

# Climate Plan: 100% Renewable & Resilient Saanich

Council Check-in

District of Saanich Council

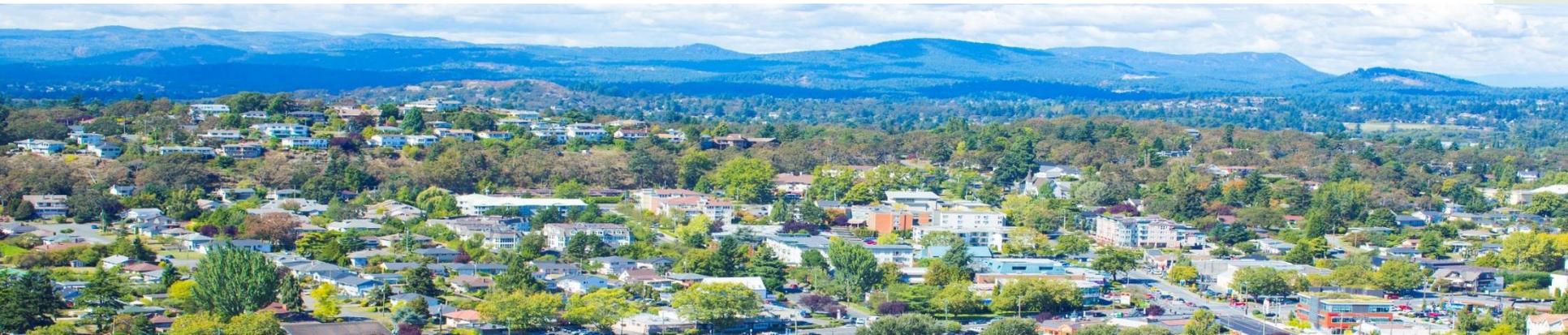
3 December 2018

[saanich.ca/climateplan](http://saanich.ca/climateplan)



# PURPOSE

Provide Council with an update on the first three stages of the updated Climate Plan: 100% Renewable & Resilient Saanich and the first of three phases of engagement.





# BACKGROUND

**Saanich**

# UPDATED CLIMATE PLAN



**100%**  
Renewable  
&  
Resilient  
**Saanich**  
saanich.ca/climateplan

- Become a 100% Renewable Energy Community by 2050
- Reduce our GHG emissions by 80% of 2007 Levels by 2050
- Prepare for a Changing Climate

Endorsed Terms of Reference

saanich.ca/climateplan

# TIMELINE



# APPROACH

- Integration of Mitigation and Adaptation
- Expansion to Consumption Based Emissions
- Recognition of the District's Role

## REDUCE

**REDUCE** - We will reduce our energy and material consumption and our waste generation through conservation, efficiency, and redesign.

## RENEWABLE

**RENEWABLE** - We will shift to renewable energy sources to power our remaining energy needs.

## RESILIENT

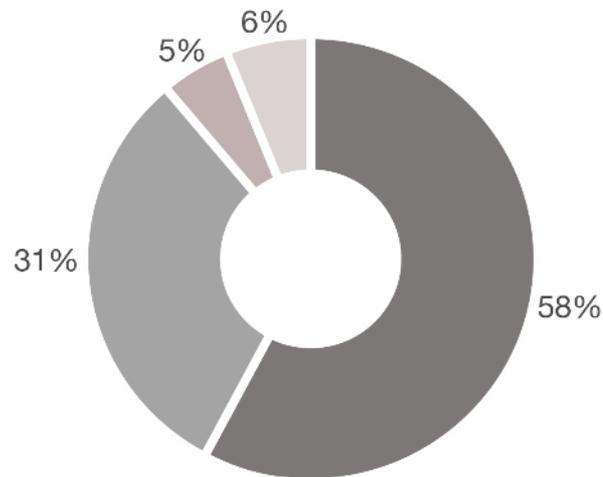
**RESILIENT** - We will design a responsive community that is prepared for a changing climate.

# THE IMPORTANCE OF WHAT WE MEASURE

## 2017 Territorial GHG Inventory

=512,901 tonnes carbon

=4.8 tonnes carbon/person

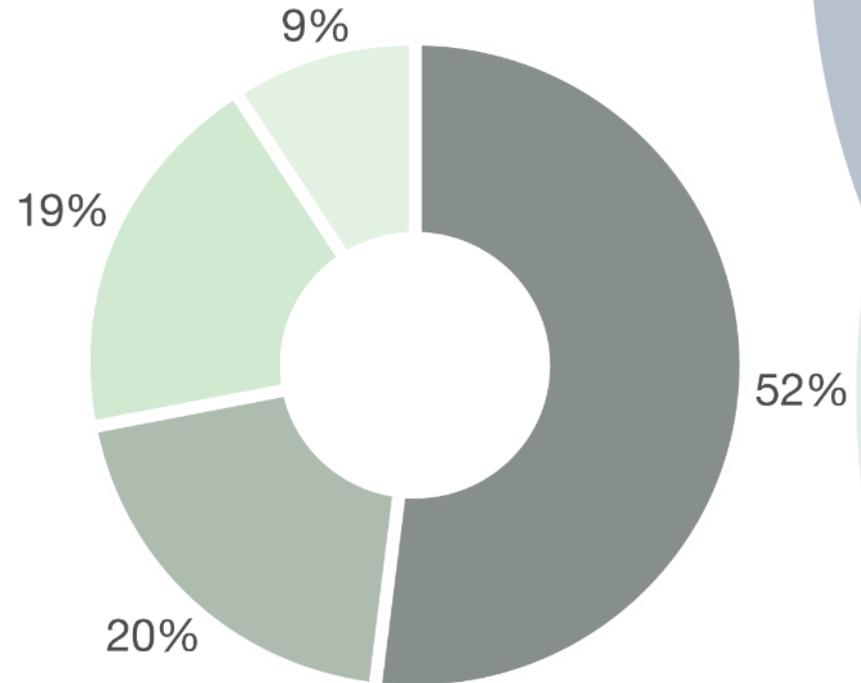


- 58% Transportation
- 31% Buildings
- 5% Waste
- 6% Other

## 2015 Consumption Based GHG Inventory

=881,000 tonnes carbon

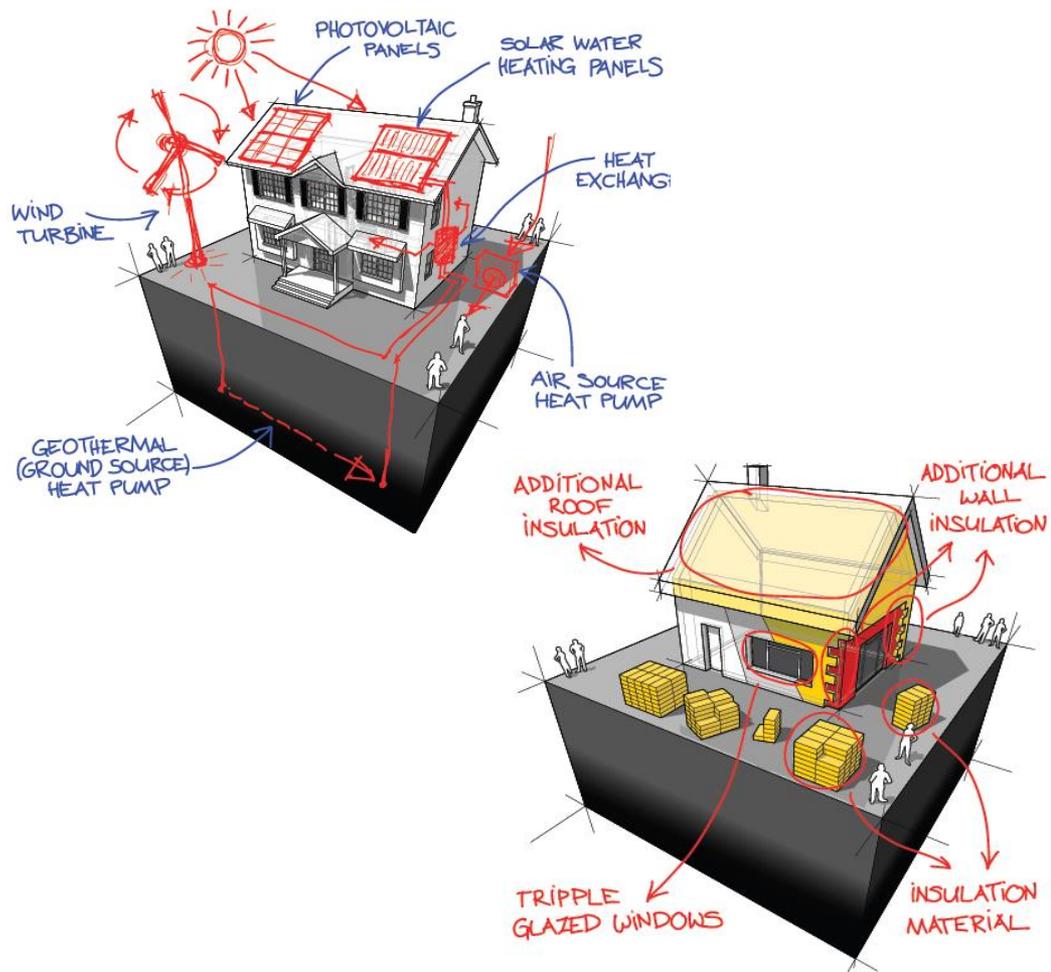
=7.7 tonnes carbon/person



- 52% Transportation
- 20% Buildings
- 19% Food
- 9% Consumables & Waste

# ACTION AREAS

1. Transportation
2. Buildings
3. Consumption & Waste
4. Food & Agriculture
5. Climate Adaptation
6. Leading By Example



SAANICH ALREADY USES RENEWABLE ENERGY AND OUR GRID ELECTRICITY IS CURRENTLY 97% RENEWABLE



# SUPPORTING PROJECTS

## ICLEI: Together for Climate



## One Planet Saanich

-  Health and happiness
-  Equity and local economy
-  Culture and community
-  Land and nature
-  Sustainable water
-  Local and sustainable food
-  Travel and transport
-  Materials and products
-  Zero waste
-  Zero carbon energy



# PROJECT PROGRESS

**Saanich**

# PROJECT PROGRESS

## PHASE 1: Project Initiation & Baseline - COMPLETE

- Reviewed climate change projections for Saanich
- Reviewed existing strategies and actions
- Best practice research on similar climate plans, strategies and actions
- Consultant hired
- Baseline Community GHG Inventory completed
- Energy Model developed & BAU scenario completed
- Engagement materials developed

# PROJECT PROGRESS

## PHASE 2: Explore Options – COMPLETE

- Develop Systems Framework and Key Themes
- Identification of actions for reducing GHG emissions
- Draft 80% GHG emissions reduction and 100% renewable scenario developed based upon early identified actions
  - Completed based upon Key Stakeholder Mitigation Workshop and early Survey responses in preparation for the public workshops
- Identification of Risk and Impact Statements for climate adaptation

# LOCAL CLIMATE CHANGE PROJECTIONS



Regional Hottest  
Daytime Temperature

32°C

2041-2071

29°C

1971-2000



Regional Summer Days

36

above 25°C

2041-2071

12

1971-2000



Dry Spells

30

consecutive days without rain

2041-2071

25

1971-2000



Freezing Days

18

below 0°C

2041-2071

59

1971-2000



Wettest Day Rainfall

84

millimetres

2041-2071

70

1971-2000



Sea Level Rise

1

meters

2100

0.5

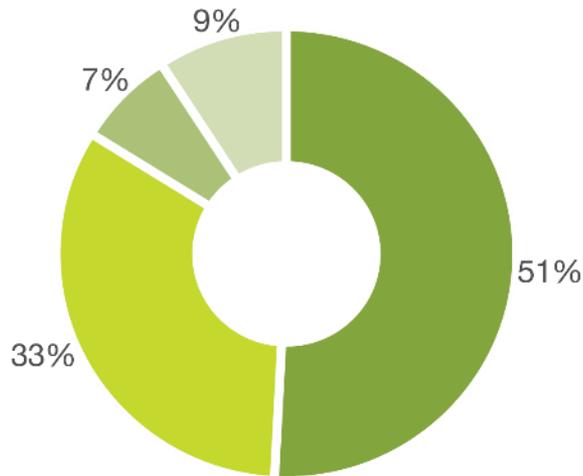
2050

# COMMUNITY GHG INVENTORY

## 2007 Baseline Territorial GHG Inventory

=495,384 tonnes carbon

=4.4 tonnes carbon/person

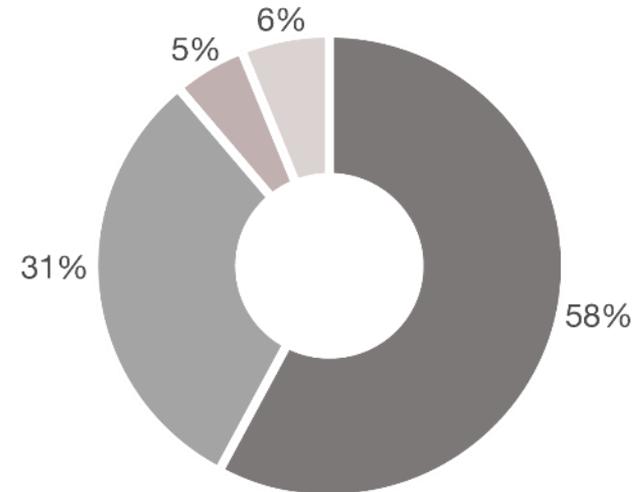


- 51% Transportation
- 33% Buildings
- 7% Waste
- 9% Other

## 2017 Territorial GHG Inventory

=512,901 tonnes carbon

=4.8 tonnes carbon/person



- 58% Transportation
- 31% Buildings
- 5% Waste
- 6% Other

# CLIMATE ACTION NAVIGATOR (CAN) TOOL

District of Saanich CANtool | Climate Action Navigator

## CHOOSE STRATEGIES

part 9 buildings   part 3 buildings   transportation   renewable energy   waste/other

### PART 9 BUILDINGS

New Construction

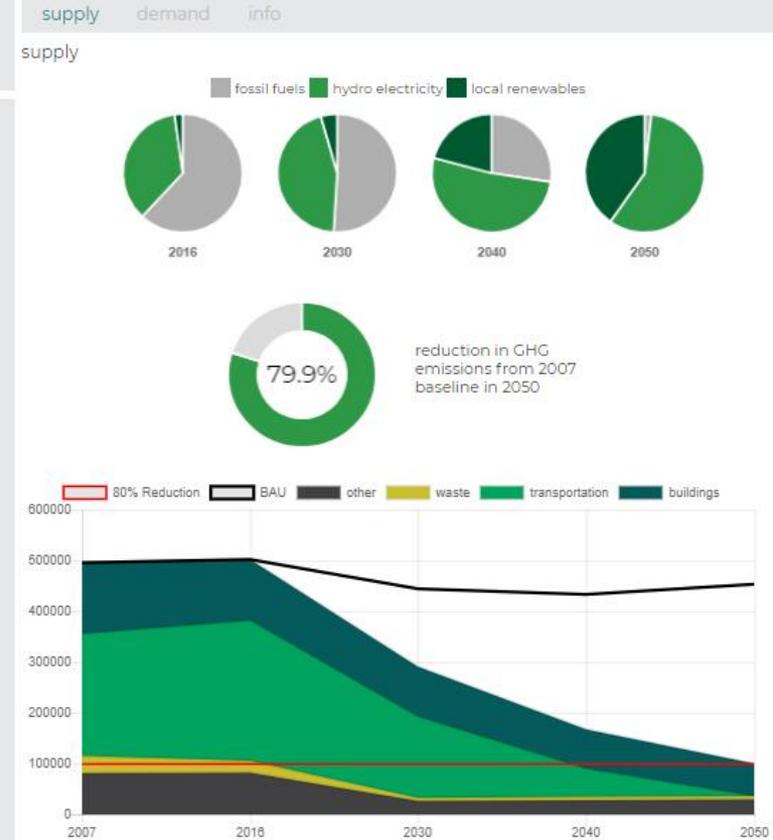
- Step Code Implementation: Step 5 by 2020 [...]
- Zero-Carbon Building Mandate: by 2032 [...]

Retrofits

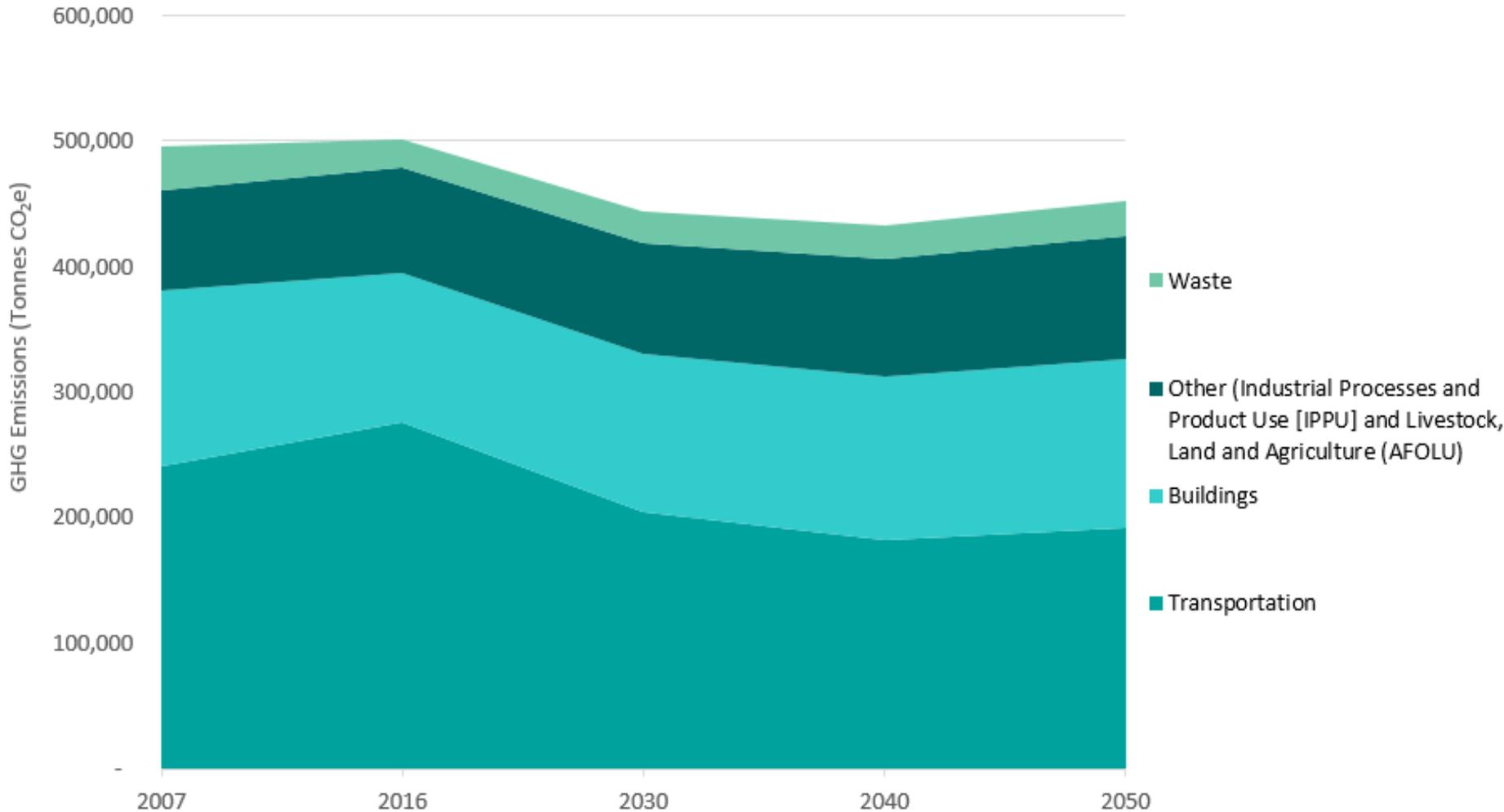
- Oil to Heat Pump Conversion: 100% by 2030 [...]
- Envelope Upgrades: 20% by 2050 [...]
- Low Carbon System Upgrades: 20% upgraded by 2050 [...]

CANtool is an interactive web tool for exploring and evaluating municipal climate action scenarios.

## RESULTS



# BAU PROJECTION SCENARIO

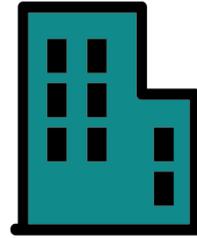


# USE OF THE CAN TOOL - STRATEGIES

Emission reduction strategies are defined for each sector and can be selected and adjusted by the user.



Houses + townhomes



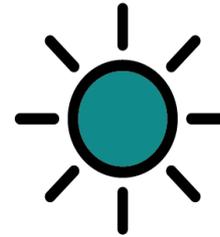
Apartments + commercial buildings



Transportation



Waste



Renewable energy

# USE OF THE CAN TOOL - STRATEGIES

## BUILDINGS

 **ACTIVE TRANSPORTATION**



Strategy Targets:

 **TRANSIT IMPROVEMENTS**



Strategy Targets:

 **ELECTRIC VEHICLES**



Strategy Targets:

## TRANSPORTATION

 **STEP CODE**

**BC Energy Step Code**



Strategy Targets:

 **SYSTEM RETROFITS**



Strategy Targets:

 **ENVELOPE RETROFITS**



Strategy Targets:

## RENEWABLES

 **RENEWABLE FUELS**



Strategy Targets:

 **SOLAR PV**



Strategy Targets:

**Other**



## WASTE

 **WASTE REDUCTION**



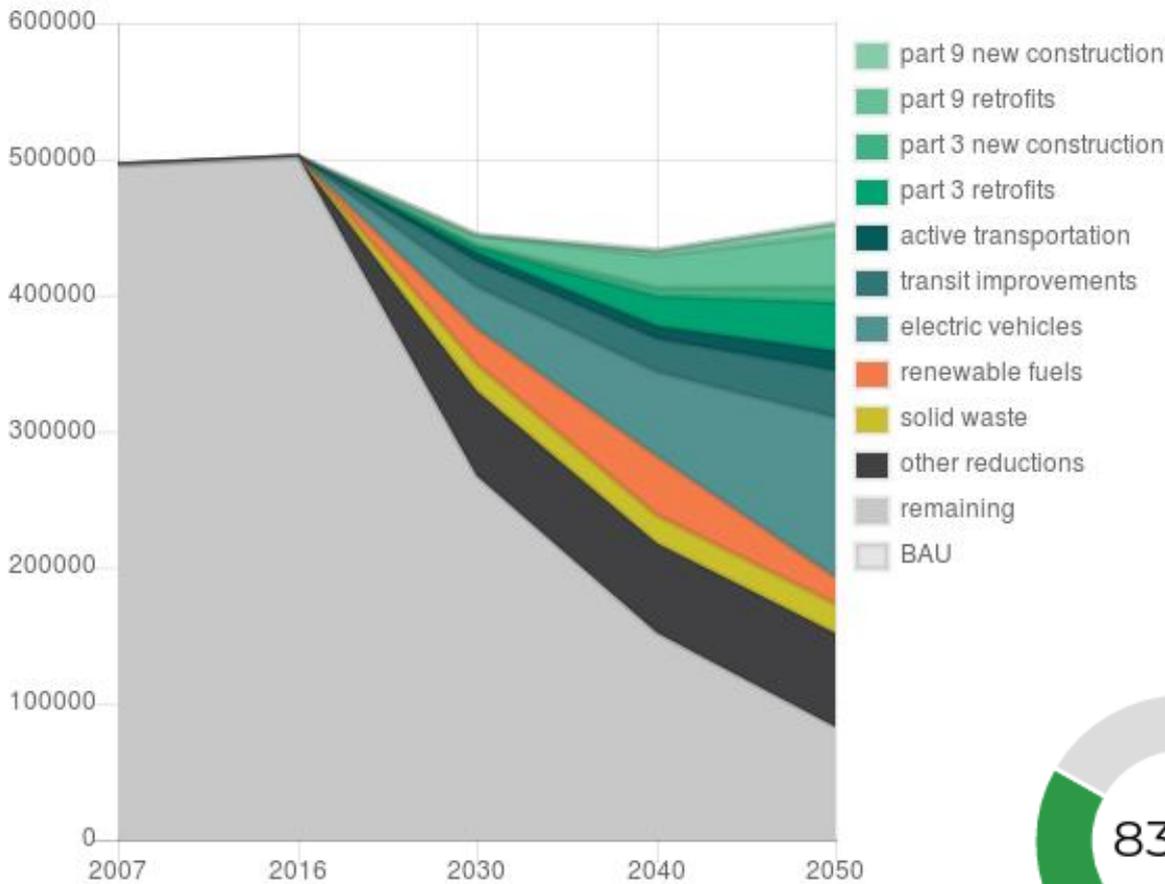
Strategy Targets:

 **CONSUMPTION REDUCTION**

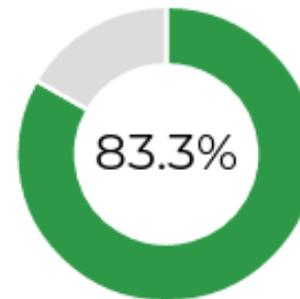


Strategy Targets:

# MULTIPLE PATHWAYS TO TARGETS



All require many actions across the community and strategy areas.



reduction in GHG emissions from 2007 baseline in 2050



# PHASE 1 ENGAGEMENT

**Saanich**

# ENGAGEMENT STRATEGY

GOAL: Inform, consult, involve and collaborate

PROCESS: Internal working group, key stakeholder group, public

## PHASE 1:

- Raise awareness of issues & baseline – address vision, targets, definitions
- Translate how climate projections impact our community
- Receive input on key themes, issues, opportunities and potential actions

## PHASE 2:

- Review of Scenarios & Modelling
- Develop strategies and actions and focus on co-benefits
- Input to Draft Action Plan

## PHASE 3:

- Review of Draft Climate Plan



# PHASE 1 ENGAGEMENT - APPROACH

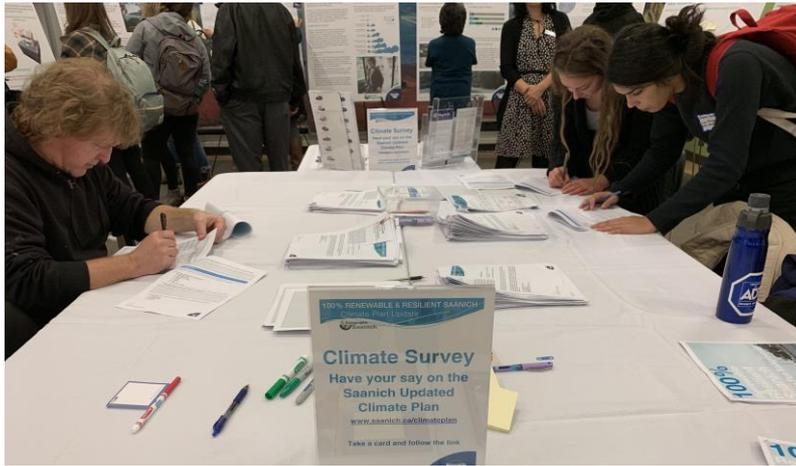
- Project Website
- Climate Plan Backgrounder
- Saanich Talks Event
- Survey
- Prize Draw
- E-newsletter
- Media and advertising
- Festivals and events
- Recreation centre and facility displays
- Engagement onboard transit buses
- One-on-one meetings and phone calls
- Public and key stakeholder workshops and open houses
- Project technical working group
- Integration with LAPs



# PHASE 1 ENGAGEMENT - EVENTS

Engagement	#
# Key Engagement Events	28
# people actively engaged in Phase 1 climate discussions at the Key Engagement events ( <i>excludes public open houses &amp; workshops</i> )	Over 1500
# members signed up to the Climate E-Newsletter	762
# comments/stickers on engagement boards at events	611
# surveys completed	938
# attendees at the Stakeholder Mitigation Workshop	66
# attendees at public open houses	190
# attendees at public workshops	161
# attendees at the Stakeholder Climate Adaptation Workshop	TBD
# attendees at the School Climate Mitigation Workshop	TBD

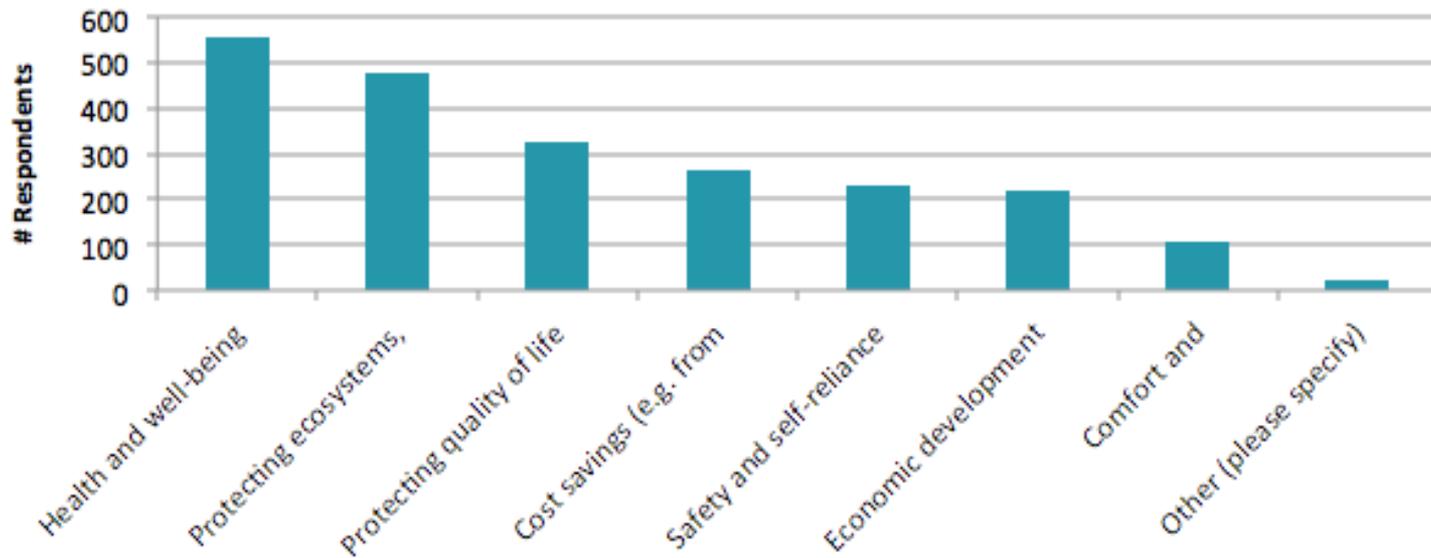
# STAKEHOLDER & PUBLIC WORKSHOPS



# EARLY FEEDBACK

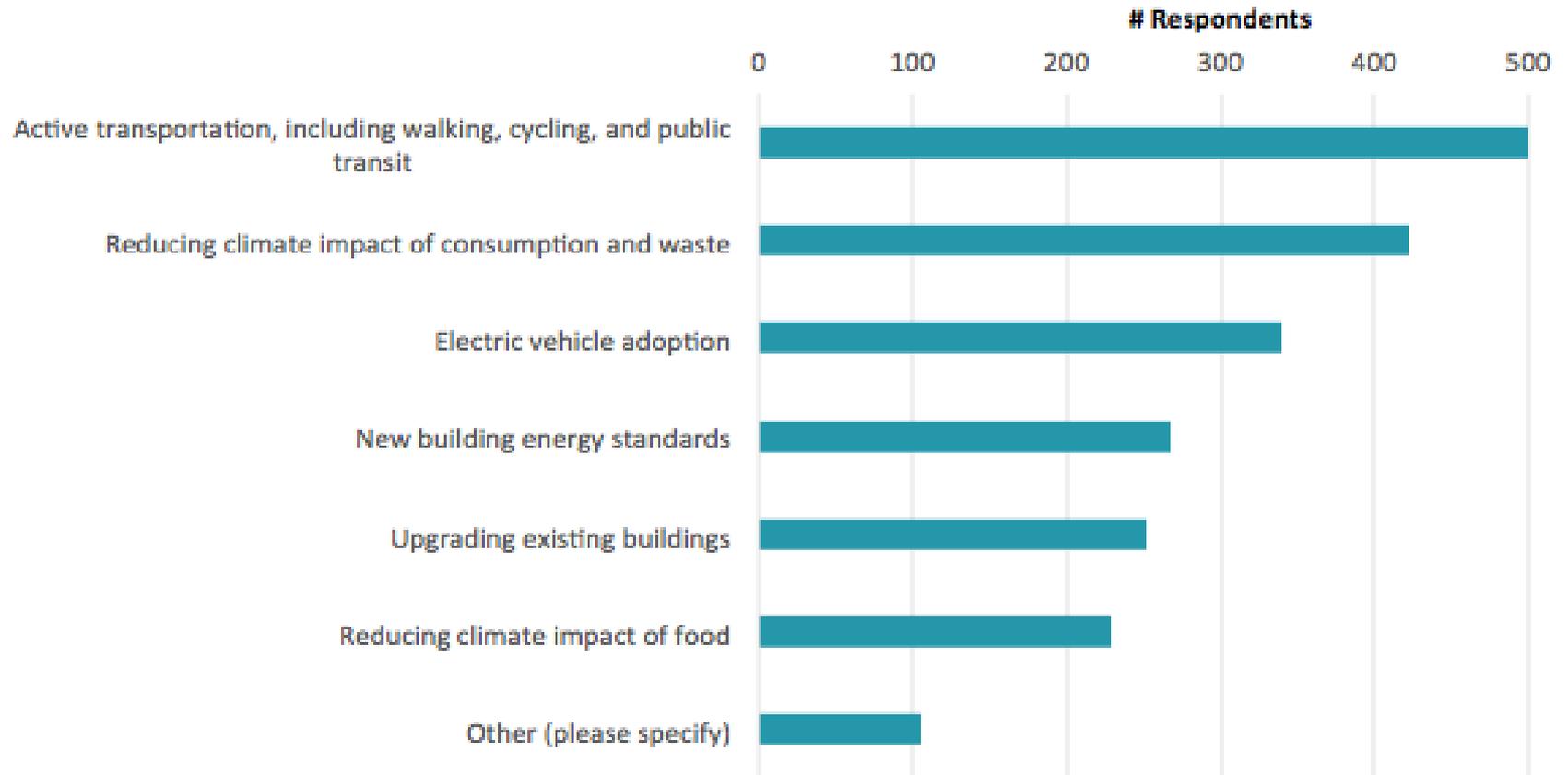
- Diverse representation of age groups and income levels
- Diverse representation of subject matter experts in stakeholder events
- 93% respondents very/somewhat important Saanich act on Climate Change
- 94% respondents taking a little/lot of action to reduce their own GHGs

## Most Important **Co-benefits** of Acting on Climate Change



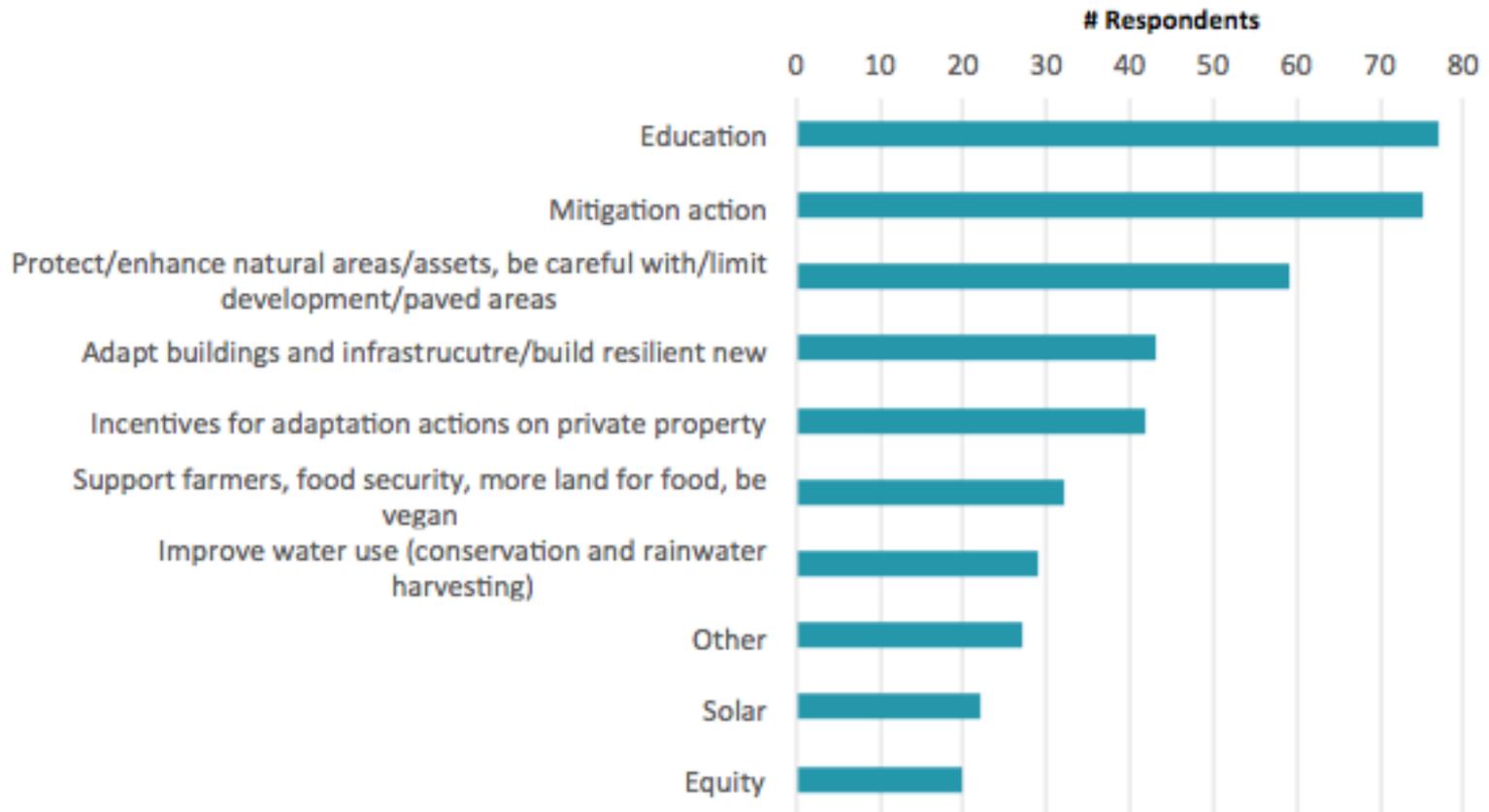
# EARLY FEEDBACK - Survey

Climate **Mitigation** Action Areas Respondents want Saanich to Prioritize



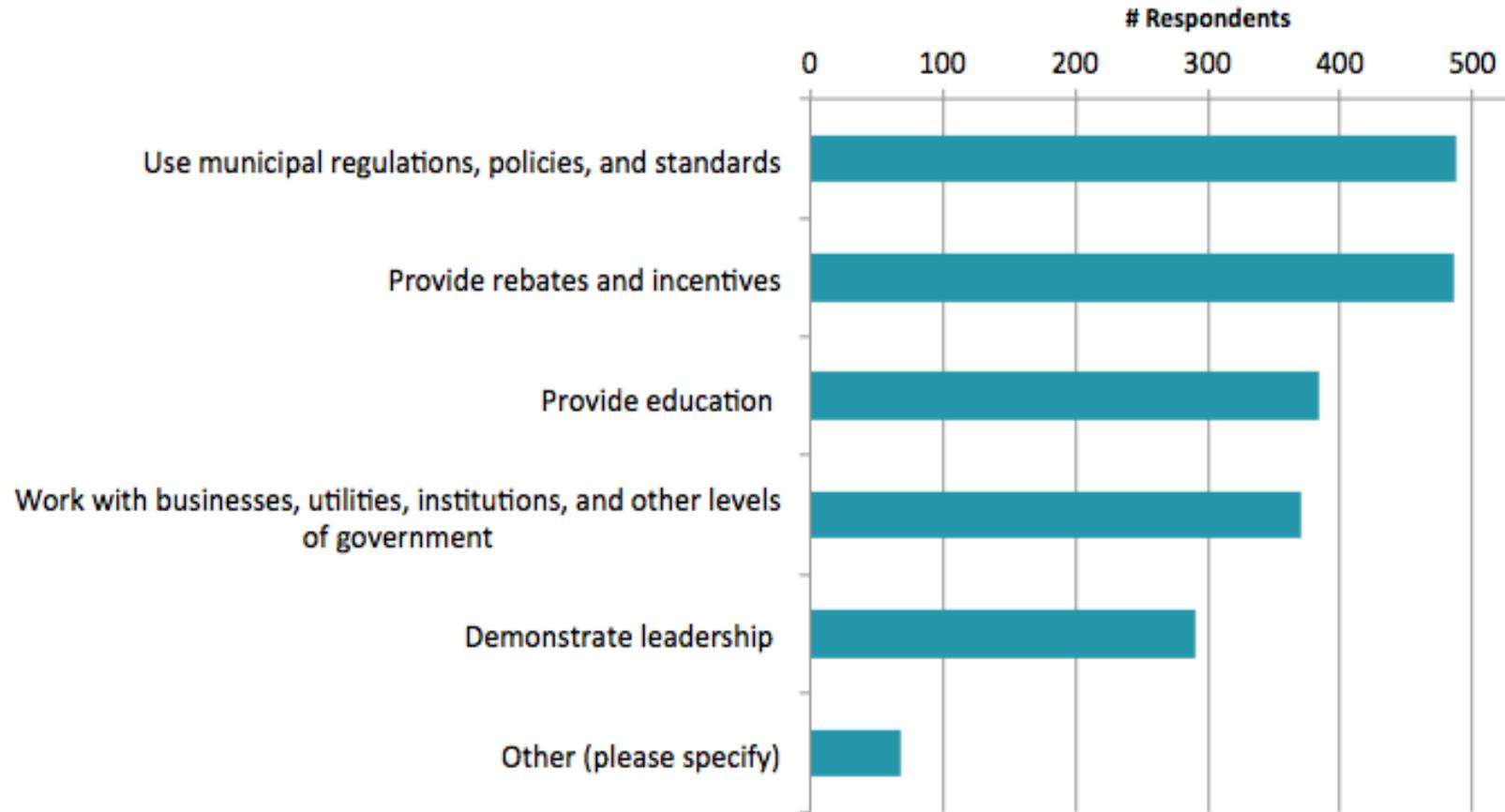
# EARLY FEEDBACK - Survey

Climate **Adaptation** Action Areas Respondents want Saanich to Help with



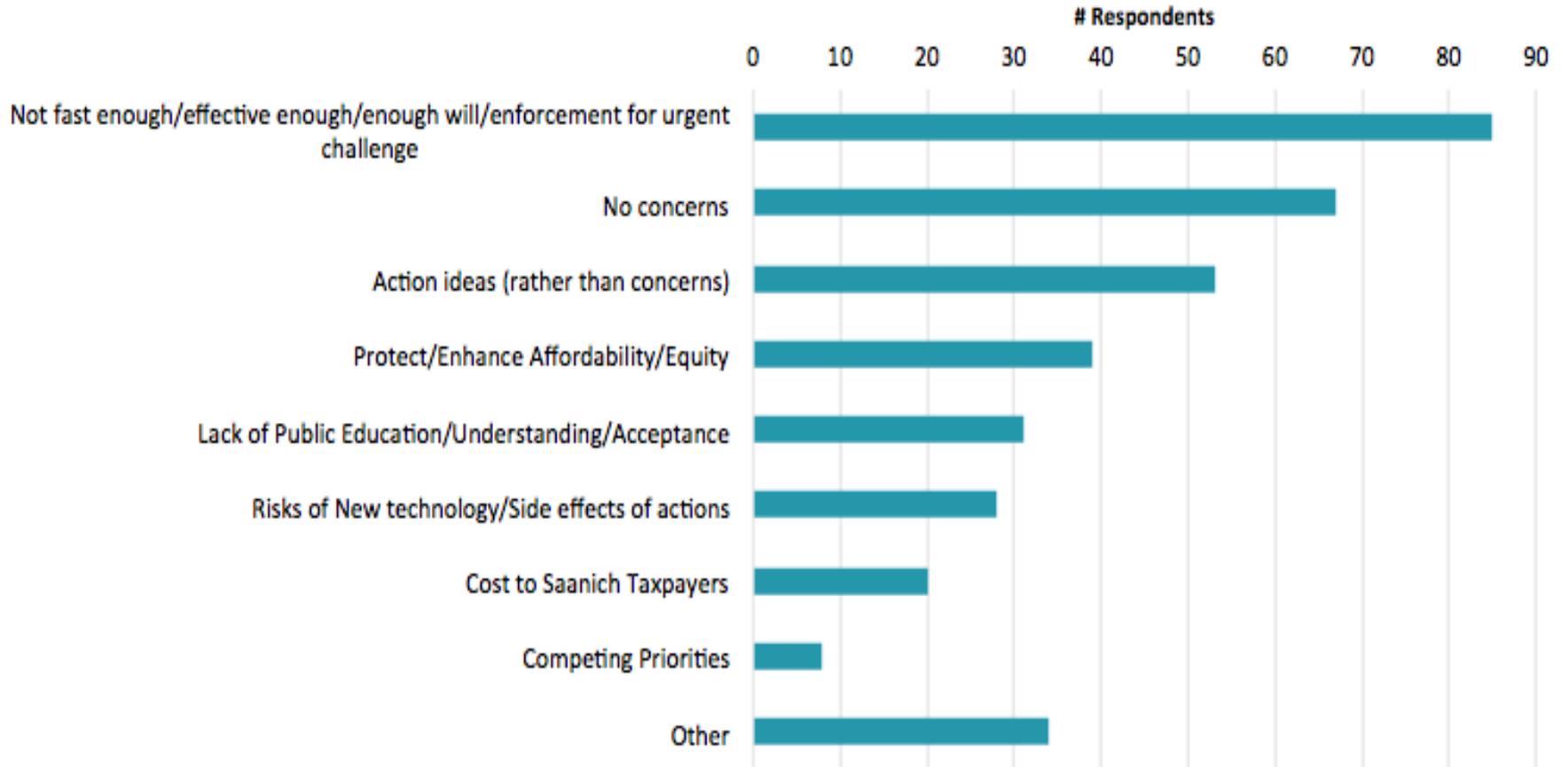
# EARLY FEEDBACK - Survey

Approaches Respondents would like Saanich to Prioritize



# EARLY FEEDBACK - Survey

Concerns about reducing Community GHGs & transitioning to Renewables



# USE OF ENGAGEMENT FEEDBACK

- Detailed survey & workshop questions – beyond those above
- Mitigation - provided indication of barriers, opportunities and support for specific action areas and approaches
- Adaptation – providing input to risk and vulnerability assessment and early ideas on action areas
- Review of input → used to develop 80% GHG emission reduction and 100% Renewable scenario(s) & adaptation actions





## NEXT STEPS

**Saanich**

# NEXT STEPS

## PHASE 3: Scenario Options and Analysis

*December – February 2019*

- Complete Phase 1 engagement
- Further analysis/modelling of scenarios & actions – technical review
- Integration of Climate Mitigation and Adaptation (+ co-benefits)

## Phase 2 PUBLIC ENGAGEMENT - *March – April 2019*

- On draft actions and scenario(s), prioritization

## PHASE 4: Review & Refine

*Spring/summer 2019*

- Draft Plan based on feedback

## Council Check-in



Questions?

[saanich.ca/climateplan](https://saanich.ca/climateplan)