Defining Energy

In developing and discussing the Energy & Sustainability Framework, having a shared and consistent understanding of various terms is important to ensure we are speaking the same language. This page provides an overview of key terminology and definitions as they relate to the Framework.

Renewable energy is any form of energy from solar, geophysical or biological sources that is replenished by natural processes at a rate that equals or exceeds its rate of use. Alternatively, fossil fuels are not renewable because they are not replenished within a time frame that is short, relative to their rate of utilization. **Sustainable energy** is the provision of energy to meet the needs of the present without compromising the ability of future generations to meet their needs. One main overlapping feature between sustainable energy and renewable energy is that neither include fossil fuels.

Sustainable and renewable energy sources:



Natural

gas

hydrogen

Biomass



Hydropower Green Renewable hydrogen Natural aas

Non-renewable energy sources:

Renewable energy sources:



len emittine energy service

Non-emitting energy sources:

Environmental sustainability can be interpreted more broadly to mean ecosystem continuity and health. It means taking care of the environment in such a way as to not compromise the environment for future generations.

Net-zero emissions refers to removing greenhouse gases (GHGs) from the atmosphere to balance out human-caused GHG emissions. Ideally, Net-zero emissions refers to the end state where we reduce emissions to as low as possible and then offset the remaining emissions using carbon capture techniques and purchased carbon offsets.

- Consumption of non-renewable energy is offset by the production of as much or more renewable energy.
- Emissions of GHGs into the atmosphere are balanced by removing existing GHGs from the atmosphere over a specified period.

A **Just Transition** minimizes the impact on workers and communities and engages with the individuals and organizations who will be impacted by the City's Framework. Regina can preferentially deploy strategies or actions that simultaneously deliver other objectives related to health, equity, poverty alleviation, and reconciliation all to ensure an equitable transition.

Climate change mitigation means deliberately acting to reduce GHG emissions to slow, stop, and even reverse the effects of climate change.

Climate change adaptation (resilience) means deliberately acting to reduce the vulnerability of natural and human systems against actual or expected climate change impacts.



Regina.ca/renewable