

NC STATE UNIVERSITY

**NC CLEAN ENERGY**

TECHNOLOGY CENTER

North Carolina Cooperative Extension of Chatham County



## Renewable Energy Projects for My Farm

Art Samberg  
 NC Clean Energy Technology Center  
 March 12, 2024

[www.nccleantech.ncsu.edu](http://www.nccleantech.ncsu.edu)

1

NC STATE UNIVERSITY

## Qualifying Renewable Energy Technologies

### Yes

- Solar PV
- Solar PV + Battery Storage
- EV Chargers If Coupled With RES
- Wind Power
- Geothermal
- Renewable Biomass
- Hydroelectric
- Hydrogen (green)

### No

- Fossil Fuel (gas, oil, propane)
- Stand Alone Battery Storage
- Stand Alone EV Chargers
- Vehicles of any type including electric tractors



NC CLEAN ENERGY  
 TECHNOLOGY CENTER

2

# Project Cost Share Criteria

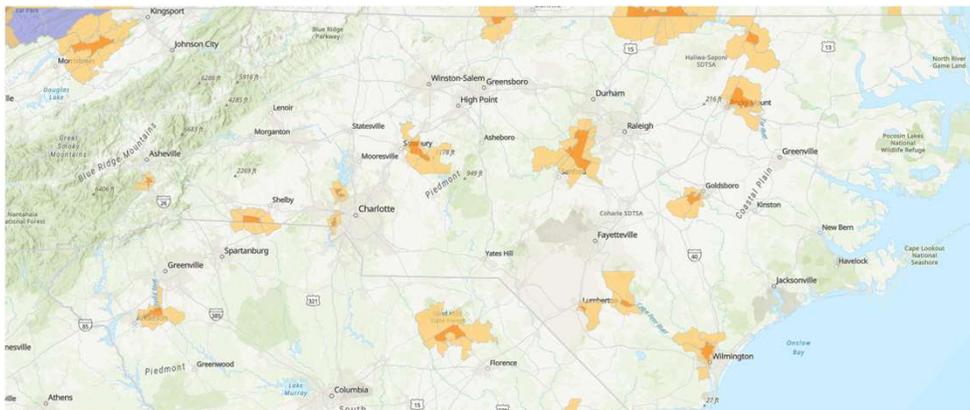
## 50% Grant Share Eligible

- Energy Community (Next Slide)
- Tribal Entity
- Zero Greenhouse Gas Emissions
  - Solar PV
  - Solar PV + Battery Storage
  - EV Chargers If Coupled
  - Wind Power
  - Hydroelectric
  - Geothermal
  - Hydrogen

## 25% Grant Share Eligible

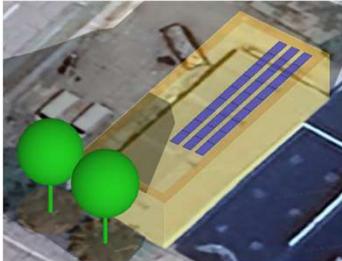
- Renewable Biomass
- Anaerobic Digestion

# Energy Community



<https://energycommunities.gov/energy-community-tax-credit-bonus/>

# Solar PV (and Battery Storage) Options



**Traditional Mounting**  
 - Rooftops  
 - Field Ground Mounts



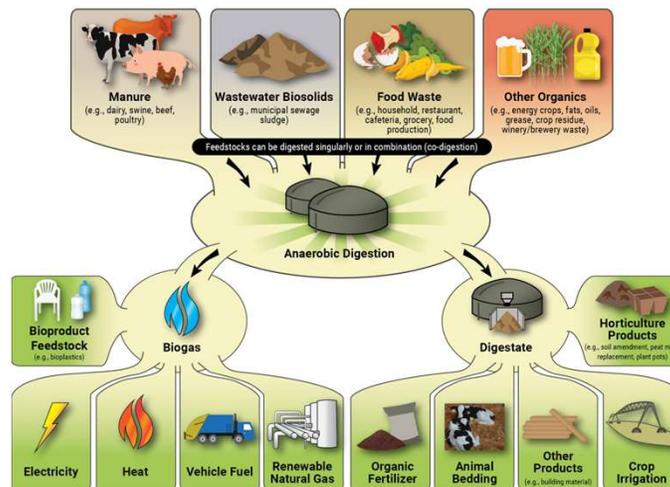
**Remote Applications**  
 - Water for livestock  
 - Irrigation water  
 - Remote buildings  
 - Gate openers



**Agrivoltaics**



# Anaerobic Digestion



# Other Technologies



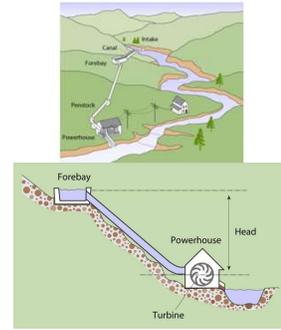
Geothermal



Biomass



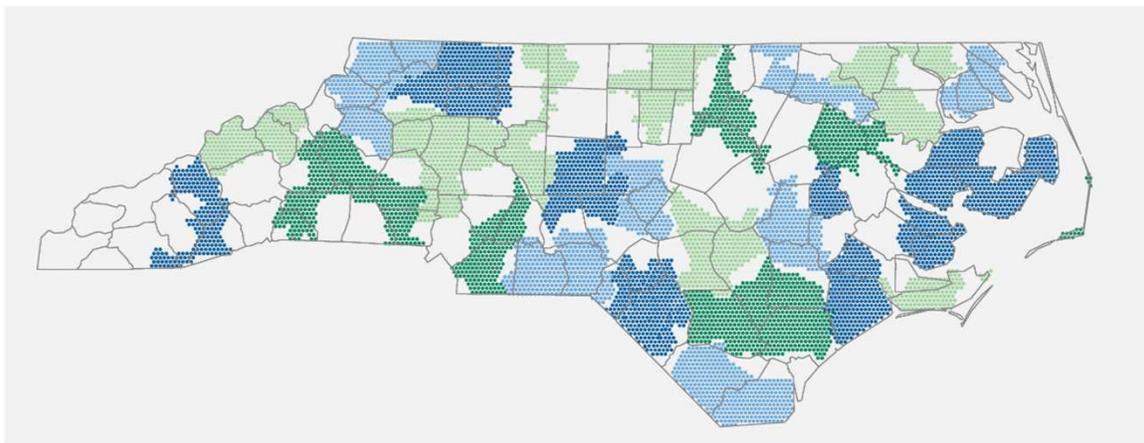
Wind Power



Micro-hydropower



# Electric Service Areas



## Application Content Requirements Increase With Total Project Costs

- There are three project cost thresholds that affect the information required for a complete application
  - Total project costs of \$200,000 or greater
  - Total project costs of less than \$200,000 but greater than \$80,000
  - Total project costs of \$80,000 or less
- Feasibility studies no longer tied to project amount but to project risk



9

## Renewable Energy Assessment Process

- Phone call or email
  - Steve Lysenko 919-515-7147 [sglysenk@ncsu.edu](mailto:sglysenk@ncsu.edu)
  - Art Samberg 919-515-5959 [asamber@ncsu.edu](mailto:asamber@ncsu.edu)
- Initial Call
- 12 months of electric bills and fuel consumption/generation
- Optional Site Visit
- Electric Provider
- Evaluate Technologies
- Cost Estimate
- Annual Savings
- Simple Payback
- Greenhouse Gas Emission Reductions
- Application Assistance (TAG)



10

**Questions ??**

**Thank you for attending  
today's webinar!**

