

Hillsborough Clean Energy Resolution

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TJCOG's Role in the Region

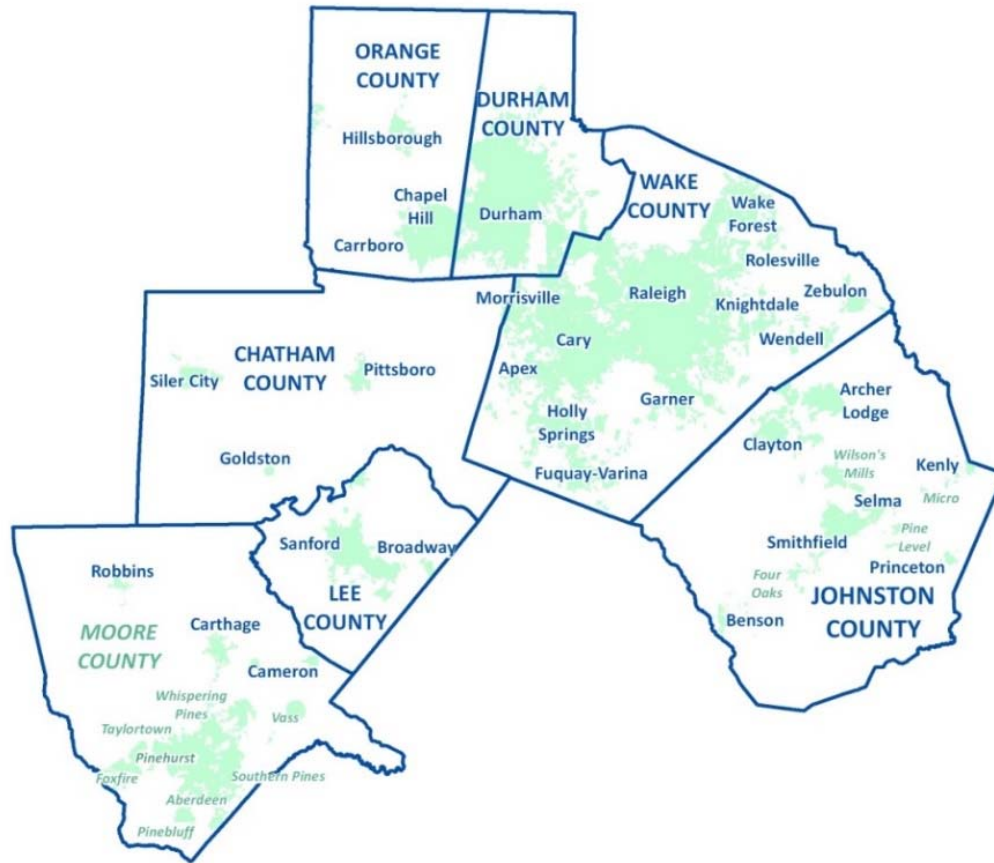
Mission Statement

“To serve as an intergovernmental organization for local elected officials that works proactively on regional issues in order to sustain and improve the quality of life for our citizens.”

TJCOG's work plan covers tough issues that transcend jurisdictional lines, achieving its work through multiple roles:

- Convener and common ground for research, project development, relationship building and information sharing;
- Coordinator of efficient regional service;
- Manager of regional planning projects;
- Administrator for regional institutions addressing development, conservation, infrastructure and the delivery of human services; and
- Provider of technical assistance and data to its member communities.

TJCOG's Region & Board



- The Board of Delegates is our governing board at TJCOG. It consists of a representative elected official from each of our **42** member communities.
- The Board also engages the TJCOG staff in discussions on regional challenges of importance to their communities.

TJCOG Program Areas

▶ Regional Planning

- Environmental Impact
- Development & Infrastructure
- Housing
- Transportation
- Transit

▶ Aging & Caregiving

- Community Resource Connections
- Long-Term Care Facility Advocates/Resources
- Administrator of Regional & County Programs

▶ Member Services

- Regional Committees – CIOs, Emergency Response, Managers, Mayors & Chairs, Legislative Committee, Regional Appearance Committee
- Drug & Alcohol Testing
- Educational Events & Opportunities
- Weekly Communications

▶ Economic Development

- Foreign Trade Zone #93
- Economic Development District

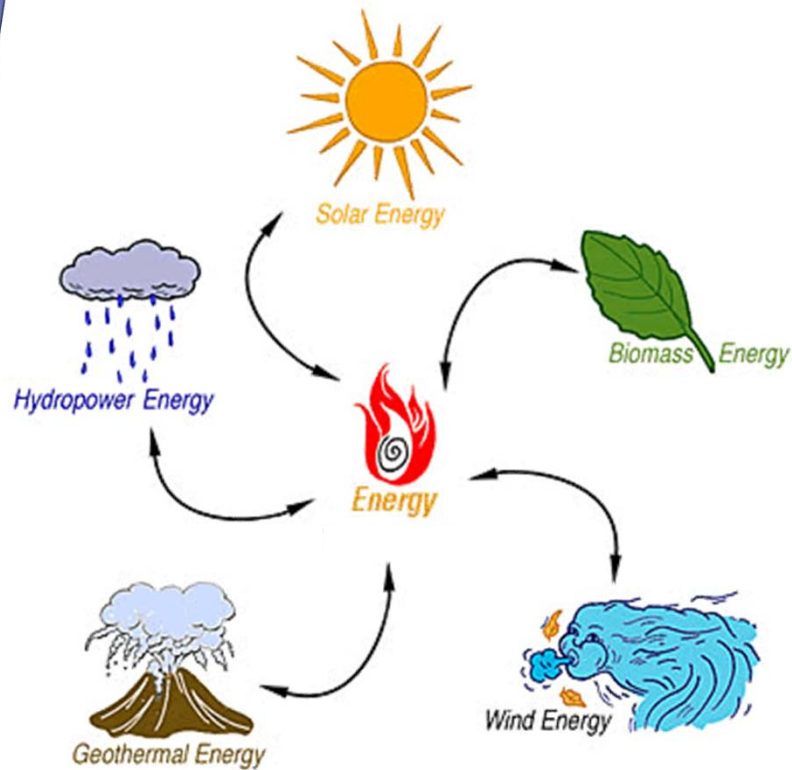
Clean Energy Resolution

- ▶ Resolution Supporting the Goal of 100% Clean Energy by 2050 for the Town of Hillsborough, and the Fostering of a Resilient and Sustainable Community
 - ▶ Resolution #20170911-10.D
- ▶ Adopted September 11, 2017
- ▶ Resolution effective upon adoption



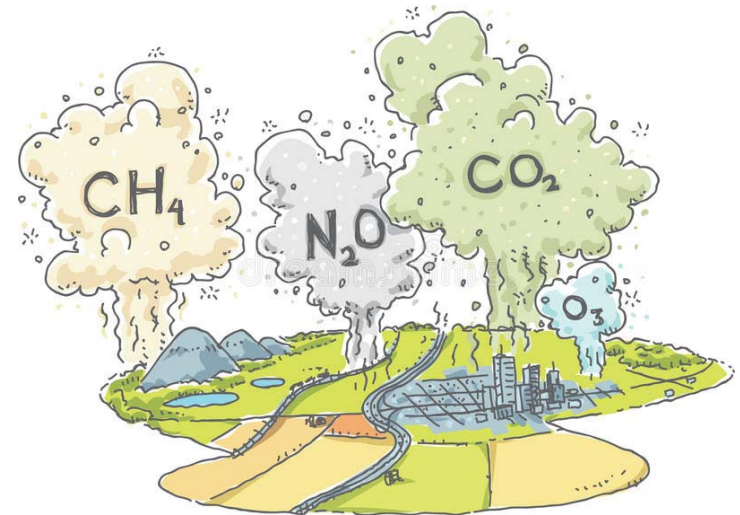
The Goal-

- ▶ “The Town of Hillsborough, North Carolina shall establish a transition from fossil fuel-powered operations to **100% clean/renewable energy by December 31, 2050** or sooner and **80% clean/renewable energy by 2030**”
- ▶ “...all energy sectors in town operations, including **electricity, heating and cooling, and transportation.**”
- ▶ “Clean, renewable energy is defined as carbon and pollution free energy, sustainably collected from renewable sources including **wind, solar, geothermal**”
 - ▶ “Other approaches may be included **after being evaluated for sustainability and environmental justice implications.**”



- The Town's goal is based on total energy use, not a decrease from a baseline.

- The goal is not based on GHG emission reductions but will intrinsically have related benefits.



Partnerships-

- ▶ “The Town commits to **work with surrounding communities and municipalities** in achieving aligned clean energy and equity goals”

▶ Potential Partners

- ▶ Energy Providers
- ▶ Academic
- ▶ Non-Profits
- ▶ Governmental Agencies

▶ National Efforts

- ▶ Aspen, CO
- ▶ Greensburg, KS
- ▶ Burlington, VT
- ▶ Kodiak Island, AK
- ▶ Rock Port, MO



Citizen Engagement

- ▶ “we commit to a transparent and inclusive process for planning and implementation, **ensuring that the public has an opportunity to participate** as the town adopts a transition roadmap.”
- ▶ **This is where you come in!**



Next Steps-

Finalize
Baseline

Staff
Education

Funding
Research

Developing
Partnerships

Questions?



Triangle J
Council of Governments



@tjcognc

Town of Hillsborough Energy Use Baseline Data

Public Outreach Meeting – Town of Hillsborough
May 31, 2018



TRIANGLE J COUNCIL OF GOVERNMENTS

Municipal Energy



Energy Use
(Electricity)
kWh



Fuel Use
(Gasoline,
Diesel, Ethanol)
gallons



Baseline – How much energy do we use?

Electricity

- Buildings
- Facilities/ Utilities
- Parks/Street Lights

Fuel

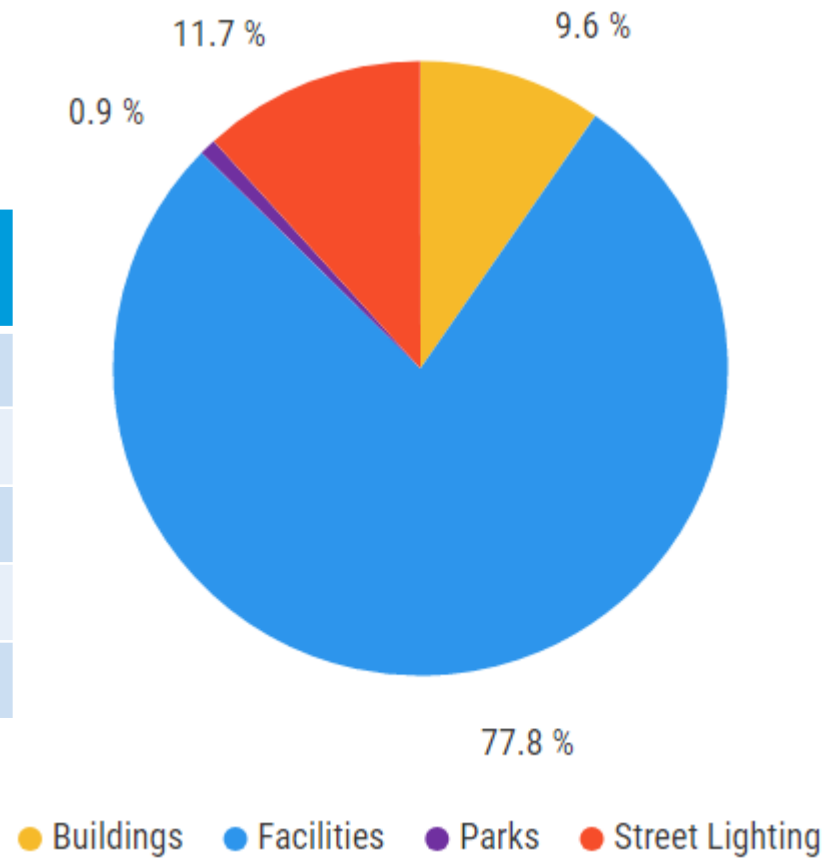
- Fleets

Annual usage: May 2017 – April 2018

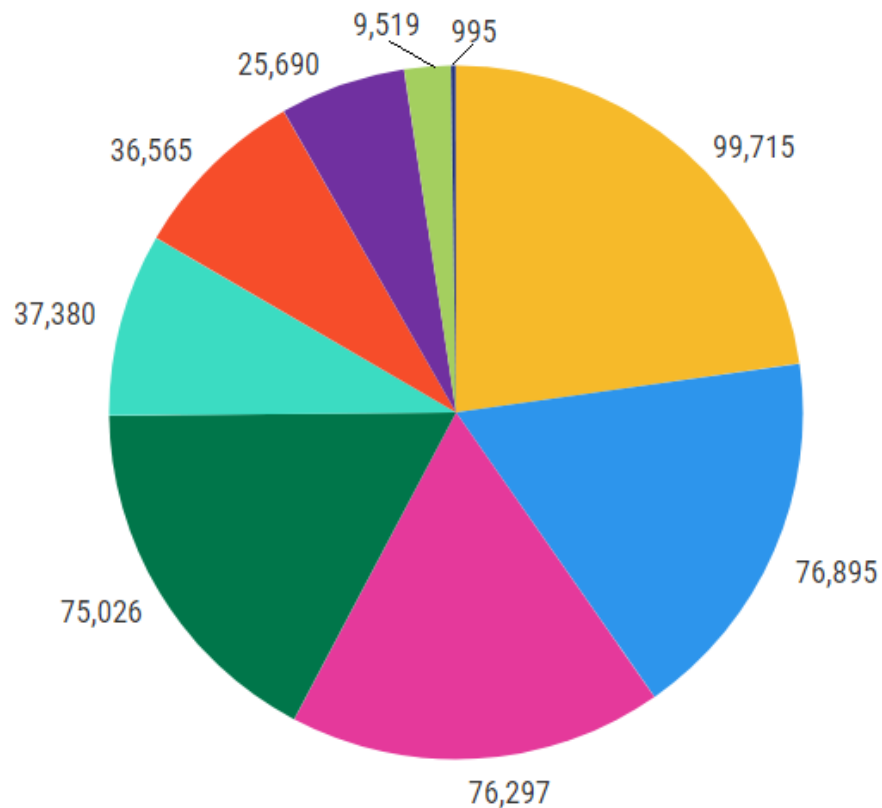
Note: the following baseline figures are still in draft form and are subject to change before final publication as more sites are identified

Electricity – Total Use

	Annual Electricity Usage (kWh)	Percentage of Total
Buildings	438,082	10%
Facilities/Utilities	3,536,106	78%
Parks	39,238	1%
Street Lighting	533,937	12%
TOTAL	4,650,624	



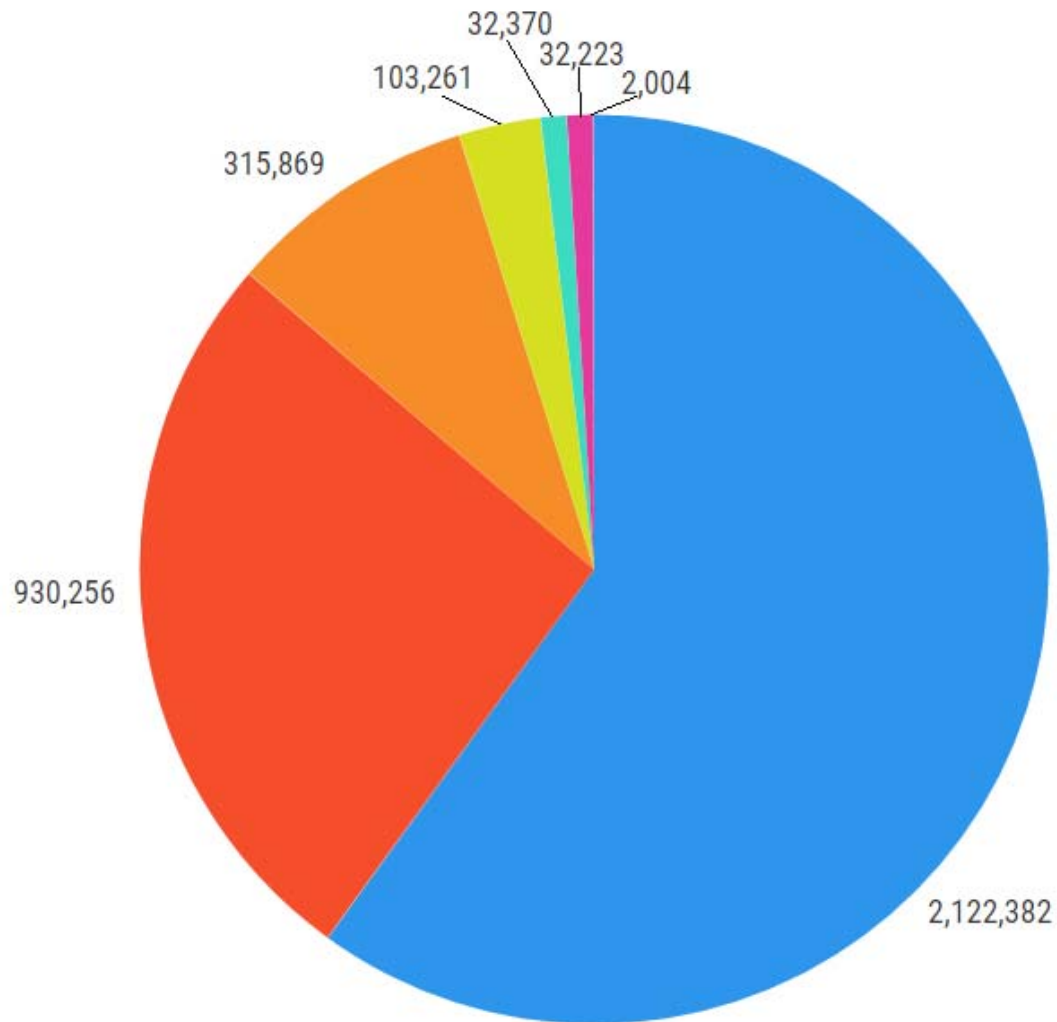
Electricity - Buildings



Building	Annual kWh	Percentage of Total
Police Main Station	99,715	23%
Town Hall, Town Barn	76,895	18%
Hwy 86 N Facility	76,297	17%
Fire Department	75,026	17%
New Town Hall Annex	37,380	9%
Town Hall Annex	36,565	8%
Police Substation	25,690	6%
Police Substation Community Center	9,519	2%
Public Safety Training Facility	995	0%
TOTAL	438,082	

● Police Main Station ● Town Hall/Barn ● Highway 86 N Facility ● Fire Department
● New Town Hall Annex ● Town Hall Annex ● Police Substation
● Police Substation Community Center ● Public Safety Training Facility

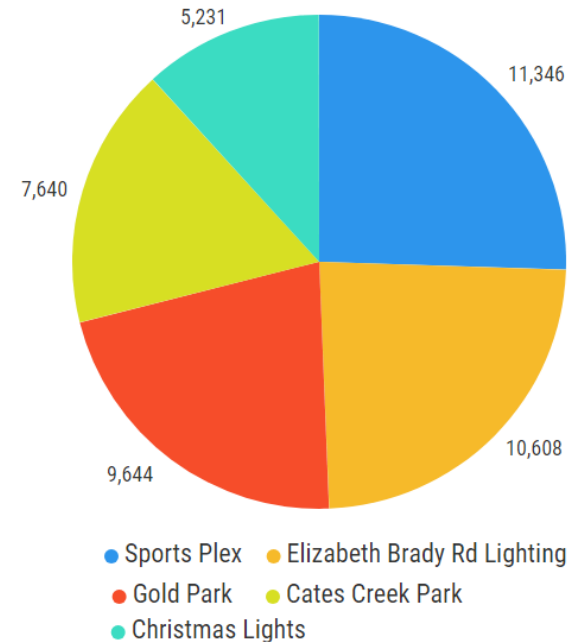
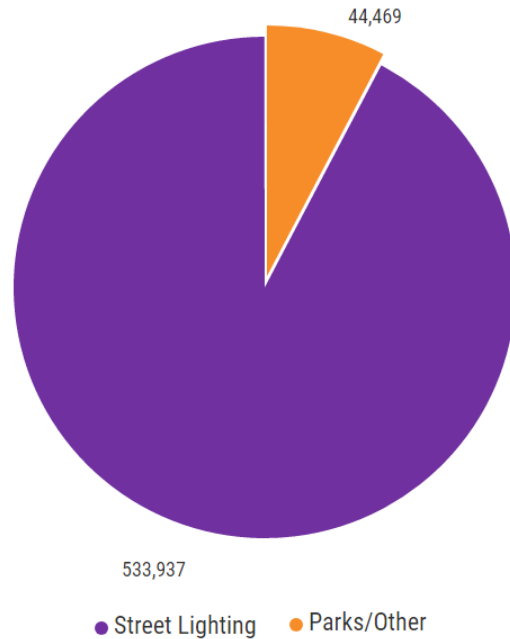
Electricity – Facilities



Facility	Annual kWh	Percent of Total
Wastewater Treatment Plant	2,122,382	60%
Water Treatment Plant	930,256	26%
Pump Stations	315,869	9%
Water Supply Tanks	101,002	3%
Old Water Treatment / PW	32,370	1%
Water Treatment Plant Intake	32,223	1%
West Fork Reservoir Site	2,004	0%
TOTAL	3,536,106	

- Wastewater Treatment Plant
- Water Treatment Plant
- Pump Stations
- Water Supply Tanks
- Old Water Treatment / Public Works
- Water Treatment Plant Intake
- West Fork Reservoir Site

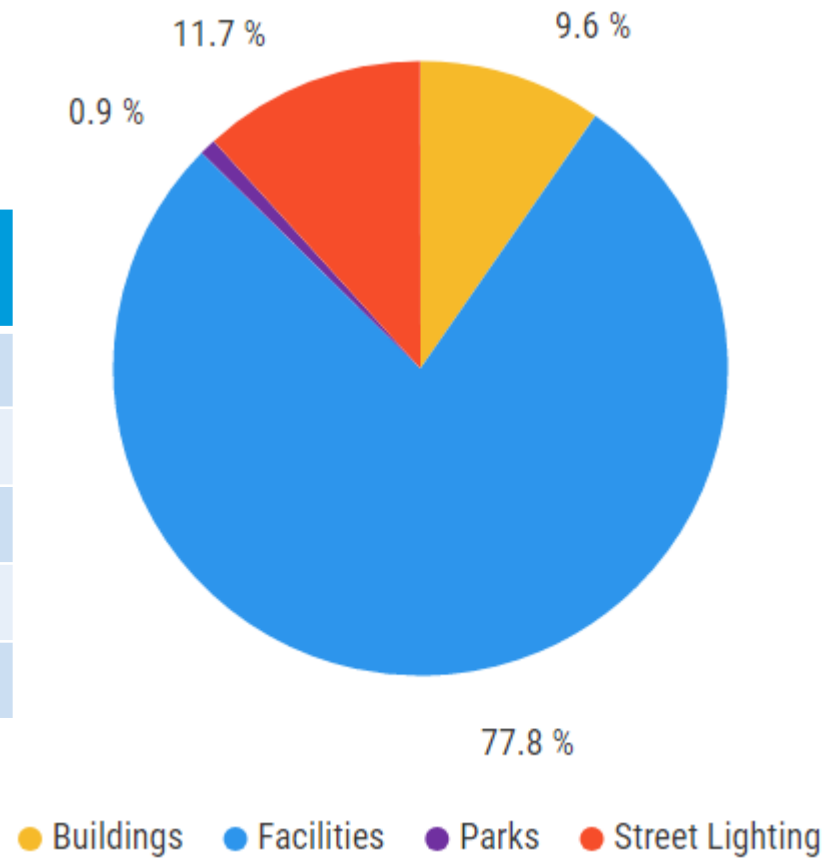
Electricity – Parks/Street Lights



	Annual kWh	Percentage of Total
Street Lighting	533,937	92%
Sports Plex	11,346	2%
Elizabeth Brady Rd	10,608	2%
Gold Park	9,644	2%
Cates Creek Park	7,640	1%
Christmas Lights	5,231	1%
TOTAL	578,406	

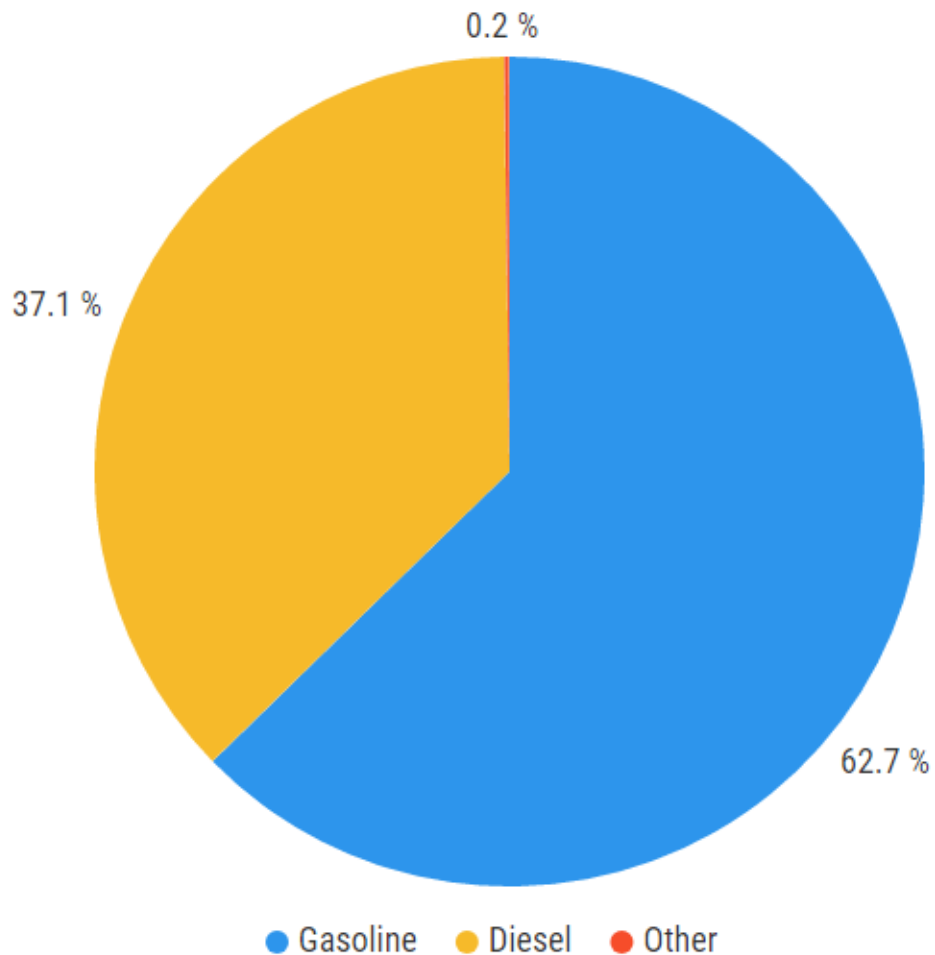
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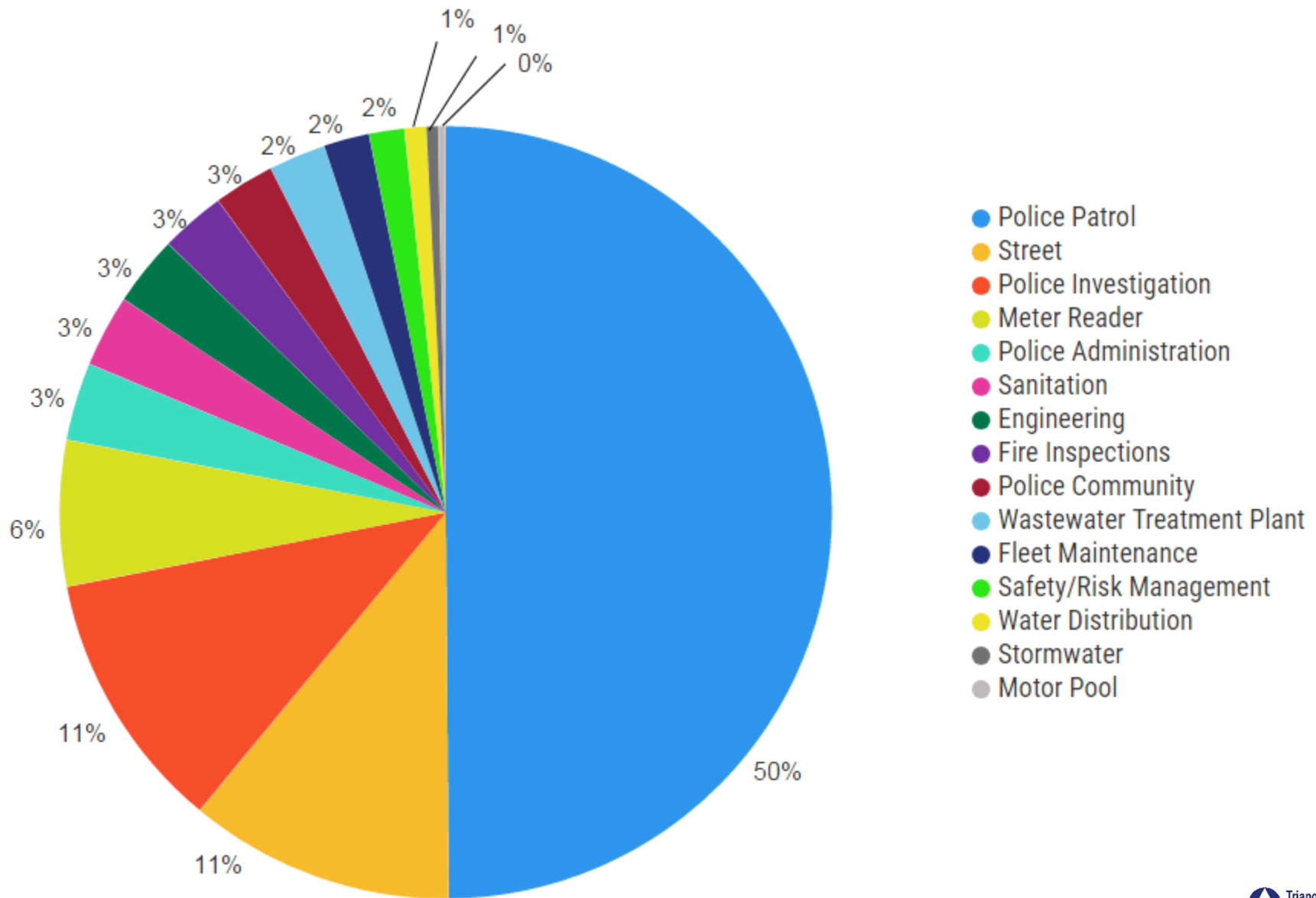
Fuel - Fleets

Percentage of Total Fuel Use by Fuel Type

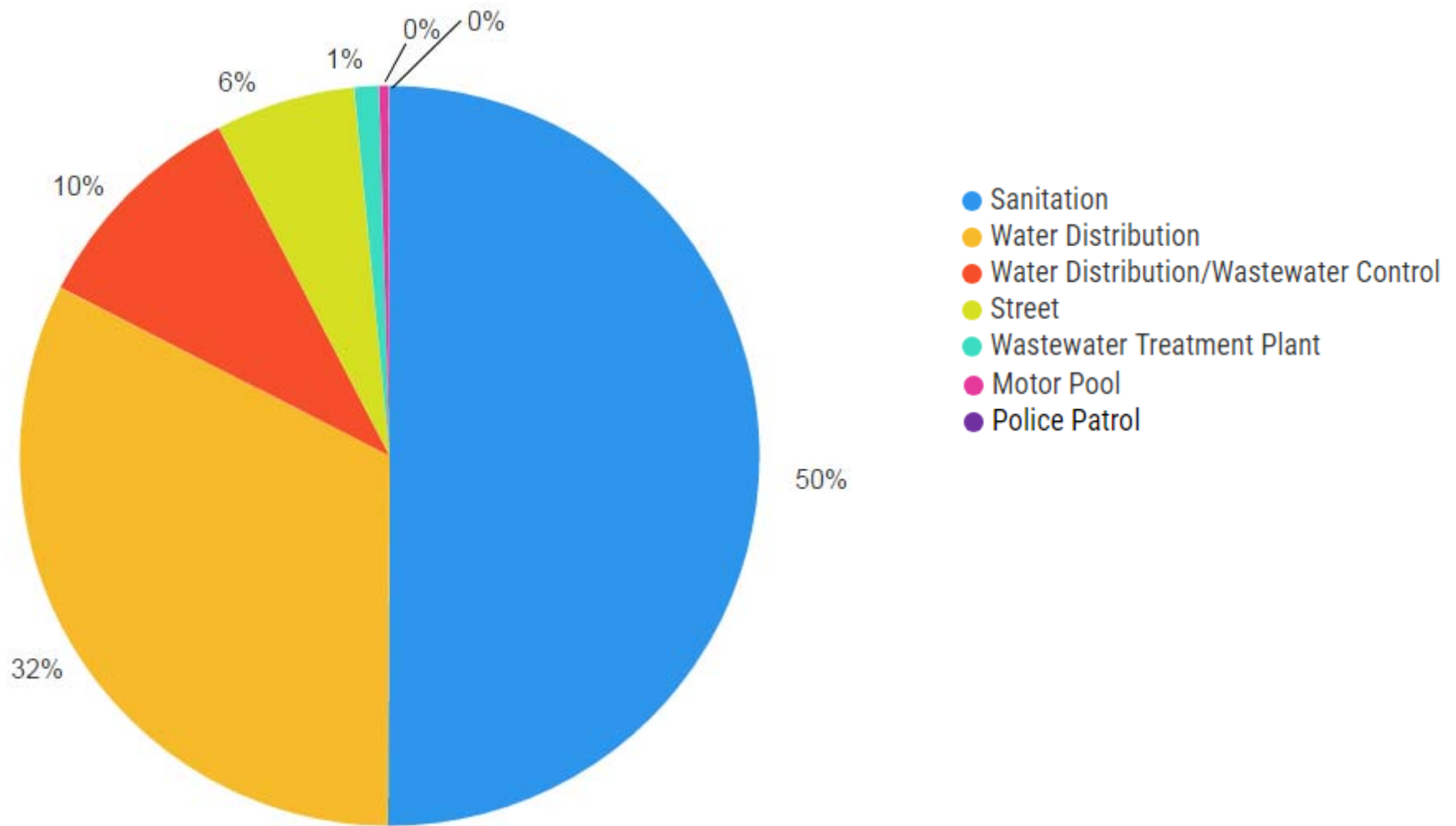


	Annual Consumption (gallons of fuel)		
	Gasoline	Diesel	Other
Engineering	893		
Fire Inspections	832		
Fleet Maintenance	584		30
Meter Reader	1,867		
Motor Pool	93	74	
Police Administration	999		62
Police Community	778		
Police Investigation	3,333		
Police Patrol	15,240	9	
Safety/Risk Management	454		
Sanitation	921	9,051	1
Wastewater Treatment Plant	729	194	
Stormwater	153		
Street	3,393	1,105	
Water Distribution	275	5,863	
Water Distribution/ Wastewater Control		1,777	
TOTAL	30,544	18,073	93

Fuel – Gasoline Usage

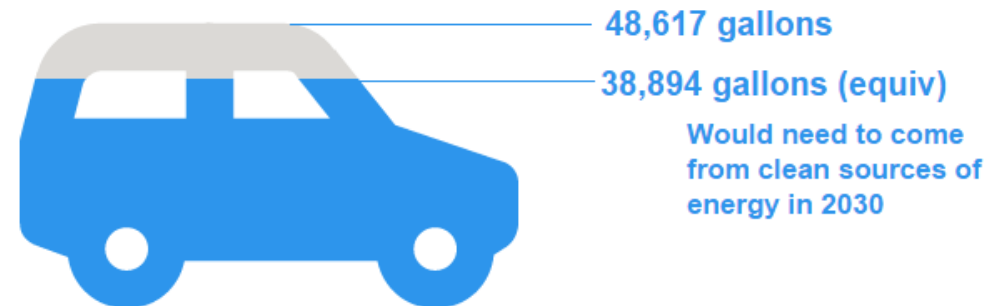
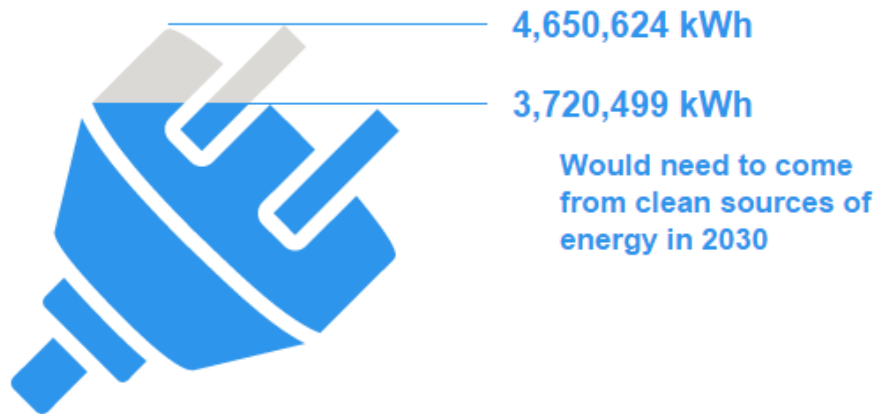


Fuel – Diesel Usage



Clean Energy Resolution

- Convert to 80% clean energy by 2030
- Convert to 100% clean energy by 2050



- Renewable/Alternative Sources
- Energy/Fuel Reduction and Efficiency

Opportunities and Input

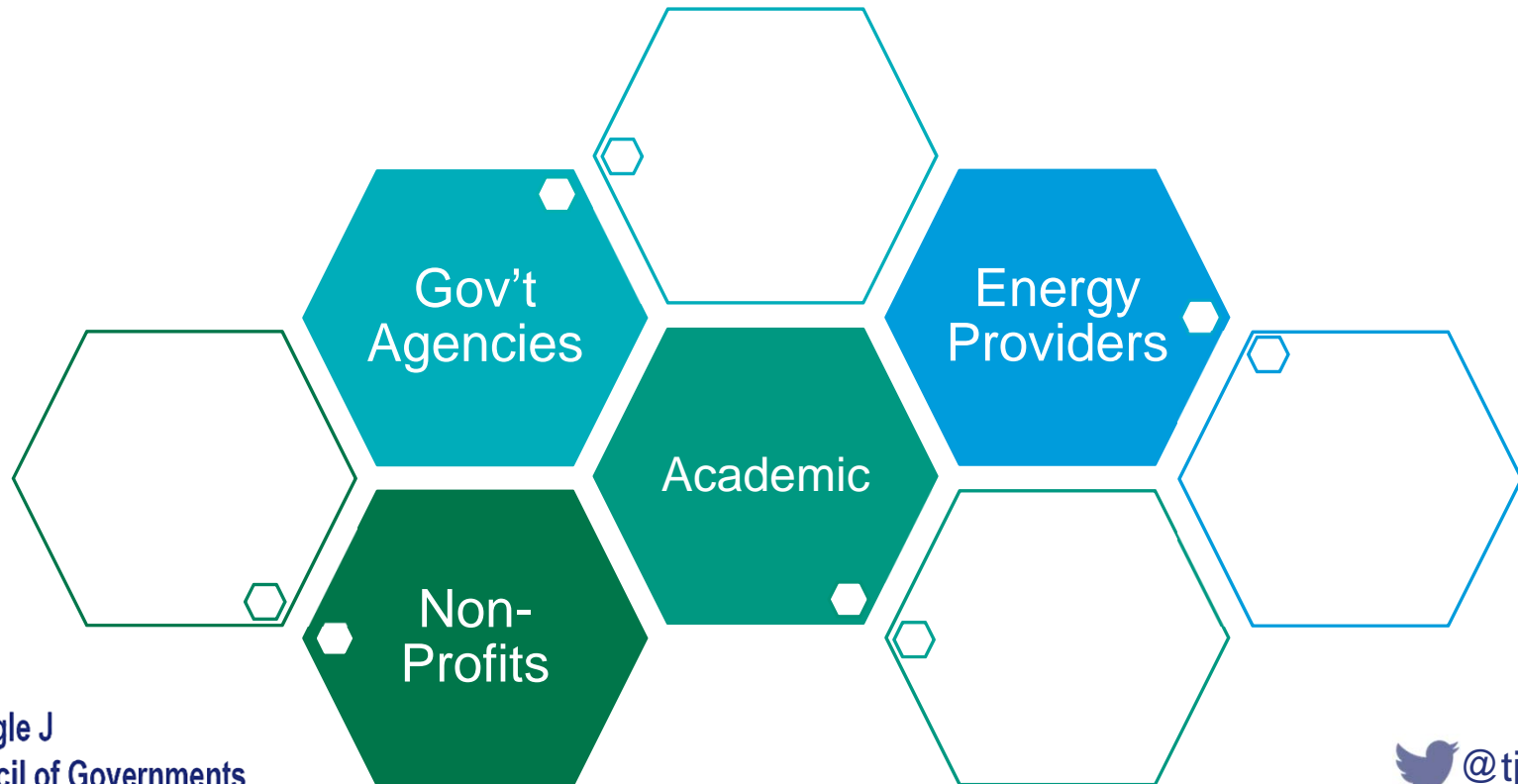
Hillsborough Clean Energy
Resolution

What do you see as “low-hanging fruit” in meeting this commitment?

- Motor efficiency at the water and wastewater treatment plants
- Get in early when new buildings and structures are being built
- Phased-in fleet improvements
- Street lights – efficiency
- Funding opportunities from Duke Energy and other sources
- Renewable installation, supply-side requirements; work with Duke energy in partnership
- Resources needed for water treatment
- Look at large scale users, not just “low-hanging fruit”
- ~80% of energy in the water/wastewater plants go toward pumps
 - Creates an opportunity as moving water can generate energy
 - Harness energy embedded in these processes

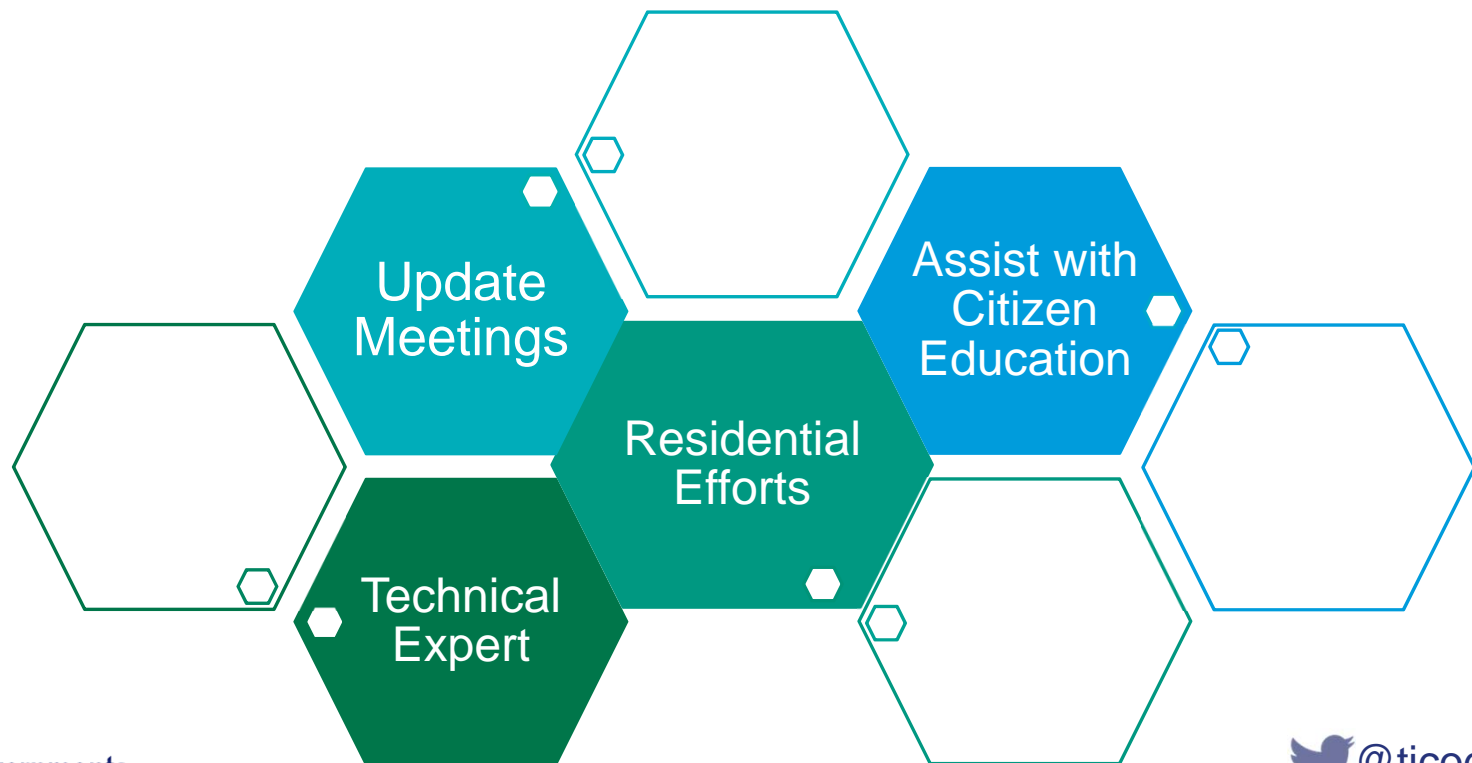
Who should be a partner?

- NC State – Energy Program
- Cooperative purchasing agreements
- No “silver bullet” → obtain lessons learned from other communities working toward this goal or who have already met this goal



How do you want to be involved?

- Treat residents and local businesses as partners (advocacy, support)
- Possible residential and public cooperative agreement in solar
- Involve local solar installers/providers
- Community partnerships, e.g. electric vehicle charging stations
- Accounting/budgeting – help price out options



Contact Us!

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