

Timeline: GM and Climate Change Action

For nearly a decade, General Motors has been working to mitigate the effects of and increase awareness of climate change — from innovative technologies to transparent disclosure to industry collaboration.



General Motors Company began operation.



2009

Launched first high-volume automotive lithium battery packs and lithium-ion battery manufacturing site in the U.S.

2010

Introduced the Chevrolet Volt, the world's first mass-produced electric vehicle with gas-powered extended range capability.



Set 2020 manufacturing commitments for energy, carbon, water and waste intensity, as well as renewable energy utilization target.

Partnered with Ceres to regularly engage with an external sustainability stakeholder advisory group.



Completed first CDP climate change and water disclosures.

Unveiled eAssist technology

2011

Signed Corporate Average Fuel Economy standards regulation to implement the next phase of the harmonized federal program to regulate fuel economy and GHGs, including a midterm evaluation to review progress and make appropriate adjustments.

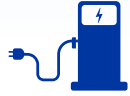
PRODUCTS

OPERATIONS

SUPPLY CHAIN

ADVOCACY

DISCLOSURE



Introduced Chevrolet Spark EV and Cadillac ELR.

Announced product goals for electrification, fuel economy improvements and CO2 emissions reduction.



Scored 100 on CDP transparency scale; joined CDP Supply Chain program.

2012



First major manufacturer to sign Ceres Business for Innovate Climate & Energy Policy (BICEP) Climate Declaration

Built on relationships with Duke Energy, Google, GE, conEdison and Cisco to research and develop charging infrastructure knowledge and best practices.

Introduced the EREV models in China, Australia and Europe.

2013

Joined U.S. EPA SmartWay Transport Partnerships.

Introduced the Sail EV from Shanghai GM, the first EV developed for the Chinese market.

Expanded CDP Climate Change disclosure to all 15 categories of Scope 3 emissions.



Conducted life cycle analysis of energy, water and GHG emissions associated with parts production.

Announced collaboration with Honda for development of fuel-cell technology.

Participated in first Dow Jones Sustainability Index.



Expanded discussion of climate change risk in SEC 10-K filing.

2014

Founding member of Business Renewables Center at the Rocky Mountain Institute.

Achieved fuel efficiency of at least 30 mpg highway for about 40 percent of vehicles sold, with six U.S. models achieving an EPA-estimated 40 mpg highway.



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Signed Renewable Energy Buyers' Principles.

Began to participate in key stakeholder dialogues around The 3% Solution: Driving Profits Through Carbon Reduction, an effort led by CDP and WWF.

Signed American Business Act on Climate Pledge with a \$140 billion commitment to low-carbon investments.

Signed a statement facilitated by the World Economic Forum in support of a positive outcome at Paris COP21 and for putting a value on carbons.



Became only North American automaker named to DJSI.



Avoided approximately 228K metric tons of carbon through vehicle lightweighting.

Reached 100 percent of 2020 renewable energy goal and committed to meeting all global facilities' electricity needs through renewable energy by 2050.

Achieved landfill-free manufacturing target four years early with a total of 152 landfill-free sites worldwide, which avoided over 9 metric tons of GHG emissions.



Eliminated all on-site coal emissions at operations.

2014

Increased renewable energy use to over 100MW, which included more solar installations than any other U.S. automaker.



2015

Concluded Chevy Carbon Reduction Initiative with \$40 million investment in carbon reduction projects.



Introduced second-generation Chevrolet Volt EV.



Introduced the 2016 Malibu Hybrid, which used efficient fundamentals to increase fuel economy to an EPA-estimated 47 mpg city.

2016

Announced the addition of a plug-in hybrid electric propulsion system to the Cadillac CT6 in China and U.S.

Introduced the Chevy Bolt EV.



Joined RE100, backed by The Climate Group in partnership with CDP, to accelerate renewable energy.

Formed 50-50 joint venture with Honda for fuel-cell production.

Introduced electrification road map for China, with plans to roll out more than 10 NEVs through 2020.



Signed the Guiding Principles to Promote Electric Vehicles and Charging Infrastructure.

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Named to DJSI North America and World Sustainability Indices and CDP Climate and Supplier Climate A lists.



Surpassed 2020 manufacturing carbon intensity commitment three years early with a 22 percent reduction against a 2010 baseline.

Honored with Motor Trend Car of the Year for the Chevrolet Bolt EV.



Called for a National Zero Emission Vehicle Program program in the U.S. that would require automakers to incorporate ZEVs as an increasing part of their portfolio — up to 25 percent by 2030.



Introduced the Buick Velite 6 and the Baojun E200 as part of our EV portfolio in China.

Increased production of the Chevrolet Bolt EV.

Conducted internal scenario planning workshop on risks associated with global warming of two degrees.



2017

Announced vision for a world with zero crashes, zero emissions, and zero congestion.



Counted five new energy vehicles in China portfolio.

Continued fuel cell innovation with the introduction of a concept vehicle on a heavy-duty truck frame.



Became first automotive company to commit to develop a pathway toward sustainable natural rubber for tires to combat deforestation.

2018

Announced Cadillac as the lead electric vehicle brand in the U.S.

Partnered with Honda to develop next-generation battery technologies.



Launched a pilot program with Consumers Energy in Michigan to test smart charging for EVs.



Awarded the 2018 SmartWay Excellence Award, which recognizes the top 2 percent of SmartWay freight partners with superior environmental performance.