
Governor's Council on Climate Change (GC3)

Financing Resilience

MEETING MINUTES

Meeting Date: July 2, 2020
Meeting Time: 3pm-5pm
Meeting Location: Zoom

Zoom Recording:
<https://ctdeep.zoom.us/rec/share/W-ooM6vO0XNLQNaOtx3gBJ9xWYD3T6a8hiVN-PRfmBnnPhRd5Sr1V6ZpVjLQrRnX?startTime=1593716652000>

ATTENDANCE

Working Group Member	Title	Organization	Present
Rebecca French, Co-Chair	Director of the Office of Climate Planning	CT Dept. of Energy and Environmental Protection	X
Andrew Mais, Co-Chair, represented by George Bradner, Director, Property and Casualty Division	Commissioner	CT Insurance Department	X
David Lehman, Co-Chair, represented by Deputy Commissioner Alexandra Baum	Commissioner	CT Dept. of Economic and Community Development	X
Bryan Garcia, Co-Chair	President and CEO	CT Green Bank	X
Joseph MacDougald	Executive Director	UConn Law School Center for Energy and	X
Claire Coleman	Undersecretary for Legal Affairs	CT Office of Policy and Management	X
James O'Donnell	Executive Director	CT Institute for Resilience and	
David Sutherland	Director of Government Relations	The Nature Conservancy	
Curt Johnson	President	Save the Sound	X
Kathy Dorgan	Principal	Dorgan Architecture & Planning	
Wayne Cobleigh	Vice President, Client	GZA	X
Dean Audet	Senior Water Resources Engineer	Fuss & O'Neill	X
Robert LaFrance	Policy Director	Audubon CT	X
Adrienne Farrar Houël	President and CEO	Greater Bridgeport Community Enterprises	X
Jennifer O'Brien	Program Director	Community Foundation for Eastern	
James Albis	Senior Advisor to Commissioner Katie Duke	DEEP	X

John Truscinski	Director of Resilience Planning	CT Institute for Resilience and Climate	X
-----------------	---------------------------------	---	---

Associated Staff	Title	Organization	Present
Mary-beth Hart	Sr. Environmental Planner	DEEP	X
Joey Wraithwall	Manager, State Director's Office	The Nature Conservancy	X
Caroline Sloat			X
Amy Paterson	Executive Director	CT Land Conservation Council	X
Brian Basso	GC3 Intern	Yale School of Forestry/CT DEEP	X
David Bingham			X
Frogard Ryan	CT State Director	The Nature Conservancy	X
Nicholas Zuba	Senior Manager, Commercial and Industrial Programs	CT Green Bank	X
Gwen Macdonald	Director of Ecological Restoration	Save the Sound	X
Leslie Kane	Managing Director	Audubon CT	X
Eric Hammerling	Executive Director	CT Forest and Park Association	X
Yonatan Zamir			X
Mathew Fulda	Executive Director	CT MetroCOG	X
Jonathan Lee			X
Patrick Carelon			X
Chris McArdie			X
Sara Bronin: Invited Speaker	Professor	Uconn School of Law	X
Susmitha Attota: Invited Speaker	Town Planner	Town of Stratford, CT	X

AGENDA & NOTES

Welcome and Announcements

Agenda Item(s)

Meeting: Financing Adaptation and Resilience Work Group

Date: 7/2/2020

Participants:

- James Albis
- Rebecca French
- Adrienne Houel
- John Truscinski
- Dean Audet
- Bryan Garcia
- Todd Berman
- Wayne Cobleigh
- Susmitha Attota
- Robert LaFrance
- Curt Johnson
- Yonatan Zamir
- Caroline Sloat
- Amy Paterson
- Chris McArdie
- Eric Hammerling
- Claire Coleman
- Mathew Fulda
- Patrick Carelron
- Alexandra Daum
- Brian Basso
- George Bradner
- David Bingham
- Ryan Frogard
- Joey Wraithwall
- Jonathan Lee
- Sara Bronin

Agenda:

- Discuss Barriers to Financing Resilience
- Discuss Progress on draft financing section of the report

Rebecca French: John Truscinski and Rebecca French collated data from literature review on barriers to financing resilience

- Resilient Rhody Paper findings concerning barriers to financing resilience
 - Lack of upfront capital
 - Design criteria
 - Limited ability to borrow funds → how much debt can the organization carry
- Bost Paper findings concerning barriers to financing resilience
 - Inadequate info on Costs and Benefits
 - Incorrect pricing risk
 - *George Bradner* adds there are political sensitivities that affect the inability to price risk properly
 - Collective Action challenges
 - Capital Budget Constraints
 - Misaligned incentives
- Connecticut Specific barriers to financing resilience
 - Lack of matching funds from both municipal and state
 - Lack of Capacity to write proposals and grants
 - Lack of Cost/Benefit information for projects
 - Uneven distribution of benefits
 - Lack of prioritization of projects and issues
 - Federal incentives
 - Coordination of investments
 - High Costs for big infrastructure projects

Curt Johnson

- Add lack of capacity to write proposals and grants. The group should allow NGOs to participate to assist in the grant writing process
- Not all of the barriers listed can be addressed by the GC3

Yonatan Zamir

- The future report will have to address the growing deficits resulting from COVID-19

Robert LaFrance

- In general resilience projects do not have a revenue source as opposed to other projects
- The committee needs to think about how to create alternative revenue options

Wayne Cobleigh

- Right now municipalities are having trouble meeting the matching requirements for federal grants
- US Treasury Cares Act money can be used by municipalities to offset their matching requirements for FEMA funds

- Theme to these barriers is limited resources pointing to the municipalities lack of personnel that are writing grants. As a consequence, the group may want to look at bolstering municipalities capabilities here.

Dean Audet

- SNEP network helps municipalities with writing grants <http://snepnetwork.org/> in Connecticut

Curt Johnson

- We should not just focus on municipalities but expand out to private funding sources

Bryan Garcia: Moves group over to progress on report writing

- 3 areas of focus in synthesizing scope and definitions of the Adaptation Planning and Implementation Working Group
 - Infrastructure and land use
 - Working and Natural Lands
 - Public Health and Safety
- Discusses existing Climate Financing Mechanisms - group lead: Wayne Cobleigh
 - The group will inventory all the existing public and private funding mechanisms
 - What are the key aspects of the public and private mechanisms that the group should highlight?
 - The group will develop an equity lens to see the strengths and weaknesses of the financing mechanisms
 - *Wayne Cobleigh:*
 - Use the data they have collected on funding mechanisms to publish to the public so that community groups can easily find what funding sources are available to them specific to their areas
- Discusses inventorying new and emerging funding sources - group lead: Curt Johnson
 - Discusses identifying new funding
 - Apply an equity lens to the new and emerging funding sources
 - *Curt Johnson*
 - What kind of funding do we need? - what are the goals and gaps of finding funding sources
- Discusses Equity Lens criteria and how to apply the lens

Susmitha Attota: gives presentation on Implementing Coastal Resiliency Projects: Opportunities & Challenges

- Discusses Stratford, CT's approach to a Coastal Resiliency Plan and the funding mechanisms they are using
- Points out that no matter who writes the grants in a municipality, the grant requires a lot of staff to process
- Need to continue to show small successes to constituents and political leaders in order to continue receiving support for grants
- State support for national grant writing would be helpful

Sara Bronnan: gives presentation on Funding Priorities for Municipal Resilience Projects

- Consider prioritizing resilient zoning because it establishes green land use development patterns
- Investing in tree planting in municipalities seems to have the highest return on investment because it makes neighborhoods cooler and has community mental health co-benefits

- Consider funding resilient affordable housing - near transit, out of flood plans, think of economic resilience as environmental resilience
- Septic Systems are a main area of concern

Meeting chat box:

15:34:49 From DAudet : Rebecca, here is the link

15:34:52 From DAudet : <http://snepnetwork.org/>

15:38:02 From James Albis : The following website is the main website for all GC3 working groups, including this one. There, you will find meeting minutes, agendas, presentations, and other information. Minutes and documentation from this meeting will be posted within the next week.

15:38:03 From James Albis : <https://portal.ct.gov/DEEP/Climate-Change/GC3/Subcommittee-and--working-groups>

15:43:37 From Matthew Fulda : In addition to the CTDEEP staff Rebecca mentioned, if anyone would like to further discuss the details of the Adaptation and Resilience working group, I am the co-chair of the WG and co-lead of two of the subgroups. My email is mfulda@ctmetro.org

15:48:13 From Adrienne Houel : For "Working Lands" wouldn't the USDA be a huge source of funding??

15:48:44 From Adrienne Houel : Beyond watershed....lots of insurance programs too...

15:49:10 From DAudet : I believe USDA is listed there.

15:49:26 From Adrienne Houel : Yes, for Watershed....

15:50:01 From Eric Hammerling : You're right, Adrienne. This is clearly not a complete list yet.

15:53:36 From Eric Hammerling : Certainly there are open space/forest land and agricultural land protection programs that would fit in the existing state and federal programs that support adaptation, resilience, and mitigation from natural climate solutions.

15:55:27 From Matthew Fulda : It may be helpful to include the new INVEST transportation authorization bill recently passed in the House as it contains resilience specific transportation funding programs.

16:12:41 From Jonathan Lee : Maybe I might have missed something (sorry if I have), but just wondering, what is the range of areas that you're looking at for the considerations of the equity lens? For example, with power plants, would we consider just the surrounding area, the closest towns, the entire jurisdiction of the local COG, or all who live downstream (or downwind) of its possible effects?

16:37:31 From Bryan Garcia : Soooo good! Thank you! Can you send along the report?

16:43:48 From Bryan Garcia : To Matthew's point on the House passed "Invest in America Act" yesterday, there is also the National Climate Bank element of the bill that is now called "Clean Energy and Sustainability Accelerator" - https://amendments-rules.house.gov/amendments/DINGMI_087_xml%20REVISED%20V2629200938513851.pdf

16:44:27 From Frogard Ryan (she, her) : That is a wonderful statement. Thank you! Great presentation as well.

16:44:48 From Bryan Garcia : You will see here, that equity and inclusion is front and center, and we have brought in resilience into the green bank model framework. We just need the Senate to approve it - and that ain't going to happen!

16:46:31 From Eric Hammerling : Yay trees!

16:46:52 From Chris McArdle : Trees and traffic calming...

16:50:17 From RFrench : Please mute yourself if you are not speaking.

16:54:17 From Frogard Ryan (she, her) : Yeah trees is right!

17:00:15 From Chris McArdle : or how about a self funded plan at the state level?

17:01:11 From Sara B : www.desegregatect.org if you want to see the full platform or sign up. It should be out there next week.

Public comments

Name, Organization (if applicable)

- Comment

NOTE: Zoom recording available: <https://ctdeep.zoom.us/rec/share/w-ooM6vO0XNLQNaOtx3gBJ9xWYD3T6a8hiVN-PRfmBnnPhRd5Sr1V6ZpVjLQrRnX?startTime=1593716652000>

Climate impacts on financing, state, municipal and economic development fiscal health

- Insurance
 - From NAIC - Climate and pandemics are likely compounding risks, affecting all strata of society, straining first responders, complicating evacuations, and impeding recovery plans.
 - Increasing costs due to reforms to NFIP and federal funding
 - Lapsing coverage in CT
- Chronic flooding may impact property taxes, municipal, and state grand lists
 - Many coastal towns may rely on high value homes near the coast. SLR may cause chronic flooding in CT's coastal floodplains and impact desirability and affordability of these homes.
- Borrowing costs and municipal bond markets
 - Increasingly requiring disclosure of climate risks and mitigation
 - Towns and the state will have to demonstrate they have an understanding of exposure and proactive strategy to address risks (either through more stringent zoning, insurance, building codes, projects to address risks, long term strategy to retreat from floodplains, buyouts, etc.)
 - Lower bond ratings = higher costs for municipalities to borrow and pay for services
- Stranded Mortgage Assets
- Economic Development
 - Addressing climate concerns of businesses coming to the state
 - Are there concerns about doing business here because of our climate risk?
 - Incentivizing resilient economic development
 - Funding projects that allow economic development to move forward
 - Attaching resilience requirements to loan and grant programs for resilience

Barriers to Financing Resilience:

Our process:

- Highlight issues from elsewhere
- Issues in CT from experience of members and subject matter experts
- Issues from the literature that could be an issue in CT.

Findings from Resilient Rhody:

- *Difficulty obtaining grant funding:* Federal government and local grant programs are often insufficient to fully meet all project costs. Additionally, states and municipalities can find it difficult to comply with or understand matching and compliance requirements.
- *Misaligned incentives:* The state and municipalities are often faced with a choice in which they must weigh competing incentives. For example, municipalities have a strong incentive to protect their tax base against the impacts of climate change and extreme weather, but also have a strong incentive to promote development that may be at risk to natural hazards. Similarly, both the state and municipalities face disincentive to invest in large-scale resilience projects, such as flood control, because the return-on-investment timeline is uncertain.
- *Lack of sustainable revenue streams:* A dedicated, sustainable revenue stream associated with resilience projects is rare. This makes it difficult for entities to repay costs associated with completing these projects. Additionally, many projects have clear benefits, but these benefits may not be easy to monetize. For example, flood mitigation measures that protect a commercial

center from being inundated during a storm may increase property values in the protected area, but this benefit is not easily captured in the form of a revenue stream.

- *Lack of upfront capital:* To complete a resilience project, an entity must have available capital ready to be deployed. Many entities simply do not have sufficient capital at one time to cover the costs of a project. In some instances, costs for just the design aspect of a project may exceed available capital. As noted in the first barrier, many federal grants require recipients to provide a non-federal match as a condition of receiving the grant. Even though this match is generally only a small portion of the total grant amount, many borrowers struggle to find those funds.
- *Limited ability to borrow funds:* Nearly all entities face limitations in terms of the amount of debt that they can carry at any given time. Limitations may arise from legal restrictions, such as statutory limits, a poor credit rating, or insufficient revenue to repay additional debt. A limited ability to generate upfront capital creates challenges for an entity to acquire the debt finance needed to complete many resilience projects. Often, the nature of resilience projects creates additional difficulty for the entity issuing debt because of the lack of a sustainable revenue stream connected with the project.

Boston Paper Findings:

- The key sources of market failure for climate resilience financing and investment are:
 - Inadequate information on costs and benefits
 - The existing models used by insurers and others tend to underestimate the amount of damage caused by extreme storms.
 - The depth-damage functions used by insurance companies to predict building-level losses do not capture these larger-scale cascading disruptions, and business interruption losses are usually estimated very coarsely.
 - Losses to infrastructure are often underestimated because these assets are typically underinsured and hard to value accurately in models.
 - Some of the benefits are social, environmental, or related to public health, and therefore hard to quantify and monetize—
 - Incorrect pricing of risk
 - insurance premiums do not currently adequately price risk. National Flood Insurance Program (NFIP) administered by FEMA underprices risk as a matter of policy, to make it affordable. This creates what the insurance industry calls “moral hazard,” meaning that property owners are encouraged to undertake risky behavior.
 - When insurers are unable to price risk accurately, or to charge enough to fully cover risks, they sometimes withdraw from markets altogether
 - real estate prices do not yet fully reflect climate-related risks
 - climate risk is not yet adequately factored into the interest rates that businesses, homeowners, or governmental agencies pay on mortgages or debt financing
 - Collective action challenges
 - governance and finance hurdles to effective collective action
 - Many resilience projects require new funding sources, regulatory action and approval, involving multiple agencies, municipalities, and businesses

- **(Recommendation?)** Cities such as Copenhagen, Amsterdam, Hamburg, and Singapore that are effectively engaged in climate preparedness have more centralized and comprehensive planning and funding authority, which appears to facilitate the process of planning and financing regional flood control
- Capital budget constraints
 - financial markets and investors generally want to see a secure stream of future cash flows, but have little institutional experience with resilience investments and their associated risks and returns.
 - Resilience investments do not necessarily generate revenues; they might make economic sense and be essential to reduce future losses, but may not provide the incremental and predictable revenues investors seek in order to offer affordable bond financing
- Misaligned incentives
 - Entities with the ability and responsibility to invest in climate resilience are not always the same as those reaping the benefits.
 - Example: Municipalities have a strong incentive to increase their tax base through development, even if that might exacerbate longer-term risks from climate change. And municipalities that invest in large-scale flood protection do not directly recoup their costs from the value of the privately-owned buildings they protect.

Connecticut Specific List so far:

- Lack of matching funds from both municipal and state
- Lack of capacity to write proposals and grants
- Lack of cost/benefit information for projects
- Uneven distribution of benefits
- Lack of prioritization of projects and issues
- Federal incentives
 - Disaster funding, FEMA
- Coordination of investments
- High costs for big infrastructure projects

Scope and Definitions

Synthesizing Information

- **Infrastructure and Land Use** – provided by the “Adaptation Planning and Implementation Working Group” on June 29, 2020
- **Working and Natural Lands** – provided by the “Working and Natural Lands Working Group” on June 30, 2020
- **Public Health and Safety** – provided by the “Public Health and Safety Working Group” on June 29, 2020

Existing Climate Finance Mechanisms

Structure and Timeline – Wayne Cobleigh (Lead)*

Adaptation and Resilience	Public Sources	Private Sources
Infrastructure and Land Use	FEMA HMG Program, Flood Mitigation Assistance, USACE Flood Damage Reduction* HUD CDBG and CDBG/DR* EPA LI Sound Futures Program* DEEP Clean Water Loan Fund*	<ul style="list-style-type: none">FHA Low-income housing tax credit (LIHTC) LendersFHA Community Development Banking (CDB)
Working and Natural Lands	NRCS Regional Conservation Partnership Program PL-566 Watershed Program NOAA Coastal Resilience Fund	<ul style="list-style-type: none">Foundations
Public Health and Safety	FEMA pre-Disaster Mitigation (now Building Resilient Infrastructure and Communities (BRIC))	<ul style="list-style-type: none">FHA Low-income housing tax credit (LIHTC) LendersFHA CDBFoundations

* Can be applied to both Infrastructure and Land Use projects and Working and Natural Lands projects

REFERENCES

* - with support from Dean Audet, Wayne Cobleigh, Curt Johnson and David Sutherland

- 1. Inventory Existing Mechanisms** – assemble various public and private financing mechanisms into general table (by July 2nd)
- 2. Key Screening Factors of Mechanisms** – identify factors to include for each financing mechanism to be included in the write-up (by July 2nd)
- 3. Write-Up Section** – assemble and write-up the existing climate finance mechanisms into a table and a short report, including key screening factors (by July 17th)
- 4. Apply “Equity Lens” to Existing Mechanisms** – apply the TBD “Equity Lens” criteria to the existing climate finance mechanisms to discern strengths and weaknesses (by August 14th)

New, Emerging, and Expanded Climate Financing Mechanisms

Structure and Timeline – Curt Johnson (Lead)*

Adaptation and Resilience	Public Sources and P3	Private Sources
Infrastructure and Land Use	<ul style="list-style-type: none">FEMA Building Resilient Infrastructure and Communities (BRIC)Property Assessed ResilienceDistrict Resilience Improvement (DRI) Tax Increment FinanceCommunity-Based Public Private Partnership (CBP3)Stormwater Utility Fees	<ul style="list-style-type: none">Environmental Impact BondCatastrophe BondsResilience BondsESG (Environmental, Social and Governance) and Sustainable Investors Foundations
Working and Natural Lands	<ul style="list-style-type: none">BRICDRI- Tax Increment FinanceCommunity-Based Public Private Partnership (CBP3)Stormwater Utility FeesUSDA Watershed Protection Funding	<ul style="list-style-type: none">Same as above
Public Health and Safety	<ul style="list-style-type: none">BRIC, DRI, CBP3	<ul style="list-style-type: none">Same as above

- Solicit, Identify, and Inventory New Mechanisms**
– assemble various public and private financing mechanisms into general table (by July 17th)
- Write-Up Section** – assemble and write-up the new, emerging, and expanded climate finance mechanisms into a table and a short report, including key screening factors (by July 31st)
- Apply “Equity Lens” to Existing Mechanisms** – apply the TBD “Equity Lens” criteria to the new, emerging, and expanded climate financing mechanisms to discern strengths and weaknesses (by August 14th)

REFERENCES

* - with support from George Bradner, Wayne Cobleigh, Rob LaFrance, and David Sutherland

New, Emerging, and Expanded Climate Financing Mechanisms

Questions for Discussion – Curt Johnson (Lead)*

- What are our goals, objectives, and estimated financing needs and gaps? Will the subcommittees be providing this information? Should Save the Sound and TNC estimate funding demand for nature-based solutions?
- Combining Adaptation with GHG Mitigation financing programs discussion: Is there a mitigation finance group and how will we coordinate to discuss bundling the programs?
- Solicit, Identify, and Inventory New Mechanisms – assemble various public and private financing mechanisms into general table (by July 17th). This needs to include (a) estimate of \$\$ generation capacity/source; (b) certainty of \$\$ generation capacity/source; and (c) include local municipal options.
- Apply “Equity Lens” to Existing Mechanisms – apply the TBD “Equity Lens” criteria to the new, emerging, and expanded climate financing mechanisms to discern strengths and weaknesses (by August 14th) Will Lee Cruz, Brenda and the GC3 Equity Working Group be available to review and discuss the priorities and options?

REFERENCES

* - with support from George Bradner, Wayne Cobleigh, Rob LaFrance, and David Sutherland

Develop and Apply “Equity Lens” to Financing Mechanisms

Structure and Timeline – Bryan Garcia (Lead)*

- **Identify the Key “Equity Lens” Criteria** – develop a list and consolidate into a workable set of criteria that can be used in a public dialogue with EJ community to clarify and prioritize importance of the criteria applied to (by July 2nd):
 - Various project types that require planning and investment (e.g., power plant, economic development project)
 - Various circumstance that require emergency response and relief (e.g., pandemic, hurricane, polar vortex, heat wave)
- **Initiate Public Dialogue** – identify EJ voices in the community to engage in a public dialogue on the criteria to discern and prioritize appropriate criterion (by July 31st)
- **Apply the “Equity Lens”** – apply the criteria resulting from the public dialogue to existing, as well as new, emerging, or expanded climate finance mechanisms (by August 24th)

REFERENCES

* - with support from George Bradner, Wayne Cobleigh, and Adrienne Houel

“Equity Lens” Criteria

Identifying, Developing, and Applying to Climate Financing Mechanisms

Initial Criteria

Equity Lens Criteria (Initial)	
X	
Y	
Z	
...	

Public Dialogue

Project	
X	
Y	
Z	
...	

Circumstance	
X	
Y	
Z	
...	

Revised Criteria

Equity Lens Criteria (Revised)	
X	
Y	
Z	
...	

Climate Financing Mechanisms

Adaptation and Resilience	Public Sources	Private Sources
Infrastructure and Land Use	1. 2. 3.	10. 11. 12.
Working and Natural Lands	4. 5. 6.	13. 14. 15.
Public Health and Safety	7. 8. 9.	16. 17. 18.

“Equity Lens” Criteria

Initial Criteria Identified

- Quality Public Education
- Safe Water (drinking water, and natural resources)
- Transportation (meaning Connectivity and public EV transportation)
- EJ would specify Mental Health along with Healthcare access
- Lifeline facilities would include affordable/environmentally efficient heating and lighting
- Attainable housing and property value should include Safe Shelter principles
- EJ has an overall “employment” category that would include Job Creation, Supplier Diversity and Workforce Training.
- Fairness
- Social Resilience
- Economic Equality
- Attainable Housing and Property Value
- Inclusive Communications
- Lifeline Facilities
- Food Security
- Healthcare Access
- Parks and Community Gardens
- Public Health
- Community Flood Insurance for Uninsured Tenants, Small Businesses, and Apartment Owners
- Public Safety
- Job Creation
- Supplier Diversity (MBE Set Asides)
- Workforce Training

REFERENCES

* - with support from George Bradner, Wayne Cobleigh, and Adrienne Houel

“Equity Lens” Criteria

Initial Criteria Consolidated

1. Public Health and Access to Health Care

- Mental Health
- Public Safety
- Food Security
- Safe Drinking Water
- Indoor Environmental Quality

2. Lifeline Facilities

- Food, Water, Shelters and Community Centers
- Safety and Security
- Health and Medical
- Energy, Power, Fuel, Microgrids
- Communications (multi-lingual)
- Transportation
- Sites with Hazardous Materials

3. Land Use and Zoning

- NFIP Renters Insurance
- Community Flood Insurance
- Attainable Housing and Property Value
- Parks and Community Gardens
- Shelters and Community Centers

4. Jobs and Economic Development

- Economic Equality
- Quality Public Education
- Social Resilient Networks
- Inclusive Communications
- Job Creation
- Supplier Diversity
- Workforce Training

5. Transportation

- Public Transit
- EV and EV Infrastructure
- Air Pollution

REFERENCES

* - with support from George Bradner, Wayne Cobleigh, and Adrienne Houel

“Equity Lens” Criteria Application to Projects and Circumstances

Help to Further Identify, Refine, and Prioritize “Criteria

Example Projects (Chronic)

- Resilient Transit-Oriented Development
- Coal, Natural Gas, or Waste-to-Energy Power Plant
- Affordable Housing and Communities
- Offshore Wind Turbine Manufacturing and Assembly in Local Port
- Economic Development Project (e.g., Adrian’s Landing)
- Adapting Structures and Critical Infrastructure to Withstand Flooding
- Others?

Example Circumstances (Acute)

- Category 4 Hurricane causing Coastal and Inland Flooding
- Winter Polar Vortex and Snowstorm taking Out Power Grid
- Summer Heat Wave with Increased Air Pollution from Dirty Power Plants in Combination with Pandemic Adversely Impacting Vulnerable Communities
- Others?

REFERENCES

* - with support from George Bradner, Wayne Cobleigh, and Adrienne Houel