



Boston University



Research for Environmental Agencies
and Organizations II class



Barriers to the Clean Energy Transition



Presented By Aliya Yelshibay



Why should we transition?

The transition to clean energy is still progressing too slowly to meet today's climate goals.

RESEARCH QUESTION: Why is the clean energy transition progressing so slowly, even when the necessary technologies already exist?



Soft Path

using renewable energy and efficiency instead of relying on large, centralized fossil fuel systems.



100% WWS

means that all sectors (electricity, transport, and industry) can run entirely on wind, water, and solar energy.



Cheaper

today, generating energy from renewables is cheaper than using coal, gas, or oil.





METHODOLOGY

Insights from 7 leading experts shaping the clean energy transition

OUR EXPERTS



Amory Lovins

Founder of Rocky Mountain Institute and Professor at Stanford University



Mark Jacobson

Professor at Stanford University and co-founder of non-profit Solutions Project



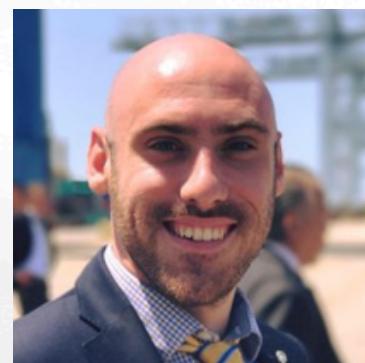
Benjamin Sovacool

Professor at Boston University and Founding Director of the IGS



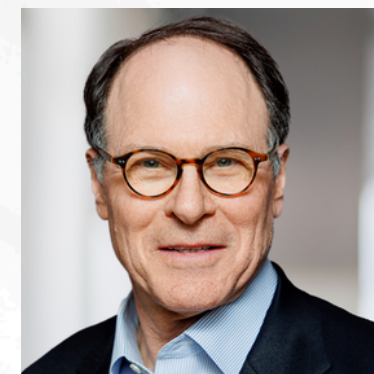
Kyle Murray

Director of the State Program Implementation at Acadia Center



Cal Brown

Senior Policy Analyst at the Northeast Energy and Commerce Association



Peter Fox-Penner

Chief Impact Officer at Energy Impact Partners corporation and Professor at Boston University



Moneer Azzam

Founder of Beacon Climate Innovations company and Professor at Tufts University



DIVERSE PERSPECTIVES. One goal: Accelerating a just and effective clean energy transition.





WHAT EXPERTS AGREE ON

A

INSTITUTIONAL BARRIERS (MOST AGREED)



Poor regulation & bureaucracy



Misaligned incentives (utilities, markets)



Fossil fuel subsidies



Slow permitting & grid delays

SUPPORTED BY:



Lovins, Jacobson, Sovacool, Murray, Fox-Penner, Azzam, Brown

B

AWARENESS & SOCIAL FACTORS



Lack of public knowledge



Disinformation



Low engagement

SUPPORTED BY:



Lovins, Azzam, Sovacool

C

ECONOMIC & STRUCTURAL ISSUES



High upfront costs



Unpriced externalities



Aging infrastructure

SUPPORTED BY:



Sovacool, Murray, Brown, Jacobson



KEY TAKEAWAY: The transition is not held back by technology, **but by systems, policies, and people.**

Conclusion

A 100% renewable energy future is within our reach.



Clean energy is possible today.

The technologies exist.
The potential is proven.



The problem is not technology.

Innovation is not the barrier—
our systems are.



The real barriers are systems, policies, and incentives.

Outdated rules, misaligned incentives,
and slow processes hold us back.



The transition can increase inequality if poorly designed.

Equity must be at the center of
every decision.



The energy transition will happen only if we change *how* the system works—not just *what* energy we use.



 CLEAN AIR
 CLEAN WATER
 THRIVING ECONOMY
 A SUSTAINABLE FUTURE FOR ALL