

# 2021 Inovate Michigan! Summit Presentation

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Melissa Davis,  
2021 MSU REI Innovation Fellow  
Managing Director,  
New Power Tour, Inc.

## **Energy Challenges in the Keweenaw: Recruiting the Community to Develop Innovative, Acceptable Solutions and Local Supply Chains**

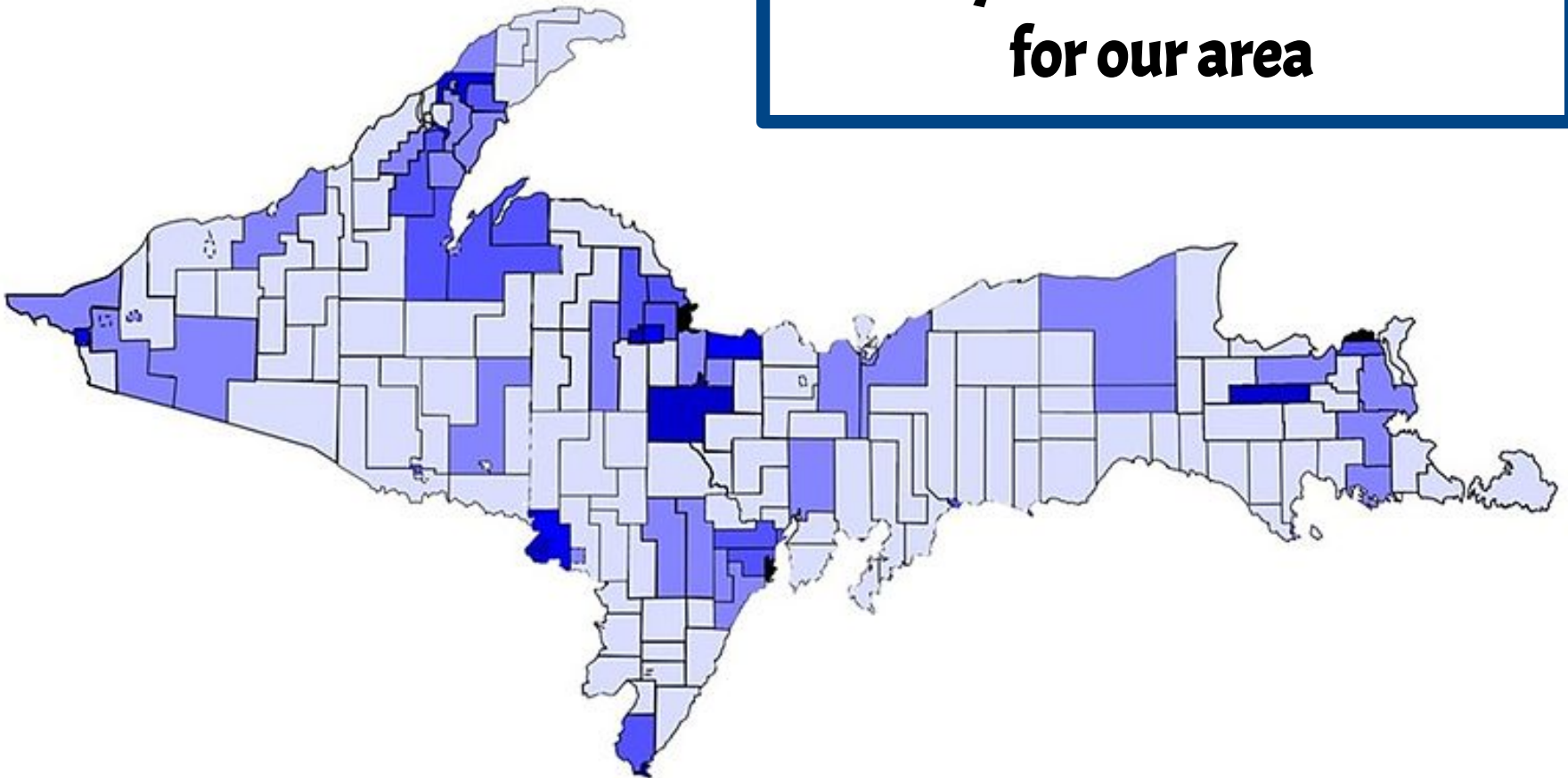
**WE GIVE YOU THE ENERGY  
TO DEAL WITH YOUR ENERGY**



# Fellowship Areas of Exploration:

**Keweenaw Energy  
Group: ~30 volunteers**

**Building A MicroIncubator:  
Emerging small,  
locally-owned businesses  
for our area**





# **Keweenaw Energy Group: Finding a Home for a Good Project**

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## **Proposed Elements: Power Garden**

- **Outdoor recreation – park, tiny home resort, RV-campground**
- **Dining - central kitchen/Road Stand Deli**
- **Food/farm education and processing center**
- **Microgrid - Renewable generation**
- **High Speed EV charging station**
- **Recreational EV rentals**
- **Build crowd-financing into project**

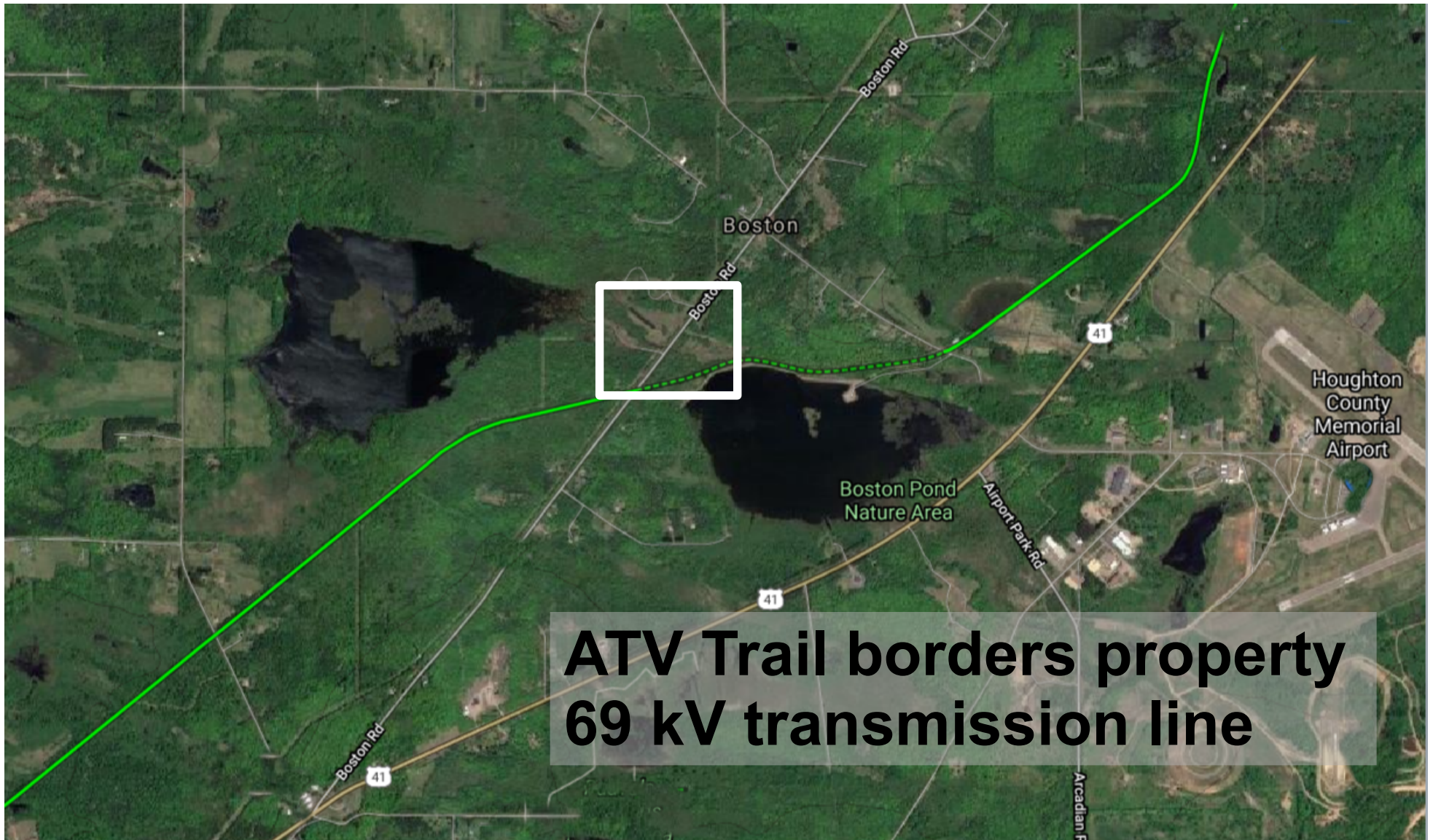


# Franklin Farms Energy Park

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# Partners & Assets: Franklin Township



**ATV Trail borders property  
69 kV transmission line**



# Partners & Assets: Franklin Township

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## Township Supervisor Mary Sears



- Farm Owner
- Forest Permaculture Expert
- Understands our difficult growing zone, 5B
- Very incentivized to share growing skills and provide plants to low-income & ALICE
- Formed Advisory Group to plan, develop and lead farm part of project

# Partners & Assets: Destination Calumet

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# Partners & Assets: Destination Calumet

destinationcalumet

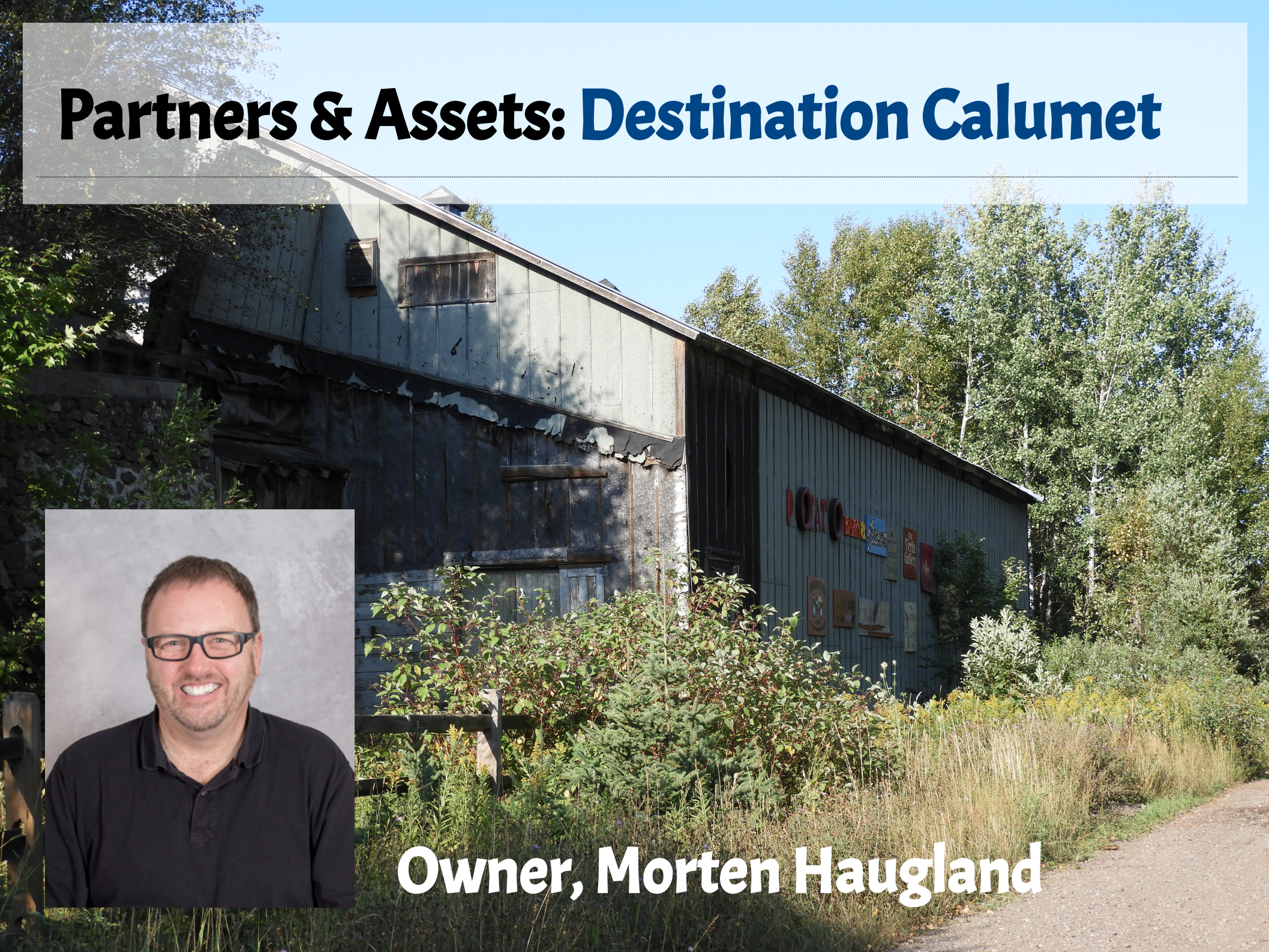
POTATO BARN &



# Partners & Assets: **Destination Calumet**



**Owner, Morten Haugland**





# Partners & Assets: Energy Systems Expert

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## **Dr. Nelson Sommerfedt, PhD**

KTH Royal Institute of Technology  
**Energy Systems Engineering,  
Economics and Data Analytics expert**  
(Stockholm, Sweden)



**Applied Energy Project Course (6 Students) Description:**  
Design an off-grid energy supply system to support lodging, dining, agriculture, and transport. Energy needs are a mixture of electricity and heat, and includes rapid electric vehicle charging for visitors and locals. Multiple technologies should be considered, including solar thermal, solar PV, biomass, heat pumps, lithium-ion storage, vanadium flow storage, and seasonal thermal storage for greenhouses. Cost is also a critical consideration, therefore economic comparisons between system designs as well as traditional energy supply (i.e. the grid and propane) should be included in the proposal.

# Partners & Assets: Finnish Technology



**Markku Paananen -  
Senior Specialist,**

**jamk.fi**

JAMK University of Applied Sciences

JAMK University of Applied Sciences,  
Institute of Bioeconomy

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- Developing transnational consortium
- Goal: to up-scale the field of thin film thermoelectric generation from its infancy to a mature technology
- Focal point: Atomic Layer Deposition (ALD) technology
- Franklin Farm Energy Park – possible demonstration site

# History Break: **Electric Park, Inspiration**

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**ELECTRIC PARK -- 1915**



# Micro-Business Incubator

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**Initial Partner: MTU Husky Innovate**

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**30 Customer Discovery Interviews**

## **Value Proposition:**

Create access point (virtual and brick-and-mortar) for customers to easily access locally produced consumer goods. Creation of structure to launch micro-business startups. Area branding umbrella and crowd-financed startup capital for promising businesses.

## **Customer Segments:**

1) Local area residents who have an interest in supporting a flourishing local business ecosystem (customers). 2. Tourists who want to support mom-and-pop shops and thriving main streets. 3. Startups (Entrepreneurs) who could benefit from shared expenses until they become solvent or area ready to take crowd-capitalization to the next level after proven market success.

# Micro-Business Incubator

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## Wood Wing: Prototyping with Husky Innovate

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'The Alley' Makers Space Interns (3)

**Portable  
Stand-Up  
Computer  
Desk**





# Micro-Business Incubator

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## Wood Wing: Prototyping with Husky Innovate

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**Storage  
Cube /  
Seat**



# Micro-Business Incubator

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## Wood Wing: Prototyping with Husky Innovate

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### Sling Chair





# Micro-Business Incubator



## Sewing Wing:

- **Jim's Pizza (Hancock) donated the use of 1/3 of floor space**
- **Volunteers learn how to sew**
- **Make something for themselves & something for us to sell**
- **Items: flannel baby blankets, hair wraps...rice hats & scarves**



# Micro-Business Incubator

## Food Wing:

MI Cottage Industry rules allow up to \$25k/annual income for selling baked goods from a residential kitchen;

Purchased grain mill to have freshly-ground flour with no preservatives as a selling point;

Finding candidates to explore 'Drive-By' Sales in front of our store two nights a week;



# Micro-Business Incubator: Next Steps

A photograph of a snowy street in a historic town. On the left, there are colorful buildings, including one with a sign that says "PURE". In the background, a church steeple with a cross is visible. The street is covered in snow, and there are cars parked on the side.

## **Morten Haugland...again.**

- **Has bought over twenty properties around and in Calumet**
- **Renovating (rescuing!) buildings**
- **Needs businesses to populate his buildings**
- **Needs staff for his businesses**
- **Exploring partnership - micro-incubator**

# Next Steps

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## **Crowd-Financing Promotion**

- **Advertising/Awareness campaign**

## **Franklin Farm Energy Park**

- **Survey of Property**
- **Architectural Plans**
- **Weekly Planning meetings with stakeholders starting in January**
- **Assessment/cataloging of potential funding sources, submissions**



# Next Steps: Micro-Incubator

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## Portable Stand-Up Computer Desk... For **Holiday Season!**

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**Most popular item, highest profit margin**

- **Reach out to Career Tech Center**
- **IF we can confirm, THEN take orders for 100 stand up computer desks for Christmas**
- **Hire Instructor and students twice a week for 3 hours to fill orders; deliver.**

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**On behalf of myself and NPT's BOD, we  
Thank You for Working With Us!  
Come Visit!**

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