

# **BUILDINGS & ENERGY**

## **Co-Benefits**



Offers significant opportunities for GHG reduction and improves air and water quality.



Provides substantial energy savings to businesses and building owners. Increases property values and makes Spokane a more economically desirable place to live.



Improves health outcomes by reducing air and water borne particulates, especially for vulnerable populations.



Provides energy efficiency programs that allow people of all income levels choices to realize savings on utilities.

## SDG Alignment









## **Buildings & Energy**



It is our vision to make Spokane a center of carbon-neutral building science and energy production achieving key benchmarks ahead of state mandates. We will engage the passion of our community along with commercial expertise to drive forward a thriving local green economy. We will accomplish this low-carbon, energy efficient future through investing in a skilled workforce capable of supporting the energy needs of a thriving city while also providing familywaged, sustainable employment for our residents.



Emission	2016 Baseline		2030 Reduction Target		2040 Reduction Target		2050 Reduction Target	
Source	2,108,796 MT		45% & 948,958 MT		70% & 1,476,155 MT		95% & 2,003,356 MT	
	Metric	Percent of	Metric	Percent	Metric	Percent	Metric	Percent
	Tons CO <sub>2</sub> e	Total	Tons CO <sub>2</sub> e	Reduction	Tons CO <sub>2</sub> e	Reduction	Tons CO <sub>2</sub> e	Reduction
Electricity	587,418	28%	83,114	80%	41,557	90%	0	100%
Gas	381,273	18%	411,163	30%	205,581	65%	24,369	95%

#### Sector Level GHG Targets: Buildings & Energy

#### **Comprehensive Plan Alignment**

Chapter 5: Capital Facilities and Utilities

CFU 1: Adequate Public Facilities and Services

CFU 3: Coordination

CFU 5: Environmental Concerns

CFU 6.2: Economic Development

Chapter 6: Housing

H 1: Housing Choice & Diversity

H 2: Housing Quality

#### Chapter 7: Economic Development

ED 1: Cooperative Partnerships

ED 2: Land Availability for Economic Development

ED 6: Infrastructure

ED 8: Quality of Life and the Environment





GOAL 1. Encourage efficient, renewable energy buildings that meet WA Clean Buildings Act Energy Use Intensity (EUI) targets

Strategy 1. Ensure new construction is as efficient as possible and ready to utilize renewable		
energy		
Priority Actions		
BE 1.1	The City will take a leadership role in providing direction and facilitating building decarbonization by working with local partners to implement the State energy code	
BE 1.2	Build community awareness on the benefits of choosing electrification and develop incentives for installing electric air and water heating/cooling systems, including heat pumps	
BE 1.3	Require installed electric hookup options for all appliances in new construction	
BE 1.4	Incentivize electrification of all new construction (residential and commercial) including incentivizing electrification and renewable energy sources through City permitting process	
BE 1.5	Require all new commercial buildings to install conduit and roof support for a future solar system if the building is in an appropriate location to utilize solar	
BE 1.6	Encourage and incentivize renewable, low-carbon materials, such as cross-laminated timber, in construction	
BE 1.7	Encourage the re-use of existing buildings, including efficiency retrofits, rather than demolishing and starting new	

	Strategy 2. Upgrade existing buildings for high efficiency and renewable energy sources; increase						
	energy efficiency at publicly-funded facilities						
	Priority Actions						
	BE 2.1	Evaluate all municipal buildings to determine a path to net neutral emissions by 2025 through retrofits or renewable energy installation, including off-site generation, to benefit under CETA programs					
	BE 2.2	Conduct an energy audit at Riverside Park Water Reclamation Facility (RPWRF) and Upriver Dam and install all feasible efficiency upgrades					
	BE 2.3	Develop and adopt a rental policy program requiring minimum energy efficiency standards for all housing rentals including requirements to make energy efficiency data available to renters; develop grant and loan program to pay for upgrades					
	BE 2.4	Participate in energy efficiency and conservation programs offered by local utilities for City owned facilities					
⊳	BE 2.5	Continue to provide flexible work schedules, work-from-home, and shared workspaces for City employees to demonstrate efficient use of office resources					
	BE 2.6	Subsidize home energy efficiency retrofits for affordable housing units					

### GOAL 2. Promote local production and sourcing of renewable energy

Strategy 3. Invest in community-scale and distributed energy generation and storage			
Priority Actions			
BE 3.1	Introduce local incentives for solar and continue to support solar incentives at the State & Federal level		
BE 3.2	Research the feasibility and provide recommendations by 2025 for onsite renewable energy policy on new residential & commercial buildings		
BE 3.3	Include energy storage solutions as part of City of Spokane's Energy Initiatives		
BE 3.4	Evaluate energy storage at Waste to Energy (WTE)		
BE 3.5	Partner with local energy companies to create and implement a citywide plan for large-scale, community solar installations		
BE 3.6	Partner with local utility companies to identify renewable energy installations most beneficial to the grid		

Strategy 4. Harness energy from waste resources		
Priority Actions		
BE 4.1	Evaluate forestry slash to energy	
BE 4.2	Evaluate diversion of biological waste materials to higher-value end uses, such as biofuel and soil amendments, at Waste to Energy (WTE)	
BE 4.3	Plan for alternatives to biogas flaring at Riverside Park Water Reclamation Facility (RPWRF)	
BE 4.4	Evaluate anaerobic digestion of green waste	
BE 4.5	Evaluate electricity generation from waste straw at WTE	

Strategy 5. Neutralize carbon emissions from fossil gas and other fossil fuels used in buildings &		
transportation		
Priority Actions		
BE 5.1	Partner with Avista to increase renewable natural gas (RNG) into the gas supply	
BE 5.2	Source renewable natural gas or green hydrogen for City fleet vehicles currently using compressed natural gas and expand to other heavy-duty vehicles	
BE 5.3	Explore options to expand the use of compressed natural gas or green hydrogen in City owned vehicles where electricity is not a valid fuel option	
BE 5.4	Partner with local businesses and compressed natural gas providers to explore expanding the use of renewable natural gas and green hydrogen in private fleet vehicles currently using compressed natural gas as a fuel source	

#### GOAL 3. Engage community in energy efficiency and renewable energy

Strategy 6. Partner with regional building, energy, & efficiency organizations for public education		
& outreach		
Priority Actions		
BE 6.1	Offer a clearinghouse for information, advertising grant and other programs to building owners and construction contractors; job opportunities to workers; etc.	
BE 6.2	Research and amplify community energy efficiency programs particularly those with a focus on low- income households	
BE 6.3	Partner with Spokane Public Schools and local energy experts to establish renewable energy & energy efficiency curriculum across all major academic areas	
BE 6.4	Educate community members on ways to participate in renewable energy and energy efficiency programs focusing on cost savings and health benefits	
BE 6.5	Fund and implement a contractor training program led by building scientists for carbon-efficient building methods, appliances, and products	
BE 6.6	Create a public outreach and scheduling hub to connect contractors with prospective customers for clean building projects	

Our energy and related industry working women and men battle the elements during ice-storms, fire-storms, and windstorms to restore our electricity. They are among first-responders. They labor to keep us warm in the Winter and cool in the Summer during times of crisis and calm. This plan, and the strategies being proposed respects the training (as many as 5 years and ten-thousand hours in registered apprenticeship programs), expertise, and invaluable contributions that our energy and related industry workers make to our Spokane society every day. Energy and related industry workers should not be a casualty of climate change.

Exciting innovations in energy supply and storage are being made every day. We know that our Spokane energy and related industry workers are on the cutting edge of the renewable energy sources production and delivery systems. In times where technologies of the future may be unknown, the workforce and the industry need to continue to have the support of our communities as it pertains to the parallel movement of technologies and training of the workforce.



"The new Catalyst building aims to be one of the largest zero-carbon, zero-energy buildings in North America, as certified by the International Living Future Institute (ILFI). The adjacent Morris Center will be the heart of an innovative shared energy model called an Eco-District, where a centralized plant will power the two new buildings and additional buildings in the future."

-- catalystspokane.com