



# The Road to Clean Air: Benefits of a Nationwide Transition to Electric Vehicles

Report by the American Lung Association

**Across the United States, the transportation sector is a leading source of dangerous air pollution that harms public health. A transition to electric vehicles will help alleviate this public health burden.**



## The transportation sector...

- Causes over half of the nation's total nitrogen oxide emissions, which form harmful ground-level ozone pollution and particle pollution.
- Is the largest source of carbon dioxide pollution in the United States.
- Contributes significantly to particle pollution & local diesel exhaust impacts that threaten lung health.

## The air pollution burden is not shared equally

The American Lung Association's 2021 "State of the Air" report found significant disparities for people of color residing in counties with failing grades for ozone and/or particle pollution.

## People of color were...

- 61% more likely than white people to live in a county with a failing grade for at least one pollutant.
- Over three times as likely than white people to live in the most polluted counties.

## Electric vehicles are an essential piece of the solution

The widespread transition to zero-emission transportation technologies could produce emission reductions in 2050 alone that could:

- Add up to \$72 billion in avoided health harms annually
- Save approximately 6,300 lives every year
- Avoid more than 93,000 asthma attacks and 416,000 lost work days annually

**“In addition to these health benefits, the annual climate benefits could surpass \$113 billion by 2050.”**



## How Transportation Worsens Air Pollution & Climate Change and Harms Public Health

### Transportation is a leading source of air pollution in the United States.

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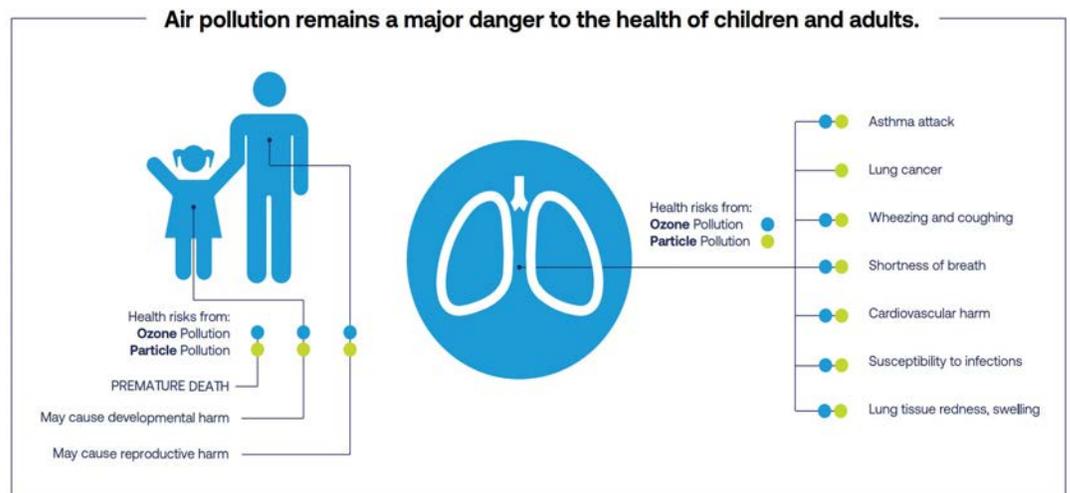
The American Lung Association’s “State of the Air” 2021 report found that more than 40% of Americans—over 135 million people—live in countries affected by unhealthy ground-level ozone and/or particle pollution, the two most widespread air pollutants in the United States.

Our changing climate is contributing to worsening air quality in the form of extreme heat, drought, and catastrophic wildfires. Increasing temperatures lead to the formation of more ground-level ozone pollution, and smoke from more frequent and intense wildfires contributes to particle pollution that can travel hundreds of miles.

## How Air Pollution and Climate Change Harms Public Health

Decades of scientific research have shown the damaging health impacts of ground-level ozone pollution and particle pollution.

Exposure to ozone and particle pollution contribute to a wide range of negative health effects and are especially dangerous to children, seniors, people living with asthma and other health conditions, lower income communities, and communities of color.





## Some Communities Face More Risk from Transportation Pollution than Others



Up to 45 percent of the urban population in North America may be within close enough proximity to major roadways to increase immediate negative health outcomes.

According to the Health Effects Institute's comprehensive 2010 review of traffic-related health effects, over 700 scientific studies concluded that traffic pollution causes asthma attacks in children and may cause a wide range of other effects including the onset of childhood asthma, impaired lung function, premature death and death from cardiovascular diseases and cardiovascular morbidity.

Major trucking corridors, warehouse distribution centers and other diesel hot spots close to major population sectors inflict serious harms to human health, and often highlight disparities in the impacts of transportation pollution burdens.

**“Far too often, clean air is out of reach for communities living near major pollution sources, including highways, ports and power plants. Communities of color are disproportionately harmed by poor air quality in the United States. The time to act on electric transportation is now.”**

**Harold Wimmer**, President and CEO American Lung Association

## Shifting to Electric Vehicle Technology is Vital to Achieving Clean, Healthy Air for All Communities

**The transition to zero-emission transportation will immediately benefit the health of hundreds of millions of Americans, especially:**

- Children riding school buses
- Daily commuters and transit riders
- Truckers and local delivery drivers
- Residents nearest major roadways, warehouse distribution centers, and other pollution hotspots





**The transportation sector must move comprehensively to zero-emission solutions, including electric vehicles and their fuels, as rapidly as possible.**

**How Much Will the Shift to Electric Vehicles Benefit Public Health?**

**The broad transition to zero-emission transportation technologies could produce emission reductions by 2050 that could provide the following benefits every year:**

- Add up to \$72 billion in avoided health harms annually
- Save approximately 6,300 lives every year
- Avoid more than 93,000 asthma attacks and 416,000 lost work days annually



**In addition to these health benefits, transitioning to electric vehicles could result in over \$113 billion in annual climate benefits by 2050. This includes improvements to:**

- Public health
- Agricultural productivity
- Flood risk and other adverse impacts generated by unmitigated climate change

Residents in every region stand to benefit from the elimination of on-road traffic pollution and clean, renewable electric generation. Across the United States, the annual health benefits of reduced exposures to transportation range from the tens of millions per year into the billions.

Under the American Lung Association’s zero-emission transportation scenario, **residents of all states will experience health benefits as the result of reduced pollution from on-road vehicles and the transition to cleaner power grids.**

**Eighteen states show annual benefits reaching \$1 billion or more in 2050, while even the smallest states see benefits in the tens to hundreds of millions.**

American Lung Association Healthy Transportation Scenario Results				
Health Benefits in 2050			Value of Benefits in 2050	
Premature Deaths Avoided	Asthma Attacks Avoided	Lost Work Days Avoided	Health Benefits	Climate Benefits
6,300	93,000	416,000	\$72 Billion	\$113 Billion



## Achieving Significant Health Benefits through Transportation Electrification

The benefits of electric vehicles (EVs) are clear and should spur action at all levels of government to speed and scale the transition to EVs and ensure these potential benefits become a reality for all Americans, especially those communities most impacted and vulnerable to pollution burdens.

### **Actions taken today to transition away from polluting combustion technologies set a crucial course to healthier air in communities across the United States:**

- At all levels, governments must align toward zero-emission transportation through policy change, investment, public education and partnership with private entities and the public working together to reduce air pollution and climate change.
- Establish health-protective clean air standards based on current science and ensure an adequate level of protection of vulnerable communities as required by the Clean Air Act.
- Designate zero-emission infrastructure a national priority program for economic recovery from the pandemic.
- Increase grant funding support for zero-emission truck and bus purchases and manufacturing, and maintain existing consumer and business tax credits for zero-emissions vehicle (ZEV) purchases.
- State authority under the Clean Air Act to enact ZEV standards must be protected and implemented.
- Increase incentives to ensure widespread deployment of zero-emission transportation infrastructure and technologies.
- Consumers must have full access to electric vehicle options that meet their needs and the benefits of zero-emission vehicles must be available to all communities.

Air pollution and climate change are harming the health of Americans today. The transition to zero-emission transportation solutions will yield major health and climate benefits across the United States. Annually, thousands of lives will be saved, along with tens of thousands of asthma attacks and hundreds of thousands of other

negative health outcomes avoided due to cleaner air throughout the United States as the majority of on-road transportation shifts to zero-emission technologies and we increase levels of non-combustion, renewable energy sources.

**There is no time to delay - the nation must get on the pathway to zero-emission transportation, and actions taken at all levels of government can support healthier air for all communities.**

