



# CITY OF YELLOWKNIFE

The future is bright  
20 Years of Community Energy Planning



## What is Community Energy Planning

COMMUNITY ENERGY PLANNING IS A COLLABORATIVE APPROACH USED TO PLAN FOR SUSTAINABLE SOURCES OF ENERGY FOR OUR COMMUNITY.

How we got here...



1998

City of Yellowknife joins the Partners for Climate Protection Program

2006

Completion & Adoption of the 2006-2014 Community Energy plan

2017

Adoption of the Corporate and Community Energy Plan 2015-2025

2018

City receives Federation of Canadian Municipalities Sustainable Communities Award

### WHERE WE ARE NOW...

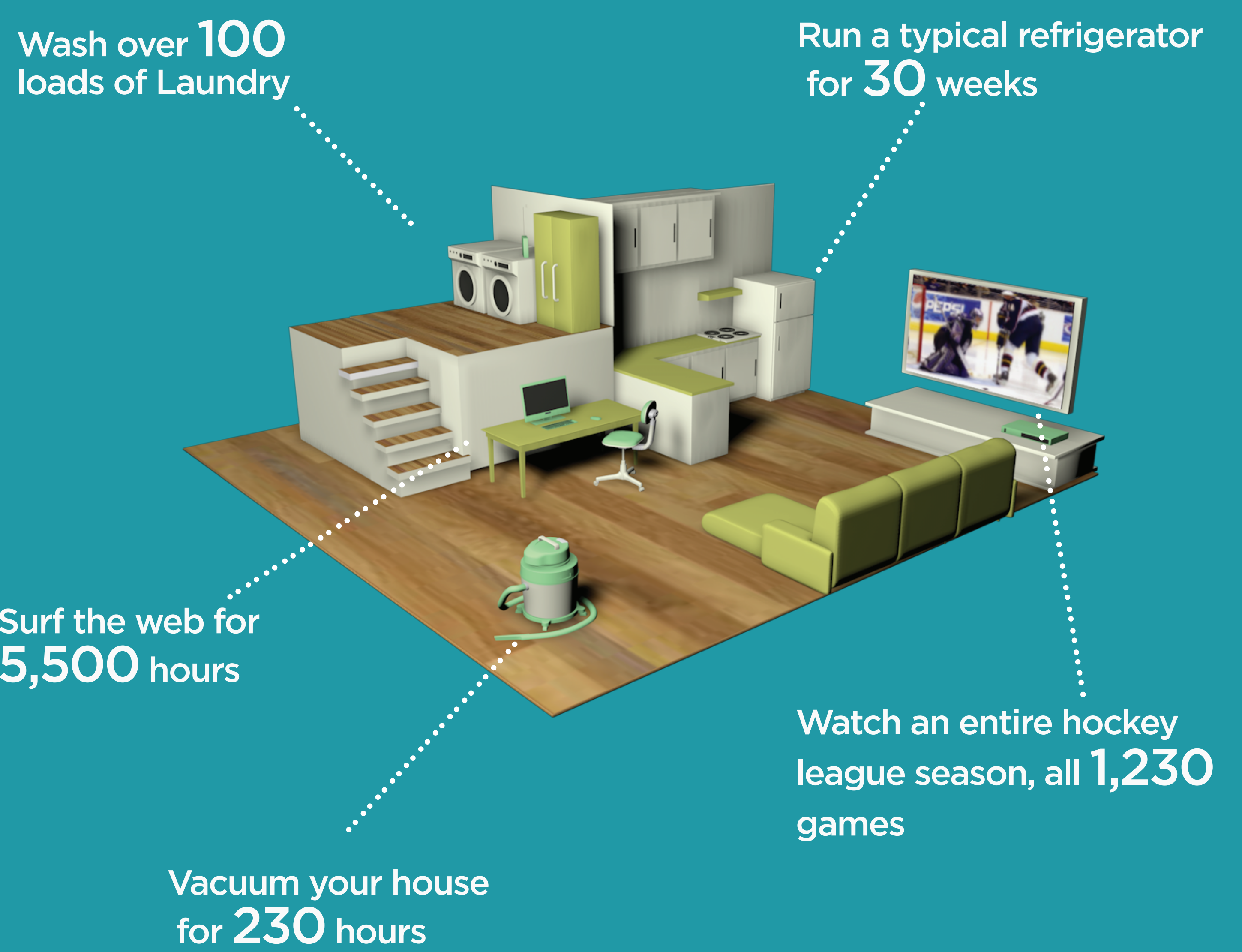
Projects implemented since 2008 are now saving the City more than **\$375,000** per year.

### IN 2013 YELLOWKNIFE'S ENERGY CONSUMPTION

Corporate annual energy consumption: **100,000 GJ**  
Community annual energy consumption: **5,000,000 GJ**  
(residents & businesses)

THE AVERAGE CANADIAN HOUSEHOLD USES **100 GIGAJOULES OF ENERGY PER YEAR**

Source: Natural Resources Canada



### MUCH REMAINS TO BE DONE!

The City of Yellowknife average annual energy cost (2012 to 2015) was approximately \$4.8 million. In 2016, the City's energy expenses were \$4.7 million. In 2015, it is estimated that Yellowknife residents and businesses spent approximately \$165 million on energy.

### CITY OF YELLOWKNIFE'S 2025 TARGETS

#### CORPORATE

- ▶ 50% reduction of GHG emissions by 2025, using 2009 as the baseline year
- ▶ Increase the share of renewable energy use from 50% to 70% by 2025
- ▶ Keep annual energy costs below the average of the preceding five years

#### COMMUNITY

- ▶ 30% reduction of GHG emissions by 2025, using 2009 as the baseline year
- ▶ Increase the share of renewable energy use from 18% to 30% by 2025

### HEATING: ENERGY CONSUMPTION AND SAVINGS

City of Yellowknife Biomass Boilers:

#### 1. Multiplex, Fieldhouse, Firehall, Public Works Garage & Community Service Garage

Total Energy Consumption (Heating) **12,600 GJ**  
Anticipated Annual Fuel Displacement **325,000 L**  
Anticipated Annual Cost Savings **\$140,000**  
Annual GHG reductions **829** tonnes of greenhouse gases

#### 2. Baling Facility

Total Energy Consumption (Heating) **1,838 GJ**  
2016 Heating Oil Displacement **21,768 L**  
2016 Cost Savings **\$6,528**  
2016 GHG reductions **56** tonnes of greenhouse gases

#### 3. YK Arena, Curling Rink & Ruth Inch Memorial Pool

Total Energy Consumption (Heating) **8920 GJ**  
2016 Heating Oil Displacement **177,696 L**  
2016 Cost Savings **\$24,630**  
2016 GHG reductions **459** tonnes of greenhouse gases

#### 4. Pumphouse # 1

Total Energy Consumption (Heating) **2000 GJ**  
Anticipated Heating Oil Displacement **52,900 L**  
Anticipated Cost Savings **\$16,689**  
Anticipated GHG reductions **135** tonnes of greenhouse gases

### COMMUNITY ENERGY

Projects since 2014:

2014	2016	2017	2017/18	2017/18
SOLAR PANELS	HEAT RECOVERY SYSTEM	SOLAR PANELS	WOOD PELLET BOILER	STREETLIGHT LED
SOLID WASTE FACILITY	YK COMMUNITY ARENA	FIELDHOUSE	PUMP HOUSE 1	CITY WIDE
				TRANSPORTATION FUNDING
				CITY WIDE
				CENTRALIZED BIOMASS BOILER
				MULTIPLEX / FIELD HOUSE
				FIRE HALL / CITY GARAGE



CITY OF YELLOWKNIFE

THIS IS JUST THE BEGINNING!

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