

Just The Facts Issue Brief

CLIMATE CHANGE

Why is this issue important?

Between 3.3 billion and 3.6 billion people worldwide are highly vulnerable to climate change. In addition to flooding, it could impair water and food supplies and cause more asthma and water- and heat-related illnesses.

- According to the most recent [assessment](#) by the Intergovernmental Panel on Climate Change (IPCC), "It is unequivocal that human influence has warmed the atmosphere, ocean and land. Widespread and rapid changes in the atmosphere, ocean, cryosphere and biosphere have occurred."
 - Burning fossil fuels is the [largest source of the greenhouse gas \(GHG\) emissions](#) that cause warming

The current situation

- Warming has reached just over 1° Celsius above the pre-industrial age baseline
 - We should plan to **adapt** (protect communities from sea rise and extreme weather events) for warming up to 1.5° C, as current scenarios predict we will reach this level before 2050, but must **mitigate** (reduce warming) to avoid more catastrophic impacts
 - Fossil fuels accounted for around 80% of the world's energy in 2020
 - Electricity and heat production; agriculture, forestry and other land use; and industry are responsible for about [70% of global GHG emissions](#)
- [Less than 4% of countries](#) are responsible more than half the world's GHG emissions, led by China, the U.S., India, Russia and Japan
 - The war in Ukraine highlights energy as a national security issue and the importance of self-sufficiency.
- An estimated [\\$5.2 trillion](#) in additional investment will be needed by 2050 to fund the transition to renewable energy
 - [Solar and wind](#) are the cheapest sources of renewable energy for more than two thirds of the world's population

The good news

- Some adaptation and sustainable development efforts have reduced vulnerability
- By 2020, the share of U.S. electricity generation from renewables reached 20%
- Utility-scale battery storage costs [decreased nearly 70%](#) between 2015 and 2018 and are expected to continue to fall
 - It's now often [cheaper to build new wind or solar plants](#) than to continue operating coal-fired plants
- Post-transition, renewables will be a cheaper source of energy than fossil fuels

The bad news

- We have already seen a marked increase in extreme weather events and wildfires
- The transition to renewable energy must accelerate significantly if we are to meet goals such as limiting warming to 2° Celsius
- Even if all greenhouse gas emissions ceased today, we would feel the impacts of climate change for decades due to historical emissions.
- [85%](#) of the solar panels sold in the U.S. are imported either from China or from Chinese companies operating in Southeast Asia, which makes this susceptible to supply chain disruptions.

Climate Change Resources

- [Intergovernmental Panel on Climate Change](#)
- [Woodwell Climate Research Center](#)
- [Georgetown Climate Center](#)
- [Connecticut Institute for Research and Climate Adaptation](#)
- For communicating about climate change: [Yale Program on Climate Change Communication](#)

The debate:

The transition from fossil fuels to renewable energy

- How much can the U.S. afford to spend on the transition and over what period?
- Should we ensure energy self-sufficiency by maximizing fossil fuel resources during the transition to renewables, or make the switch as quickly as possible?
- How much should we invest in adaptation and how much in mitigation?

Status in Connecticut

- The Northeast has high energy costs, so Connecticut will be especially affected by temporary price increases that accompany the transition
- The Connecticut [Renewable Portfolio Standard](#) creates an incentive for development of renewable energy projects by requiring electric providers to offset a specified percentage or amount of the energy they generate or sell by purchasing renewable energy credits from renewable sources
- Connecticut is one of nine states and D.C. that participate in the [Regional Greenhouse Gas Initiative](#) to cap and reduce power sector CO2 emissions
- Connecticut is part of the [Transportation Climate Initiative Program](#) to cap and reduce greenhouse gases from the transportation sector and accelerate investments in an equitable, cleaner, and more resilient transportation
- The state pledged to achieve net zero-carbon electricity [by 2040](#)

Connecticut Compact is an initiative of American Compact, Inc., a nonprofit 501(c)3 seeking to build consensus on our most pressing challenges and opportunities in selected states, starting with Connecticut.