



INFRASTRUCTURE & RESILIENCE PLAN

OFFICE OF SUSTAINABILITY | 2025

Executive Summary

INNOVATION & RESEARCH



Why Build Resilience?

2 While Arlington is no stranger to extreme weather, as global average temperatures continue to climb and weather patterns become increasingly erratic, UTA's energy infrastructure becomes more exposed to damaging storms and peak conditions with greater frequency and for longer periods of time, leaving the system at risk to blackouts.

Planning for future weather extremes is essential to ensure safety and operational resilience for the UTA community and its neighbors. Recent weather extremes across the state of Texas and in the DFW area have highlighted the need for this plan. A "resilience-based" approach to the proactive planning of social, environmental, ecological, and infrastructure systems on campus will help it withstand the test of time and mitigate the increasing impacts of weather extremes while also reducing financial burdens in the future.





With extreme storms and increased strain on existing infrastructure, resilience will need to be baked in to any and all future-focused efforts. Resilience, in this context, is not merely having “backup” but rather understanding critical vulnerabilities at the system level, and planning for their future condition. This includes increasing on-site energy generation capacity, to combat potential grid failures like that seen in 2022, or developing financial models accounting for changing energy prices, as market volatility continues to rise. This strategy of operational resilience is a part of not only how UTA builds its facilities, but how it weathers all forms of uncertainty in a changing world.

strong winds

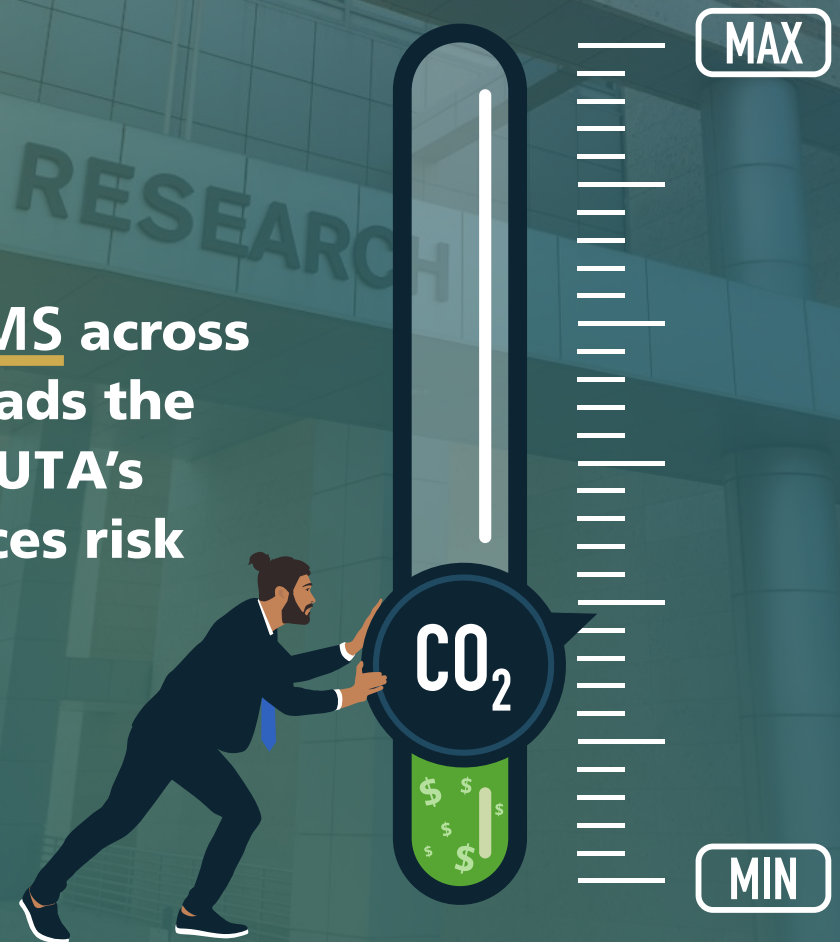
winter storms

extreme heat

Financing the IRP

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Strategically DIVERSIFYING AND DISTRIBUTING INVESTMENT STREAMS across various energy sources not only spreads the burden of responsibility throughout UTA's portfolio, but also significantly reduces risk exposure in energy investments





**Campus-Level
Operation**



**Designated
Energy Funding**



**Public-Private
Partnerships**



**System Level
Innovation**

As transformative energy projects have historically been in competition with routine operational needs, successful energy infrastructure modernization must come as an evolution of UTA's decision-making framework for financing. By reconceptualizing this as an infrastructure investment rather than an operational expense, UTA can take advantage of the opportunities that come with a more holistic approach.

This includes prioritizing existing infrastructure - ensuring that it operates at its most efficient - in order to capitalize upon savings. These savings provide the most effective way to develop additional infrastructure projects – continuing to reap financial benefits of efficient operation, while expanding that operation further and further. These investments, made at key moments throughout UTA's infrastructure modernization, can stitch together all efforts around environmental stewardship into a feedback loop, magnifying the potential outcomes beyond any single effort on its own.

This holistic approach harmonizes internal operations and external partnerships, creating opportunities for combined efforts to continue to push UTA toward both its environmental and institutional goals, and positioning itself as a leader within the Arlington community.

Community Insight

Two public engagement workshops with the campus community, and an online survey with over 250 responses, identified several key themes and revealed alignment between institutional capabilities and the aspirations of students, staff, and faculty. Together with technical analysis from energy modeling software and baseline infrastructure data, this input is what became the Infrastructure & Resilience Plan.

6

2 engaging
workshops

215+
attendees

ONE Maverick
spirit



The UTA community left us with a clear understanding that this plan must take action in the following:

CELEBRATE SUSTAINABILITY!

Recognizing the hard work and achievements of UTA to date

REACTIVE TO PROACTIVE: A HEALTHY CAMPUS IS A SUSTAINABLE CAMPUS

Preventative measures are the most important for protecting the campus overall

DEEPEN THE COMMUNICATIONS FABRIC OF UTA’S SUSTAINABILITY STORIES

Enhance visibility through signage, art, and student activities

EXPAND ON WASTE LEADERSHIP TO TACKLE THE FOOD-WATER-ENERGY NEXUS

Create programming that integrates UTA dining services, waste management practices, and state of the art energy solutions

CREATE A PHYSICAL GROUNDING POINT FOR INTERDISCIPLINARY WORK

Collaboration needs an intentional home to bring together researchers and students across different department

GET AGGRESSIVE ON THE INFRASTRUCTURE MODERNIZATION

Prioritize the strategies (and financing!) needed to deliver action on energy security

INNOVATE THROUGH RESILIENCE!

The changing climate needs new technologies and ideas in order to protect the plan immediately. Utilize the brainpower at UTA to turn vulnerabilities into opportunities

STRENGTHEN THE REGIONAL IDENTITY OF SUSTAINABILITY

Did you know DFW is the first net-zero airport in the US? Or that UTA will be collaborating on the World Cup’s sustainability actions in Dallas? UTA and its partner need to create a clear brand identity that puts sustainability front and center



SOCIAL IMPACT

Highlight UTA as an exemplar university for research in sustainability



OPERATIONS & FINANCE

Utilize environmental impact in operational and financial decision-making



HIGH-PERFORMANCE BUILDINGS

Retrofit and design high-performance buildings across campus



ENERGY INFRASTRUCTURE

Shift to low-carbon energy infrastructure



Key Themes



FOOD & WASTE

Reduce food and waste by moving towards circular economy



ECONOMIC DEVELOPMENT & INNOVATION

Position the DFW region as a leader in sustainability and innovation



CULTURE & COMMUNICATION

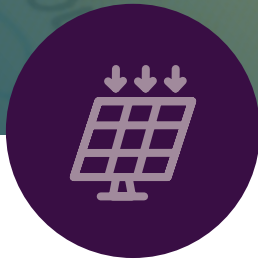
Enhance the role of sustainability in culture & communications through story-telling and collaboration



MOBILITY

Shift to sustainable mobility patterns

Regional Leadership



10

Sustainability Innovation and Research Support

UTA's status as an R1 institution lends itself to leading North Texas in sustainability-focused research by leveraging the region's momentum in renewable energy and supporting major efforts such as DFW International Airport's commitment to becoming North America's first carbon neutral airport; the University can do this by creating a pipeline of skilled professionals in related fields like clean energy technology, sustainable urban development, and waste diversion. Key partnership opportunities include regional utility providers and technology companies where UTA can support joint research, demonstration projects, and provide shared testing and validation facilities. Strong partnerships can make it easier to pursue collaborative proposals, allowing for a greater chance of securing funding for further research and equipment.

UTA's Campus as a Living Laboratory

As a coordinated effort with the Strategic Plan and the Campus Master Plan, the IRP not only helps to inform the development of future UTA facilities and services, but it helps to set goals for how UTA handles its future operations and how the university can tackle some of North Texas' biggest challenges head-on. Establishing hands-on learning experiences that are focused on solving problems experienced across campus and within the Arlington community helps students learn how to apply the information they're learning in their classes while also offering real world experience for when they are ready to enter the workforce.



1

NEAR-TERM PRIORITIES | 0 - 5 YEARS

Supporting sustainable systems expansion

Prepare infrastructure for modernization, and develop new buildings to high performance targets



2

MID-TERM PRIORITIES | 5-10 YEARS

Bridging Electrification

Develop new buildings to high performance targets, focus on existing building efficiency improvements, and continue to prepare infrastructure for modernization



3

LONG-TERM PRIORITIES | 10-15 YEARS

Resiliently Electrify UTA

Swap remaining fossil fuel sources for electrified sources, increase on-site utility resilience

UTA's Pathway to Modern Infrastructure

Implementing the IRP

The Journey Continues

The Infrastructure & Resilience Plan is just the first step on UTA's path toward sustainable operations, and another step in a long line of environmentally conscious efforts. This plan will serve as a guide, but needs input and participation from everyone to be successful!



**Financing
Needed**

**Check out
the Office of
Sustainability
website for
information
about upcoming
events and ways
to get involved!**

Or email us at sustainability@uta.edu