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WELCOME

Ridge View Solar + Storage Public Meeting

July 27, 2022

www.ridgeviewsolar.com

RIDGE VIEW solar + storage project

Welcome and Introductions

- Deepali McCloe, Facilitator
- Over 20 years' experience as environmental planner, project manager, and public involvement specialist
- President, Marigold Consulting, Amherst, NY

marigold consulting, llc

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Welcome and Introductions - Goals

- To **re-introduce** EDF Renewables and the Ridge View Solar and Storage project to the Hartland community.
    - **Share information** about EDFR, the project, and the timeline
    - Describe the regulatory process
    - Address common questions and misconceptions
    - Gain insight that can inform project siting and design

Welcome and Introductions - Approach

- Panelists will **present Common Themes** to address common questions
- Submit your **written questions** throughout the presentation
- Facilitator will **consolidate and paraphrase questions** and invite panelists to respond
- There are **additional opportunities for Q & A**: open house 1:1, comment cards, web site Q & A
- Please be respectful of fellow participants and the project team

Common Themes

01 Company and Project Overview

02 Regulatory Process

03 Environmental Considerations

04 Energy Storage

05 Compatibility with Agriculture

Company and Project Overview

Kevin Campbell

Project Developer

01 Company & Project Overview

- Who is EDF Renewables?
- What is the Project?
- Setbacks/Safety Measures
- Decommissioning
- Regulatory Process and Timeline

01 Company & Project Overview – Who is EDFR?

- Nearly **40-year track record** in US
- 1,600 employees across **North America**, 1,278 in the United States
- Develop, build, own, operate and maintain solar, wind, energy storage, car charging – **small and large scale**
- Owned by French Government – operates as **Independent Power Producer in the United States**
- **We collaborate** with community stakeholders in both planning and operations
- We value **honesty, transparency, and two-way dialogue**

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01 Project Overview – NYSERDA Contract

New York's Renewable Energy Goals

NYSERDA (New York State Energy Research and Development Agency) manages annual procurements for renewable energy projects to help the state meet its 70% renewable electricity goal by 2030

Project Financial Backing

- Project awarded a 20-year NYSERDA contract at fixed power price, securing project investment
- Ridge View intends to continue operating for 10 to 20 years additional years after the NYSERDA contract ends, generating revenues from the NYISO (New York Independent System Operator) wholesale market or other sources

01 Project Overview – Components

- **Modules:** 750,000 crystalline silicon solar panels
- **Single Axis Trackers:** panels are mounted on single-axis tracker racking system supported by driven steel piles, with **no concrete expected**. Panels track the sun from east in the morning to west in the evening.
- **Invertors & Transformers:** Inverter/transformer units convert DC electricity from modules to AC electricity for grid injection.
- **Collector Line:** underground cable buried 36-48" below ground. Connects inverters to the substation. Deeper burial and specialized methods to cross roads and/or wetlands. Overhead lines may be used when not on farmland.
- **Substation**: Combines all collector lines and increases voltage to grid-level; connects to existing transmission lines. Located as far as practical from homes to mitigate sound and visual impact.

Racking mounted on piles

Panels installed on racking

Project substation (grid tie)

Inverter/transformer skid

Aerial view of project

Land is revegetated

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01 Project Overview – Background

- **2019- Socialized** project concept, held informational meetings
- **Spring 2022- NYSERDA contract** awarded, securing project financials and committing project to 2026 operational date
- **2022- Door-to-door campaign** to introduce project and share information, also **advertised public** meeting via mailer and newspaper with neighbors
- **Ongoing**- EDFR continues **to site and design project**, conducts studies

01 Project Overview – Proposed Project

- **Proposed capacity**: 350 MW with potential for 20 MW storage
- Solar panels, substation, and associated project components to be sited on **2,000 acres of land in the Town of Hartland**
- If integrated, energy storage facility would be sited on **1-acre of land, near substation and away from residences**

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01 Project Overview – Progress to Date

- Have agreements with 50 individual landowners
- Project leased 3,600 acres of land; fenced-in area for solar panels and substation would occupy half of that area
- EDFR is signing easements to connect solar energy to existing 345 kV transmission line.
- In process of siting and design. Final design will be based on multiple factors-- community feedback, setbacks, design parameters, and field studies – will keep community informed

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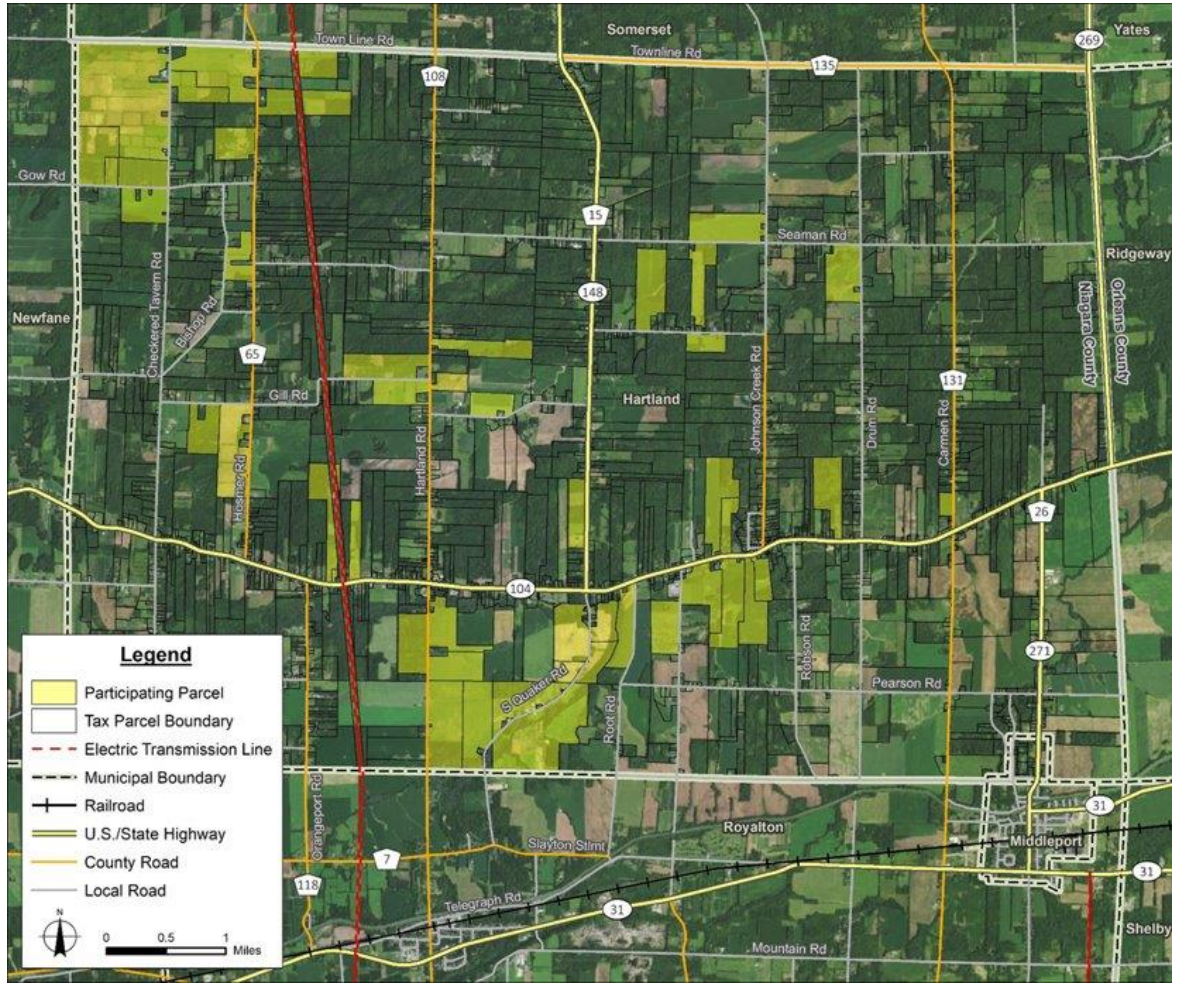
01 Project Overview – Project Facility*

- Yellow parcels represent areas where solar panels, substation and/or energy storage may be located
- Solar panels and substation will be fenced (approximately 1,800 acres or half of yellow area)
- Connection to existing 345 kV line is TBD; easement areas are not identified on map



*Design is not final

01 Project Overview – Setbacks and Safety

- **Setbacks are a key consideration** in project siting and design
- Solar panels, substation, and associated equipment **will be fenced**
- Larger setbacks pose challenges, requiring more land

01 Project Overview – Setbacks and Safety (cont.)

- New York State Office of Renewable Energy Siting (ORES) mandates minimum setbacks from roads, property boundaries and neighboring residences

Setback Type (NYS Mandated)	Solar Facility Setback
Non-participating residential property lines	100 feet
Centerline of Public Roads	50 feet
Non-participating property lines (non-residential)	50 feet
Non-participating occupied residences	250 feet

- Setback is from feature to solar panels (i.e. fences and visual buffers are allowed to be installed within setback area)
- EDFR recommends a 100-foot setback from center line of public roads to allow room for snow banks, visual buffering and fences

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Module 1 Roadside Softening Cont.

Existing Conditions

**Visual buffer sample from previous projects*

Module 1 Roadside Softening Cont.

Visual Simulation – Year One

**Visual buffer sample from previous projects*

Module 1 Roadside Softening Cont.

Visual Simulation – 7 to 10 Years

**Visual buffer sample from previous projects*

Module 2 Open Field / Supplemental Hedgerow Cont.

Existing Conditions

**Visual buffer sample from previous projects*

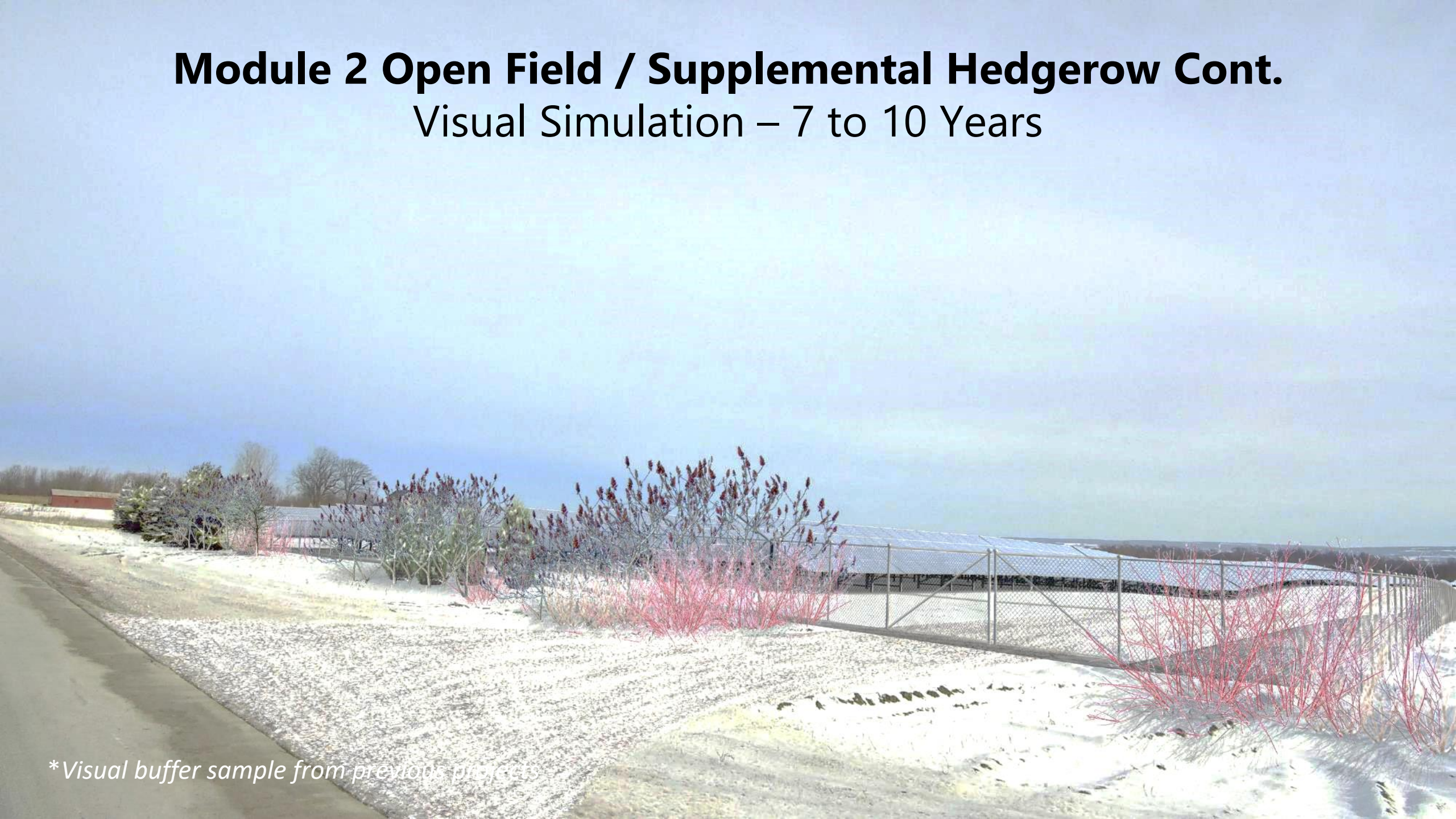
Module 2 Open Field / Supplemental Hedgerow Cont.

Visual Simulation – Year One

**Visual buffer sample from previous projects*

Module 2 Open Field / Supplemental Hedgerow Cont.

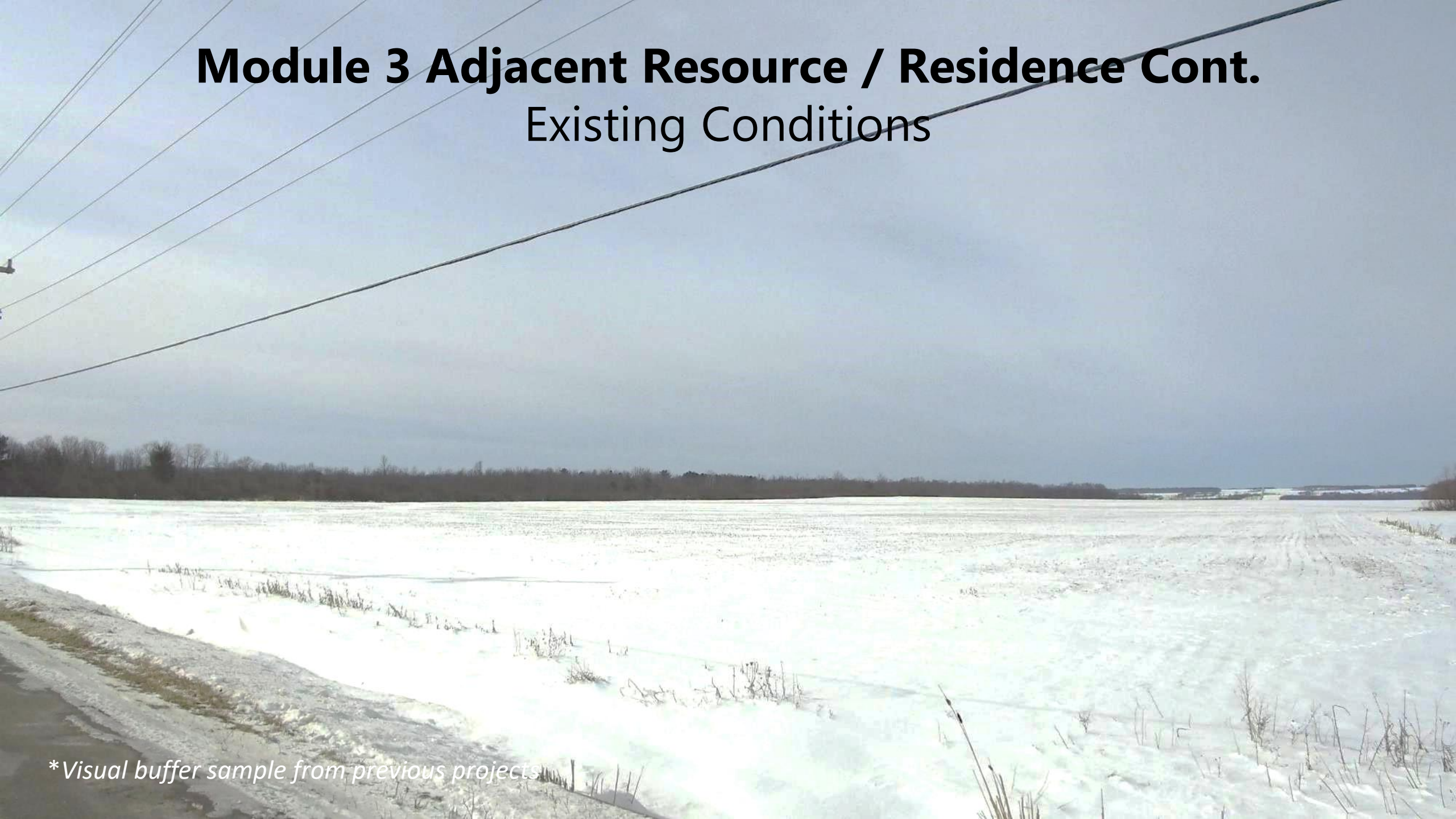
Visual Simulation – 7 to 10 Years



**Visual buffer sample from previous projects*

Module 3 Adjacent Resource / Residence Cont.

Existing Conditions



**Visual buffer sample from previous projects*

Module 3 Adjacent Resource / Residence Cont.

Visual Simulation – Year One

**Visual buffer sample from previous projects*

Module 3 Adjacent Resource / Residence Cont.

Visual Simulation – 7 to 10 Years

**Visual buffer sample from previous projects*

01 Project Overview – Hunting

1. **No setback required from solar panels**. Most, if not all setbacks from inverters, transformers, energy storage containers would be contained within project fenced area
2. **Generally, hunting may occur with landowner permission and on land outside of the fenced area**

01 Project Overview – Local Benefits

1. **300** good-paying prevailing wage construction jobs
2. **Hire local contractors** whenever feasible and possible.
3. Over **$1 million per year to local governments and school districts** (through Payment in Lieu of Taxes and Host Community Agreement)
4. **Lower local electric bills** by ~$100 per household for ten years
5. We work with communities
   - **green energy workforce -** scholarships to pursue renewable energy or the trades
   - **local committee** identifies and disburses **$40,000 annually starting at construction** for local initiatives

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01 Project Overview – Pace University Study

Key Findings

- $177 - $229 million contributions to the local economy during construction and 30 years of operation – higher number assumes construction wages paid to local workers
- Half of the contributions go to the community and half to participating landowners
- Equivalent to $2,949 - $3,824/acre/yr

CONDUCTED BY → Pace Energy and Climate Center, Elisabeth Haub School of Law

FUNDED BY → EDF renewables

SUPPORTED BY → RIDGE VIEW solar + storage project

Visit this link to see the study: https://bit.ly/solar_farming_study

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01 Project Overview – Agrivoltaics

1. **Solar grazing with sheep** is a proven way to incorporate farming
2. More and more research on growing crops within solar facilities (e.g, Jack's Solar Garden
3. Ridge View Solar **local Agrivoltaic Committee** - first meeting held earlier this year, second meeting planned in mid-August – looking for representation from community to help plan feasible ways to farm within project land
4. We can make **energy, food and fiber**

Photos from Jack's Solar Garden – visit www. https://www.jackssolargarden.com/

01 Project Overview – Example Agrivoltaics Project

> We've been able to grow our flock every year, and in 2021, we took on a second site for EDFR. We expect to lamb 500+ ewes in 2022, which is wonderful!
>
> - Chris, Shady Creek Lamb

Arnprior Solar & Shady Creek Lamb Co.

- Site built in 2009 on 200-acres
- Young couple near Ottawa, Ontario wanted to grow flock by grazing outdoors – needed 400-500 animals to sustain business
- Solar grazing PILOT project in 2017
- Today, graze Arnprior and other sites – expect to lamb 500+ ewes in 2022
- Selling meat to local restaurants and wool to make blankets
- See virtual site tour: https://www.youtube.com/watch?v=6dvL_dvu9OA&t=7s

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01 Project Overview – Decommissioning

1. Subject to **NYSDAM guidelines, including agricultural monitoring during construction**
2. Land must be **returned to its original condition** at end of project's life
3. Letter of **credit or bond is required** with Town of Hartland to cover decommissioning cost (assessed every five years for inflation)
4. During operation, **soil quality can be improved** due to sheep grazing and other uses
5. The land underneath the panels is **suitable for farming** during operation and after decommissioning

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01 Project Overview – Disposal

1. **Disposal must follow all governmental, environmental, and legal requirements,** starting with a test mandated by Federal Resource Conservation and Recovery Act
2. Most panels are **classified as non-toxic waste** and are accepted at landfills
3. Niagara County currently requires recycling of solar panels – included in project assumptions

01 Project Overview – Timeline

- Expecting Section 94-c permit to be submitted by summer or fall 2023
- Construction 2024-2026
- Start of operation in 2025-2026
- Operation for 30 or more years
- Leases signed with landowners for 40-year operating duration – thereafter, require approvals from landowners to continue using land.

Common Themes

01 Company and Project Overview

02 Regulatory Process

03 Environmental Considerations

04 Energy Storage

05 Compatibility with Agriculture

Young / Sommer LLC
ATTORNEYS AT LAW

Regulatory Process

James Muscato
Permitting Counsel

02 Regulatory Process – Consultation

- Subject to Section 94-c. Approval occurs ~12 – 18 months after application is submitted
- Requires consultation with host communities pre-application
- Pre-application meetings with municipalities 60 days prior to application
- Requires at least one public meeting
- Requires consultation on important local topics (visual, roads, local laws, socioeconomic impacts)

02 Regulatory Process – Public Notices

- Required throughout application process
  - Notice of intent to file (3 days and 60 days prior)
  - Notice of application filing, completion, and issuance of draft permit
  - All publicly available materials are posted online and at local repository

02 Regulatory Process – Local Input

- After draft permit is issued, public has 60 days to comment, request party status, and identify issues
- Local municipalities provide input to ORES regarding compliance with local law
- Local Agency Account Funds are available to local agencies and intervenors to facilitate public participation
- Host community benefits are required (e.g., PILOTs and CBAs)
- EDFR has voluntarily offered escrow agreement with Town to provide funds for pre-application support
- EDFR provides additional opportunities to engage during process

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Environmental Considerations

Caitlin Graff

Environmental Project Manager

03 Environmental Considerations

- Section 94-c sets standardized conditions for solar projects to meet
- The New York State permitting process is extremely thorough
- Before the project can be built, EDFR is required to do extensive studies
- Full suite of environmental studies and approval of project design
- Requires coordination with various agencies
    - Office of Renewable Energy Siting, NYS Department of Environmental Conservation, NYS Department of Agriculture and Markets, NYS Department of Transportation, State Historic Preservation Office, NYS Department of Public Service
    - U.S. Army Corps of Engineers
    - Niagara County and Town of Hartland

03 Environmental Considerations

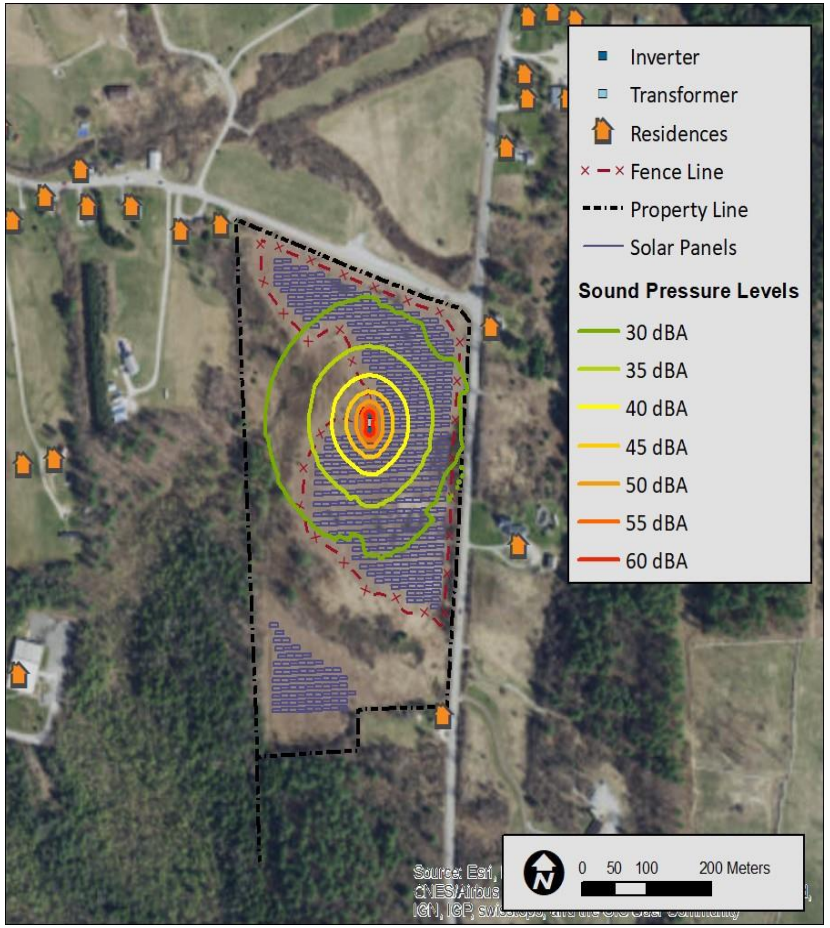
Studies will be undertaken to:

- Identify whether sensitive environmental resources and/or cultural resources are present in areas being considered for the project
- Inform the design process
- Identify ways to avoid and minimize potential impacts to resources

03 Environmental Considerations – Resource Areas

- Cultural Resources
  - Historic & archaeology surveys done in consultation with SHPO
- Wetlands & Streams
  - Delineations in accordance with USACE methods
- Threatened & Endangered Species
  - Includes winter raptor surveys & breeding bird surveys
- Noise
- Visual Resources

03 Environmental Considerations – Noise



Sample Sound Map

EDF Renewables will conduct a noise assessment to assure that the project is compatible with the surrounding area and compliant with regulations. The assessment includes:

- Background sound level monitoring to assess existing sound levels
- Sound propagation modeling to project future sound levels
- Development of mitigation recommendations to ensure that the project is in compliance with noise requirements

Noise limit 45 dBA around solar facilities, and 40 dBA for substation*

03 Environmental Considerations – Visual

- Viewshed Analysis
- Visually Sensitive Resources Research
- Multiple Field Visits
- Outreach Regarding Visual Sensitive Resources and Viewpoints for Visual Simulations
- Preliminary Mitigation Modules
- Representative Visual Simulations

03 Environmental Considerations – Visual

Year 2-3 Simulation

Year 7-9 Simulation

Approach to Visual Mitigation:

- Based on minimum requirements and feedback from community
- Focus on sensitive receptors like homes and public areas – trails, parks, etc.
- Maintenance and replacement plan is required

03 Environmental Considerations – Mitigation

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Energy Storage Safety

Nick Warner

Storage Safety Expert

Co-founder, Principal

04 Energy Storage – Overview

- **May include** energy storage
- **Centrally located** with project substation
- Located in a number of containers
- Energy storage allows solar energy to be used **when the sun is not shining**
- New York State is committed to deploying energy storage and leads the nation in safety

04 Energy Storage – Overview (cont.)

- Will include battery module packs made of lithium-ion batteries – same technology that powers **cell phones and electric vehicles**
- Packs are aligned in rows in a container, similar to shipping container
- **Training provided** for local response teams

04 Energy Storage – Example System

Battery cells

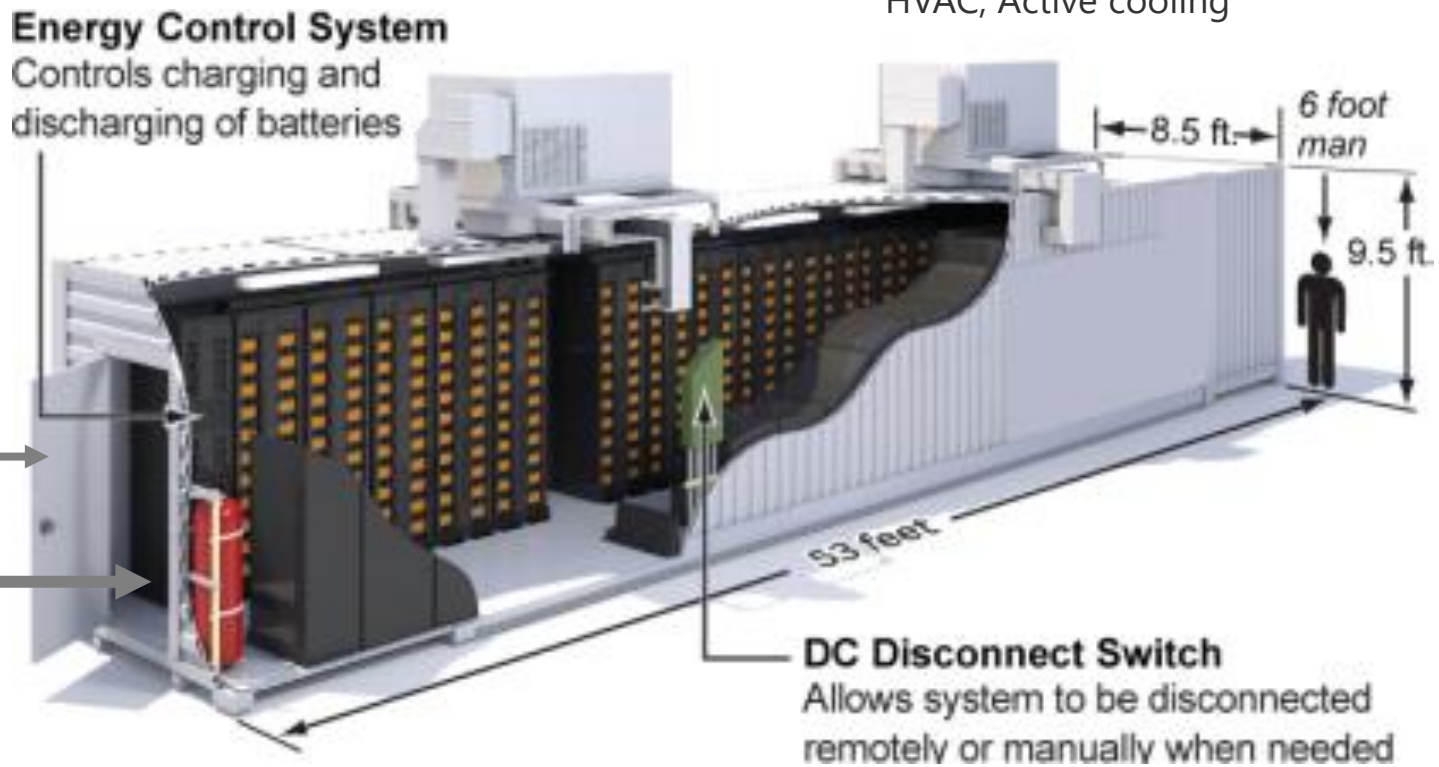
Combine to create modules, and are stored on racks

Safety systems

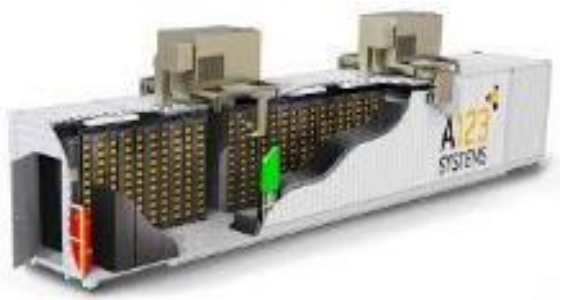
System is constantly monitored and can automatically isolate parts or whole system

Thermal management

HVAC, Active cooling



04 Energy Storage – Example System (cont.)



Enclosures are equipped with HVAC, monitoring system and automatic shut-off systems, and fire suppression units

How Energy Storage Works

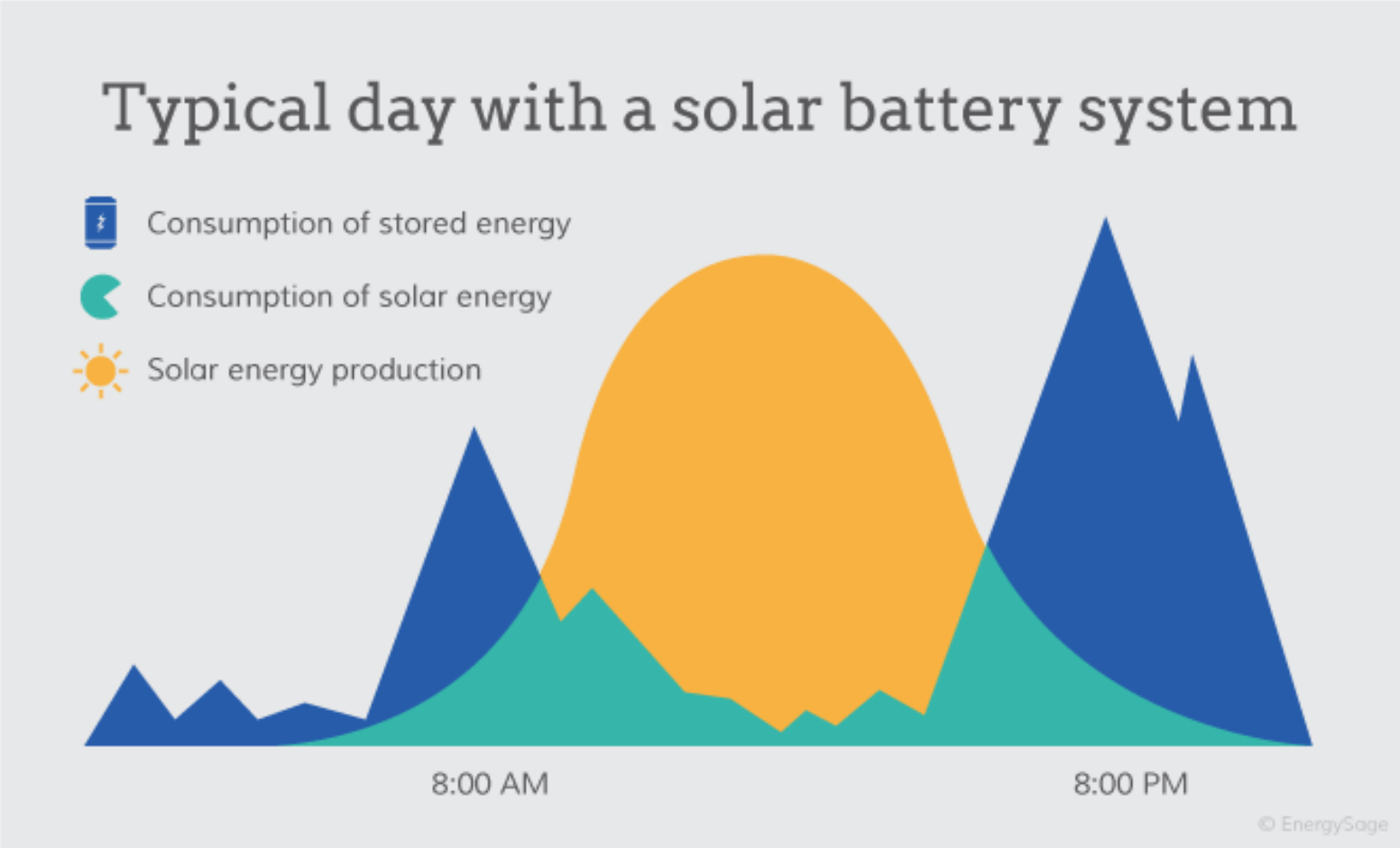


Image courtesy: energysage.com

Operations Safety

- EDF Renewables will have a local team of operations personnel to monitor and maintain the system to the highest of standards.
- Site Security and Safety Response Plans will be prepared with feedback from the first responder community.
- Training of Local First Responders prior to installation and annually thereafter.
- The facility will be monitored 24/7 365 days per year from operations control center
- Maintain electronic cyber and physical security perimeter requirements.
- Disaster Recovery plan in place to mitigate remote monitoring impacts, including redundant co-location servers, backup power to support 48-72 hours of power should there be a local utility outage and network connectivity redundancy.

EDF Renewables' 24/7 NERC-compliant operations control center, where remote monitoring, diagnostics, troubleshooting, and cybersecurity measures are implemented for all wind and solar power farms under operation

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AGRIVOLTAIC
SOLUTIONS

Compatibility With Agriculture

Lewis Fox

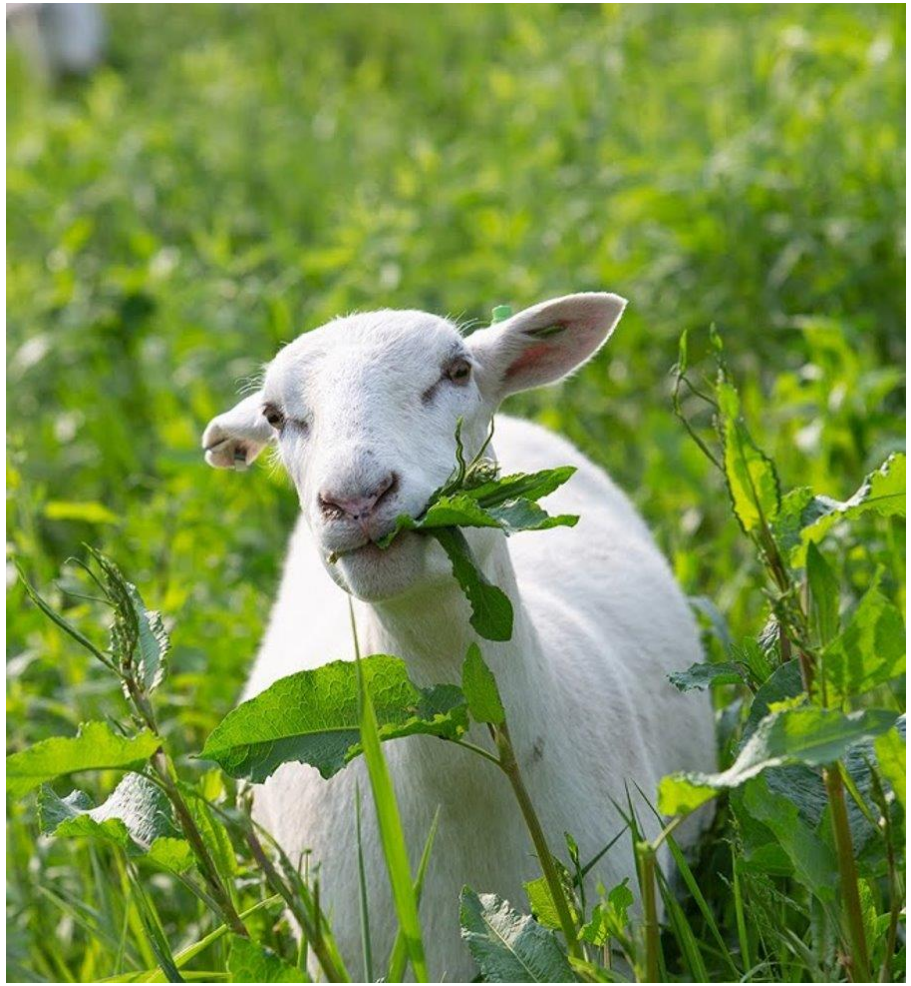
Partner

05 Compatibility with Agriculture

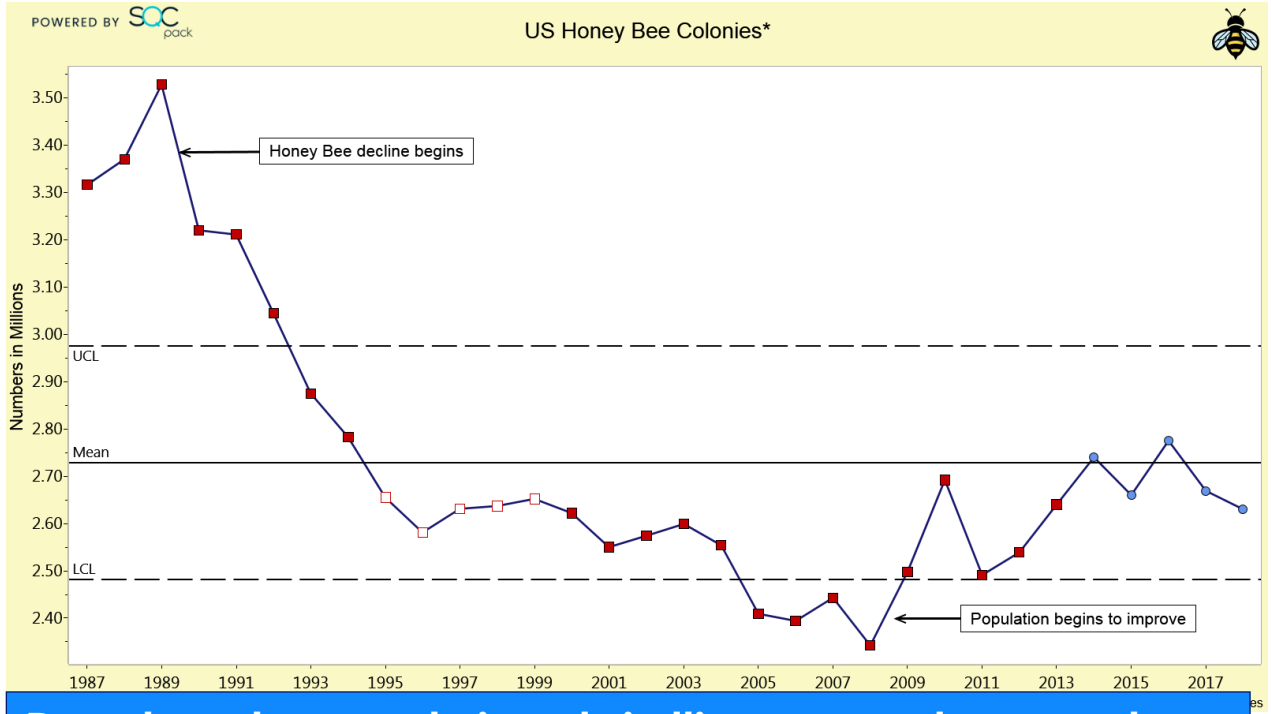
- Common and successful agriculture practices include sheep grazing and foraging of bees and other pollinators
- Results in two revenue streams while sharing the same piece of land
- Sheep reduce the need for herbicides and mechanical mowing
- Solar grazing allows the land to rest, improving carbon sequestration and returning nutrients back into the soil

Solar Energy and Agriculture

- Complementary uses:
  - Adding agriculture is efficient and economically advantageous to the local community
  - Sheep & vegetative management
  - Flowering vegetation = food for bees and butterflies, birds
- EDF Renewables has successfully partnered with local farmers & apiarists.



Bees Like Solar



Data shows bee populations dwindling more and more each year. US Dept of Agriculture chart

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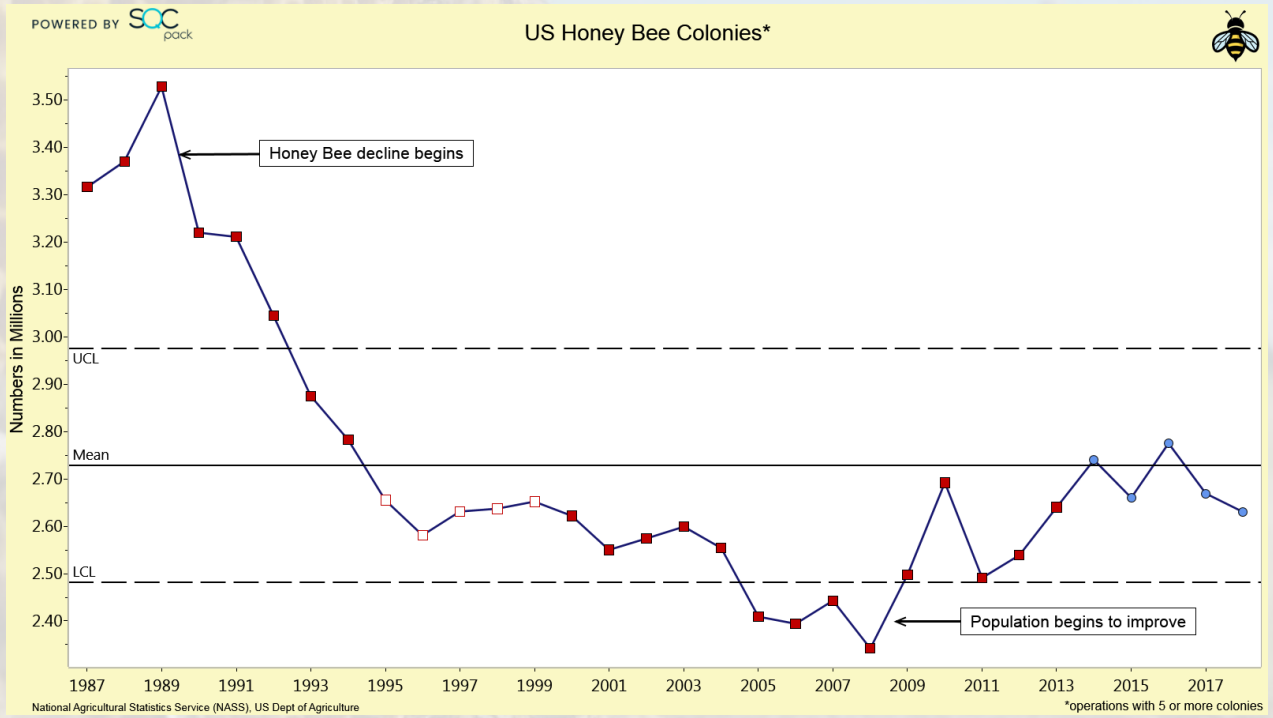
Bees Like Solar

RIDGE VIEW solar + storage project



Data shows bee populations dwindling more and more each year. US Dept of Agriculture chart

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Sheep Like Solar

EDF Renewables
200-acre site

RIDGE VIEW
solar + storage project

- Managed for 5 years with solar grazing
- On-site lambing
- About 10 lambs born every day
- End of June, expect ~300 sheep on-site
- Integrated hay production

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Sheep Like Solar

EDF Renewables
200-acre site

RIDGE VIEW
solar + storage project

- Farmer-landowners
- About 700 sheep rotated through the site
- Integrated into a 5,000-acre diversified farming operation
- Lambs marketed into the regional food supply

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Sheep Like Solar

RIDGE VIEW solar + storage project

- Potential for up to 3,500-4,000 sheep to be rotationally grazed
- Custom-made grazing plan
- Seed mix to support grazing, biodiversity, honeybees
- EDFR is experienced at the management required to bring in multiple uses of the land

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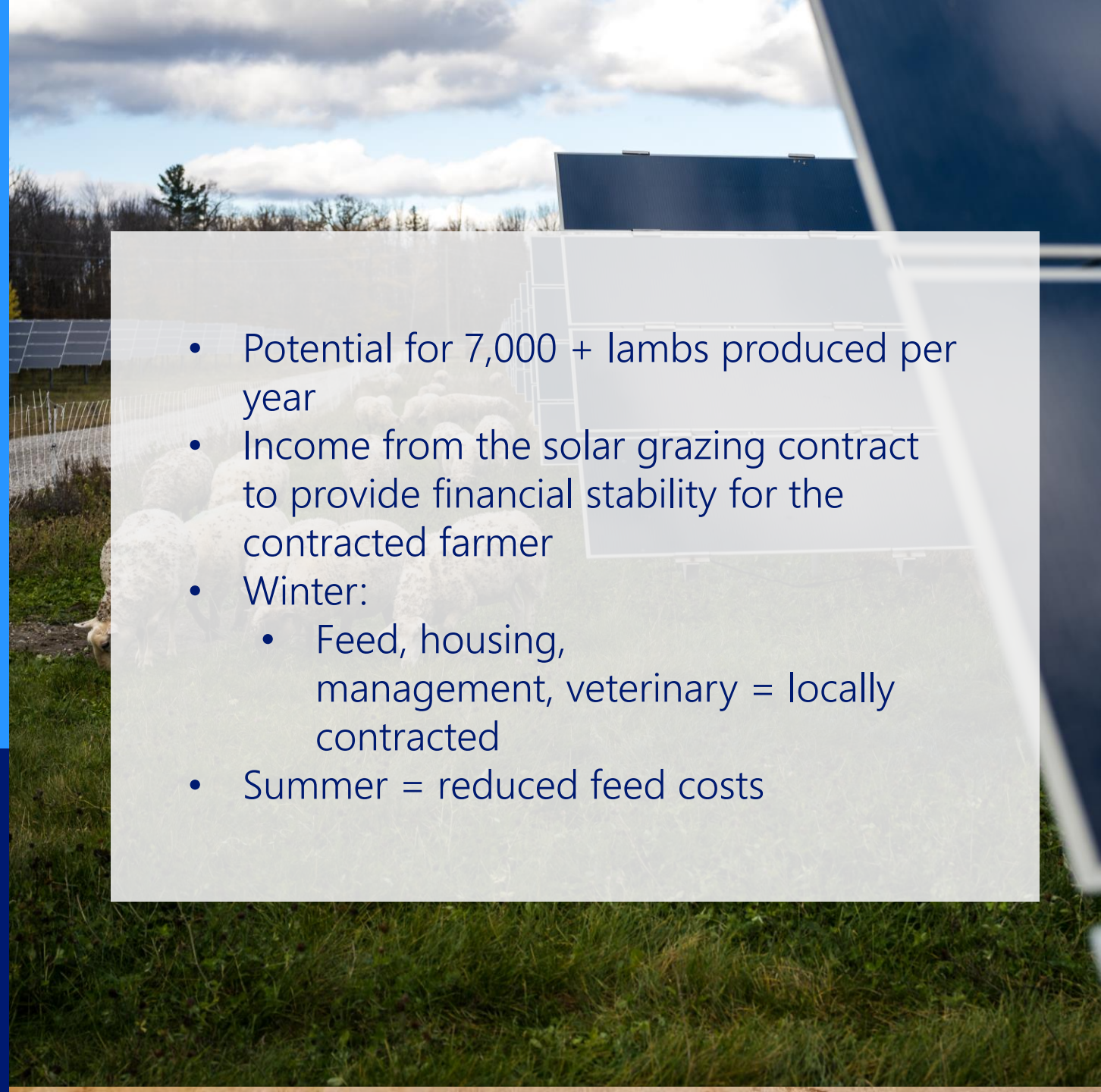
Sheep Like Solar

Planned for Morris Ridge

RIDGE VIEW solar + storage project



- Potential for 7,000 + lambs produced per year
- Income from the solar grazing contract to provide financial stability for the contracted farmer
- Winter:
  - Feed, housing, management, veterinary = locally contracted
- Summer = reduced feed costs

06 Panel Discussion

marigold consulting, llc

- Please submit index cards
- Facilitator will consolidate and paraphrase common questions
- Unanswered questions can be discussed during open house or found online shortly after meeting
- This is not the last opportunity to engage, visit www.ridgeviewsolar.com

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