

# **Finding Common Ground: Fighting Climate Change with Smart Energy**

**Patty Durand, President & CEO**  
**Smart Energy Consumer Collaborative**

# Who Is SECC?



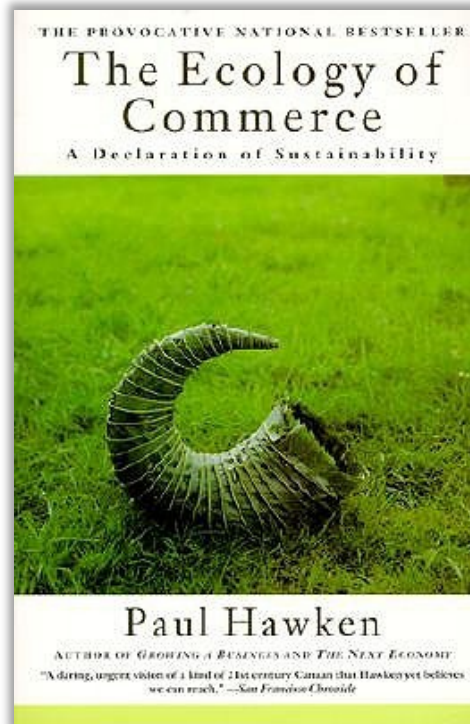


# *My story*





# *The angry question*



# *The smart grid*

**...must be completed**

***While it is running.  
Full-tilt.***





# Why smart energy?

*Smart grid enables more economic reduction of greenhouse gases*



## Energy Conservation

Studies show 5-15% energy reduction



## Renewables Integration

Smart grid enables more renewables added to grid



## Transportation Electrification

Electric motors more efficient



## Grid Efficiency

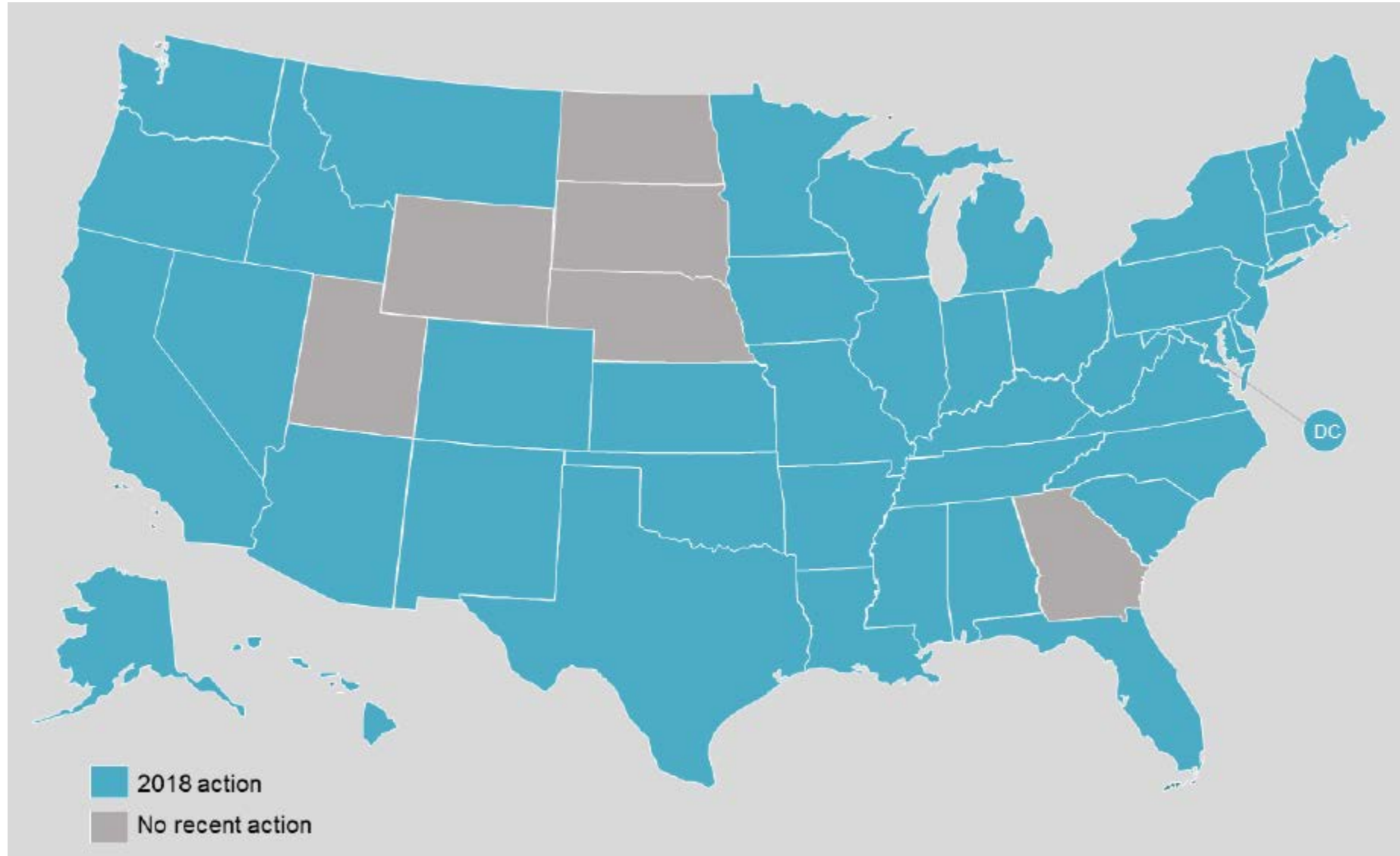
1-2% baseload improvements, more during peak



## EV with Renewables

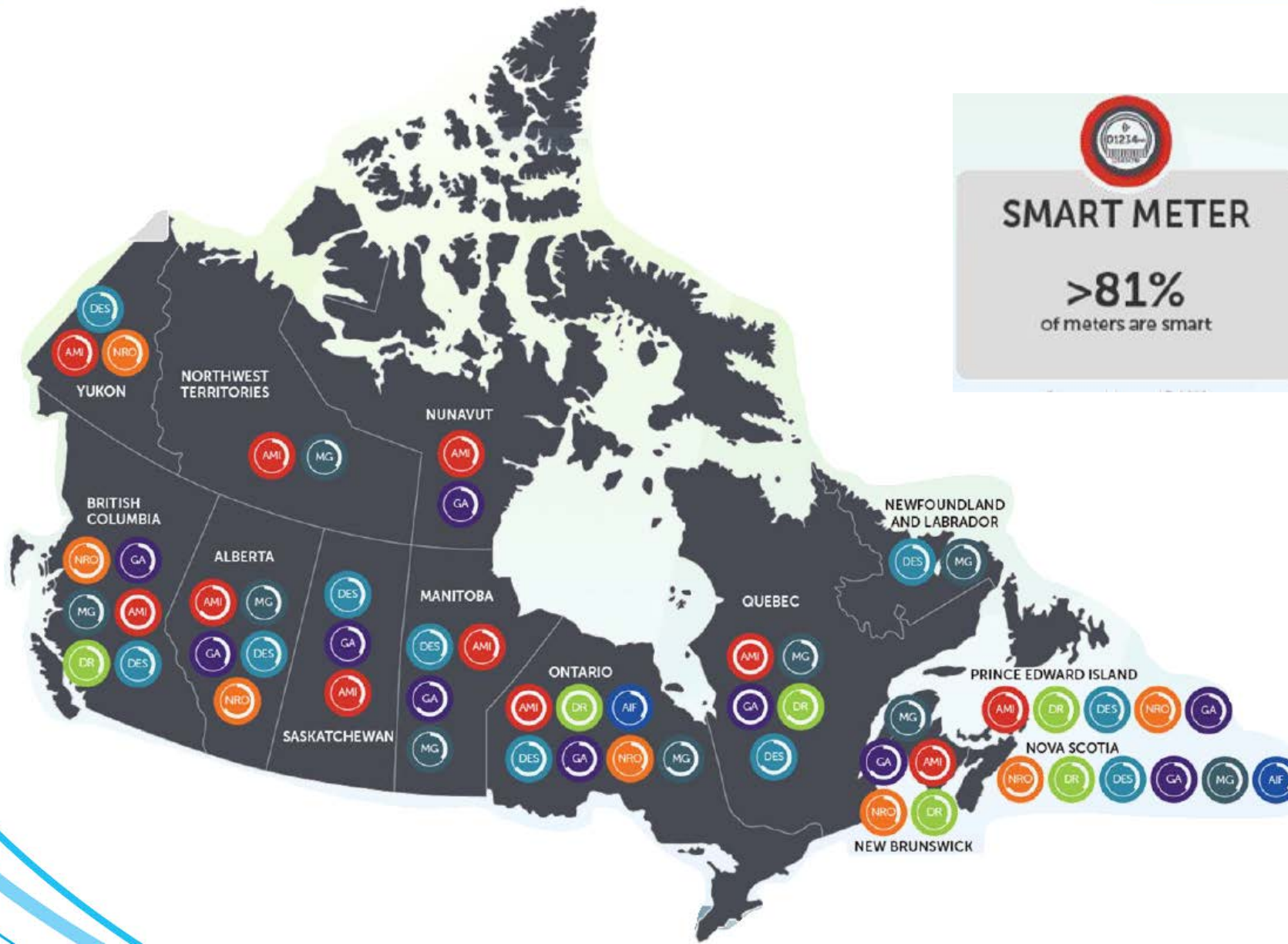
Zero GHG emissions if charged with renewables

# *Has U.S. made progress?*





# What progress has Canada made?



Natural Resources  
Canada



# Extreme weather events



THE CANADIAN PRESS/Andrew Vaughan  
NEWS



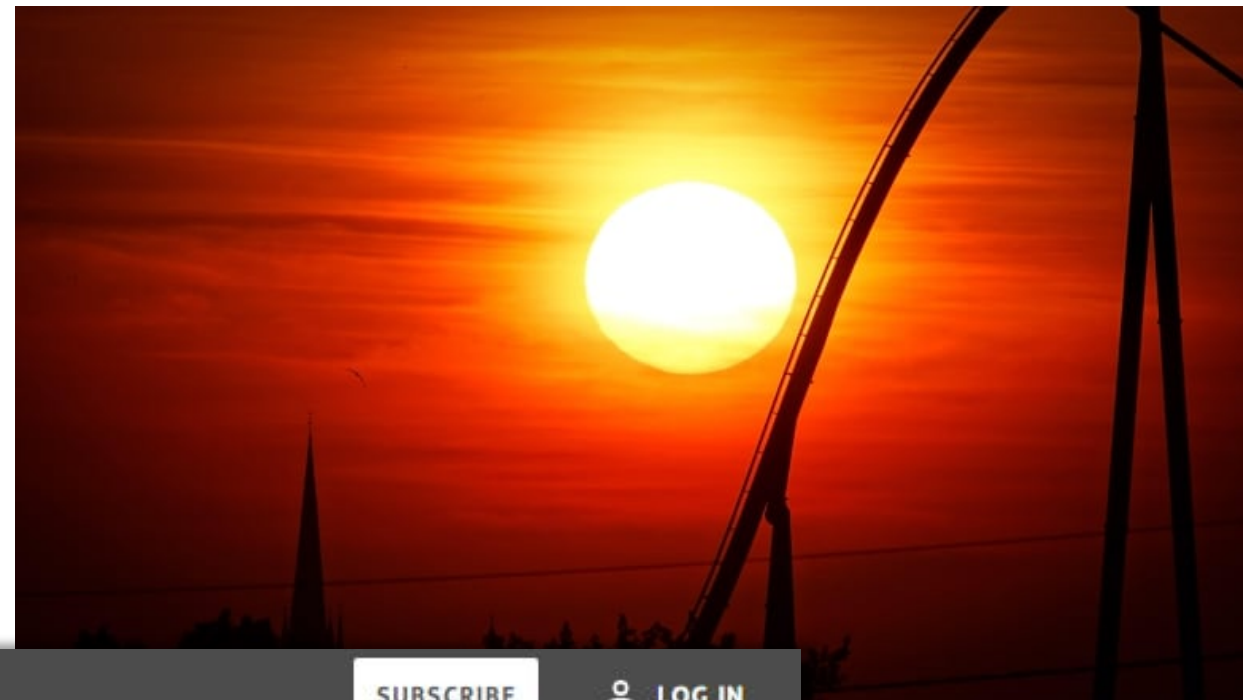
Matthew Bingley/CBC

**The Narwhal**

**Back-to-back historic floods in  
Atlantic Canada force a climate  
reckoning**



# Deadly heat waves



THE GLOBE AND MAIL CANADA

SUBSCRIBE

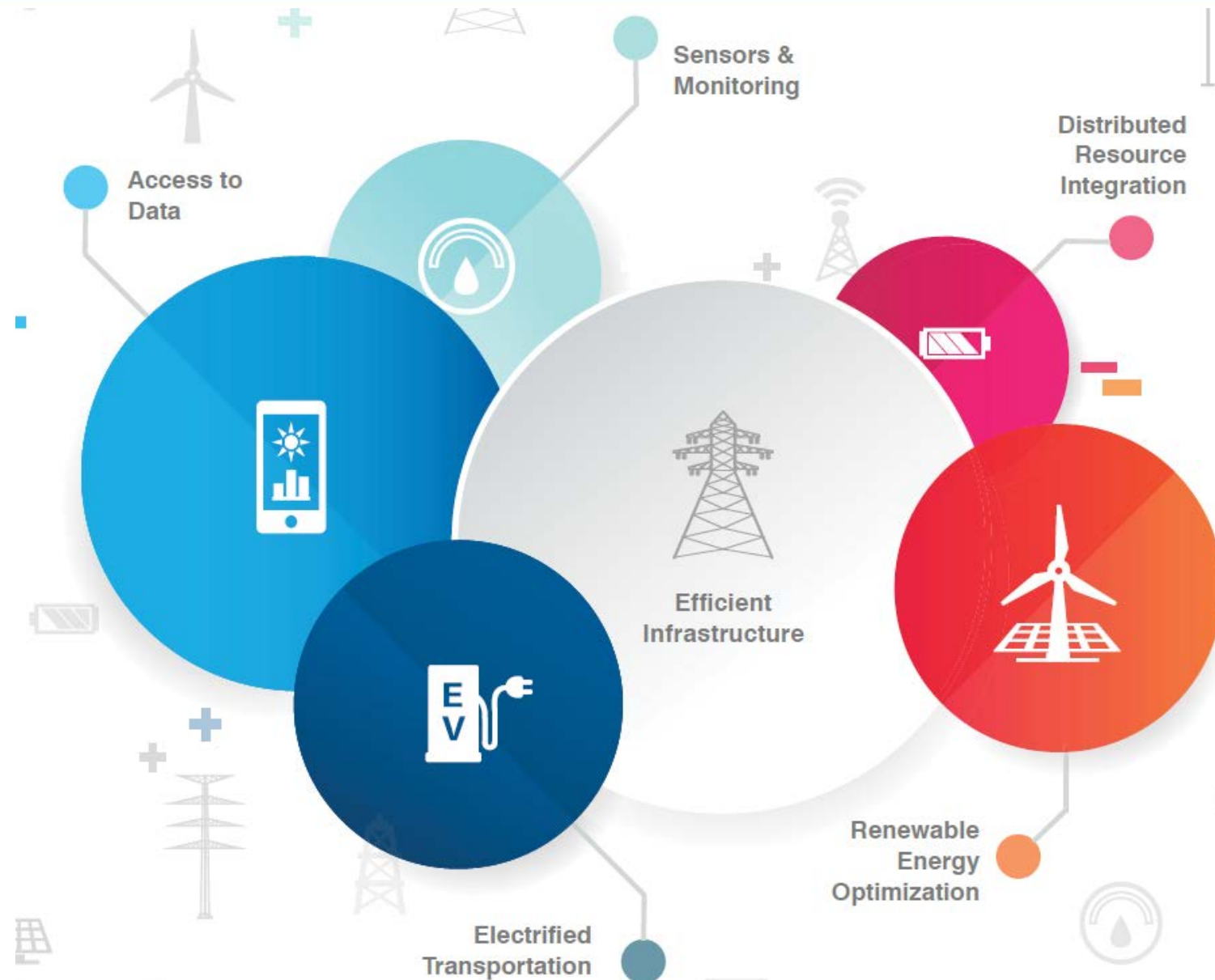
LOG IN

## Up to 70 people may have died in Quebec in connection with recent heat wave: health authorities

MONTREAL  
THE CANADIAN PRESS  
PUBLISHED JULY 9, 2018



# *Environmental Defense Fund's view*



# ***Examples of investments***



***Grid investments began  
in 2011 with the Energy  
Infrastructure  
Modernization Act***

***\$2.6 billion upgrade to  
electric grid***



An Exelon Company



***280,000+ interruptions avoided during worst winter on record***

***45% fewer outages on average***



# ***Are there savings?***

## ***Peak Time Savings***

### ***Simple actions***

***Since 2015 customers  
~ \$10.2 million in bill  
credits***



**Power Down During  
Peak Hours to Save.**

**Enroll in Peak Time  
Savings Today.**



# ***BC Hydro***

***BC Hydro ~ 95% of B.C.***

***Began implementation of  
the Smart Metering  
Program in 2011***

***1.9+ million smart meters***



**BC Hydro**  
Power smart

# Smart meters empower consumers

***~ 1 million customers are using tools to save money***

***HydroHome app results in \$150 + per year savings***

***One customer reported annual savings ~\$700***

**9:00 a.m.**

Turn off coffee pot remotely from work.

**3:00 p.m.**

Turn up thermostat before kids get home.

**4:30 p.m.**

Turn off power to TV, so kids do homework.





# *What's going on in California?*

***50,000 square miles across  
Southern California***

***Aggressive grid  
modernization and RE  
goals: 80% carbon-free by  
2030***



SOUTHERN CALIFORNIA  
**EDISON®**

# ***A cleaner grid!***

***By 2030 more than 7  
million EVs***

***2.4 million fewer tons of  
GHG***

***New rooftop solar every  
12 minutes***



# *California mandate for new homes*

Starting in **2020**, California will become the first state to **require all** newly built **homes** to have solar panels





# Consumer benefits - recap



**More Data, More  
Control, More  
Savings**



**More Reliable  
Electricity Year-  
round**



**More Renewables,  
Cleaner  
Communities**

***But do consumers care?***

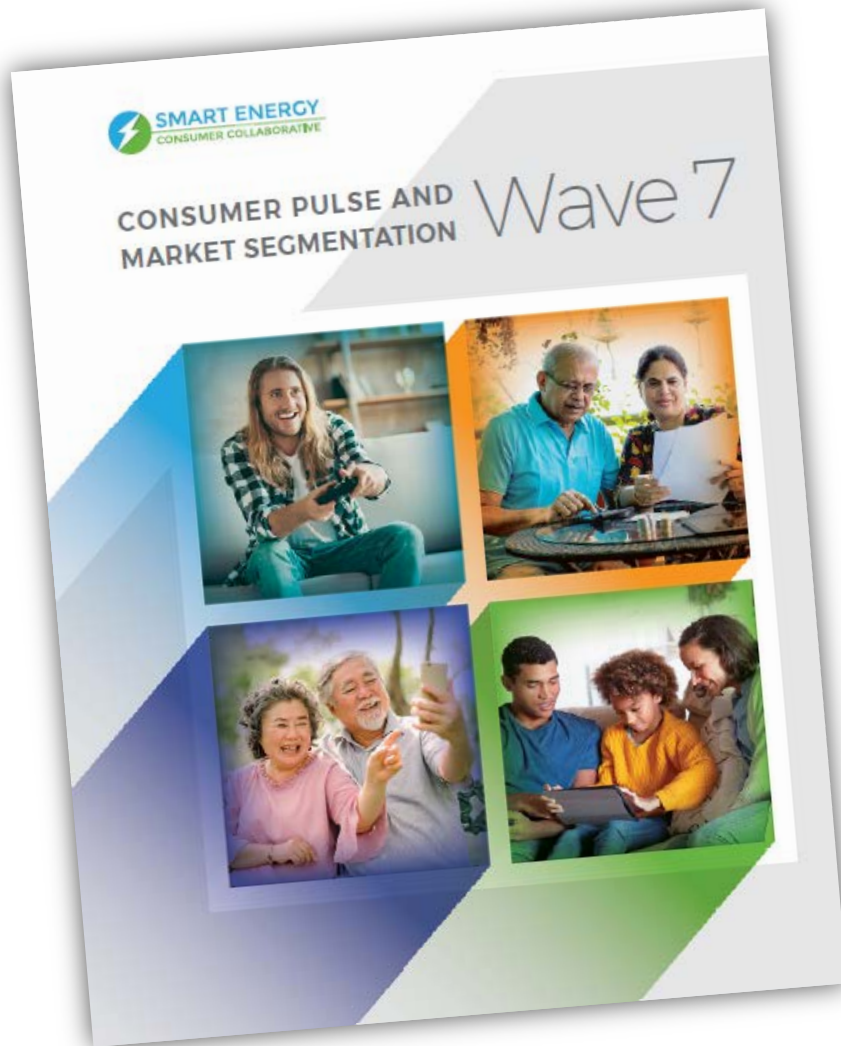


# *Home energy voice assistant*

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<https://www.youtube.com/watch?v=6dXLDT8BpO4>

# Consumer Pulse Study – Wave 7



**Largest longitudinal study  
of consumers**

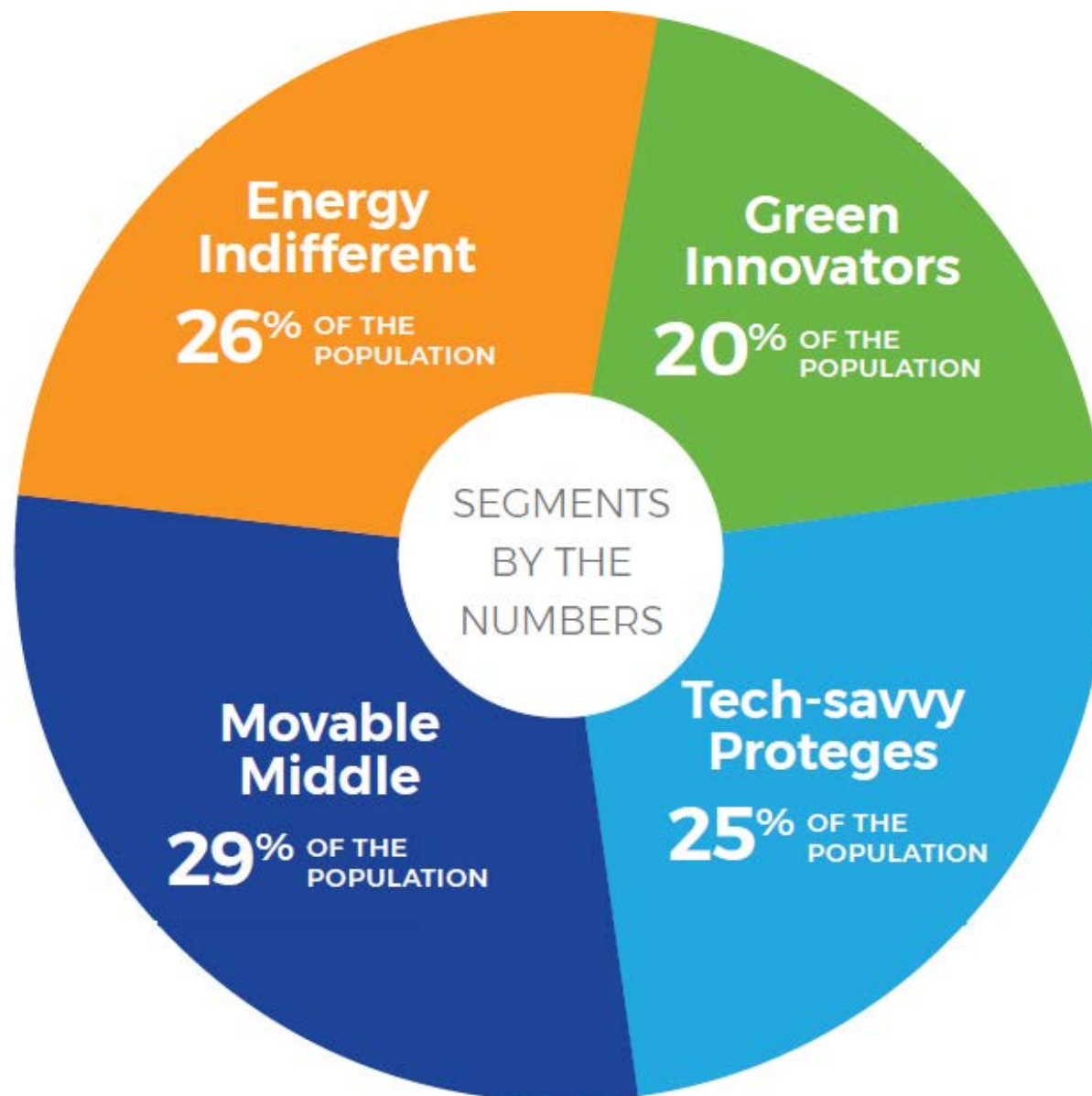
**Refreshed residential  
market segmentation  
framework**



## *Other digital experiences*



# What are consumer values?





# Green Innovators

*Energy Perspective:* Strongly value sustainability and lead the way in saving energy with technology.



- **Saving energy is very important to them**
- **Top two reasons to be energy-efficient:**
  - Money I can save
  - Environmental benefits
- **Own smart devices**
  - Smart thermostat (21%)
  - Smart speaker (30%)

# Tech-savvy Proteges

***Energy Perspective:*** Receptive to changing energy habits and using technology to do so



- Saving energy is important, but not at the expense of their technology or comfort
- Have the highest average energy bills
- Most likely to frequently be in contact with their energy provider

# *The Movable Middle*

***Energy Perspective:*** face few barriers; use technology, but not dependent upon it

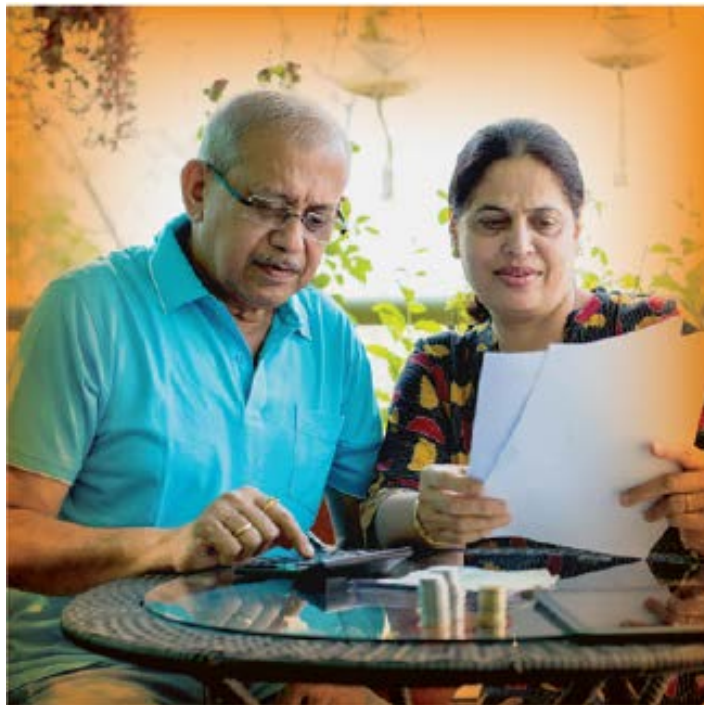


- **Neither tuned-out nor engaged – they’re the center of the bell curve in almost every way**
- **Values and beliefs are in line with national averages**
- **Motivated by saving money**



# *Energy Indifferent*

***Energy Perspective:*** Not concerned about the environment; simple energy and want to be left alone



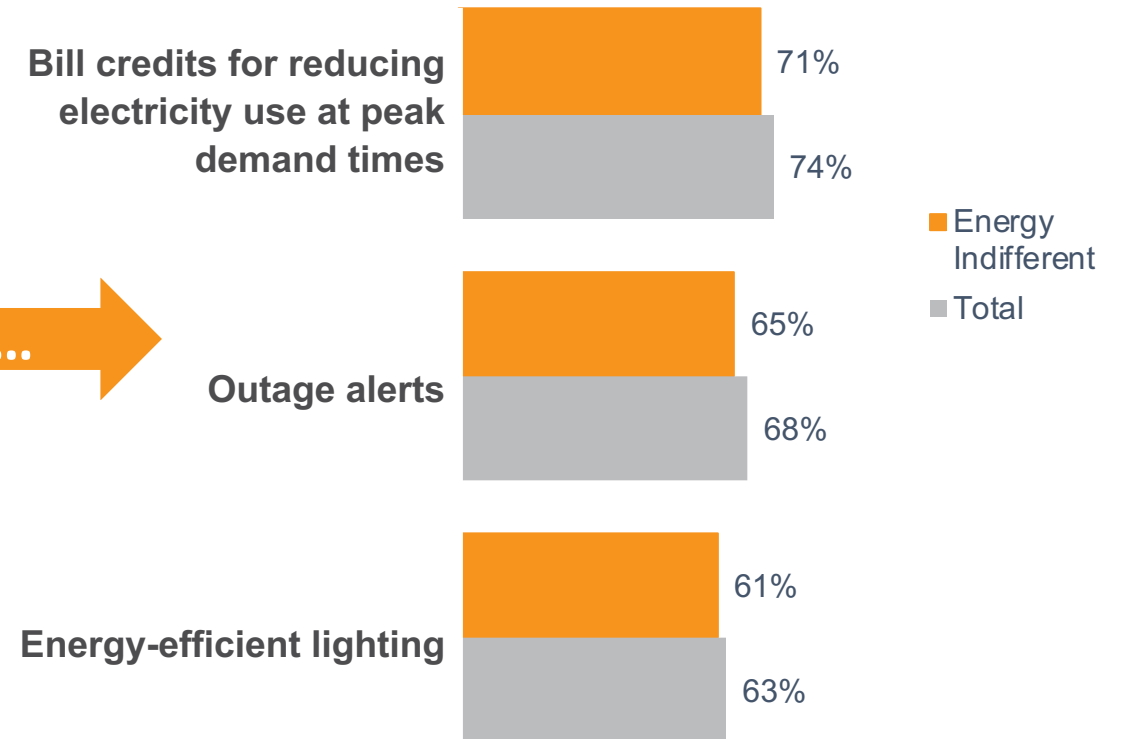
- **Traditionalists**
- **Low tech ownership rates**
- **Half believe climate change concerns are overblown**

## *Some opportunities exist*

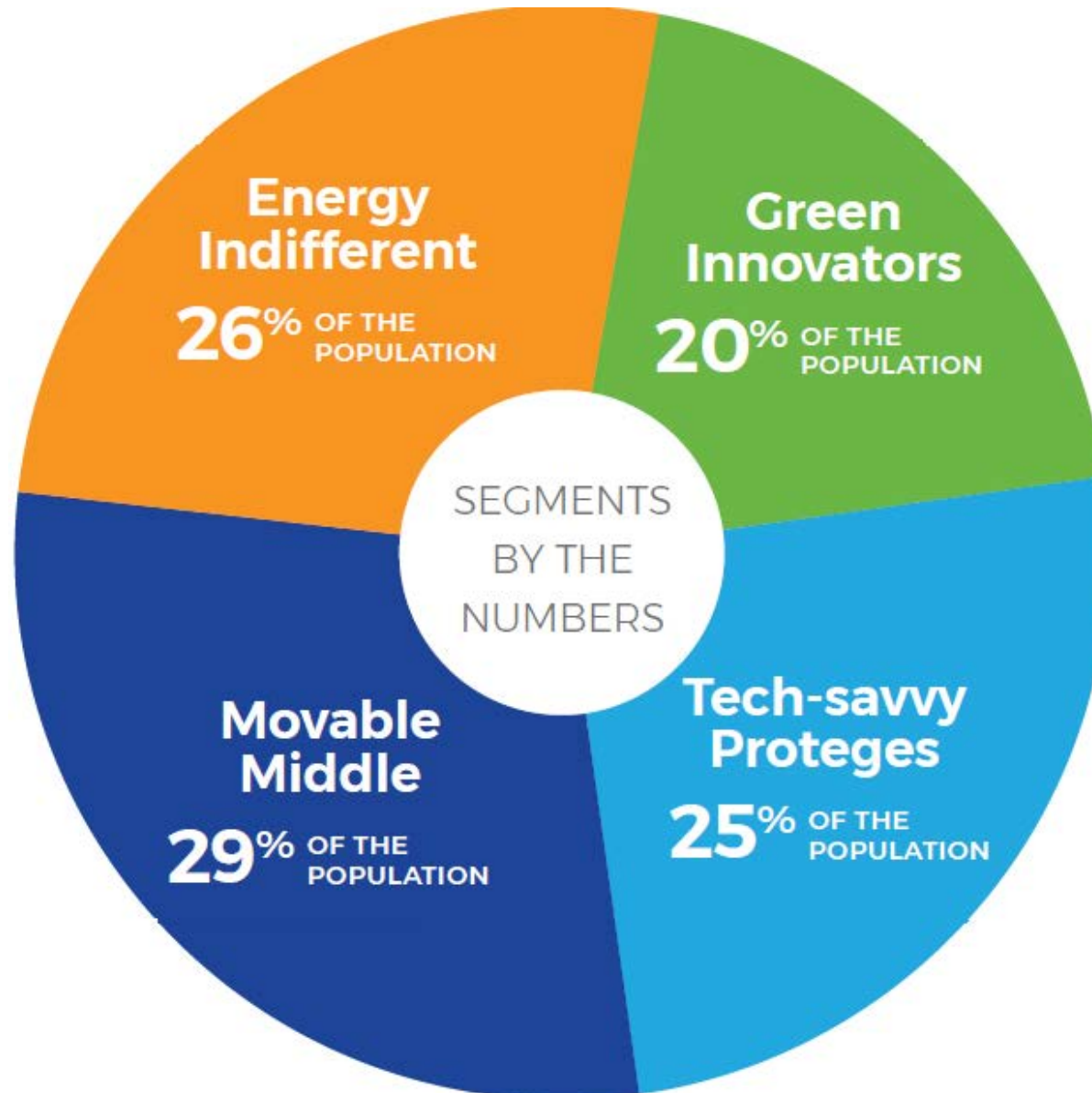
- Not interested in expanded services from their energy providers
- Not comfortable contracting with multiple energy partners
- Prefer flat rate plans



### Interest in Energy-Saving Programs



# SECC's consumer segments





# ***New Study: DERs***

**Consumer awareness  
and interests for  
distributed energy  
resources**

**Includes a separate  
sample of 543 Canadian  
consumers**



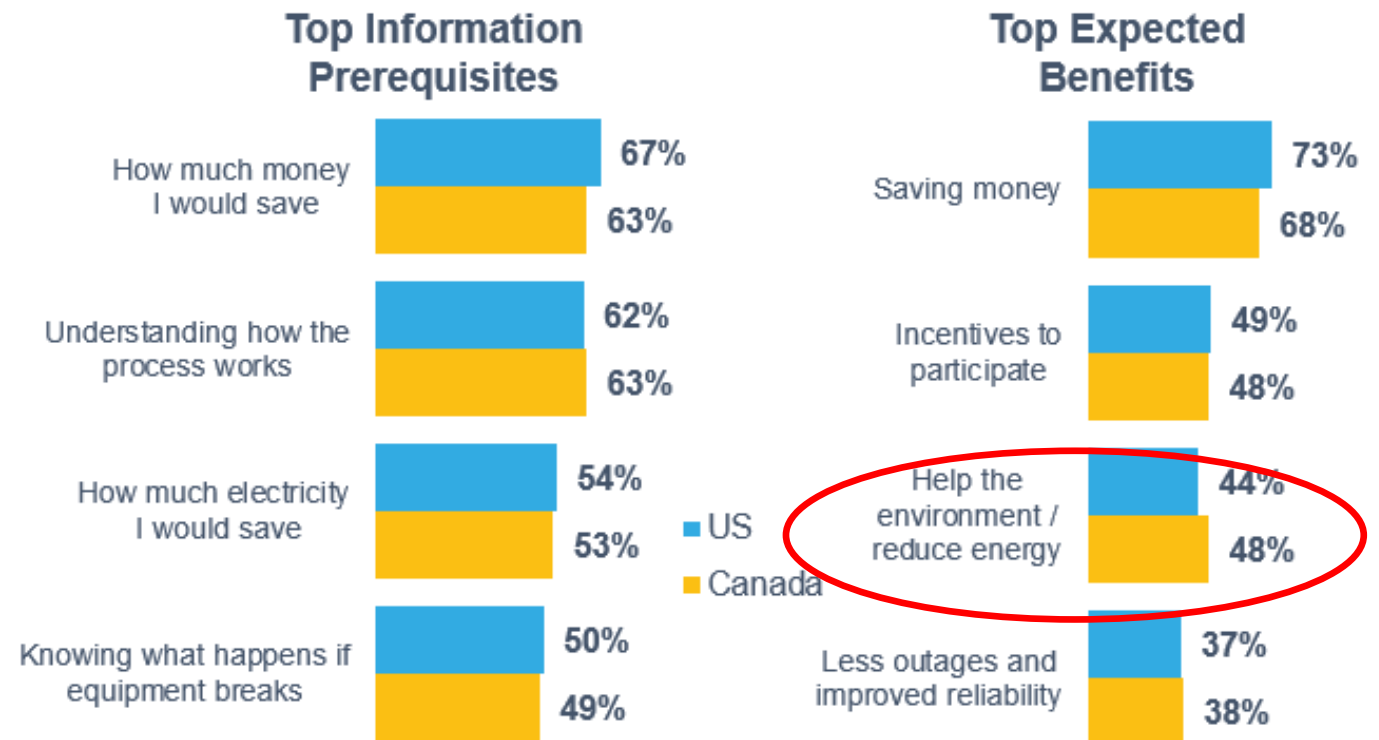
# Canadian DER Insights

Similar interest

Adoption is lower

More likely to think about others

## Consumer Needs & Expectations of DER



Q\_Information. What information would you need before signing up for or purchasing these products and services?

Q\_Benefit. What benefits, if any, would you expect to receive from using any of the Distributed Energy Resources?

Q\_Base: All US General Population Respondents, n=1500; All Canadian General Population Respondents, n=543

# 2020 Consumer Symposium



## Keynote Speaker



**Paula Gold-Williams**

**President & CEO**  
**CPS Energy**



**DISTRIBU**TECH****<sup>™</sup>  
— INTERNATIONAL —



## ***In summary***

- **Consumers care about energy**
- **Consumers want digital experiences similar to other industries**
- **Smart energy is required to ramp renewable energy and EVs**
- **Smart energy is essential to addressing climate change**

# Questions & Contact Info



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