

A CONVERSATION WITH HARC ABOUT RESILIENCE PLANNING

January 19, 2022







- HARC is a nonprofit applied sustainability research organization founded by George P. Mitchell in 1982
- Objective non-advocacy approach to finding meaningful answers to complex questions
- We engage in research that helps people thrive and nature flourish

Mission

Providing independent analysis on energy, air, and water issues to people seeking scientific answers.



Resilience and Equity Key Goals

Threading resilience and equity at the nexus of community economic development, health, and equity.

Provide analytical and research support to public and private sectors

- Energy -
 - Energy system decarbonization and resilience through clean energy systems and technologies
 - Reducing the green divide and energy poverty
 - Enhancing energy power system resilience
- Water
 - Amplify coastal resilience with focus on climate impacts
 - Enhance One Water with focus on climate, equity and infrastructure
 - Deepen climate, water, and energy connection, risk, and equity
- Air
 - Drive ozone attainment
 - Continue air toxics and nuisance exposure to inform environmental justice initiatives
 - Advance resilience through equitable deployment of EV charging facilities



Resilience and Equity Focus Areas

Equity and Environmental Justice	Energy	Water	Air	Resilience Planning
Equity with a focus on energy poverty and environmental justice	Adoption of clean energy technologies and policies; bridging the gap across energy options, environmental sensitivity, and economic feasibility	Water resources management, coastal watersheds, and climate resilience	Emissions, modeling, health impacts, environmental justice, stakeholder engagement,	Working with local governments to maximize funding for climate and resilience programs

HARC

Our work: Resilience Planning

Galveston Bay Estuary Resilience Assessment Report

Prepared by Houston Advanced Research Center for the Galveston Bay Estuary Program

ATMOS Research & Consulting



Climate Impact Assessment for the City of Houston







FOUNDATIO

RESILIENT HOUSTON

Electrification of the Transportation Sector



Electrification of the transportation sector may reduce overall emissions

HARC

Resilience of Charging Infrastructure



- Number of rapid chargers needed
- Location of chargers
- Charger power resilience



Texas Clean Energy Hub



Welcome
 Interactive Tools
 ● Podcasts and Webinars
 Ξ Guides and Case Studies



Welcome to the Clean Energy Hub hosted by **HARC**, a Texas-based research non-profit organization with expertise in identifying and supporting cost-effective, practical solutions to speed the transition to a decarbonized and resilient energy system. The Clean Energy Hub, funded by the State Energy Conservation Office (**SECO**), houses a variety of interactive tools, podcasts, webinars, guides, and case studies to help accelerate the adoption of distributed generation and energy efficiency projects in Texas.

B Interactive Tools

ERCOT Interconnection Dashboard





This curated collection of online, **interactive tools** can help you implement best energy practices and explore opportunities to add solar and other clean energy projects to your property. Specific topics include **estimating** the cost of installing rooftop solar systems, **building** the business case for financing energy efficiency projects, **learning** how to interconnect larger distributed generation projects to the grid, **tracking** the status of PACE projects in Texas, and how to **create** a benchmarking program in your community.



energyhub.harcresearch.org

<u>Energy</u>

Crossroad

CHP and Microgrid Technical Assistance for Resilience



SOUICE: https://betterbuildingssolutioncenter.energy.gov/sites/default/files/attachments/DER Disaster Impacts Issue%20Brief.pdf



U.S. Electric System Disturbance Events (2000-2018)

U.S. Electric System Disturbance Events by Type (2000-2018)







20 to 40 0.173 to 20

HARCresearch.org

- understand current and future community climate impact
- Statistically Downscaled Climate Data

HARCresearch.org/RESIN

HARC



Thank You!

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