Agricultural Technical Working Group (A-TWG)

November 25, 2024

NEW YORK STATE | NYSERDA

Meeting Agenda

- **Welcome**
- **New York State programmatic and policy updates**
- **Coordinated Grid Planning Process Introduction**
- **RAISE SC updates**
- **AGV SC updates**
- **Scorecard SC updates**
- **Member announcements and next steps**

A-TWG Members

Katie Baildon	NOFA-NY
Stephen Ballentine	Scenic Hudson
Kevin Campbell	EDF Renewables
Echo Cartwright	The Nature Conservancy
Sam Casella	Farmer/New York State Department of Agriculture and Markets Advisory Council on Agriculture
Linda Garrett	New York American Farmland Trust
Noah Ginsburg	NY Solar Energy Industries Association
Matt Johnson	Tug Hill Commission
David Kay	Cornell College of Agriculture and Life Sciences (CALS)
Mikael Kerr	Suffolk County
Jenny Loewenstein	Genesee/Finger Lakes Regional Planning Council
Kyle Rabin	Alliance for Clean Energy New York
Tyler Ramsden	Nexamp
Renée St. Jacques	New York Farm Bureau
Rick Zimmerman	Retired, formerly New York State Vegetable Growers Association/Northeast Dairy Producers Association
Ian Crisman	New York State Department of Environmental Conservation
Jason Mulford	New York State Department of Agriculture and Markets
Jeremy Wyble	New York State Energy Research and Development Authority

A-TWG Members
(Other NYS Representatives)

Bram Peterson	NYSERDA – LSR
Candace Rossi	NYSERDA – NY Sun
Jeremy Magliaro	NYSERDA – Environmental Research
Jen Manierre	NYSERDA – Clean Energy Siting
Jessica Zweig	NYSERDA – Industrial & Agriculture
Kristin France	NYSERDA – Environmental Research
Abigail Randall	NYSERDA – LSR

New York State programmatic and policy updates

- Biennial Review
- Comptroller's Agriculture Report
- DEC endangered and threatened mitigation bank fund proposed regulations
- AGV RFP

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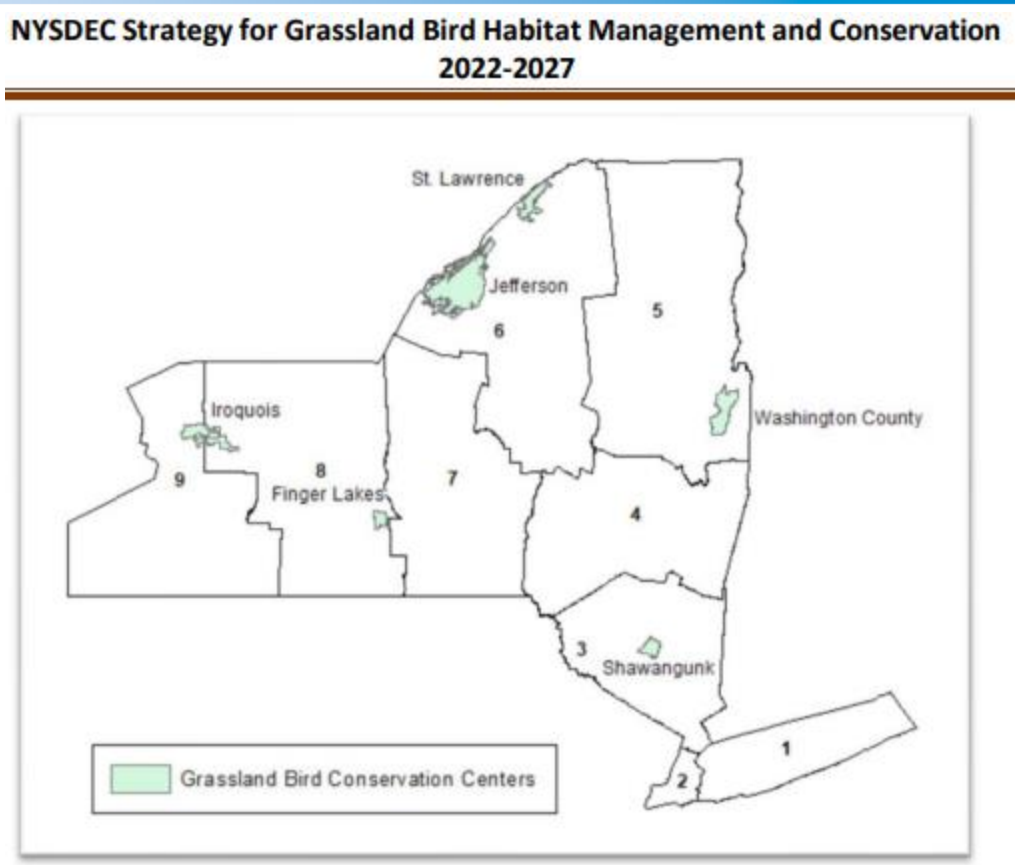
DEC endangered & threatened species mitigation bank fund – open for public comment

- **Required by legislation under the Accelerated Renewable Energy Growth and Community Benefit Act (2020) as well as RAPID (2024)**
- **Implements a fund to help offset negative impacts to endangered and threatened species populations during the construction of major renewable energy and energy transmission projects.**
- **Proposed regs allow funds paid to mitigation bank to satisfy all or part of the net conservation benefit requirement.**
- **Open for public comment until January 15, 2025; Virtual Public Hearings January 8, 2025.**



Source: NYSDEC Strategy for Grassland Bird Habitat Management and Conservation 2022-2027

AGV Research & Demonstration RFP (PON 5752) update

> **Deadline to submit proposals was Sept 12th**

> **Responses are under review**

> **Potential awardees to be contracted in Q1 2025**

Coordinated Grid Planning Process (CGPP) Update

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NEW YORK STATE OF OPPORTUNITY. | Department of Public Service

Coordinated Grid Planning

November 2024

What is Transmission Planning?

- New York utilities are responsible for providing safe and reliable service to customers at reasonable rates
- This requires short and long-term planning for appropriate investment in the grid
- Traditional drivers of planning and investment are changes in load, reliability, resiliency, and asset condition

Recent Developments

- 2019 -- CLCPA sets climate targets
- 2020 -- Accelerated Renewable Energy Growth Act
  - calls for Power Grid Study to illustrate future grid scenarios
  - adds climate targets to electric system planning
  - directs the PSC and the utilities to identify bulk, local transmission, and distribution system upgrades needed to meet climate targets
  - requires publication of the resulting investment plans
- PSC ordered the utilities to develop a coordinated state-wide planning process to forecast CLCPA needs

Power Grid Study

- PSC and NYSERDA published the Study in January 2021
- Long-term system assessment
- Three components:
  - Utility study (distribution and local transmission)
  - Zero emissions (100 x 40) study
  - Offshore wind integration study

Power Grid Study Results

- System is well placed to meet CLCPA **2030** goals
- Distribution and local transmission upgrades may be sufficient to meet 2030 goals
  - This work will involve existing facilities and rights-of-way
- As 2040 approaches, more study will be needed to anticipate changing needs
  - “Bulk” transmission upgrades may also be necessary in the future
- For OSW, 9 GW target is achievable
  - An additional inter-tie between Long Island and the mainland is needed by 2035
- Key recommendation: **planning methods need to be improved**

Coordinated Planning

- "The Act and the Initiating Order require a more comprehensive examination of utility planning and even the implementation of new approaches."
- Further, "the Commission finds there is an urgent need to … improve"
  - utility planning to better coordinate with the NYISO's bulk-power system planning;
  - integration with NYSERDA renewable energy procurements;
  - forecasting of renewable generation development.

Other Objectives

- Planning must
  - Support **all** existing transmission & distribution grid needs
  - Identify upgrades needed to meet CLCPA in a timely and cost-effective way
  - Provide actionable information to policy makers and stakeholders
  - Use consistent input data, assumptions, and models
  - Include stakeholders to ensure decisions are based on current information and sound forecasts
  - Produce a portfolio of integrated solutions: local and bulk transmission levels

Outline of the Process

- Establish EPPAC – advisory group
- Utilities conduct several steps
  - Stage 1 – collect data, develop capacity expansion model, and select three scenarios for analysis
  - Stage 2 – build power flow and short circuit models
  - Stage 3 – local area studies and solutions development
  - Stage 4 – scrutinize solutions to identify interactions and conflicts
  - Stage 5 – least cost assessment, with limits and local transmission upgrades added to the model
  - Stage 6 – draft and file least cost plan, including recommendations for cost effective investment

Capacity Expansion

- What the model is supposed to do
  - Least cost generation mix to meet climate objectives
- Kinds of inputs
  - Load Forecast
  - Existing generation mix
  - Generator type, capital cost, fixed and variable cost, timelines, operational parameters and constraints
  - System representation (transmission limits, external territories)
- Sensitivities
  - Test how results change if inputs are different

Identifying Transmission Needs

- Power flow and stability models are run
  - Identify areas requiring T&D upgrades
- Rate case quality solutions developed – preliminary engineering, costs
- Re-run capacity expansion to determine full value of solutions
- File transmission proposals with the PSC

Commission Role

- Upon completion of CGPP studies, PSC will review the utilities' recommendations for transmission investment
- PSC may approve funding for all or a subset of the proposals
- Utilities will re-start cycle 2 of CGPP after PSC reviews the first portfolio
- Cycle 2 will be based on cycle 1 results and updated information and forecasts
- Transmission plans will respond to progress of electrification and renewable energy deployment over time

10-minute BREAK

Specialist Committee Updates

- RAISE
- Agrivoltaics
- Solar Siting Scorecard

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Regional Agronomic Impacts of Solar Energy (RAISE) Specialist Committee Update

Refresher: intended phase 1 outcomes (from 1st meeting)

1. **Identify drivers of agricultural land conversion (solar and non-solar)**
2. **Better understand tradeoffs of solar development related to NY's agricultural industry**
3. **Identify feasible study approaches for assessing solar development impacts on regional agricultural productivity and economies**

Phase 1 study approach (from 1st meeting) -> Three "tracks" of analysis:

1. **Conduct land use analyses to understand the role solar development plays in agricultural land conversion.**
   - *Historical and prospective land use change, correlations with transmission/other parameters.*
   - *Identify regions experiencing (or more prone to) solar development.*
2. **Identify available data sources and information gaps necessary to assess the impacts and benefits of solar development on the agricultural economy (from land conversion and other effects).**
   - *Literature review, compilation of data (lease payments, PILOT agreements, etc.), social surveys*
   - *Identify and evaluate desktop or field study options to address key information gaps*
3. **Apply findings from #1 and #2 to scope research options on regional agronomic effects from solar development.**
   - *Relationships between agricultural land, productivity, and regional ag- economic activity*
   - *Identify and evaluate study options to better characterize relationships*

Taking stock of Track 1: Land use analysis

Data / outputs generated or compiled thus far:

- Statewide estimates and spatial distribution of Ag and MSG 1-4 Lands
- Historical and projected (non-solar) urban sprawl on Ag land
- Acres and % of historical solar projects built on Ag/MSG 1-4 lands
- Acres of Solar Projects in Interconnection Queues (by County)
- Acres and % of Ag/MSG 1-4 land proximate transmission lines (by County)
- Acres and % of forage crops proximate transmission lines (by County)
- Estimated crop acres needed to support dairy cows (by County)

Track 1: Land Use Analysis remaining tasks and gap identification

1. **Analyses under development (or outstanding):**
   - Agricultural processing facilities (to be presented today)
   - Protected lands

Committee thoughts on Land Use Analyses conducted to date?

Literature Review and Supplementary Research Takeaways

Track 2: Solar Impacts and Benefits on Ag Analysis, Input, and Research/Gaps to date

Topics of Inquiry:

1. Comparison of lease rates for ag and solar
2. Property Tax/PILOT agreements associated with solar leases
3. Solar-induced land value changes and effects
4. What are the regional economic impacts of converting ag land to solar?
5. Regional agricultural processing/manufacturing info and data

Comparison of lease rates for ag and solar

- The average **cash rental rate** is $84/acre for all cropland. County-level averages are available.[1]
  - The average rental rate for irrigated cropland is $170/acre
  - The average rental rate for non-irrigated cropland is $83/acre
  - The average rental rate for pastureland is $27/acre
- Historic/current solar leases in NYS range between $700-$2000 per acre.[2,3]
  - Hanson (2019) $1,500-$2,000/acre; Tug Hill Commission (2023): $700-$1,200/acre
- No research was found that evaluated NYS agricultural land or lease value changes resulting from nearby solar development.
  - The limited research that exists for other geographies finds no direct impact from solar facilities on nearby agricultural land values.

Sources:

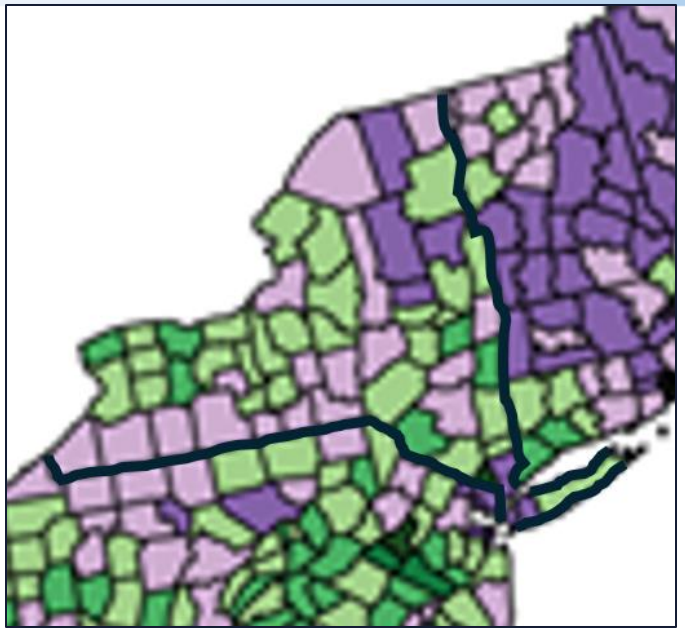
[1] USDA National Agricultural Statistics Service (NASS). (2024). Cash Rents.

[2] Hanson, K.L. (2019). New York's Clean Energy Standard: Can Renewable Energy Development Revitalize Upstate New York's Dying Economy?

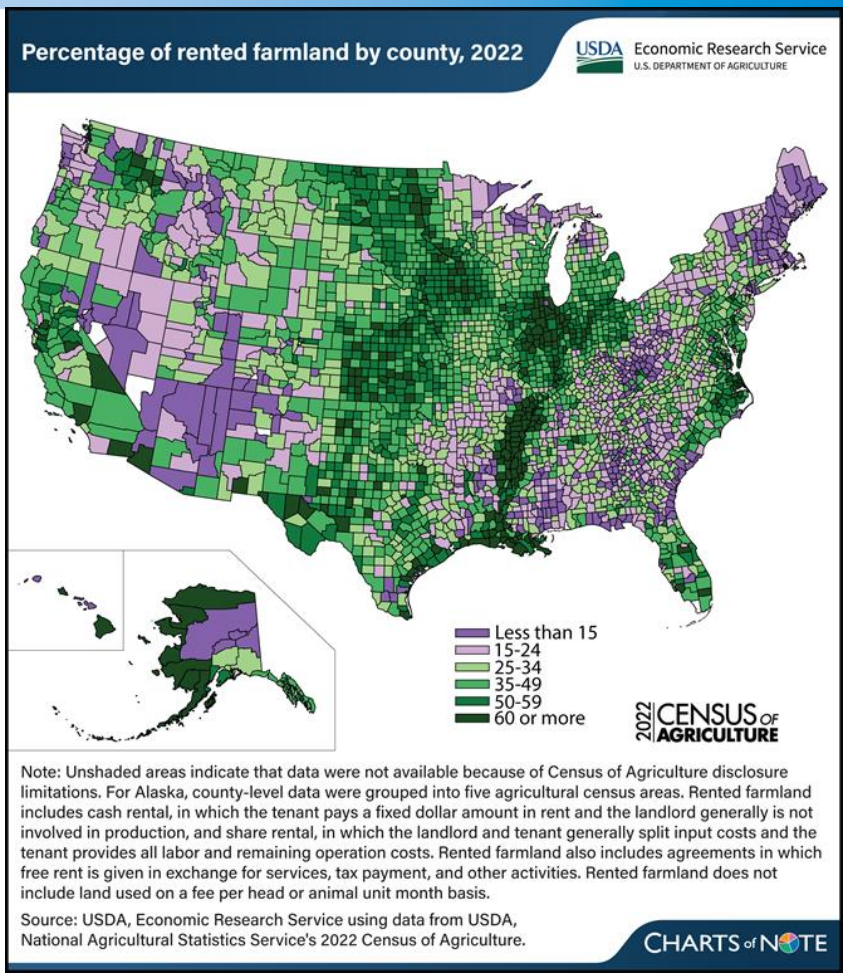
[3] New York State Tug Hill Commission. (2023). Planning for Solar Energy Projects.

Proportion of ag land owned vs. rented

- In NYS, 1,768,959 acres of land were rented or leased in 2022. This represents **27%** of the 6,502,286 total acres of NYS farmland. County-level data is available.[1]
  - Of the rented or leased acres, 1,579,512 were farmed by *part-owners* and 189,447 were farmed by *tenants*.
    - *Part owners* operated land they owned and also land they rented from others. *Tenants* operated only land they rented from others or worked on shares for others.
  - In the greater U.S., 39% of farmland was rented or leased in 2022.[2]



***Dark purple** areas have high rates of **owned farmland**.*
***Dark green** areas have high rates of **rented farmland**.*



Sources:

[1] USDA National Agricultural Statistics Service (NASS). (2024). 2022 Census of Agriculture New York State and County Data.

[2] USDA Economic Research Service (ERS). (2024). 2022 Census of Agriculture: Share of farmland rented holds steady at 39 percent.

Takeaways – impacts on ag land values

- **Solar lease rates are considerably higher than ag lease rates**
- **Research is very limited, but thus far has not found a direct impact of solar on nearby ag land values**
- **Could reasonably consider farmers operating on rented land more vulnerable**
  - Rates of farmland rented vary across the state; some counties could thus see this impact on tenant farmers more than others

2. Property Tax/PILOT agreements

- Review of select Article VIII content indicated an annual tax payment of ~**$2,500 to $3,300/MW**.
  - For a 100 MW project, this equates to an average of ~$7 million over the course of a 20-year agreement
- Expectations for use of funds is typically for schools and public services.
- Recent agricultural protection plans recommend PILOT funds be used to support agricultural conservation easement purchases.
  - The Tug Hill Commission (2023) suggests that PILOTS can be structured to encourage development on marginal land.[1]

NYS Solar Project	Location	Estimated First year	$/MW	Comments
Mohawk Solar 90.5 MWac	Canajoharie and Minden, Montgomery County	$300,000	$3,315	
Greens Corners Solar 120 MWac	Watertown and Hounsfield, Jefferson County	$397,800	$3,315	
Tracy Solar 119 MWac	Orleans and Clayton, Jefferson County	$297,000	$2,496	Additional $28,000/year to special districts (ex. fire, ambulance, highway)
Riverside Solar 100 MWac	Lyme and Brownville, Jefferson County	$550,000	$5,500	Combined PILOT & Host Community Agreement

Sources:

[1] New York State Tug Hill Commission. (2023). Planning for Solar Energy Projects.

Takeaways – PILOT and property tax implications

- **Revenue for host municipalities from taxes or PILOT agreements can be meaningful for investments in public services**
  - We don't have the full picture of host community or PILOT agreements
- **Ideas in ag protection plans to use funds to support ag conservation easements**

Economic multiplier effects of solar and ag: difficult to establish apples-to-apples comparison

- Tools have been developed to model the economic multiplier effects of solar developments in communities (e.g. JEDI PV Model.) Factors considered include:
  - Incremental school district, municipal, public authority, or utility operation costs (generally nominal)
  - Workforce and payroll during construction; estimate of jobs/payroll during a typical year of operation
    - Ex: Riverside annual direct expenditures, facility operation and maintenance = $667,000 (labor, land maintenance, vehicle maintenance)
    - Ex: Greens Corners estimated annual operation non-payroll expenditures = $134,000
    - Ex: Tracy non-payroll expenditures = $264,000
- No off-shelf tool exists to estimate local/regional economic effects from agricultural activities or the loss thereof.
  - ORES Exhibit 15 – Agricultural Resources – includes request that solar developers map and assess active agricultural businesses / facilities / related infrastructure within a 5-mile radius study area
  - Cox (2023) recommends expansion of the JEDI tool to improve validity and usefulness of analysis on regional economic impacts of converting land to solar; specifically development of a calculator that enables analysis of statewide effects through greater industry linkages (agriculture, etc.), as well as local impacts.[1]
- **Takeaway:** Because there is no tool to estimate the impacts of lost agricultural activity, it is currently difficult to create a "net" estimate of economic impacts from agricultural land conversion to solar.

The **economic multiplier effect** refers to the phenomenon where a change or increase in one economic variable leads to a series of changes in other interconnected variables, resulting in a more significant impact than the initial change itself.

Sources:

[1] Cox, I. (2023). Evaluating the Regional Economic Impacts of Land Conversions to Solar Energy Production.

Role of dairy industry in NYS economy

- NY continues to punch above its weight in dairy - fluid milk manufacturing, specifically.[2]
- Dairy is responsible for over half the ag receipts in the state and provides some of the highest economic multipliers in the state.[1]

Industry Subsector	# Employed
Dairy Cattle and Milk Production	20,196
Fluid Milk Manufacturing	13,695
Cheese Manufacturing	6,738
Support Activities for Animal Production	4,894
Creamery Butter Manufacturing	412
Sheep Farming	169
Goat Farming	114

Location Quotients Representing Industry Strength

Industry	CT	DE	ME	MD	MA	NH	NJ	NY	PA	RI	VT
Goat Farming	0	0	0	0	0	0	0	0.4	0.3	0	30.6
Ice Cream and Frozen Dessert Manufacturing	1.9	0.5	0.9	2.5	1	0.7	0.5	0.9	1.6	0.5	11.2
Dairy Cattle and Milk Production	0.4	0.2	1.2	0.3	0.1	0.6	0	1.2	0.9	0.1	7.6
Fluid Milk Manufacturing	0.7	0.2	1.4	0.8	0.6	2.2	0.5	1.8	1.5	0.4	7.3
Dry, Condensed, Evaporated Dairy Product Manuf.	0	0	0	0.4	0.5	0	0.2	0.5	0.2	0	7.1
Cheese Manufacturing	0.3	0	0.2	0.1	0	0.2	0.6	0.9	0.7	0.1	4.4
Creamery Butter Manufacturing	0.7	0	2.1	0	0	0	0	0.1	2.1	0	3.8
Sheep Farming	0.4	0	0.3	0.3	0.1	0.7	0.1	0.7	0.5	0	3.7

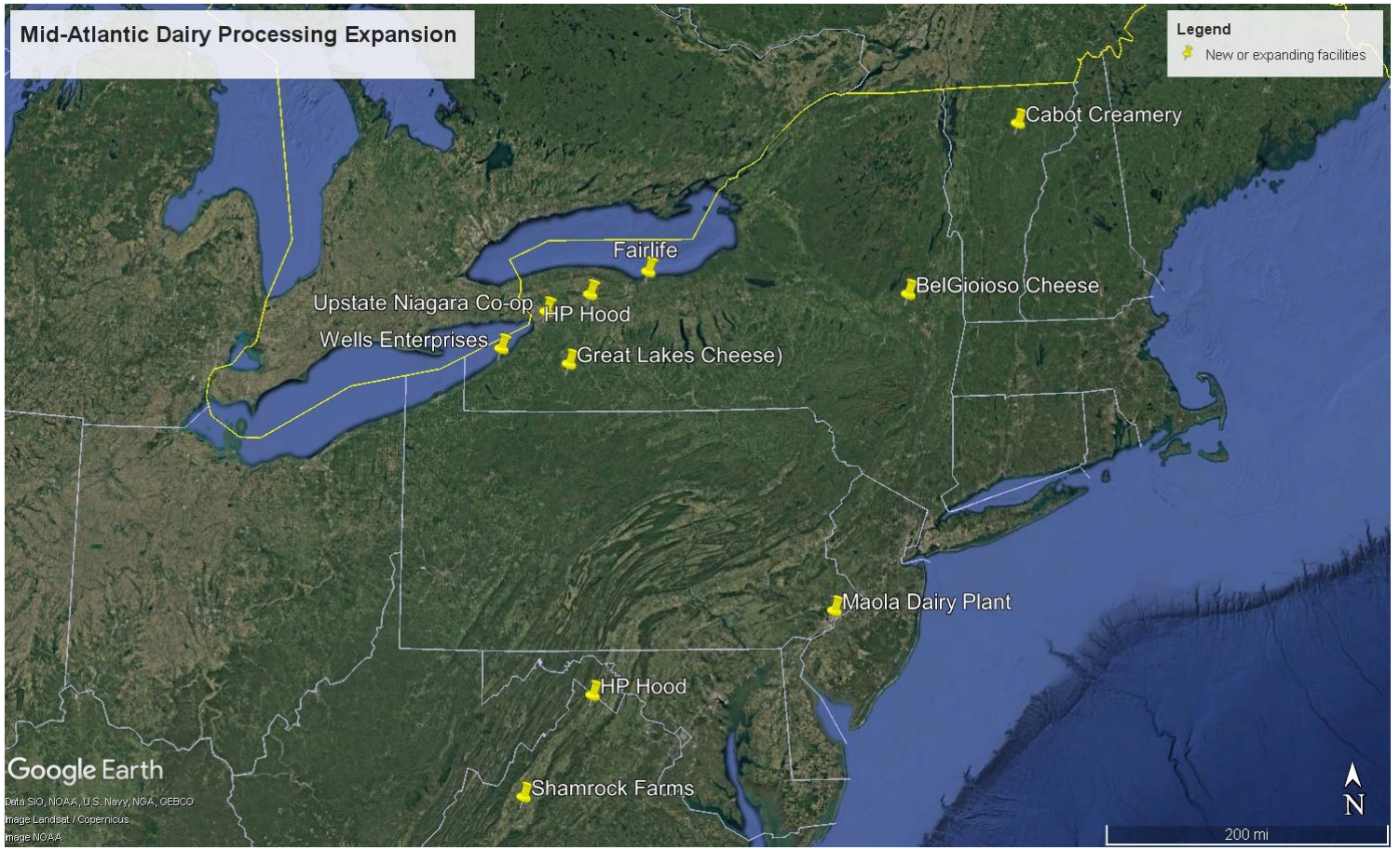
Sources:

[1] NYSAGM. (2022). New York State Dairy Statistics.

[2] Northeast Dairy Innovation Center. (2024). Designing a Regional Dairy Workforce Program for the Northeast.

Role of dairy industry in NYS economy

- Dairy processing is expanding, which is driving producers to invest more in their operations to meet that higher capacity.
- Recall from land use analysis maps:
  - Land requirements for dairy are high; in some places, potential dairy expansion may already run into land use constraints.
  - Where both land use needs for dairy and projected solar development are high, these constraints could be exacerbated



Sources:

Gruber, P. (2024). Many dairy processors are expanding in mid-atlantic. Lancaster Farming.

Mitchell, A. (2024). Appetite for dairy, innovation spurs expansions across U.S. Cheese Market News.

Agricultural Value Chain Conversations:

Insights from trade association conversations

We met with the following contacts to better inform the RAISE committee's understanding of the agricultural value chain.

In particular, how is solar development affecting decisions to start, maintain, or close localities that are providing farm services?

- New York State Agribusiness Association (NYSABA)
- Northeast Dairy Foods & Suppliers Association (NDFSA)
- Northeast Agribusiness and Feed Alliance (NEAFA)
- Dairy Veterinarians

Overall Takeaways

- **Solar and agribusiness**
  - Based on current solar deployments, generally, interviewees observed that solar has not been identified as an issue affecting agribusiness.
  - Trend of consolidation in the agribusiness industry.
- **Solar and farmers**
  - Concern that existing mitigation measures to steer solar development away from prime farmland are ineffective.
  - Question if agrivoltaics makes sense economically.
  - Profitable farms view solar as a competitor for land; farms that do not have a transition plan or are unprofitable view solar as a potential opportunity.
  - Dairies without a transition plan are switching to beef cows.
  - From a dairy perspective, dairy is declining in the eastern part of the state and more successful dairy operations are occurring in the western part of the state.
- **Trends/pressures in the agriculture and agribusiness industry**
  - Recent expansion in dairy processing capacity (ex. Fairlife and Great Lakes Cheese) are driving dairies to invest in their operations.
  - Electrification of transportation fleet and agricultural equipment.

Supplemental Agricultural Protection Plan Review

Identify if Plans contain analyses of solar suitability on farmland parcels, and/or information regarding abandoned or vacant agricultural parcels.

WSP selected the most recent Plans (2016 – current) for review, as they are most likely to contain information related to solar development.

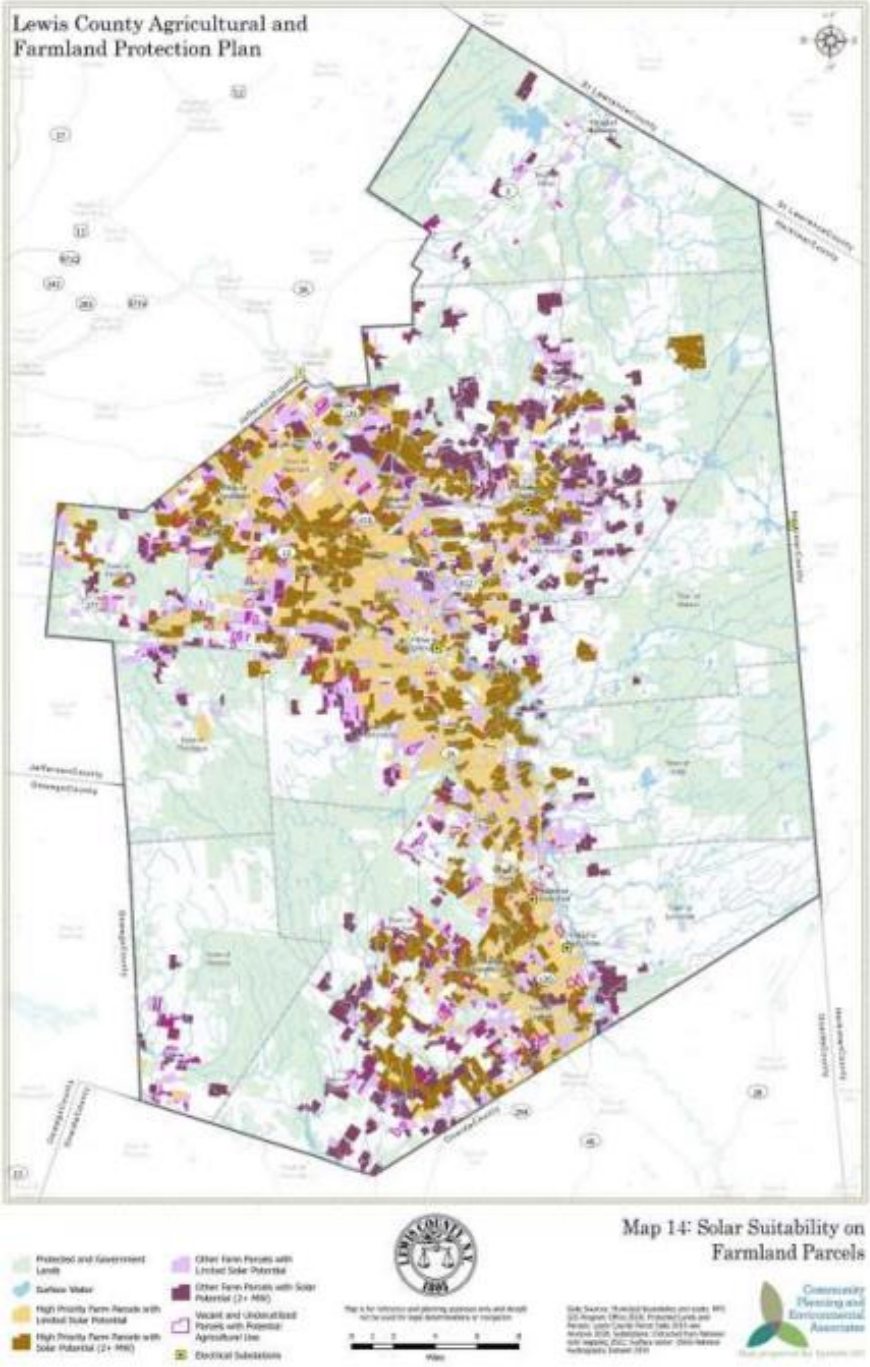
- Lewis County (2021)
- Wayne County (2023)
- Chenango County (2021)
- Cattaraugus County (2020)
- Niagara County (2018)
- Genesee County (2017)
- St. Lawrence County (2016)
- Essex County (2022)
- Onondaga County (2022)
- Seneca County (2020)
- Yates County (2023)
- Jefferson County (2016)
- Otsego County (2017)
- Ontario County (2018)
- Schoharie County (2017)
- Sullivan County (2016)
- Washington County (2019)
- Montgomery County (2017)
- Albany County (2018)
- Broome County (2019)
- Town of Henrietta (2018)
- Town of Saratoga (2018)
- Herkimer County (2020)
- Oneida County (2016)

Ag Protection Plans with guidance for solar siting

Lewis, Wayne, and Essex County Plans include analyses designed to steer solar development away from high priority farmlands, and data regarding acreage of vacant or abandoned agricultural land.

- Lewis County included the map depicted here to identify sites that should be avoided and where there was potential to utilize vacant or underutilized farm parcels for solar development.
- Wayne County indicates approximately 70% of the soils are Prime, Prime if Drained and Soils of Statewide Importance, and as such recommends a cap of 1,800 acres for ground-mounted solar across the county.
- Essex County identifies 39,007 acres of farmland for protection. The maps were built by layering several datasets, including solar farms, and categorize farmland to be protected by land use (active agriculture, potential available, and forest).

Herkimer County's Plan recommends a solar suitability analysis on farmland parcels, as well as an effort to map underutilized lands and vacant farmlands as future actions.



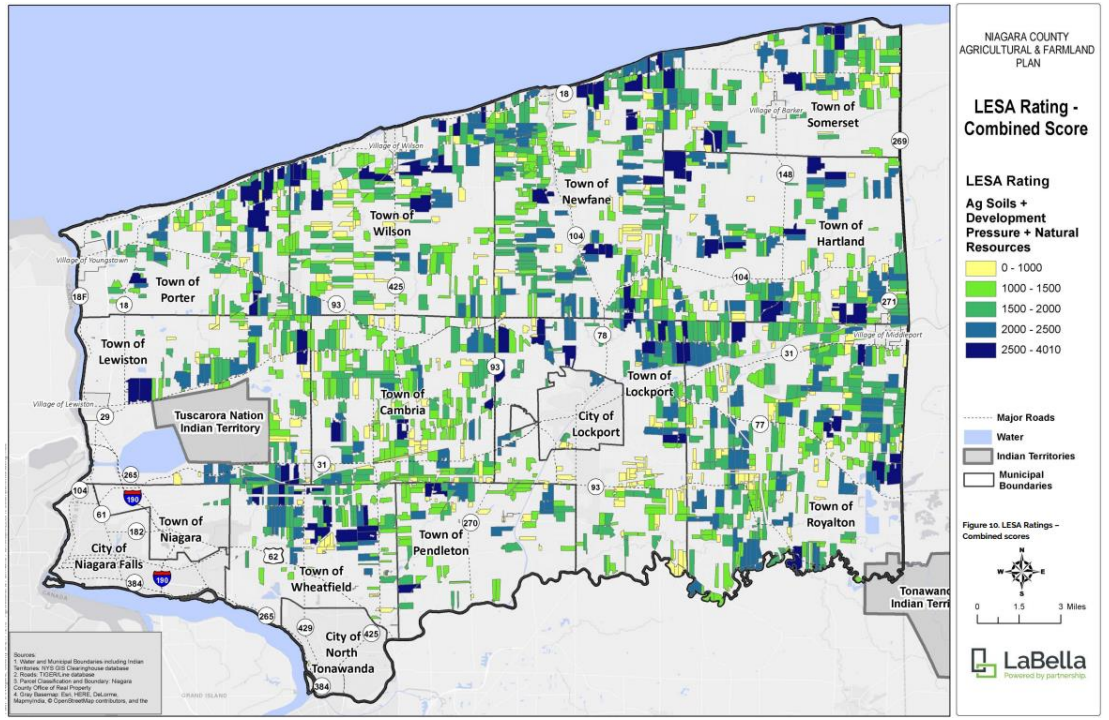
Ag Protection Plans with guidance for farmland protection

A number of County Plans contain an analysis of agricultural parcels that may be good candidates for long-term protection, based on (1) the quality of agricultural soils, (2) proximity to natural resources, and (3) development pressure (*see right*).

(Counties include Niagara, Onondaga, Herkimer, Ontario, Otsego, Montgomery, Schoharie, and the Town of Henrietta.)

Takeaways:

- Most plans reviewed have analyses to ID farmland that is a good candidate for protection
- Some have gone further to analyze level of solar pressure, with the goal of steering development towards more marginal land



Next Steps: RAISE Phase 1 Study Trajectory and Potential Outputs

Proposed Timeline ->

- Draft Products for Committee Review Nov/Dec 2024 -> January 2025
- Meetings on Committee recommendations -> January - March 2025
  - Bring for A-TWG review at Q1 A-TWG meeting
- Goal to finish Phase 1 by April 2025

Proposed Outputs:

- Short Report or Policy Paper, and Slide Deck
- Finalize Maps and Tables

Committee Thoughts on Timeline and Approach?

Agrivoltaics Specialist Committee Update

AGV Updates

- September 25 AGV-SC meeting
  - American Farmland Trust NJ AGV Training for Farmers
  - Rutgers Agricultural Research and Extension Center update on AGV pilots
- Planning for 2025
  - Future meetings called on "as needed" basis when there are new developments to share from NYS or AGV-SC members

AFT-NJ Farmer Training

> **Training content:** Dual-Use Solar Energy Program overview, Agrivoltaics 101, Rutgers agrivoltaics research, economics of agrivoltaics, and a presentation by SolAg.

> **NJ Dual-Use Solar Energy Program approved October 2024**

- Final rules and regulations for participation in the pilot program are being established. Once finalized, BPU will announce applications and timelines for completion.
- For the first round of applications, system sizes must be 500 kW - 10 MW.
- The program is seeking to evaluate if agrivoltaics makes sense in NJ and is intended to feed into a permanent program.

Rutgers Agrivoltaics Program
New Jersey Agricultural Experiment Station

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Technical Assistance Program for Agrivoltaics (TAPAS)

Agrivoltaics Farmer & Rancher Training in New Jersey

Christina Couch
NJ Technical Specialist

Supportive Project Components:

Regional Agrivoltaics Extension Network (RAEN) – consortium of university faculty focused on knowledge sharing of agrivoltaic site development, research, and educational programs

Rutgers Agrivoltaic Program (RAP) Extension Publication Committee – responsible for publishing external materials such as fact sheets and white papers, to support other educators and farmers.

Project Consultants - Iain Ward of SolAg & Byron Komineck of Jack's Solar Garden & the Colorado Agrivoltaic Learning Center

Advisory Committee – 11 organizations representing diverse sectors of local ag in NJ. NJ Farm Bureau, Underserved Farmers Network, Coalition for Community Solar Access, NRCS, NJDA, Extension, SADC & more.

Sample Agenda: Full Day In-Person Farmer Training

INDOORS

01

Refreshments & Introductions

Allow participants to lightly mingle over breakfast refreshments; disseminate all materials for the day (handouts); opening remarks from TAPAS team; participant introductions.

02

Intro to Agrivoltaics

Why Farmland?
Agrivoltaics 101
Overview of Rutgers Field Trial Project
Addressing Farmer FAQs

OPEN DISCUSSION / Q&A

OUTDOORS

03

Site Tour: Farm Mgmt

Operating large equipment; Vegetation management; Farm worker & livestock wellbeing; Microclimates; Observations in irrigation, pests, weeds, disease, fruiting, humidity & moisture etc.

INDOORS

04

Lunch Chat: Economics

Using visuals, depict how money typically flows in agrivoltaics systems between the various parties involved. Share opportunities for revenue generation and cost savings; Tax incentives; Financing; Insurance; and State & Federal Funding Programs.

OUTDOORS

05

Engineering & Design

Future decision making considerations around development constraints, site considerations, and complementarities between arrays and farming operations.

INDOORS

06

Land Access & Conservation

Share opportunities for both landowners and tenant farmers. Discuss zoning and permitting considerations. Present logistics of operating on a leased-array system. Share potential benefits through conservation practices.

07

Surveys & Goal Setting

Give time for farmers to complete post-workshop surveys as well as set 3-month, 6-month, and 1-year goals for where they would like to be in relation to agrivoltaics at each time period.

08

Farmer Follow-Up

Continued engagement with participants through virtual deep dive learnings, 1:1 producer sessions, email updates, and checking in on goals set during workshop.

Farmer & Rancher Feedback

- Overall, producers are open and mostly excited about the concept of agrivoltaics and their ability to produce a crop or raise livestock, the main concerns are around the regulations
- Expressed concerns: right to farm act, farmland preservation, farmland tax assessment
- Economics & revenue generation
- Decommissioning and recycling of panels to ensure the plots can be returned to agricultural use
- How to small-scale producers fit into this equation?
- How to approach landowners and keep them engaged for 3-5 years?

Lessons Learned

- Getting farmers out on the sites is one of the most effective ways to increasing their comfortability & familiarity with these systems
- Recruiting farmers in August and for a full or even half day is challenging
- Generational differences in risk taking and experience with solar
- Spend more time at the start of the day describing the different ways we see solar show up on farms and how agrivoltaics can be an exception to many pre-existing rules and parameters
- Farmers want to hear from other farmers! Peer to peer learning is key.
- Overall: Huge need for technical assistance in Agrivoltaics!

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New Jersey Agricultural Experiment Station

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Technical Assistance Program for Agrivoltaics (TAPAS)

Questions?

ccouch@farmland.org

Christina Couch

NJ Technical Specialist

Summary of Rutgers AGV Research Update from 1st Growing Season (Preliminary Data)

- **Rutgers is studying PV panels with hay, soybeans, vegetables, and cattle**
  - **PV + hay:**
    - Cuttings 1 & 2: No apparent yield or quality differences between the treatment (panel shading) and control (no panel shading).
    - Cutting 3: Treatment area demonstrated better yield & quality, potentially due to higher soil moisture. Could have negative outcomes in a rainy year.
  - **PV + vegetables (eggplants, peppers, and tomatoes):**
    - Eggplants may be the most affected by the panels.
  - **PV + soybeans:**
    - No apparent difference between treatment and control areas, but soybeans had not yet been harvested.
  - **PV + cattle:**
    - Cattle grazed down the pasture and had to be removed to prevent overgrazing. It was a very dry fall, so the grass did not recover.

  For the latest research and harvest updates: https://agrivoltaics.rutgers.edu/whats-new/

Solar Scorecard Specialist Committee Update

Priorities for 2025 Scorecard

- Review scoring of submitted Scorecards – potential realignment and points balancing
- Consider refinements to avoidance flowcharts and strategies based on developer feedback
- Integrate guidance on opportunities to site on developed land relevant to strategy #59
- Review and refine field verification guidance for forested lands avoidance and strategies
- Make CAFRI data available to developers for planning purposes earlier in the proposal process
- Continue to assess options to further integrate ecosystem services strategies in Scorecard
- Continue post-processing and publication of Scorecards from contracted projects

Anticipated schedule

- Reconvene Specialist Committee in early 2025 to review and discuss potential updates for 2025
- Draft Scorecard for ATWG review in March
- Prepare to include in Spring 2025 RFP

A-TWG member updates

Next steps

Upcoming meetings:

- RAISE SC December 13
  - Working towards draft report Q1 2025
- Scorecard SC meetings to be scheduled in early 2025
- AGV SC meetings as needed
- A-TWG anticipated Q1 2025