FOOD, ENERGY, AND WATER RESILIENCE SOLUTIONS: AGRIVOLTAICS AS A TOOL FOR RURAL COMMUNITIES

Presented by Tyler Swanson

ABOUT ME

- University of Illinois Urbana-Champaign Class of 2023
  - B.S. in Agricultural & Consumer Economics
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  - MA in Geography
- Research Areas
  - Agrivoltaics
  - Agritourism
  - Energy Policy
- Current Position
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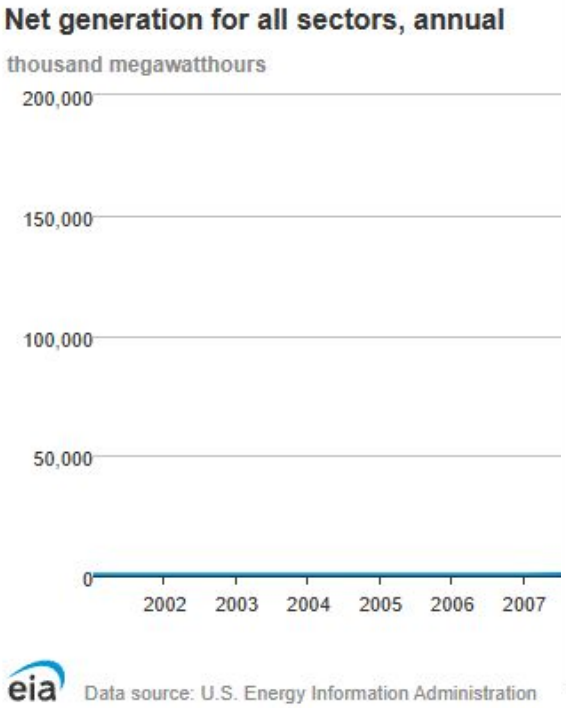
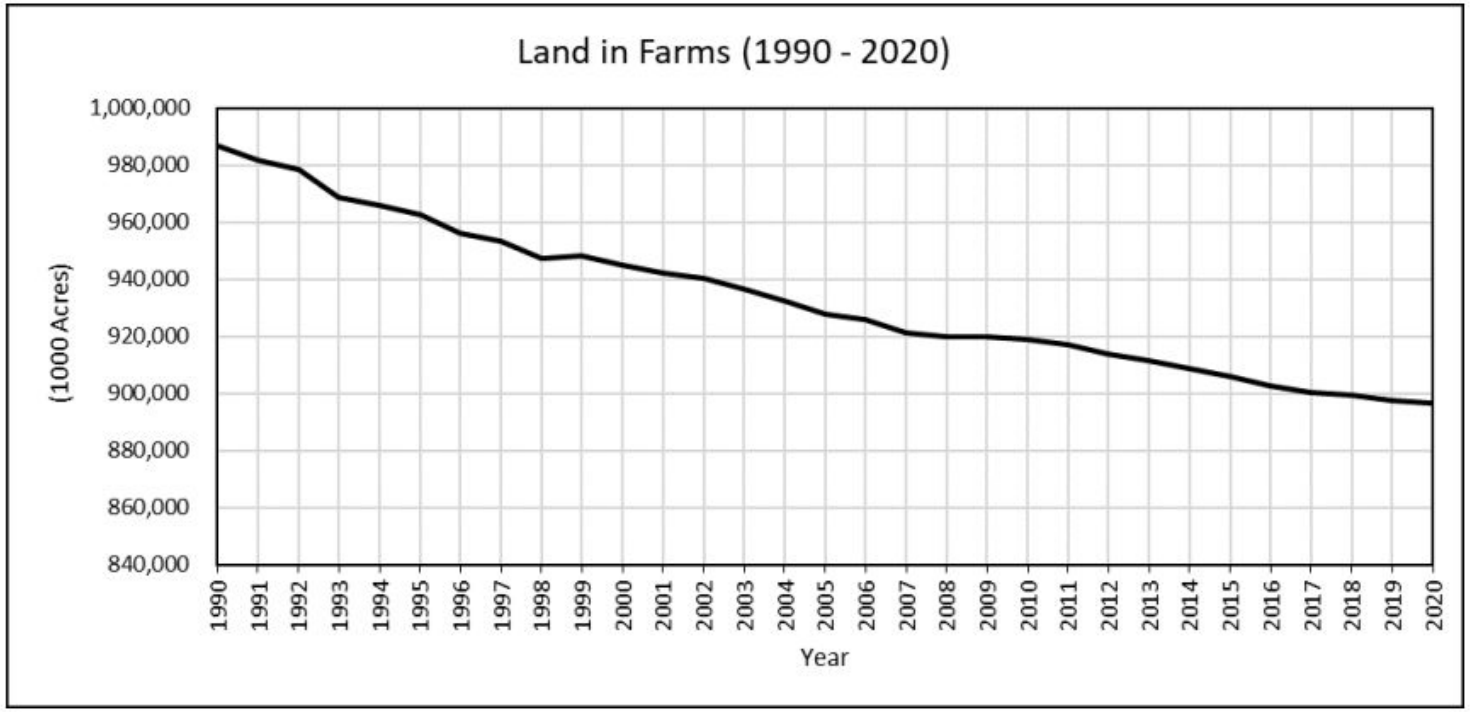




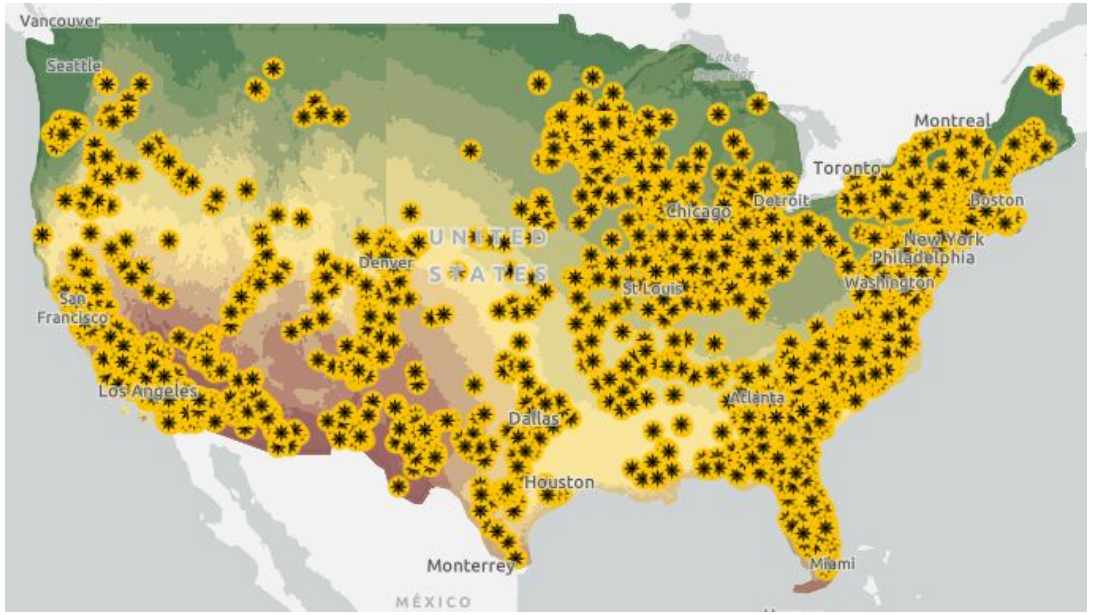
SOLAR IS GROWING, AG IS SHRINKING

WHERE IS SOLAR, AND WHY?

•The American Farmland Trust estimates that of the 2.9 million acres of utility-scale solar to be built by 2040, 80%will be built on agricultural lands.

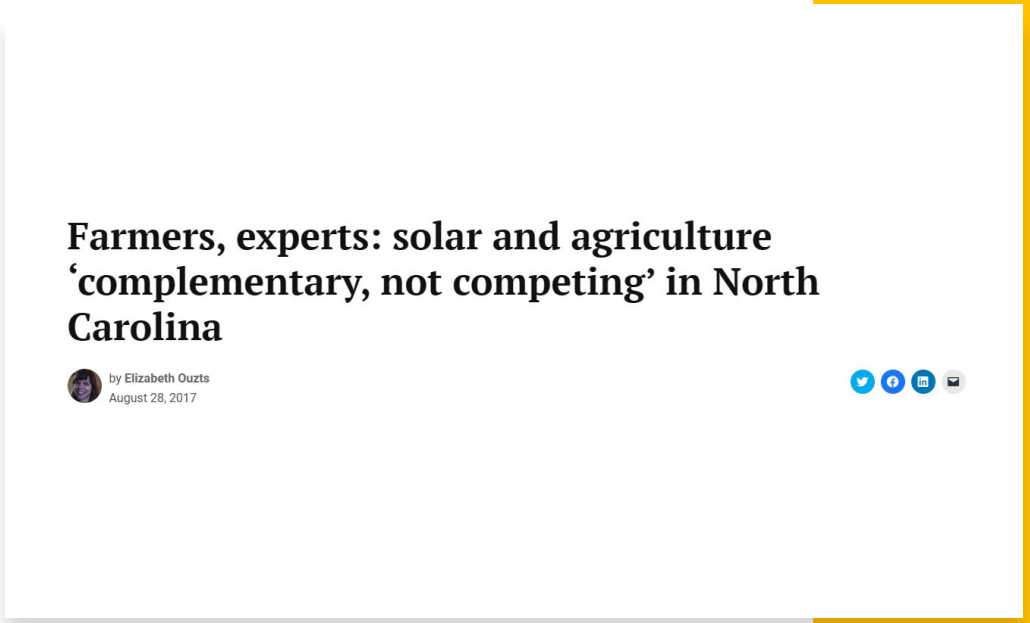
•Good agricultural and solar land share similar characteristics

- Access to sunlight
- Low wind speeds
- Flat, clear plots
- Located near existing infrastructure



SOLAR AS OPPORTUNITY FOR FARMERS

- In 2023, a farmer growing corn or soybeans is expected to generate gross revenues of $966 or $694 per acre, respectively
- Leasing farmland to a solar developer can lock in per-acre payments ranging from $700-1000 for 20 years or more
- Solar can keep farmers in business by providing a steady stream of income, serving as a barrier to market volatility.


Farmers, experts: solar and agriculture 'complementary, not competing' in North Carolina

by Elizabeth Ouzts
August 28, 2017


ENERGY & ENVIRONMENT

New farmland harvest – solar energy – creating political sparks

by Jan Ellen Spiegel
February 21, 2017 @ 5:00 am

SOLAR EXPANSION, PUBLIC PUSHBACK

Ten Ohio counties ban wind, solar projects under new state law

BY JAKE ZUCKERMAN - AUGUST 23, 2022 3:55 AM

SCIENCE ENVIRONMENT

Oregon Restricts Solar Development On Prime Farmland

By Cassandra Profita (OPB)
Sherwood, Ore. May 23, 2019 4:45 p.m.

Supervisors reject proposed solar farm north of Coolidge

By MARK COWLING Staff Writer Nov 4, 2022 Updated Dec 19, 2022 0

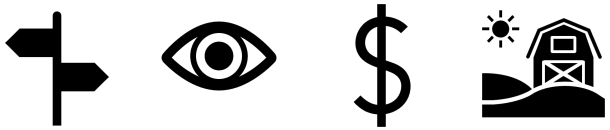
Another Pinal solar plant advances despite public opposition

By MARK COWLING Staff Writer Sep 7, 2022 Updated Oct 17, 2022 0

BUDGET & TAXES, BUSINESS, POLITICS, STATE GOVERNMENT

Currituck County fed up with solar

DON CARRINGTON APRIL 25, 2017



WHY NOT BOTH?

Agriculture + Photovoltaics = Agrivoltaics!

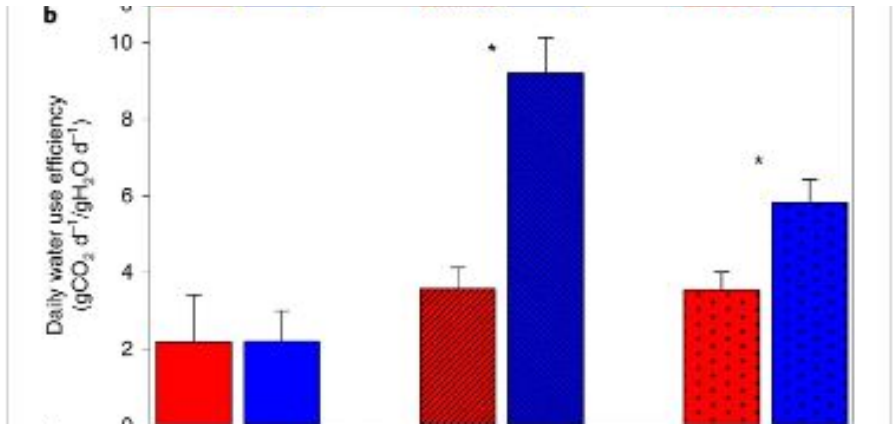
- Pollinator Habitat
- Crop-Based
- Solar Grazing

AGRIVOLTAICS BENEFITS ACROSS THE FOOD-ENERGY-WATER NEXUS

2 ZERO HUNGER

AGRIVOLTAICS AND FOOD

AGRIVOLTAICS AND WATER

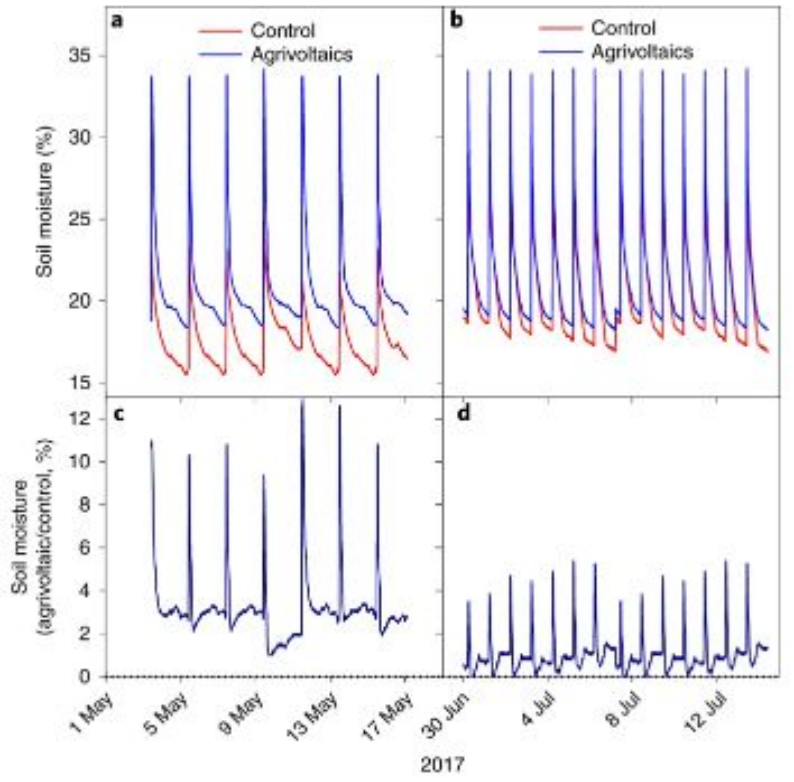


Chiltepin Tomato pepper

Jalapeno

Red = Control

Blue = Agrivoltaics

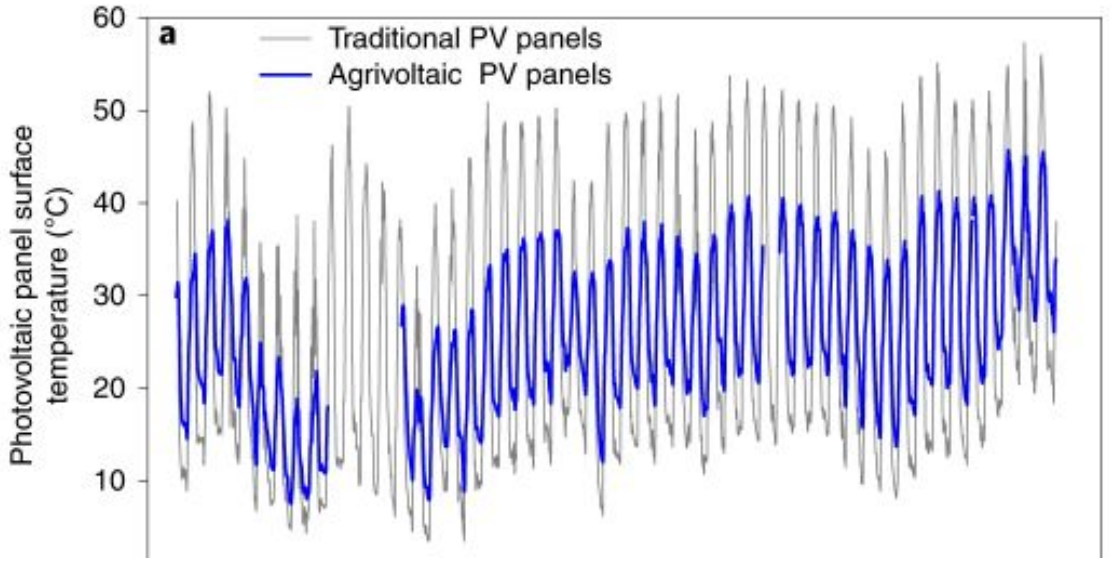


6 CLEAN WATER AND SANITATION

AGRIVOLTAICS AND ENERGY

81.8% increase in community support for solar when agrivoltaics is included

“It helps us address some local opposition, right? It helps us from a permitting and regulatory standpoint. If we can point to the fact that we're going to be providing multiple levels of benefit on this developed farm, then that helps us in the permitting process … Not having to fight local opposition, there's a cost savings there.”
-Mid Scale Developer in Northeast US



7 AFFORDABLE AND CLEAN ENERGY

BENEFITS OF AGRIVOLTAICS TO RURAL COMMUNITIES

COMMUNITY BENEFITS

Education

Local Food

Agricultural Preservation

Community Events

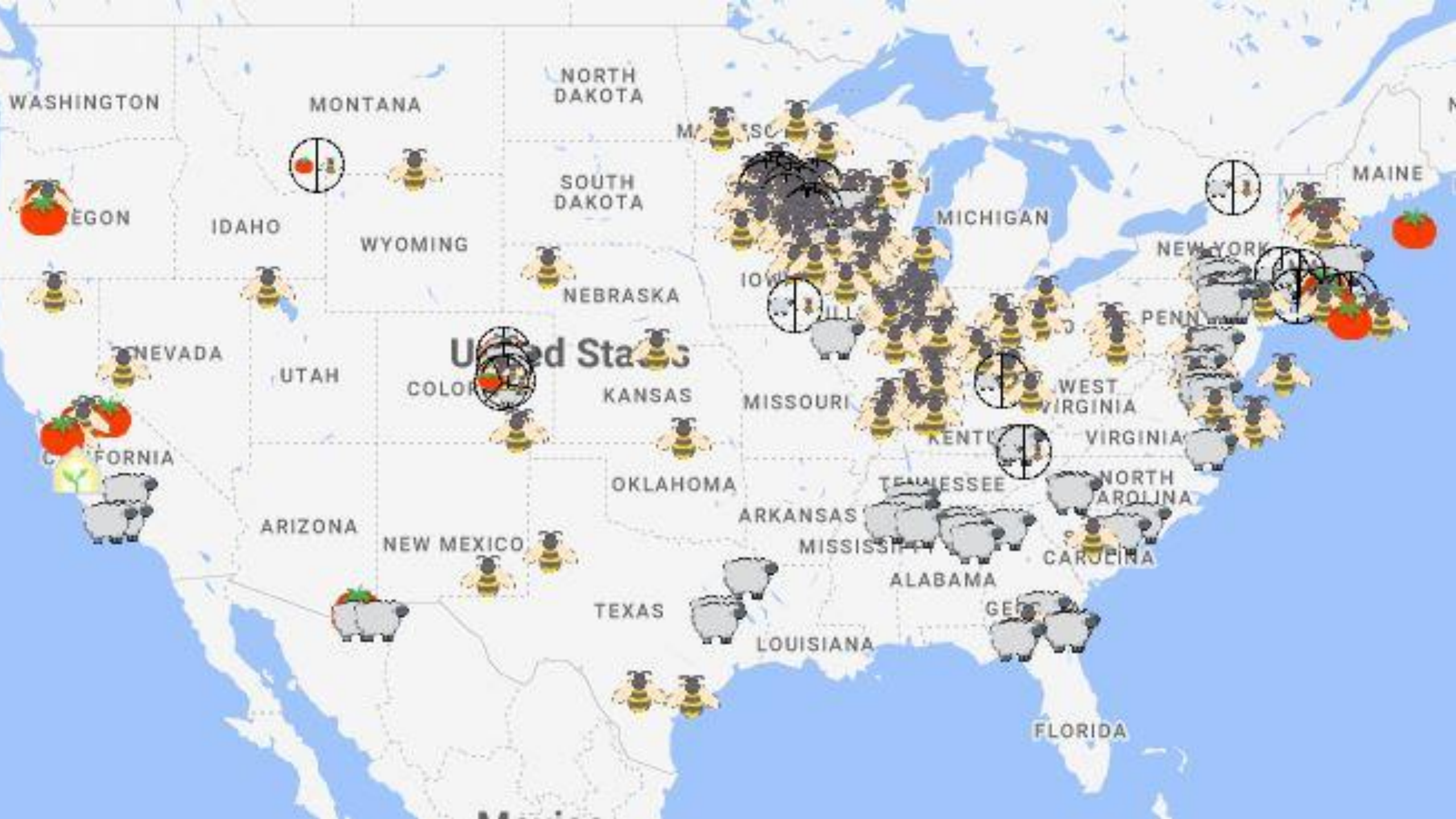
Local Green Energy

Local Economic Development

HOW DO WE GET THERE?

POLICIES SUPPORTING AGRIVOLTAICS

Pollinator-Friendly Certifications	Scorecards	Tax Benefits and Subsidies
IL, MD, MI, MN, NY, SC, VT	IL, NY	CO, MA, NC, NJ, VT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Thank You!
Questions?

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