

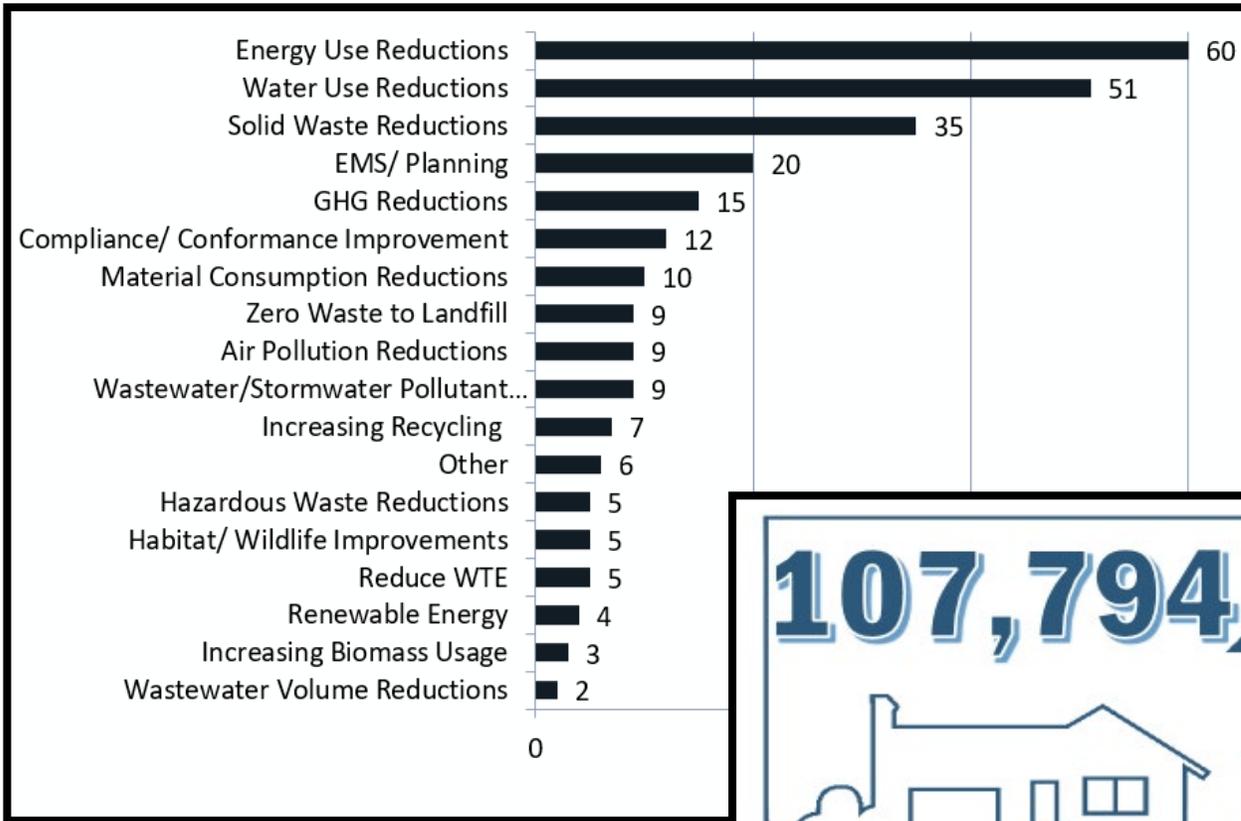


Environmental Stewardship Initiative's New Energy Toolkit

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Why an Energy Toolkit?



- Support member energy goals
- Energy focus of networking and educational offerings since 2019
- Support members' measurement of energy consumption and operating data
- Model after DOE's Diagnostic Equipment Program
- Funded by EPA P2 grant

107,794

Number of North Carolina homes that could be powered for a year by ESI member energy savings in 2020.

ESI Member Goals for 2020



Toolkit Development



Source - DOE Better Plants website

- Recognize members may not have access to necessary equipment
- May want to test equipment before buying
- Identify what we have and what do we need
- Inventoried existing equipment
- New equipment identified with WRP assistance
- Delivery delayed by the pandemic

How do you Request Equipment?

ESI Member

- Complete our Microsoft form or contact coach directly

ESI staff

- Review request vs. what's in stock
- Ask you to complete our legal liability agreement
- Check equipment before loaning and again upon return
- Ask you complete a survey

Serial #	Equipment Name	Equipment Image
1.	Electricity Usage Monitor	
2.	Color LED Light Meter	
3.	Ultrasonic Leak Detector	
4.	Power Quality Clamp-on Meter	
5.	AC Current Probe	
6.	Power Data Logger	
7.	Infrared Camera	

What Equipment Do We Have?

Color LED Light Meter – Extech LT 45

- Measures in foot candle and lux
- Can be used with LED, Fluorescent, halogen and incandescent lights
- Stores and recalls readings

Electricity Usage Meter – Kill A Watt

- Measures voltage, amps, watts, Hz and VA
- Used with plug-in equipment
- Check quality by using voltage, line frequency, and power factor

Infrared Camera – FLIR

- Instant detection of temperature gradients
- More features than IR thermometer



What Equipment Do We Have?

Ultrasonic Leak Detector - Bacharach

- Detects high-pressure leaks and mechanical wear
- Used on compressed air, refrigerant, steam, and gases
- Tanks, pipes, pumps, steam traps, valves wear in bearings and machine parts



Power Data Logger - DENT

- Measures/stores/analyzes electrical consumption data
- Single or 3-phase systems
- Analog inputs for voltage, current, temperature or process control conditions

AC Current Probe - DENT

- Measures electric current flowing through wire, cable, bus bars, or other conductor



What Equipment Do We Have?

Power Quality Clamp-on Meter

- Determine if electrical system is affected by harmonics
- Measures current , voltage, resistance, frequency, temperature, harmonics, power factor and real, reactive and apparent power

Older DEQ Equipment -evaluating viability

- Extech Heavy Duty Light Meter
- Centech IR thermometer
- Fluke Infrared thermometer
- Centech analog sound level meter
- TIF digital probe thermometer/pyrometer



Next Steps

What have we Accomplished?

- Created factsheets for all equipment and ensured we have manuals and instructional videos
- Establishing Check-in and -out procedures
- Established flows in Power automate
- Developed post-use survey

What's Still Outstanding?

- Develop marketing factsheets and add to ESI website
- Train ESI staff - hands-on experience with newer equipment
- Develop case study and areas for improvement
- Determine if we can expand toolkit