeline corridors throughout central and western Wyoming. The EIS completed in 2021 evaluated the resources, socioeconomics, vegetation, wildlife, water resources, geology, and other areas. It also addressed environmental justice concerns, such as the influx of non-resident workers into tribal communities during pipeline construction. Diligent assessment of available data (e.g., Council on Environmental Quality's Climate and Economic Justice Screening Tool (CEJST)), in direct collaboration with broader public engagement, will ensure that the project minimizes disbenefits to local communities.

F. Summary Table

Category	Commitment #	Budget Period 1 Milestone
Community and Labor Engagement		See below.
Investing in Job Quality and a Skilled Workforce		
A leadership team will be established consisting of the RECS director, a Tribal RECS alumnus, a Wind River Community College staff member, and a representative from the University of Wyoming.	C4.i	Estimated 4 months after project award
The leadership team will align the pilot project activities and creation of workforce pipelines to the needs of the students and community.	C4.ii	Estimated 6 months after project award
The project and leadership team will develop a workforce education and mentorship program for carbon management modeled after the RECS program and network.	C4.iii	Estimated 9 months after project award
The project team will conduct a pilot workforce education and mentorship program for carbon management, bringing together students, businesses, and researchers currently working in CCS.	C4.iv	Estimated 12 months after project award
The project team will conduct an evaluation of the pilot program with a focus on securing community inputs to shape further workforce development priorities and activities.	C4.v	Estimated 15 months after project award
The project team will engage with public/private stakeholders at the local, state, and federal levels and private foundations for sustainable financing for the workforce education program beyond the life of the project.	C4.vi	Quarterly updates to leadership team; Work-to-date reported at End-or-Project report.
Diversity, Equity, Inclusion, and Accessibility		
Project partner Kanata assist with Tasks 2 (Community Benefits Plan) and 5 (Evaluating regional infrastructure).	D1	N/A – Ongoing throughout project as part of Tasks 2 and 5.
Project vendor RedStreak provide support for Task 2 (Community Benefits Plan).	D2	N/A – Ongoing throughout project as part of Task 2.
Partner with Wind River Tribal College to create a pilot educational/workforce development program.	D3	N/A – Ongoing throughout project as part of Task 2.
Create a database of workforce development organizations, tribal colleges and universities, apprenticeship programs, educational institutions, labor unions, and job centers throughout the state. Host one virtual meeting with at least ten local, tribal colleges and universities, and state	D4	Estimated 12 months after project award.

Category	Commitment #	Budget Period 1 Milestone
organizations to present the work-related opportunities available for CCS.		
Develop an advisory board to help organize the workforce development portion of the pilot program. Conduct at least two virtual meetings with workforce development and tribal colleges and university contacts to advise on how to create a meaningful, long-term process for recruiting and retaining a CCUS workforce in Wyoming.	D5	Estimated 18 months after project award.
Justice40 Initiative		
Complete research needed to understand necessary data for transparent, community-engaged siting and analysis.	E1	Estimated 6 months after project award.
Obtain community and SME feedback to characterize potential risks and benefits associated with the carbon hub infrastructure. Incorporate feedback into GIS.	E2	Estimated 18 months after project award.
Develop metrics to track how risks and benefits flow to communities, including those that are and are not disadvantage communities using the DOE-DCR or the CEJST screening tools.	E3	Estimated 24 months after project award.