

Resources to Support Local Healthcare Decarbonization

EXECUTIVE SUMMARY

WHO: climate change is the number one threat to human health

- ▶▶ 250,000 additional deaths projected per year between 2030 and 2050

Healthcare emissions contribute to climate change and health impacts

- ▶▶ Comprise 8.5% of total U.S. emissions and increased 6% between 2010-2018
- ▶▶ Emit 9% of harmful air pollutants that contribute to more than 100,000 deaths related to air pollution each year in the U.S.

Climate change is already impacting health in the Pacific Northwest

- ▶▶ Record-breaking temperatures in June 2021 contributed to over 100 deaths, a 69-fold increase in ER visits and the highest volume of 911 calls in King County since the system was launched in 1969

Health facilities and infrastructure are threatened by climate change

- ▶▶ Events such as flooding and wildfires are increasingly disrupting operations
- ▶▶ Legacy Health Systems was forced to close facilities and evacuate patients and staff in northwestern Oregon due to wildfires in 2020

Taking action on sustainability is an opportunity to reduce contribution to climate change, build resilience and realize diverse benefits

- ▶▶ Benefits include cost savings via reduced energy, waste management and procurement expenses, reduced carbon footprint, improved collaboration between interdepartmental teams, and industry and public recognition for commitment to sustainability
- ▶▶ Reducing emissions could avoid thousands of premature deaths, respiratory illnesses such as asthma attacks and lost workdays per year

Historic support available for healthcare decarbonization initiatives via the Inflation Reduction Act

- ▶▶ The IRA contains incentives, tax credits and grants for initiatives such as improving building energy efficiency, installing renewable energy systems, shifting to electric vehicles and reducing supply chain emissions

National healthcare sector collaboration to achieve decarbonization

- ▶▶ The National Academy of Medicine Action Collaborative on Decarbonizing the U.S. Healthcare Sector is a public-private partnership of healthcare stakeholders committed to addressing the sector's environmental impact while strengthening sustainability and resilience. Membership comes from healthcare, government, trade associations, pharmaceutical/medical device manufacturers and academia.

SNAPSHOTS OF DIVERSE BENEFITS

Local healthcare systems and facilities are realizing cost savings and other benefits from diverse sustainability initiatives across energy infrastructure, operations, and clinical delivery. Several projects were implemented with limited up-front investment, utilizing existing staff capacity and expertise without complex infrastructure upgrades.

Examples:



KAISER PERMANENTE

- Strategies: installed solar at 100 facilities including 31 hospitals, installed renewable microgrid with 1 megawatt-hour storage capacity, achieved Energy Star or LEED certification for 87 facilities
- Outcomes: reduced energy use intensity by 6% compared to 2015
- Cost savings: **\$21.4 million per year**



PROVIDENCE

- Strategies: transitioned from centralized to canister-based nitrous oxide at Providence St. Vincent Medical Center in Portland, Oregon.
- Project team: anesthesiologist, OR leadership, facilities leadership and senior hospital leadership
- Outcomes: **achieved 99% reduction in nitrous oxide waste**, reduced health risks to patients, visitors and staff from leaked NO2 and realized modest cost savings.



SEATTLE CHILDREN'S

- Strategies: committed to diverting 50% of main campus waste from landfills by 2025 through a comprehensive recycling program for paper, plastics, lighting, electronic devices, metals and composting of food and landscaping waste.
- Outcomes: achieved **47% waste diversion rate** in 2022

SUPPORT AND MOTIVATION FOR ACTION

INFLATION REDUCTION ACT

The IRA contains incentives, tax credits and grants for sustainability initiatives such as improving building energy efficiency, installing renewable energy systems, shifting to electric vehicles and reducing supply chain emissions.

- ▶ *Solar installation:* Centro Diagnostico y Tratamiento San Sebastian Inc., a health clinic located in Puerto Rico, **received a \$113,958 grant** to purchase a 96.76 kW photovoltaic solar system connected to a battery backup energy storage system.
- ▶ *HVAC infrastructure:* Oaks Healthcare LLC **received a \$204,358 grant** to purchase a 350-ton chiller system for the nursing home/long-term care campus of buildings.

INCENTIVES/REBATES

Local public energy utilities including Puget Sound Energy, Seattle City Light and WA State offer incentive programs that may lower the cost of energy efficiency projects such as LED transition, HVAC efficiency and tracking, infrastructure upgrades and more.

- ▶ *Puget Sound Energy - Existing Building Commissioning:* Overlake Medical Center utilized a PSE incentive covering 75% of commissioning providers fees to identify opportunities for energy efficiency improvements and savings, such as adjusting HVAC settings and sequencing that resulted in a **10% electricity reduction** and **\$150,000 per year savings in energy costs**.

MANDATES

Several decarbonization policy measures enacted by WA State and City of Seattle apply to the healthcare sector, requiring significant sustainability actions to achieve compliance.

- ▶ *Clean Buildings Standards:* WA State and City of Seattle require applicable buildings over 50k sq. ft., **including hospitals**, to meet declining carbon emission targets starting in 2026, 20k-50k sq. ft. buildings starting in 2031, reaching net-zero by 2050.
- ▶ *WA State Organics Management Law:* Requires governments, businesses and other organizations **including hospitals** to reduce the amount of organic material disposed in landfills and increase food waste diversion starting in 2024.