



# Nature Energy: Roberts Conditional Use Permit and Height Request

Local Approvals Requested from Village of  
Roberts for Nature Energy US Ventures 3,  
LLC

August 4, 2022



# Agenda

- Introductions
- Who is Nature Energy?
- Roberts Project Overview
- Conditional Use Permit (CUP)
- Environmental Summary
- Height Variance Request
- Legal Standard for CUP Consideration



## Introductions

- Nick Vivian – Development Counsel
- Alexis Glick – CEO - Nature Energy
- Clarke Pauley – Nature Energy
- Ben Hach – Nature Energy
- Rachel Smith – Arcadis
- Mark Toso - Arcadis
- Bob Peplin – Agri-Waste Energy Operations
- Kim Bremmer – Ag Inspirations LLC
- David Tolberg - Agronomist
- Dean Doornink – Jon De Farm, Inc.
- Bill Derrick – Crane I Holdings (Landowner)

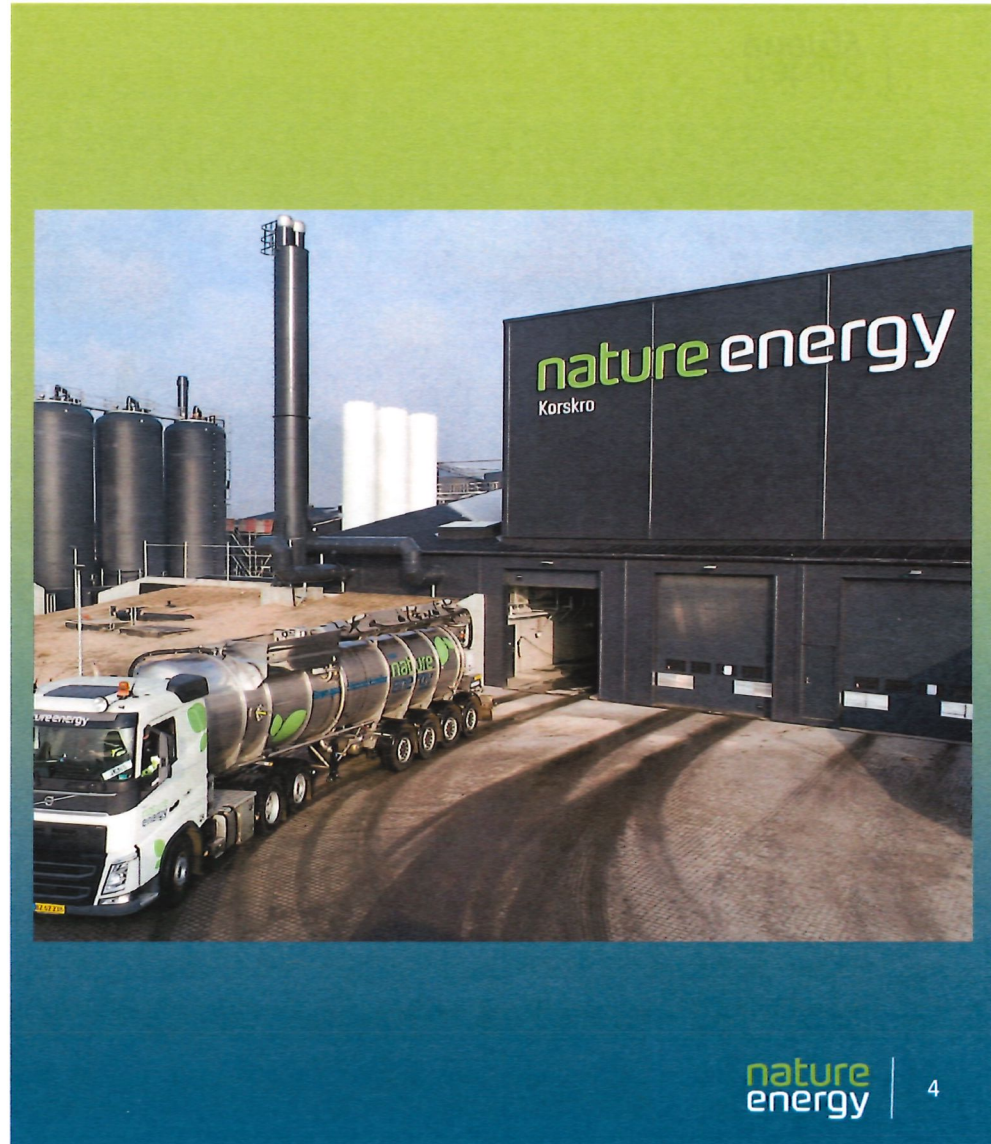




## Who is Nature Energy?

- Worldwide headquarters is located in Odense, Denmark.
- US office is located in St. Paul, MN
- Nature Energy is at the forefront of the green energy transition and is a pioneer in biogas production
- Nature Energy currently has 14 biogas plants located in Denmark and France
- Nature Energy is Denmark's largest producer of biogas
- Nature Energy is bringing technology and experience to North America

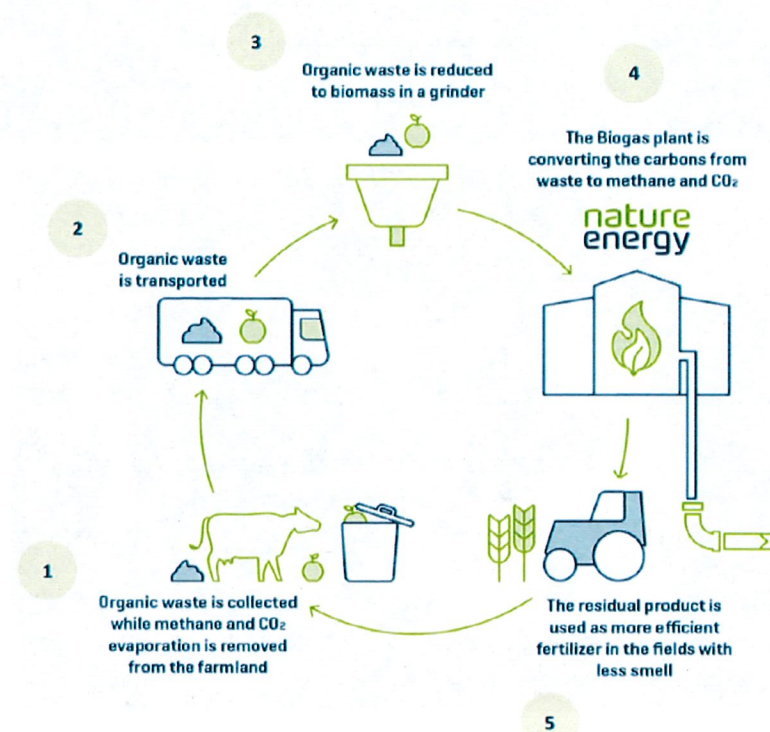
For more information, refer to: [roberts.nature-energy.com](https://roberts.nature-energy.com)  
or [nature-energy.com](https://nature-energy.com)





## Roberts Project Overview

1. Project represents a circular economic benefit for the use of agricultural waste products to collect natural gas for distribution to the grid.
2. The Project will gather and transport raw agricultural waste materials, including manure and turkey litter from local farms (within 20-mile radius) to produce biomethane (biogas).
3. Nature Energy processes the raw waste products via anerobic digestion to capture biomethane (biogas). After the agricultural waste is digested, the by-products include liquid manure, nutrient water, and phosphorous-rich solids.
4. The raw biomethane is upgraded into pure renewable natural gas, which is identical to the natural gas that is used to heat homes.
5. After gathering the biomethane, the digestate products will be transported back to participating local farms for use as manure and soil nutrients.



The Nature Energy Roberts' facility will produce about 7MM Therms of biomethane annually - enough to replace the natural gas use of approximately 4,665 homes (Source EPA).



## Biogas – A Solution for Local Farmers

- Dairy farmers lend their raw manure to Nature Energy and receive high quality nutrients back after the biogas digestion process.
- The raw manure is turned into high-quality, sustainable soil nutrients with a lower application rate, resulting in a lower risk of leaching into groundwater, less soil compaction and fewer fossil fuels used when fertilizing crops.
- Sustainable nutrients are returned to participating dairy farmers and are also sold to crop farmers who want to replace synthetic, conventional fertilizers.
- Allows farmers to effectively manage their nutrients, efficiently fertilizing their soils and reducing nutrient run-off.
- By working with local farmers in an approximate 20-mile radius, the Nature Energy facility will not influence the growth of existing large dairy production.
- By reducing the methane pollution from unprocessed manure, Nature Energy is able to reduce greenhouse gases released into the atmosphere.



*This project gives us more nutrients from our manure, and a financial path to move forward with larger storage facilities. The benefits from decreasing our purchase of fertilizer alone will give us a 18-24 month payback on a new storage facility.*

Joe and Mary Holle milking 110 registered Holstein cows at Holle-Oaks Farm, Baldwin, WI



## Roberts Project Overview

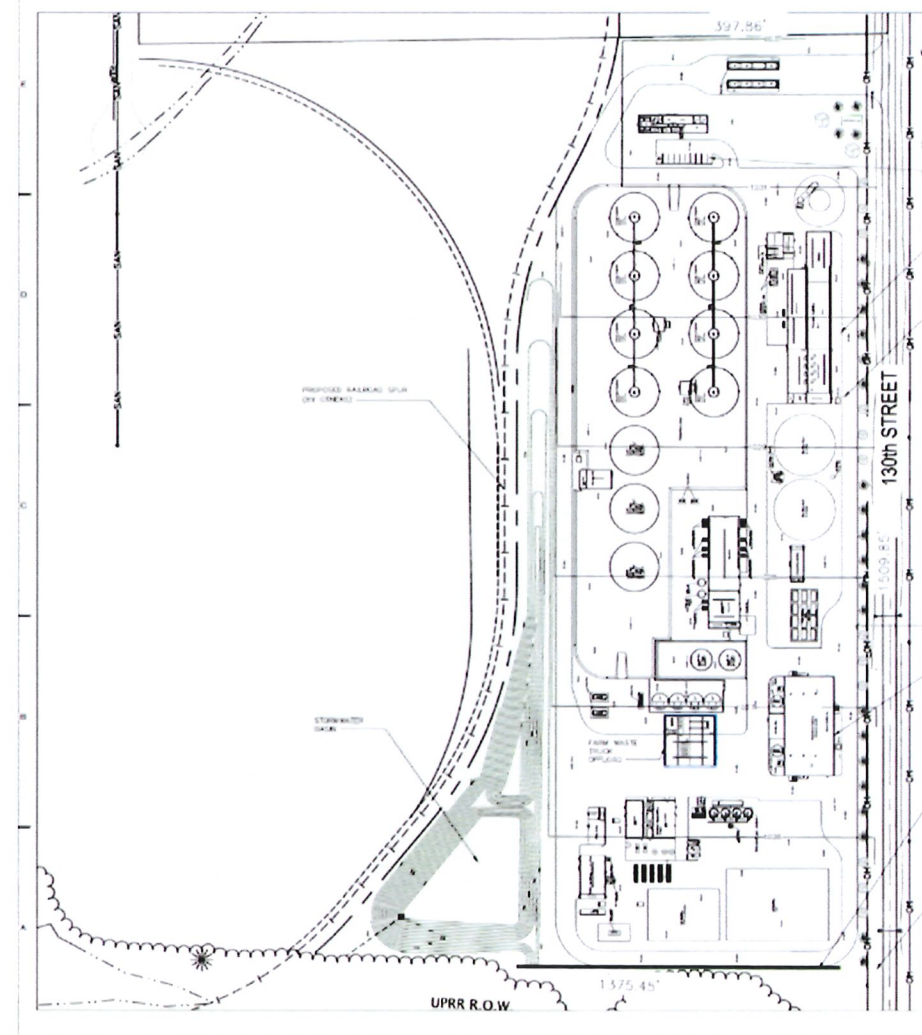




## Roberts Project Overview

- Proposed location is north of the Union Pacific railroad and south of the Roberts Business Park
- Site is zoned as M-7, Industrial Rail Park District
- Neighbors include Harris Rebar and Xcel Energy (NSP)
- Site has a minimal flood hazard

**Project is consistent with Village Comprehensive Plan, and zoning is appropriate for the Nature Energy Facility.**





# Nature Energy Roberts



Nature Energy Roberts will employ 8-10 workers



Site will operate 24 hours/day, 7 days/week  
Deliveries will be M-F: 6 am to 8 pm and  
Saturday: 8 am to 2 pm  
No deliveries on Sundays



Biomass inputs will contain various sources including dairy manure, turkey litter, food processing waste and water.



Commercial sale of Renewable Natural Gas and CO<sub>2</sub>. Additional by-products to return to farmers include digestate, nutrient water, and nutrient rich solids.





3D visualization of  
the project in  
Roberts, WI in St  
Croix County  
(Looking north on 130<sup>th</sup> St)





A 3D architectural rendering of a bioenergy facility. The central feature is a row of five large, dark grey cylindrical storage silos. To the left of the silos is a long, low-profile black building with a single tall, thin smokestack rising from its roof. In front of the silos is a smaller, white rectangular building with several windows. The facility is surrounded by a white fence. To the left of the fence, there are several trees with autumn foliage in shades of orange and red. The foreground consists of a wide, brown dirt road or field. The background shows rolling green hills under a clear blue sky.

nature  
energy

3D visualization of  
the project in Roberts,  
WI in St Croix County  
(Looking south on 130th St)

nature  
energy





1

**Offloading Shed:** 54-foot tall, 17,500 square foot building where trucks tip their loads of deep litter directly into an interior pit. The biomass is shredded before being sent on into the system.

2

**Agriculture and Food Industry Waste Receiving:** 35-foot-tall building where agriculture and food waste is received.

3

**Offloading Shed:** 48-foot-tall building where tankers offload slurry and are loaded again with degassed slurry.

4

**Liquid Storage Tank:** The 46-foot tall, 1.5-million-gallon tank provides raw material liquid storage.

5

**Digesters:** Eight 82-foot-tall digesters contain 2.5 million gallons of biomass each. An agitator ensures that the mixture is consistent.

6

**Post-Production & Gas Tanks:** Two 46-foot tall, 1.5-million-gallon tanks ensure degassed slurry returns to farmers with same quantity of nitrogen as the fresh slurry delivered to the plant.

7

**Bio Filters and Ventilation Exhaust Stack:** The 197-foot-tall exhaust stack for two bio-filters which collect odorous substances for biological treatment.

8

**Separation Building:** 52-foot-tall building where trucks are loaded with solid biomass. Process equipment is on second floor level.

9

**Enclosed Biogas Flares:** Two enclosed flares (main emergency & backup) are 33 feet tall.

10

**Biogas Upgrading Plant:** 42-foot-tall building where CO<sub>2</sub> in the biogas is removed. After, the gas consists of 99% methane, the same content as in natural gas.

11

**Biogas Upgrading Plant Stack:** The 100-foot-tall stack exhausts CO<sub>2</sub> separated from natural gas during the digestion process.

12

**Biogas Liquification Building:** 33-foot-tall building to liquify gas for use in gas powered vehicles or mobile power generators.

13

**CO<sub>2</sub> Liquification:** 33-foot-tall building where carbon dioxide is condensed for commercial use (e.g., carbonation for beverages).

14

**Boiler Building & Stack:** 25-foot-tall building, exhaust from the boiler is discharged from this 100-foot-tall stack.

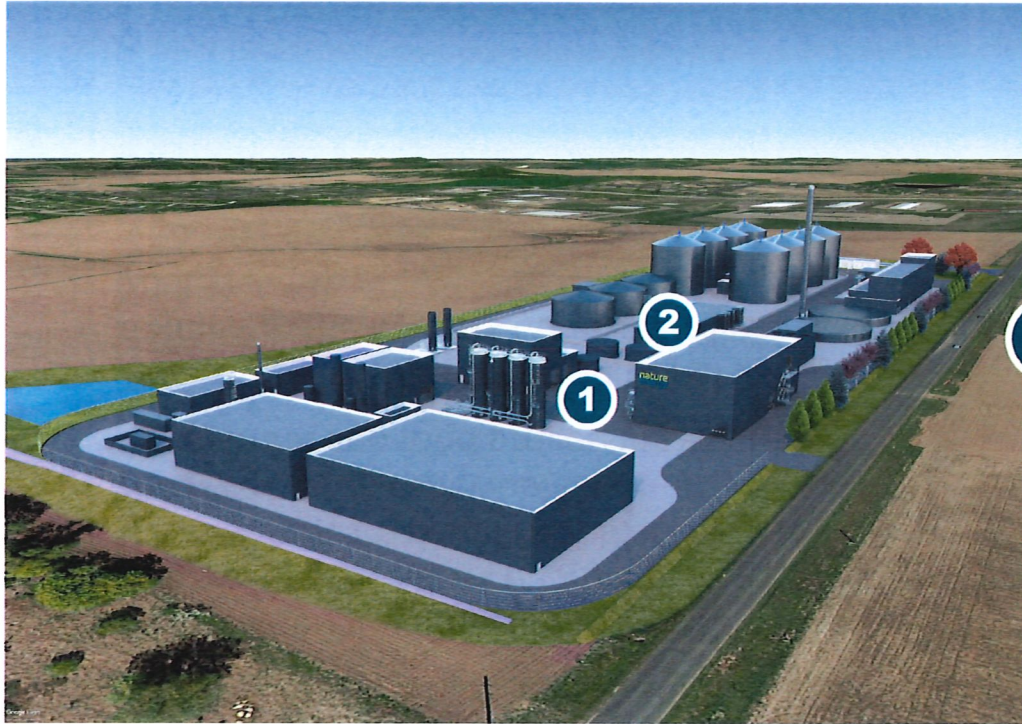
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**Emergency Diesel Generator & Stack:** Exhaust from the 10-foot-tall emergency generator building is discharged from this <35-foot-tall stack.

16

**Admin Building:** 16-foot-tall building containing offices, lunch/meeting rooms, showers, changing facilities.





**1** Clean facilities with good housekeeping practices



**2** Enclosed material handling and processing

Nature Energy has a demonstrated history of maintaining good housekeeping practices at the existing operating facilities. At Nature Energy facilities, materials are loaded/unloaded, stored, and processed indoors. As such, all storage and process areas are covered and enclosed.



## Conditional Use Permit

Nature Energy is requesting that the Village of Roberts approve the Conditional Use Permit in the M-7 Industrial Rail Park District to include the recovery of renewable natural gas from agricultural and food processing waste.

This use aligns with the conditional uses defined in the Roberts Code of Ordinances, Sec. 70-131.A.(3).



## Comprehensive Environmental Summary

In May 2022, Nature Energy proactively completed a comprehensive Environmental Summary for review and consideration by the Planning Commission and the Village Board.

The Environmental Summary was reviewed by the Village Engineer and the Village's Consulting Agronomist.

Nature Energy has reviewed the comments and is working in partnership with Village staff to ensure that all comments are addressed appropriately.

Topics addressed in the Environmental Summary include storm water, wastewater, water usage, soils, air quality, zoning, noise, traffic and permitting.



Nature Energy conducted a review of potential environmental impacts:

"Nature Energy Biogas facility Roberts, Wisconsin "Environmental Summary", Dated May 2022



## Wellhead Protection Area

- The facility is located in the Village's Wellhead Protection Area.
- The storage of all feedstock materials is entirely contained indoors, and the facility has been designed to exceed state and federal regulations, including implementing secondary containment systems in the unlikely event of a spill. These measures should result in minimal risk of environmental contamination.
- The Code allows for uses to be permitted by the Village, subject to conditions including monitoring.
- Mitigation measures include secondary containment areas, earthen berm, 24-hour spill detection and monitoring and a spill response plan.
- Nature Energy's design includes a backup generator that will be powered by natural gas so that monitoring is ensured 24 hours per day, 365 days per year.



## Wellhead Protection Area – Hydrogeologist Testimony

- Wellhead protection areas are very conservative – 5-year travel time to the municipal wells is not from the land surface.
- The drinking water aquifer is 80'-110' deep, the village wells are cased to 152' and 188' with multiple low permeability layers between the wells and the surface;
- Primary products in tanks are not hazardous, but multiple levels of spill containment exceed industry standards
- Project provides greater overall ground and surface water protection across the entire region (county?)
- I live here too! – Don't want my drinking water and air adversely impacted.



### Water Quality Findings Supported by:

Arcadis Memorandum dated July 21, 2022 titled, "Spill Containment Measures"

John Dustman, Summit Environmental - Hydrogeologist Testimony

Mark Toso – Local Resident, and Arcadis Hydrogeologist Testimony



## Odor

SUSTAINABLE  
USING

Although the raw materials are known to have odor, Nature Energy manages these materials entirely indoors and the collected air is treated with engineered biofilters.



- Nature Energy receives feedstocks in an enclosed negative pressure receiving hall.
- Air from the receiving loading halls and storage tanks is treated with engineered biofilters prior to release through the 197-foot stack.
- Biogas from the enclosed anaerobic digestion tanks is collected with an enclosed pressurized piping system.

## Traffic Management

Locally sourced feedstocks for the anaerobic digesters will be delivered in enclosed/covered trucks.



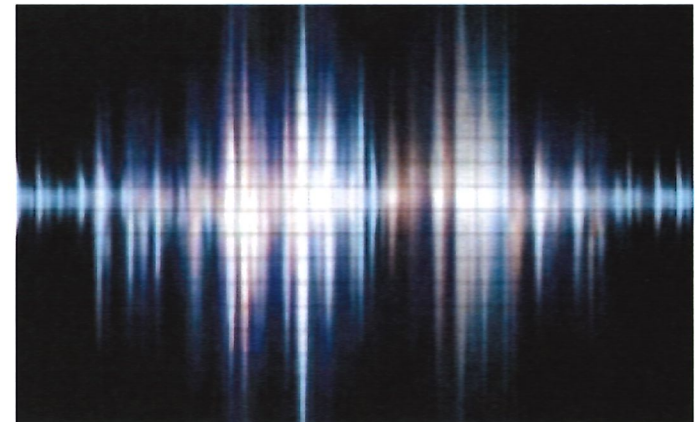
Traffic Management Findings Supported by S2 Traffic Solutions  
Traffic Analysis Memorandum dated May 2, 2022

- Approximately 90-95 transport truck trips per full working day and approximately 40-50 on Saturdays.
  - Truck deliveries will be from M-F 6am-8pm; Sat. 8am – 2pm
  - No deliveries on Sundays
- Transport trucks will enter and exit the site using northbound 130<sup>th</sup> Street.
- NE's truck logistics will optimize truck traffic patterns to prevent off-site transport truck queuing.
- NE's traffic study did not identify any potential traffic implications from the facilities and improvements to 130<sup>th</sup> Street.



## Noise

- The closest noise-sensitive receptors are buffered by a tree line (residence 300 feet south of the proposed facility, across the railroad) and distance (residents located west of the proposed facility at distances exceeding 1,000 feet).
- A study for a Nature Energy Denmark facility calculated noise contributions to residential areas and found that:
  - The maximum noise levels were 50 decibels at the receptor locations – This noise level is similar to that of a quiet residential street with light traffic.
  - The maximum noise contribution at night originated primarily from sporadic traffic entering and exiting the sites.



Noise Findings Supported by NIRAS A/S Noise  
Study date November 23, 2021



## Surrounding Property Values

- The Property is located in the Village of Roberts Industrial Park
- The Property is identified as Industrial in the Village's Comprehensive Plan
- The Property is zoned properly for the proposed use
- There should be no diminishment in value of properties over one mile from the proposed Facility, and there will be a minimal to negligible overall impact to properties within a one-mile radius



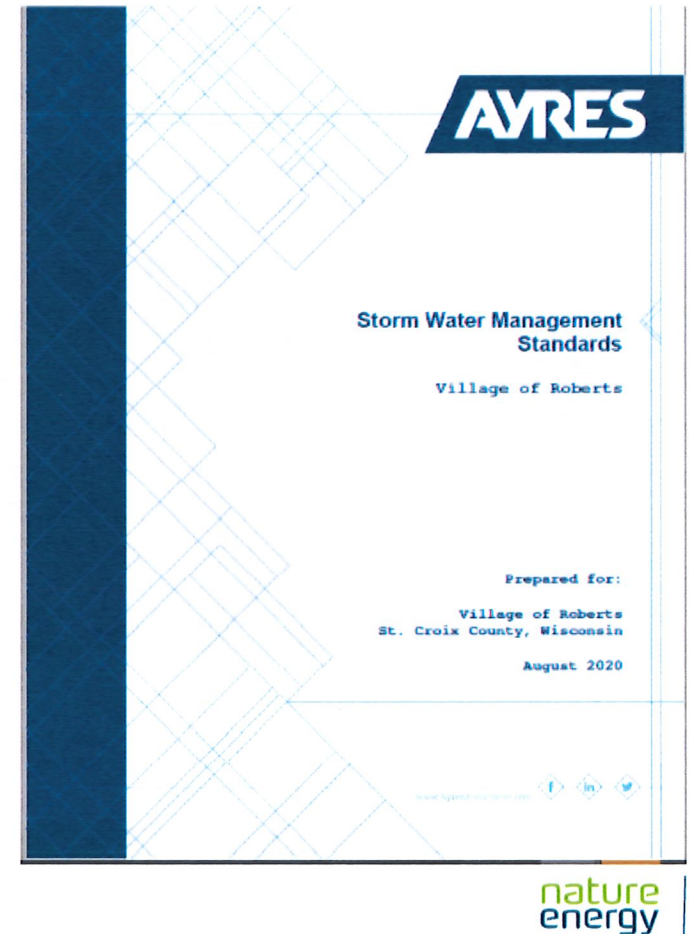
Property Value Findings Supported by Steigerwaldt Real Estate Impact Analysis dated August 9, 2019 as commissioned for the St. Croix County Board of Adjustments



## Stormwater Management

- Stormwater at the operating facility will be managed with two bays within a stormwater pond
- The stormwater pond will be designed to maintain the 100-year flood storage capacity of the surrounding area
- Wisconsin Department of Natural Resources (WDNR) Water Resources Application for Project Permits – Submitted 2/28/2022

Stormwater Findings Supported by Arcadis Technical Memorandum dated April 20, 2022





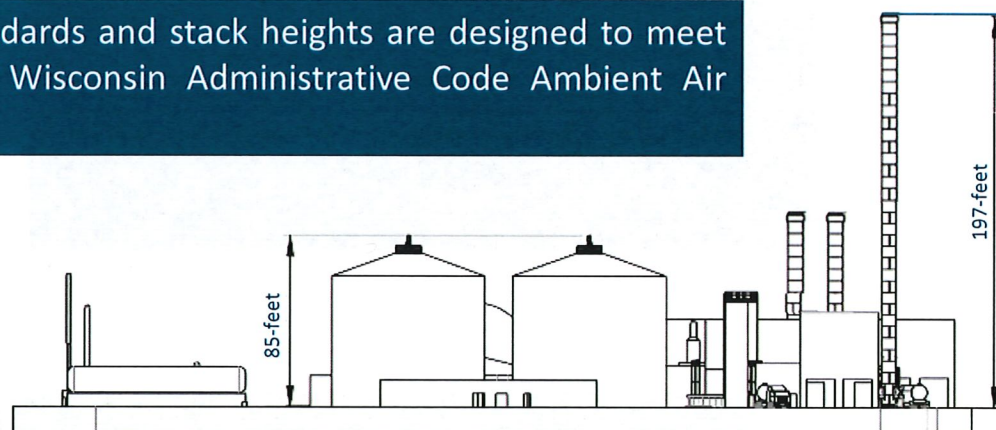
## Height Request - Building Heights

6060A  
USP103

Nature Energy needs to install the following structures, which exceed the 35-foot maximum structure height:

1. Five buildings with an anticipated maximum height ranging from approximately 36 feet to approximately 51 feet
2. Six primary and two secondary digesters with an anticipated maximum height of approximately 85 feet
3. Three storage tanks with an anticipated maximum height of approximately 47 feet
4. Three process stacks with anticipated maximum heights of approximately 66-100 feet (two stacks) and 197 feet (one stack)  
Actual stack heights are dependent upon air dispersion modeling, which will be conducted during future design activities

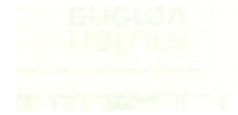
Process equipment heights are dictated by industry standards and stack heights are designed to meet National Ambient Air Quality Standards (NAAQS) and Wisconsin Administrative Code Ambient Air Quality requirements.



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## Height Comparisons



Water Tower: Approximately 145'



Harvestore Silo Storage: Approximately 85'-100'



## Benefits for the Community

- Regional conversion of local manure to renewable energy and sustainable soil nutrients
- Improvement of regional groundwater quality issues caused by excessive nitrate/nitrite concentrations
- Multiple direct/indirect job opportunities, including construction, supplier and permanent technical jobs
- Economic gain to local commercial/business operations
- “Payment in Lieu of Taxes” (PILOT) agreement to be negotiated with Village Board.



Nature Energy process is full circle solution *"that will take a waste product, neutralize it to be an improved nutrient-filled fertilizer for crop and land application, remove CO2 [carbon dioxide] gas to help with global warming, and finally create a renewable fuel source: biogas."*  
Cheryl Johnson Village of Roberts Trustee, after September 2021 visit to Nature Energy Facilities in Denmark.

## Legal Standard for CUP Review – Act 67



If a CUP applicant meets or agrees to meet all of the requirements and conditions specified in the municipal ordinance or those imposed by the zoning board, the municipality shall grant the CUP.


The requirements and conditions must be reasonable.

The decision to approve or deny the permit must be supported by substantial evidence.

“Substantial evidence” means facts and information, **other than merely personal preferences or speculation**, directly pertaining to the requirements and conditions an applicant must meet to obtain a conditional use permit and that reasonable persons would accept in support of a conclusion.

**Nature Energy Roberts agrees to meet all of the requirements and conditions specified in the Village Code or those imposed by the Plan Commission and Village Board.**



An aerial rendering of a large industrial facility, likely a refinery or chemical plant, situated in a rural area with brown and green fields. The facility features several large, dark-colored storage tanks, processing units, and a tall smokestack. A road runs along the right side of the complex, lined with trees. The sky is clear and blue.

We Appreciate Your Consideration

[roberts.nature-energy.com](http://roberts.nature-energy.com)

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