



# Electric Vehicles Powered by Renewable Energy can Save Wisconsin Billions

CHRISTINA ZORDANI AND DR. ANDREW LEWANDOWSKI



**Christina Zordani**

**Electric Vehicle Intern for RENEW WI**

**Second year graduate student at  
UW-Madison in the La Follette School  
of Public Affairs focusing on energy  
policy**



Andrew Lewandowski, DO, FAAP

Community Pediatrician in Madison, WI

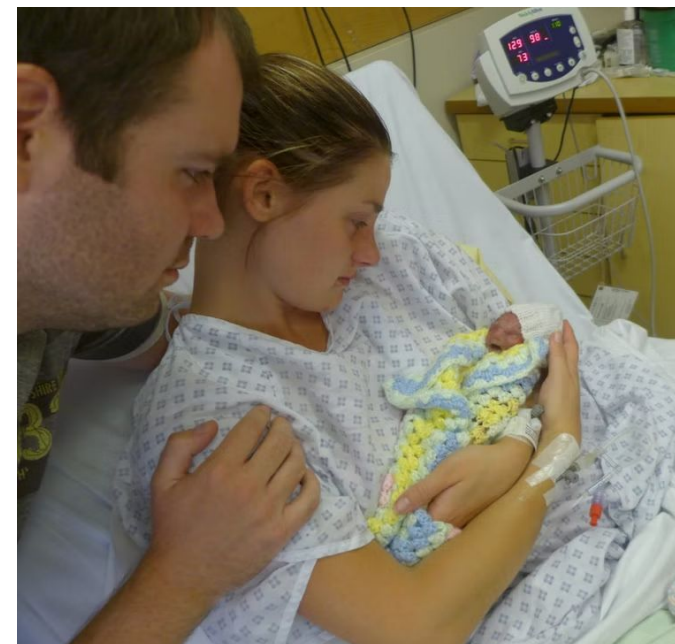
Climate Medicine Physician with a career emphasis on climate change and health messaging and education.





RENEW Wisconsin is a nonprofit organization dedicated to building a stronger, healthier, more vibrant Wisconsin through the advancement of renewable energy. We work on policies and programs that support solar power, wind power, biogas, local hydropower, geothermal energy and **electric vehicles**.







# Transportation Related Air Pollution

- NOx and SOx
- CO
- PM 2.5
- Ozone
- Benzene
- Polycyclic Aromatic Hydrocarbons
- Black Smoke
- Lead
- Volatile Organic Compounds

Respiratory Disease

Cardiovascular Disease

Poor Birth Outcomes

Poor Neurodevelopmental Outcomes

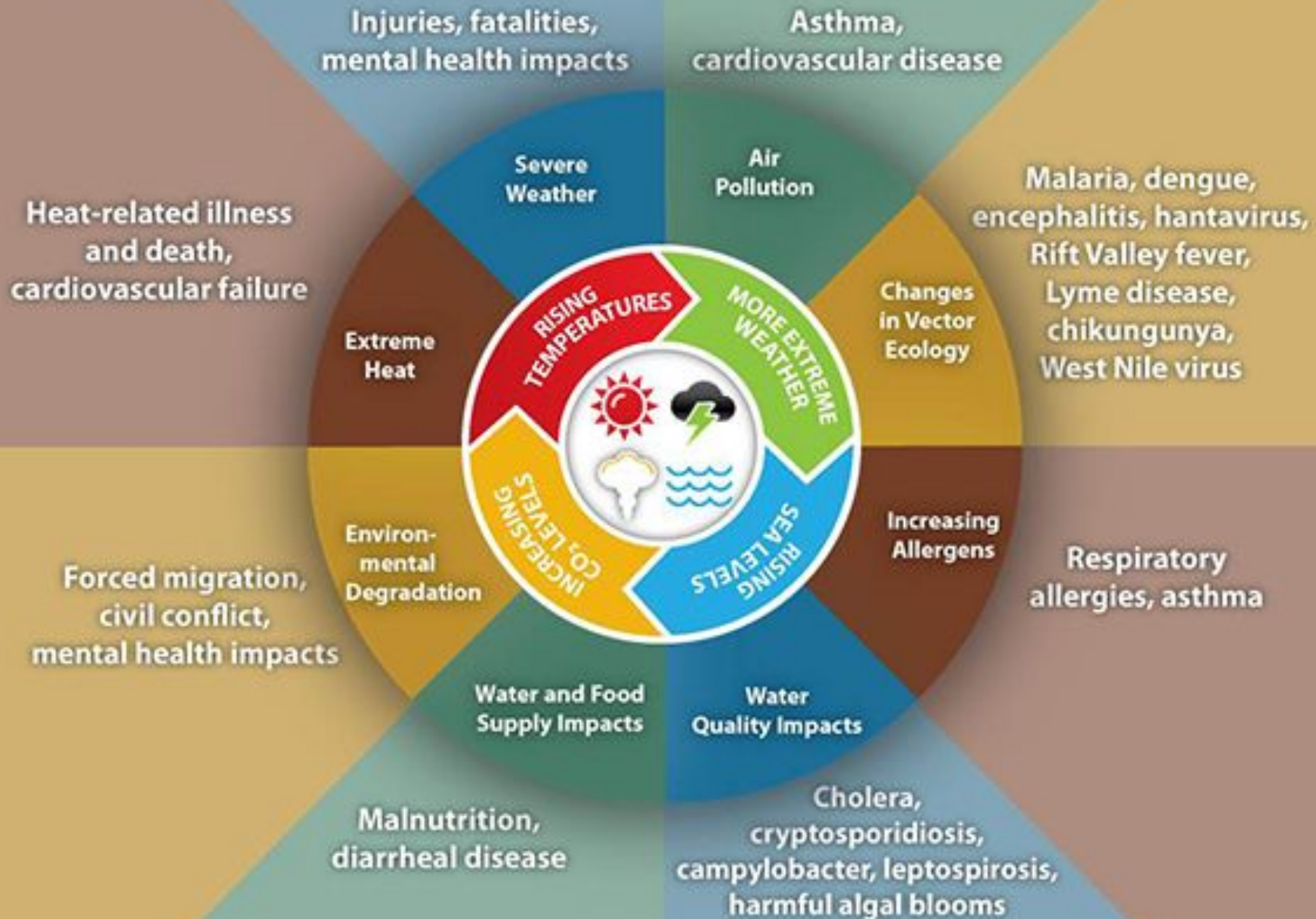
Cancer

---

# I'm okay because I don't live hear a highway...

- School buses
- Agricultural machinery exposures
- Vehicle idling
- Vehicle efficiency considerations

# Impact of Climate Change on Human Health



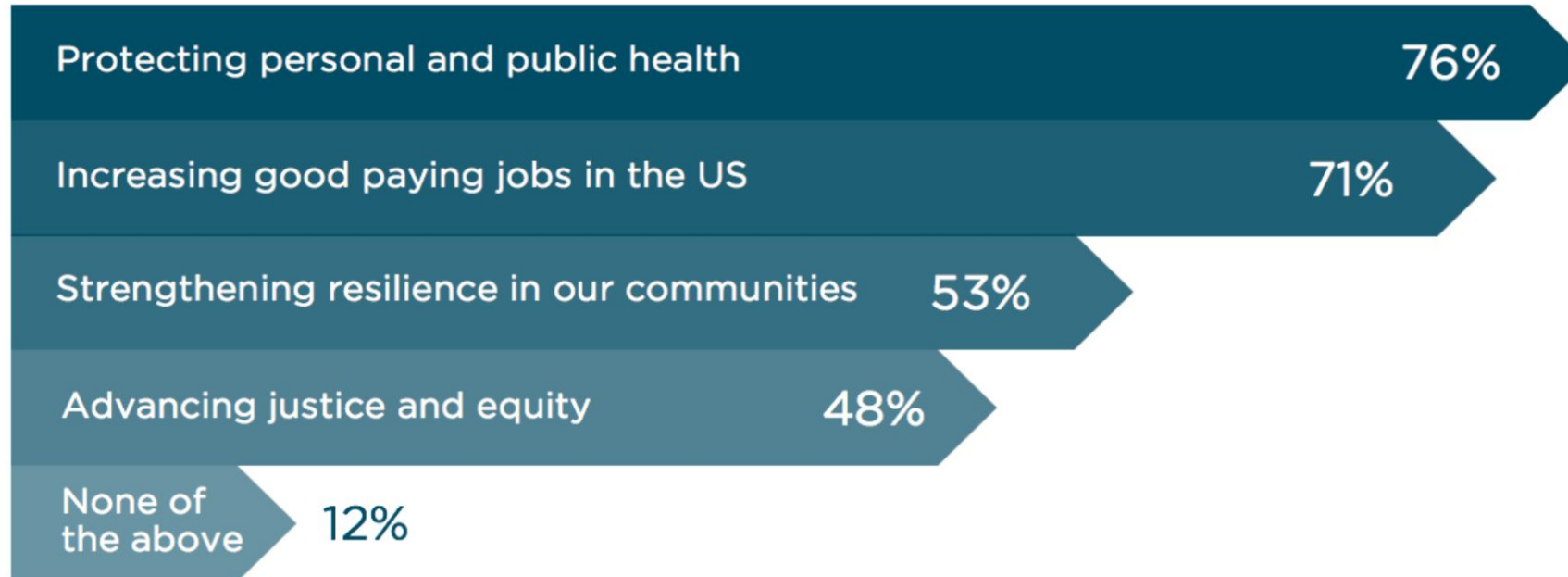




Air pollution is a multifaceted problem since it is representing the world's leading environmental risk to health and costing the globe an estimated \$8.1 trillion in 2019 and killing 7 million each year

## The majority of Americans support climate change solutions that protect health

Survey question: "Would you support climate solutions if they benefited any of the following? (Please select all that apply)." 1,029 national respondents. +/- 3% margin of error.

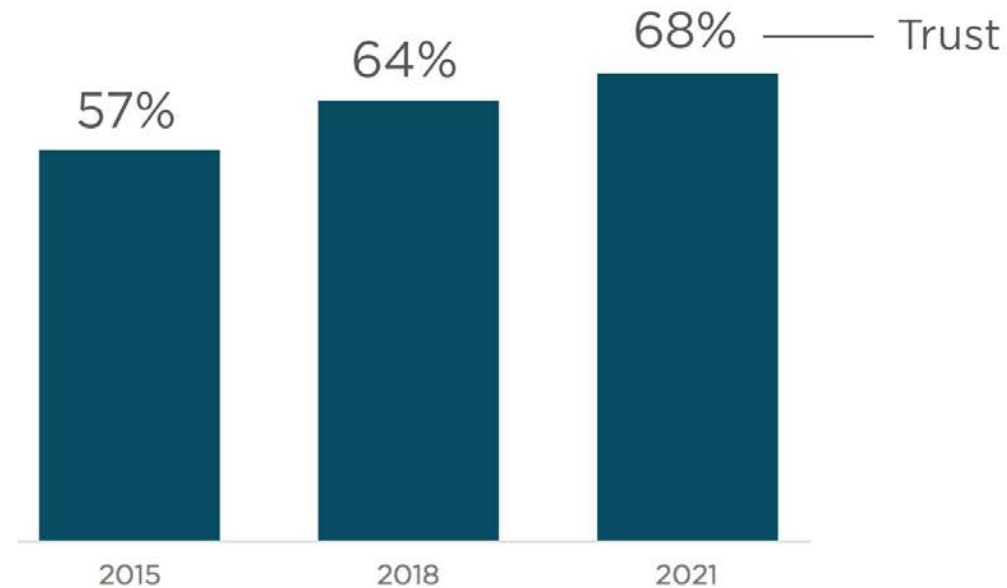


© ecoAmerica 2021



## More Americans trust health professionals for climate change information

Survey question: As a source of information about climate change, how much do you trust health professionals? 1,029 national respondents in 2021. "A lot" and "Some" presented +/- 3% margin of error



© ecoAmerica 2021

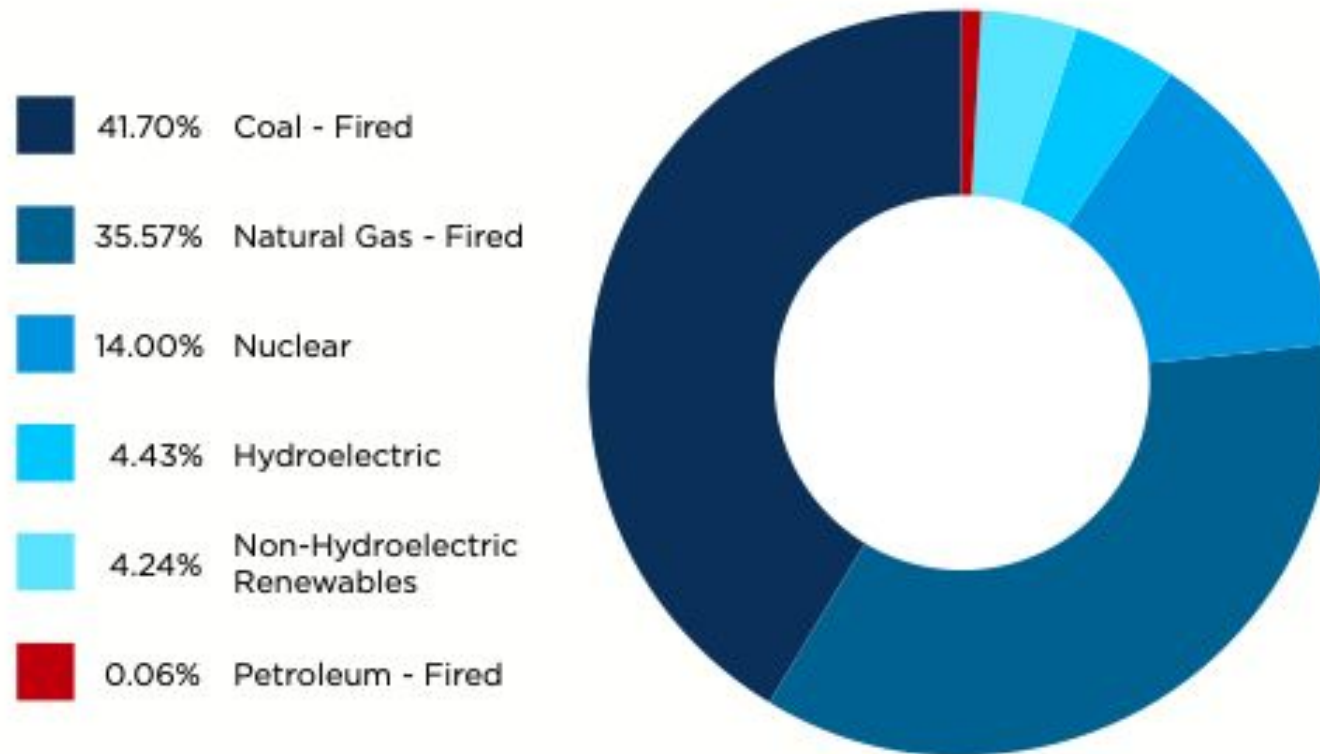






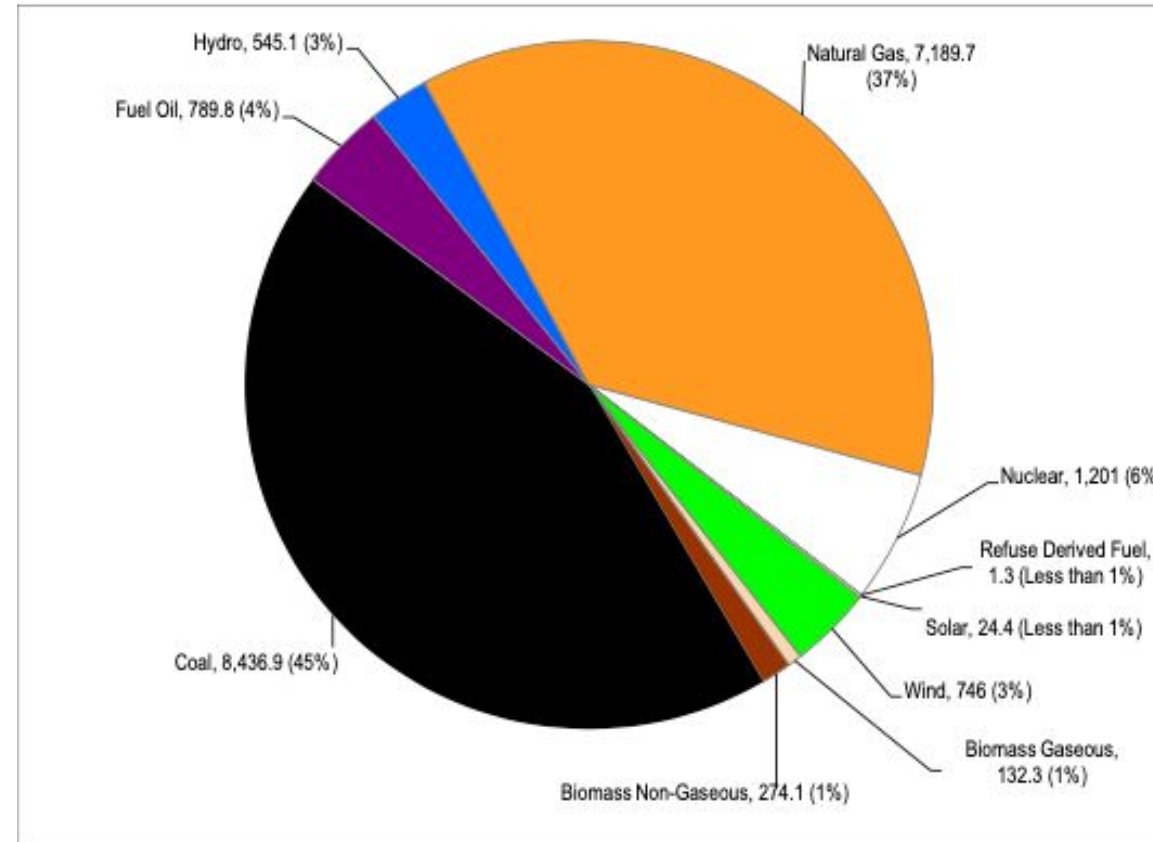
Imagine what the future holds when everyone in Wisconsin drives electric vehicles that are powered by clean energy





## WI 2019 Electricity Generation Sources

# WI 2018 Electric Generation

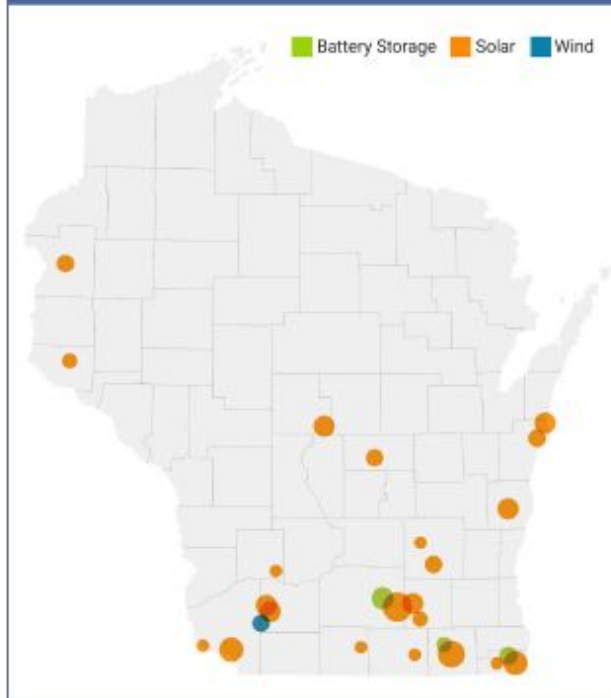


Source: Public Service  
Commission Strategic  
Energy Assessment



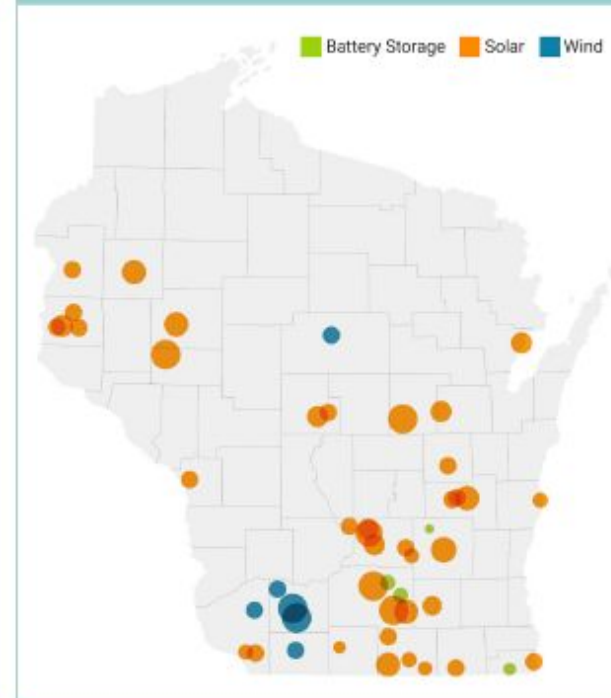
**WISCONSIN SOLAR, WIND,  
AND STORAGE UNDER  
DEVELOPMENT OR RECENTLY  
ONLINE AS OF JULY 2021**

2,697 MW Solar  
99 MW Wind  
350 MW Storage



**POTENTIAL WISCONSIN  
SOLAR, WIND, AND STORAGE  
BASED ON MISO QUEUE AS OF  
JULY 2021**

5,620 MW Solar  
992 MW Wind  
225 MW Storage



## RENEWABLE CAREERS

WIND WIND SOLAR

Manufacturing and Installation Jobs	28,800	168,000
--	--------	---------

Operation and Maintenance Jobs	14,400	42,000
-----------------------------------	--------	--------

TOTAL	43,200	210,000
-------	--------	---------

**To accommodate  
100% clean-power  
EV use, Wisconsin  
would add over  
250,000  
construction jobs.**





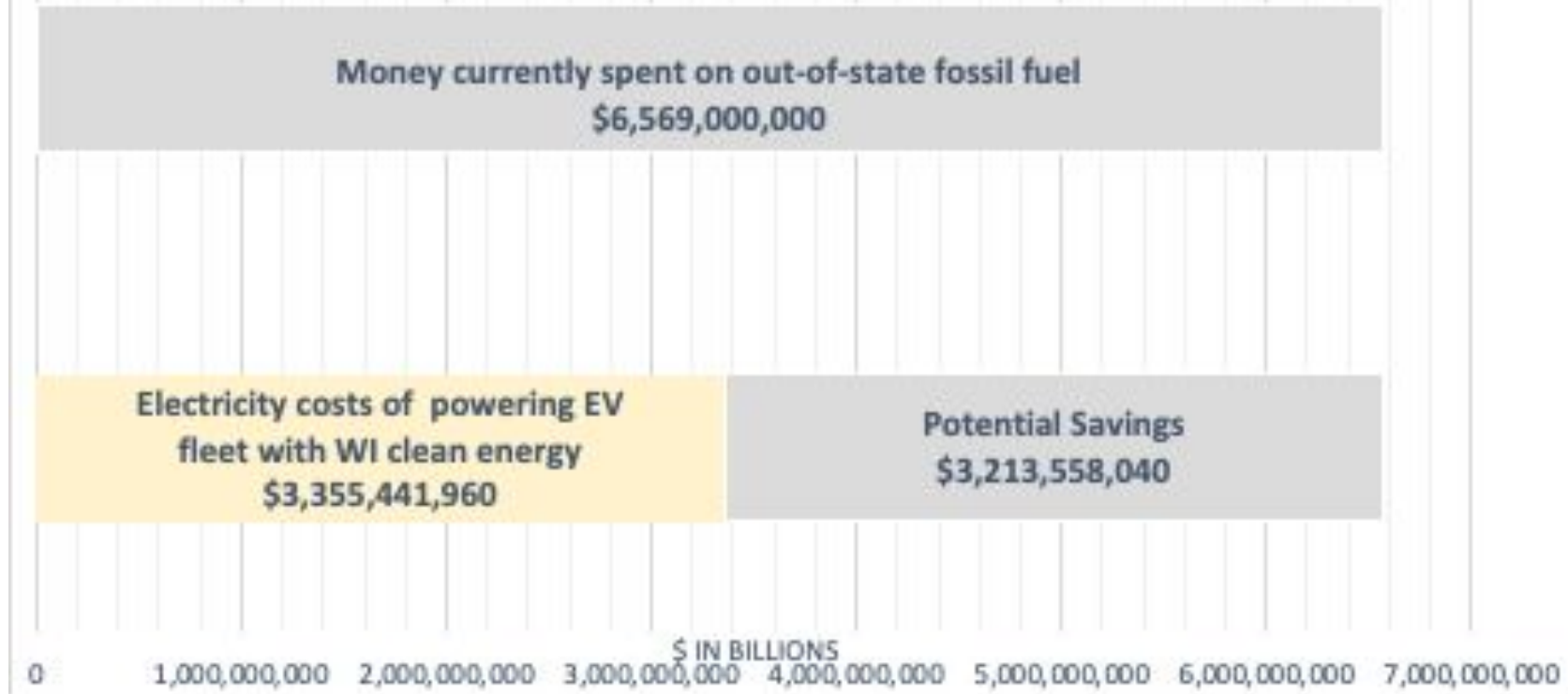
**100% electric vehicle adoption, \$6 billion could stay in local economies, and residents could collectively save \$3 billion on fuel.**



66,341,000) miles traveled in WI 2019) \* (.346 kWh/mile EV fuel efficiency) \* (.14 cents/kWh electricity price) = \$3,213,558,040 then subtract from total spent on motor gasoline (\$6,569,000,000) to get total savings = \$3,355,441,960



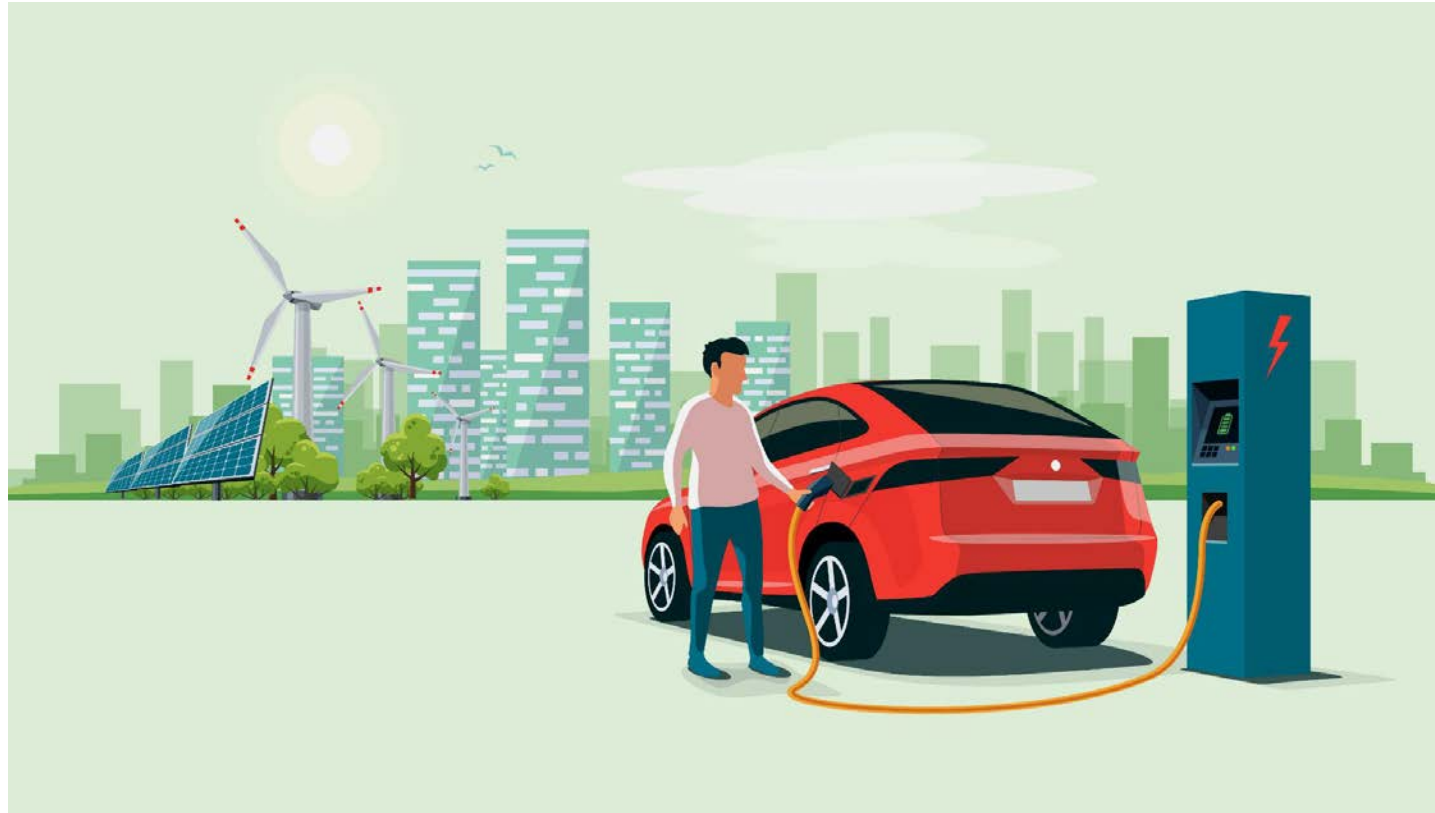
## Potential Savings From Investing in Clean-powered EV Fleet





**100% clean-power electric vehicle adoption would result in over \$2 billion of avoided health and social impacts.**

# Driving on Sunshine is Good for Everyone





---

# Recap of the benefits of switching to renewables and EVs

- Avoided health and social impacts
- Increase jobs
- Keep money local and save money
- Can potentially address social justice issues





# QUESTIONS?

THANK YOU!  
CHRISTINA ZORDANI AND  
ANDREW LEWANDOWSKI  
RENEW WISCONSIN