

New York Farmland Market Trends and the Impacts of Renewable Energy

Alan Hinds

Ph.D. Candidate, Dyson School of Applied Economics and Management, Cornell University

arh245@cornell.edu

alanhinds.github.io

Some materials adapted from presentations made by Dr. Wendong Zhang

2026 Realtor Education Day | Binghamton, NY | February 3, 2026

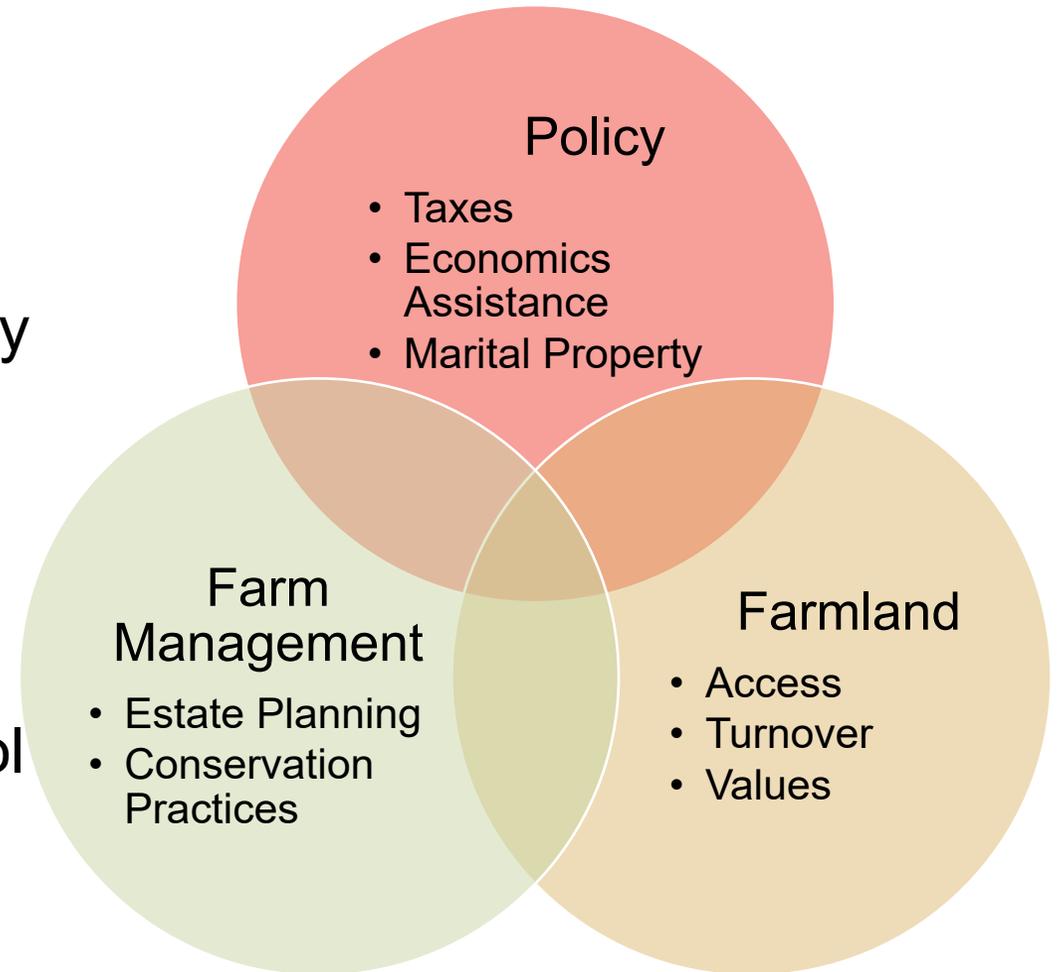
About Me

Education:

- 3rd Year Ph.D. at Cornell Dyson
- B.S. & M.S. from Kansas State University in Ag Econ

Background:

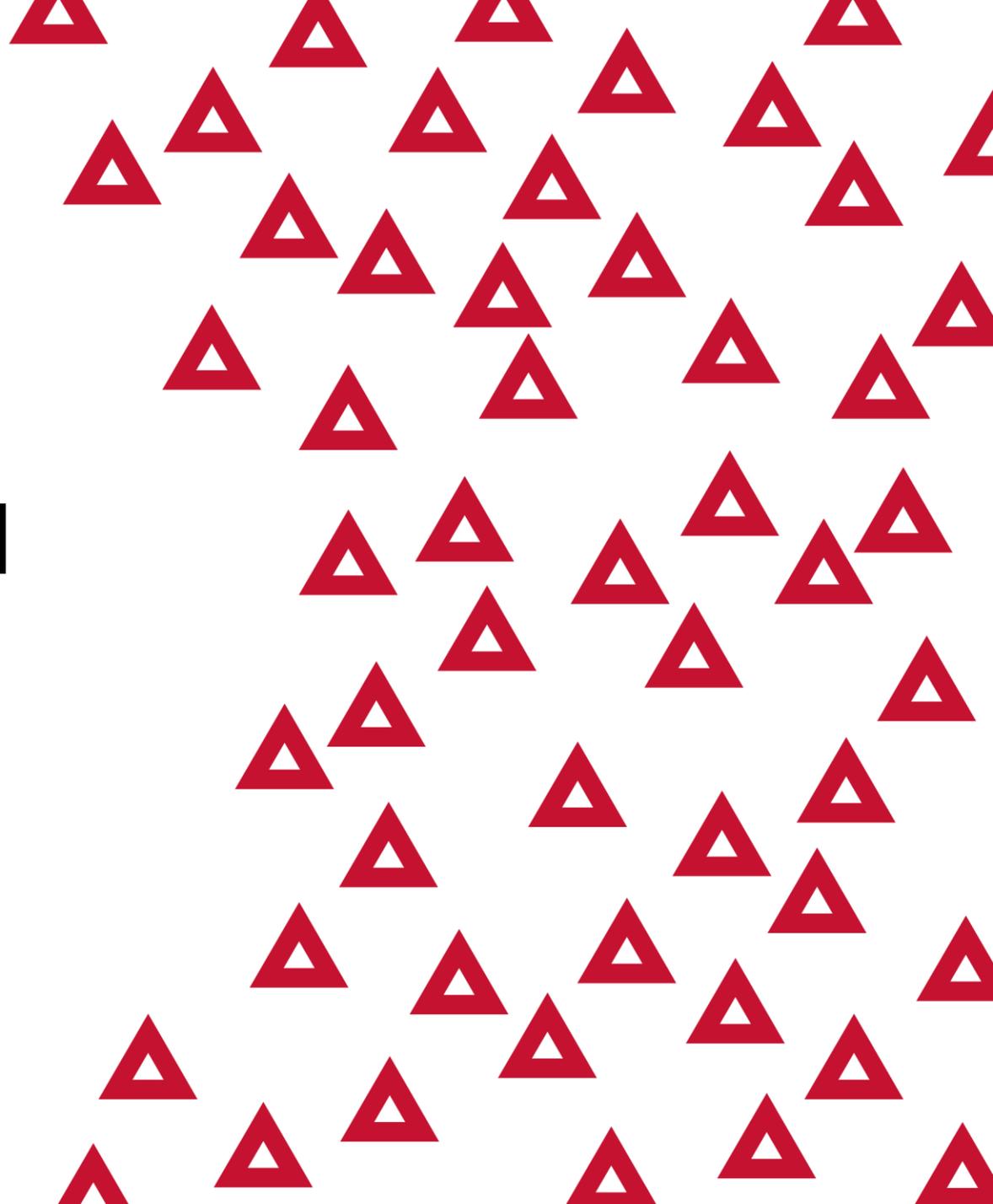
- Born in central Iowa ⇒ moved to family farm in NE Kansas
- Showed ranch horses before grad school
- Avid outdoorsman (camping, hiking, fishing, and waterfowl hunting)



Outline

- New York Farmland Market Trends
- Renewable Energy Policy
- Pricing Farmland
- Renewable Energy & Land Values
- Concluding Thoughts

New York Farmland Market Trends



ASFMRA Report

Farmland Class	Value Range	Activity Trend	Value Trend
High-quality cropland	\$3,000-\$12,000	Limited Sales	Increasing
Medium-quality cropland	\$2,000-\$7,000	More Sales	Increasing
Vineyard	\$3,000-\$17,000	Limited Sales	Stable
Wasteland or Recreational land	\$600-\$4,000	More Sales	Increasing
Cropland Rent	Rent Range	Rental Activity Trend	Rent Trend
	Up to \$250/acre	Stable	Increasing

Region 2
Southern Tier

Released in the summer

Source: dx.doi.org/10.2139/ssrn.5402595



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NEW YORK & VERMONT

LAND VALUE TRENDS

**American Society
of Farm Managers
& Rural Appraisers**

NORTHEAST CHAPTER

Dyson
Cornell
SC Johnson College of Business

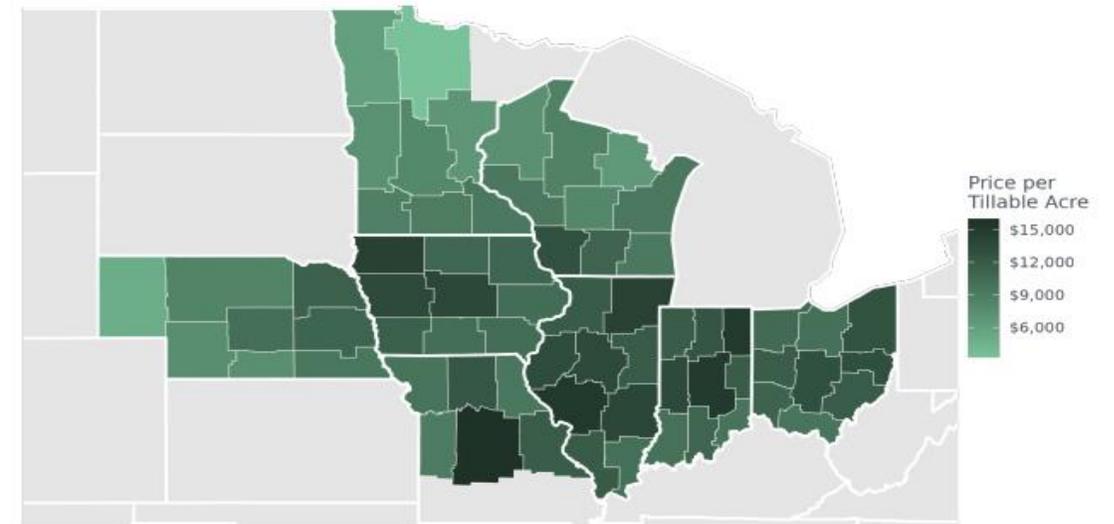
Cornell
Cooperative
Extension

New Northeast Report with Acres.com

New collaboration between Dr. Wendong Zhang, myself, and Acres.com

- 150M+ Parcel Records
- 45M+ Land Transactions
- We will be making farmland market reports for the Northeast, with a focus on New York
 - First to be releases in February/March 2026

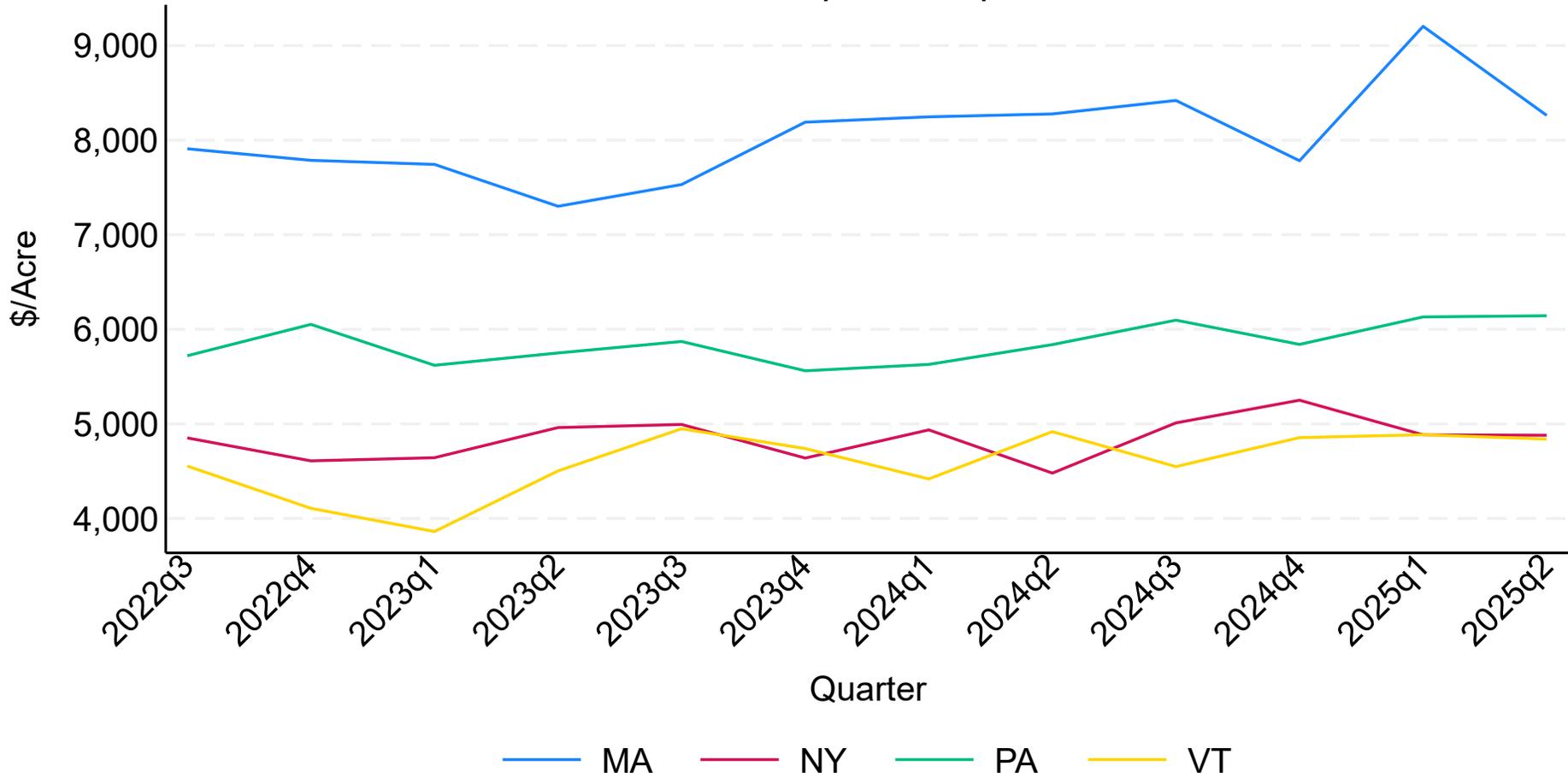
FIGURE 7. Shows a heat map of price per tillable acre across crop reporting districts in the Heartland.



Source: get.acres.com/heartland-report

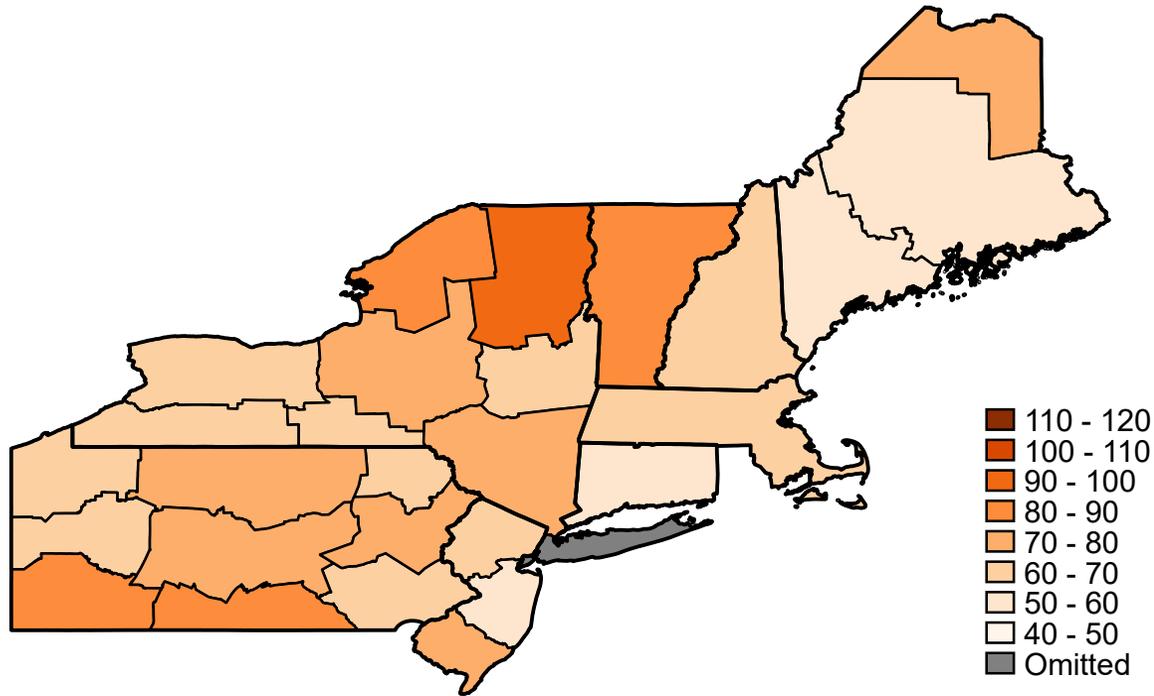
Mean Price of Farmland by State

2022q3 - 2025q2



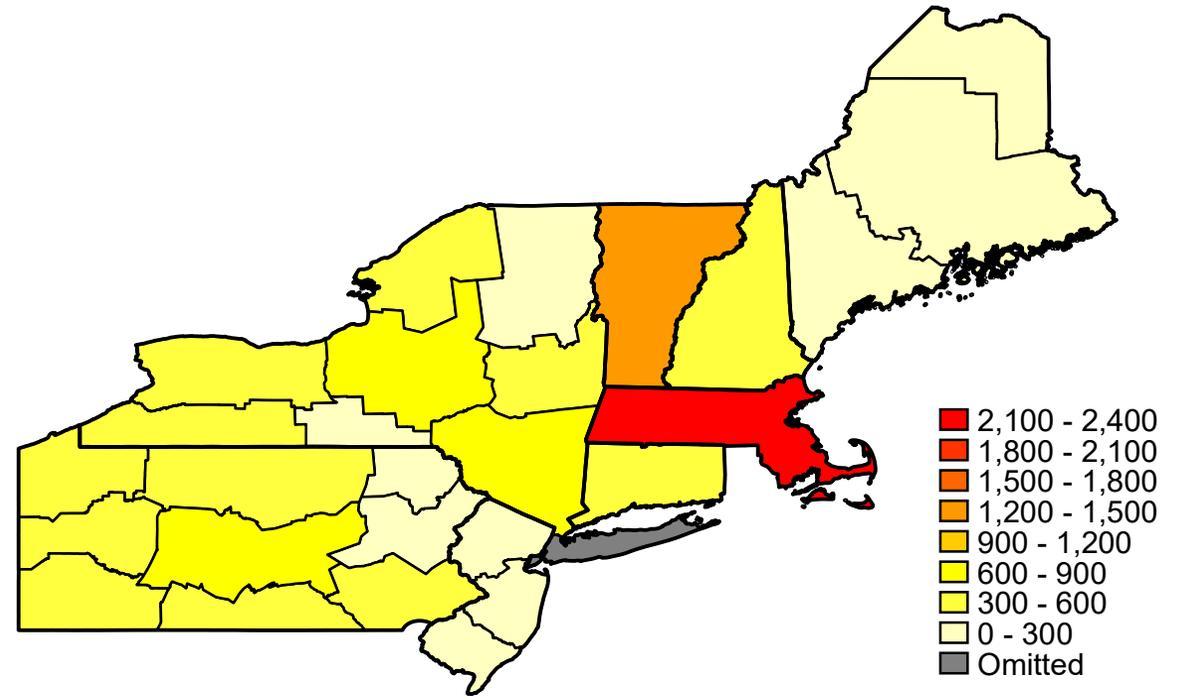
Average Sale Size (Acres)

2024q3 - 2025q2



Number of Farmland Sales

2024q3 - 2025q2



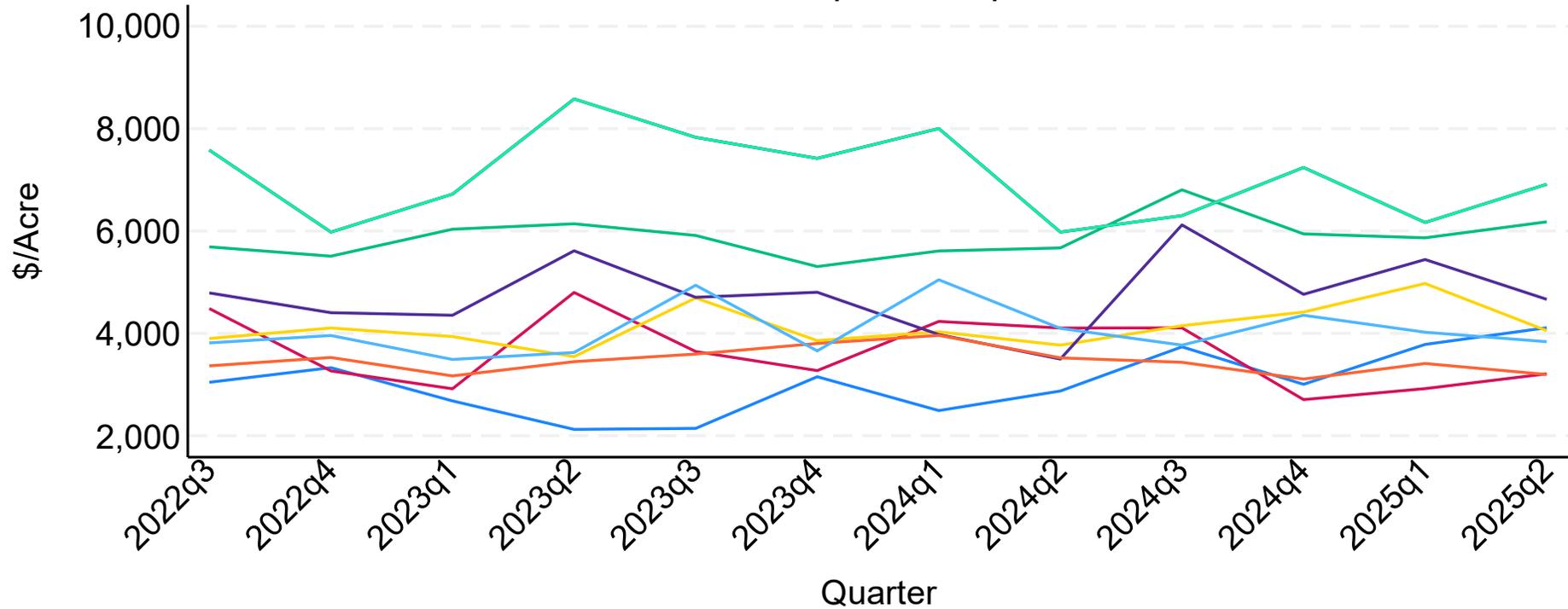
Districts with less than 5 transactions or less than 500 transacted acres are omitted. Districts with less than 5 transactions or less than 500 transacted acres are omitted.

Mean Price



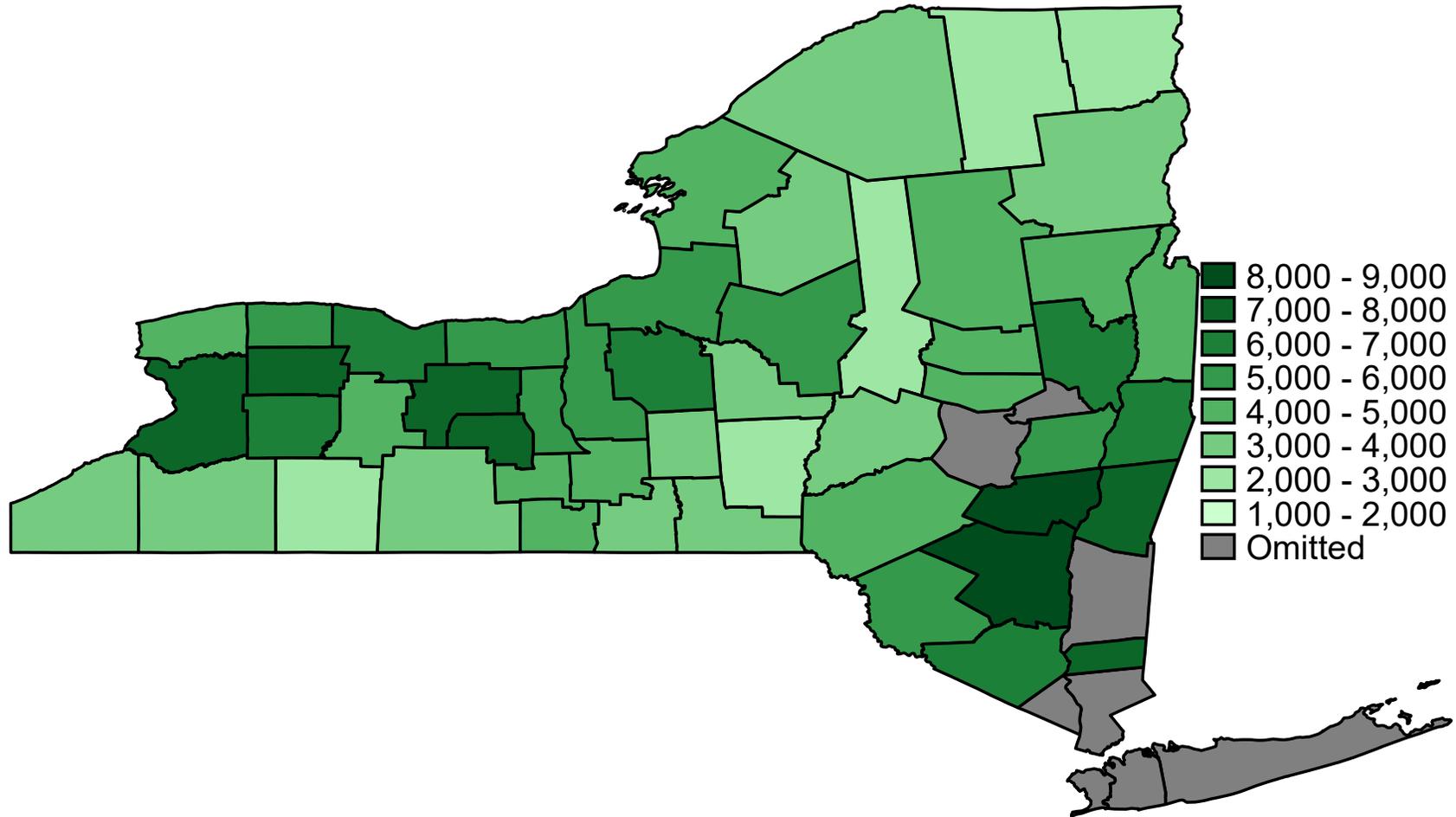
Mean Price of Farmland by Crop Reporting District

2022q3 - 2025q2



- Northern (20)
- Northeast (30)
- Western (40)
- Central (50)
- Eastern (60)
- Southwest (70)
- Southern (80)
- Southeast (90)
- Long Island (91)

Mean Price of Farmland (\$/Acre) 2024q3 - 2025q2

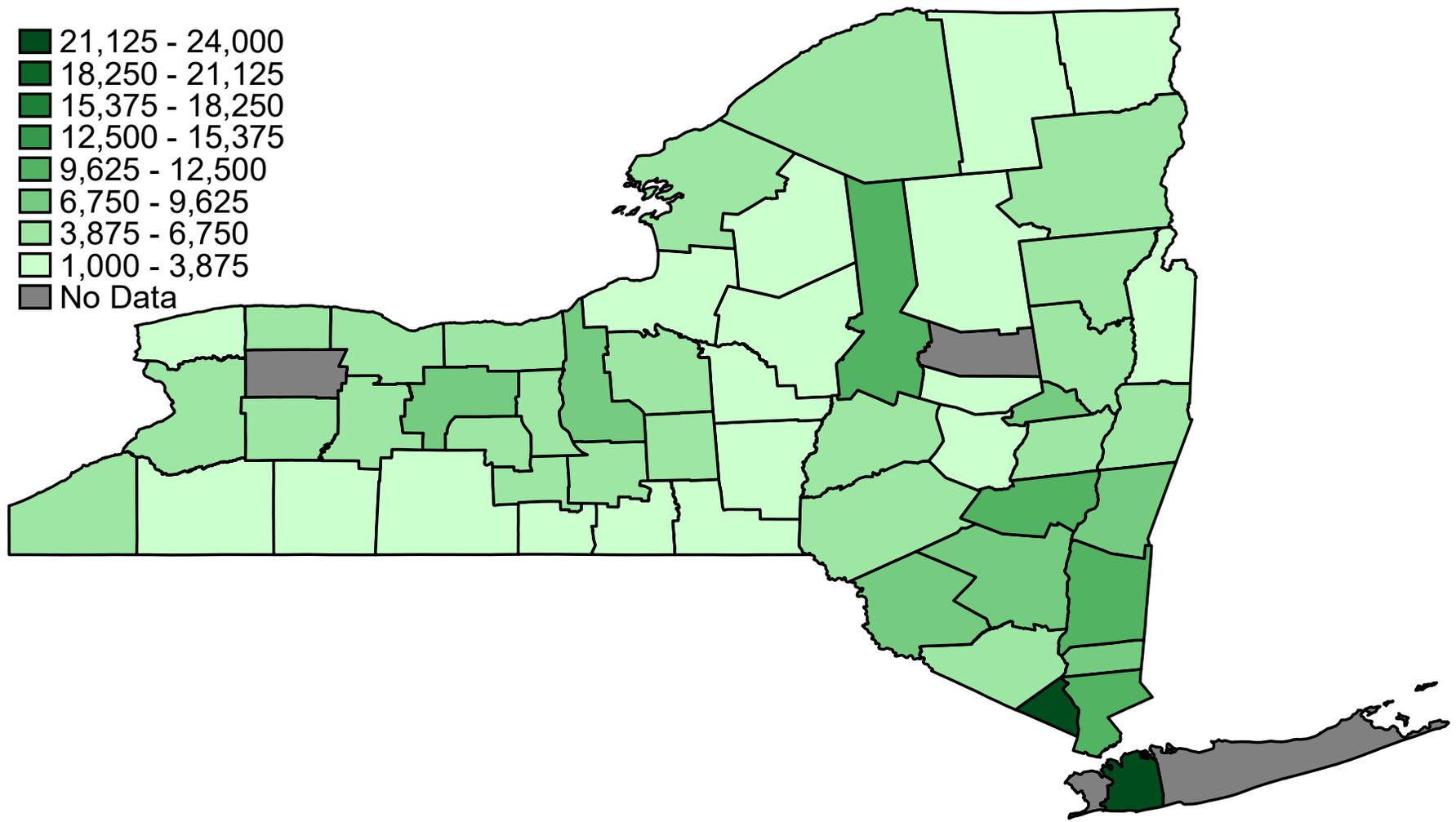


Counties with less than 5 transactions or less than 1000 transacted acres are omitted.

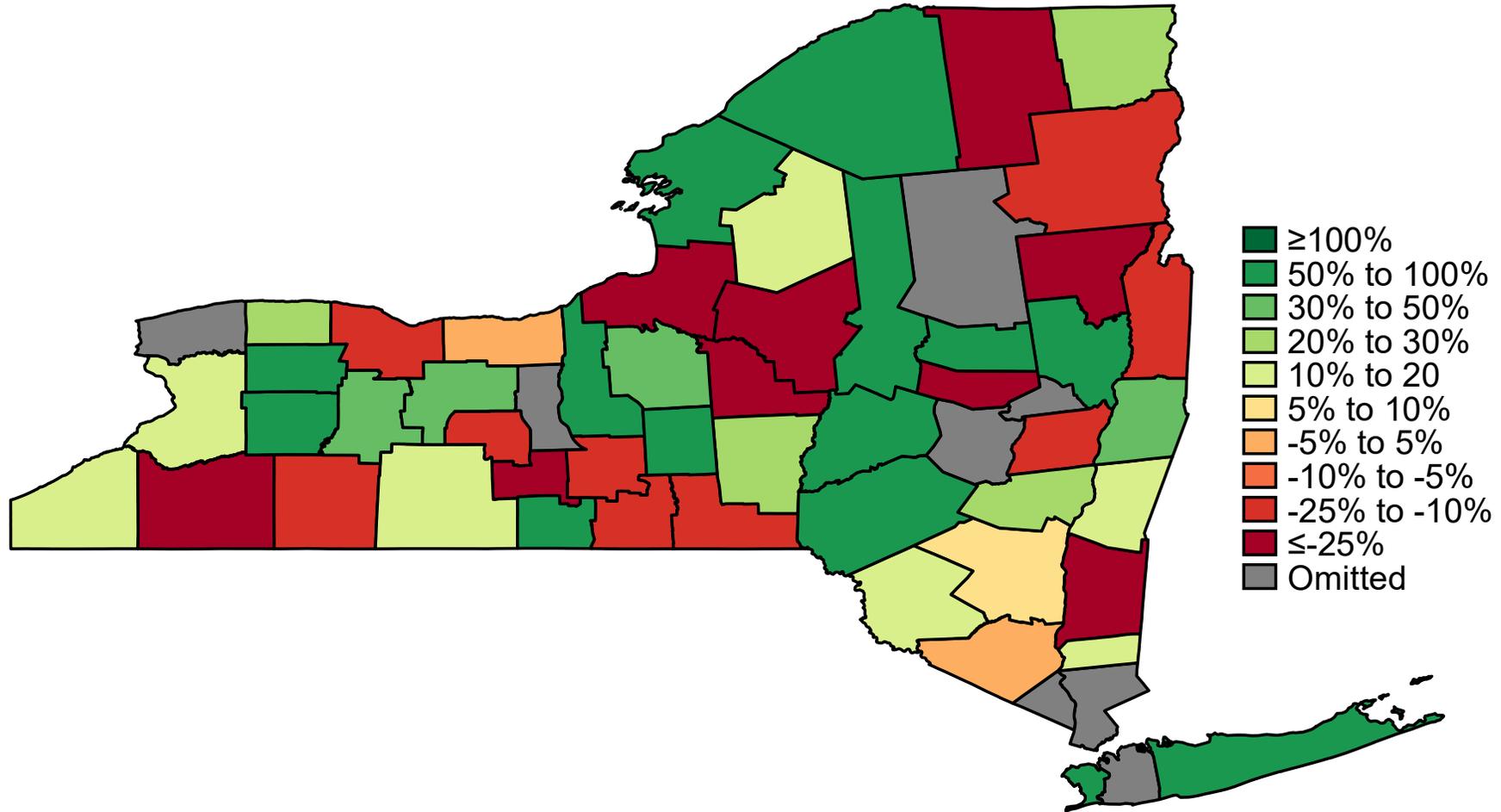
Median Price



Median Price of Farmland (\$/Acre) 2025q2



Percent Change in Median Price per Acre 2025q2 versus 2024q2



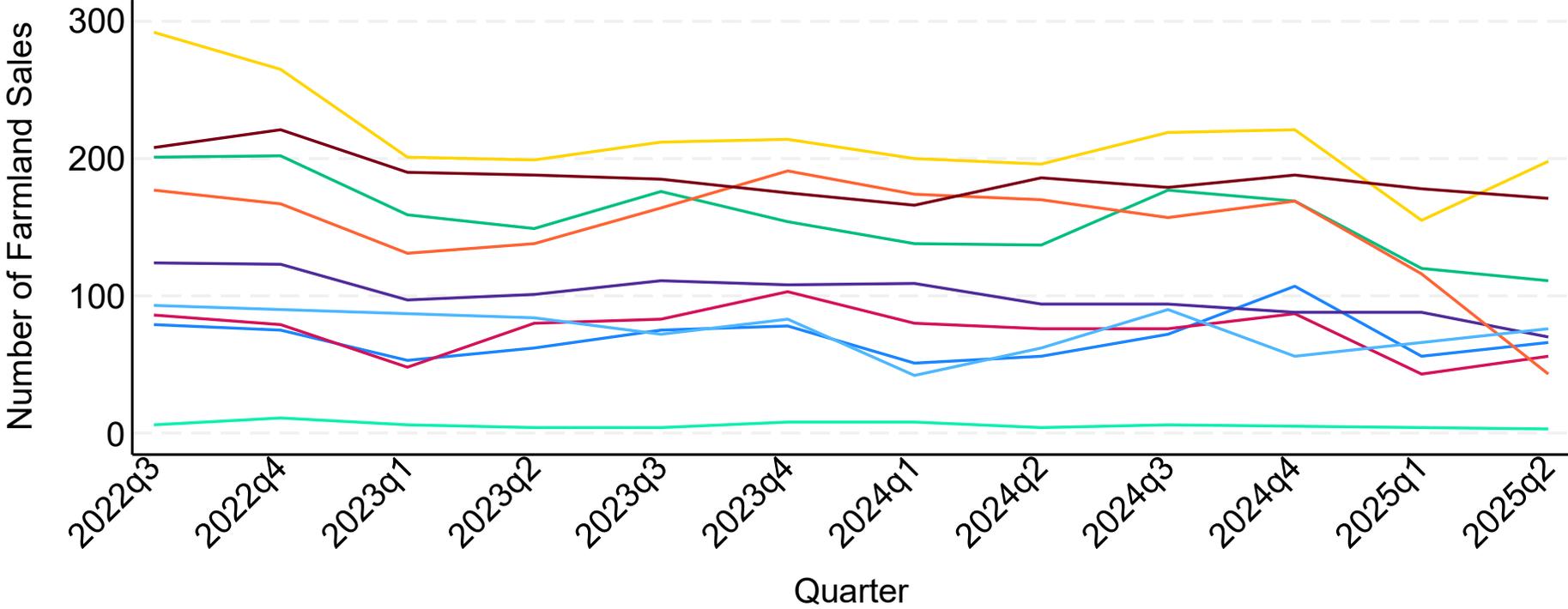
Counties are omitted if, in either quarter, they had <3 transactions or <100 transacted acres.

Number of Sales



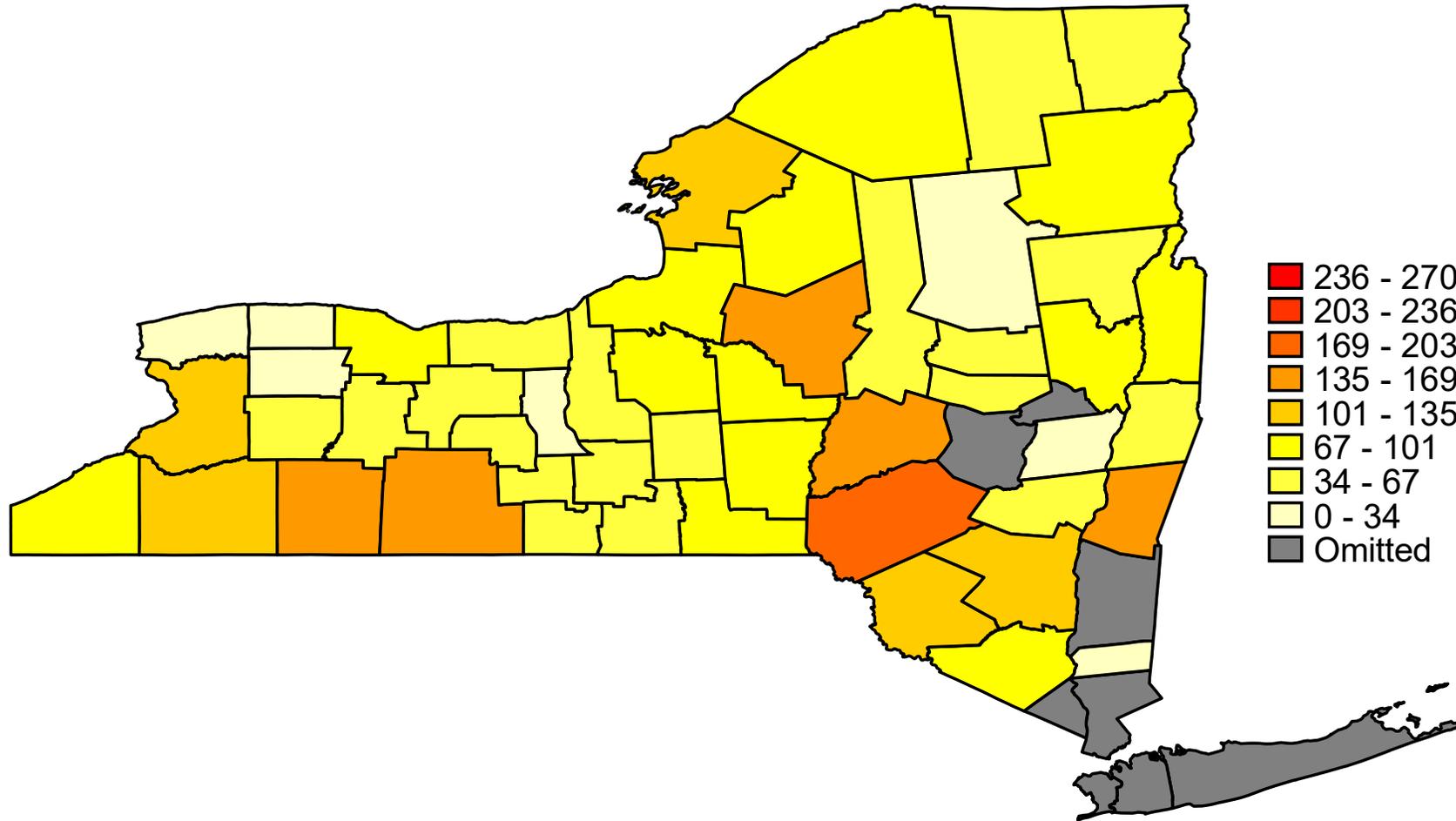
Farmland Sales by Crop Reporting District

2022q3 - 2025q2



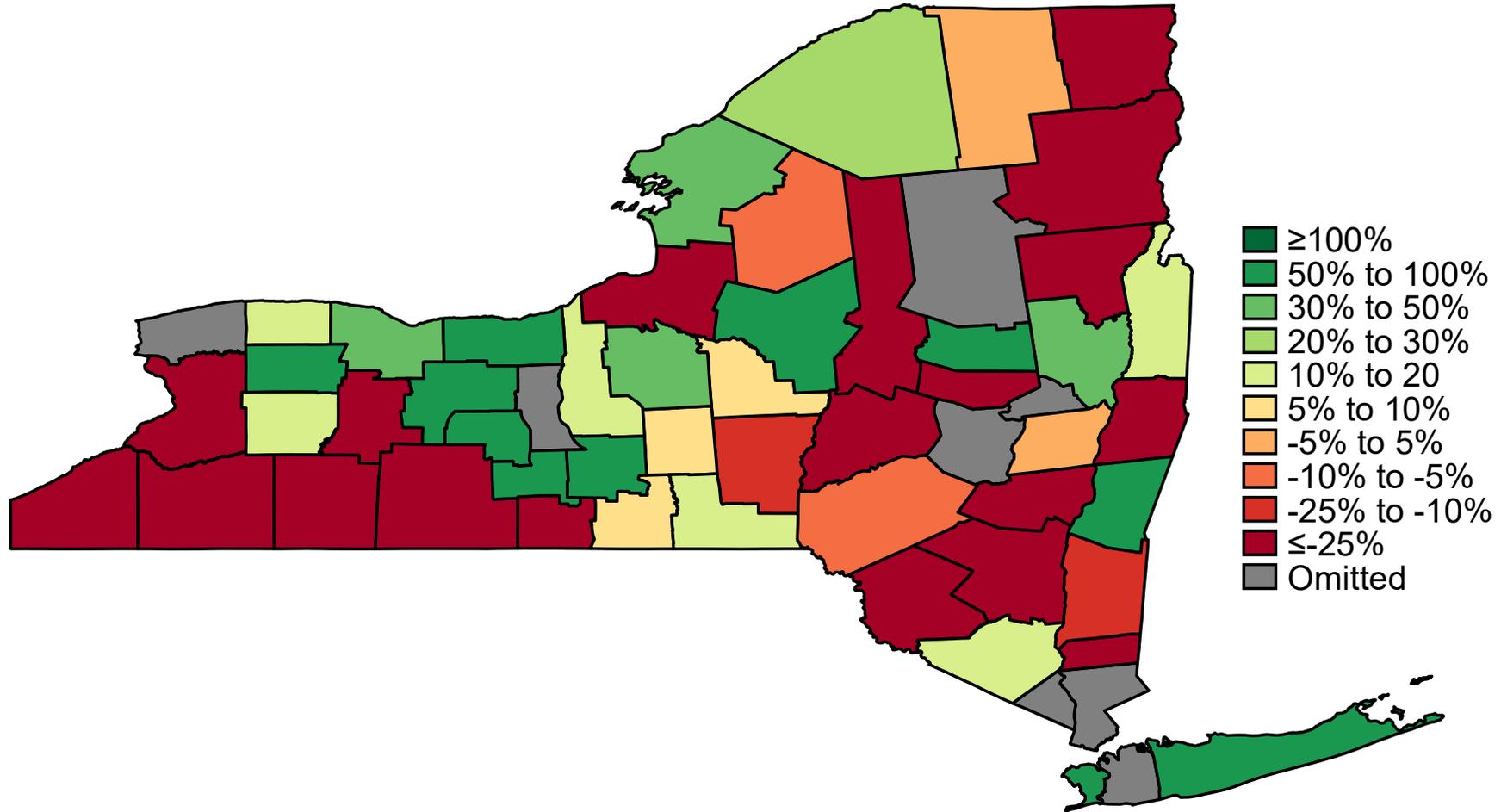
- Northern (20)
- Northeast (30)
- Western (40)
- Central (50)
- Eastern (60)
- Southwest (70)
- Southern (80)
- Southeast (90)
- Long Island (91)

Number of Farmland Sales 2024q3 - 2025q2



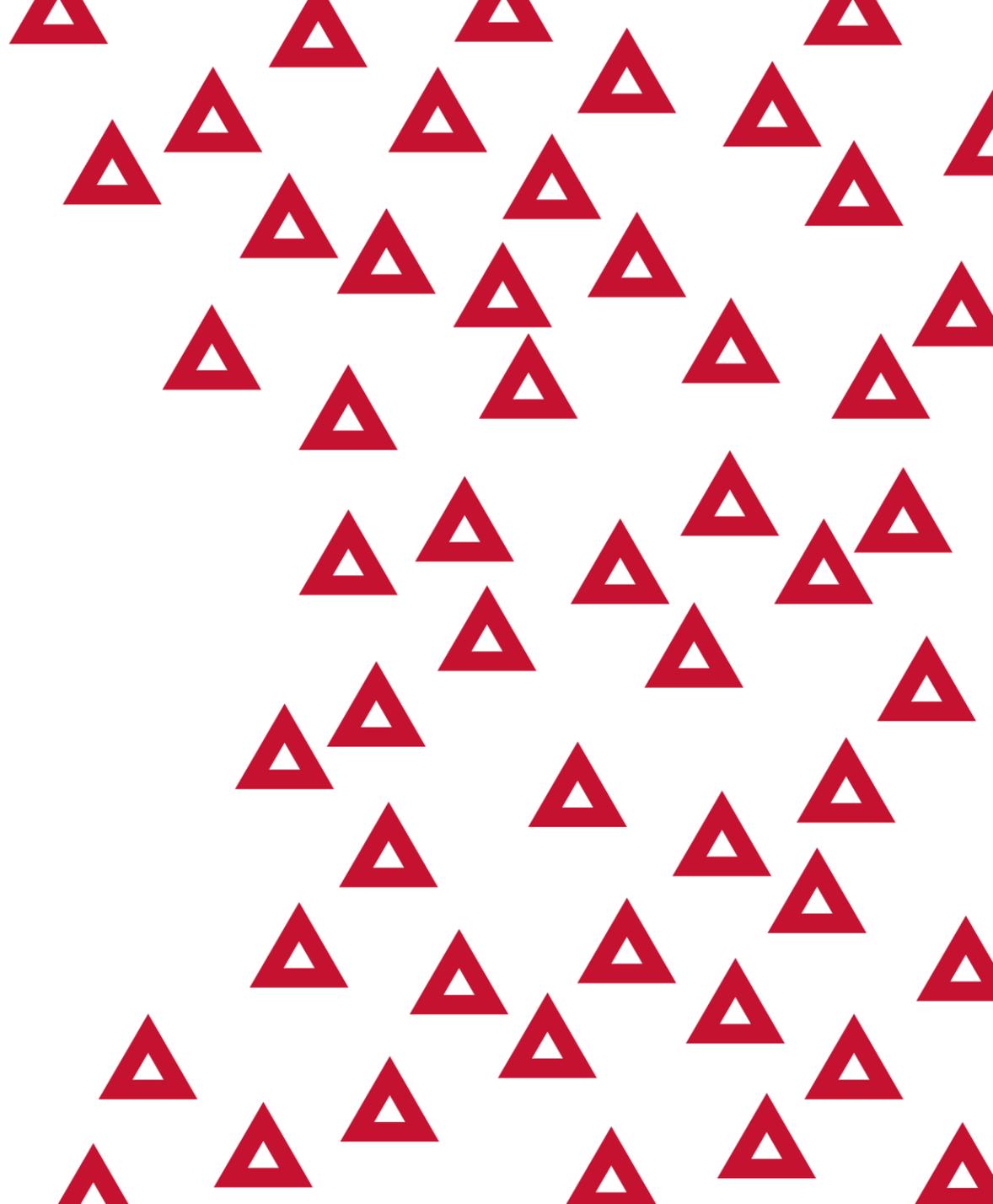
Counties with less than 5 transactions or less than 1000 transacted acres are omitted.

Percent Change in Number of Farmland Sales 2025q2 versus 2024q2



Counties are omitted if, in either quarter, they had <3 transactions or <100 transacted acres.

Renewable Energy Policy



U.S. Energy Policy & Solar

- National goal: net-zero carbon emissions by 2050 (recently dropped)
- Large-scale solar projects (LSSPVs; ≥ 1 MW) help push towards this goal
 - Development is the target of many state policies
 - Require ~6-8 acres/MW
 - An additional ~3 million acres of utility-scale solar to be built by 2040
 - The 500+ existing large-scale solar developments have taken about 10,000 acres of NYS land, ~56% was converted from agriculture

Sources: farmland.org/project/farms-under-threat/ & Peter Woodbury (pbw1@cornell.edu)

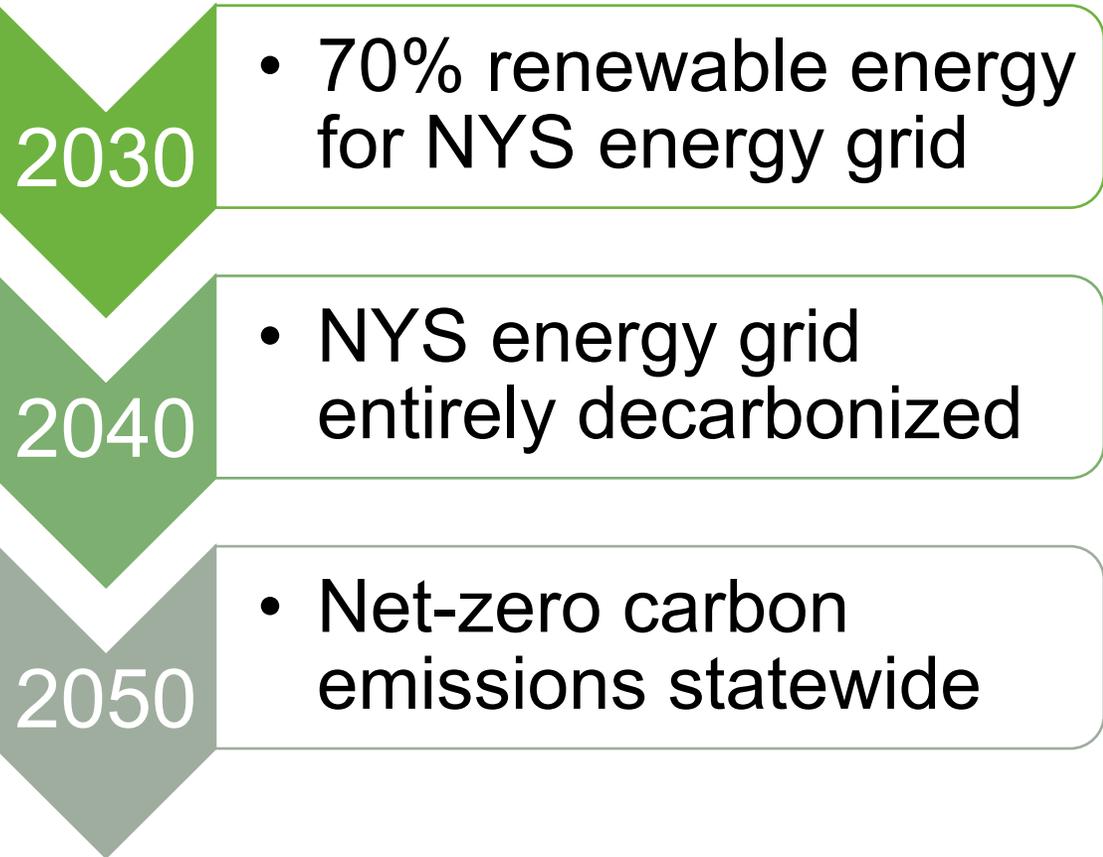
The One Big Beautiful Bill (OBBB) Act

- Eliminated the Residential Clean Energy Credit for 2026+
 - 30% of qualified expenses for new clean energy property
- Changes the Clean Electricity Investment Tax Credit
 - Eliminated planned phase out process
 - Requires that solar projects:
 - Begun construction before July 5, 2026; or
 - Be in service before January 1, 2028
- Restrictions for Foreign Entities of Concern (FEOC)
 - No “specified foreign entity” (SFE) or “foreign-influenced entity” (FIE) can claim certain clean energy tax credits
 - Projects claiming clean energy tax credits must limit materials or components with “material assistance” from SFEs and FIEs

⇒ State policies will drive solar development

Source: seia.org/research-resources/clean-energy-provisions-big-beautiful-bill/

The New York Climate Leadership and Community Protection Act (CLCPA) 2019



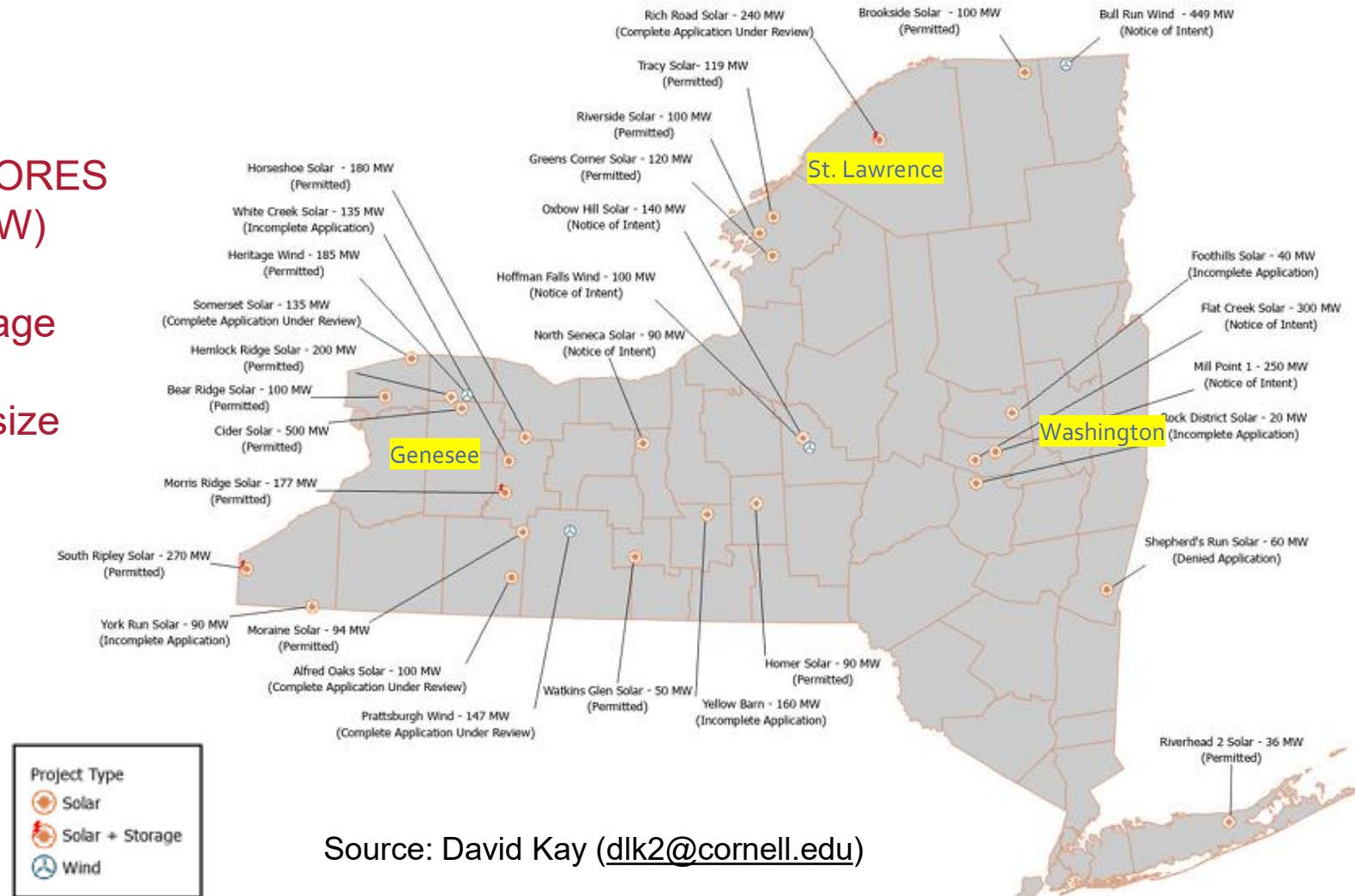
- Ambitious climate legislation
- Goals will require 65GW (65,000MW) of additional energy capacity
- Mandates decarbonization of key sectors including:
 - Transportation
 - Home space heating

Sources: Peter Woodbury (pbw1@cornell.edu) & NYS DEC

Office of Renewable Energy Siting (ORES)

Executive Law § 94-c Permit Application Status
(as of February 6, 2024)

- Permits from the Office of Renewable Energy Siting (ORES governs projects >20-25 MW)
- Most activity in the early stage
- Average proposed project size >100MW



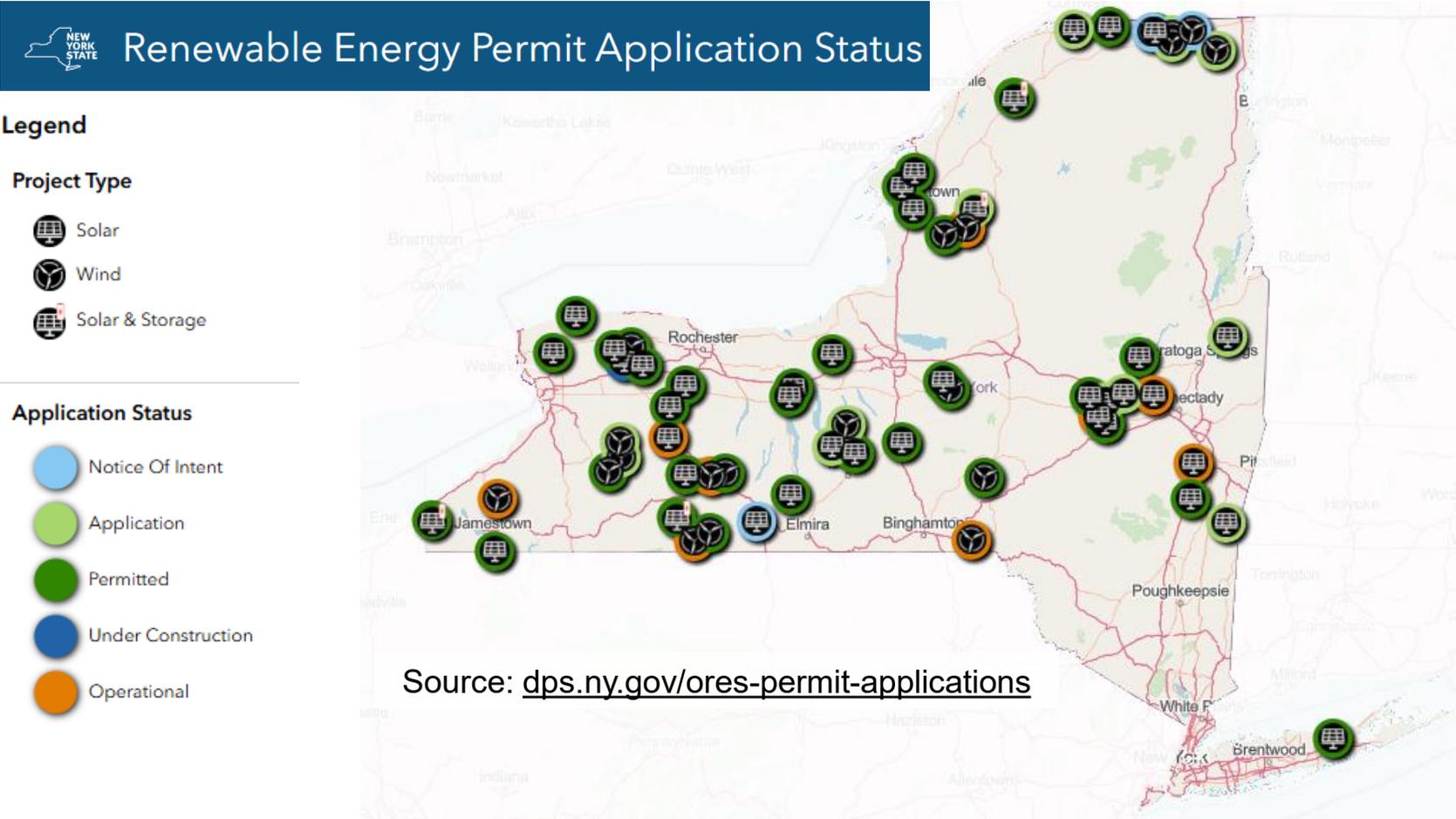
Source: David Kay (dlk2@cornell.edu)

More NYS Legislation

- The Accelerated Renewable Energy Growth and Community Benefit Act (2020)
 - Established new rules for siting electricity generating facilities
 - 20-25MW or larger
- New authority for NY Power Authority (NYPA)
 - Develop renewable power facilities (in addition to hydropower)
- Renewable Action Through Project Interconnection and Deployment (RAPID) Act
 - Transferred the Office of Renewable Energy Siting (ORES) from Department of State to the Department of Public Service
 - Adds new functions, powers, duties, and obligations related to major electric transmission siting

Source: David Kay (dlk2@cornell.edu)

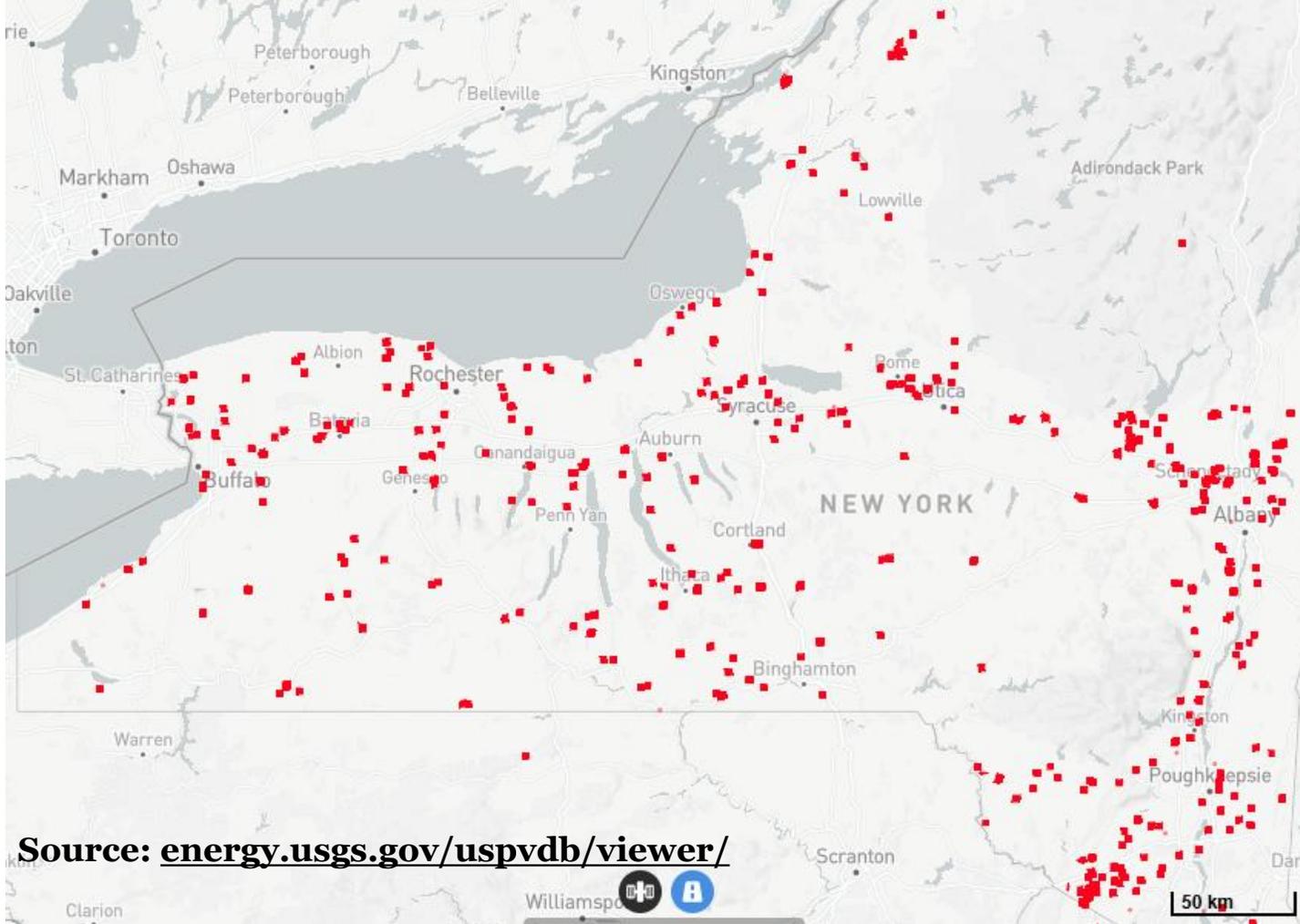
Few 5MW+ projects, but more will come; Most are much larger (100MW+)



Search by Project Name

Zoom to Location

Solar Projects ≥ 1 MW



U.S. Solar Photovoltaic Database

Data Source: April, 2025 | Build: v3.0 | [LBNL](#), [USGS](#)

The U.S. Solar Photovoltaic Database (USPVD) provides the locations and array boundaries of U.S. front-of-the-meter, photovoltaic facilities, direct current capacity of 1 megawatt or more, that became operational before mid-2024.

Showing **459** solar projects on screen with a total rated capacity of **1,710 MW AC**

Apply Range/Category Filter to Solar Facilities by:

- None
- Type
- Capacity
- Agrivoltaic
- Year

Filter by project name, state (e.g. NC), or Id

Name	Year	Capacity	Area
Showing 1 - 50 of 459 Projects Here			
East Point Energy Center, LLC, NY	2024	50.0 MW	564,719 m ²
NY8 - Teichos Pattersonville, NY	2024	20.0 MW	527,327 m ²
NY8 - Darby Solar, NY	2022	20.0 MW	283,596 m ²
NY8-Branscomb Solar, NY	2021	20.0 MW	366,305 m ²
NY8 - Regan Solar, NY	2022	20.0 MW	357,099 m ²

East Point Energy Center, LLC, NY **50.0 MW**
 Year Online: 2024 | Axis Type: Single-Axis
 Site Type: Greenfield | Area: 564,719 m²
 Date of source imagery when facility digitized: 07/2023

NY8 - Teichos Pattersonville, NY **20.0 MW**
 Year Online: 2024 | Axis Type: Single-Axis
 Site Type: Greenfield | Area: 527,327 m²
 Date of source imagery when facility digitized: 02/2024

NY8 - Darby Solar, NY **20.0 MW**
 Year Online: 2022 | Axis Type: Fixed-Tilt
 Site Type: Greenfield | Area: 283,596 m²
 Date of source imagery when facility digitized: 04/2023

NY8-Branscomb Solar, NY **20.0 MW**
 Year Online: 2021 | Axis Type: Single-Axis
 Site Type: Greenfield | Area: 366,305 m²
 Date of source imagery when facility digitized: 08/2022

NY8 - Regan Solar, NY **20.0 MW**
 Year Online: 2022 | Axis Type: Single-Axis
 Site Type: Greenfield | Area: 357,099 m²
 Date of source imagery when facility digitized: 12/2022

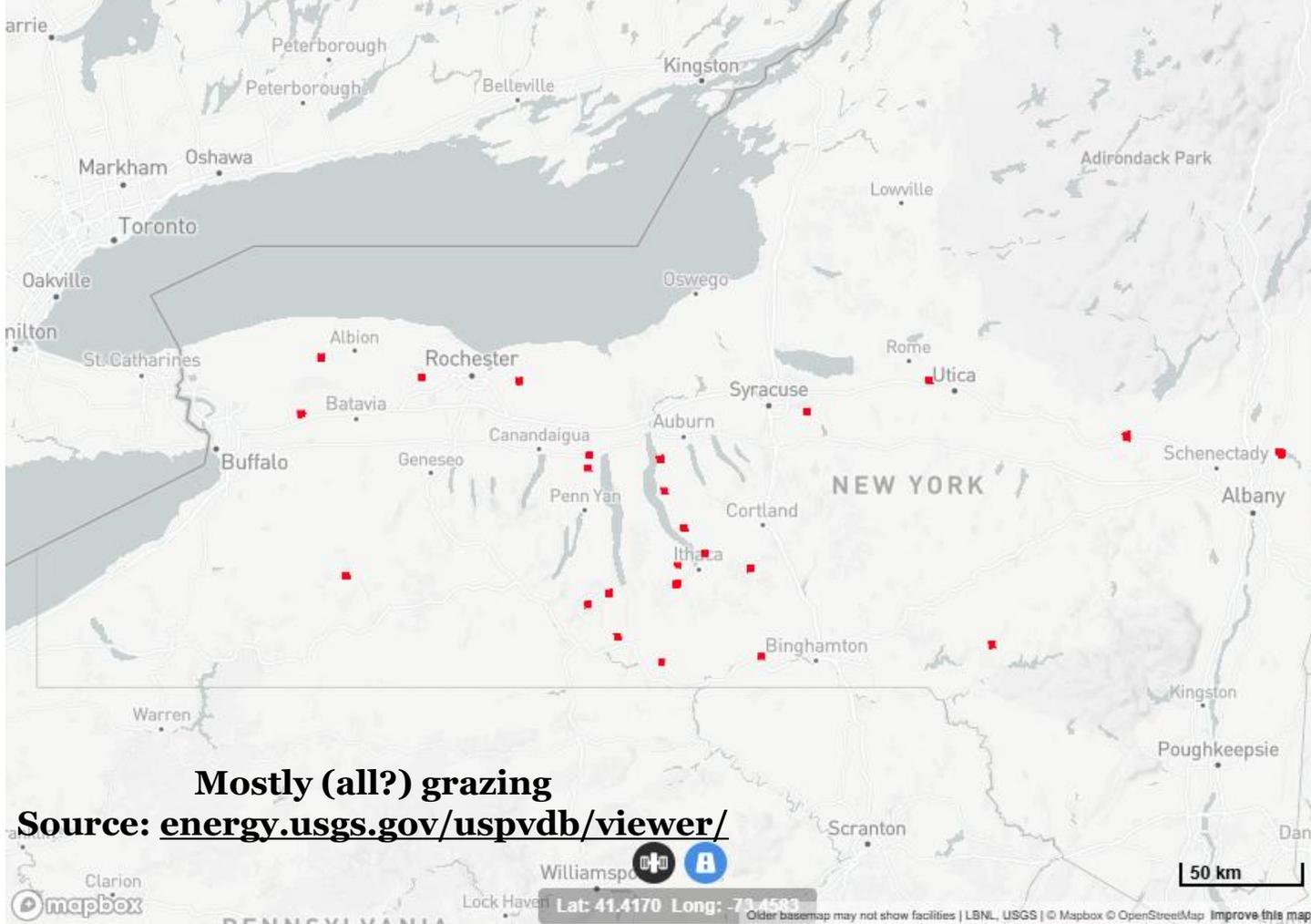
Source: energy.usgs.gov/uspvdb/viewer/



Search by Project Name

Zoom to Location

Agrivoltaics ≥ 1 MW



Mostly (all?) grazing

Source: energy.usgs.gov/uspvdb/viewer/

U.S. Solar Photovoltaic Database

Data Source: April, 2025 | Build: v3.0 | LBNL, USGS

The U.S. Solar Photovoltaic Database (USPVDB) provides the locations and array boundaries of U.S. front-of-the-meter, photovoltaic facilities, direct current capacity of 1 megawatt or more, that became operational before mid-2024.

Showing **28** solar projects on screen with a total rated capacity of **112 MW AC**

Apply Range/Category Filter to Solar Facilities by:

- None
- Type
- Capacity
- Agrivoltaic
- Year

Non-Agrivoltaic Projects Agrivoltaic Projects

Filter by project name, state (e.g. NC), or Id

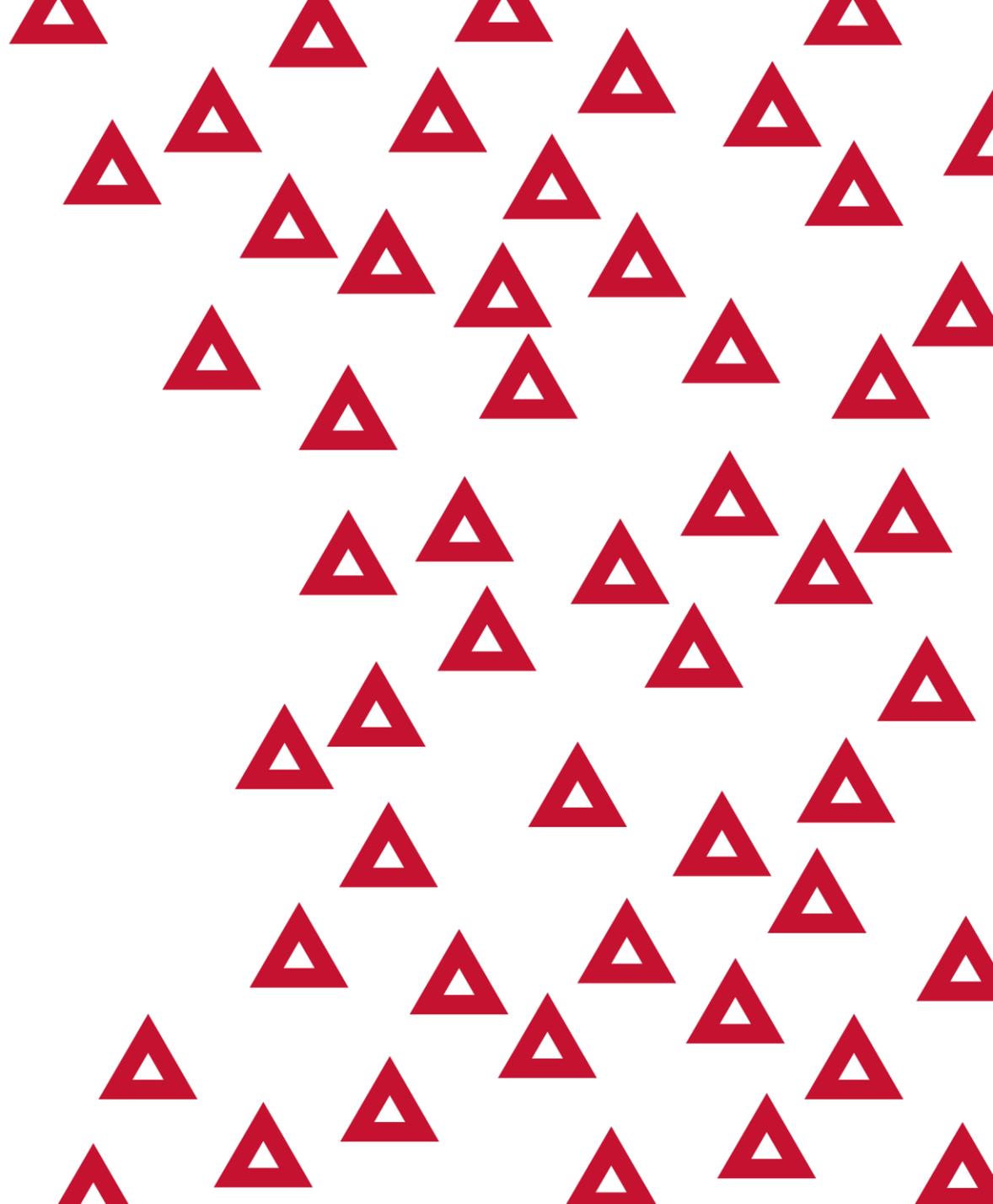
Name	Year	Capacity	Area
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Showing 28 Projects Here

Newfield Community Solar, LLC, NY Year Online: 2019 Axis Type: Fixed-Tilt Site Type: Greenfield Area: 124,340 m ² Date of source imagery when facility digitized: 07/2022	6.0 MW
Lansing Renewables, LLC, NY Year Online: 2020 Axis Type: Single-Axis Site Type: Greenfield Area: 84,153 m ² Date of source imagery when facility digitized: 05/2022	5.0 MW
Podunque Road (CSG), NY Year Online: 2021 Axis Type: Fixed-Tilt Site Type: Greenfield Area: 75,918 m ² Date of source imagery when facility digitized: 12/2023	5.0 MW
Green Lakes Solar, NY Year Online: 2022 Axis Type: Fixed-Tilt Site Type: Greenfield Area: 78,186 m ² Date of source imagery when facility digitized: 10/2022	5.0 MW
Mohawk View Solar, NY Year Online: 2021 Axis Type: Single-Axis Site Type: Greenfield Area: 103,502 m ²	5.0 MW



Pricing Farmland

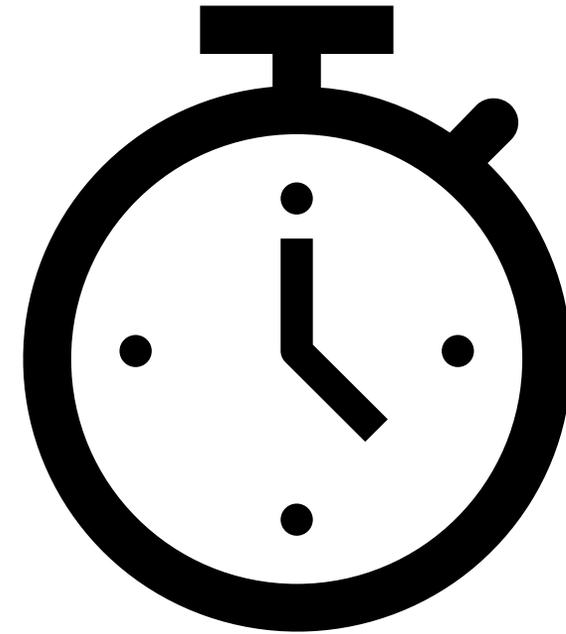


Conceptual Framework

$$\text{Land Value} = \frac{\text{Local Net Income}}{\text{Universal Interest Rate}}$$

Time Value of Money

- A dollar today is worth more than a dollar tomorrow
- Why?
 - Consumption
 - Risk / uncertainty
 - Investment
 - Inflation
 - Other?



Capitalization

Capitalization Formula

$$PV = \sum_{t=0}^n \frac{R}{(1+i)^t}$$

The present value of land is equal to the sum of all future returns.

Farmland Capitalization

If we think of farmland as having

- constant income streams to infinity *and*
- a constant interest rate

then present value converges to:

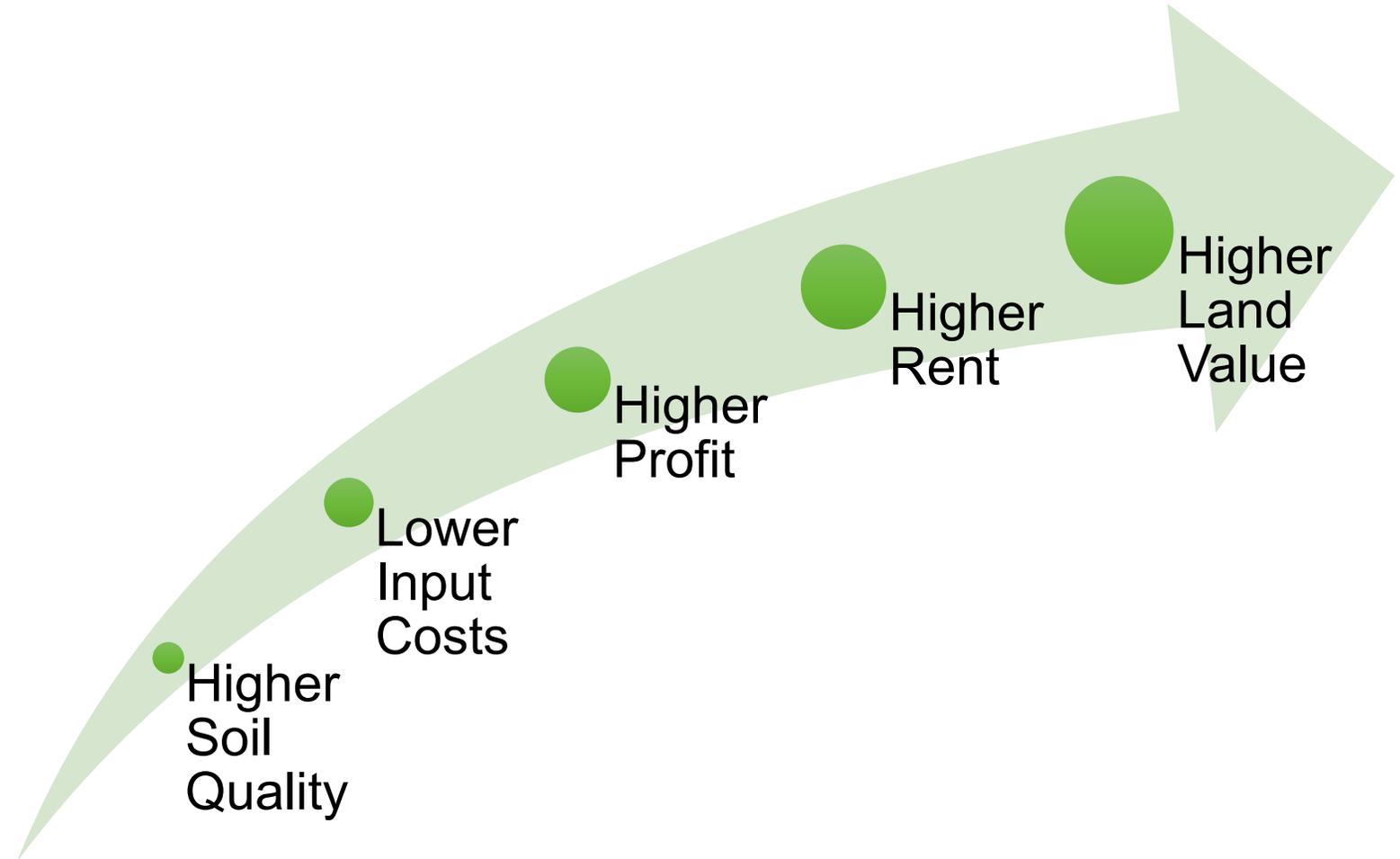
$$PV = \frac{R}{i} \Rightarrow \text{Land Value} = \frac{\text{Local Net Income}}{\text{Universal Interest Rate}}$$

Local Net Income



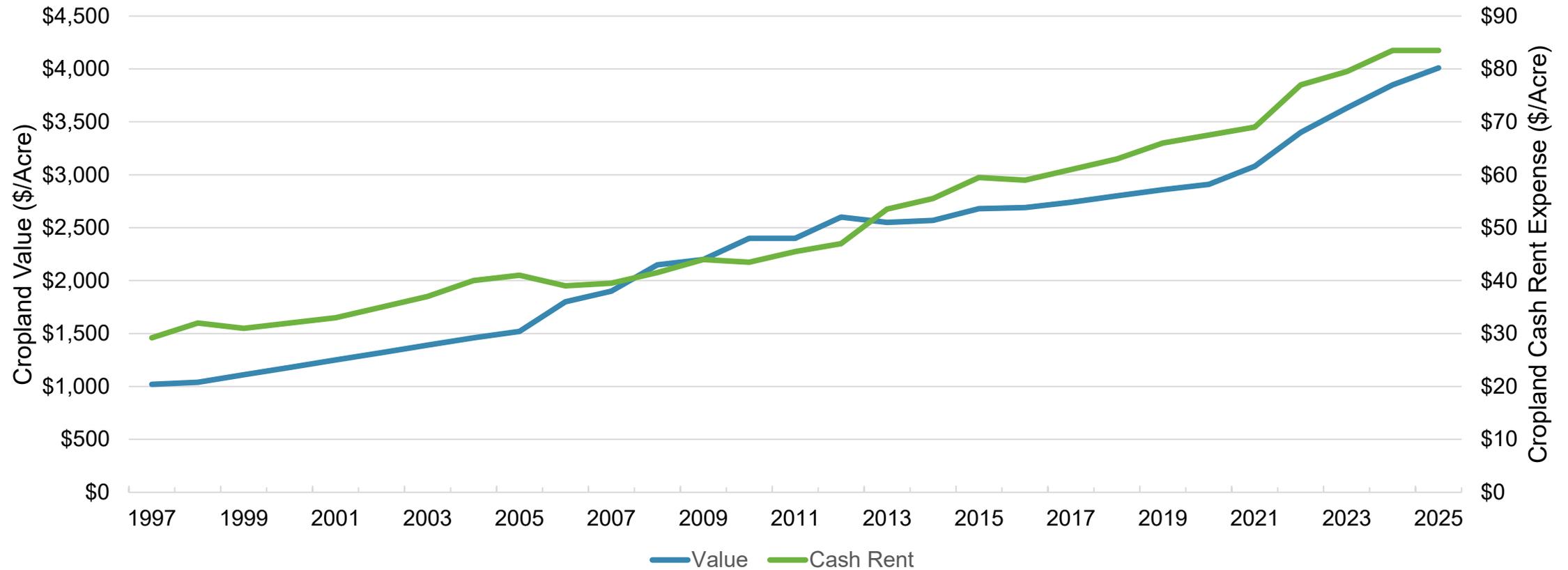
Ricardian Model

- David Ricardo (1821)
- The value of land is derived from its productivity



Rents Follow Land Values

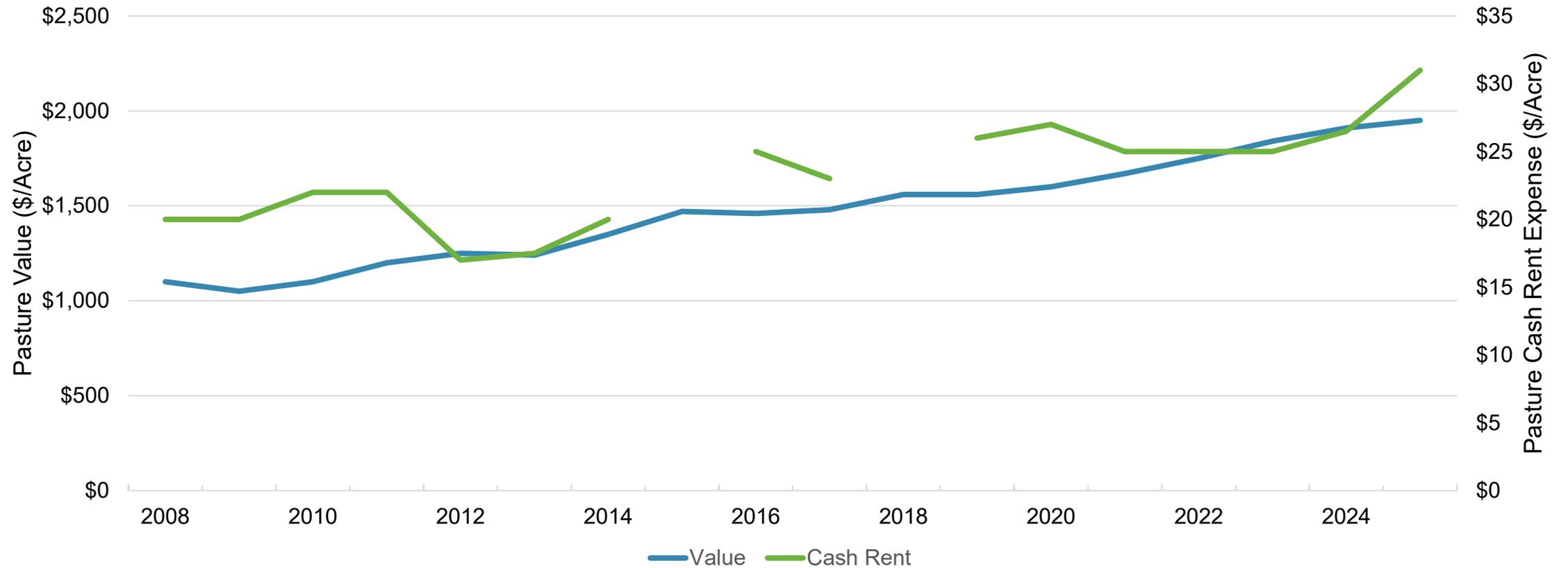
New York Cropland Value and Cash Rent



Source: [USDA NASS Quick Stats](#)

Rents Follow Land Values

New York Pasture Value and Cash Rent



Source: [USDA NASS Quick Stats](#)

Cash Rent Resources

dyson.cornell.edu/wp-content/uploads/sites/5/2021/09/EB-2021-02_Central-NY-Farmland-Cash-Rental-Rate-Survey-Findings-VD.pdf



EB # 2021-02
February 2021



Warren Hall

Extension Bulletin

Dyson School of Applied Economics and Management
Cornell University, Ithaca, New York 14853-7801 USA

**Central NY Farmland Cash Rental Rate
Survey Findings**

Jennifer Ifft and Nicole Tommell

A Farmer's Guide to Cash Rent Calculations and Negotiations

By [Cassidy Walter](#), [Raylene Nickel](#), and [Rich Fee](#) | Published on September 17, 2025



In This Article

How Is Rent Being Calculated?

Tips for Negotiating



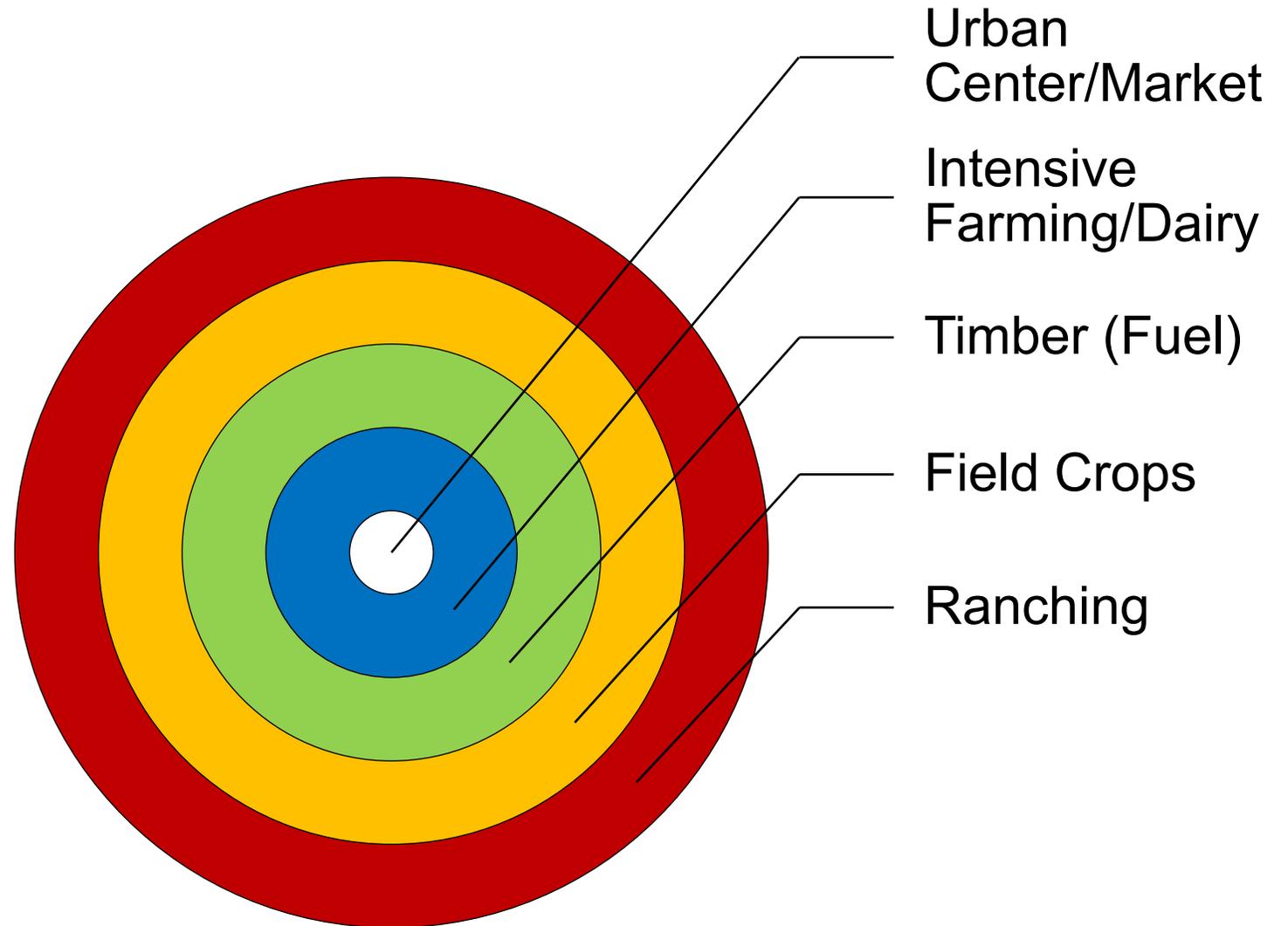
PHOTO: MEREDITH OPERATIONS CORP.

agriculture.com/a-farmer-s-guide-to-cash-rent-calculations-and-negotiations-11811989



Von Thunen Model

- Johann Heinrich Von Thunen (1826)
- The cost of producing a crop increases with its distance to market due to transport costs
- This can be reflected in where commodities are produced *and* the local price (e.g. crop basis maps)



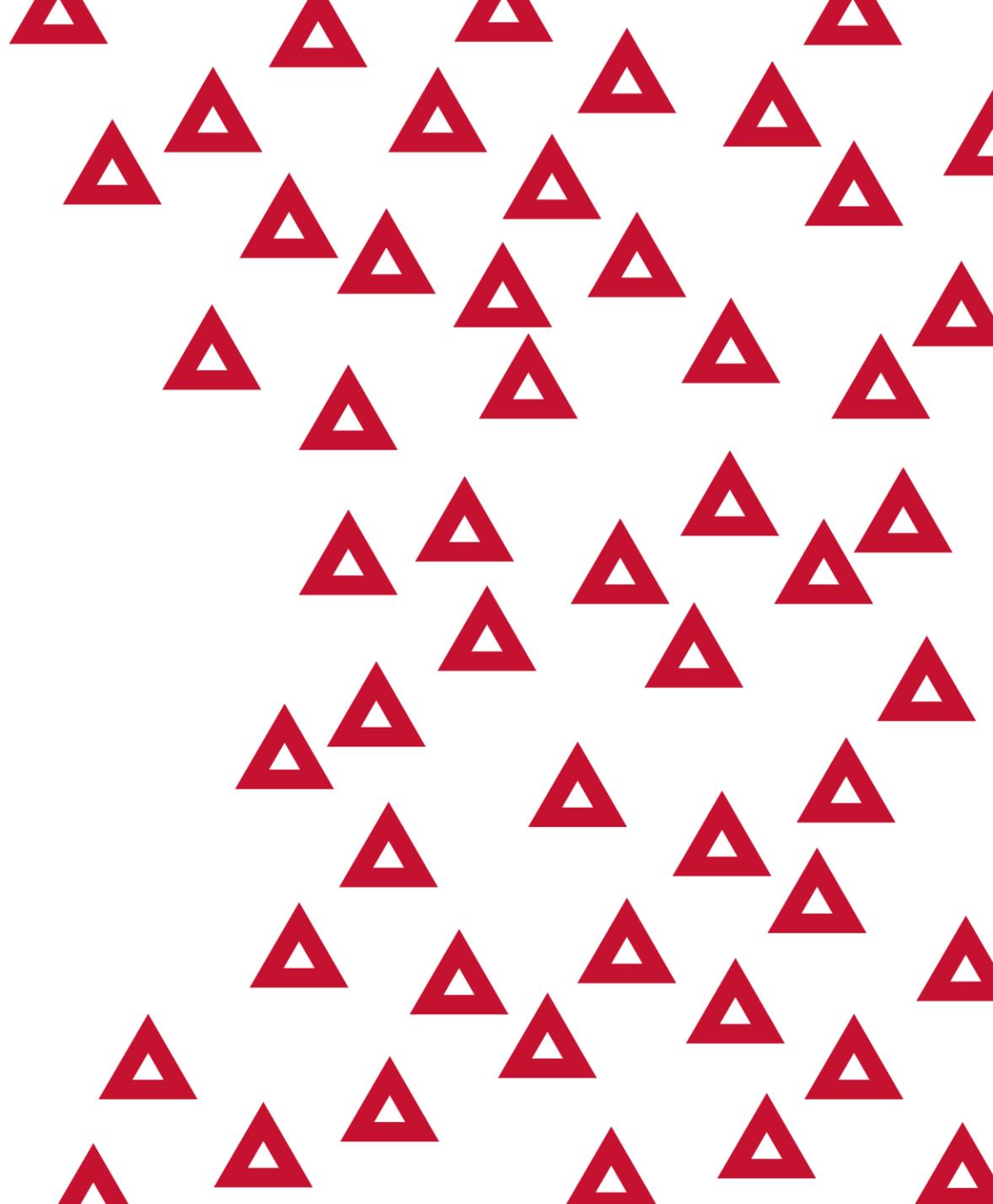
Universal Interest Rate



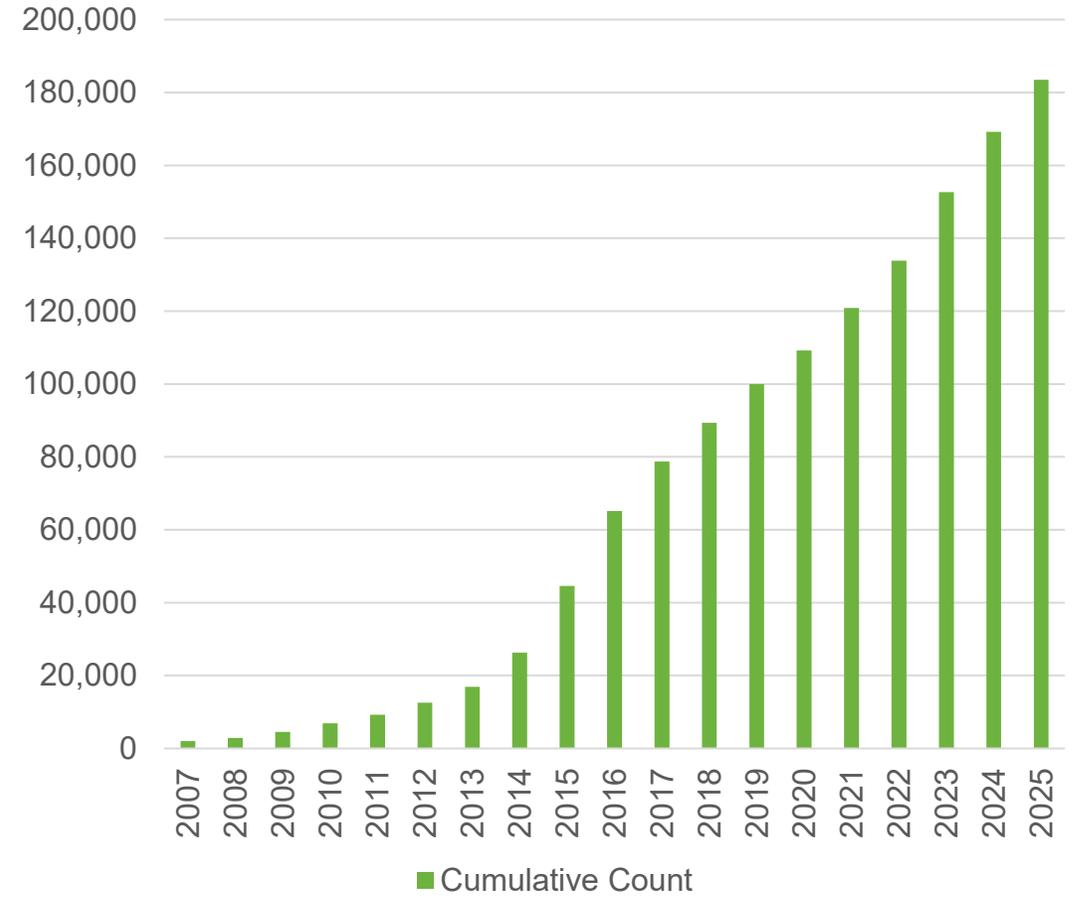
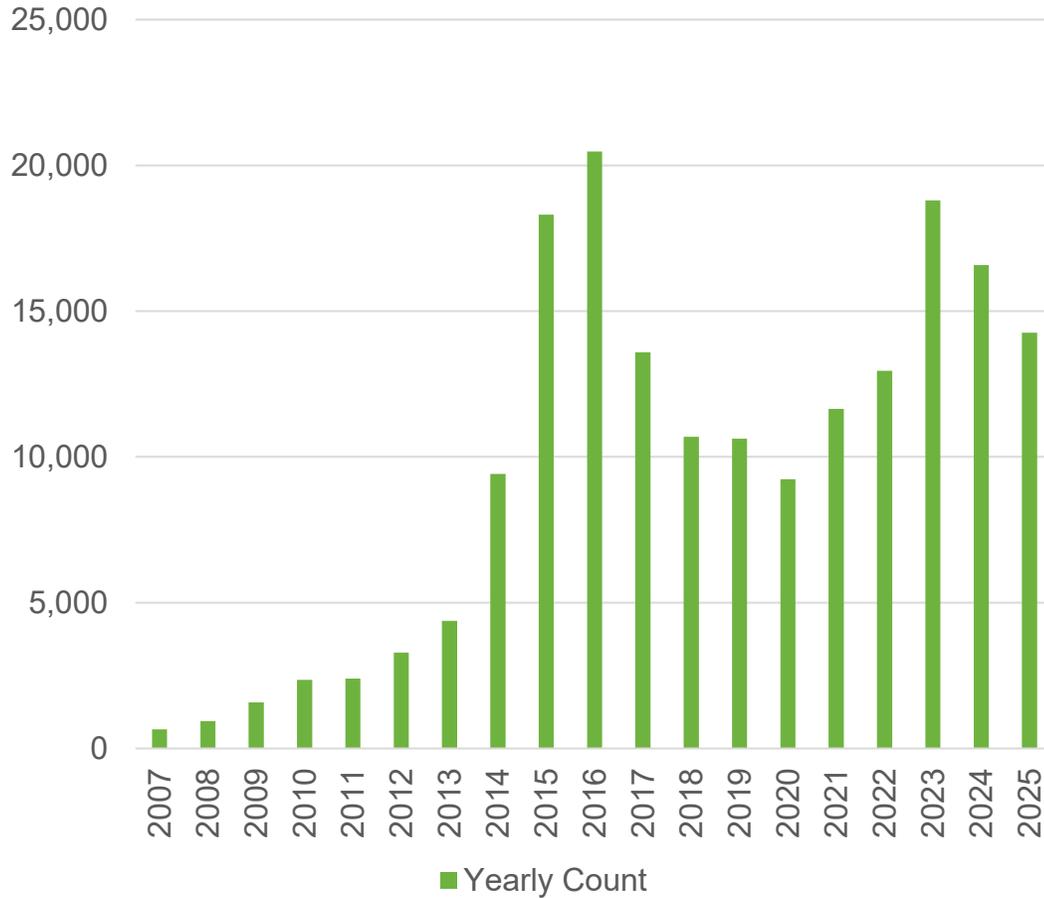
Discount Rate

- The discount rate considers:
 - Opportunity cost of capital
 - Cost of borrowing
 - Tax differences
 - Inflation
- Example: Real interest rate on farmland loan
- Increasing the rate lowers the value of the investment

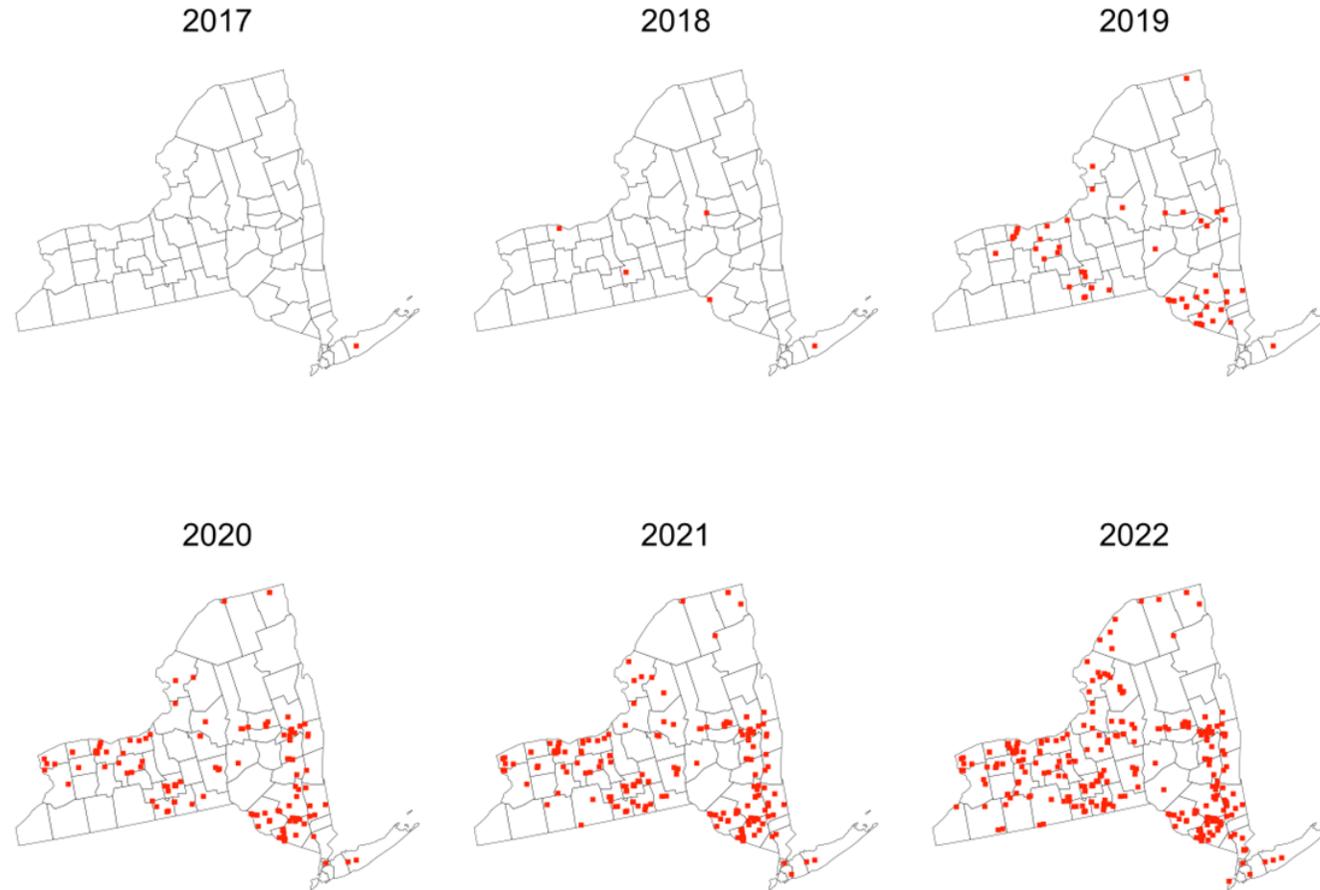
Renewable Energy & Land Values



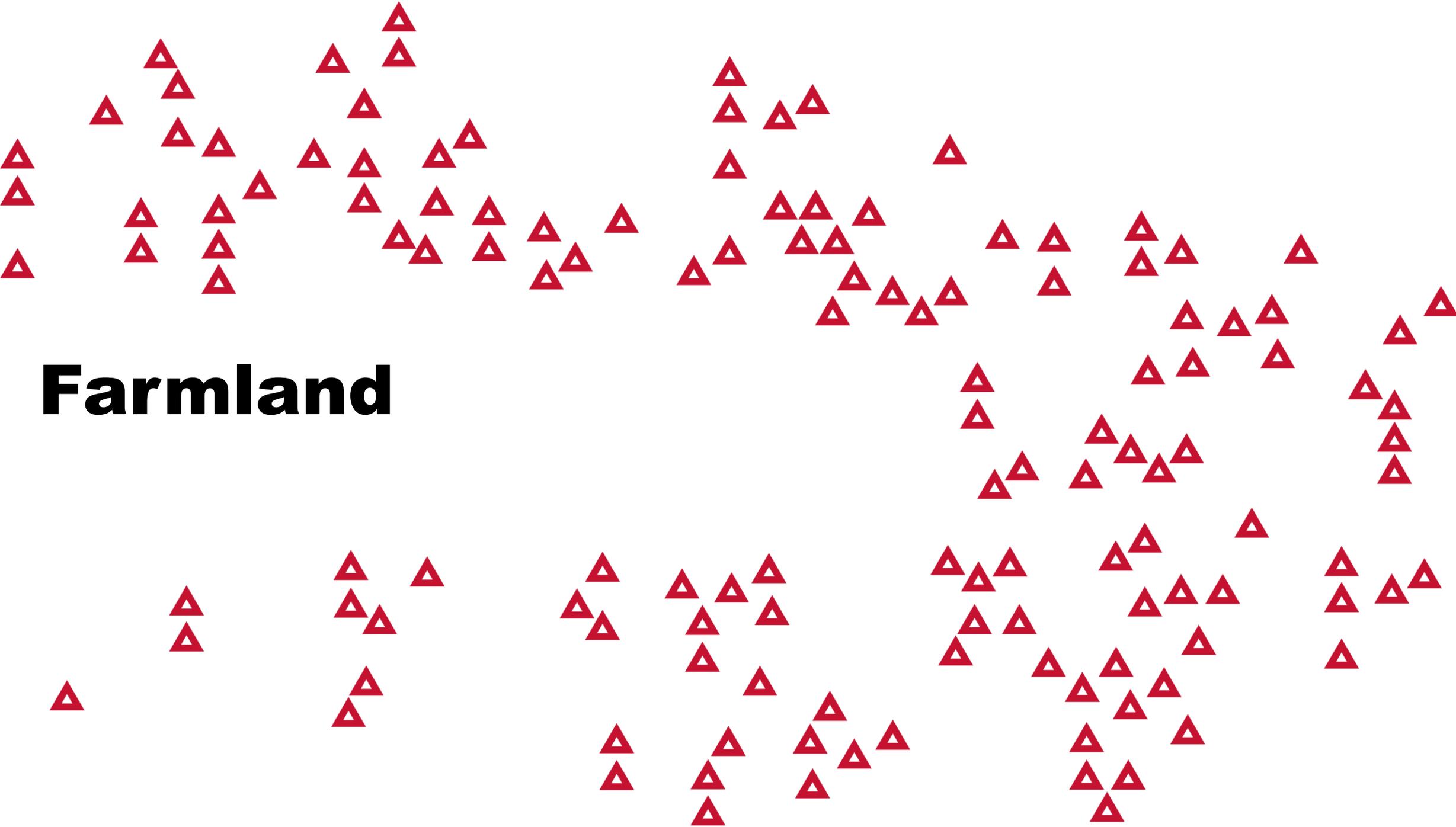
NYSERDA-Supported Solar Projects in NYS



Location of installed community solar projects (>1 MW) supported by NYSERDA



Farmland



Large-Scale Solar (LSSPVs) & NY Farmland

Land Economics

Research Article | Articles

Impacts of Large-Scale Solar- Enabling Legislation on Farmland Values

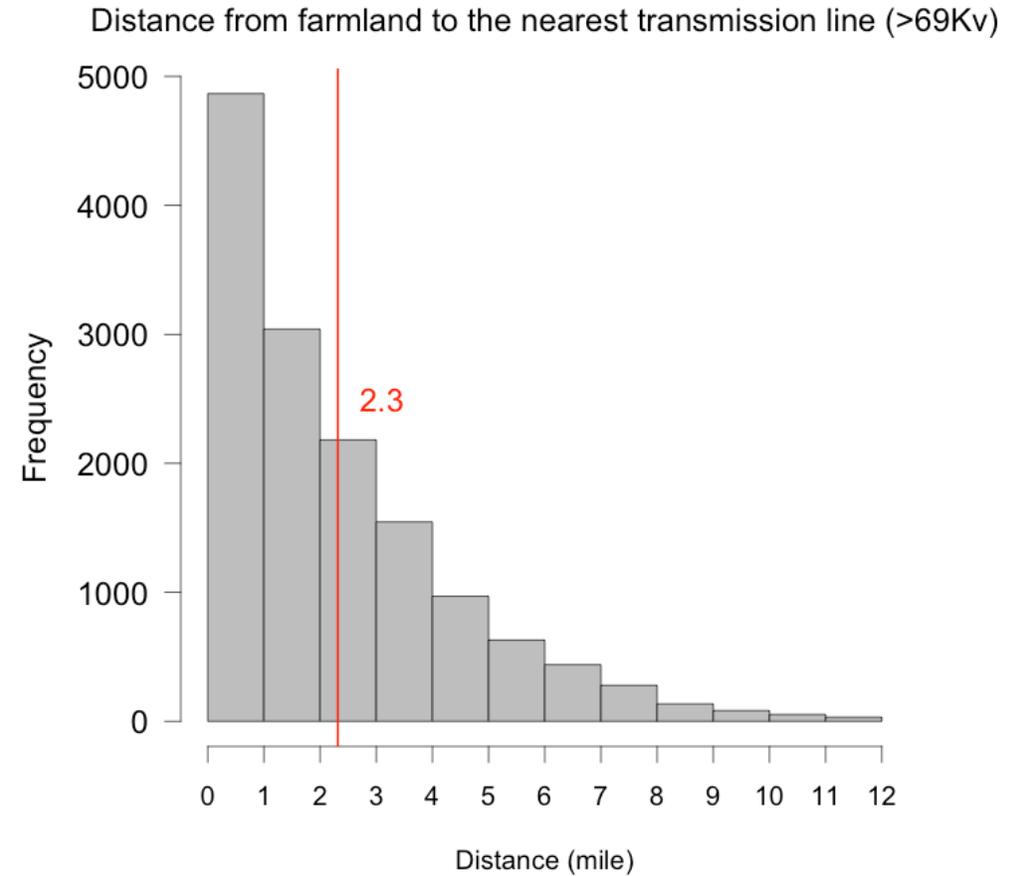
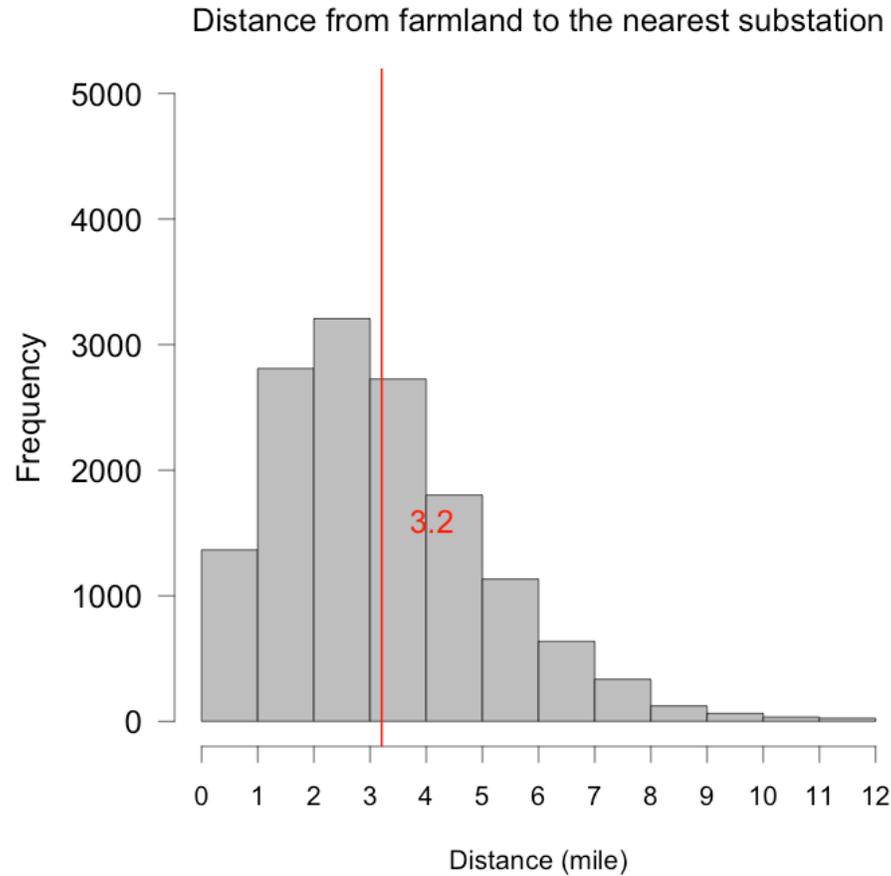
Zhiyun Li, Wendong Zhang and Ariel Ortiz-Bobea

Published online before print October 06, 2025, 0022625-0013R1; DOI:
<https://doi.org/10.3368/le.102.2.022625-0013R>



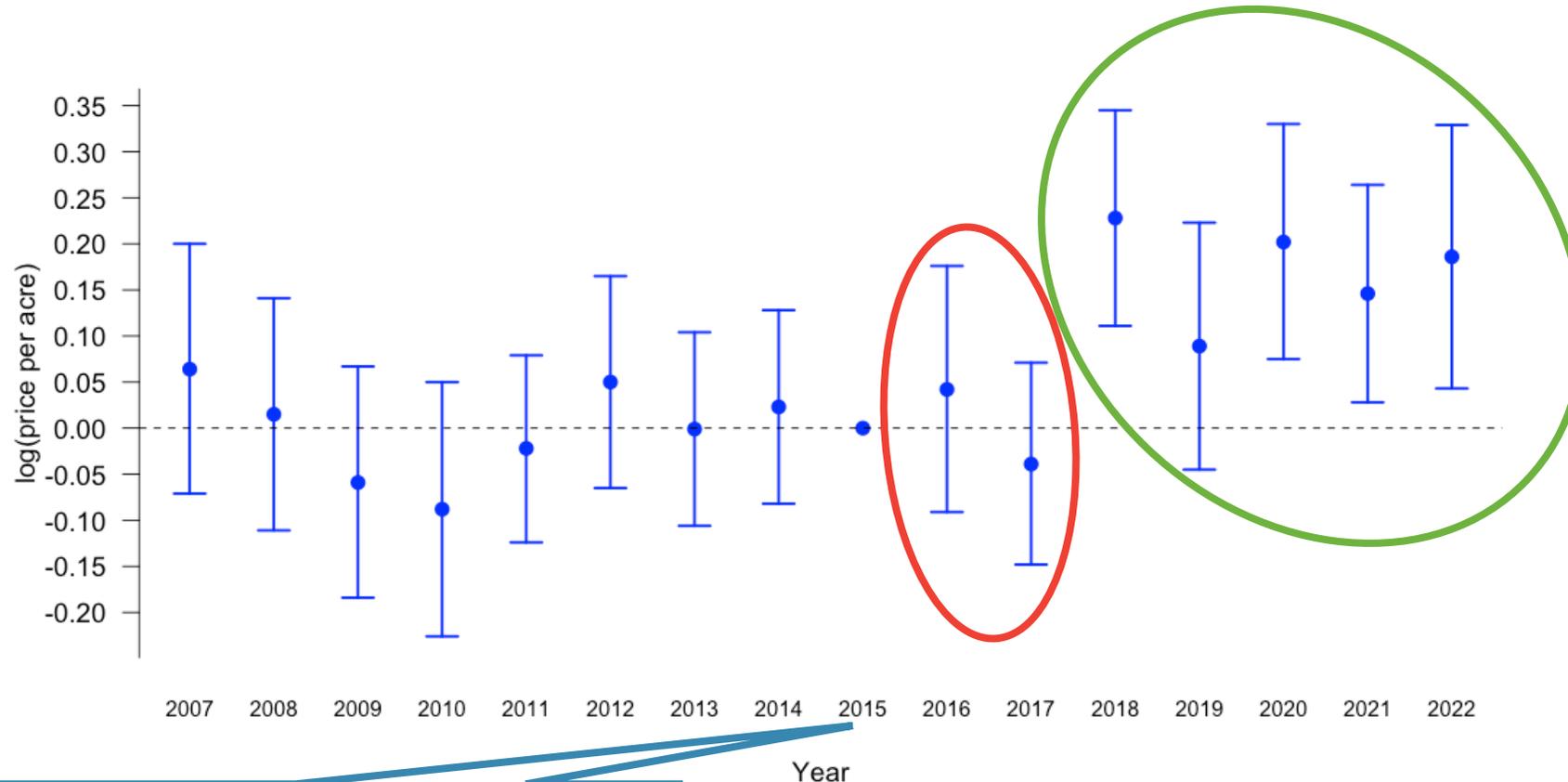
Source: dx.doi.org/10.2139/ssrn.4942012

Distance of farmland to the nearest electric infrastructure



Source: papers.ssrn.com/sol3/papers.cfm?abstract_id=4942012

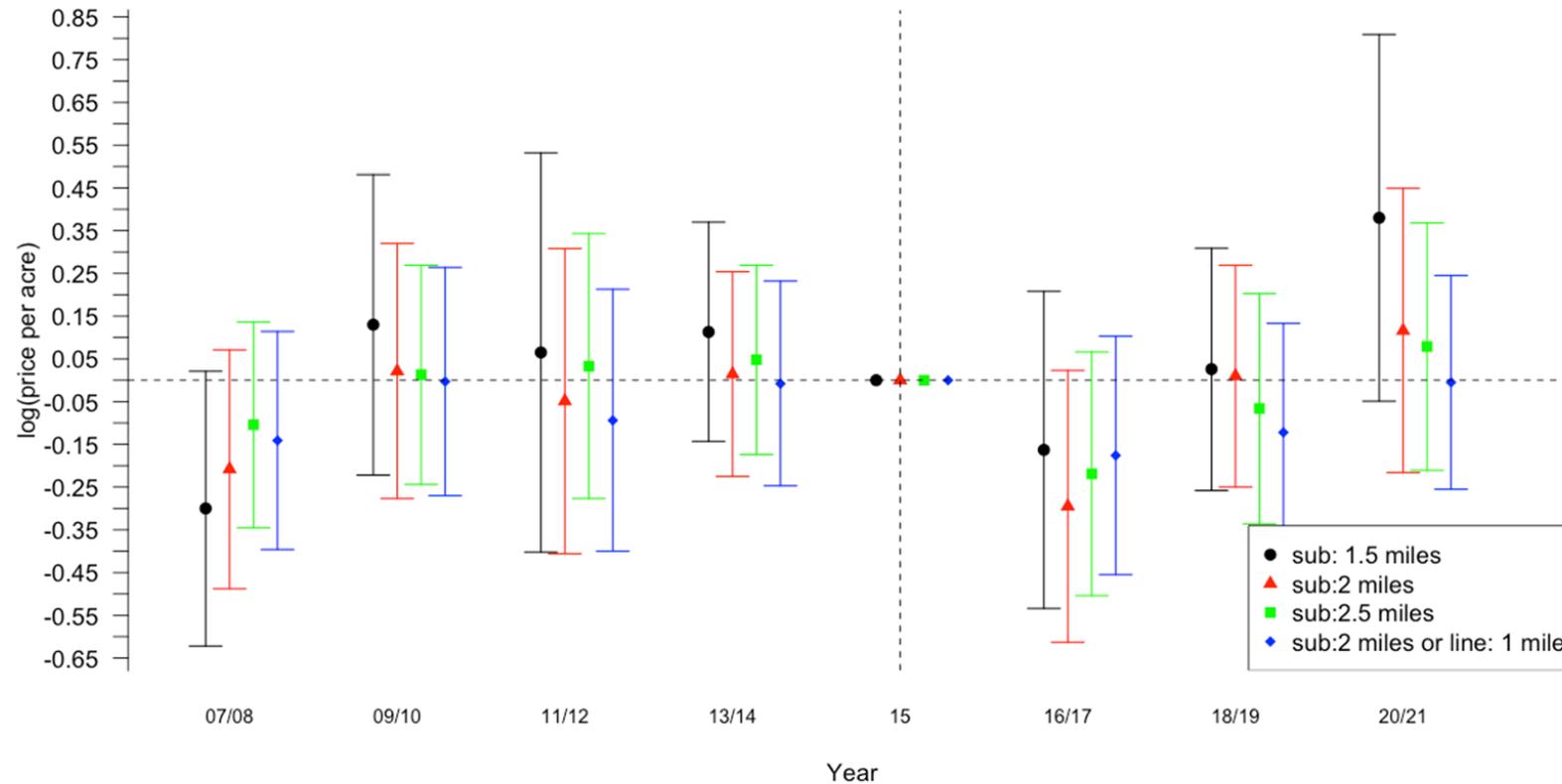
Farmland parcels within 2 miles of substations enjoyed **10-15% price premium** from 2018-2022, but **not evident for 2016-17**



NY Shared Renewable Program (2015)

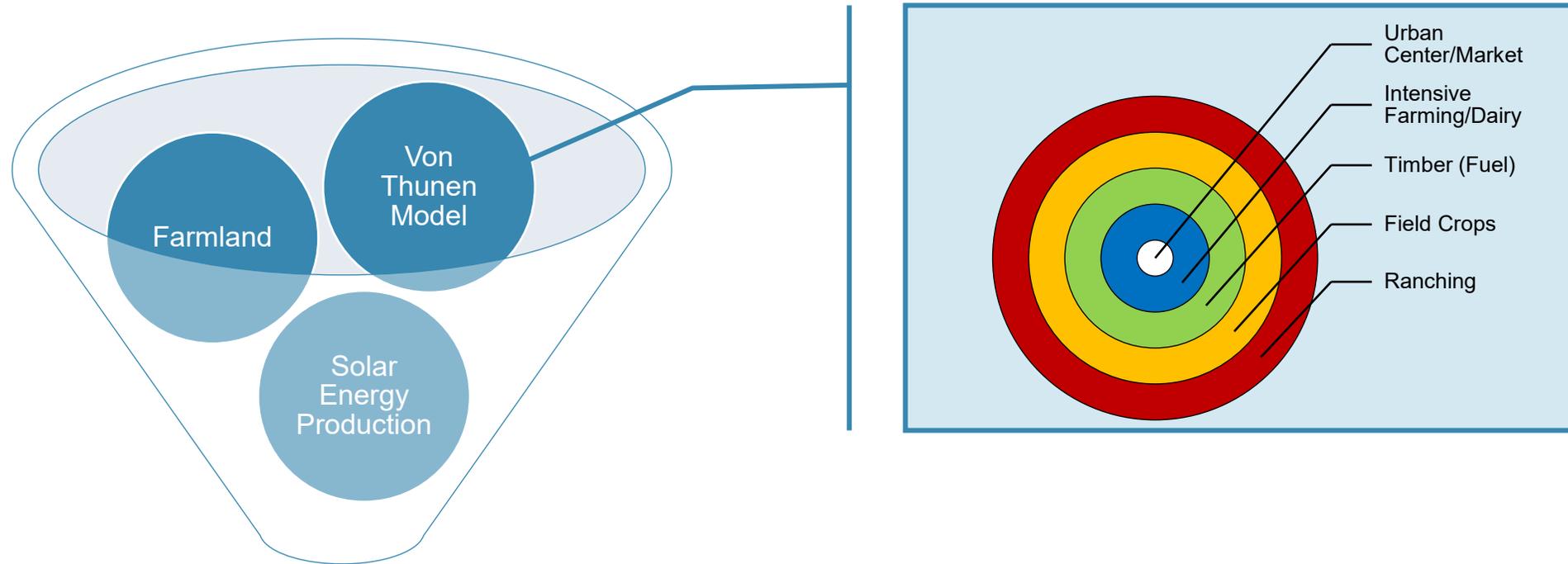
Source: papers.ssrn.com/sol3/papers.cfm?abstract_id=4942012

No premium for small parcels (<10 acres)

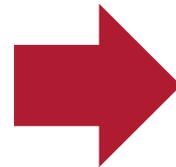


Source: papers.ssrn.com/sol3/papers.cfm?abstract_id=4942012

Connection with the Von Thunen Model



The cost of producing solar energy increases with its distance to market due to transport costs

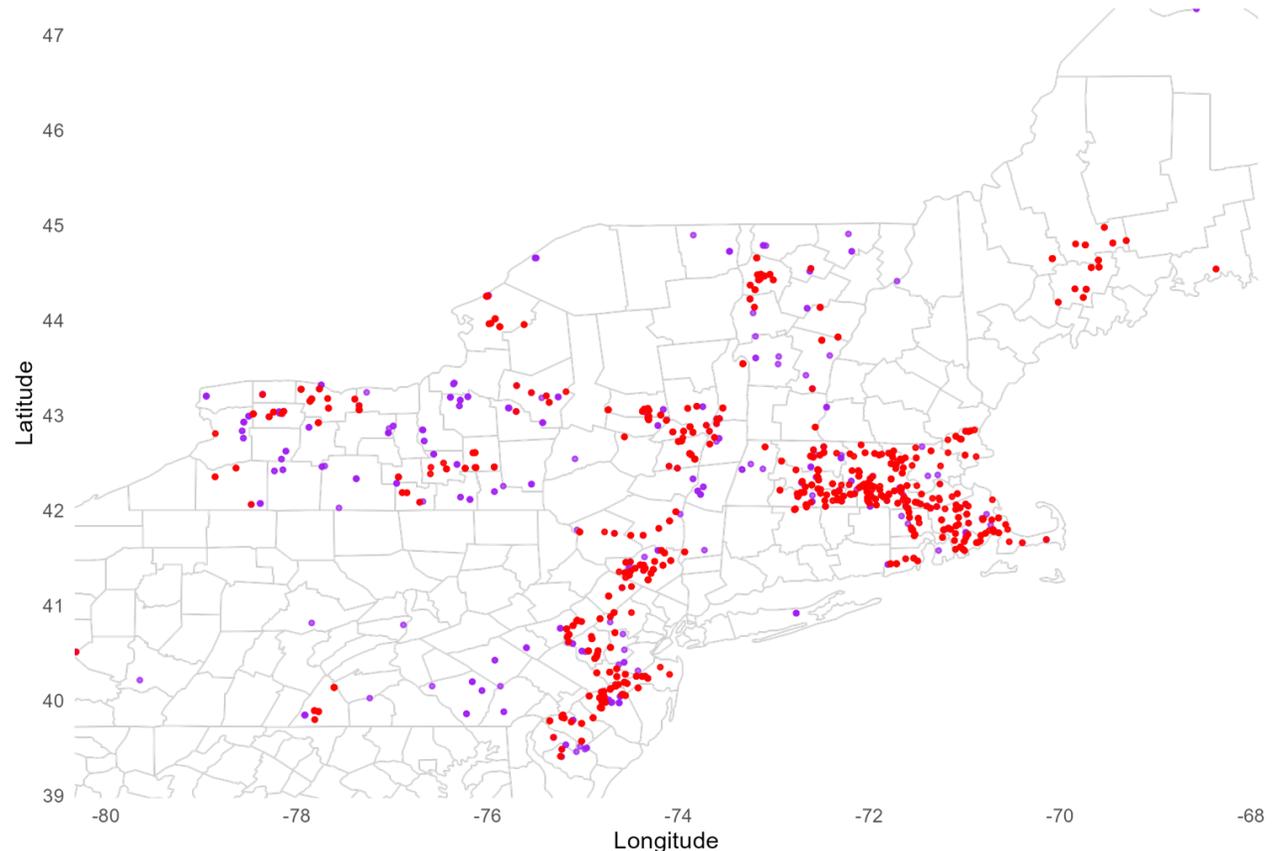


Developers are willing to pay a premium for farmland close to existing transmission lines to minimize transportation costs

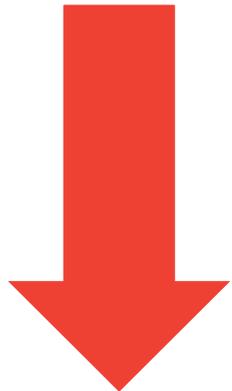
Predicted Sites of New LSSPVs (In Progress)

Wendong Zhang, Allan Pinto,
Jasmin Wehner & Ziyang Long

Existing solar installations and predicted hotspots
Purple: current solar (SP = 1) · Red: top 2.5% of predicted Pr(SP = 1)



More likely
to be sited
 ≤ 3 miles of
transmission
lines



Less likely to
be sited on
steep slopes

Red represents the 700k acres most likely to convert to solar

Solar Lease Resources

extension.psu.edu/pennsylvania-landowners-guide-to-utility-scale-solar-leasing

Pennsylvania Landowners Guide to Utility-Scale Solar Leasing

This guide is intended to inform landowners on terminology, background information, and considerations to make when approached to lease their land for utility-scale solar.

Save for later Print Share Updated: January 24, 2025



Photo credit: Tom Murphy



Farmland Owner's Guide to Solar Leasing

Peggy Kirk Hall, Evin Bachelor and Eric Romich
Ohio State University Extension



farmoffice.osu.edu/sites/aglaw/files/site-library/Farmland_Owner%27s_Guide_to_Solar_Leasing.pdf

Rural Property



Transmission Lines (TMLs) & Property Values in the Midwest

- Disamenity for urban housing prices
- Premium for farmland prices
- Premium strengthens in high-wind-resource areas



Journal of Housing Economics
Volume 62, December 2023, 101968



Disamenity or premium: Do electricity transmission lines affect farmland values and housing prices differently? ☆

[Qinan Lu](#)^a , [Nieyan Cheng](#)^b , [Wendong Zhang](#)^c  , [Pengfei Liu](#)^d 

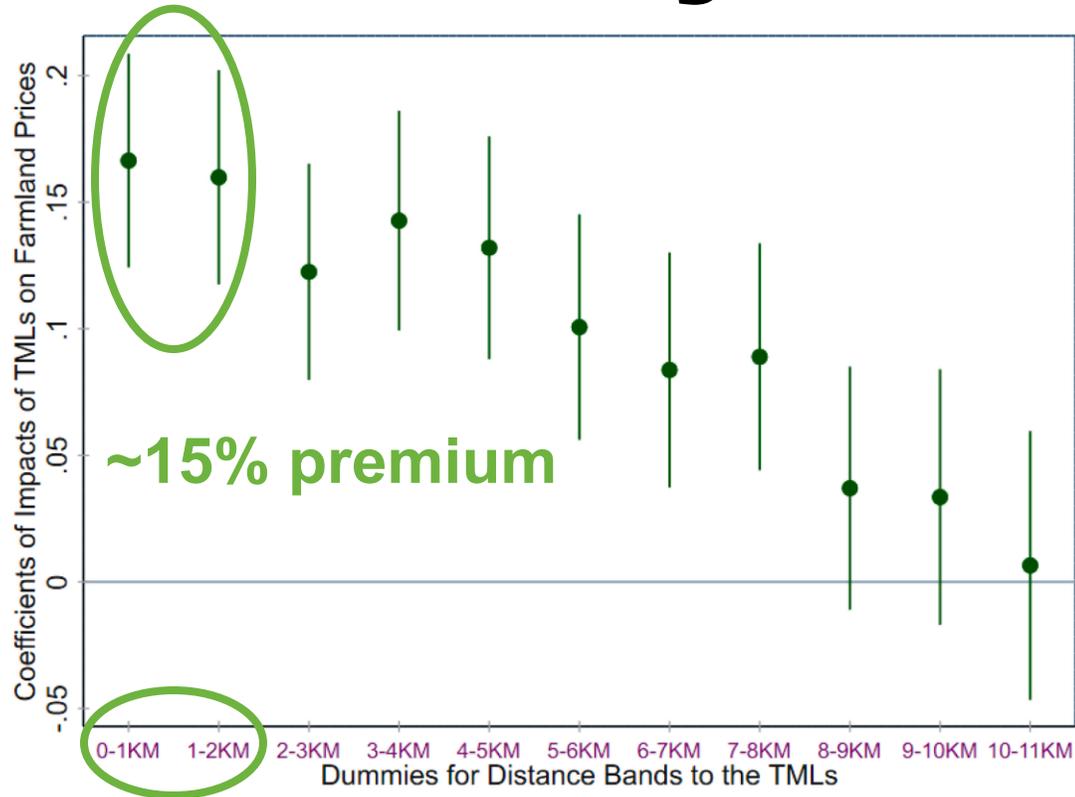
[Show more](#) ▾

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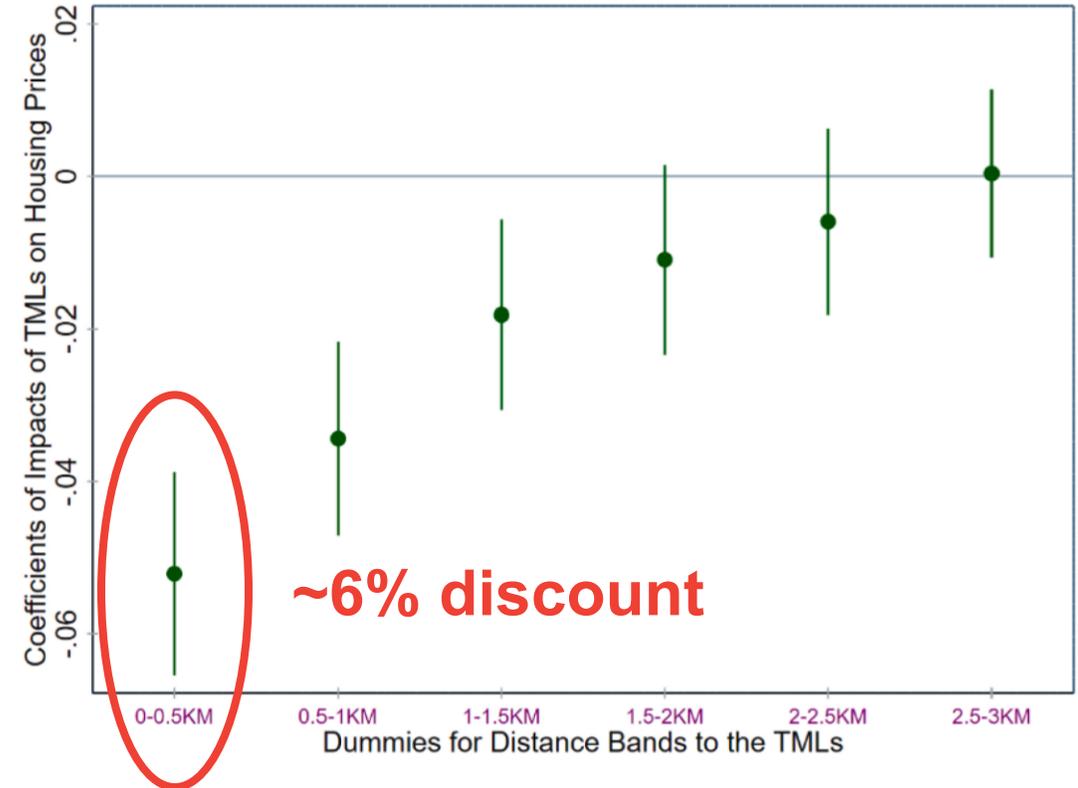
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Premium for Farmland Disamenity for Residential Houses



(a) Nonlinear Effects of Proximity to TMLs on Farmland Prices



(b) Nonlinear Effects of Proximity to TMLs on Housing Prices

Source: [sciencedirect.com/science/article/pii/S1051137723000554#fig3](https://www.sciencedirect.com/science/article/pii/S1051137723000554#fig3)

Solar & Property Values in the U.S.

PNAS



RESEARCH ARTICLE | ✓

Impact of large-scale solar on property values in the United States: Diverse effects and causal mechanisms

Chenyang Hu , Zhenshan Chen  , Pengfei Liu , Wei Zhang , Xi He , and Darrell Bosch   [Authors Info & Affiliations](#)

Edited by Catherine Kling, Cornell University, Ithaca, NY; received September 10, 2024; accepted April 24, 2025

June 9, 2025 | 122 (24) e2418414122 | <https://doi.org/10.1073/pnas.2418414122>



Ag/vacant land ≤ 2 miles of LSSPV

Residential property ≤ 3 miles of LSSPV



Housing



Solar & Housing Prices in the NE

- Massachusetts & Rhode Island
- Houses depreciate 1.5-3.6% after construction of a solar array ≤ 0.6 mi

*“... this average effect is primarily driven by solar developments on **farm and forest lands** and in rural areas, which is intuitive given the **composite impact of solar, loss of open space, and loss of rural character.**”*



Energy Economics
Volume 122, June 2023, 106699



House of the rising sun: The effect of utility-scale solar arrays on housing prices

Vasundhara Gaur, Corey Lang  

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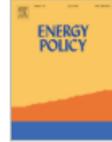
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Solar & Housing Prices



Energy Policy
Volume 175, April 2023, 113425



Shedding light on large-scale solar impacts:
An analysis of property values and
proximity to photovoltaics across six U.S.
states

Salma Elmallah ^a  , Ben Hoen ^a, K. Sydney Fujita ^a, Dana Robson ^a, Eric Brunner ^b

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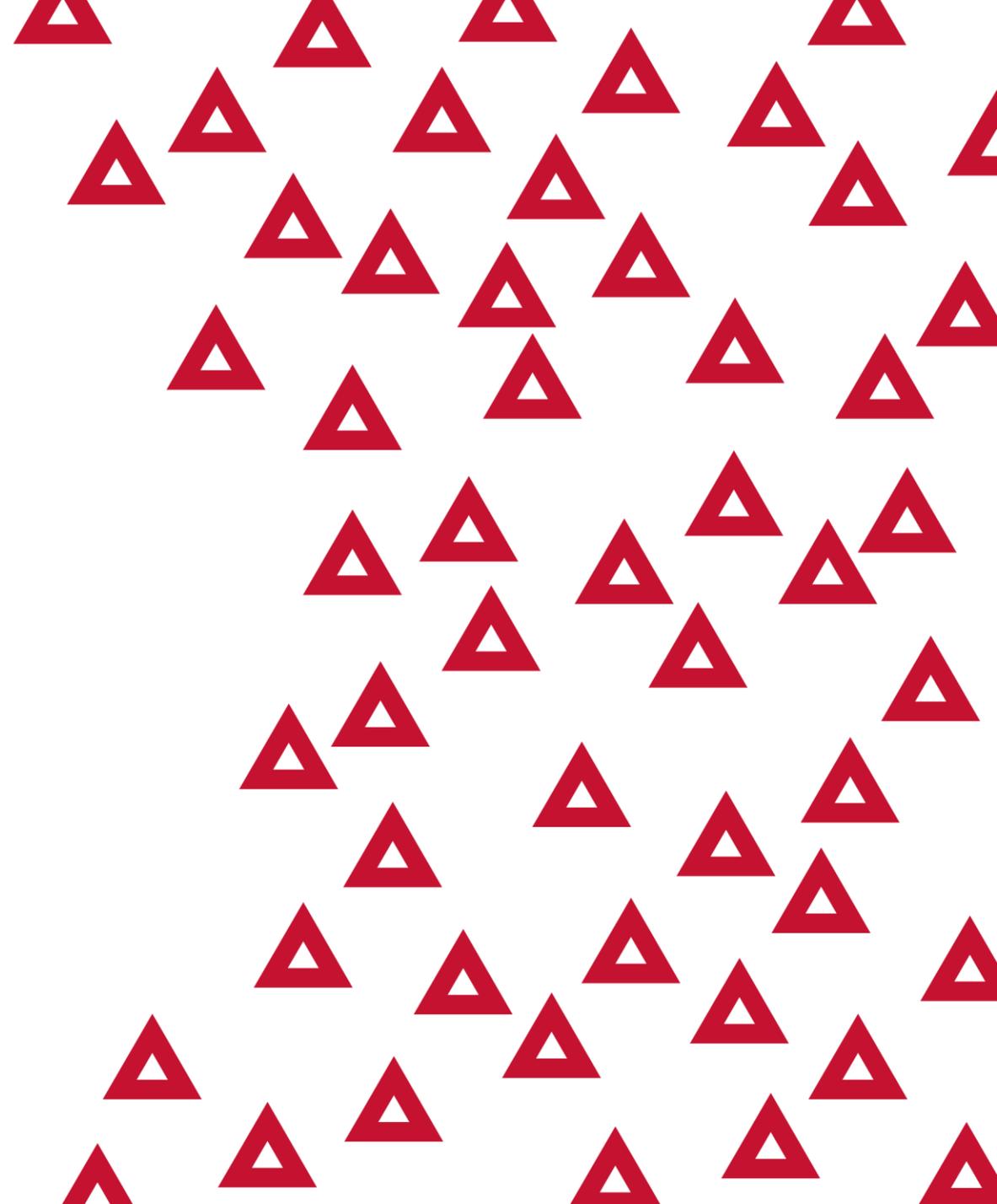
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<https://doi.org/10.1016/j.enpol.2023.113425>

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- In Minnesota, New Jersey, and North Carolina
 - Homes near LSPVPs (≤ 0.5 mi) face a 1.5% discount in sale price
- In California, Connecticut, and Massachusetts
 - No impact on home prices
- Context for effects are key:
 - Rural
 - Agricultural
 - Near large LSPVPs

Concluding Thoughts



Concluding Thoughts

- Large scale solar projects will become more prevalent
- Residential home prices near large projects will likely be reduced
- Farmland prices near transmission lines (or substations) will increase & owners will likely be approached more by developers
- Rural communities are concerned about the loss of farmland and rural character
- Increasing interest in agrivoltaics for dual use of ag & solar
 - Cornell & NYS have projects working on this

Thank you!

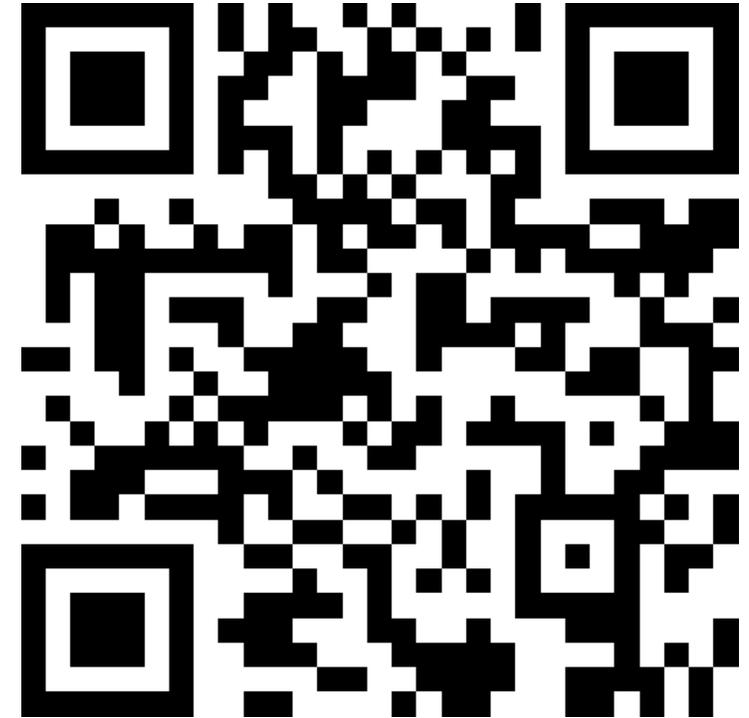
Alan Hinds

Ph.D. Candidate

Cornell Dyson School of Applied
Economics and Management

363 Warren Hall | Ithaca, NY

arh245@cornell.edu



alanhinds.github.io