



# 2023 Sustainability Progress Report

Building a better tomorrow | September 2024



Art lines the pedestrian bridge at Overlake Village Station.



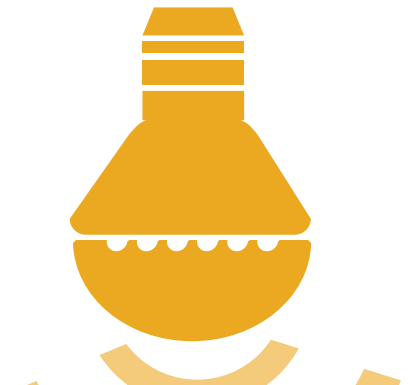
# At a glance

AGENCY  
**WATER USE**  
is down  
**16%** since 2018

AVOIDED  
EMITTING OVER  
**216K**  
TONS OF  
greenhouse gases  
WHEN PASSENGERS  
TAKE TRANSIT

SAVED NEARLY  
**\$1M**  
ANNUALLY FROM  
**56** ongoing resource  
efficiency projects

  
**Staff who have**  
earned sustainable  
professional accreditations:  
**48** *Envision  
Sustainability  
Professionals.*

Renovated  
Union Station to  
  
OPERATE AS A  
FOSSIL FUEL FREE FACILITY

GREENHOUSE GAS  
EMISSIONS  
**31%**  
reduction  


**1,263**  
staff trained in  
  
**Safety Management  
System**

DIVERTED  
**70%**  
of waste  
IN AGENCY  
HEADQUARTERS  
BUILDINGS  




# Sustainability

## Sustainability at Sound Transit

**Sustainability is at the core of our mission: connecting more people to more places to make life better and create equitable opportunities for all.** Investing in transit builds a better future by supporting a clean environment, connecting communities, and fostering vibrant economies. Sound Transit supports regional sustainability by serving the riders who depend on transit the most.

Sustainability helps further our mission by:

- Providing affordable, safe regional transportation options.
- Promoting stewardship that conserves the planet's natural environment.
- Supporting community prosperity by helping residents and businesses save time and money.

Sound Transit uses a robust Environment and Sustainability Management System to guide our environmental and sustainability initiatives. The system holds the agency accountable for controlling potential environmental impacts, achieving annual environmental and sustainability targets, and demonstrating continual improvement in performance.

Since 2007, Sound Transit's ESMS has maintained international ISO 14001 certification for accountability in controlling environmental impacts, maintaining environmental compliance, and demonstrating enhanced sustainability performance.

## About this report

**This year's Annual Progress Report summarizes our efforts to achieve long- and short-term environmental and sustainability goals.**

Analysis and performance measures in this report focus on how Sound Transit uses its resources — including through capital project planning and design — and how we operate our services. (This report does not include resource use from agency construction.)

The data in this report focuses on the metrics set by Sound Transit's Sustainability Plan, which established short-term goals for the years 2019 through 2024 and extended the agency's long-term goals to 2050. The year 2018 serves as the baseline for the agency's short-term goals and key performance indicators.

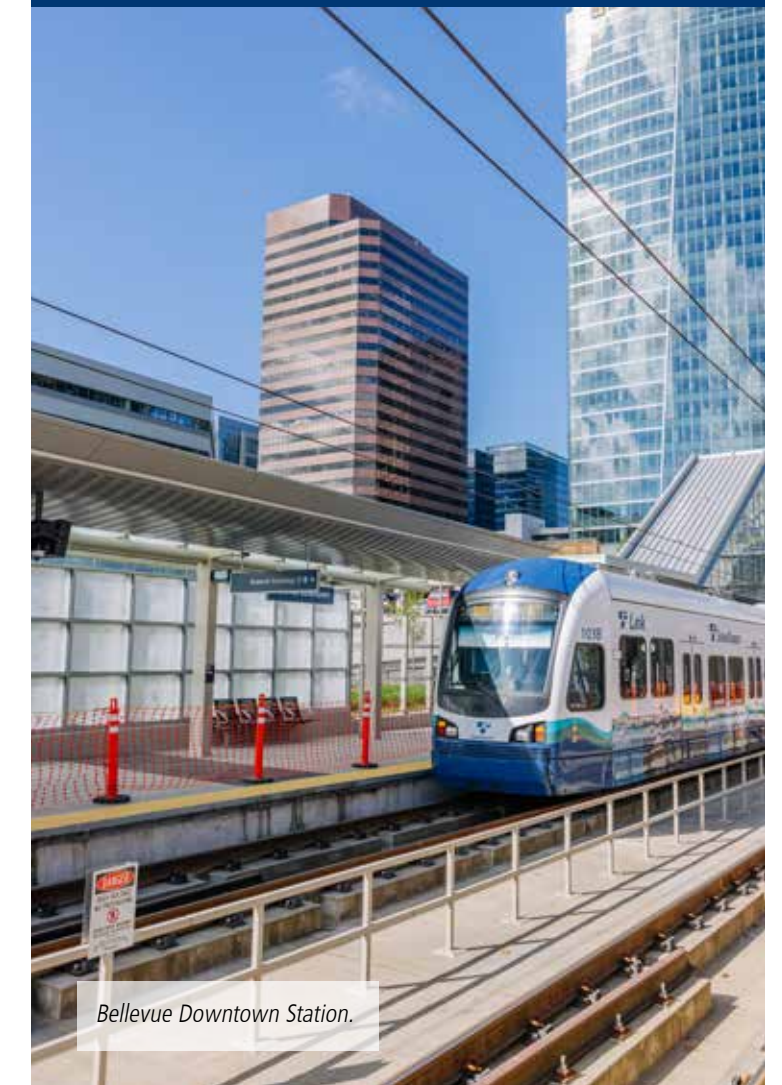
These metrics reflect multiple reporting frameworks and standards, including those used by other transit agencies and local governments, as well as the American Public Transportation Association's Sustainability Commitment and The Climate Registry.

Investing in transit builds a better future by supporting a clean environment, connecting communities, and fostering vibrant economies.



14001:2015

Sustainable business practices and strategies will be integrated throughout the Sound Transit organization, including planning, designing, constructing, and operating existing and new transit systems and facilities. Executive Order No. 1, 2007.







Construction worker at the Bellevue Downtown Station.

# Transit is sustainable

**Sound Transit's regional system expansion is essential to Central Puget Sound's sustainable future.** The agency promotes sustainability by developing and operating regional transit and fostering smart growth.

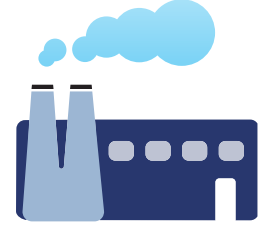
Capital expansion will help more people travel affordably and reliably on environmentally friendly buses and trains throughout the region's growing communities. Expanding mass transit services benefits everyone by offering a less carbon-intensive means of travel, which decreases regional air and water pollution. Plus, transit also:



**SAVES TIME.**



**SAVES FUEL.**



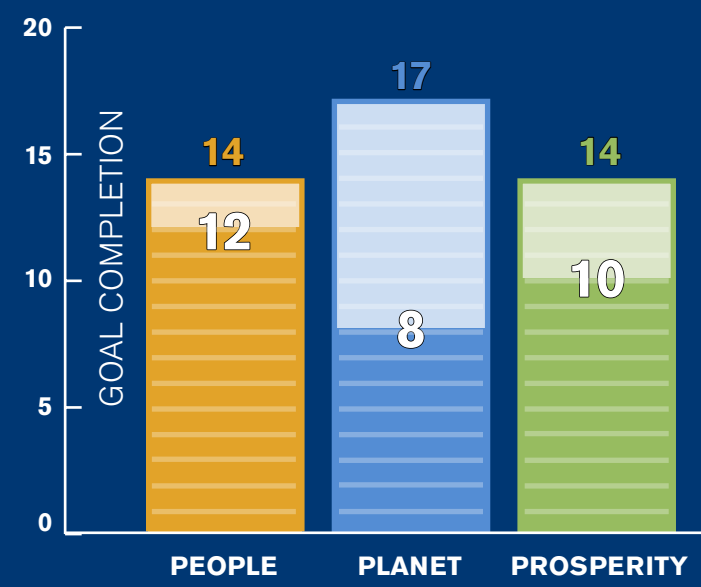
**IMPROVES AIR QUALITY.**



**SAVES MONEY.**



Sound Transit's Security Operation Center



## Progress toward the Sustainability Plan

This report includes both data on Sound Transit's operational performance from a resource-use perspective and progress on short-term goals in the Sustainability Plan. As of 2023, Sound Transit has completed 30 of the plan's 45 short-term goals, and we're on track to complete the majority of these by 2024.

**# TOTAL** **# COMPLETED**

## Key accomplishments

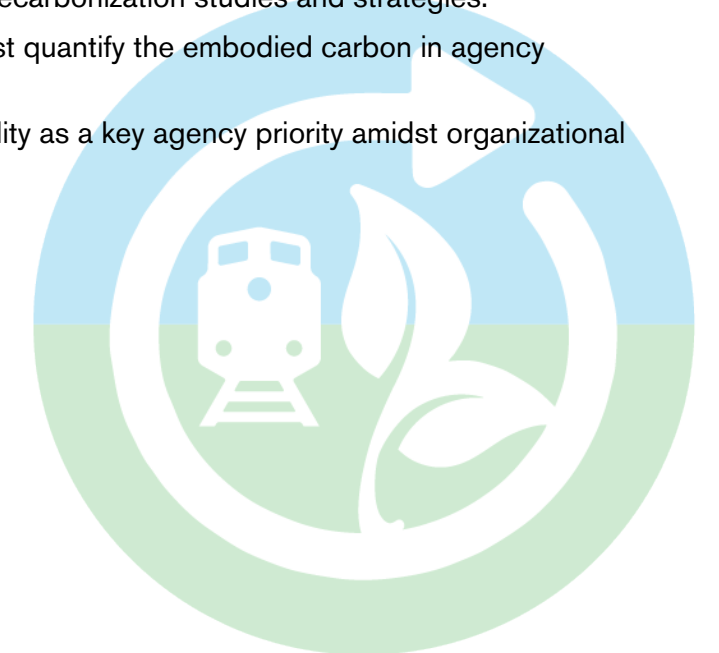
The agency achieved a number of important sustainability accomplishments over the last year that leverage social, environmental, and financial benefits for the region's future. In 2023, we:

- Participated in Washington's Clean Fuel Standard and earned nearly \$1 million in revenue for providing clean transportation from electricity and alternative fuels.
- Returned to nearly pre-pandemic levels of energy efficiency in the agency's revenue service.
- Avoided emitting over 216,000 tons of greenhouse gas emissions when passengers took transit instead of driving. The emissions avoided is nearly five times the agency's total emissions from providing service. This is 12% more emissions avoided than in 2022.
- Saved nearly \$1M from 56 new and existing sustainability and resource efficiency projects.
- Began using renewable diesel in agency bus fleets, reducing life cycle carbon emissions.

## Continual improvement

Sound Transit is committed to improving sustainability performance year after year. In the next year, sustainability efforts will be focused on:

- Expanding the use of renewable diesel in more of Sound Transit's diesel fuel sources.
- Implementing fleet decarbonization studies and strategies.
- Exploring how to best quantify the embodied carbon in agency activities.
- Retaining sustainability as a key agency priority amidst organizational change.





# People

Helping people move freely, affordably, and healthily by providing regional transit service



Capitol Hill Station, Transit Oriented Development

## Supporting affordable housing

Sound Transit is committed to creating diverse, vibrant, and mixed-income communities around transit. Offering surplus properties as development opportunities for affordable housing or other benefits for the public are managed through the agency's Transit-Oriented Development (TOD) program. Some highlights from the TOD program in 2023:



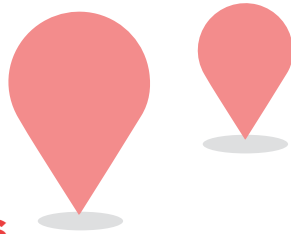
Opened **486** homes

Began construction on



**266k** square feet, or 135 homes.

Awarded **2** sites to developers



- Overlake Village Station awarded to Bellweather Housing.
- Kent/Des Moines Station, North Site awarded to Mercy Housing NW and Open Doors for Multicultural Families.



**\$3.9 M** in grants awarded for TOD

- \$1.75 M for joint development planning.
- \$1.85 M Lynnwood City Center Station grant.
- \$400 K for U District.



Wilburton Station

## Key performance indicators

**Dollars contributed to affordable housing revolving loan fund:**  
\$4 million.

**Staff trained in equity and inclusion:**  
97% of staff completed Equal Employment Opportunity Training.  
74% of staff completed Implicit Bias Training.  
51% of staff completed Inclusion Training.  
14% of staff completed Microaggressions in the Workplace Training.

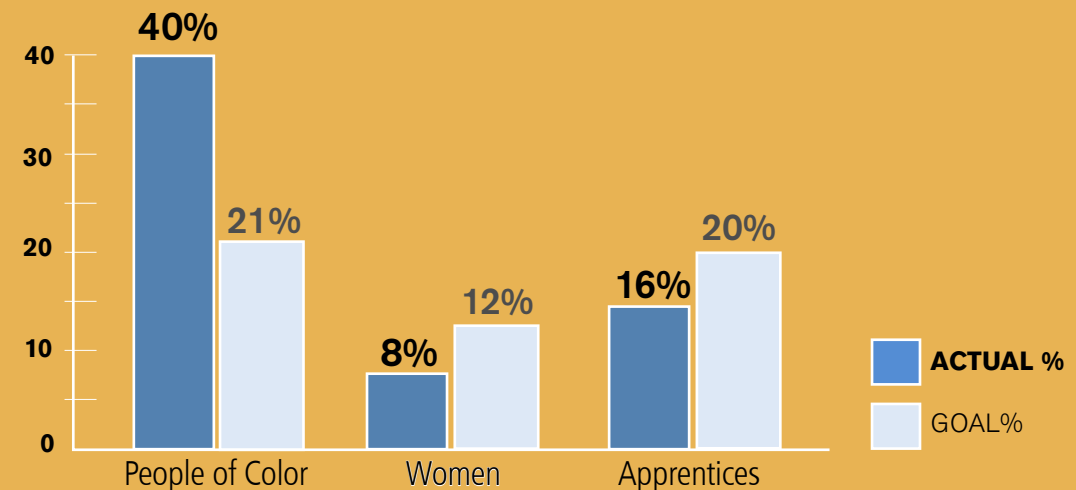
**Total hours worked on ST job sites in 2023:**  
40% by people of color.  
8% by women.  
16% by apprentices.

**Staff who have earned sustainable professional accreditations:**  
48 Envision Sustainability Professionals.  
12 LEED Accredited Professionals.  
12 other sustainability certifications.

## Employing Puget Sound residents

Sound Transit's capital expansion projects bring construction employment opportunities to communities across the Puget Sound region.

In 2023, Sound Transit's construction projects directly employed more than 10,220 people who worked 3.6 million hours and earned \$199 million in wages.





# People

## Social equity addressed and implemented as an agency value



Testing trains in Lynnwood

## Daylighting a stream, enabling affordable housing

**Sound Transit secured Federal Highway Administration funding for stream restoration at the Lynnwood City Center TOD site, which would enable nonprofit organizations to finance affordable housing on the property.** Without the agency's support for the environmental work, nonprofit developers would not have been able to finance the project for affordable housing. Housing Hope, a Snohomish County-based nonprofit, was selected as the development partner with a proposal for 167 units of affordable housing across two buildings and low-cost medical, dental, and behavioral health services. Housing Hope also plans to operate a childcare center and a public café for community members, whether or not they can pay. The café will also double as a job-training program. The restored stream runs through the site's two buildings and will result in over 1,000 feet of open channel to support fish passage in the immediate station area. The area will include public walking trails, pedestrian bridges, and public plaza space. The stream design also provides valuable green space for residents, light rail passengers, and the on-site childcare facility.

## All staff champion sustainability

### Training for green procurement

**Sound Transit is committed to using the power of procurement to ensure the purchase of as many environmentally preferable products as possible.** The agency implements a Green Procurement Program to guide staff through this selection process. Staff can evaluate each procurement made at the agency for greener options using one or more tools including sustainability evaluation criteria, a life cycle cost assessment, green design criteria, or sustainability standards and certifications. In 2023, procurement staff at the agency held a training on how to apply green procurement methods.

## Becoming an anti-racist organization

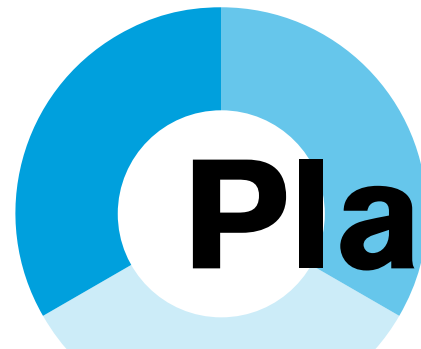
**Sound Transit held its third Equity Summit over two days in fall 2023.** All staff were encouraged to attend the event to support the agency's journey to becoming an anti-racist organization. Centered around the theme "It Starts with Us," the summit focused on the intersection of transit and equity. The event provided practical strategies for advancing equity in the workplace, specifically in public transportation services, and offered participants the skills and knowledge to effectively navigate equity challenges. Over 450 registered attendees joined interactive sessions led by agency, local, and nationally recognized speakers. Participants engaged in sessions such as "Allyship in Action" and "Fostering Belonging in the Workplace" and learned about how other transit agencies, such as LA Metro, are working to embed equity into their planning practices.



All staff were encouraged to attend the 2023 Equity Summit to support the agency's journey to becoming an anti-racist organization.

All-staff gathering, June 2023





# Planet *Promoting stewardship to conserve the planet's natural environment*

## Increasing environmental benefits

**Sound Transit and our partner services provide tangible environmental benefits for the region's growing communities.** For example, when residents choose transit instead of driving alone, they reduce air and water pollution.

Passengers taking Sound Transit services avoided over 216,000 tons of greenhouse gas emissions annually. This represents a 12% increase in avoided emissions since 2022, illustrating a ridership rebound. In 2023, Sound Transit avoided nearly five times the amount of emissions it produced. The avoided emissions are equivalent to:

### The avoided emissions are equivalent to:



Burning over 21 million gallons of gasoline.

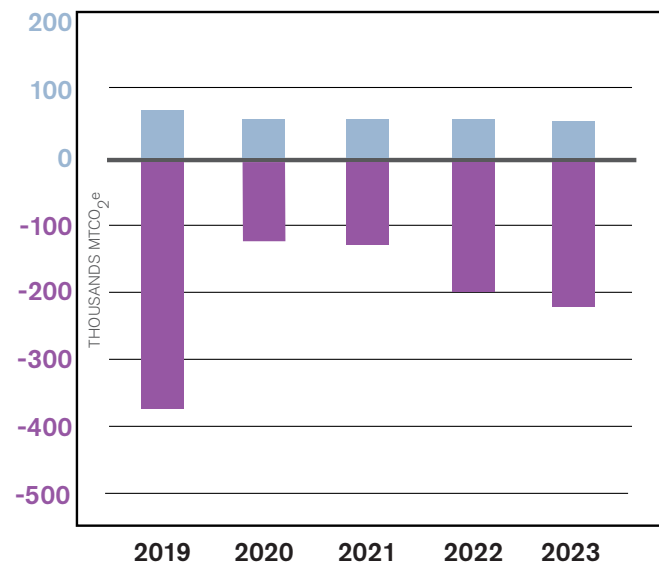
Providing electricity for nearly 43,000 homes for a year.

The carbon captured by growing over three and a half million tree seedlings for 10 years.

### Greenhouse gas emissions

Every year the benefits of Sound Transit's service far exceeds the emissions associated with operating that service.

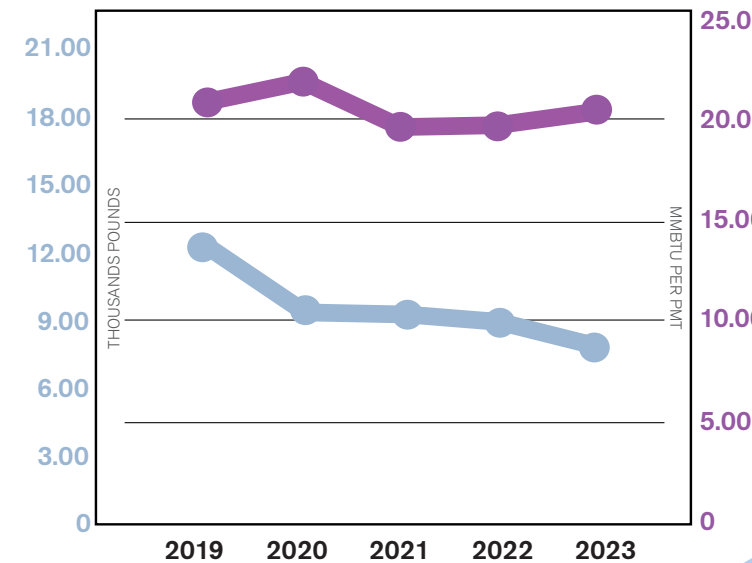
Agency emissions from operations  
Regional emissions avoided when residents take transit



### Reducing air pollution

Updates to Sounder engines and phasing out older ST Express diesel buses have reduced Sound Transit's PM10.

PM10  
Carbon monoxide



Aerial of Silver Lake

## Key performance indicators

### Greenhouse gas emissions:

31% reduction.

### Criteria air pollutants:

Particulate matter: 30% decrease.

Volatile organic compounds: 28% decrease.

Nitrogen oxides: 11% decrease.

Carbon monoxides: 5% increase.

Sulfur oxides: 15% decrease.

### kWh renewable energy production:

172,730 kWh produced in 2023.

231 KW solar generating capacity.

### Energy used in facilities built before 2018:

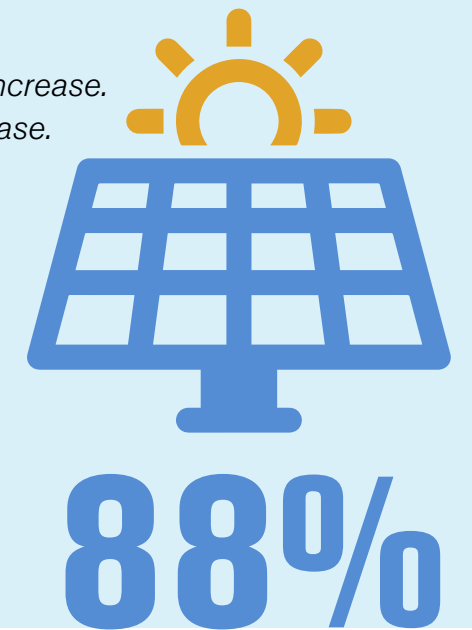
0% reduction.

### Number of fineable environmental compliance violations:

0 violations in 2023.

### Agency water use:

16% decrease.



88% of Sound Transit's electricity comes from renewable sources.





## Enhance ecosystem functions

### Reducing agency water use

**Sound Transit is committed to reducing the agency’s natural resource consumption.** As part of that effort, the agency is exploring ways to make landscaping less water-dependent. In 2023, the agency installed water reduction technologies at seven sites. These technologies included mechanisms like high-efficiency nozzles, flow sensors, smart controllers, and replanting with drought-tolerant shrubs. Agency water use is down 16% since 2018.

### Quantifying ecosystems services

**“Ecosystem services” refers to the various physical materials and food that humans derive from the natural environment such like timber, water, fish, and soil, as well as benefits like recreation, water purification, and flood management.** Sound Transit is undertaking a multi-year effort to prioritize restoration and maintenance activities based on the ecosystem services provided and to communicate and educate the public on the full benefits of the agency’s environmental mitigation and conservation efforts.

In 2023, the agency assessed three pilot sites to determine ecosystem services across six metrics: carbon storage, flood management, pollination, sense of place, social equity, and space for wildlife. In future phases, the agency will expand this assessment to all Sound Transit restoration sites to better understand and improve ecosystem services provided to the communities we serve.

## Achieve carbon-free operations

### Diversifying the agency’s fuel mix

**In late 2023, Sound Transit partnered with Pierce Transit to begin fueling buses at Lakewood Base with renewable diesel.** As the agency develops zero-emissions fleets, renewable diesel offers an interim solution to improve air quality and greenhouse gas emissions. Renewable diesel is chemically identical to petroleum but contains hardly any fossil fuels — it’s made from renewable and sustainable resources such as natural fats, vegetable oils, and grease. Renewable diesel contains 65% less carbon content and burns cleaner, showing significant reductions in sulfur dioxide emissions. The agency will be looking for more places to implement renewable diesel, such as emergency backup generators.



Renewable diesel contains 65% less carbon content and burns cleaner, showing significant reductions in sulfur dioxide emissions.



As of 2023, with the boiler replacement project completed, Union Station operates as a fossil-fuel – free facility.





# Prosperity

Supporting local economic prosperity by helping residents and businesses to save time and money

## Saving taxpayer dollars

**Sound Transit invests in sustainability, and sustainability pays us back.** Over the past 10+ years, the agency has invested in many projects that save natural resources and money. These projects include operational improvements, such as using electric wayside power units on Sounder trains to reduce the idling of diesel engines and upgrading inefficient lighting to LEDs. This sample of the agency's resource conservation projects saved Sound Transit nearly \$1,000,000 in 2023 alone and over \$8.5 million over project lifetimes.



**\$637K** Fleet upgrade projects  
**\$46K** Irrigation projects  
**\$48K** Facilities upgrade projects  
**\$13K** Solar installations  
**\$243K** LED lighting upgrade projects

	2023 savings	Savings to date
Fleet upgrade projects	\$637,092	\$6,308,771
Irrigation projects	\$46,144	\$442,343
Facilities upgrade projects	\$47,925	\$303,459
Solar installations	\$12,770	\$71,644
LED lighting upgrade projects	\$243,073	\$1,418,081

Refer to Appendix B for more details on sustainability cost savings.

## Key performance indicators

### Staff trained in emergency preparedness:

254 staff participated in core safety training.  
 62 staff attended safety lunch and learns.  
 127 staff trained in a non-revenue vehicle safe driving course.  
 116 staff certified in First Aid/CPR/AED.

44 staff trained in Stop The Bleed.

45 staff trained in De-Escalation/Personal Safety.  
 1,263 staff trained in Safety Management Systems.

### Projects that include Climate Change Vulnerability Assessments:

100% of eligible projects.

### Waste diverted

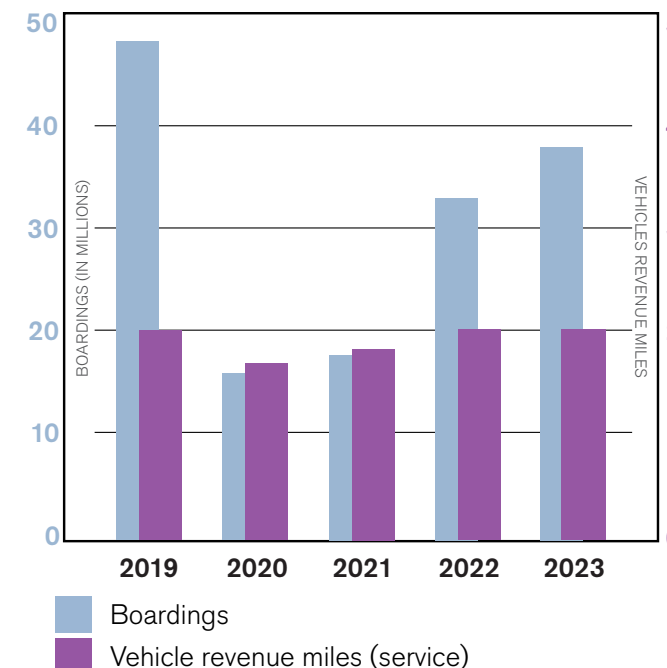
39%.

### Percentage of and increase in dollar value of green procurements:

19% of procurements included green methods, a 58% increase in green procurements dollar value from 2018.

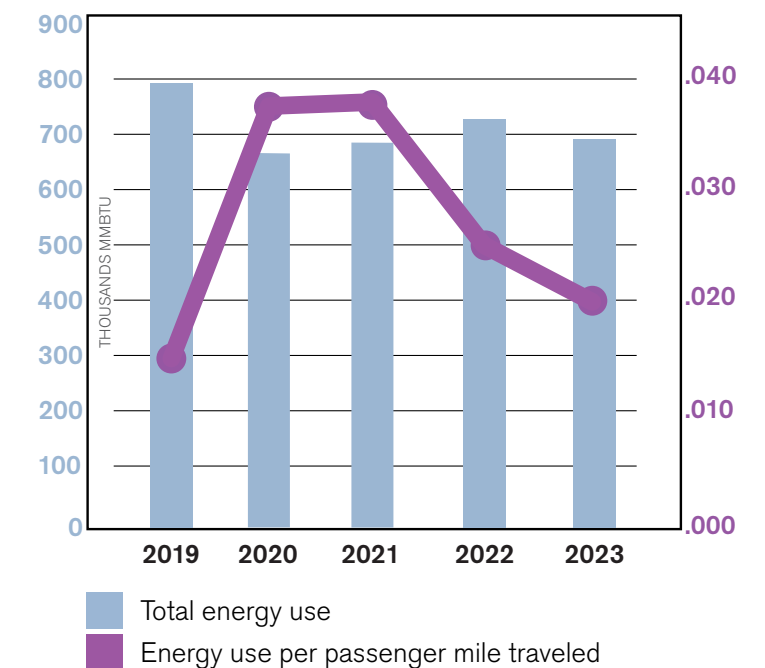
## Boardings and service

Sound Transit carried more passengers per services levels ever year.



## Revenue fleet energy use

All services continued to operate efficiency by carrying passengers further while using fuel more efficiently





# Prosperity

## Build resilience to climate change and natural or humanmade disasters

### Incorporating effects of climate change into asset management

Sound Transit's existing assets were designed and planned for replacement assuming historic and present climate patterns. The T Line Modal Asset Management Plan (MAMP) is a roadmap for T Line assets across their lifecycle to ensure Sound Transit is doing *the right amount of work*, at the *right time*, to achieve the *right levels of service*, for the *right cost*. In an innovative pilot, the MAMP also identified how projected climate changes would affect asset management. The vulnerabilities that pose the greatest risk to the system were found to include more extreme heat, flooding, sea level rise, and landslides. The agency's future adaptation planning work will continue to address these vulnerabilities and ensure a resilient system.

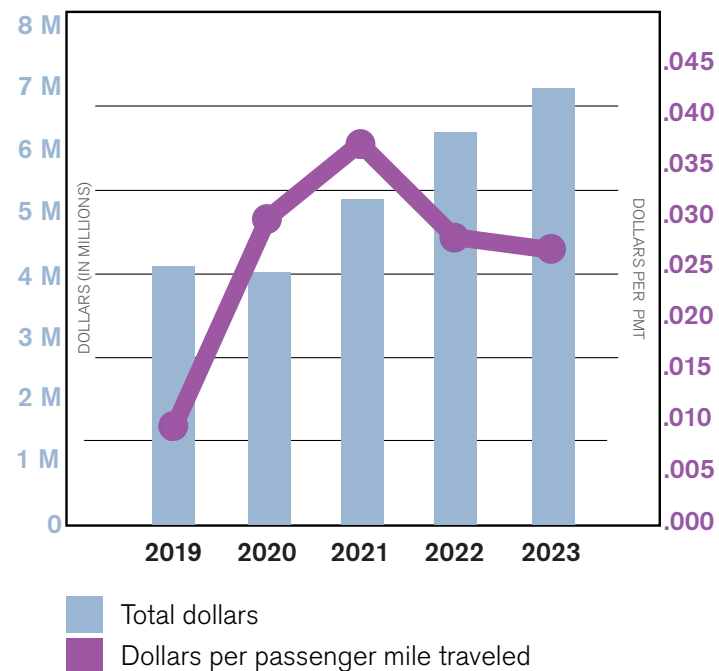
### Waste diversion

Sound Transit continues to maintain a high waste diversion rate in our office buildings and is exploring ways to increase waste diversion from service operations.



### Utility costs

Sound Transit is a growing agency, but has been able to keep costs per level of service relatively steady.



## Maximize operational efficiency

### Generating revenue by providing electric transit

Washington's Clean Fuels Standard came into effect at the beginning of 2023. This market-based policy is designed to reduce greenhouse gas emissions from the state's transportation fuels by 20% by 2034. This marketplace rewards public and private entities that invest in new, clean transportation infrastructure and vehicles through the sale and purchase of clean fuel credits. In the program's first year, Sound Transit generated just under \$1M in revenue from clean fuel credits, driven by the agency's growing electrified low-carbon light rail operations. Moving forward, Sound Transit expects to grow its revenue through light rail expansion; the opening of its first all-electric bus service, Stride BRT; and electric vehicle charging. The legislation intends for beneficiaries to reinvest revenue into further electrification and clean fuels efforts, such as the agency's efforts to fully transitioning the ST Express and Sounder fleets away from diesel propulsion to alternative sources.





# 2023 Sustainability Targets

Sound Transit Year in Review

## People

- Identify resources and partnership opportunities to restore a stream on Sound Transit's transit-oriented development property next to Lynnwood Transit Center.
- Support a minimum of five staff in earning new LEED and Envision credentials.\*
- Enhance employee wellness benefits with expanded support for mental and physical health.
- Launch Talent Guard, career path, succession management and employee career profile initiatives.

## Planet

- Create a sustainability dashboard to track operational greenhouse gas emissions.
- Purchase first battery electric truck for the agency's non-revenue vehicle fleet.
- Begin bus procurement for Stride, the agency's first battery electric bus fleet.
- Generate revenue from electric transit service under Washington state's Clean Fuel Standard.
- Design Stride's Bus Base North to operate as a fossil fuel-free facility.
- Conduct zero-emission locomotive feasibility study for Sounder rail service.\*
- Identify and evaluate ecosystem services on a representative Sound Transit project.
- Begin water use reduction feasibility study by reviewing landscape standards that are less water dependent.
- Initiate LEED Platinum and Fitwel feasibility studies for the West Seattle and Ballard Link Extensions & Operations and Maintenance Facility South.
- Update environmental commitment tracking system tools for improved efficiency and effectiveness.\*
- Implement the Preliminary Environmental Site Assessment for due diligence studies on the West Seattle and Ballard Link Extensions and Everett Link Extension.
- Review and revise Environmental Corrective Action Report system to enhance construction contractor environmental compliance.
- Establish framework for agency Stormwater Management Program.

\* These partially completed targets are on track for finalization in 2024





# 2023 Sustainability Targets

Sound Transit Year in Review



## Prosperity

- Reevaluate King and Pierce counties' Threat Hazard Identification Risk Analysis.
- Reevaluate floor captain responsibility for a hybrid work environment.
- Integrate climate resiliency into design requirements.
- Identify and prioritize construction materials where the carbon content can be reduced.
- Meet 2023 competitive grant assumptions, including at least one sustainability grant.
- Evaluate renewable diesel feasibility for use in emergency power generation at Sound Transit facilities.
- Build model to determine transportation efficiencies in labor deployment management.
- Hire an Energy Manager and develop a strategic plan for compliance with the Washington Clean Buildings Performance Standard.\*
- Begin incorporating climate change adaptation strategies in Tacoma Link Asset Management Plan.
- Educate all staff about green procurement options for micro-purchases.
- Finish Procurement, Contracts and Agreements e-file library development and migrate required legacy contracts and Agreements to the new system.

\* These partially completed targets are on track for finalization in 2024





# 2024 Environmental and Sustainability Targets

— Supporting people, planet and prosperity

## People

- Recommend an expanded parking program for adoption by the Sound Transit Board.
- Implement family planning program to contribute to the agency's commitment to employee wellbeing.
- Implement job description changes to reflect equity audit recommendations.

## Planet

- Develop Zero Emissions Implementation Plan for ST Express bus services.
- Evaluate the feasibility of a renewable diesel pilot for Sounder.
- Evaluate solar powered back-up generation for facility lighting.
- Launch Lynnwood Link Extension with carbon-free electricity.
- Expand Clean Fuel Standard program participation with Link light rail service openings.
- Draft technical requirement guidelines for EV charger installations.

- Evaluate feasibility of an advanced ecosystem mitigation approach for TDLE or EVLE and OMF North.
- Complete ecosystem services pilot study and determine related assessment tools for all mitigation sites.
- Prepare Union Station LEED Existing Buildings Operation and Maintenance certification documents for submission.
- Establish an updated program for cleaning track alignment on a quantified and routine basis.
- Attain coverage under the Washington State National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) permit.

## Prosperity

- Complete Snohomish County Threat Hazard Risk Identification Analysis.
- Reimplement the STPrepared Program to designate and promote emergency preparedness.
- Propose a process approach to integrate sustainable design practices into state-of-good-repair projects.
- Draft a feasibility report on sustainability improvements proposed and implemented by DB contractors.
- Update Strategic Asset Management Plan and seek ISO 55001 certification.
- Establish process for Safety Management System management review.
- Implement an off-the-shelf contract management software system designed to streamline and simplify efforts to remain paperless within PCA.
- Educate new Sound Transit staff about green procurement benefits and best options possible for micro-purchases.
- Drive staff to generate incremental increases in green procurement metrics.