

# Table 2:

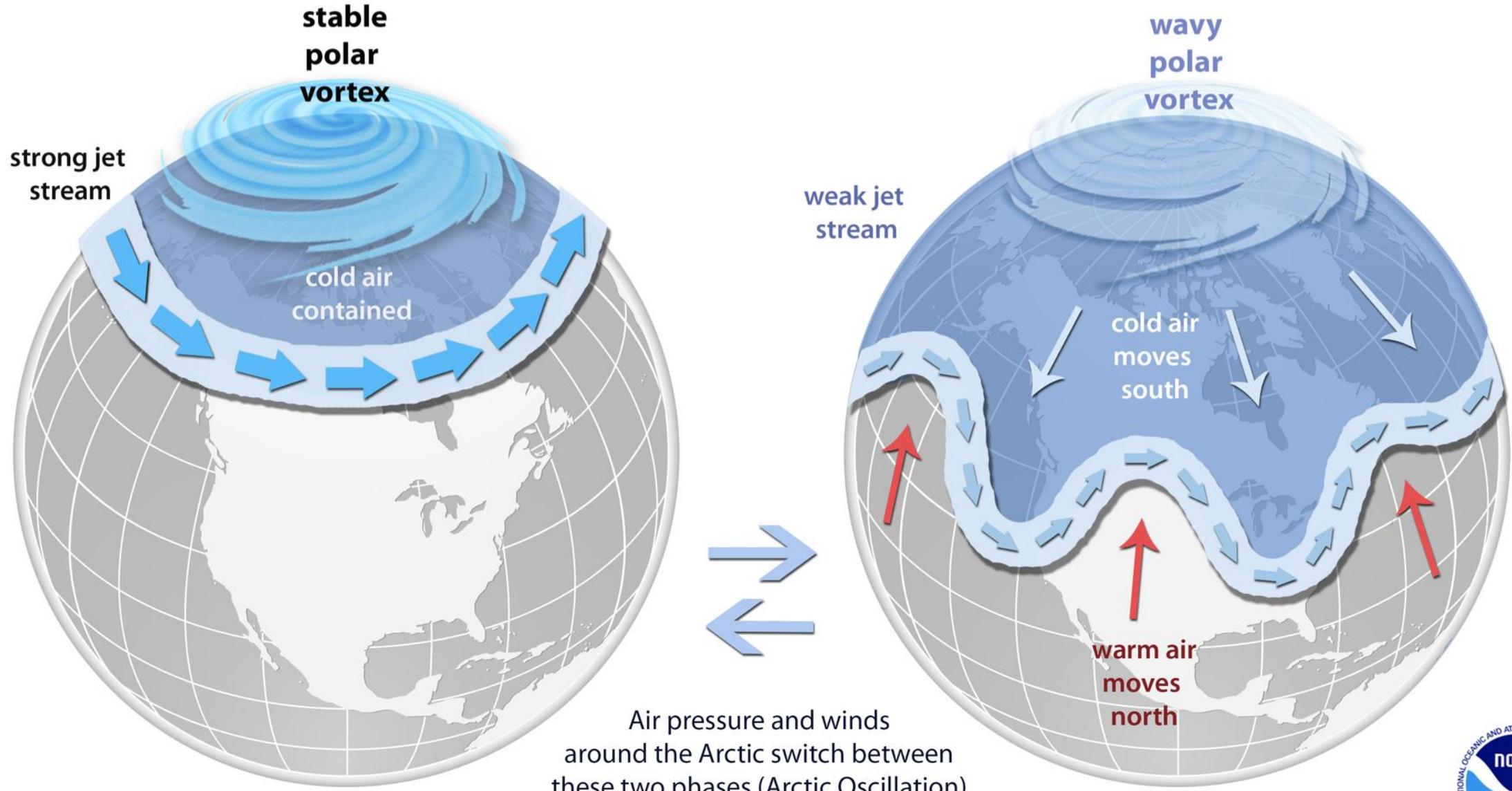
## The Texas Deep Freeze: Can the Free Market Adequately Cope with Climate Crises?

Arthur Grinath (Economics) and  
Diane K. McDaniel (Geology)



Dallas, Winter storm Uri, 2021, Getty Images

# STEAMed Planet 2021: Exploring the Intersections of Global Humanities and STEM through Climate Change



Air pressure and winds around the Arctic switch between these two phases (Arctic Oscillation) and contribute to winter weather patterns.



## Anthropogenic Climate Change

Cause: ↑ greenhouse gases (GHG). *E.g.*,

CO<sub>2</sub> – fossil fuels—transportation, electricity, manufacturing.

CH<sub>4</sub> – agriculture—beef / rice, especially.

Some consequences:

- rising temperatures

## Responses—Two Types:

Adaptation: Preparing for consequences.  
even as we continue mitigation,  
adaptation is necessary.



Mitigation: Fixing the cause of the problem.

Slow down  
GHG emissions



# Adaptation

migration: a last resort with severe effects on people, society.



# Adaptation

migration: a last resort with severe effects on people, society.

when uncontrolled, accompanied by homelessness, upheaval of families, cultures.

*Climate Refugees*



## The Economics of the Freeze

- What went wrong economically?
- What can and can't markets do?



## U know what's good for U

- You make the best decisions for you
  - Might adapt for personal protection
  - Will use alternative energy if cheaper
- These may not be best for society
  - Not likely to mitigate for a shared resource



## Demand & Supply & Cold

- Demand increased
- Supply decreased
  - Little excess capacity
  - Disconnected power grid

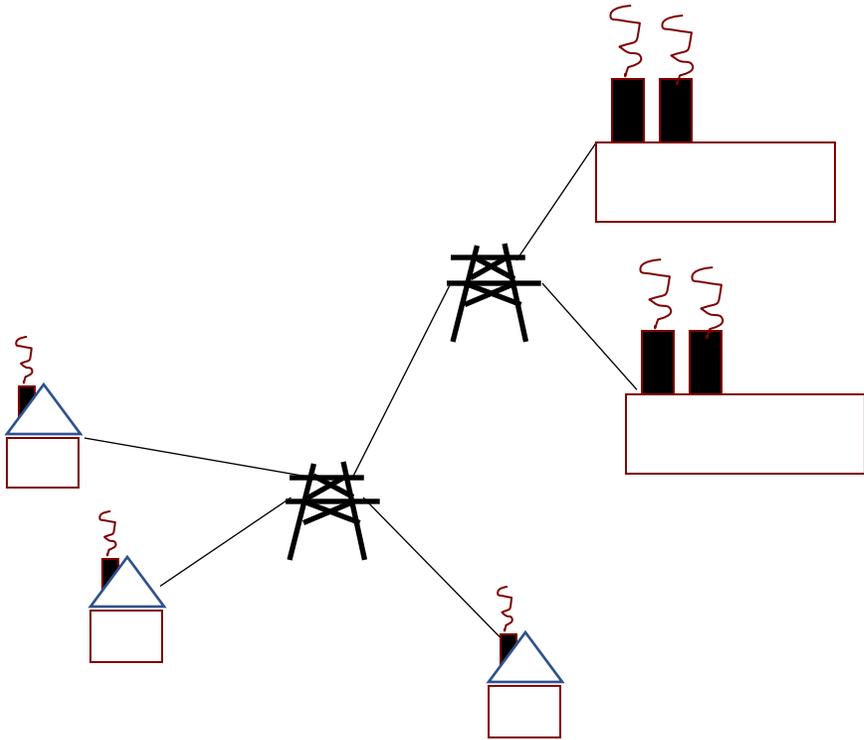


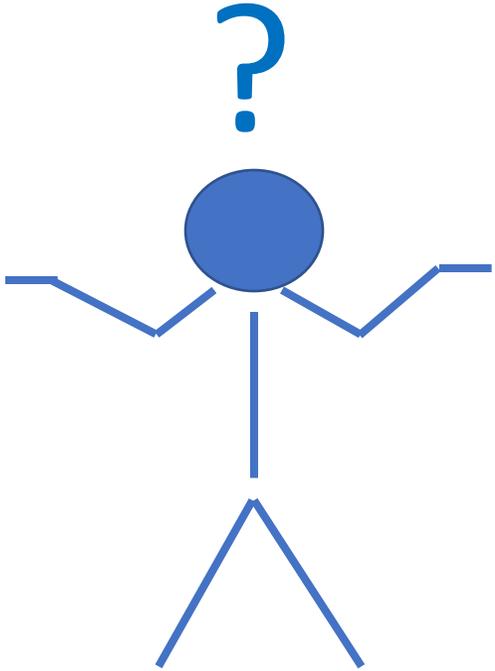
## The Role of High Prices

- Should reduce quantities demanded
- Should increase quantities supplied
- But...

## Market Limits

- The Grid is a shared resource
  - Individuals don't have a lot of control
- Lack of information & Moral Hazard
- Economies of Scale and competition





## What can an individual do?

- Let's list some actions you personally could take if you lived in Texas to avoid this situation in the future
- What are the advantages and disadvantages of each of these?
- Are we willing to let people live with their decisions?



## What can Government do?

- Let's list some actions government could take that individuals cannot
- What are the advantages and disadvantages of each of these?
- Don't "privatize the gains and socialize the losses"

