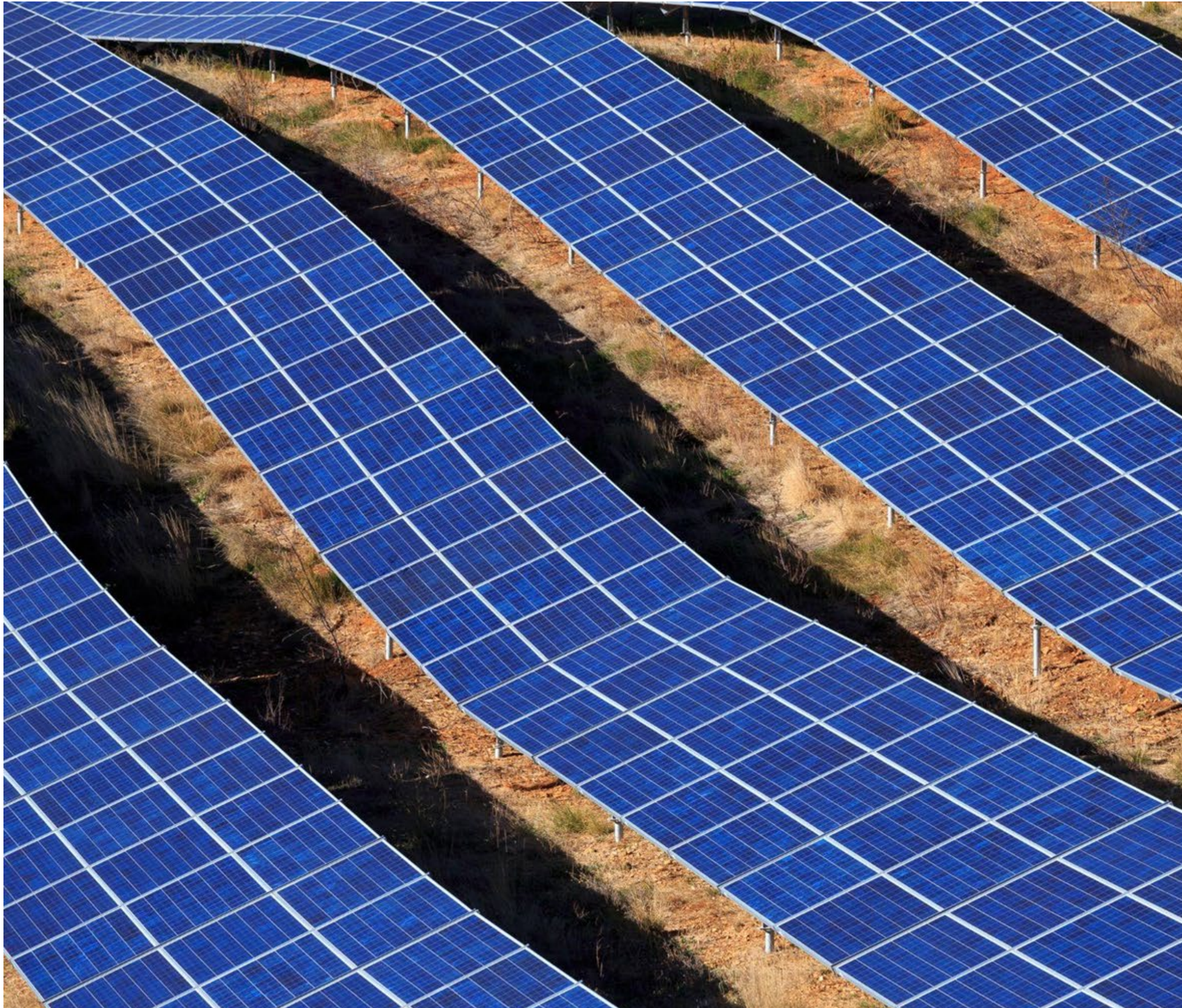
The Future is Now: Clean Energy Goes Mainstream

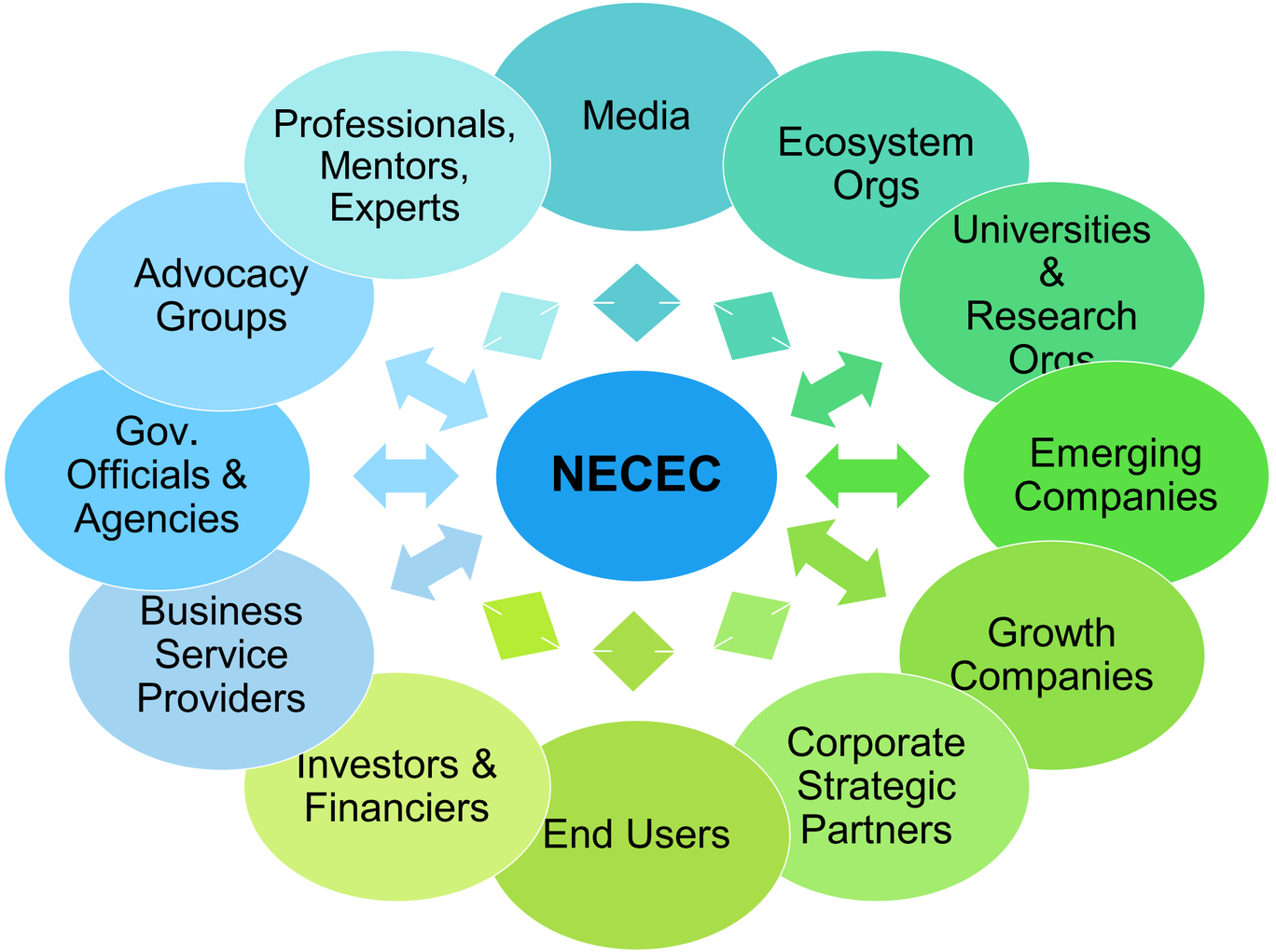
August 2, 2022



NECEC Overview

- Leads the just, equitable, and rapid transition to a clean energy future and diverse climate economy
- Ecosystem convener, connector, accelerator
- Seven states – New York and New England (Massachusetts, Connecticut, Rhode Island, Maine, New Hampshire and Vermont)

NECEC's Community



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The Time for Action is Now

"The cumulative scientific evidence is unequivocal: Climate change is threat to human wellbeing and planetary health. Any further delay in concerted anticipatory global action on adaptation and mitigation will miss a brief and rapidly closing window to secure a liveable and sustainable future for all."

-IPCC Sixth Assessment Report, 2022

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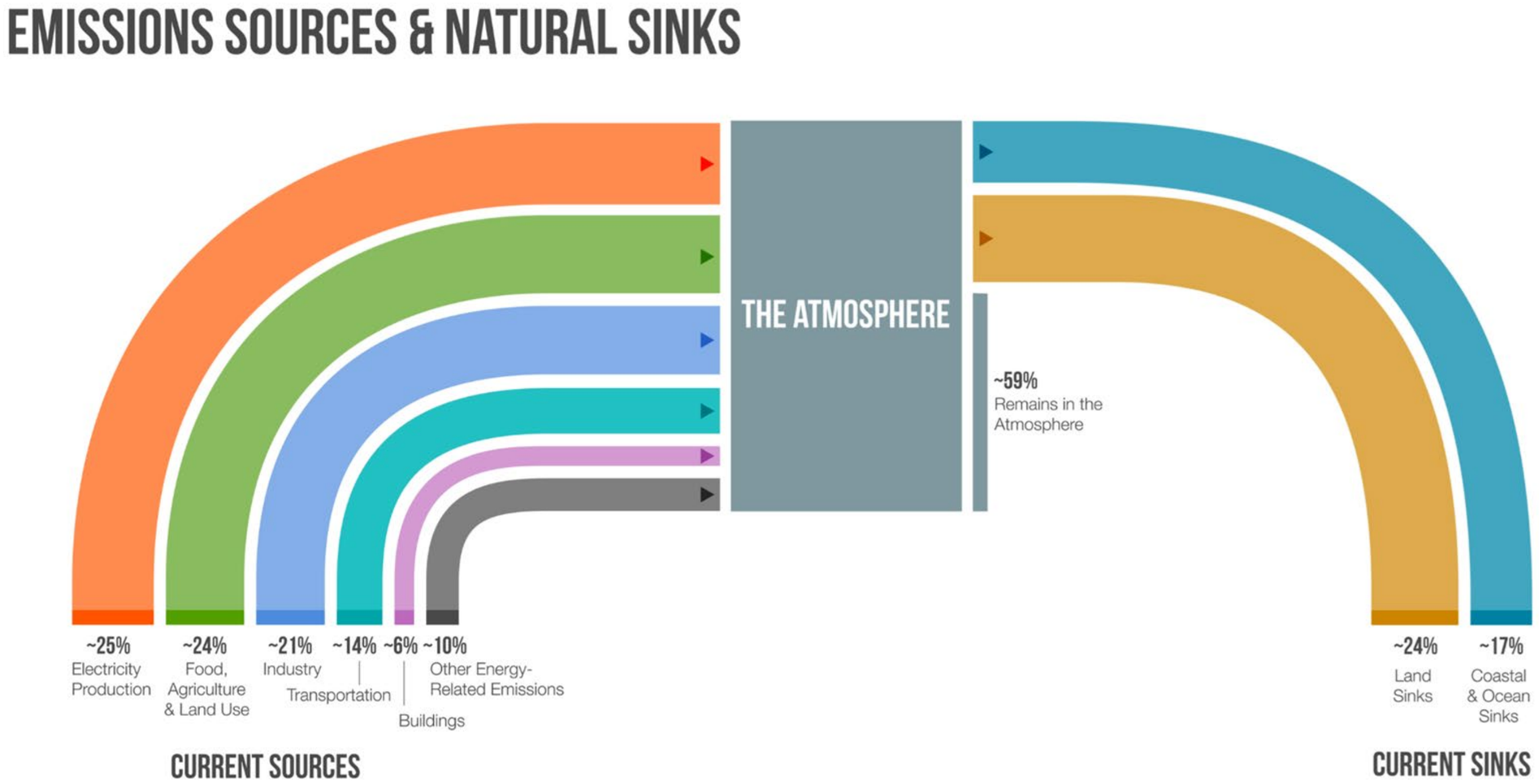
Sources of GHG Emissions- Globally



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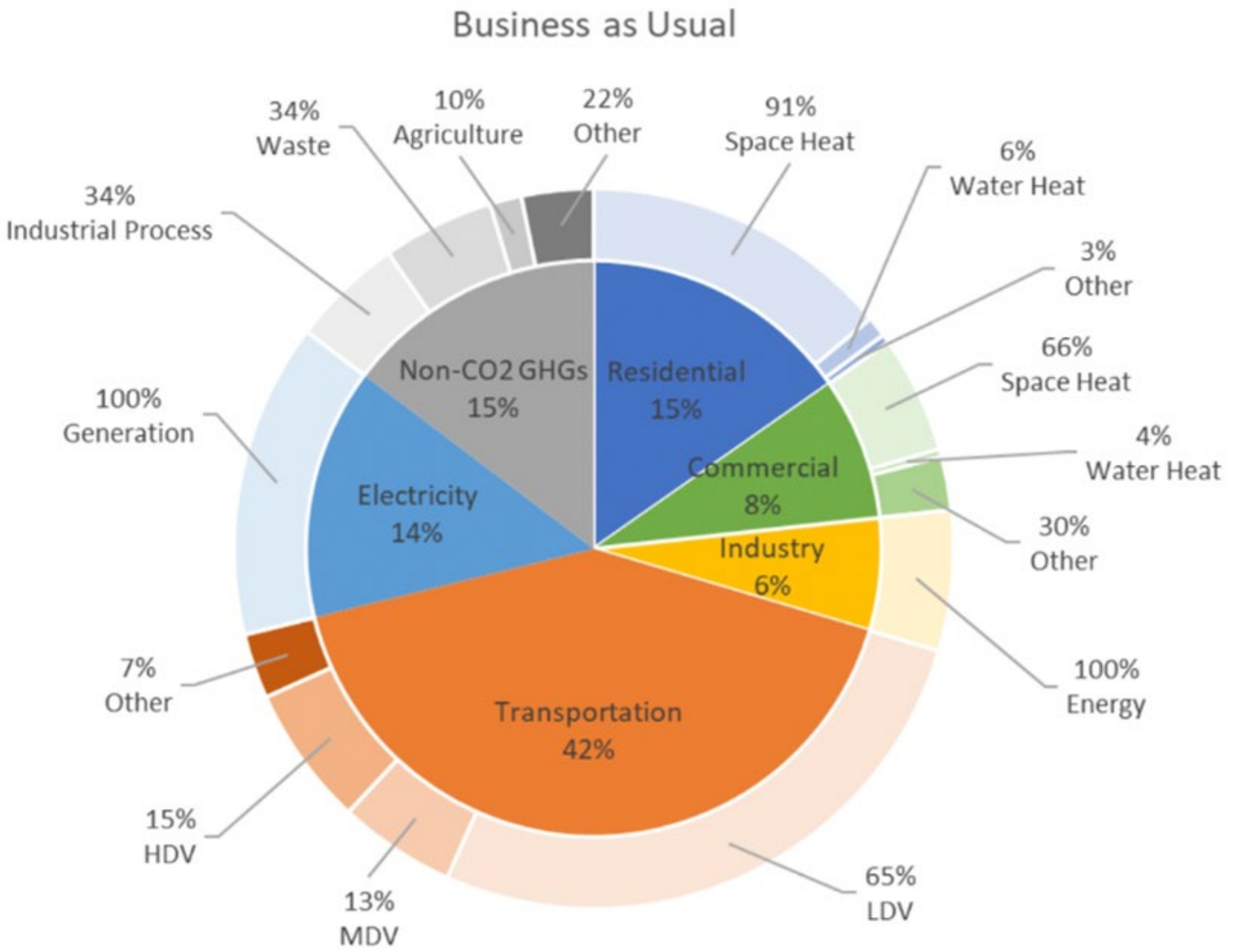
Sources of GHGs- Northeast US



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Our transition to a climate economy must be just

Source: Browning the Green Space

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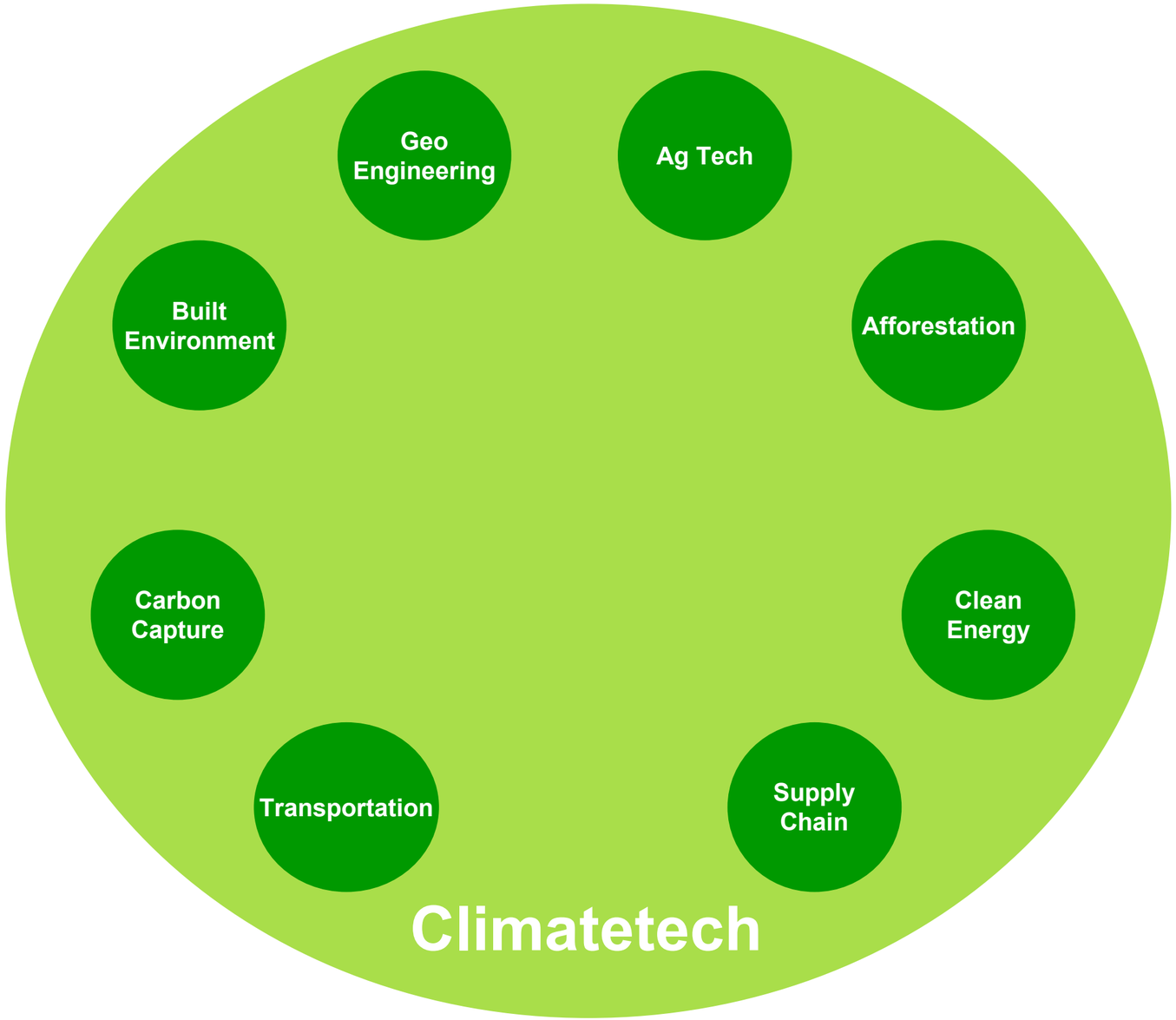
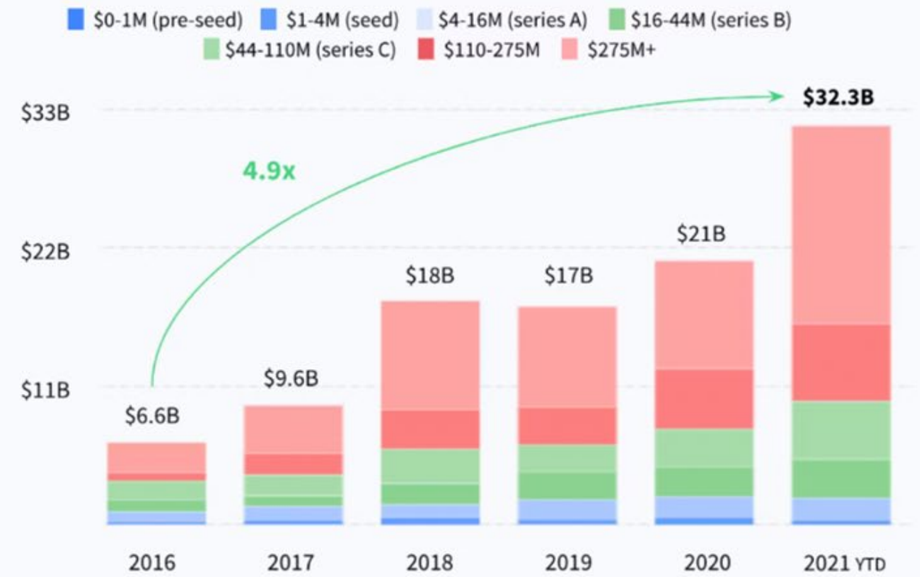
Climatetech: Technology to Reduce GHG Emissions



Investment in climatetech is increasing rapidly

Climate tech startups have raised a record $32B in 2021 globally, 4.9 times more investment since the Paris Climate Agreement was signed five years ago.

Global climate tech investment



Biggest rounds of 2021 YTD

Company	HQ	Transaction
northvolt	Stockholm Sweden	$2.8B Growth Equity
RIVIAN	Irvine United States	$2.5B Growth Equity
SVOLT	Boading China	$1.4B Growth Equity
goodleap	Roseville United States	$800M Late VC
REDWOOD MATERIALS	Carson City United States	$700M Series C

In this report, 2021 YTD covers data up until Q3 2021. Source: Dealroom.co.

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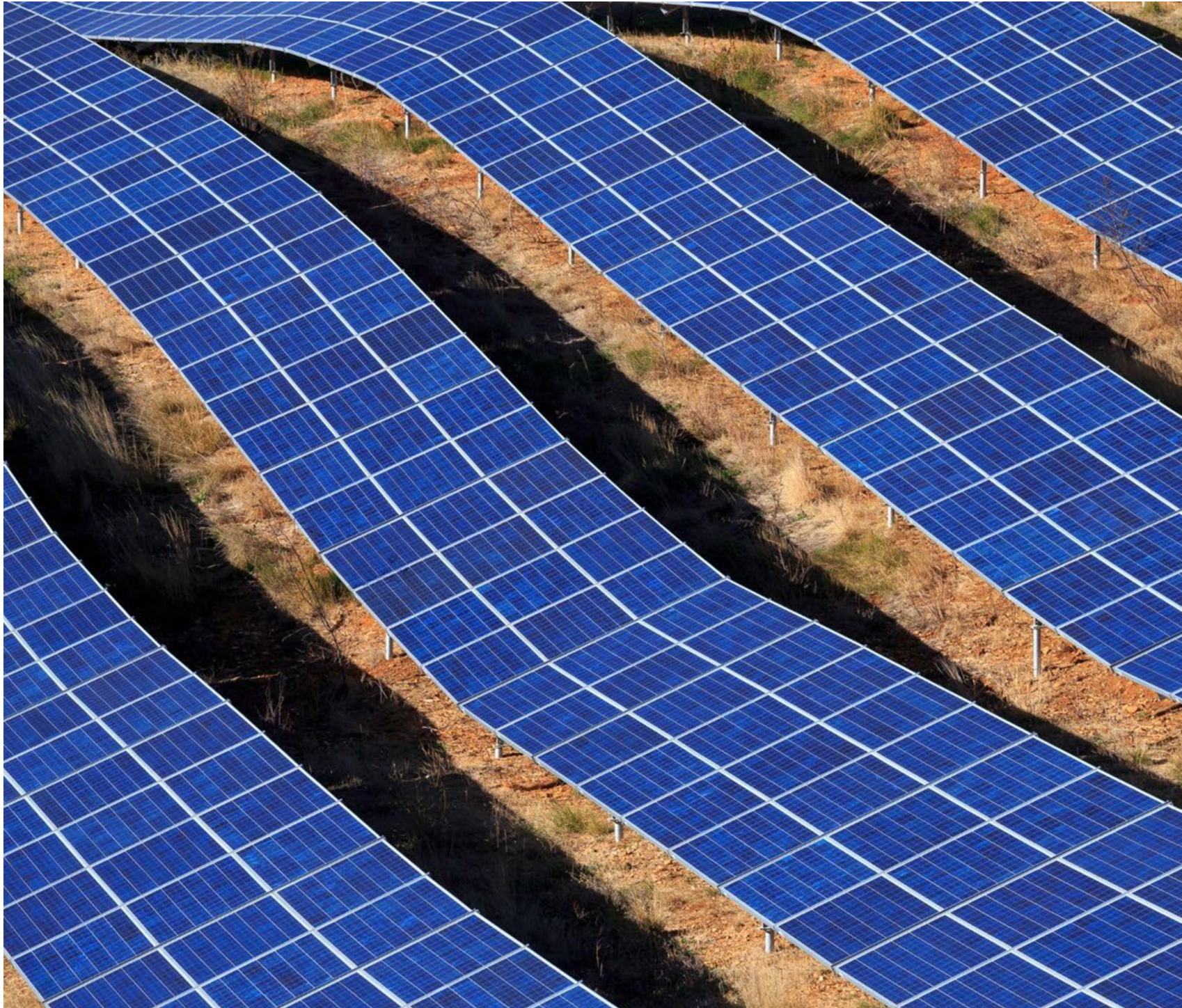
2021 has been a record year for climate tech investment, with $32B raised so far this year.

Source: https://dealroom.co/blog/climate-tech-investment-trends

Clean Energy: The future is now



Sustainable energy system

Carbon-free economy

Distributed Renewables

Energy Storage

Positive Buildings

Electric Vehicles

Smart Grid

Distributed energy supply and dynamic demand

Source: Third Industrial revolution. Jeremy Rifkin.

The Inflation Reduction Act Gets Us in the Game

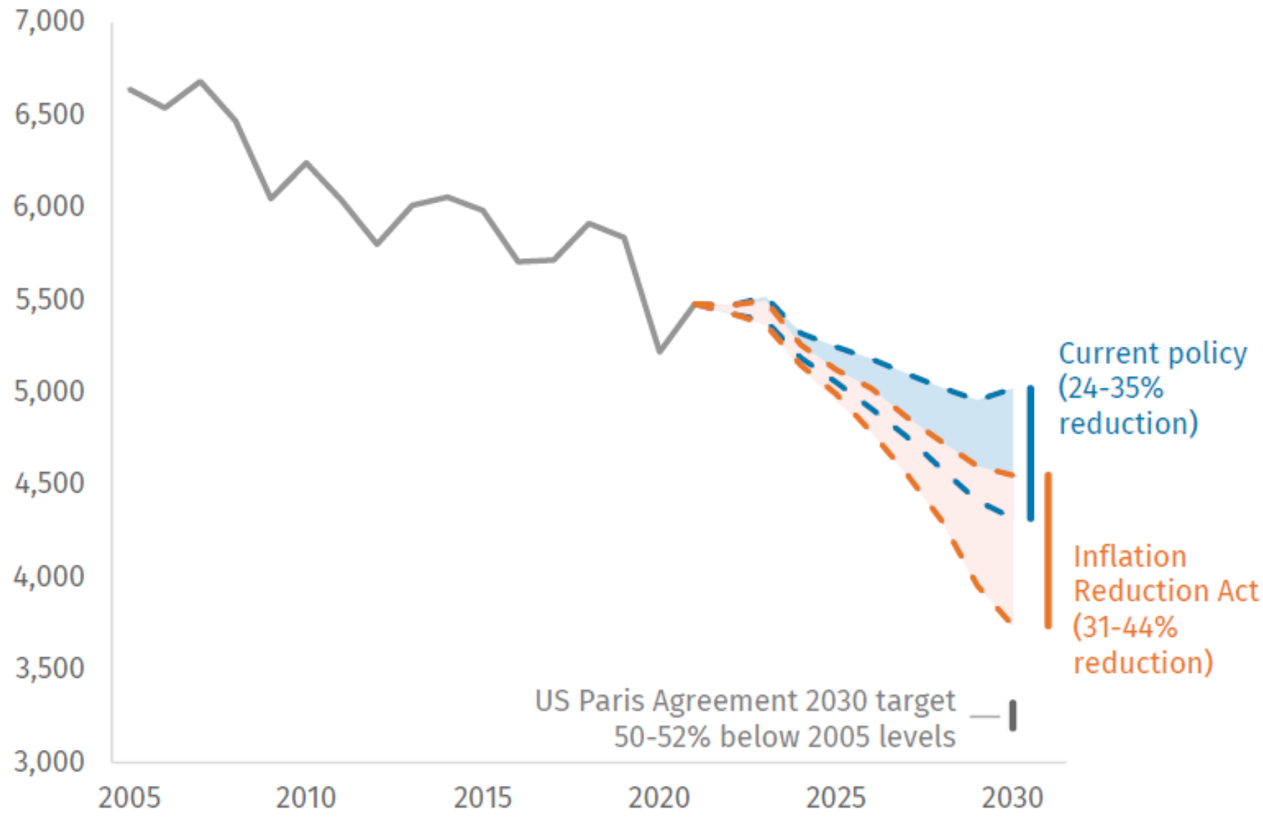
States and cities must lead the way on climate action

Federal action alone will not decarbonize fast enough to prevent worst case climate scenarios

FIGURE 1

US greenhouse gas emissions

Net million metric tons (mmt) of CO_2-e

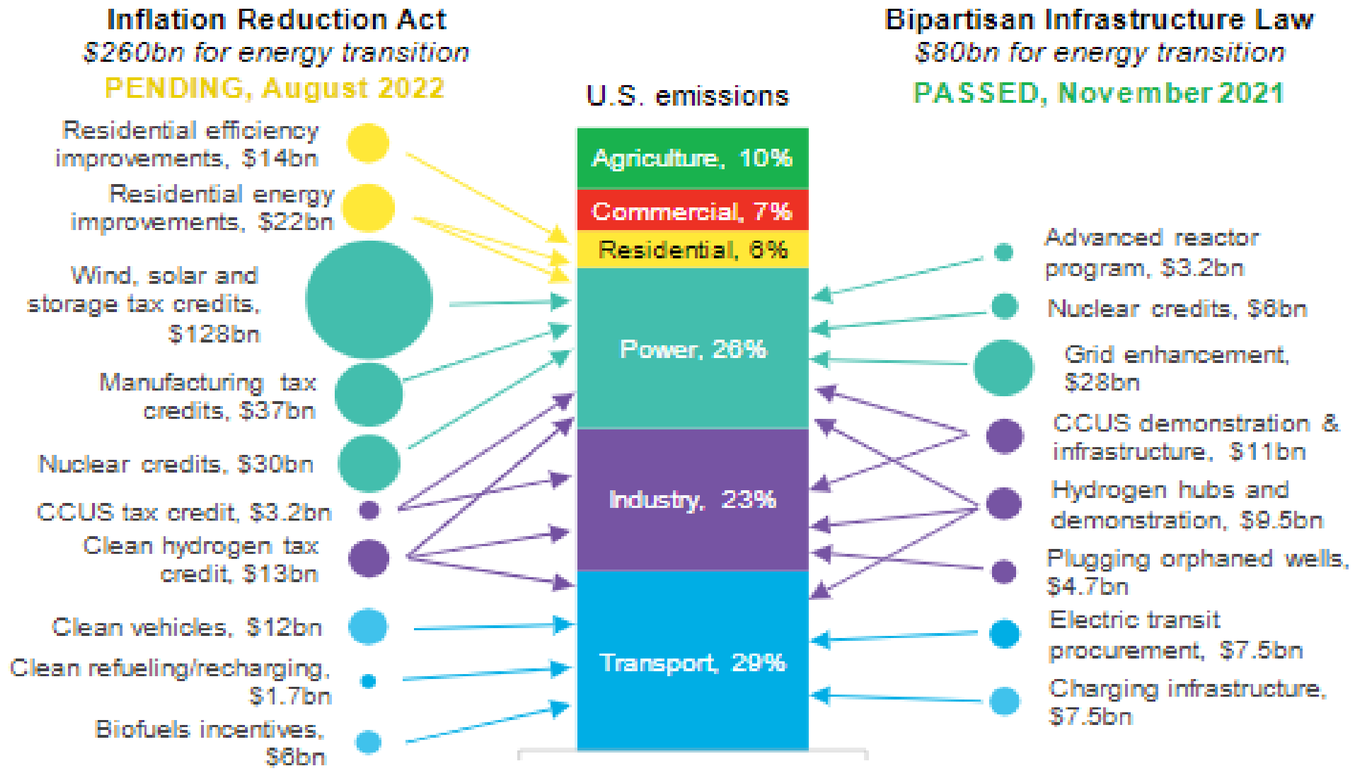


Source: Rhodium Group

Massive Federal Investment in Clean Energy

- **$260 billion from 2022 Inflation Reduction Act**
- **$80 billion from 2021 Bipartisan Infrastructure Law**

Figure 1: Estimated 2022-31 energy transition spending in Inflation Reduction Act and Bipartisan Infrastructure Law

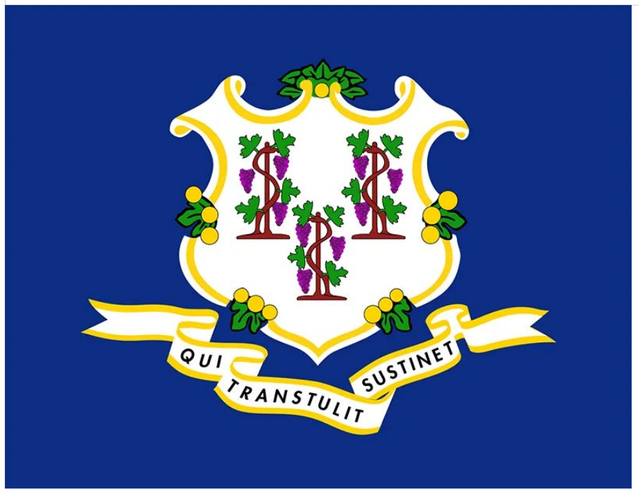


Source: EIA, EPA, Joint Committee on Taxation, BloombergNEF. Note: Chart only captures tax credits and incentives, not grant programs or loans. Bn is billion. CCUS is carbon capture, utilization and storage.

States Taking Action

Rhode Island - 100% renewable electric by 2033, purchasing up to 1 GW of offshore wind power

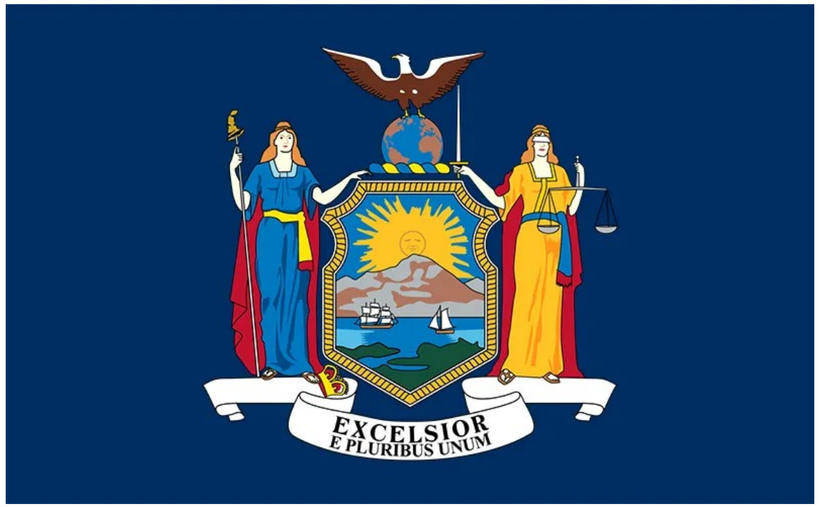
Connecticut - 100% clean electric by 2040, expanding energy storage & solar energy



States Taking Action - 2

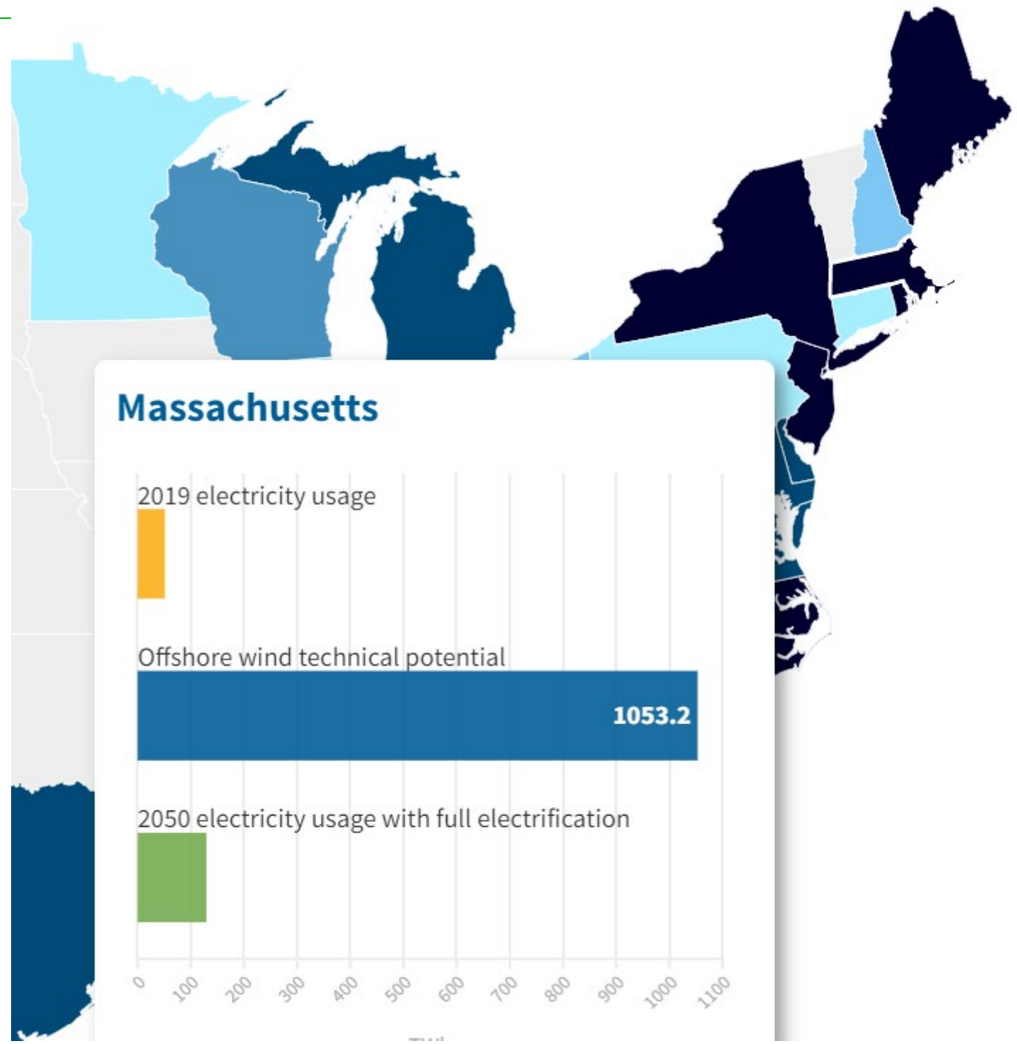
New York - 10 GW solar power, 6 GW energy storage by 2030, $500M commitment to offshore wind

Massachusetts - Sweeping new climate bill - offshore wind, solar, energy storage, grid, EVs



Offshore Wind - Massive Potential

The Northeast has one of the best wind corridors in the world. Maine, Massachusetts, Rhode Island, New York and New Jersey could produce 2,100 TWh annually.



Every State is a Sunshine State

Massachusetts is one of the leading states in the nation for solar industry jobs.

Significant growth in Ohio & Minnesota.

Table 1

TOP 10 STATES FOR SOLAR JOB GROWTH, 2021

State	2021 Jobs	2020 Jobs	Jobs Added 2020–2021	% Increase
California	75,712	68,677	7,035	10.2%
Massachusetts	10,548	9,495	1,053	11.1%
Nevada	7,193	6,174	1,019	16.5%
Arizona	8,278	7,346	932	12.7%
Ohio	7,411	6,532	879	13.5%
North Carolina	6,978	6,107	871	14.3%
New Jersey	6,237	5,384	853	15.8%
Georgia	5,314	4,466	848	19.0%
Colorado	7,426	6,771	655	9.7%
Minnesota	4,570	3,993	577	14.4%

Source: Eric Kilby, Flickr

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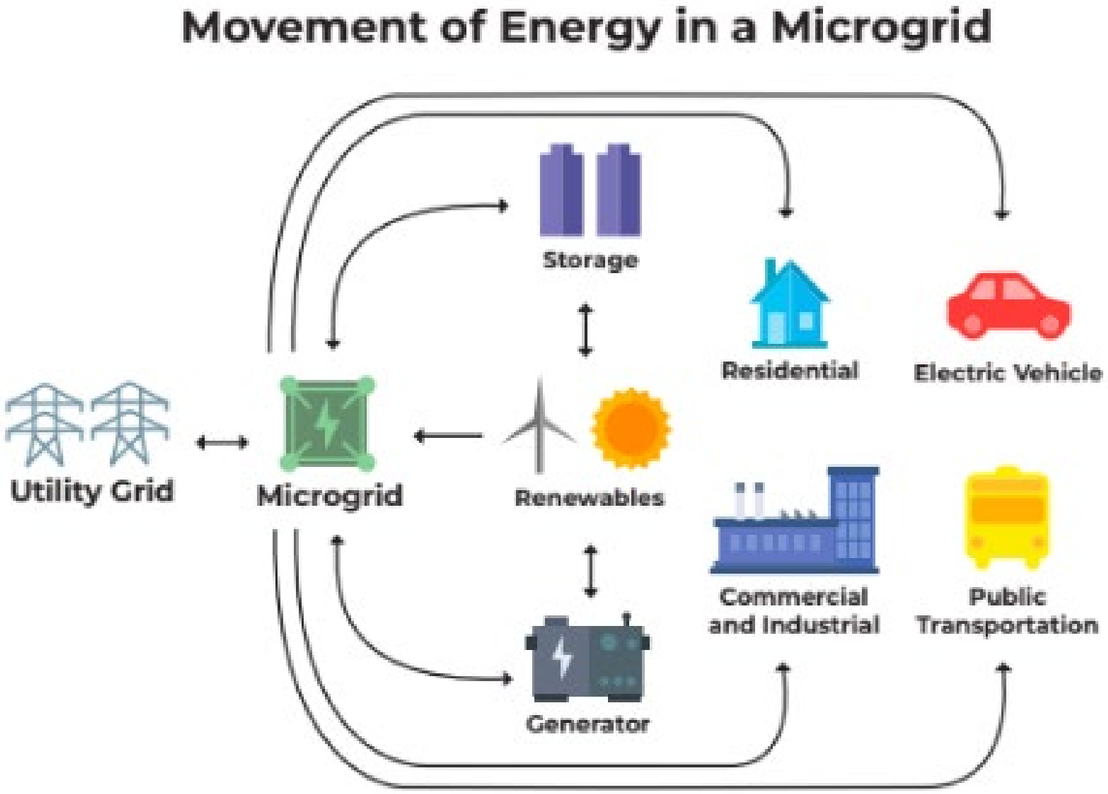
Clean Energy is Affordable and Reliable

Study Finds World Can Switch to 100% Renewable Energy and Earn Back Its Investment in Just 6 Years

After examining 145 countries, the researchers have stated that switching to clean energy and electrifying all energy sectors won't lead to blackouts or an increase in prices. In fact, according to the study, prices would immediately drop, and all of the up front costs for switching to 100% renewable energy would be paid back in just six years.

Microgrids - A Million Points of Lights

- Someone has to manage the flow
- Microgrids being built in Chelsea, MA and Chinatown in Boston
- Stafford Hill Solar Farm and Microgrid in Rutland, VT



Interconnection - We Need New Rules

"Interconnection procedures designed for the **by-gone thermal generation era** are not aligned with today's advanced technologies."

– David Gahl, SI2 Executive Director

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The Path Forward

- Rapid transition, don’t be last
- Develop new core competencies - storage, grid management, infrastructure
- Prioritize resiliency, don’t be Texas
- Think regionally, none of us are in this alone
- Lead the advocacy, bring expertise to the table
- Show your work, make sure your customers know what you’re doing
- Connect on values, tie climate response to affordability and reliability