



Town of Jackson Energy Efficiency Goals

Summary

In 2006, the Town of Jackson embarked on the 10x10 initiative to reduce energy consumption 10% by 2010. Next, it created the 40x20 program, called *GPS: Guiding and Promoting Sustainability*, with a goal of being 40% more energy efficient by 2020. All but one of the program targets were achieved. While we are well beyond 2020, staff have continued to track energy use and efficiency in alignment with the goals of the GPS program. This document highlights our successes and continued progress towards our energy efficiency goals. In some cases, we continue to make progress; in others, our energy efficiency stagnated after reaching our goal. To continue to progress towards our new goal to be Net Zero by 2030, we will need to set new targets. This will be forthcoming with the new Town Sustainability Plan.

Snapshot of Fiscal Year 2022:

With comparable or improved levels of service,

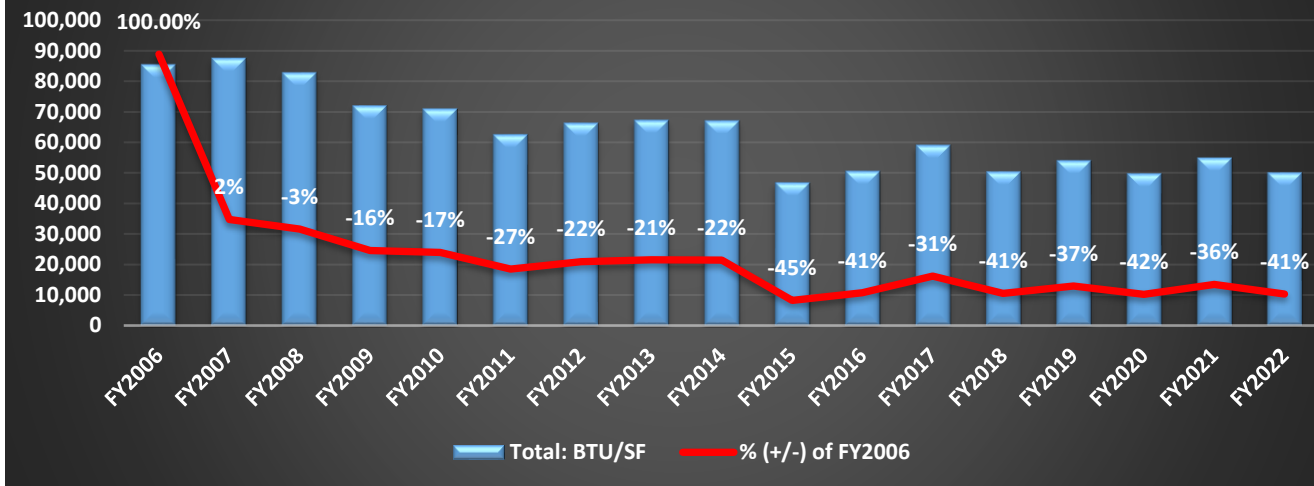
1. We will be 40% more energy efficient with all Town facilities by June 30, 2020 from FY2006 as measured on a square foot basis.

Comparing FY2006 to FY2022, all Town facilities are down 41% Btu/ft.² without using the square footage and energy data from the Parking Garage. As a result, we are **41%** more efficient than we were in FY2006. If we included the Parking Garage, we are **70%** more efficient than we were in FY2006. Most of our increased efficiency in buildings was accomplished by FY2015, and we have remained relatively stable since then. The upcoming building energy audit will help to identify next steps to continue improving energy efficiency in buildings.

*Goal #1 as it relates to our Comprehensive Plan, **Principle 2.4: Increase Energy Efficiency in Buildings:***

- *Policy 2.4.a: Construct energy efficient buildings*
- *Policy 2.4.b: Renovate and reuse existing buildings*
- *Policy 2.4.c: Use and reuse construction material sustainably*
- *Policy 2.4.d: Use energy efficient building systems and appliances*
- *Policy 2.4.e: Encourage smaller buildings*

BTU/Ft.² TOJ Facilities FY06-FY22



2. All Non-START Town vehicles and equipment will be 40% more fuel efficient by June 30, 2020 from FY2006.

Comparing FY2006 to FY2022, all Town vehicles are **60%** more efficient. We continue to improve fuel efficiency by replacing old, inefficient vehicles with more fuel-efficient ones. This progress is largely due to staff prioritizing fuel efficiency in purchasing decisions. A purchasing policy could ensure continuation of this trend.

Diesel = (FY06: 0.70 HPG vs. FY22: .76 HPG). A **10%** increase in efficiency.

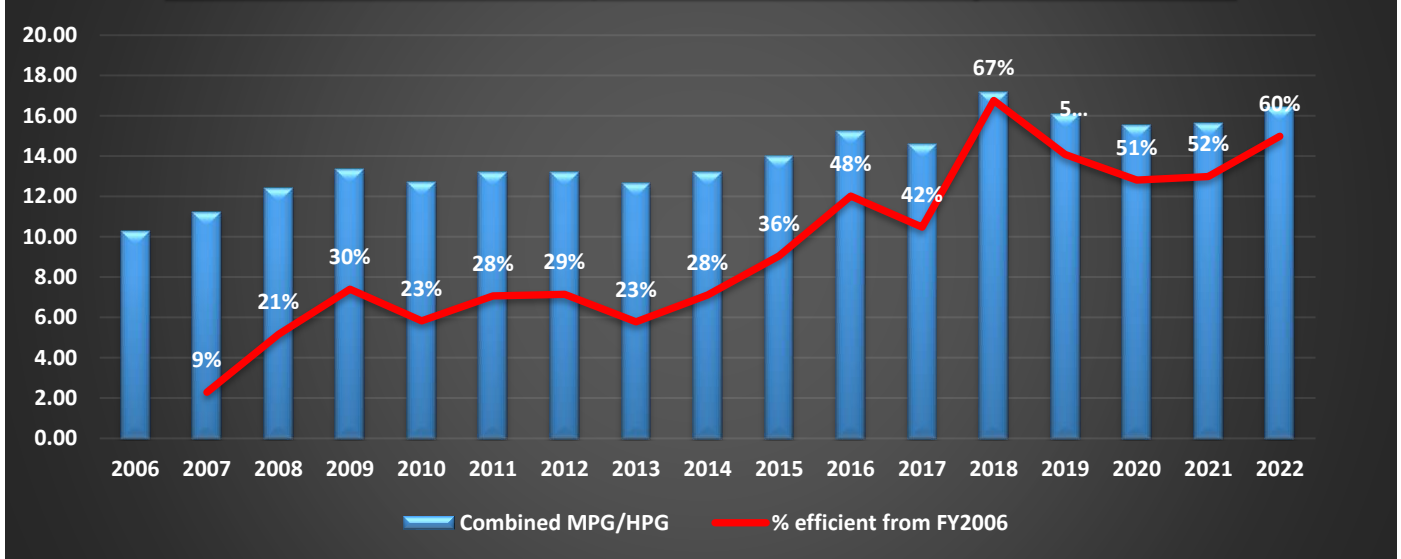
Gas = (FY06: 9.6 MPG vs. FY22: 15.7 MPG). A **64%** increase in efficiency.

Combined Gas & Diesel = (FY06: 10.28 vs. FY22: 16.45). A **60%** increase in efficiency.

*Goal #2 as it relates to our Comprehensive Plan, **Principle 2.1: Reduce Consumption of Non-Renewable Energy and Principle 2.3: Reduce Energy Consumption through Transportation:***

- *Policy 2.3.a: Meet future transportation demand through the use of alternative modes*

Combined Fuels MPG/HPG and Efficiency: FY06-FY22



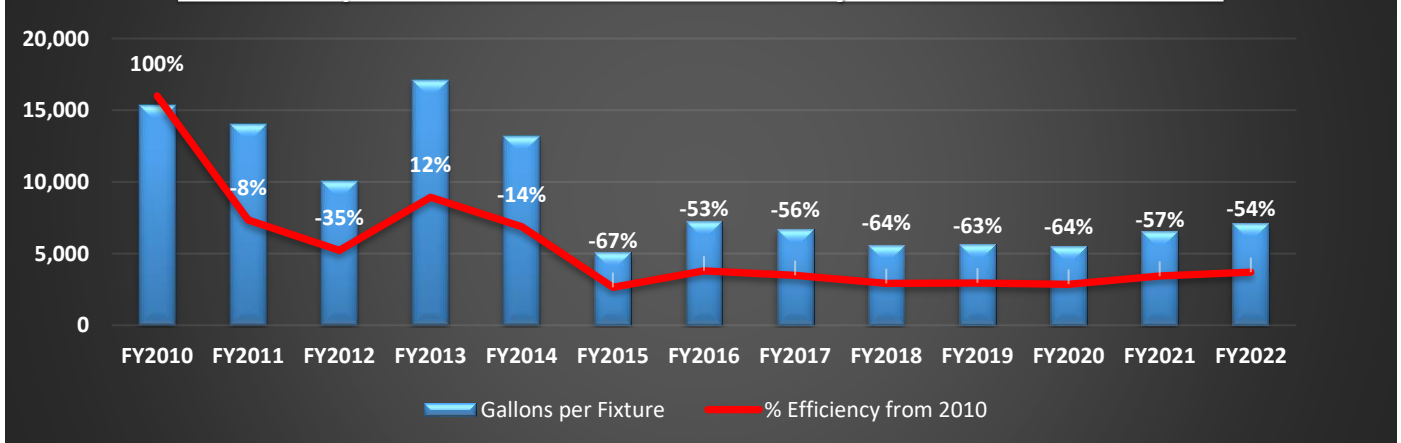
3. We will be 20% more efficient with Town of Jackson water consumption by Town facilities by June 30, 2020 from FY2010.

Since this goal was not included in the 10 x 10 Initiative, our baseline year starts in FY2010. Comparing FY2010 to FY2022, our facilities increased our water usage efficiency by **54%**. Great improvements were made prior to FY2015. Since then, our efficiency with water consumption has held steady or decreased. The upcoming energy audit may uncover additional ways to improve water conservation in Town facilities.

*Goal #3 as it relates to our Comprehensive Plan, **Principle 2.5: Conserve Energy through Waste Management and Water Conservation:***

- *Policy 2.5.a: Encourage water conservation*

Gallons per Fixture and Efficiency: FY2010 - FY2022

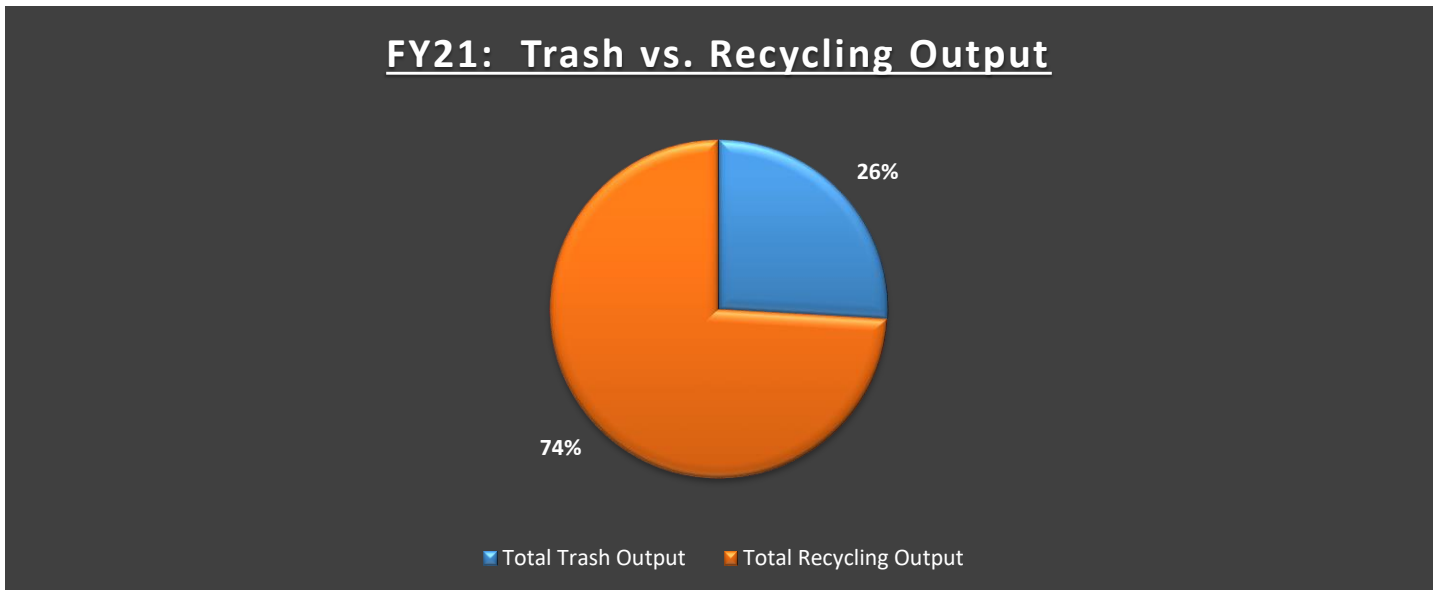


4. We will divert 50% of our waste stream by June 30, 2020.

There is no baseline associated with this goal, therefore, we track our success every fiscal year. Many Town departments continue to work together to meet this goal. For FY2022, we show a **71%** diversion rate. We have held relatively steady with a waste diversion rate above 70% for several years. We may be close to the maximum diversion rate we can achieve without either changing purchasing habits or adding additional materials to those we divert.

*Goal #4 as it relates to our Comprehensive Plan, **Principle 2.5: Conserve Energy through Waste Management and Water Conservation:***

- *Policy 2.5.b: Manage our waste stream for sustainability*

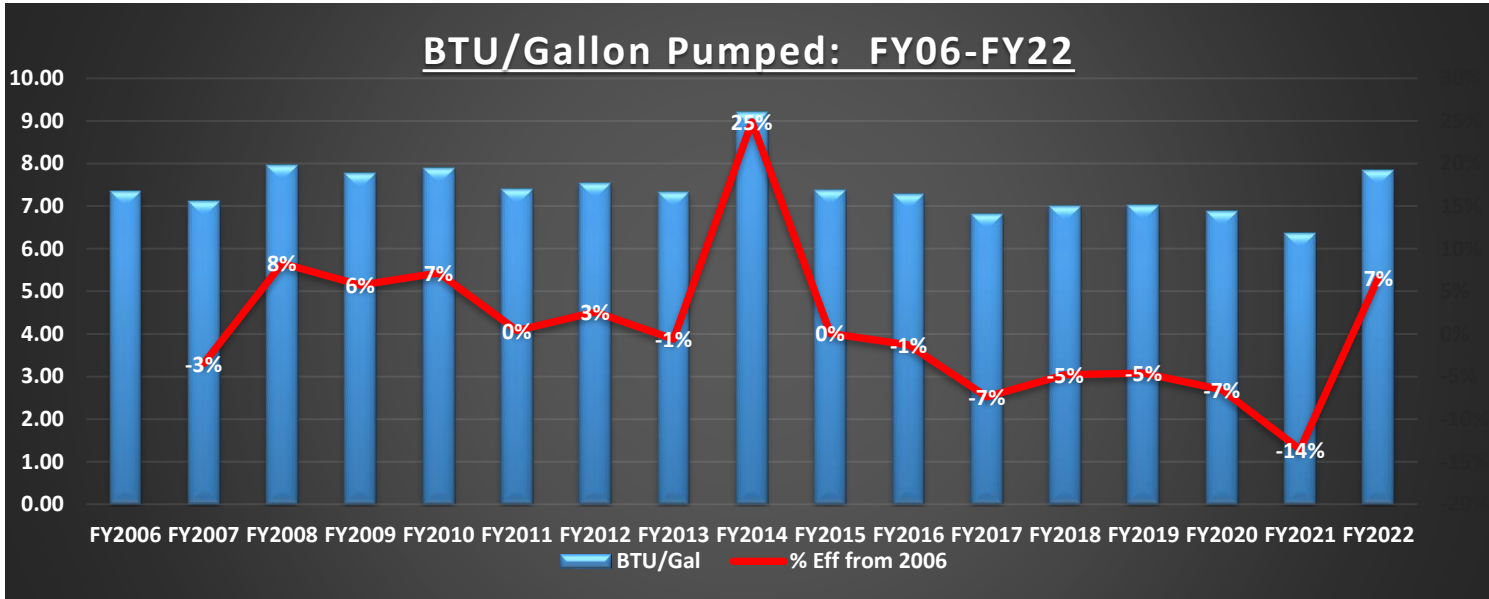


5. We will be 20% more energy efficient in producing water for our service area by June 30, 2020 from FY2010.

Comparing FY2006 to FY2022, we are **7%** less efficient pumping a gallon of water. We have a lot of work to do if we are going to achieve any reduction in BTU's per gallon of water pumped. Technological solutions may not be practical at many wells. We may want to consider if we could achieve greater energy savings for a lower cost by focusing resources on other conservation goals.

*Goal #5 as it relates to our Comprehensive Plan, **Principle 2.4: Increase Energy Efficiency in Buildings and Principle 2.5: Conserve Energy through Waste Management and Water Conservation:***

- *Policy 2.4.b: Renovate and reuse existing buildings*
- *Policy 2.4.d: Use energy efficient building systems and appliances*
- *Policy 2.5.a: Encourage water conservation*

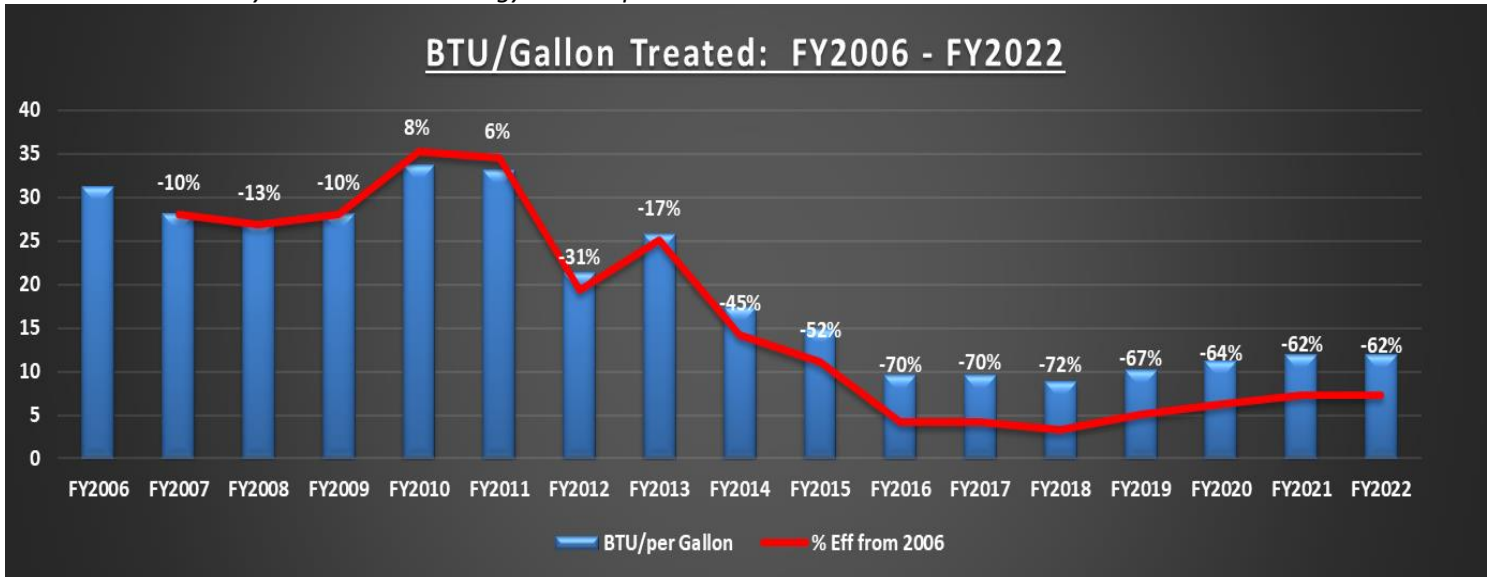


6. We will be 40% more energy efficient per gallon of wastewater treated and discharged through our Wastewater Treatment Plant by June 30, 2020 from FY2006.

Comparing FY2006 to FY2022, the Sewer Division is **62%** more efficient treating a gallon of water before discharge into the Snake River, while meeting and exceeding our permit with the state DEQ and EPA. The Treatment Plant was 70% more efficient between FY2016 and FY2018, and efficiency has decreased slightly since then.

*Goal #6 as it relates to our Comprehensive Plan, **Principle 2.5: Conserve Energy through Waste Management and Water Conservation:***

- *Policy 2.5.c: Reduce energy consumption in wastewater treatment*



7. We will maintain 100% of the electrical energy used for Town operations from renewable energy sources.

In a unique partnership with Lower Valley Energy, the Town purchased all of our electrical energy needed to operate 100% of our operations in FY2022 through Lower Valley Energy’s Green Power program, which supports renewable energy projects in our region, including a certified hydro-electric plant in Etna, Wyoming on Strawberry Creek.

*Goal #7 as it relates to our Comprehensive Plan, **Principle 2.1: Reduce Consumption of Non-Renewable Energy:***

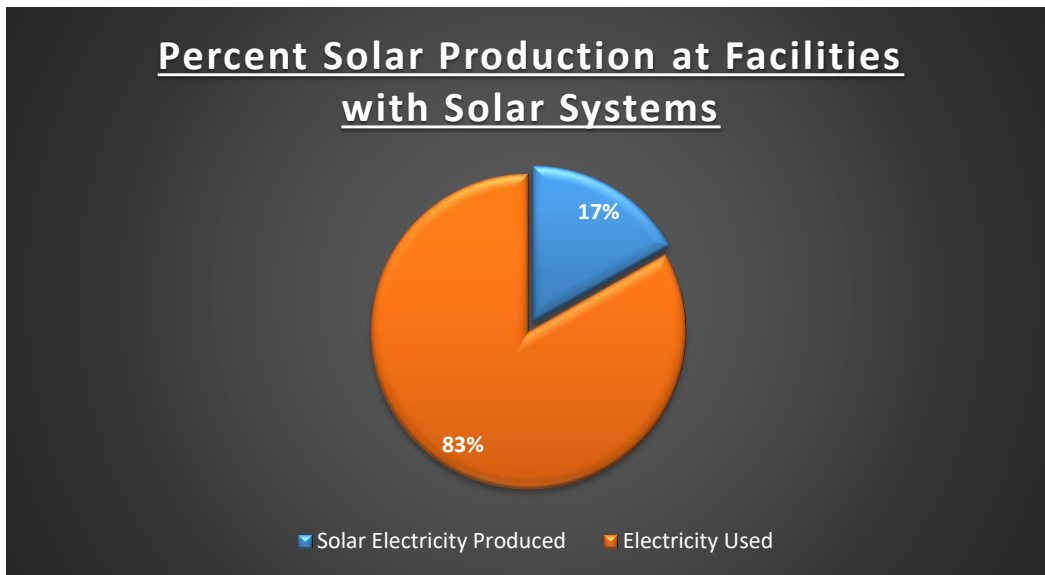
- *Policy 2.1.a: Shift community energy consumption behavior*
- *Policy 2.1.c: Increase local use and generation of renewable energy*
- *Policy 2.1.d: Allow and encourage onsite renewable energy generation*

7(a). Solar Production

Though the GPS program does not have a specific goal related to solar energy production, it is an important component of the Town’s Net Zero by 2030 Resolution. Currently, the Town of Jackson owns and operates 1,016 kW of solar farms located both on roof mounts and ground mounting systems. Over the course of FY2022, our PV systems produced **1,084,097** kWh’s of energy which is enough electricity to power **72** Jackson homes for a year. The Town’s solar energy installations provided about 17% of our total electricity use in FY22.

*Goal #7(a) as it relates to our Comprehensive Plan, **Principle 2.1: Reduce Consumption of Non-Renewable Energy:***

- *Policy 2.1.c: Increase local use and generation of renewable energy*
- *Policy 2.1.d: Allow and encourage onsite renewable energy generation*



7(b). Avoided Energy Costs

Though we do not have a goal associated with avoided energy costs, it provides additional perspective on our energy efficiency goals. From our FY06 baseline year to FY22, we have avoided **\$2,867,800** in energy costs related to fuel, electricity, natural gas, and propane usage.

Annual Avoided Energy Costs: FY2006 - FY2022



7(c). Avoided Tons of CO2

Carbon offsets based on energy efficiency rely on technical upgrades to reduce energy consumption, renewable energy from displaced energy production, and therefore, reductions in CO2 emissions. Again, the GPS program did not have a goal associated with tons of CO2 avoided, but it is important for the Town’s Net Zero by 2030 resolution. Compared to our baseline year (FY06), the Town has avoided the emission of **4,098** tons of CO2 related to fuel, natural gas, and propane usage. To achieve Net Zero, the Town of Jackson will need to further reduce energy consumption from transportation, buildings, water production, wastewater treatment and trash while increasing the proportion of transportation and energy fueled by renewable sources. We have proven that we can accomplish big goals to reduce emissions; achieving Net Zero will require even greater dedication and innovation.

Annual Avoided Tons of CO2: FY06 - FY22

