



Replace Your Ride

Tackling transportation poverty
and accelerating emissions reduction

Presentation to House Transportation Committee
Linda McGinnis, Economist and Sr. Fellow, Energy Action Network
February 10, 2021



Energy Action Network (EAN) 2020 Summit

EAN	Network of 100+ Members and 100+ partners.
Mission	Achieve VT's Comprehensive Energy Plan total energy goals and significantly reduce GHGs in ways that create a more just, thriving and sustainable future for Vermonters.
Members & Partners	Members: Organizations, Businesses, Utilities, Higher Education, Finance, others Public Partners: Local, State, Federal agencies
How	Neutral non-partisan convenor. Work with public partners to collect data, track progress, and provide objective, trusted analysis toward energy and climate commitments.
Annual Summit	Gathering of all members and partners around core climate/energy theme. 2020 Theme = Transportation and thermal Equity
Pitch Process	Policy Pitches: like 'Shark Tank' only nicer... Replace Your Ride voted among top 4!

Replace Your Ride Team

Steering Committee

- Linda McGinnis, **EAN** (Co-Chair) and Peggy O'Neill-Vivanco, **VT Clean Cities/UVM Transportation Research Center** (Co-Chair)
- Dave Roberts, **VEIC/Drive Electric Vermont**
- Marilyn Miller, **Vt Auto Dealers Association**
- Nancy Seidman, **Regulatory Assistance Project**
- Dana Rowangould, **UVM Transportation Research Center**

Advisory Committee

- **Capstone Community Development:** Sue Minter, Paul Zabriskie
- **VEIC/Efficiency Vermont:** Carole Weston, Kelly Lucci, Hillary Andrews, Jennifer Wallace-Brodeur
- **Utilities:** GMP, BED, VPPSA, VEC
- **CATMA:** Sandy Thibault
- **LocalMotion:** Karen Yacos & Sandy Bender, **LocalMotion**
- **Vt Public Transit Authority:** Elaine Haytko
- **Old Spokes Home:** Laura Jacoby,
- **VBSR:** Jordan Giaconia
- **Sierra Club:** Robb Kidd
- **VNRC & Transportation 4 VT:** Johanna Miller, Kate McCarthy
- **CarShareVT:** Annie Bourdon
- **TNC:** Lauren Oates

- **Cody Chevrolet:** Bob Cody
- **Used Car Dealership:** Jane Lowery
- **Community Action Programs and OEOs:** Steve Gellar, President and all Directors
- **Vital Communities:** Bethany Fleishman
- **Energy Action Network:** Jared Duval, Cara Robeckek, Mei Butler

Public Partners

- **Agency of Transportation:** Michele Boomhower, Dan Dutcher
- **Agency of Natural Resources:** Heidi Hales
- **State Legislators:** House and Senate Transportation Committees
- **Senator Leahy's office:** Tom Berry
- **Senator Sanders' office:** Haley Pero, Katie Thomas

Others Needed

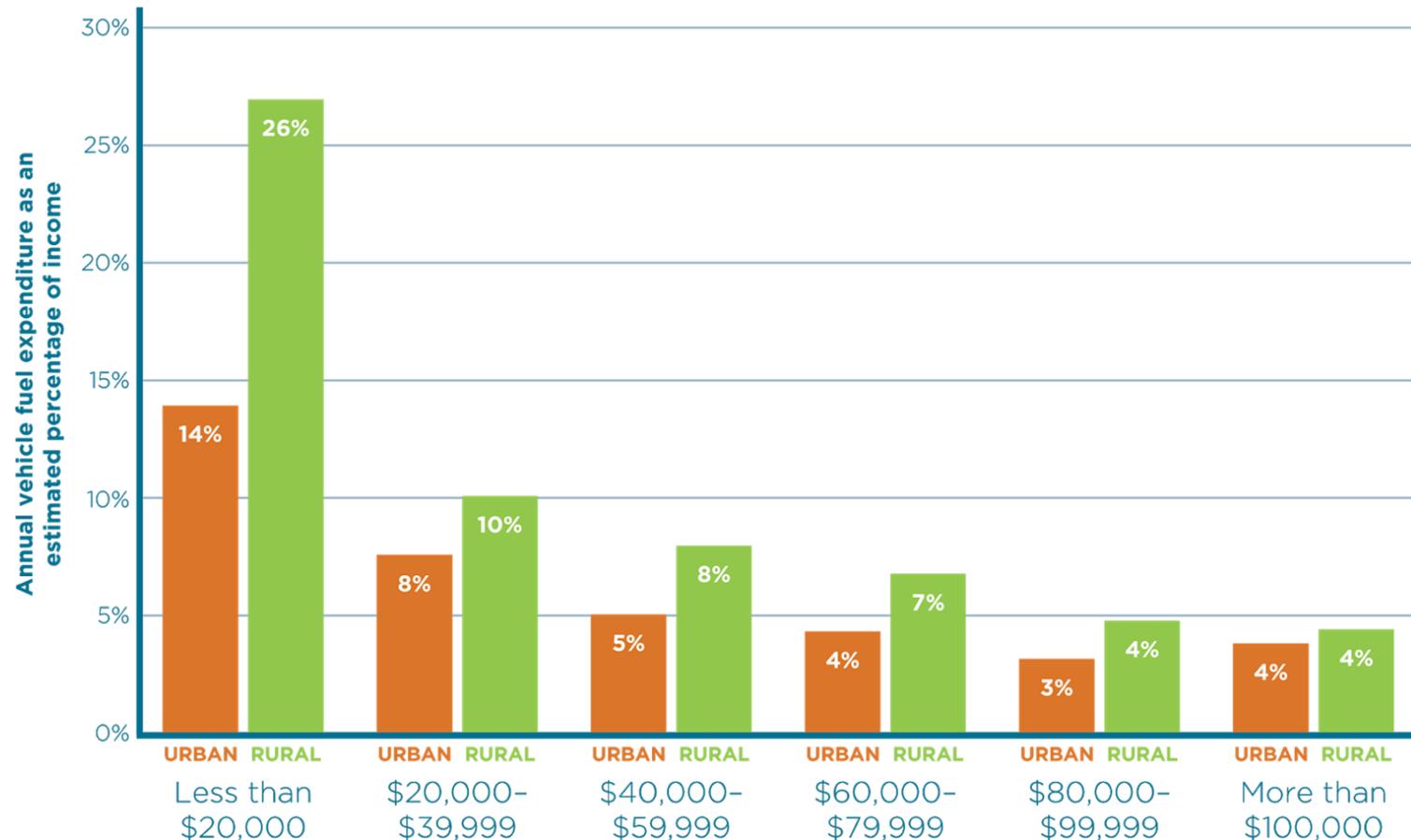
- Car Inspection Centers/DMV
- More Used Car Dealers
- Scrap & salvage yards
- Go! Vermont
- Private Ride-sharing
- Others

Tackling Transportation Poverty



Poorest VTers spend up to 27% income on gas/diesel

Vermont 2009 annual vehicle fuel expenditure burden by income and location-type

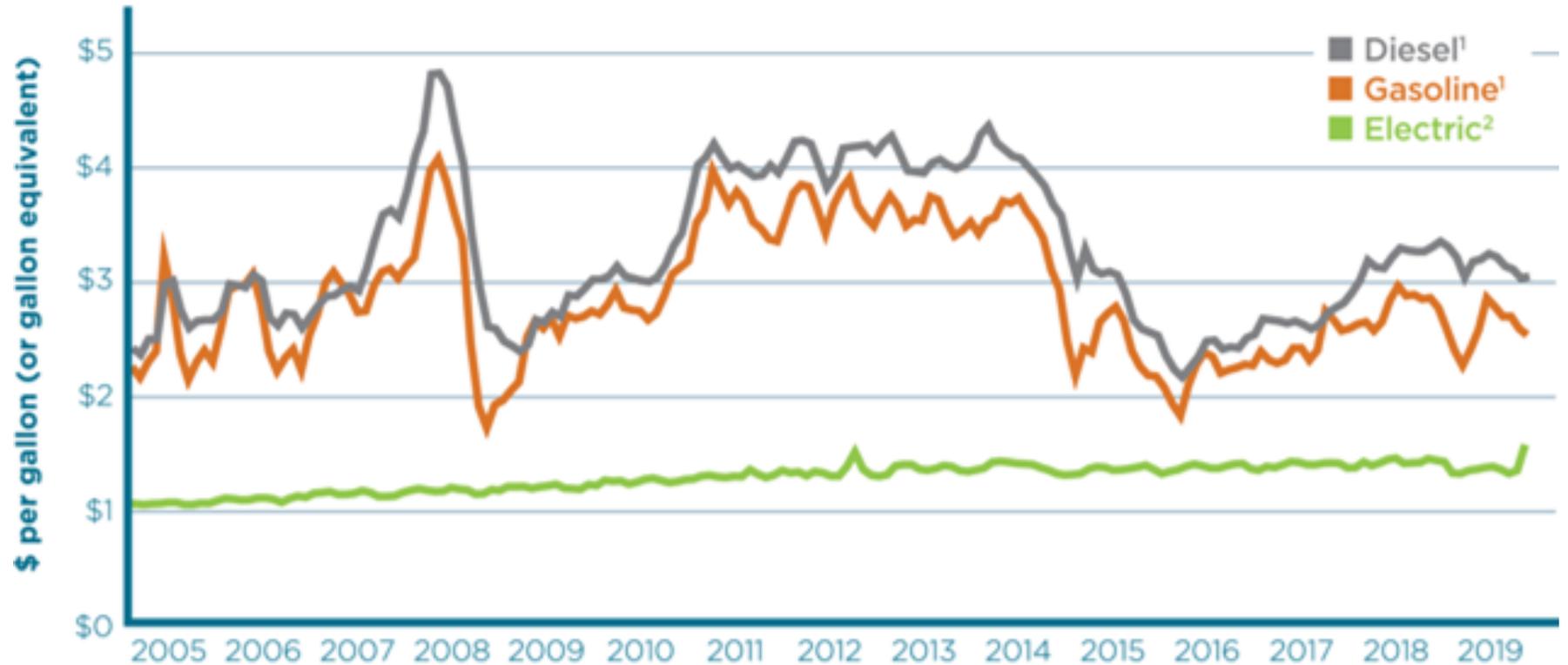


Getting to essential jobs, school, services can make or break a monthly budget

Gas/diesel prices are higher, more volatile than electricity

Putting poor households at greater risk.

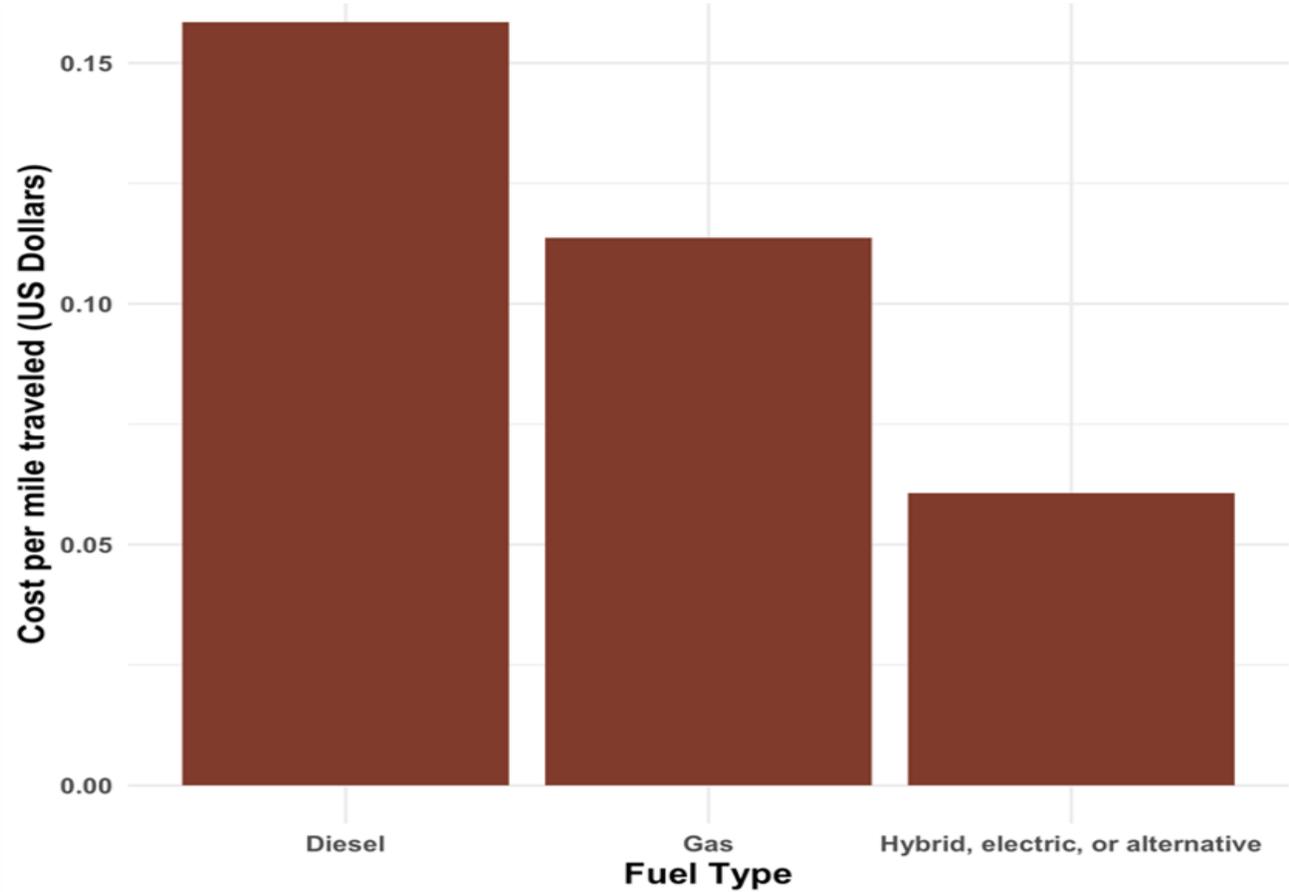
Filling up an EV 'tank' is much less expensive, and prices more predictable than filling up a gas tank



1. Fuel prices (gasoline and diesel) from the Vermont Agency of Transportation (VTrans) and Drive Electric Vermont. **2.** Electric charging costs (gallon equivalent) calculated by Drive Electric VT, based on EIA data on average Vermont residential electric rates and the average efficiency of light-duty electric and gasoline vehicles.

EVs Less Expensive to Drive

Average Cost/Mile Travelled by Fuel Type



Source: US Department of Transportation, 2017 National Household Travel Survey

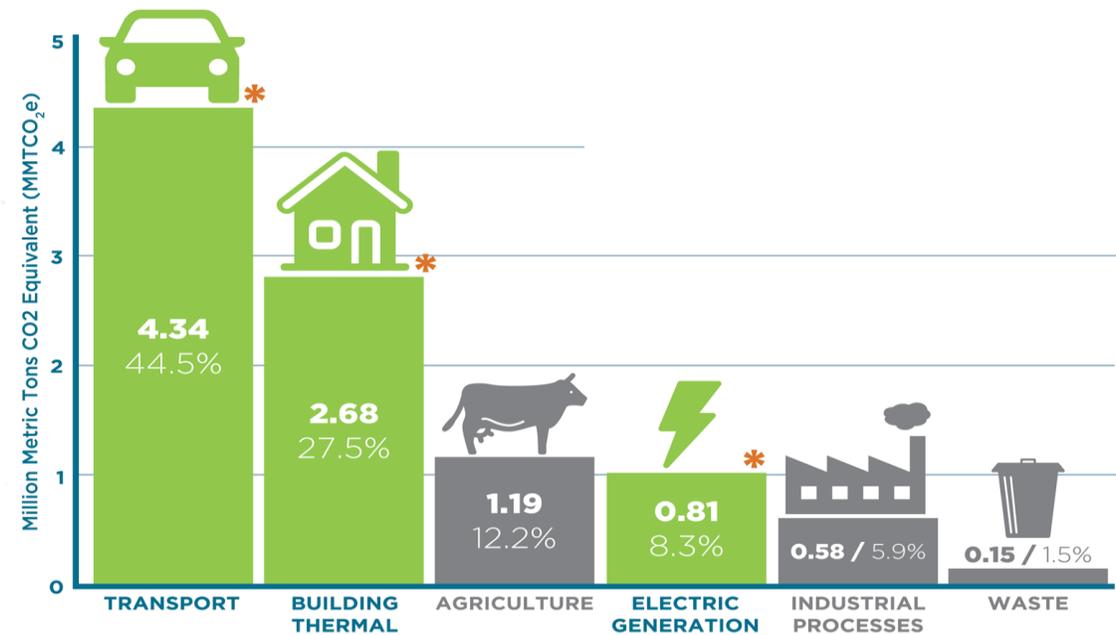
A 2020 study by the Union of Concerned Scientists found that **rural drivers stand to save the most from EVs, and that the average rural Vermont driver stands to save about \$1,900/year from driving an EV.**

Accelerating Transportation Emissions Reduction

45% of Vermont
total emissions
(and GROWING)

On-road gas/diesel
= 74% of total
transportation
emissions

Vermont's GHG emissions by sector¹



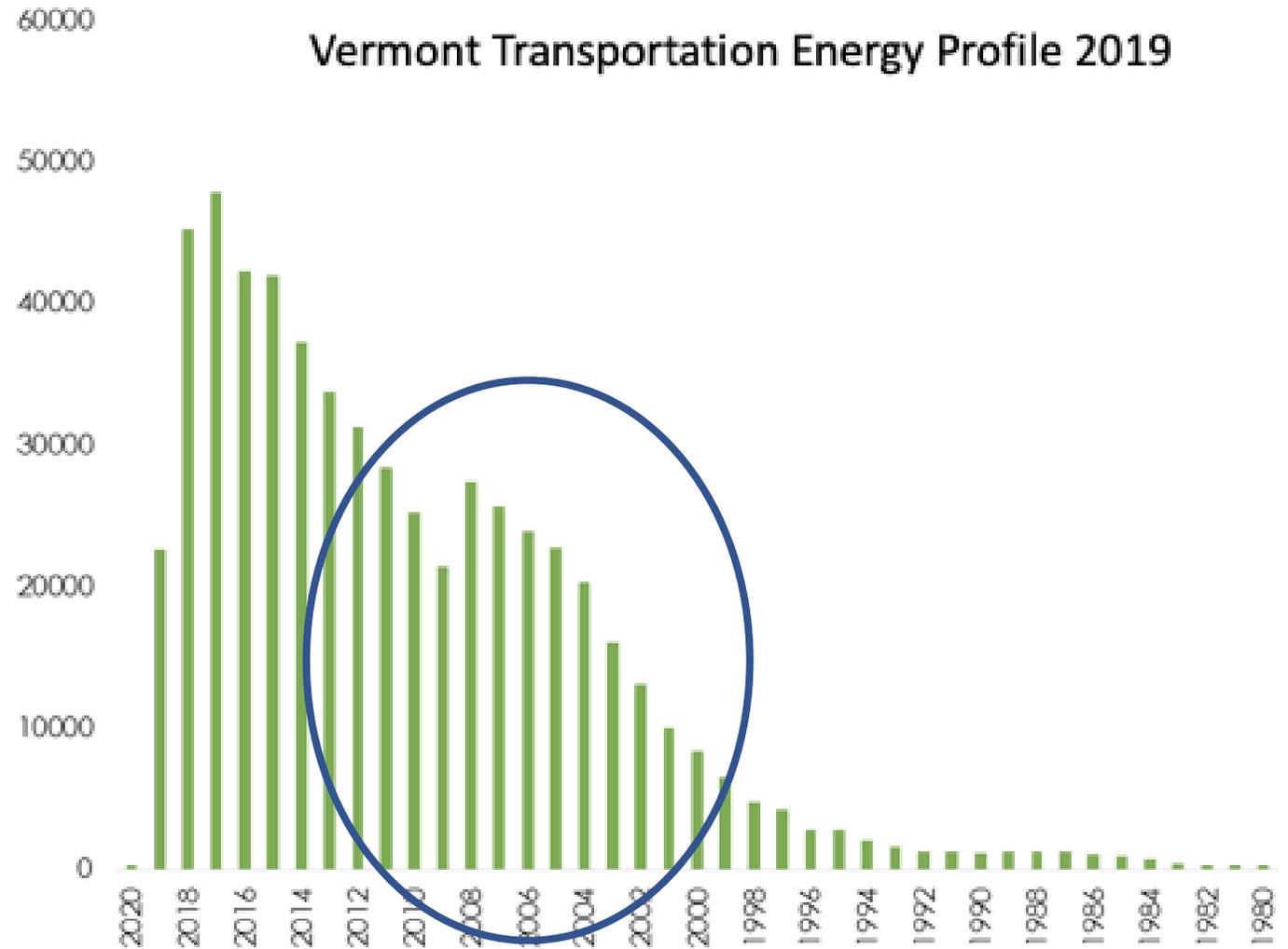
54% of VT vehicles
are older than
2012 (321,000+)

The older the car,
the higher the
pollution

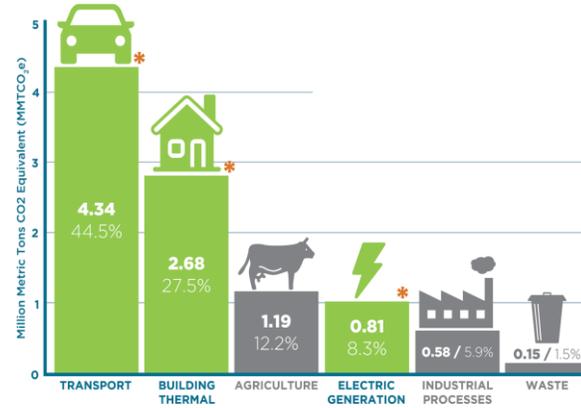
Age of Vehicles on VT Roads

Cars
MY 2010 and
older
(179,000+)

Vermont Transportation Energy Profile 2019



Vermont's GHG emissions by sector!



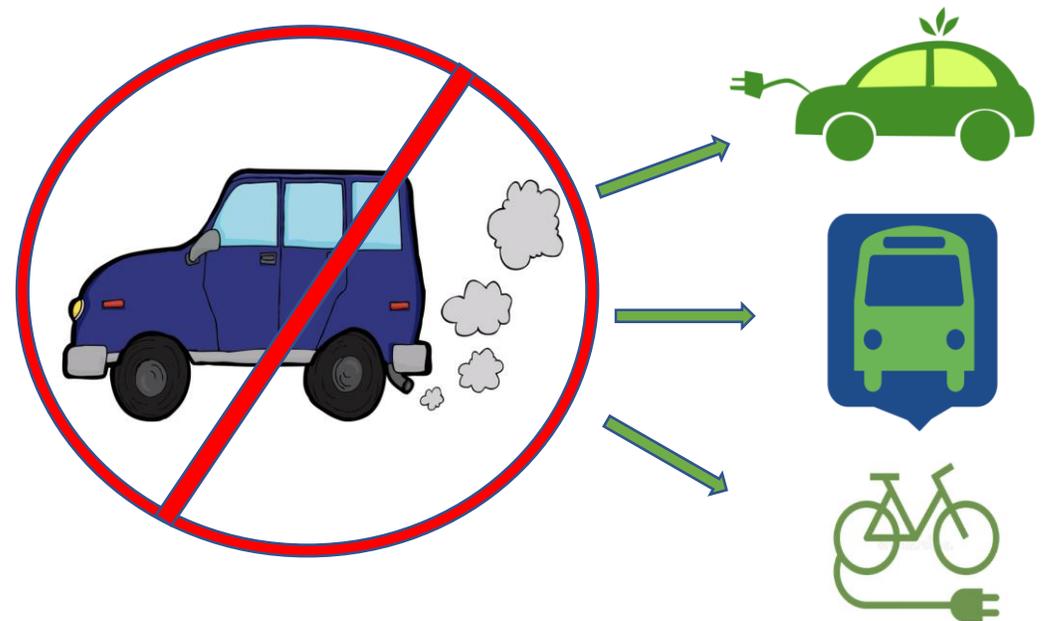
How can we address both challenges?



Replace Your Ride

\$3000 incentive for low-income Vermonters to:

- 1. Scrap** older high-polluting vehicle (MY2010 and older)
- 2. Replace** with new/used EV/PHEV, Electric bike/motorcycle, or shared-mobility options
- 3. Stack** on top of existing incentives



REMOVE OLD VEHICLE + REPLACE WITH CLEAN ALTERNATIVE = DOUBLE the emissions impact!

Stacked incentives put real \$\$ in the pockets of low-income Vermonters

New EV purchase

Replace Your Ride
(\$3,000)

Utility Incentives
(vary \$500 - \$2,500)

State Incentives
(up to \$4,000)

Federal Incentives
(up to \$7,500)

**TOTAL Incentives:
up to \$17,000**

Used EV purchase

Replace Your Ride
(\$3,000)

Utility Incentives
(vary \$0 - \$1,750)

MileageSmart
(25% of vehicle cost up to \$5,000)

**TOTAL Incentives:
up to \$10,000**



Ongoing savings on fuel and maintenance expenses

New EV Price with Incentives

Most Popular 2020

Nissan Leaf
Chevy Bolt

	Nissan LEAF 150 Mile Range		Nissan Sentra
	Standard Incentive	< \$50k Income Incentive	
Starting Price	\$31,600	\$31,600	\$19,310
Federal Tax Credit	-\$7,500	-\$7,500	--
State Incentive	-\$2,500	-\$4,000	--
OEM Discount	-\$6,000	-\$6,000	--
Utility Incentive	-\$1,500	-\$2,500	--
Price after Incentives	\$14,100	\$11,600	\$19,310
Replace Your Ride		\$3,000	
Price After RYR		\$8,000	\$19,310

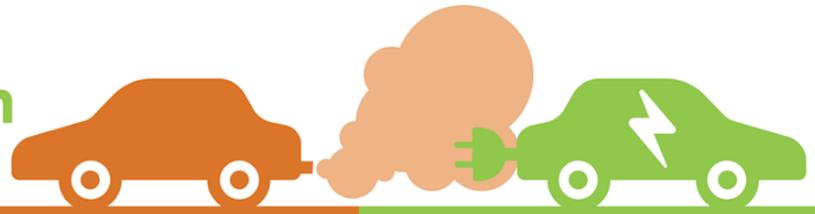
PLUS annual operations and maintenance savings of \$500 to \$2,000

Used EV Price with Incentives

	Model Year 2014		Model Year 2017	
	ELECTRIC Nissan LEAF (Range 75 m)	GAS Nissan Sentra	ELECTRIC Chevy Bolt (Range 238 m)	GAS Nissan Sentra
Starting Price	\$8,000	\$7,500	\$17,000	\$15,000
Mileage Smart	- \$2,000	-	-4,250	-
Utility Incentive (varies)	- \$1,500	-	-1,500	-
Current Price After Incentives	\$4,500	\$7,500	\$11,250	\$15,000
Replace Your Ride	-\$3,000	-	-3000	-
Price After Incentives	\$1,500	\$7,500	\$8,250	\$15,000

Low O&M
Saves
\$10,000
over life of
vehicle

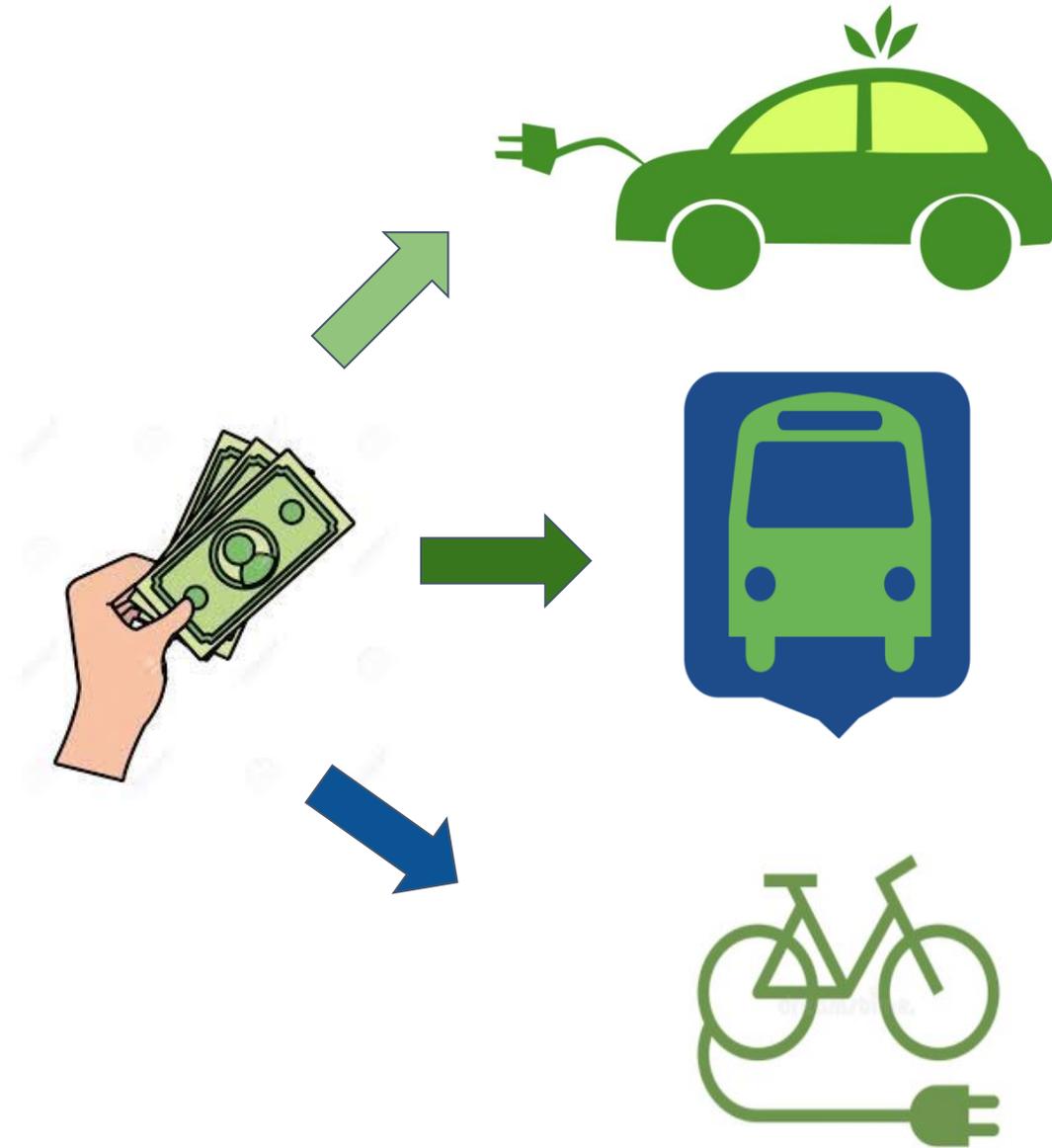
Gas vs. EV cost comparison over 150,000 miles¹



	GAS VEHICLE	ELECTRIC VEHICLE
Fuel	\$17,585	\$9,164
Oil Changes & Filter Replacement	\$900	None
Tire Changes	\$600	\$600
Engine Air Filter Replacements	\$207	None
Cabin Air Filter Replacements	\$273	\$273
Spark Plug Replacements	\$439	None
Coolant Flush and Replacement	\$110	\$110
Total	\$20,114	\$10,147

1. American Automobile Association. 2018. Your Driving Costs.

RYR allows low-income Vermonters to choose the type of clean transportation options that fits their needs



Impact: Democratize the Benefits of Clean Transportation

Affordability

Reduce both vehicle purchase costs and monthly transportation costs for low-income Vermonters

Access

Increase mobility and access to services

Predictability

Eliminate volatility of gas prices for vulnerable

Economy

Keep more \$ local with renewable electric power for vehicles.
New opportunities for Auto Dealers.

Health

Improve air quality for vulnerable

Emissions

Accelerate emissions reductions by both removing older vehicles permanently and replacing with low/no emissions vehicles

What's Happened So Far?

- Jan - Oct 2020: Core team defined parameters modeled off successful CA program
- Oct 2020: EAN 2020 Summit Pitch – selected for funding and staff support
- Nov 2020: Established Steering Committee and Advisory Group
- Jan 2021: Replace Your Ride included in draft House Transportation Modernization Act and in Administration Budget Proposal (\$1.5m)

National Level Seachange

→ Manufacturers/Dealers

- ◆ Currently 40 models from 20 manufacturers
- ◆ Top companies: Nissan, Chevrolet, Tesla, BMW
- ◆ Manufacturing ramping up
- ◆ Prices dropping (now from low \$20K)
- ◆ AWD and SUVs now available
- ◆ Trucks on market 2021 (4 models)

→ Federal Administration

- ◆ Focus on vehicle electrification and expanding public transit
- ◆ New and Improved Cash for Clunkers
- ◆ <https://www.npr.org/2021/02/02/963115508/biden-administration-wants-electric-vehicles-to-replace-gas-guzzlers>

→ State Level

- ◆ Massive investment in charging stations
- ◆ Widespread EV/PHEV incentives

GENERAL MOTORS (Jan 2021)

“Climate change is real, and we want to be part of the solution by putting everyone in an electric vehicle.”

- Mary Barra, GM Chair and CEO

No new Gas powered vehicles by 2035
30 new EV Models by 2025



Takeaways Why RYR?

1. **Makes switching to clean transportation much more affordable for low-income Vermonters**
2. Reduces monthly fuel and operations costs
3. **Stackable** on existing State and MileageSmart incentives
4. Targets low-income only
5. **Options:** Gives Low income Vermonters a choice among cleanest transportation options
6. **Administratively seamless:** RYR could use either income eligibility method (AGI or weatherization), depending on implementing program
7. Bonus: RYR adds **scrappage** for more GHG reductions



Thank You!

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Policy Analyst