

Welcome to your CDP Climate Change Questionnaire 2020

C0. Introduction

C0.1

(C0.1) Give a general description and introduction to your organization.

General Motors Company ("GM") is a global company committed to delivering safer, better and more sustainable ways for people to get around. With global headquarters in Detroit, Michigan, GM employs 164,000 people in over 400 facilities across five continents.

GM offers a comprehensive range of vehicles and services in more than 84 countries around the world. The largest national market for its products is China, followed by the U.S., Brazil, Canada and Mexico. Along with its strategic partners, GM produces cars and trucks, and sells and services these vehicles through the following brands: Chevrolet and Cadillac globally, and Baojun, Buick, GMC, Wuling, OnStar, and Cruise in certain regions or specific countries.

GM also maintains equity stakes in major joint ventures including SAIC-GM, SAIC-GM-Wuling, in China, and GM Korea, as well as subsidiaries such as OnStar, a recognized industry leader in vehicle safety, security, and information services, and Cruise Automation, a leader in autonomous driving technology.

More information is available at www.gm.com and media.gm.com .

GM's commitment to sustainability applies to every part of our business and creates value for customers. It underscores GM's philosophy of "Customer-Driven Sustainability" – an approach for meeting customers' needs through sustainability by making the mobile experience safer, more efficient, and better integrated with everyday life. As part of that commitment and philosophy, GM continually assesses and takes steps to reduce the environmental impact of its products and operations.

For example, GM is focusing on energy management; carbon and waste intensity reduction; resource preservation; and developing more efficient vehicles through our technological advances, global scale and employee innovation. These areas help the company reduce its environmental footprint and share best practices worldwide for broad results.



Sustainability is also an important part of GM's people and culture. The company integrates sustainability across every business function and through each level of the organization. GM is actively engaged in cross-functional efforts to seize environmental and social opportunities to improve our Company and the communities in which we operate.

GM's Guiding Environmental Commitments, within this document, are the foundation of this policy and were established from the core Environmental Principles and values that were in place for more than 25 years. GM's Guiding Environmental Commitments now serve as a guide for all GM employees worldwide. UNITED NATIONS GLOBAL COMPACT In 2015, GM became a signatory to the United Nations Global Compact, which endorses a framework of principles in the areas of human rights, labor, the environment, and anti-corruption.

GM's commitment supports the Global Compact's ten principles and the company's intent to maintain the principles and to evaluate related global best practices that may be applicable to GM. Of these ten principles, Environment is specifically tied to Principles 7, 8 and 9, which state: • UNGC Principle 7 – Businesses should support a precautionary approach to environmental challenges. • UNGC Principle 8 – Businesses should undertake initiatives to promote greater environmental responsibility. • UNGC Principle 9 – Businesses should encourage the development and diffusion of environmentally friendly technologies. APPLICABILITY This Environmental Policy applies globally to all of GM's employees and its operations, consultants, agents, sales representatives, distributors, independent contractors, and contract workers when they perform work for GM. GM's Guiding Environmental Commitments encourage environmental consciousness in both daily conduct and in the planning of future products and programs. The Guiding Environmental Commitments support and embrace GM's purpose, values and our vision of a future world with zero crashes, zero emissions and zero congestion. We are committed to actions that restore and preserve the environment. We are dedicated to:

- Preventing deforestation, conserving water, caring for natural resources in and around our facilities and the communities where we operate.
- We believe climate change is real and are committed to the public disclosure of our greenhouse gas emissions and taking actions to reduce them.
- Renewable Energy We are committed to using renewable energy at our facilities and sites globally and will advocate for policies that promote renewable energy use and demand.

General Motors is reporting greenhouse gas emissions (GHG) consistent with GHG Protocol for operations where we have operational control for GHG emissions, owned or leased facilities, and joint ventures as applicable. Our operations are managed regionally in North America, South America, and International Operations (rest of world) and will be reporting Scope 1 and 2 emissions by these regions, as well as company wide for Scope 3.



C0.2

(C0.2) State the start and end date of the year for which you are reporting data.

| | Start date | End date | Indicate if you are providing emissions data for past reporting years |
|----------------|-----------------|-------------------|---|
| Reporting year | January 1, 2019 | December 31, 2019 | No |

C0.3

(C0.3) Select the countries/areas for which you will be supplying data.

- Argentina
- Brazil
- Canada
- Chile
- China
- Colombia
- Ecuador
- Egypt
- Mexico
- Republic of Korea
- United States of America

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.

- USD



C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.

Operational control

C-TO0.7/C-TS0.7

(C-TO0.7/C-TS0.7) For which transport modes will you be providing data?

Light Duty Vehicles (LDV)

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

| Position of individual(s) | Please explain |
|---------------------------|---|
| Board-level committee | (i) The Governance and Corporate Responsibility Committee (GCRC) of the GM Board of Directors (ii) is comprised of three independent directors. The Committee selects members of the Board; provides leadership in shaping GM's corporate governance which is important for long-term environmental, social and corporate governance ("ESG") success; and oversees GM's policies and strategies related to |



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| | <p>Sustainability which is achieved through a standing agenda item for ESG related activities including climate-related updates. The members of this Committee have extensive leadership and strategy experience gained at companies respected for their ESG performance. Their input is valuable as GM further integrates sustainability into its business strategy and addresses climate change on its drive toward a future of zero emissions.</p> <p>An example of a decision from the GCRC is over the past 18 months, we have made multimillion dollar investments in EV manufacturing infrastructure, battery technology and the development of new EV models, with plans to allocate more than \$20 billion in capital and engineering resources to EV and autonomous vehicle (AV) programs between 2020 and 2025. We developed a new, highly flexible, global EV platform powered by our proprietary Ultium batteries in 2019, which will be mass produced through our partnership with LG Chem. We are also investing in two assembly plants to produce our new EVs. Beginning in 2020, our EV portfolio will begin to expand with launches by Chevrolet, GM and Buick. We also address barriers to EV adoption by providing customers with easy access to charging stations, adding charging connectors at our own facilities and engaging with regulators on the need for a National Zero Emissions Vehicle program in the U.S.</p> |
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C1.1b

(C1.1b) Provide further details on the board’s oversight of climate-related issues.

| Frequency with which climate-related issues are a scheduled agenda item | Governance mechanisms into which climate-related issues are integrated | Please explain |
|---|--|---|
| Scheduled – some meetings | Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Monitoring implementation and performance of objectives | The Governance and Corporate Responsibility Committee (GCRC) of the Board of Directors of General Motors assists the Board in its oversight of the Company’s governance structures, programs, and policies. It brings to the attention of the Board and management, as appropriate, current and emerging global political, social, and policy issues that may affect the business operations, profitability, or public image or reputation of the Company. The GCRC oversees global public policy matters as well as specific functions of the Company, as appropriate, including strategy, action plans, and risk management. Company functions reviewed by the GCRC include Legal, Global Public Policy, and Sustainability, including climate change, corporate social responsibility, and philanthropic activities. GCRC receives |



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| | <p>Monitoring and overseeing progress against goals and targets for addressing climate-related issues</p> | <p>regular reports from the Strategic Risk Management (SRM) team, led by an executive director with dedicated resources, has risk management responsibility and is supported by the Risk Advisory Council (RAC)—executives who directly report to the Senior Leadership Team (SLT). The GCRC reviews and guides GM's strategy for Climate Change as evidenced by our future product planning for decarbonization. Over the past 18 months, we have made multimillion dollar investments in EV manufacturing infrastructure, battery technology and the development of new EV models, with plans to allocate more than \$20 billion in capital and engineering resources to EV and autonomous vehicle (AV) programs between 2020 and 2025. We developed a new, highly flexible, global EV platform powered by our proprietary Ultium batteries in 2019, which will be mass produced through our partnership with LG Chem. We are also investing in two assembly plants to produce our new EVs. Beginning in 2020, our EV portfolio will begin to expand with launches by Chevrolet, GM and Buick. We also address barriers to EV adoption by providing customers with easy access to charging stations, adding charging connectors at our own facilities and engaging with regulators on the need for a National Zero Emissions Vehicle program in the U.S.</p> |
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C1.2

(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.

| Name of the position(s) and/or committee(s) | Responsibility | Frequency of reporting to the board on climate-related issues |
|---|---|---|
| Other C-Suite Officer, please specify Executive Vice President of Global Manufacturing | Both assessing and managing climate-related risks and opportunities | More frequently than quarterly |

C1.2a

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).

GM envisions a world with zero crashes, to save lives; zero emissions, so future generations can inherit a healthier planet; and zero congestion, so customers get back a precious commodity -- time.

GM is focused on strengthening its core business of light-duty vehicles, while also working to lead the transformation of personal mobility through advanced technologies like connectivity, electrification, autonomous driving, and car sharing. GM has also established a strategic direction based on putting the customer at the center of everything the Company does, and GM's customers expect GM to help mitigate, if not eliminate, issues such as congestion and emissions.

GM's operations greenhouse gas (GHG) emissions are about 85% of the total; therefore, GM's Executive Vice President of Global Manufacturing who reports to the CEO and is on the Senior Leadership team (SLT) along with the CEO is key to GM's response to climate related issues. In 2019, GM established its first Chief Sustainability Officer (CSO), who reports to Executive VP of Global Manufacturing.

The Board of Directors is briefed at least annually on Environmental issues through interaction with the GCRC. The GCRC and SLT are linked to a Sustainability Office (SO) encompassing all aspects of GM's business with daily functional lead from CSO. The SO solicits feedback from Internal and External advisory groups related to Climate Change issues.

The SLT and Executive Vice President of Global Manufacturing receives regular updates and is involved in key decisions that further our long-term strategic objectives including our efforts to reduce GHG emissions toward a future of zero emissions. As an example, GM's updated Renewable Energy goal (RE-100) for operations was pulled forward from 2050 to 2040 and was developed by GM's Sustainable Workplaces team and reviewed by the CEO, CSO, and Executive Vice President of Global Manufacturing and approved. On a monthly basis GM's performance to its public energy and water goals, which are climate change related, are presented by CSO to the Manufacturing Leadership Team, led by the Executive VP of Global Manufacturing. If targets are not on the pathway, countermeasures are developed at the plant level and reviewed by the MLT. An example of a countermeasure was increased attention to shutdown energy as work stoppage caused our pathway to exceed our target in last quarter of 2019. With attention to shutdown energy with daily monitoring, we were able to minimize the impact to energy targets.

The Risk Committee of the Board (GCRC) that is linked to SLT and SO is responsible for overseeing GM's management of enterprise-level risks. The Strategic Risk Management (SRM) team, led by an executive director with dedicated resources, has risk management responsibility and is supported by the Risk Advisory Council (RAC)—executives who directly report to the SLT. A global network of executives representing GM's key functions and



markets are given additional responsibilities as risk officers to support the overall SRM program and process. GM's risk and opportunities identification process is as follows:

- RAC and Risk officers appointed
- Annual identification, evaluation, and assessment of Company and asset risks and opportunities.
- Ongoing mitigation plan development and monitoring by RAC and Risk Officers and approval by the SLT.
- (i) Risks and opportunities are categorized based on frequency, velocity, and impact on financials, operations, reputation, etc.
- All top risks have approved mitigation plans, and are reviewed regularly by the SLT and the Board.
- All other risks have either an approved mitigation plans and are reviewed at least once a year by the SLT, or, after being fully analyzed, are put on a “watch list” and are monitored by the risk officer and their respective SLT member.
- (ii) Asset level risks have mitigation plans that are the responsibility of local management. Exposure to and experience with catastrophic risk or losses from climate change or other natural events are continuously analyzed and reviewed for ongoing operations and when evaluating new sites and selecting suppliers. Asset level risks are generally those that are anticipated to occur with regular or high frequency but have a low impact on the Company and can be managed locally. Lessons learned are incorporated into future site planning, supplier selection process, and risk mitigation and strategic development. For Manufacturing, each site has a Plant director (PD) that has profit and loss responsibility for operations. PD often need support for asset level risk and rely on the Manufacturing Leadership Team (MLT), comprised of the Executive VP for Global Manufacturing, regional VPs of Manufacturing, the CSO, Manufacturing representative on RAC, and other resources for risk management and action planning and implementation. The MLT has subject matter experts in risk management and sustainability as resources to PD for risk management.

C1.3

(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

| | Provide incentives for the management of climate-related issues | Comment |
|-------|---|---------|
| Row 1 | Yes | |



C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).

| Entitled to incentive | Type of incentive | Activity incentivized | Comment |
|--------------------------|-------------------|---|--|
| Corporate executive team | Monetary reward | Emissions reduction project Emissions reduction target | <p>GM introduced its vision of a future with zero crashes, zero emissions, and zero congestion in 2017. In a related action, GM updated its executive compensation program in 2017 to continue its leaders' focus on the key areas that both drive the business forward and align to the short-term and long-term interests of our shareholders. Accordingly, GM's Short-term Incentive Plan was modified to include an individual performance component weighted at 25%, including results that had a positive impact on Environmental, Social, and Governance (ESG) measures.</p> <p>For example, as highlighted in GM's 2020 Proxy statement, GM CEO's compensation evaluation included performance to 2019 strategic objectives 2019 executive compensation was based, in part, on reaffirming CEO's transformational vision of zero crashes, zero emissions, and zero congestion for the future of GM, in alignment with our core strategic objectives.</p> <p>In 2019, this included:</p> <ul style="list-style-type: none"> • Announcing the joint venture with LG Chem to build a plant to mass-produce battery cells for an all-electric future • <p>Enabling access to numerous charging ports through collaborations with EVgo, ChargePoint, and Greenlots, the largest collective EV charging network in the U.S., and</p> <ul style="list-style-type: none"> • Announcing a collaboration with Bechtel to build a public facing EV fast charging infrastructure in the U.S. • Continuing to execute our global electrification plan through the launch of the 2020 Bolt EV and announcement of the first ever electric truck, the HUMMER EV <p>We announced a joint venture with LG Chem to build a new plant to mass-produce battery cells for future EVs. This global architecture will be flexible and versatile, allowing us to build everything in our portfolio from</p> |



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| | | | <p>just three drive units.</p> <p>Another example in our operations is that our Business Unit managers and Plant Directors, must meet certain Energy targets for their respective facilities as one of their goals that relates to their individual compensation. Individual performance is based on GM's "Commitment and Accountability Partnership" or CAP system for performance evaluation and compensation. CAP goals are set at the beginning of the year and reviewed every 6 months for performance.</p> |
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C2. Risks and opportunities

C2.1

(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?

Yes

C2.1a

(C2.1a) How does your organization define short-, medium- and long-term time horizons?

| | From (years) | To (years) | Comment |
|-------------|--------------|------------|--|
| Short-term | 1 | 3 | Short term plans include annual budgets for Capex and Opex. |
| Medium-term | 3 | 5 | GM's Mid-term plan includes 3-5 years of budgets for resources and funds. |
| Long-term | 5 | | Long term is open-ended and is extended based on the type of risk or opportunity. As an example, GM's RE-100 commitment extends to 2040. |

C2.1b

(C2.1b) How does your organization define substantive financial or strategic impact on your business?

GM assesses risks based on management's professional judgment, the relevant case law, definitions and guidance from the U.S. Securities and Exchange Commission (the "SEC") and discussions with external auditors. This includes both a quantitative and qualitative assessment. From a quantitative perspective, GM considers the risk as a percentage of various financial statement amounts (e.g., assets, liabilities, revenues, earnings, etc.). From a qualitative perspective, GM considers all of the relevant circumstances including whether the risk is strategically integral or important to the Company's business plan, whether the risk will have an impact on future results of operations or financial condition, and whether the risk is important to an understanding of the company's business. As a result, risks that we have identified as having a substantive impact will vary from risk to risk in terms of quantitative and qualitative perspectives.

C2.2

(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

Value chain stage(s) covered

Direct operations
Upstream

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

More than once a year

Time horizon(s) covered

Short-term
Medium-term
Long-term

Description of process

Management of GM's climate-related risks and opportunities ultimately resides with GM's Chairman and Chief Executive Officer, who leads our Senior Leadership Team (SLT) and Board of Directors (BoD).

Climate change has been incorporated into our enterprise risk management process. This designation ensures that these issues are at the forefront of daily decision-making and that we manage them at the highest levels of the organization.

The Cybersecurity and Risk Committee of the Board is responsible for overseeing GM's management of enterprise-level risks. The Strategic Risk Management (SRM) team, led by the Chief Auditor, with dedicated resources, has risk management responsibility and is supported by the Risk Advisory Council (RAC)—executives who directly report to the SLT.

Risks and opportunities are categorized based on frequency, velocity, and impact on financials, operations, reputation, etc. - All enterprise risks have approved mitigation plans and are reviewed regularly by the SLT and the Board. All other risks have either an approved mitigation plans and are reviewed at least once a year by the SLT.

A global network of executives representing GM's key functions and markets are given additional responsibilities as risk officers to support the overall SRM program and process. The process by which enterprise risks are managed involves 6-steps, starting with risk identification.

Risk Identification encompasses multiple inputs including external research, corporate surveys and interviews with the senior leadership team, and risk identification workshops. This process occurs on a bi-annual basis. SRM also manages emerging risks for GM, and the process for identification occurs on a quarterly basis. Emerging risks are monitored on a quarterly basis to evaluate if they are eligible to transform into enterprise risks. Risk are evaluated and finalized based on disruption potential and probability of occurrence.

The next step of enterprise risk management is assignment of risk ownership. Following the identification of risks, owners are assigned to ensure effective management and accountability. The assignment of ownership is based on the nature of the risk and areas of the enterprise that are deemed most vulnerable.

Upon assignment of ownership, owners embark on an exploration of existing risk responses. Risk owners are responsible for investigating established relevant controls that work to minimize the disruption potential, if the risk materializes.

Following the exploration of existing risk responses, the identified risks are evaluated to determine the revised level of disruption and timing, considering existing controls. This process includes external research, internal assessments, interviews and, cross-functional workshops.

Cross-functional workshops include Game Theory, War Games, Scenario Planning, Pre-Mortems and more.

The revised analysis of the risks allows the owners to develop effective mitigation plans to further minimizes GM's vulnerability by reducing the disruption potential of the identified risk.

Finally, risks are continuously monitored to stay abreast of the changing risk landscape and determine when mitigation plans need to be triggered. Reporting to the CEO, CFO and the Board are also conducted on a regular basis to ensure leadership is fully aware of the risk's

development and to ensure comfortable with the controls in place to mitigate the potential disruption. Each month, a business unit's SLT member, RAC member and other key executives review how risk management is being integrated into strategic planning. As an example, a cross-functional climate change scenario workshop in 2018 helped us assess the risks, challenges and opportunities associated with various 2-degree warming scenarios (2DS). The workshop consisted of a three-step process including exploring uncertainties and defining success in the future world; answering questions to shape each scenario; and performing an analysis to determine what GM should be doing now to influence our future. In 2019, we conducted an EV workshop to update the strategy developed from the scenario analysis results into our short, medium, and long term planning. An example case study that shows the process applied to a transitional risk related to The California Air Resource Board's (CARB) latest requirements that include increasing Zero Emissions Vehicles (ZEVs) offered for sale in California and ZEV volumes for 2018 model year and later. The US Clean Air Act permits states with air quality compliance issues to adopt California emission standards in lieu of federal requirements; 13 states use these standards, 10 of which have adopted ZEV requirements. Using 2DS Scenario analysis, described above, we identified this risk as Medium-term, likely to occur with Medium-high impact. Our mitigation approach includes announcing our intent to allocate more than \$20 billion in capital and engineering resources to EV and autonomous vehicle (AV) programs between 2020 and 2025. By 2025, we intend to sell a million EVs per year in our two largest markets – North America and China.

Manufacturing Leadership Teams -

While the majority of GM's carbon footprint results from the use of our vehicles, a category of Scope 3 emissions, the scale of our manufacturing operations also presents significant opportunities to mitigate climate change risk with emissions reduction. On a monthly basis, GM's progress toward our public energy, emissions and water goals, all of which are climate-related, are reviewed by the Manufacturing Leadership Team (MLT). If targets are not meeting our defined pathway, countermeasures are developed at the plant level and reviewed by the MLT.

Local Management-

Asset-level risks have mitigation plans that are the responsibility of local management. Exposure to and experience with catastrophic risk or losses from climate change or other natural events are continuously analyzed and reviewed for ongoing operations and when evaluating new sites and selecting suppliers.

A case study related to physical risk of climate change was identified using the WRI Aqueduct model applied to all of our global assembly plants. We identified Extreme Water Risk (>80%) at the locations of two of our three assembly plants in Mexico. Our approach to mitigate this risk is that GM has integrated water management into our annual business planning process and has set a 2020 target to reduce the water intensity for our operations by 15 percent compared to a 2010 baseline. Also, GM installed Zero Liquid Discharge systems to minimize the reliance on well water withdrawal. The system purifies and transforms wastewater into reusable water for the facility's paint and machining processes, as well as irrigation. Additionally, we expanded our capacity to reuse process wastewater as process water at our facilities in Silao and Ramos Arizpe, Mexico to reduce water stress on non-renewable wells.



C2.2a

(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?

| | Relevance & inclusion | Please explain |
|---------------------|---------------------------|---|
| Current regulation | Relevant, always included | <p>Our products are subject to extensive laws, governmental regulations and government policies that can significantly increase our costs and affect how we do business. We are significantly affected by US NHTSA's Corporate Average Fuel Economy (CAFE) standards that can increase costs related to the production of our vehicles and affect our product portfolio. GM's US vehicle sales volume is 37% of our total vehicle sales globally. Meeting or exceeding these regulations is costly and often technologically challenging with respect to mandated emissions and fuel economy standards, especially where standards may not be harmonized across jurisdictions. Driven by climate change and other related factors such as air quality and energy security, GHG and fuel consumption standards have become more stringent to meet government policy priorities. We anticipate that the number and stringency of these regulations, and the related costs and changes to our product portfolio, may increase significantly in the future. These government regulatory requirements could significantly affect our plans for global product development, and given the uncertainty surrounding enforcement and regulatory definitions, may result in substantial costs, including civil or criminal penalties. In addition, an evolving but un-harmonized regulatory framework may limit or dictate the types of vehicles we sell and where we sell them, which can affect revenue.</p> <p>The Board has the overall responsibility for risk oversight with a focus on the most significant risks facing the company such as current regulations related to GM's business.</p> <p>While GM does not follow the precautionary approach, it does have a comprehensive risk management plan in place. Effective risk management is the responsibility of the CEO and other members of management, including the senior leadership team (SLT). Our Board implements its risk oversight function both as a whole and through delegation to Board Committees, particularly the Risk Committee for current regulations. Each of the Board Committees is responsible for oversight of risk management practices for categories of risks relevant to its functions.</p> |
| Emerging regulation | Relevant, always included | <p>We see autonomous technology leading towards a future of zero congestion, zero emissions and zero crashes, since, according to the National Highway Traffic Safety Administration (NHTSA), more than 90% of crashes are caused by driver error. We are among the leaders in the industry with significant global real-world experience in delivering connectivity,</p> |



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| | | <p>safety, and security services to millions of customers through OnStar, LLC (OnStar) and advanced safety features that are the building blocks to more advanced automation features that are driving our leadership position in the development of autonomous technology. An example of advanced automation is Super Cruise, a hands-free driving customer convenience feature that is available on the 2019 Cadillac CT6 sedan.</p> <p>Many of our advanced technologies, including autonomous, present novel issues with which domestic and foreign regulators have only limited experience and will be subject to emerging regulation and evolving regulatory frameworks. Any current or future regulations, like the US Corporate Average Fuel Economy (CAFE), could impact whether and how these technologies are designed and integrated into our products, and may ultimately subject us to increased costs and uncertainty.</p> <p>The Board has the overall responsibility for risk oversight with a focus on the most significant risks facing the company such as emerging regulations related to GM's business.</p> <p>While GM does not follow the precautionary approach, it does have a comprehensive risk management plan in place. Effective risk management is the responsibility of the CEO and other members of management, including the senior leadership team (SLT). Our Board implements its risk oversight function both as a whole and through delegation to Board Committees, particularly the Risk Committee for emerging regulations. Each of the Board Committees is responsible for oversight of risk management practices for categories of risks relevant to its functions.</p> |
| Technology | Relevant, always included | <p>Technology in our products and facilities is included in Climate Change risk assessments on a case by case basis.</p> <p>An example workshop, sponsored by GM's corporate secretary and the head of GM's product portfolio planning, and led by Strategic Risk Management and Sustainability organizations — brought together a broad, cross-functional team, from public policy to global propulsion systems to business intelligence.</p> <p>Goals included developing and understanding a range of different world scenarios; identifying risks, opportunities and success factors for GM; and making recommendations for GM to analyze, prepare, adapt and act.</p> <p>The Climate Workshop (Scenario Analysis) used a 2 degree scenario. The time frame of the analysis was out to 2030. The inputs for the analysis included a number of trends and forecasts such as vehicle sales, technology and innovation, policies and regulations, energy, consumer behaviors, etc.</p> |

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| | | <p>One of the key findings from the Scenario Analysis is that the world on a 2 degree C path has implications for key drivers of GM's technology that include vehicle fuel efficiency, vehicle-to-vehicle/customer/infrastructure connectivity, and advance vehicle technology. The transition of a majority of GM vehicles from internal combustion engine technology to an all-electric, zero-emissions future — from battery chemistry and architecture to safety validation and infrastructure — requires unprecedented investment risk in people and resources. This is why we've announced our intent to allocate more than \$20 billion in capital and engineering resources to EV and autonomous vehicle (AV) programs between 2020 and 2025.</p> |
| <p>Legal</p> | <p>Relevant, always included</p> | <p>In the current uncertain regulatory framework, environmental liabilities for which we may be responsible and that are not reasonably estimable could be substantial. Alleged violations of safety or emissions standards could result in legal proceedings, the recall of one or more of our products, negotiated remedial actions, fines, restricted product offerings, or a combination of any of those items. Any of these actions could have substantial adverse effects on our operations including facility idling, reduced employment, increased costs, and loss of revenue.</p> <p>We are subject to legal proceedings involving various issues, including product liability lawsuits, class action litigations alleging product defects, emissions litigation (both in the U.S. and elsewhere), stockholder litigation, labor and employment litigation in various countries (including U.S., Canada, Korea and Brazil), claims and actions arising from divestitures of operations and assets and proceedings related to the Ignition Switch Recall. In addition, we are subject to governmental proceedings and investigations.</p> <p>The Board has the overall responsibility for risk oversight with a focus on the most significant risks facing the company such as legal risks related to GM's business.</p> <p>While GM does not follow the precautionary approach, it does have a comprehensive risk management plan in place. Effective risk management is the responsibility of the CEO and other members of management, including the senior leadership team (SLT). Our Board implements its risk oversight function both as a whole and through delegation to Board Committees, particularly the Risk Committee for emerging regulations. Each of the Board Committees is responsible for oversight of risk management practices for categories of risks relevant to its functions.</p> <p>GM Legal team, led by an Executive VP & General Counsel ensure that legal risks are managed at the business unit level.</p> |



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| Market | Relevant, always included | <p>Marketing of our products is included in Climate Change risk assessments on a case by case basis.</p> <p>An example workshop, sponsored by GM's corporate secretary and the head of GM's product portfolio planning, and led by Strategic Risk Management and Sustainability organizations — brought together a broad, cross-functional team, from public policy to global propulsion systems to business intelligence.</p> <p>Goals included developing and understanding a range of different world scenarios; identifying risks, opportunities and success factors for GM; and making recommendations for GM to analyze, prepare, adapt and act.</p> <p>The Climate Workshop (Scenario Analysis) used a 2-degree scenario. The time frame of the analysis was out to 2030. The inputs for the analysis included several trends and forecasts such as vehicle sales, technology and innovation, policies and regulations, energy, consumer behaviors, etc.</p> <p>One of the key findings is that the world on a 2-degree C path has implications for key drivers of GM's marketing related to vehicle fuel efficiency, vehicle-to-vehicle/customer/infrastructure connectivity, and advance vehicle technology. The transition of a majority of GM vehicles from internal combustion engine technology to an all-electric, zero-emissions future — from battery chemistry and architecture to safety validation and infrastructure — requires unprecedented investment risk in people and resources. This is why we've announced our intent to allocate more than \$20 billion in capital and engineering resources to EV and autonomous vehicle (AV) programs between 2020 and 2025. GM's transition to an all EV portfolio is a significant market risk for GM as the future marketplace for the one million EV's, that GM intends to produce by 2025, is uncertain.</p> |
| Reputation | Relevant, always included | <p>As we develop electric vehicles, we are mindful of the raw materials necessary to support their deployment on a commercial scale. As with all raw material inputs for our vehicles, some of these materials involve inherently higher risks, such as cost, supply availability, reputational and human rights risks. The identification of these risks is part our product development process, and we work to reduce these risks through a variety of methods, including re-engineering of components, supplier diversification, and reuse and recycling efforts. Concerns about advanced technologies like EV and autonomous, whether raised internally or by regulators or consumer advocates, and whether or not based on scientific evidence, can result in product delays, recalls, lost sales, governmental investigations, regulatory action, private claims, lawsuits and settlements, and reputational damage. These circumstances can also result in damage to brand image, brand equity, and consumer trust</p> |



| | | |
|----------------|---------------------------|--|
| | | <p>in the Company's products and ability to lead the disruption occurring in the automotive industry. We currently source a variety of systems, components, raw materials and parts from third parties. From time to time these items may have performance, quality, or reputational issues that could harm our reputation and cause us to incur significant costs.</p> <p>An example of GM's risk mitigation plan is in the design of GM's new Ultium batteries that boast a proprietary, low-cost chemistry and an easy-to-manufacture design. These batteries will have the high-nickel and low-cobalt content — reduced by 70 percent — in a large format pouch cell, which requires less wiring than smaller cells and reduces the raw material reputational risk to GM. The built-in battery management system eliminates 80 percent of the battery pack's wiring as compared to those in the original Bolt EV. Our joint venture with LG Chem to develop and mass produce battery cells will drive cell costs below \$100 per kWh, and we expect ongoing technological and manufacturing breakthroughs to drive costs even lower.</p> <p>The Board has the overall responsibility for risk oversight with a focus on the most significant risks facing the company such as reputational risk related to GM's business as described above.</p> <p>While GM does not follow the precautionary approach, it does have a comprehensive risk management plan in place. Effective risk management is the responsibility of the CEO and other members of the senior leadership team (SLT).</p> |
| Acute physical | Relevant, always included | <p>Acute physical considerations of climate change in our facilities are included in risk assessments on a case by case basis. An example is severe drought, as described by The National Water Commission (Conagua), who warned of the drought suffered by more than 2,000 municipalities across Mexican territory, like at our GM Assembly plants at Ramos Arizpe and Silao, Mexico. As Mexico production is significant to GM's revenue and net income, with a potential to lose revenue of \$1.34B of USD due to production reduction, we developed a risk mitigation plan. The GM Manufacturing team performed a short term risk assessment of water scarcity and elected to increase the capacity of water reuse equipment and operate it to mitigate the physical drought risks in Silao and Ramos Arizpe.</p> <p>The Manufacturing Leadership Team at GM manages mitigation of acute physical risks associated with facilities described above. If material to the business, the Executive Vice President of Global Manufacturing, also a member of the SLT would work with the Board Risk Committee for assistance, if needed.</p> |



| | | |
|------------------|---------------------------|--|
| Chronic physical | Relevant, always included | <p>Chronic physical considerations from climate change in our facilities are included in risk assessments on a case by case basis. As Mexico production is significant to GM's revenue and net income, with a potential to lose revenue of \$1.34 B of USD due to production reduction, we developed a risk mitigation plan.</p> <p>At our Silao Assembly plant in Mexico, where non-renewable wells were identified as stressed, GM installed additional water reuse equipment resulting in GM increasing the amount of recycled water that will reduce the water stress risk at Silao.</p> <p>The Manufacturing Leadership Team at GM manages mitigation of Chronic physical risks associated with facilities described above. If material to the business, the Executive Vice President of Global Manufacturing, also a member of the SLT would work with the Board Risk Committee for assistance, if needed.</p> |
|------------------|---------------------------|--|

C2.3

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.3a

(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Downstream

Risk type & Primary climate-related risk driver

Emerging regulation

Mandates on and regulation of existing products and services

Primary potential financial impact

Increased indirect (operating) costs

Company-specific description

Emissions regulations continue to tighten and increasingly vary across GM's key markets. We are managing this risk by launching 20 new battery electric vehicles globally by 2025 with the goal of profitability. We are continuing to work with regulators globally to harmonize regulations and support other measures to increase consumer acceptance of these technologies and address charging infrastructure. As an example, Corporate Average Fuel Economy (CAFE) standards in US affect 37% of our global production volume, which could have a substantial impact to our business unless risks are mitigated properly.

Time horizon

Medium-term

Likelihood

Likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

1,090,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure



Specifically, our estimated financial implications from this risk are related to risk of 1 million EV vehicles loss of net income out to 2025, which is our goal for EV sales. Our estimated time frame for the financial implications of this risk are between 3-5 years; The impact is calculated based on 2019 Net income of \$8.393 B USD allocated by 1 Million vehicle sales compared to 7.7 Million total sales in 2019 or $1/7.7 \times \$8.393B = \$1.09B$

Cost of response to risk

4,080,000,000

Description of response and explanation of cost calculation

On a long-term basis, we intend to mitigate this risk by launching 20 new profitable EVs by 2025. We currently offer seven models in the U.S. featuring some form of electrification and continue to develop plug-in hybrid electric vehicle technology and extended range electric vehicles such as the Chevrolet Volt and Bolt EV. We announced our plans to launch multiple new Zero Emission Vehicles (ZEVs) in global markets by 2025, including two in the next 18 months.

In the short term we are working to increase battery electric vehicle production at our Orion Assembly in 2019-20 and a significant expansion of our battery lab in Warren, MI, already one of the largest in the world, brings the facility to more than 100,000 sq. ft. that includes new heavy and mild battery abuse test areas.

GM's current amount of research and development cost is \$6.8 Billion and with an estimate of 60% R&D costs for EV development, the cost to develop EVs is estimated at \$4B. The continued development of our EV portfolio rests upon 20 years of electrification knowledge and experience and the investment of billions in research and development.

Comment

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Acute physical

Increased severity and frequency of extreme weather events such as cyclones and floods

Primary potential financial impact

Decreased revenues due to reduced production capacity

Company-specific description

Increases in the frequency of drought conditions can further depress water availability for production in water-stressed areas. GM has production facilities in Mexico, an area that was hit hard by drought in recent years, and there is a risk that increases in the frequency of such events could disrupt production due to lack of water availability. Mexico accounts for approximately 12% of GM's global production.

Time horizon

Short-term

Likelihood

About as likely as not

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

1,370,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Mexico accounts for approximately 12% of GM's global production. 12% of GM's sales and revenues or \$137B = \$16.5 billion and a one-month disruption due to water scarcity would = \$1.37 B

Cost of response to risk

20,200,000

Description of response and explanation of cost calculation

GM integrated water management into its annual business planning process and set targets for each facility to reduce water use intensity by 15% by 2020. Reduction methods are implemented at a facility level and include conservation with behavioral activities, improving equipment efficiency to reduce, and reuse.

When plants are located in water-stressed areas, special consideration is given to water treatment technologies.

A Zero Liquid Discharge (ZLD) system was installed at our San Luis Potosi, Mexico facility that produces vehicles and transmissions and is being operated to reuse water in the process, reduce withdrawal from deep wells, and reduce the risk of lack of water for production while providing an opportunity to continue production without interruption. The installed cost was \$12M and ongoing operations are \$200k.

Additionally, at our Silao plant in Mexico we are currently expanding the volume of reuse with an \$8M dollar investment.

Comment

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Downstream

Risk type & Primary climate-related risk driver

Market

Changing customer behavior



Primary potential financial impact

Decreased revenues due to reduced demand for products and services

Company-specific description

Changing consumer behavior could weaken the demand for our higher margin full-size pick-up trucks and sport utility vehicles, such as Silverado, Sierra, Suburban, and Tahoe, which could reduce our market share in affected markets, decrease profitability, and have a material adverse effect on our business if we are unable to offer alternatives that are of interest to our customers. (i) Volatility in fuel pricing and tax incentives may affect consumer behavior. As of 2019, carbon-pricing schemes are operating in at least 33 countries and 18 sub-national jurisdictions, covering around 20 percent of global emissions. Though CO2 pricing schemes vary widely around the world, all are intended to encourage consumers to purchase vehicles that emit less carbon or, at a minimum, to help raise public awareness about the importance of CO2 reduction. Carbon Trading Schemes are active in South Korea where GM Korea operates and China where GM China sales are the highest of any country for GM. (ii) There is a risk that there may be less demand for GM's larger, less fuel-efficient vehicles, such as Chevrolet Suburban. Changing consumer behavior could weaken the demand for our higher margin full-size pick-up trucks and sport utility vehicles, which could reduce our market share in affected markets, decrease profitability, and have a material adverse effect on our business if we are unable to offer alternatives that are of interest to our customers.

Time horizon

Medium-term

Likelihood

More likely than not

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

1,370,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

On a global basis, a decrease in sales due to changing consumer behavior of 1% for example may result in a decrease in earnings before interest and taxes. Total revenue for GM in 2019 was \$137 B USD and 1% is \$1.37B of potential revenue loss.

Cost of response to risk

4,080,000,000

Description of response and explanation of cost calculation

Continuous innovation and advanced technology development are key to keeping up with changing consumer behavior. One way GM achieves this is through our global network of R&D labs around the world as well as through active collaboration with academia, suppliers, and start-ups to develop new technologies centered on five strategic areas: 1. Automotive Cleantech that improves fuel economy and decreases mobile emissions through advanced engine and transmission technology, next-generation batteries and electric motors, and power electronics; 2. Connected Vehicles that leverage data, enhance vehicle safety; 3. Advanced Materials that lead to more fuel-efficient vehicles through reduced mass; and Sensors, Processors and Memory that can accelerate the advent of the autonomous vehicle; 4. Manufacturing Technologies that yield cost and quality improvements.

In 2019 we offered the Chevrolet Bolt, and E-200, both battery electric vehicles and we plan to continue to invest heavily to support the expansion of our electric vehicle offerings and in-house development and manufacturing capabilities of advanced batteries, electric motors and power control systems.

In 2019, GM invested approximately \$6.8 billion in R&D activities for vehicles of which 60% was related to EV R&D or a cost of \$4.08B to develop EV technology.

Additionally, across our four largest markets - the U.S., China, Brazil and Canada, over 75 percent of our 2019 volume contained stop-start technology, enabling the vehicle's engine to turn off when the car is stopped or idled. These engines provide a fuel economy benefit of between approximately 3 to 5 percent, significantly decreasing CO2 emissions for consumers who face extended idle times. In the U.S., to date, stop-

start engine technology has saved GM customers 293 million gallons of fuel and 2.61 million metric tons of CO2 emissions over the lifetime operation of their vehicles.

Comment

C2.4

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.4a

(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Opp1

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

Autonomous electric vehicles offer GM a significant business opportunity to combat climate change. AV systems integrate more seamlessly with EVs than vehicles with conventional internal combustion engines. All-electric AVs will also help accelerate more widespread adoption of electric propulsion technologies. We see autonomous technology leading to a future of zero congestion, zero emissions and zero crashes, since more than 90% of crashes are caused by driver error, according to the National Highway Traffic Safety Administration (NHTSA). We are actively testing AVs on public roads in San Francisco, California; Scottsdale, Arizona; and Warren, Michigan. Additionally, we plan to develop an integrated network of on-demand autonomous vehicles in the U.S. Our growing fleet of test vehicles will accumulate a significant number of miles in 2019 and based on our current rate of change we expect commercial launch at scale in dense urban environments within the next year.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

102,000,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Assuming AV is a trillion-dollar global market based upon third party sources and GM's global market share is 10.2%, we calculated our financial opportunity within the AV market as \$100B. Today, the market is approximately \$5B. We do not publicly report on the financial positive implications at this time, but we did publicly report that the SoftBank Vision Fund (\$2.25 billion), Honda (\$2.75 billion), and most recently, funds advised by T. Rowe Price and existing Cruise partners, (\$1.15 billion) in Cruise, which we are including as our financial positive implications for this year.

Cost to realize opportunity

1,100,000,000

Strategy to realize opportunity and explanation of cost calculation

Every Cruise (formerly GM Cruise) autonomous test vehicle is also an electric vehicle that employs a design based on the Chevrolet Bolt EV. GM's strategy is to introduce these technologies in tandem to accomplish multiple goals, including increasing acceptance of EVs and encouraging buildout of EV charging infrastructure. In addition, there are benefits to integrating AV technology into an EV — as opposed to a conventional or hybrid vehicle — from an engineering perspective. Across the country at the state and federal levels, regulators and legislators are actively considering how to help foster and shape the evolution of AVs. GM is committed to a transparent and active partnership with policymakers in this process. In particular, we are focused on discussing our mobility offerings with city officials across the U.S. and around the world, given that urban settings are the environment in which many of our advanced technologies will provide the most robust applications and value.

Financial forecasts are highly uncertain, but investments by SoftBank and Honda have valued GM's Cruise subsidiary at >\$19 Billion. The timeframe for impact is too uncertain to estimate at this stage, although we have already seen a financial inflow from outside investments in Cruise by SoftBank and Honda. GM has said the total investment in Cruise over the past year exceeds \$7 Billion – some of it financed through external sources of equity. In 2019 GM reported Cruise cash flow in our 10k as follows: Net cash used in operating activities of (\$0.8B), Net cash used in investing activities of (\$0.3B), or a total negative cash flow of \$1.1 B.

Comment

Identifier

Opp2

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Resource efficiency

Primary climate-related opportunity driver

Move to more efficient buildings

Primary potential financial impact

Reduced direct costs

Company-specific description

Energy Efficiency projects implemented in our manufacturing operations in South Korea resulted in the opportunity to sell carbon credits into the Emission Trading Scheme in South Korea. Implementing energy efficiency in GM operations in Korea is integrated into their business plan. Energy Treasure hunts in GM Korea find opportunities for energy and carbon savings and with implementation of various initiatives - LED lights, compressed air, and building management system improvements, provide savings in cost, carbon emissions reduction, and option to sell excess carbon credits. These initiatives represent an opportunity for us to reduce our operational costs and to sell carbon credits into the marketplace using the Korean Carbon Emission Trading Scheme. In 2019, GM Korea continued to make efficiency improvements and sold 38,700 metric tons of excess CO₂e credits at \$23/ton for a revenue to GM of about \$1 M USD

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

5,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Cost savings resulting from reduced use of electricity and natural gas in GM Korea operations from the implementation of energy conservation and efficiency measures - LED lights, compressed air and building management, and other efficiency projects resulted in \$4M savings in 2019. Additionally, in 2019 we sold \$1.0M from trading carbon credits into the ETS, partially because of implementing energy conservation measures. We are using the direct sale of CO2e credits and energy savings as a financial benefit in 2019 from energy efficiency, or \$5M.

Cost to realize opportunity

3,200,000

Strategy to realize opportunity and explanation of cost calculation

GM identifies energy and carbon savings opportunities using a standardized Energy Treasure Hunt process as documented by USEPA Energy Star. The opportunities include paint shop optimization, HVAC improvements, lighting, building envelop improvements, and controls. Action plans were developed to implement energy conservation measure opportunities and were implemented to provide cost savings and reduction of carbon emissions at GM South Korea's sites that manufacturer vehicles and parts. The process utilized our Energy Star standardized Energy Treasure Hunt process to track progress and measure success. The cost to implement energy conservation measures was \$3.2 M. In 2019, we also conducted multiple Energy and Water treasure hunts in many countries - US, MX, China, and Brazil.

Comment

Identifier

Opp3

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Resource efficiency

Primary climate-related opportunity driver

Reduced water usage and consumption

Primary potential financial impact

Increased revenues resulting from increased production capacity

Company-specific description

As extreme drought conditions occur, GM facilities in Mexico that have water reuse systems are resilient and can continue to operate.

Increases in the frequency of drought conditions can cause disruptions to GM production in our highest water use and production critical process of painting vehicles, due to water stress. Proper mitigation using water conservation and water reuse allows production to continue without added water stress on local water systems.

GM's water management approach at production facilities located in water stressed areas offers an opportunity to continue production without disruptions due to lack of water for people and critical paint shop production. In our San Luis Potosi Assembly plant in Mexico, GM uses a Zero Liquid Discharge system to minimize the reliance on well water withdrawal.

Time horizon

Medium-term

Likelihood

Likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

1,370,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

GM's revenue in 2019 was \$137.2 B. Mexico accounts for about 12% of total global production and a one-month disruption of GM's production could result in loss of \$1.37B. The opportunity to GM is the continuance of production avoiding a potential loss of revenue of \$1.37B USD.

Cost to realize opportunity

20,200,000

Strategy to realize opportunity and explanation of cost calculation

Plants located in water-stressed areas, such as Mexico, are given special consideration by GM for water treatment technologies. Minimizing water use and withdrawals from shared water sources allows the GM plant to minimize the stress it is placing on local water sources, which in turn helps lessen the risk that, in times of drought, local water sources will have been depleted beyond capacity potentially causing production disruption. The invested amount for ZLD was \$12M and \$8M at Silao with ongoing operations cost of \$200k/year

An example of the engineering method used is in our San Luis Potosi plant, where a closed loop water system (Zero Liquid Discharge) was engineered to reuse 90% of the facility's wastewater for the next cycle of plant operations and the remaining 10% is sent to an onsite pond where it evaporates. The plant has reduced its water withdrawals by 90% by reusing wastewater. The plant also reduced its water intensity by 10% since opening using business plan deployment (BPD) management methods and remains our best operating plant for water efficiency.

Comment



C3. Business Strategy

C3.1

(C3.1) Have climate-related risks and opportunities influenced your organization’s strategy and/or financial planning?

Yes, and we have developed a low-carbon transition plan

C3.1a

(C3.1a) Does your organization use climate-related scenario analysis to inform its strategy?

Yes, qualitative

C3.1b

(C3.1b) Provide details of your organization’s use of climate-related scenario analysis.

| Climate-related scenarios and models applied | Details |
|--|---|
| 2DS | <p>The integration of sustainability and climate change into our business continues to be a focus, and both have been incorporated into our risk management process. This places both topics at the forefront of daily decision-making throughout the company and ensures continuous management at the highest levels of the company. As an example of this management, we recently addressed climate change risks and opportunities through a scenario planning workshop. The workshop was based on a key assumption that the world is on a path by 2030 to limit emissions so that temperatures increase no more than 2 degrees Celsius by 2050. Sponsored by GM’s Corporate Secretary and the head of GM’s product portfolio planning, the exercise — led by Strategic Risk Management and Sustainability organizations — brought together a broad, cross-functional team from GM from the entire company for the analysis. Goals included developing and understanding a range of different world scenarios; identifying risks, opportunities</p> |

and success factors for GM; and making recommendations for GM to analyze, prepare, adapt and act. The group considered four different scenarios in a maximum 2-degree warmer world and walked through a three-step process. The first step was to explore uncertainties and then to define success in this future world. The final step involved an analysis to determine what GM should be doing now to influence its future. All four scenarios shared common themes. Within the vehicle market, for example, it was assumed that new passenger vehicles would be required to make faster and greater adjustments than other users of energy; significant changes in the vehicle ownership paradigm; and a decline in the proportion of single-person vehicle miles. The exercise helped to clarify risks but also highlighted opportunities as well, many of which are already well underway at GM today. Some examples include:

- Adapting new business models aggressively, which is evident at Cruise and its push to commercialize autonomous technology in the near future.
- Launching new personal mobility services.
- Responding to new energy vehicle regulations in China with the production of four EVs in 2019.

(i) China will implement a unique China 6 emission standard that combines elements of both European and U.S. standards and includes more stringent emission requirements and increases the time and mileage periods over which manufacturers are responsible for a vehicle's emission performance. Nationwide implementation for new registrations is expected in July 2020 for China 6a and July 2023 for the more stringent China 6b standard.

(ii) To meet the future China standard, a mix of EV's is required.

(iii) In 2019, we produced four all-electric vehicles in China, based on what we have learned from developing the Chevrolet Bolt EV in US: the Buick Velite 6 EV, Velite 6 Plus MAV, and the Baojun E100 & E200. China is the world's largest EV market, and a major driver of EV adoption.

(iv) GM is number 2 in market position in China and production of EV's resulted in 92,000 Velites, E100, and E200 vehicles produced in 2019 on a pathway to meet China 6 GHG emissions regulations in the future.

- Focusing on new technologies by shifting capital resources and talent toward vehicle electrification programs.
- Prioritizing renewable power sources and zero carbon footprints for manufacturing of electric vehicles.

All of these moves require GM, as never before, to think like a market entrant rather than an incumbent. The workshop underscored the reality that the need to limit global warming is influencing consumer choices and brand perception today. Climate change concerns also are likely to drive new policy and regulations, as well as political and economic pressures to reduce emissions throughout the manufacturing value chain. And, the exercise validated the need for GM to continue to develop and sustain a comprehensive climate change strategy.

C3.1d

(C3.1d) Describe where and how climate-related risks and opportunities have influenced your strategy.

| | Have climate-related risks and opportunities influenced your strategy in this area? | Description of influence |
|---------------------------------|---|---|
| Products and services | Yes | <p>GM's long term (2025-2050) product design strategy has shifted from internal combustion engine vehicles (ICE) to all electric vehicles influenced by our vision of Zero emissions and decarbonization. Vehicle propulsion or electrification is the most substantial strategic decision that has been influenced by the need to mitigate climate change.</p> <p>Future regulatory risks and business market opportunities influenced by climate change drove our strategy of an all-electric future. Our global commitment to realize an all-electric, zero-emissions future — from battery chemistry and architecture to safety validation and infrastructure — requires unprecedented investment in people and resources. This is why we've announced our intent to allocate more than \$20 billion in capital and engineering resources to EV and autonomous vehicle (AV) programs between 2020 and 2025 to move towards a zero carbon emissions future.</p> |
| Supply chain and/or value chain | Yes | <p>Life cycle analysis of GM's purchased goods and services for auto parts shows carbon emissions as our number 2 priority after customer's use of our vehicles and the most substantial business decision for climate change in the supply chain area. With electrification and renewable energy in the future, auto parts will be our number 1 priority for carbon reduction. Therefore, our strategy for decarbonization has been influenced to prioritize reduction of supply chain carbon emissions with supplier engagement and sustainable materials.</p> <p>Although our scenario analysis focused on the highest impact, vehicle emissions, but pointed to our next highest impact which is life cycle auto parts emissions that is currently 18% of our total carbon footprint. The realization that supply chain emissions could be our next highest priority led to an increase in supplier engagement plans and evaluation of sustainable materials for auto parts to decarbonize.</p> <p>Based on the need to increase supply chain engagement to mitigate the risk of climate change, GM</p> |



| | | |
|-------------------|-----|---|
| | | announced a goal to ensure 100 percent of targeted GM suppliers are reporting data to CDP Supply Chain by 2022 and to achieve at least 50 percent sustainable material content in our vehicles by 2030. |
| Investment in R&D | Yes | <p>R&D is closely aligned with products and services and our vision of Zero emissions and a shift from ICE to all electric vehicles drove a change in R&D with a main focus on electrification.</p> <p>Our commitment to electric and autonomous vehicle programs is our most substantial business decision related to R&D and we plan to double the resources allocated to these programs in the next two years. Continued work rests upon 20 years of electrification knowledge and experience and the investment of billions in research and development.</p> <p>We are supporting this transition by shifting approximately 75 percent of our 4,000-person Global Propulsion Systems engineering workforce from internal combustion engines to alternative or electrified propulsion.</p> |
| Operations | Yes | <p>Although our operations are only 2% of our carbon footprint, we have a significant level of control for carbon emissions. Risks and opportunities related to Climate Change, including cost savings, led us to two positive strategic actions in 2019 that was the most substantial business decisions related to climate change risk in our operations. The two actions were 1). Increased energy efficiency with Energy Performance Contracts (EPC) and 2). pulling forward of our RE-100 goal from 2050 to 2040 globally and by 2030 for our US operations.</p> <p>Energy efficiency in our operations is the first pillar of our decarbonization strategy and with a shift of company spend for electric vehicle development and less for operations energy efficiency, we increased our Energy Performance Contract (EPC) activities as internal spend reduced. In 2019 we had over \$60 M USD EPC under development. RE-100 is important to decarbonizing our operations and pulling the goal ahead by 10 years will speed up our decarbonization efforts in operations.</p> <p>Our absolute carbon goal for operations from 2010 to 2030 is highly dependent on energy efficiency and use of renewable energy (RE). From our life cycle analysis of our top 3 GHG emissions - Vehicle use, supply chain, and operations, renewable energy provides a large impact to carbon reduction. An all EV future is most impactful on decarbonization with high levels of RE based on life cycle studies of upstream and downstream sources. That's why we work with utility companies on Green Tariffs to</p> |



| | | |
|--|--|--|
| | | further increase the availability of renewable energy. |
|--|--|--|

C3.1e

(C3.1e) Describe where and how climate-related risks and opportunities have influenced your financial planning.

| | Financial planning elements that have been influenced | Description of influence |
|-------|---|--|
| Row 1 | Capital expenditures | <p>Our global commitment to realize an all-electric, zero-emissions future — from battery chemistry and architecture to safety validation and infrastructure — requires unprecedented investment in people and resources. This is why we've announced our intent to allocate more than \$20 billion in capital and engineering resources to EV and autonomous vehicle (AV) programs between 2020 and 2025.</p> <p>We want to get as many EVs on the road as possible. By mid-decade, our intent is to sell a million EVs per year in our two largest markets: North America and China, where we are working with our joint venture partners. GM's flexibility and engineering focus will drive the scale required to accelerate our path to zero emissions in a profitable and efficient way. In addition, we are leveraging existing assets, such as production tools and body and paint shops, so that economies of scale can be realized with less capital and to further position the first generation of these products for profitability.</p> <p>Though many of the details about our electric future were revealed during EV Week in the first quarter of 2020, we've been preparing for this future for years. We have two decades of electrification knowledge and experience and have invested billions in research and development. This includes a \$1.5 billion investment three years ago at our Technical Center, where we have expanded and enhanced our state-of-the art battery testing lab, as well as other R&D facilities. The battery lab has been the largest and most advanced test lab in America for over a decade. The latest expansion brings the facility to more than 100,000 square feet and includes heavy and mild battery abuse test areas and new test chambers. Today, about 60 percent of the work at our Technical Center is focused on EV development compared with about 20 percent three years ago. These types of R&D investment are one reason that GM has more than 3,000 global patents related to electrification on file today.</p> |

C3.1f

(C3.1f) Provide any additional information on how climate-related risks and opportunities have influenced your strategy and financial planning (optional).

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?

Absolute target

C4.1a

(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.

Target reference number

Abs 1

Year target was set

2018

Target coverage

Company-wide

Scope(s) (or Scope 3 category)

Scope 1+2 (market-based)



Base year

2010

Covered emissions in base year (metric tons CO2e)

6,173,746

Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)

100

Target year

2030

Targeted reduction from base year (%)

31

Covered emissions in target year (metric tons CO2e) [auto-calculated]

4,259,884.74

Covered emissions in reporting year (metric tons CO2e)

5,311,575

% of target achieved [auto-calculated]

45.0487722396

Target status in reporting year

Underway

Is this a science-based target?

Yes, we consider this a science-based target, but this target has not been approved as science-based by the Science-Based Targets initiative

Please explain (including target coverage)

GM met our Scope 1 and 2 GHG 2020 goal in 2017 and developed an absolute goal to 2010-2030, based on science, to limit global temperature rise to below 2 degrees Celsius above pre-industrial levels. Energy efficiency in our operations and RE100 provide the methods to

meet our goal in the future. The model used is from Ecofys and is consistent with Science Based Initiative ("SBTi") 2DS for general industry for Scope 1 and 2 and is based on market-based emissions. As we are working on scope 3 SBTi, along with other OEMs, we will apply for SBTi when scope 3 goals are finalized and update this goal using a well below 2-degree model. In 2019, GM's Scope 1 and 2 emissions are 5.3 Million tons and pathway of 6.2 Million tons, so we are ahead of pathway.

Target reference number

Abs 2

Year target was set

2017

Target coverage

Country/region

Scope(s) (or Scope 3 category)

Scope 3: Use of sold products

Base year

2016

Covered emissions in base year (metric tons CO2e)

8,023,097

Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)

100

Target year

2021

Targeted reduction from base year (%)

4

Covered emissions in target year (metric tons CO₂e) [auto-calculated]

7,702,173.12

Covered emissions in reporting year (metric tons CO₂e)

7,763,604

% of target achieved [auto-calculated]

80.8581150147

Target status in reporting year

Underway

Is this a science-based target?

No, but we anticipate setting one in the next 2 years

Please explain (including target coverage)

GM is implementing a short-term goal to reduce vehicle emissions with advanced technologies: Stop-Start, Downsized Turbo, and Advanced Transmissions for GM vehicles in use by our customers. The goal will be met with aggressive penetration into vehicle markets by 2021. It is based on reducing GHG emissions during the use phase of sold vehicles starting at annual US GHG emissions in 2016 and reducing an absolute amount of 390,290 metric tons on GHG by 2021. With 259,493 metric tons GHG reduced by 2019 with advanced technologies, we are at 81% of our goal.

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?

Target(s) to increase low-carbon energy consumption or production

Other climate-related target(s)

C4.2a

(C4.2a) Provide details of your target(s) to increase low-carbon energy consumption or production.

Target reference number

Low 1

Year target was set

2017

Target coverage

Company-wide

Target type: absolute or intensity

Absolute

Target type: energy carrier

Electricity

Target type: activity

Consumption

Target type: energy source

Renewable energy source(s) only

Metric (target numerator if reporting an intensity target)

Target denominator (intensity targets only)

Base year

2016

Figure or percentage in base year

293,458

Target year

2040

Figure or percentage in target year

7,478,378

Figure or percentage in reporting year

1,636,792

% of target achieved [auto-calculated]

18.6965756056

Target status in reporting year

Revised

Is this target part of an emissions target?

Yes, our RE-100 goal for renewable electricity by 2040, globally compliments our Scope 1&2 absolute emissions target of 31% GHG reduction by 2030 from a baseline of 2010.

Is this target part of an overarching initiative?

RE100

Please explain (including target coverage)

GM announced a renewable energy goal in September 2016 to use 100% renewable electricity by 2050 in our global facilities operations. Our four-tier approach includes - increasing energy efficiency in our operations, sourcing renewable electricity, addressing intermittent supply through storage, and influencing policy to drive scale.

In early 2020, in response to the need to accelerate efforts to address climate change, we pulled forward our 100 percent global renewable energy commitment to 2040 with interim goals of achieving 60 percent globally by 2025 and 100 percent of U.S. sites by 2030. In the second quarter of 2020, we executed our largest solar project of 300 MW in Michigan through a green tariff agreement, making all GM sites in Southeast Michigan served by DTE on renewable power, including our global headquarters in Detroit and

Warren Technical Center. We finished 2019 with 23 sites completely powered by renewable energy, including our Arlington, Texas, assembly plant that is completely powered by wind energy. In 2019, we are using renewable electricity ahead of our pathway with 22% based on 1,636,792 MWh of renewable electricity (3rd party verified) and total electric use of 7,478,378 MWh.

C4.2b

(C4.2b) Provide details of any other climate-related targets, including methane reduction targets.

Target reference number

Oth 1

Year target was set

2011

Target coverage

Company-wide

Target type: absolute or intensity

Intensity

Target type: category & Metric (target numerator if reporting an intensity target)

Waste management

metric tons of waste generated

Target denominator (intensity targets only)

vehicle produced

Base year

2010

Figure or percentage in base year

307

Target year

2020

Figure or percentage in target year

186

Figure or percentage in reporting year

222

% of target achieved [auto-calculated]

70.2479338843

Target status in reporting year

Underway

Is this target part of an emissions target?

Reducing waste in GM's operations provides an important part of our low-carbon transition plan. Using EPA WARM model, GM tracks progress of carbon reduction through waste reuse, recycle, and reduction of landfill materials. In 2019, GM avoided 6.0 Million metric tons of CO₂e emissions from Elimination, Reuse, Recycle activities which is more than our combined annual scope 1 and 2 emissions. Additionally, we have 94 landfill-free sites in 2019 that contributes to the waste reduction goal.

Is this target part of an overarching initiative?

Other, please specify

Reducing waste in GM's operations provides an important part of our low-carbon transition plan.

Please explain (including target coverage)

GM has made steady progress in reducing our operational waste intensity over the past decade. As we approach the terminal date of our current 2020 manufacturing goals, we are formulating a new goal to build further upon progress to date. Our aspiration is to become the first zero waste automotive company. As in the past, innovation and the adoption of new technologies will help us lead in this area. Our Bowling Green Assembly paint shop system, for example, is using limestone to capture overspray, a practice



that eliminates more than 400 tons per year of paint sludge waste. Likewise, GM's design team donates scrap leather, vinyl and synthetic suede to the College for Creative Studies to be used by fashion students, and donates Corvette leather scraps to Pingree, a Detroit business that employs veterans with meaningful work. Pingree's team of makers hand craft this leather into custom Corvette-branded accessories. At our Global Design Center in Warren, Michigan, the extended design team collects and cleans clay that is left over from creating vehicle models, which help designers more clearly visualize and refine the look of a finished product. Using metal detecting wands, the team meticulously removes any metal pins and processes the material into a new mixture. In one hour, six team members can completely strip one midsize vehicle model of salvageable clay, preventing it from entering a landfill. Sending less waste to landfill also extends to our construction projects. In 2019, GM recycled about 14 million kilograms of concrete and uncontaminated asphalt, 27.5 million kilograms of metal scrap and 216,000 kilograms of plastic generated during construction. The recycled material was sent to accredited waste facilities for regeneration. Additionally, GM global facilities reused 11.5 million kilograms of concrete and uncontaminated asphalt. Our target coverage includes all of our waste generated in GM operations globally normalized by the number of vehicles produced.

C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.

Yes

C4.3a

(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

| | Number of initiatives | Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *) |
|---------------------------|-----------------------|--|
| Under investigation | 260 | 163,911 |
| To be implemented* | 250 | 157,840 |
| Implementation commenced* | 250 | 157,840 |
| Implemented* | 250 | 484,922 |

| | | |
|-----------------------|----|-------|
| Not to be implemented | 10 | 6,071 |
|-----------------------|----|-------|

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

Initiative category & Initiative type

Energy efficiency in buildings
Heating, Ventilation and Air Conditioning (HVAC)

Estimated annual CO2e savings (metric tonnes CO2e)

112,565

Scope(s)

Scope 1
Scope 2 (location-based)
Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

10,436,737

Investment required (unit currency – as specified in C0.4)

5,196,773

Payback period

<1 year

Estimated lifetime of the initiative

3-5 years

Comment

Upgrading building management controls, replacing old inefficient motors and lights with LED provides great paybacks. We use Energy Treasure hunts to find and implement opportunities. The majority are related to HVAC savings as that is 30-40% of our use. GM also uses a variety of Energy Star initiatives as a framework for charting our progress in building energy efficiency. Energy Star's Building Portfolio Manager (BPM) allows us to benchmark our progress and make continuous improvements. BPM integrates with our utility bill management system, sending an automated monthly analysis of building scores to evaluate building performance.

Initiative category & Initiative type

Energy efficiency in production processes
Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)

19,655

Scope(s)

Scope 1
Scope 2 (location-based)
Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

3,902,661

Investment required (unit currency – as specified in C0.4)

5,226,110

Payback period

1-3 years

Estimated lifetime of the initiative

3-5 years

Comment

As paint shops represent most of our energy use, many projects were completed in paint - efficient paint mix motors, LED lights, steam elimination, paint booth and oven optimization...

Initiative category & Initiative type

Low-carbon energy consumption

Wind

Estimated annual CO2e savings (metric tonnes CO2e)

258,900

Scope(s)

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

0

Investment required (unit currency – as specified in C0.4)

0

Payback period

<1 year



Estimated lifetime of the initiative

11-15 years

Comment

GHG reduction from renewable electricity was included in our 3rd party verification this year at 660,094 metric ton reduction using wind, solar, and landfill gas for electric generation.

In early 2020, in response to the need to accelerate efforts to address climate change, we pulled forward our 100 percent global renewable energy commitment to 2040 with interim goals of achieving 60 percent globally by 2025 and 100 percent of U.S. sites by 2030. In the second quarter of 2020, we executed our largest solar project of 300 MW in Michigan through a green tariff agreement, making all GM sites in Southeast Michigan served by DTE on renewable power, including our global headquarters in Detroit and Warren Technical Center. We finished 2019 with 23 sites completely powered by renewable energy, including our Arlington, Texas, assembly plant that is completely powered by wind energy. In 2018, the number of tons saved by RE in our operations was 401,194 tons, so the net reduction in 2019 was 258,900 tons CO₂e.

Initiative category & Initiative type

Transportation

Other, please specify

Third party logistics for incoming parts from supply chain and outgoing vehicle transportation to dealers

Estimated annual CO₂e savings (metric tonnes CO₂e)

68,182

Scope(s)

Scope 3

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

56,325,586

Investment required (unit currency – as specified in C0.4)

0

Payback period

<1 year

Estimated lifetime of the initiative

1-2 years

Comment

GM's third-party logistics provider assist us in optimizing our carrier routes in 2019 to save cost and scope 3 GHG from upstream (parts) and downstream transportation (assembled vehicles for sale). The results from route redesign, optimizing loads, and other logistics savings was 68k tons of GHG reduction and savings of \$56M USD. GM is a member of SmartWay and many of our carriers are members also contributing to continuous improvement in logistics carbon reduction from tracking and sharing best practices.

Initiative category & Initiative type

Company policy or behavioral change

Other, please specify

Behavior change using energy management system and business plan deployment where energy is integrated into our operating business plan.

Estimated annual CO2e savings (metric tonnes CO2e)

25,619

Scope(s)

Scope 1

Scope 2 (location-based)

Scope 2 (market-based)

Voluntary/Mandatory



Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

3,098,334

Investment required (unit currency – as specified in C0.4)

35,003

Payback period

<1 year

Estimated lifetime of the initiative

1-2 years

Comment

GM uses an energy management system (EMS) and performance contracts to achieve energy-reduction goals. The basis of the system originates from Energy Star model and is integrated into our plan, do, check, act business plan. In 2019, 27 GM U.S. manufacturing facilities, or more than 90 percent of our U.S. manufacturing footprint, implemented the U.S. Department of Energy’s (DOE) 50001 Ready program. This program is an application tool through which 25 tasks are measured to demonstrate an effective EMS. Upon completion, facilities can self-attest to the structure of ISO 5001, a voluntary global standard. GM engaged with DOE to train the GM Energy team, along with suppliers and other companies on the 50001 Ready process.

GM has recognized by DOE in US for "50001 Ready" for 25 facilities, more facilities than any other participating company. We plan to expand this program to all manufacturing facilities globally in order to continuously monitor and improve our EMS.

C4.3c

(C4.3c) What methods do you use to drive investment in emissions reduction activities?

| Method | Comment |
|--|---|
| Dedicated budget for energy efficiency | GM uses a dedicated budget for energy efficiency projects in operations and Energy Performance Contracting (EPC) methods to supplement. In 2019, we shifted the majority of our spend from internal dedicated to external sources using EPC. The EPC method |



| | |
|--------------------------|--|
| | uses a shared savings approach that must include positive savings from day one. We currently have about \$60M in EPC development. |
| Employee engagement | <p>GM uses an energy management system (EMS) and performance contracts to achieve energy-reduction goals. The basis of the system originates from Energy Star model and is integrated into our plan, do, check, act business plan. In 2019, 27 GM U.S. manufacturing facilities, or more than 90 percent of our U.S. manufacturing footprint, implemented the U.S. Department of Energy's (DOE) 50001 Ready program. This program is an application tool through which 25 tasks are measured to demonstrate an effective EMS. Upon completion, facilities can self-attest to the structure of ISO 5001, a voluntary global standard. GM engaged with DOE to train the GM Energy team, along with suppliers and other companies on the 50001 Ready process.</p> <p>GM has recognized by DOE in US for "50001 Ready" for 25 facilities, more facilities than any other participating company. We plan to expand this program to all manufacturing facilities globally in order to continuously monitor and improve our EMS. The process is key to making behavioral changes and engaging with employees.</p> |
| Internal price on carbon | <p>GM has operations in countries with carbon trading schemes, e.g. South Korea, where we have realized real savings from energy efficiency with sales of credits into the market to fund energy efficiency projects. Our internal price is set at \$25 per ton. We incorporate this into our energy project tracking system to include the GHG savings based on an internal price on carbon in our payback calculation. This helps prioritize projects that save greater amounts of GHG.</p> |

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products or do they enable a third party to avoid GHG emissions?

Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products or that enable a third party to avoid GHG emissions.

Level of aggregation

Group of products

Description of product/Group of products

Our 2019 EV portfolio includes electric vehicles—such as our Chevy Bolt—and extended range vehicles—such as our Chevy Volt—and are sold globally. These vehicles have lower emissions compared to internal combustion engine vehicles. The Bolt offers an EPA estimated range of 238 miles and 60 kWh battery capacity while the Extended Range Volt offers an electric range of 53 miles and has sold more than 170,000 units since 2010.

Electric vehicles and extended range vehicles sold globally with lower emissions than comparable vehicles available for sale provide our customers GHG reduction opportunities.

Are these low-carbon product(s) or do they enable avoided emissions?

Low-carbon product and avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify

(Fueleconomy.gov provides a method to calculate the emissions of low-carbon products as well as the equivalent emissions of a conventional vehicle for GHG comparison.) GM used the calculator to compare similar vehicle models of EV vs. ICE models.

% revenue from low carbon product(s) in the reporting year

1.4

Comment

Reductions in energy consumption and GHG emissions for our products can be contributed to the increase in production and sales of electric vehicles in China and globally. To evaluate the impact, we used EPA and DOE website "fueleconomy.gov". Rationale for this calculation includes side by side comparison of Chevrolet Bolt EV and Volt vehicles to Chevrolet Cruze (ICE), Buick Velite was compared to Buick Regal TourX (ICE), and Bajoun E100 and E200 (EV) compared to Spark (ICE). Standards, methodologies, assumptions and calculation tools used can be found at <https://www.fueleconomy.gov>. Total life cycle GJ and GHG reduction is calculated over 10 years. Total GHG emissions avoided is 3,127,505 metric tons and 76,026,924 GJ energy equivalent reduction.

GM produces Electric vehicles (EV) and extended range vehicles sold globally (e.g. E100, E200, Velite, Bolt and Volt) with lower emissions than comparable internal combustion vehicles sold.

C5. Emissions methodology

C5.1

(C5.1) Provide your base year and base year emissions (Scopes 1 and 2).

Scope 1

Base year start

January 1, 2010

Base year end

December 31, 2010

Base year emissions (metric tons CO₂e)

1,902,196

Comment

Baseline restated in 2017 for 2010 due to significant divestiture of assets in Europe, India, and Africa.

Scope 2 (location-based)

Base year start

January 1, 2010

Base year end

December 31, 2010

Base year emissions (metric tons CO₂e)

4,271,550

Comment

Baseline restated in 2017 for 2010 due to significant divestiture of assets in Europe, India, and Africa.

Scope 2 (market-based)

Base year start

January 1, 2010

Base year end

December 31, 2010

Base year emissions (metric tons CO₂e)

4,271,550

Comment

Baseline restated in 2017 for 2010 due to significant divestiture of assets in Europe, India, and Africa.

C5.2

(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

US EPA Mandatory Greenhouse Gas Reporting Rule

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO₂e?



Reporting year

Gross global Scope 1 emissions (metric tons CO2e)

1,589,700

Comment

Our global scope 1 GHG emissions are from operations, including manufacturing and non-manufacturing locations. As energy management is integrated into our business plan, reducing energy and GHG is an ongoing business process. Although our GHG reduction was greater in Scope 2 and 3 emissions, GHG reduction for scope 1 emissions amounted to 27,500 tons or 2% of our total scope 1 GHG emissions.

C6.2

(C6.2) Describe your organization’s approach to reporting Scope 2 emissions.

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

We are reporting a Scope 2, market-based figure

Comment

Based on GM's RE-100 commitment, we chose to use market based GHG emissions for our reduction goal.

C6.3

(C6.3) What were your organization’s gross global Scope 2 emissions in metric tons CO2e?

Reporting year

Scope 2, location-based

4,381,970

Scope 2, market-based (if applicable)

3,721,875

Comment

Our scope 2 emissions are primarily from electricity use, but also includes purchased steam, and hot water. Both location-based and market-based GHG emissions were verified at 100% by an independent 3rd party. Reductions in scope 2 are tracked globally and represent 4% or 130,600 metric tons of reduction in 2019. Major initiatives include Energy Performance Contracts, dedicated fund, prioritization with internal price on carbon, and behavioral methods. Our current RE-100 performance at 22% provides 15% less GHG for market-based emissions vs. location-based.

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?

Yes

C6.4a

(C6.4a) Provide details of the sources of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure.

Source

Small offices and training centers, either leased or owned are not included in GHG accounting as they are less than 5% of total emissions and not material to our carbon footprint. Leased spaces are included in our scope 3 emission inventory.

Relevance of Scope 1 emissions from this source

Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source

Emissions are not relevant

Relevance of market-based Scope 2 emissions from this source (if applicable)

Emissions are not relevant

Explain why this source is excluded

small offices and training centers, either leased or owned are not included in GHG accounting as they are less than 5% of total emissions and not material to our carbon footprint. Leased spaces are included in our scope 3 emission inventory.

C6.5

(C6.5) Account for your organization’s gross global Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status

Relevant, calculated

Metric tonnes CO2e

45,505,504

Emissions calculation methodology

Following the GHG Protocol, this Supply Chain analysis is “cradle-to-gate” for emissions associated with the value chain from material extraction through manufacturing. The use and disposal phases of the product are omitted in this case. Using annual spend provided by General Motors as the Company’s activity data combined with emissions factors from the Climate Earth’s Environmental Database, the core of which is the USEPA Environmental Extended Input Output database (USEEIO v1.1) which provides industry average cradle-to-gate emissions factors for economic sectors. Due to the complexities of large supply chains, the WRI Corporate Value Chain Accounting and Reporting Standard (WRI Scope 3 Standard) specifically permits the use of industry average emissions factors combined with direct company activity data. General Motors has provided complete direct spend activity data for the Company for the 2018 reporting year. 2018 was selected due to 2019 work stoppage event in US that lasted 40 days and skewed the data for auto parts. The methodology employed for these calculations conforms to the WRI Corporate Value Chain (Scope 3) Accounting



and Reporting Standard. The model provides tier analysis and industry analysis for strategic planning to reduce life cycle GHG emissions for auto parts. The majority of GHG is in tiers 2-6 and in electric and steel industries.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

50

Please explain

Spend data is a key component of the economic input output analysis and is derived from supplier spend at a manufacturing country level for increased granularity. This is extremely important for water life cycle analysis since location is important for water security. As a calibration method, CDP Supply Chain tier 1 data is compared to improve accuracy. This data was verified by a 3rd party in 2020 using 2018 LCA data.

Capital goods

Evaluation status

Relevant, calculated

Metric tonnes CO2e

4,597,425

Emissions calculation methodology

Following the GHG Protocol, this Supply Chain analysis is “cradle-to-gate” for emissions associated with the value chain from material extraction through manufacturing. The use and disposal phases of the product are omitted in this case. Using annual spend provided by General Motors as the Company’s activity data combined with emissions factors from the Climate Earth’s Environmental Database, the core of which is the USEPA Environmental Extended Input Output database (USEEIO v1.1) which provides industry average cradle-to-gate emissions factors for economic sectors. Due to the complexities of large supply chains, the WRI Corporate Value Chain Accounting and Reporting Standard (WRI Scope 3 Standard) specifically permits the use of industry average emissions factors combined with direct company activity data. General Motors has provided complete direct spend activity data for the Company for the 2018 reporting year. 2018 was selected due to 2019 work stoppage event in US that lasted 40 days and skewed the data for auto parts. The methodology employed for these calculations conforms to the WRI Corporate Value Chain (Scope 3) Accounting and Reporting Standard. The model provides tier analysis and industry analysis for strategic planning to reduce life cycle GHG emissions for Capital Goods.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

50

Please explain

Spend data is a key component of the economic input output analysis and is derived from supplier spend at a manufacturing country level for increased granularity. This is extremely important for water life cycle analysis since location is important for water security.

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

322,403

Emissions calculation methodology

Using Australia's National Greenhouse Accounts (NGERS) factors 2019, natural gas fugitive emissions of GHG not included in Scope 1 were estimated globally based on scope 1 use. US EIA estimates electric losses and the factor was applied globally using scope 2 emissions to estimate fugitive electric GHG not accounted for in scope 2 calculations.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

50

Please explain

NGERS and USEIA factors account for half of the calculation; whereas, actual data from scope 1 and 2 comprise the remaining portion of data. This data was verified by a 3rd party in 2020. Based on the methodology used, the value is 6% and exceeds the 5% threshold of relevancy established compared to the total of Scope 1 and 2 emissions and therefore determined to be relevant. Reduction of Scope 1 and 2 reduces this scope 3 emission.

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Metric tonnes CO2e

3,449,729

Emissions calculation methodology

GM is a member of EPA SmartWay and used their methodology to obtain GHG emissions, based on truck distances and fuel efficiency according to GHG Protocol for GM's North America parts delivery from third party over the road logistics providers. Ocean emissions intensity was evaluated using a major supplier's carbon accounting and extrapolating using revenue intensity. Rail and Air emissions for all global upstream transportation GHG were estimated using CDP Analytics for similar companies multiplied by revenue spend. Truck emissions for rest of world were calculated using emission factors from EPA SmartWay. As SmartWay data is one year in arrears, the basis for the data is 2018 and was verified by an independent 3rd party in 2020.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

50

Please explain

SmartWay provides data from carriers using fuel use and distances travelled. Revenue spend is from suppliers and CDP analytics provides companies revenue intensities as secondary data. The quantity is about half of scope 1 and 2 and is relevant to our carbon footprint.

Waste generated in operations

Evaluation status

Relevant, calculated

Metric tonnes CO2e

954

Emissions calculation methodology

USEPA WasteWise model applied with GM Global waste data. GM avoided 6 Million metric tons by reusing, recycling, and composting significant quantities of materials. In 2019 we had 94 land-fill free sites globally that provides more than a total offset from waste reuse and

recycle activities to our Scope 1 & 2 GHG emissions. Although the GHG is small compared to our total carbon footprint, waste reduction is strategic to our business and included as relevant.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

50

Please explain

Reuse, recycling, incineration, and landfill activities are inputs to WARM model from actual data and the remaining calculation from WARM uses secondary data factors. As GM increases its waste reuse and recycling, our GHG from waste to landfill is reduced accordingly. In 2019, GM avoided 6 Million tons of GHG through reduction, reuse, recycle, and composting materials and had 94 Landfill-free sites. Although CO2e reductions have reduced it to below relevant levels, we continue to treat it as relevant due to the huge offset opportunity as reuse and recycling avoids more than our scope 1 & 2 emissions combined and waste reduction is strategic to our business.

Business travel

Evaluation status

Not relevant, calculated

Metric tonnes CO2e

40,051

Emissions calculation methodology

GHG Protocol method was used by our 3rd party travel agent to calculate Air Business travel GHG emissions for our global operations from 2019 data. The GHG emissions were verified by a 3rd party in 2020.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

50

Please explain

Distances travelled is primary data and emission factors is secondary. Based on the methodology used, the value is 1% or much less than the 5% threshold of relevancy established compared to the total of Scope 1 and 2 emissions and therefore determined to be not relevant.



Employee commuting

Evaluation status

Not relevant, calculated

Metric tonnes CO2e

123,000

Emissions calculation methodology

Using CDP Analytics, an average of employee commuting intensity per employee was calculated and applied to GM's total employee number to estimate our GHG associated with employee commuting.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

50

Please explain

Based on the methodology used, the value is 2% or much less than the 5% threshold of relevancy established compared to the total of Scope 1 and 2 emissions and therefore determined to be not relevant.

Upstream leased assets

Evaluation status

Not relevant, calculated

Metric tonnes CO2e

10,077

Emissions calculation methodology

GM's leased asset facility area was used along with the GHG intensity of similar facilities to estimate the GHG from GM's global upstream leased assets.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

50

Please explain

Based on the methodology used, the value is 0.1% or much less than the 5% threshold of relevancy established compared to the total of Scope 1 and 2 emissions and therefore determined to be not relevant. Area of leased space is primary data and intensity factors is secondary.

Downstream transportation and distribution

Evaluation status

Relevant, calculated

Metric tonnes CO2e

1,922,037

Emissions calculation methodology

GM is a member of EPA SmartWay and used their methodology to obtain GHG emissions, based on truck distances and fuel efficiency according to GHG Protocol for GM's North America parts delivery from third party over-the-road logistics providers. Ocean emissions intensity was evaluated using a major supplier's carbon accounting and extrapolating using revenue intensity. Rail and Air emissions for all global upstream transportation GHG were estimated using CDP Analytics for similar companies multiplied by revenue spend. Truck emissions for rest of world were calculated using emission factors from EPA SmartWay. As SmartWay data is one year in arrears, the basis for the data is 2018 and was verified by an independent 3rd party in 2020.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

50

Please explain

SmartWay provides data from carriers using fuel use and distances travelled. Revenue spend is from suppliers and CDP analytics provides companies revenue intensities as secondary data. The quantity is about half of scope 1 and 2 and is relevant to our carbon footprint.

Processing of sold products

Evaluation status

Not relevant, calculated



Metric tonnes CO2e

120,731

Emissions calculation methodology

GM sells boat engines as an intermediate product to boat manufacturers and customers for recreational use. Based on estimates from boatcarbonfootprint.com, including average hours of operation and fuel efficiency for gasoline engines and USEPA emission factors, a total GHG amount for the use of sold products was calculated and extrapolated for total carbon footprint.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

50

Please explain

Based on the methodology used, the value is 2% or less than the 5% threshold of relevancy established compared to the total of Scope 1 and 2 emissions and therefore determined to be not relevant.

Use of sold products

Evaluation status

Relevant, calculated

Metric tonnes CO2e

190,123,729

Emissions calculation methodology

GHG from the Use of Sold products or vehicles is calculated using the average regional CO2e emissions per vehicle multiplied by life cycle distance driven by customers of 150,000 km over 10 years and multiplied by 2019 sales volumes. Regional emission factors are calculated using governmental methods in countries such as, USA, Brazil, and China. Additionally, fugitive emissions of Mobile air conditioning units are calculated using WRI method 3 and added for total estimated GHG emissions. The regions utilized for emission factors are USA, Brazil, and China based on the most fully developed regulatory monitoring and measurement systems. Vehicle emissions were verified by a third party, including mobile air conditioning, which accounts for less than 1% and getting less as GHG friendly refrigerants like HF1234yf are being used.



Percentage of emissions calculated using data obtained from suppliers or value chain partners

50

Please explain

2019 calculation of life cycle GHG from vehicles sold is done using regional vehicle emissions rates for increased granularity. Vehicle emissions were verified by a third party, including mobile air conditioning fugitive emissions of GHG, which accounts for less than 1% and getting less as more Climate Change friendly refrigerants like HF1234yf are being used in-lieu of R134a.

End of life treatment of sold products

Evaluation status

Relevant, calculated

Metric tonnes CO2e

2,938,656

Emissions calculation methodology

The total emissions are based on the "end of life" CO2e results of product life cycle analysis calculations performed at General Motors for specific automobiles and their material compositions and is multiplied by the total amount of vehicles that GM sold globally in 2019.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

50

Please explain

Product life cycle analysis provides a basis for GHG emissions from end of life of an automobile. Design for the Environment activities provide a method for continuous improvement in End of Life GHG. As the GHG is 58% of scope 1 and 2, it is relevant. Primary data is vehicle volume and secondary is Product LCA.

Downstream leased assets

Evaluation status

Not relevant, calculated



Metric tonnes CO2e

20,459

Emissions calculation methodology

A portion of GM's global headquarters facility is leased to other tenants as well some vehicle haul-away sites. The GHG represents the estimated use from leased spaces based on energy invoice data and meter allocations. GHG emissions are calculated using GHG Protocol with E-Grid and fuel emission factors from USEPA.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

50

Please explain

Based on the methodology used, the value is 0.4% or much less than the 5% threshold of relevancy established compared to the total of Scope 1 and 2 emissions and therefore determined to be not relevant.

Franchises

Evaluation status

Not relevant, calculated

Metric tonnes CO2e

138,641

Emissions calculation methodology

Using CDP Analytics, a representative GHG net income intensity was used along with GM's financial unit's annual 2019 income to estimate our GHG from Investment activities.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

50

Please explain



Based on the methodology used, the value is 1% or much less than the 5% threshold of relevancy established compared to the total of Scope 1 and 2 emissions and therefore determined to be not relevant,

Investments

Evaluation status

Not relevant, explanation provided

Please explain

We have equity ownership stakes in entities that meet the demands of customers in other countries, primarily in China, with vehicles developed, manufactured, and/or marketed under the Baojun, Buick, Cadillac, Chevrolet, Jiefang, and Wuling brands. The emissions from these investments are included in our Scopes 1,2, and 3. Emissions from other investments, e.g. GM Cruise, are insignificant and related to small leased offices in 2020.

Other (upstream)

Evaluation status

Please explain

Other (downstream)

Evaluation status

Please explain

C6.7

(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?

No

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure

0.000039

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

5,311,575

Metric denominator

unit total revenue

Metric denominator: Unit total

137,237,000,000

Scope 2 figure used

Market-based

% change from previous year

1

Direction of change

Decreased

Reason for change

Revenue decreased by 7% and absolute GHG decreased by 7% due to RE-100 implementation and energy efficiency projects, like LED lights, building management systems, and process optimization. Revenue intensity is not a good measure for automobile manufacturing as revenue is



more dependent on vehicle content as opposed to energy used in operations. Energy cost is <1% of revenue and is insignificant compared to revenue. Energy use in operations does not correlate to vehicle content or revenue, but rather vehicle production, climate, size of vehicles (wheelbase), and plant utilization according to US EPA Energy Star benchmarking.

Intensity figure

0.72

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO₂e)

5,311,575

Metric denominator

vehicle produced

Metric denominator: Unit total

7,332,373

Scope 2 figure used

Market-based

% change from previous year

8

Direction of change

Increased

Reason for change

GM experienced a 13% year over year volume reduction in 2019 vs. 2018 and absolute GHG decreased by 7% due to RE-100 implementation and energy efficiency projects, like LED lights, building management systems, and process optimization. Energy use and volume do not have a 1:1 relationship as manufacturing has a fixed energy load during non-production. The best energy shutdown we experienced in 2019 was in the 90% range during US work stoppage which minimized the impact. Additionally, we idled some facilities due to lower car sales compared to trucks and SUVs and launched many new vehicle models. Energy Performance Contracts (EPC) based on shared savings, represents the



method with the most energy reduction and in 2019, GM had multiple plants and facilities with EPC's underway. EPC projects range from complete steam elimination, LED lights, HVAC optimization, and other energy conservation measures.

Intensity figure

0.38

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

2,778,316

Metric denominator

vehicle produced

Metric denominator: Unit total

7,332,373

Scope 2 figure used

Market-based

% change from previous year

7

Direction of change

Decreased

Reason for change

As Auto OEMs have various levels of manufacturing integration and outsource at different levels, a good measure of how much energy per vehicle is to focus on Vehicle Assembly Plants. Vehicle Assembly plants are about 60% of our total energy use and representative of vehicle manufacturing - Stamping, Body weld, Paint, and Assembly. Whereas, other parts manufacturing - Engine, Transmission, Battery, Casting, and smaller parts manufacturing insourcing vs. outsourcing varies by OEM. Energy Performance Contracts (EPC) based on shared savings, represents the method with the most energy reduction and in 2019, GM had multiple plants and facilities with EPC's underway. EPC projects range from complete steam elimination, LED lights, HVAC optimization, and other energy conservation measures.

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?

Yes

C7.1a

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).

| Greenhouse gas | Scope 1 emissions (metric tons of CO ₂ e) | GWP Reference |
|-----------------|--|---|
| HFCs | 69,825 | IPCC Fifth Assessment Report (AR5 – 100 year) |
| CO ₂ | 1,519,875 | IPCC Fifth Assessment Report (AR5 – 100 year) |

C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/region.

| Country/Region | Scope 1 emissions (metric tons CO ₂ e) |
|--|---|
| North America | 1,192,960 |
| South America | 59,638 |
| Other, please specify Rest of World, excluding Americas | 337,102 |

C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

By business division

C7.3a

(C7.3a) Break down your total gross global Scope 1 emissions by business division.

| Business division | Scope 1 emissions (metric ton CO2e) |
|-----------------------------|-------------------------------------|
| GM North America | 1,192,960 |
| GM South America | 59,638 |
| GM International Operations | 337,102 |

C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4

(C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4) Break down your organization's total gross global Scope 1 emissions by sector production activity in metric tons CO2e.

| | Gross Scope 1 emissions, metric tons CO2e | Comment |
|--------------------------|---|---|
| Transport OEM activities | 1,351,245 | GM's non-manufacturing scope 1 is excluded for sector specific emissions. |

C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/region.

| Country/Region | Scope 2, location-based (metric tons CO2e) | Scope 2, market-based (metric tons CO2e) | Purchased and consumed electricity, heat, steam or cooling (MWh) | Purchased and consumed low-carbon electricity, heat, steam or cooling accounted for in Scope 2 market-based approach (MWh) |
|-----------------------|--|--|--|--|
| North America | 2,380,340 | 1,746,833 | 5,080,244 | 1,501,706 |
| South America | 90,776 | 85,383 | 508,267 | 31,888 |
| Other, please specify | 1,910,853 | 1,889,659 | 2,286,607 | 33,857 |



| | | | | |
|---|--|--|--|--|
| Rest of World - GM International Operations | | | | |
|---|--|--|--|--|

C7.6

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

By business division

C7.6a

(C7.6a) Break down your total gross global Scope 2 emissions by business division.

| Business division | Scope 2, location-based (metric tons CO2e) | Scope 2, market-based (metric tons CO2e) |
|--|--|--|
| GM North America | 2,380,340 | 1,746,833 |
| GM South America | 90,776 | 85,383 |
| GM International Operations - includes GM total minus Americas | 1,910,853 | 1,889,659 |

C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7

(C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7) Break down your organization’s total gross global Scope 2 emissions by sector production activity in metric tons CO2e.

| | Scope 2, location-based, metric tons CO2e | Scope 2, market-based (if applicable), metric tons CO2e | Comment |
|--|---|---|---------|
| | | | |



| | | | |
|--------------------------|-----------|-----------|--|
| Transport OEM activities | 3,724,675 | 3,163,594 | Transport Sector Scope 2 excludes GM's non-manufacturing GHG emissions. Non-manufacturing includes GM offices, labs, and warehouse activities. |
|--------------------------|-----------|-----------|--|

C-TO7.8

(C-TO7.8) Provide primary intensity metrics that are appropriate to your indirect emissions in Scope 3 Category 11: Use of sold products from transport.

Activity

Light Duty Vehicles (LDV)

Emissions intensity figure

0.000126

Metric numerator (Scope 3 emissions: use of sold products) in Metric tons CO2e

190,123,729

Metric denominator

p.km

Metric denominator: Unit total

1,505,010,000,000

% change from previous year

-1

Vehicle unit sales in reporting year

7,718,000

Vehicle lifetime in years

10

Annual distance in km or miles (unit specified by column 4)

15,000

Load factor

Average occupancy rates for passenger vehicles under various use scenarios according to European Environment Agency is 1.3 passengers per vehicle. We used a 1.0 for load factor and 1.3 passengers per vehicle.

Please explain the changes, and relevant standards/methodologies used

GM used (3) methodologies for vehicle emissions intensities (grams/km) based on governmental standards from US EPA, China, and Brazil and applied these to the appropriate country of sale considering vehicle model similarities, e.g. use US for Canada sales and Brazil for South America sales... For mobile air conditioning HFC fugitive emissions calculation we used WRI method 3 and ARA 5 GWP for R-134a and HF1234yf. Vehicle sales are listed in GM's financial filing 10-k report with the US Securities and Exchange Commission. Passenger km is based on industry standard at 15,000 km/year and vehicle lifetime is 10 years. We used 1.3 passengers per vehicle based on average occupancy from European Environment Agency report on Occupancy rates for passenger vehicles. 2019 total vehicle emissions were down by 1% compared to 2018: -reduction in emission intensity in Brazil and China, -slight increase, 2%, in USA due to product mix increases in Light Duty Trucks, -a reduction based on the increased use of HF1234yf as vehicle refrigerant in 2019 versus 2018 as transition to HF1234yf continues.

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Decreased

C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.



| | Change in emissions (metric tons CO2e) | Direction of change | Emissions value (percentage) | Please explain calculation |
|--|--|---------------------|------------------------------|--|
| Change in renewable energy consumption | 258,900 | Decreased | 5 | <p>In 2019, 258,900 tCO2e were reduced by increasing renewable consumption and our total S1 and S2 emissions in 2018 was 5,971,670 tCO2e, therefore we arrived at 4% through $(258,900/5,971,670)*100= 4\%$.</p> <p>In early 2020, in response to the need to accelerate efforts to address climate change, we pulled forward our 100 percent global renewable energy commitment to 2040 with interim goals of achieving 60 percent globally by 2025 and 100 percent of U.S. sites by 2030. We finished 2019 with 23 sites completely powered by renewable energy, including our Arlington, Texas, assembly plant that is completely powered by wind energy. By late 2022, our largest facility in North America, Spring Hill Manufacturing, is expected to be powered by 100 percent solar energy. This will be made possible through a green tariff agreement with the Tennessee Valley Authority, which is expected to supply up to 100 megawatts of solar energy per year. The energy will be supplied by a solar farm in Lowndes County, Mississippi, currently under development by Origis Energy (subject to environmental review).</p> <p>The commitment is made possible through the Tennessee Valley Authority's Green Invest program, which is the federal electric utility's green tariff solution. At its completion, the project is expected to increase GM's use of renewable energy to more than 50 percent of its sourced electricity by 2023. We are making significant progress in the use of renewable energy to power our operations, combining physical and virtual power purchase agreements and onsite renewable energy projects, such as solar arrays and landfill gas projects. GM is also a member of RE100, a global collaborative initiative backed by The Climate Group in partnership with CDP. RE100 brings</p> |



| | | | | |
|--------------------------------------|---------|-----------|---|---|
| | | | | <p>together companies that have made commitments to use 100 percent renewable energy in their operations to share best practices and demonstrate the increased demand for clean power. GM is one of only three automakers, and the only one in North America, that has made the RE100 pledge. In recognition of our efforts, GM received the 2019 Green Power Leadership Award from the U.S. Environmental Protection Agency, one of only seven organizations nationwide to receive the award. The awards recognize companies for their commitment and contribution to helping advance the development of the nation's voluntary green power market.</p> |
| Other emissions reduction activities | 157,840 | Decreased | 3 | <p>In 2019, 157,840 tCO2e were reduced by implementing energy savings projects and emissions reduction activities (LED, Building Management Systems, and process improvements), and our total S1 and S2 emissions in in 2018 was 5,971,670 tCO2e, therefore we arrived at 3% through $(157,840/5,971,670)*100= 3\%$</p> <p>Incorporating a price on carbon to prioritize energy savings projects, GM implemented 250 projects globally in Building, Process, and Behavioral.</p> <p>i. Building projects include - Upgrading building management controls, replacing old inefficient motors and lights with LED provides great paybacks. We use Energy Treasure hunts to find and implement opportunities. The majority are related to HVAC savings as that is 30-40% of our use.</p> <p>GM also uses a variety of Energy Star initiatives as a framework for charting our progress in building energy efficiency. Energy Star's Building Portfolio Manager (BPM) allows us to benchmark our progress and make continuous improvements. BPM integrates with our utility bill management system, sending an automated monthly analysis of building scores to evaluate building performance.</p> <p>ii. Process improvements - As paint shops represent the majority of our energy use, many projects were completed in paint - efficient paint mix motors, LED lights, steam elimination, paint booth and oven optimization...</p> <p>iii. Behavioral improvements - GM uses an energy management system (EMS) and energy performance contracts (EPC) to achieve energy-reduction goals. The basis of</p> |



| | | | | |
|-----------------------|---------|-----------|---|--|
| | | | | <p>the system originates from Energy Star model and is integrated into our "plan, do, check, act" business plan. In 2019, 27 GM U.S. manufacturing facilities, or more than 90 percent of our U.S. manufacturing footprint, implemented the U.S. Department of Energy's (DOE) 50001 Ready program. This program is an application tool through which 25 tasks are measured to demonstrate an effective EMS. Upon completion, facilities can self-attest to the structure of ISO 5001, a voluntary global standard. GM engaged with DOE to train the GM Energy team, along with suppliers and other companies on the 50001 Ready process. GM has been recognized by DOE in US for "50001 Ready" for 25 facilities, more facilities than any other participating company. We plan to expand this program to all of our manufacturing facilities globally in order to continuously monitor and improve our EMS.</p> |
| Divestment | 0 | No change | 0 | We did not have any significant divestments until year end in 2019 and have included GHG emissions for divested operations in our scope 1 & 2 disclosure. |
| Acquisitions | 0 | No change | 0 | We did not have significant acquisitions that impact our scope 1 & 2 GHG emissions. |
| Mergers | 0 | No change | 0 | We did not have significant mergers that impact our scope 1 & 2 GHG emissions. |
| Change in output | 234,772 | Decreased | 4 | In 2019 compared to 2018, GM vehicle production volume decreased by 13%. One cause was a work stoppage in GM's US factories for 40 days. Also, GM's 2019 global markets experienced lower sales than in 2018. Scope 1 & 2 emissions do not correlate on 1:1 basis with volume as there are fixed energy uses that must be operating although there is no production. GM stepped up our shutdown activities during the 40-day work stoppage by daily tracking of each facilities performance in energy reduction, Plant directors involved in reaching the lowest shutdown possible, and sharing best practices globally for shutdown. |
| Change in methodology | 0 | No change | 0 | No significant change in methodology. |



| | | | | |
|---|---------|-----------|------|---|
| Change in boundary | 2,745 | Increased | 0.05 | GM added non-manufacturing net space in 2019 that resulted in an increase in scope 1 and 2 GHG emissions. |
| Change in physical operating conditions | 35,411 | Decreased | 1 | Climate has an effect on GHG emissions due to heating and cooling outside air for process (Paint booths & ovens) and people comfort. We measure the effect by comparing heating and cooling degree days (HDD/CDD) on a year over year basis. In 2019, Winter months had 2% lower HDD in areas of the world where we paint and assemble vehicle and Summer was milder also with 3% less CDD than in 2018. GM uses multi-variate regression analysis for energy and water forecasting and estimates climate effect at 1% for 2019 vs. 2018. |
| Unidentified | 0 | No change | 0 | |
| Other | 470,793 | Increased | 8 | In 2019 GM idled multiple facilities due to low volume and at the same time implemented many product launches. Idling facilities results in energy use, but on product output. Product launches are an important aspect of our business to deliver new vehicle models to our customers. Product launches require validation to ensure quality and require operating our facilities, using energy, but with no saleable vehicle volumes for output. |

C7.9b

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Market-based

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?

More than 0% but less than or equal to 5%

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

| | Indicate whether your organization undertook this energy-related activity in the reporting year |
|--|---|
| Consumption of fuel (excluding feedstocks) | Yes |
| Consumption of purchased or acquired electricity | Yes |
| Consumption of purchased or acquired heat | Yes |
| Consumption of purchased or acquired steam | Yes |
| Consumption of purchased or acquired cooling | No |
| Generation of electricity, heat, steam, or cooling | Yes |

C8.2a

(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

| | Heating value | MWh from renewable sources | MWh from non-renewable sources | Total (renewable and non-renewable) MWh |
|--|----------------------------|----------------------------|--------------------------------|---|
| Consumption of fuel (excluding feedstock) | HHV (higher heating value) | 244,337 | 7,775,567 | 8,019,904 |
| Consumption of purchased or acquired electricity | | 1,567,451 | 5,910,927 | 7,478,378 |
| Consumption of purchased or acquired heat | | 0 | 40,477 | 40,477 |
| Consumption of purchased or acquired steam | | 0 | 356,263 | 356,263 |



| | | | | |
|---|--|-----------|------------|------------|
| Consumption of self-generated non-fuel renewable energy | | 69,341 | | 69,341 |
| Total energy consumption | | 1,881,129 | 14,083,234 | 15,964,363 |

C8.2b

(C8.2b) Select the applications of your organization’s consumption of fuel.

| | Indicate whether your organization undertakes this fuel application |
|---|---|
| Consumption of fuel for the generation of electricity | No |
| Consumption of fuel for the generation of heat | Yes |
| Consumption of fuel for the generation of steam | Yes |
| Consumption of fuel for the generation of cooling | Yes |
| Consumption of fuel for co-generation or tri-generation | No |

C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Fuels (excluding feedstocks)

Natural Gas

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

7,500,278

MWh fuel consumed for self-generation of heat

4,401,681

MWh fuel consumed for self-generation of steam

3,001,097

MWh fuel consumed for self-generation of cooling

97,500

Emission factor

0.18

Unit

metric tons CO2 per MWh

Emissions factor source

Intergovernmental Panel on Climate Change (IPCC) AR 5 for natural gas is used globally with emission factor 0.20 tons per MWh. For US, we use US EPA value of 0.18 Tons/MWh for natural gas.

Comment

Natural Gas is used for ovens to cure paint, building heating, and generation of hot water and steam in boilers.

Fuels (excluding feedstocks)

Landfill Gas

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

244,337



MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

56,868

MWh fuel consumed for self-generation of cooling

0

Emission factor

0.177

Unit

metric tons CO2 per MWh

Emissions factor source

US EPA website, <https://www.epa.gov/sites/production/files/2020-04/documents/ghg-emission-factors-hub.pdf> provides landfill gas emission factor. GM reports the Biogenic portion of emissions separately from non-biogenic.

Comment

US EPA.gov reports "CO2 emissions from MSW landfills are not considered to contribute to global climate change because the carbon was contained in recently living biomass. The same CO2 would be emitted as a result of the natural decomposition of the organic waste materials outside the landfill environment."

C8.2d

(C8.2d) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.

| | Total Gross generation (MWh) | Generation that is consumed by the organization (MWh) | Gross generation from renewable sources (MWh) | Generation from renewable sources that is consumed by the organization (MWh) |
|-------------|------------------------------|---|---|--|
| Electricity | 65,862 | 65,614 | 65,614 | 65,614 |



| | | | | |
|---------|---------|---------|---|---|
| Heat | 40,477 | 40,477 | 0 | 0 |
| Steam | 421,077 | 421,077 | 0 | 0 |
| Cooling | 801 | 801 | 0 | 0 |

C8.2e

(C8.2e) Provide details on the electricity, heat, steam, and/or cooling amounts that were accounted for at a zero emission factor in the market-based Scope 2 figure reported in C6.3.

Sourcing method

Power purchase agreement (PPA) with a grid-connected generator with energy attribute certificates

Low-carbon technology type

Wind

Country/region of consumption of low-carbon electricity, heat, steam or cooling

United States of America

MWh consumed accounted for at a zero emission factor

902,329

Comment

Virtual PPAs for wind where GM owns the environmental attributes.

Sourcing method

Power purchase agreement (PPA) with a grid-connected generator with energy attribute certificates

Low-carbon technology type

Solar

Country/region of consumption of low-carbon electricity, heat, steam or cooling

United States of America

MWh consumed accounted for at a zero emission factor

13,555

Comment

Solar PPAs where GM owns the environmental attributes.

Sourcing method

Green electricity products (e.g. green tariffs) from an energy supplier, supported by energy attribute certificates

Low-carbon technology type

Wind

Country/region of consumption of low-carbon electricity, heat, steam or cooling

Americas

MWh consumed accounted for at a zero emission factor

400,291

Comment

Green tariffs in USA for wind and in Brazil for wind, solar, and small hydropower mix where GM owns the environmental attributes.

Sourcing method

Power purchase agreement (PPA) with a grid-connected generator with energy attribute certificates

Low-carbon technology type

Solar

Country/region of consumption of low-carbon electricity, heat, steam or cooling

China

MWh consumed accounted for at a zero emission factor

33,857

Comment

Solar PPAs where GM owns the environmental attributes.

Sourcing method

Green electricity products (e.g. green tariffs) from an energy supplier, supported by energy attribute certificates

Low-carbon technology type

Hydropower

Country/region of consumption of low-carbon electricity, heat, steam or cooling

Americas

MWh consumed accounted for at a zero emission factor

217,203

Comment

Green tariffs in US and Brazil where GM owns to environmental attributes.

Sourcing method

Green electricity products (e.g. green tariffs) from an energy supplier, supported by energy attribute certificates

Low-carbon technology type

Solar

Country/region of consumption of low-carbon electricity, heat, steam or cooling

United States of America

MWh consumed accounted for at a zero emission factor

216

Comment

Green tariff in US for solar where GM has rights to environmental attributes.

C-TO8.5

(C-TO8.5) Provide any efficiency metrics that are appropriate for your organization's transport products and/or services.

Activity

Light Duty Vehicles (LDV)

Metric figure

24.52

Metric numerator

tCO₂e

Metric denominator

Production: Vehicle

Metric numerator: Unit total

190,123,729



Metric denominator: Unit total

7,718,000

% change from previous year

1

Please explain

Total use of sold product is calculated annually for 2019. The method is consistent with GHG Protocol, using country regulatory vehicle emission methods for US, China, and Brazil. The GHG emission intensities are applied to every country with sales using emission factors that match the models typically sold in that country, e.g. US factors used in Canada, Brazil factors used in South America, and China used in Asia, Africa, and Middle East. Emission intensities (Grams/km) are multiplied by 15,000 km/year driven per vehicle and number of vehicles sold by country. Metric tons are normalized by sold vehicles in 2019 for metric figure reported. The numerator is annual CO2e emissions from 100% of vehicles and metric is normalized by vehicle sales. There is a 1% decrease due to ICE efficiencies of Start-stop, advanced transmissions, and electrification as well as product mix of sales in 2019 vs. 2018.

C9. Additional metrics

C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

Description

Waste

Metric value

222

Metric numerator

Total waste from GM operations in Kilograms

Metric denominator (intensity metric only)

Vehicles produced

% change from previous year

1

Direction of change

Decreased

Please explain

GM has made steady progress in reducing our operational waste intensity over the past decade. As we approach the terminal date of our current 2020 manufacturing goals, we are formulating a new goal to build further upon progress to date. Our aspiration is to become the first zero waste automotive company. As in the past, innovation and the adoption of new technologies will help us lead in this area. Our Bowling Green Assembly paint shop system, for example, is using limestone to capture overspray, a practice that eliminates more than 400 tons per year of paint sludge waste. Likewise, GM's design team donates scrap leather, vinyl and synthetic suede to the College for Creative Studies to be used by fashion students, and donates Corvette leather scraps to Pingree, a Detroit business that employs veterans with meaningful work. Pingree's team of makers hand craft this leather into custom Corvette-branded accessories. At our Global Design Center in Warren, Michigan, the extended design team collects and cleans clay that is left over from creating vehicle models, which help designers more clearly visualize and refine the look of a finished product. Using metal detecting wands, the team meticulously removes any metal pins and processes the material into a new mixture. In one hour, six team members can completely strip one midsize vehicle model of salvageable clay, preventing it from entering a landfill. Sending less waste to landfill also extends to our construction projects. In 2019, GM recycled about 14 million kilograms of concrete and uncontaminated asphalt, 27.5 million kilograms of metal scrap and 216,000 kilograms of plastic generated during construction. The recycled material was sent to accredited waste facilities for regeneration. Additionally, GM global facilities reused 11.5 million kilograms of concrete and uncontaminated asphalt.

C-TO9.3/C-TS9.3

(C-TO9.3/C-TS9.3) Provide tracking metrics for the implementation of low-carbon transport technology over the reporting year.

Activity

Light Duty Vehicles (LDV)

Metric

Sales

Technology

Battery electric vehicle (BEV)

Metric figure

2

Metric unit

% of total sales

Explanation

Our global commitment to realize an all-electric, zero-emissions future — from battery chemistry and architecture to safety validation and infrastructure — requires unprecedented investment in people and resources. This is why we've announced our intent to allocate more than \$20 billion in capital and engineering resources to EV and autonomous vehicle (AV) programs between 2020 and 2025. This equates to more than \$3 billion annually. By mid-decade, our intent is to sell a million EVs per year in our two largest markets: North America and China, where we are working with our joint venture partners. GM's flexibility and engineering focus will drive the scale required to accelerate our path to zero emissions in a profitable and efficient way. In addition, we are leveraging existing assets, such as production tools and body and paint shops, so that economies of scale can be realized with less capital and further position the first generation of these products for profitability.



C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6

(C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?

| | Investment in low-carbon R&D | Comment |
|-------|------------------------------|---------|
| Row 1 | Yes | |

C-TO9.6a/C-TS9.6a

(C-TO9.6a/C-TS9.6a) Provide details of your organization’s investments in low-carbon R&D for transport-related activities over the last three years.

Activity

Light Duty Vehicles (LDV)

Technology area

Electrification

Stage of development in the reporting year

Full/commercial-scale demonstration

Average % of total R&D investment over the last 3 years

41-60%

R&D investment figure in the reporting year (optional)

6,800,000,000



Comment

Though many of the details about our electric future were revealed during EV Week in the first quarter of 2020, we've been preparing for this future for years. We have two decades of electrification knowledge and experience and have invested billions in research and development. This includes a \$1.5 billion investment three years ago at our Technical Center, where we have expanded and enhanced our state-of-the-art battery testing lab, as well as other R&D facilities. The battery lab has been the largest and most advanced test lab in America for over a decade. The latest expansion brings the facility to more than 100,000 square feet and includes heavy and mild battery abuse test areas and new test chambers. Today, about 60 percent of the work at our Technical Center is focused on EV development compared with about 20 percent three years ago. These types of R&D investment are one reason that GM has more than 3,000 global patents related to electrification on file today.

C10. Verification

C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

| | Verification/assurance status |
|--|--|
| Scope 1 | Third-party verification or assurance process in place |
| Scope 2 (location-based or market-based) | Third-party verification or assurance process in place |
| Scope 3 | Third-party verification or assurance process in place |

C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.

Verification or assurance cycle in place

Annual process


Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

 ver_stmt_2019_gm_Global_20200710.pdf

Page/ section reference

Page 2 of GM 2019 Verification statement by Stantec, an independent 3rd party is attached.

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

C10.1b

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.

Scope 2 approach

Scope 2 location-based

Verification or assurance cycle in place

Annual process


Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

 ver_stmt_2019_gm_Global_20200710.pdf

Page/ section reference

Page 2 of GM 2019 Verification statement by Stantec, an independent 3rd party is attached.

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

Scope 2 approach

Scope 2 market-based

Verification or assurance cycle in place

Annual process


Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

 ver_stmt_2019_gm_Global_20200710.pdf

Page/ section reference

Page 2 of GM 2019 Verification statement by Stantec, an independent 3rd party is attached.

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

C10.1c

(C10.1c) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Scope 3 category

Scope 3: Use of sold products

Verification or assurance cycle in place

Annual process


Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

 ver_stmt_2019_gm_Global_20200710.pdf

Page/section reference

Page 2 of GM 2019 Verification statement by Stantec, an independent 3rd party is attached.

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

Scope 3 category

Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

 ver_stmt_2019_gm_Global_20200710.pdf

Page/section reference

Page 2 of GM 2019 Verification statement by Stantec, an independent 3rd party is attached.

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

Scope 3 category

Scope 3: Business travel

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

 ver_stmt_2019_gm_Global_20200710.pdf

Page/section reference

Page 2 of GM 2019 Verification statement by Stantec, an independent 3rd party is attached. This represents 100% of business travel by air.

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

Scope 3 category

Scope 3 (upstream & downstream)

Verification or assurance cycle in place

Biennial process


Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

 rpt_fnl_gm_global_20200713_2018_v2.pdf

Page/section reference

Page 3 of GM 2018 Verification report by Stantec, an independent 3rd party is attached. Used 2018 data for verification due to best available data from primary sources.

Category 1 Purchased Goods and Services (in 2019, GM had major disruption to production due to work stoppage, so 2018 data was used)

Category 2 Capital Goods (in 2019, GM had major disruption to production due to work stoppage, so 2018 data was used)

Categories 4 and 9 transportation (best available data from SmartWay)

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)


C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?

Yes

C10.2a

(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?

 ver_stmt_2019_gm_Global_20200710.pdf

| Disclosure module verification relates to | Data verified | Verification standard | Please explain |
|---|--|-----------------------|---|
| C8. Energy | Year on year change in emissions (Scope 1 and 2) | ISO 14064-3 | To measure continuous improvement in GHG reduction, we had an independent 3rd party, Stantec, verify year over year performance for GHG, as well as energy use, water use, vehicle production, and waste. |
| C8. Energy | Renewable energy products | ISO 14064-3 | Renewable energy (electricity) consumption was verified by an independent 3rd party to track our progress to our RE-100 goal. We are at 22% to a goal of 100% by 2040. |

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?

Yes

C11.1a

(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.

Canada federal Output Based Pricing System (OBPS) - ETS

China national ETS

Korea ETS

C11.1b

(C11.1b) Complete the following table for each of the emissions trading schemes you are regulated by.

Canada federal OBPS - ETS

% of Scope 1 emissions covered by the ETS

99

% of Scope 2 emissions covered by the ETS

1.4

Period start date

January 1, 2019

Period end date

December 31, 2019

Allowances allocated

58,536

Allowances purchased

0

Verified Scope 1 emissions in metric tons CO₂e

121,328

Verified Scope 2 emissions in metric tons CO₂e

1,772

Details of ownership

Facilities we own and operate

Comment

Verified data for Canada OBPS is not final for 2019 until October, 2020. We expect these values to be verified.

China national ETS

% of Scope 1 emissions covered by the ETS

16

% of Scope 2 emissions covered by the ETS

84

Period start date

January 1, 2019

Period end date

December 31, 2019

Allowances allocated

480,896

Allowances purchased

0

Verified Scope 1 emissions in metric tons CO₂e

71,256



Verified Scope 2 emissions in metric tons CO2e

410,458

Details of ownership

Facilities we own but do not operate

Comment

(Joint Venture ownership with managing director from GM for operations. We include active JV's in our carbon reporting and share best practices.)

Korea ETS

% of Scope 1 emissions covered by the ETS

33.1

% of Scope 2 emissions covered by the ETS

0

Period start date

January 1, 2019

Period end date

December 31, 2019

Allowances allocated

346,986

Allowances purchased

0

Verified Scope 1 emissions in metric tons CO2e

300,961

Verified Scope 2 emissions in metric tons CO₂e

0

Details of ownership

Facilities we own and operate

Comment

we sold 38,6844 CO₂eq tons at \$1 M USD in 2019 or 25.85 USD/ton

C11.1d

(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?

GM's strategy for participating in emissions trading schemes in Korea and China is to continue implementing energy efficiency projects and initiatives to reduce GHG and provide value from the potential sale of carbon credits in the marketplace. An example of the reason why this is important is in our plant in Korea, we gained \$9.5M from the sale of carbon credits as well as reducing our carbon footprint.

Implementing energy efficiency in GM operations in Korea and China is an ongoing process as it is integrated into our business plans and includes Energy treasure hunts, energy teams and project and initiative implementation with these examples - LED lights, compressed air and building management. These initiatives represent an opportunity for us to reduce our operational costs and to sell carbon credits into the Korean Carbon Emission Trading Scheme. In 2019, GM Korea continued to make efficiency improvements and sold 38,6844 CO₂eq tons at \$1 M USD in 2019 or 25.85 USD/ton

C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?

Yes

C11.2a

(C11.2a) Provide details of the project-based carbon credits originated or purchased by your organization in the reporting period.

Credit origination or credit purchase

Credit purchase

Project type

Transport

Project identification

One of GM's fleet customers was interested in offsetting a part of their scope 3 vehicle emissions from GM vehicle use for the short term in 2019. GM procured 15,500 tons of verified carbon credits from Intermodal transportation. The 15,500 tons were retired in the name of the customer in 2019 as part of an incentive program.

The GHG CleanProjects® Registry provides a portal to report and showcase your project's greenhouse gas (GHG) emission reductions or removals. It offers a web-based public location that is accessible world-wide. The GHG CleanProjects® Registry's focused mandate relates to the listing and delisting of greenhouse gas projects and resulting verified emission reductions and removals. Through its serialization engine, the GHG CleanProjects® Registry's tags each tonne of verified emission reductions/removal with a unique serial number. Information displayed in the GHG CleanProjects® Registry may be useful for corporate risk management, voluntary initiatives, GHG markets and regulatory reporting/compliance

Verified to which standard

Other, please specify

CSA verified Greenhouse Gas Emission reductions. These VERRS are retired on the GHG Clean Projects Registry.

Number of credits (metric tonnes CO2e)

15,500

Number of credits (metric tonnes CO2e): Risk adjusted volume

15,500

Credits cancelled

Yes

Purpose, e.g. compliance

Voluntary Offsetting

C11.3

(C11.3) Does your organization use an internal price on carbon?

Yes

C11.3a

(C11.3a) Provide details of how your organization uses an internal price on carbon.

Objective for implementing an internal carbon price

- Drive energy efficiency
- Drive low-carbon investment
- Identify and seize low-carbon opportunities

GHG Scope

- Scope 1
- Scope 2

Application

GM's Energy efficiency projects usually provide a return on investment of 2-3 years. Adding the value of carbon credits to the savings provides for quicker payback and allows additional projects to be implemented within the targeted return. An example of this was in our facilities in South Korea where energy project business cases included carbon credits to enhance the returns. In reality, GM Korea was able to sell 38,684 CO₂e tons at \$1 M USD into the market at a price of \$26/ton, yielding \$1M USD. An example of prioritization is for two energy saving LED projects with similar paybacks, one in US and one in Canada, would be prioritized by added benefit of more CO₂e savings in US due to higher emission factors.

Additionally, we modified our energy savings project tracking application to include a price on carbon in our energy efficiency and carbon reduction project prioritization process. This provides a method for reducing carbon as a top priority for implementing projects.

Actual price(s) used (Currency /metric ton)

25

Variance of price(s) used

We have not used an estimated variance in price on carbon yet, as real market data is easiest to sell to GM management as indicative of current market conditions. We are expanding this to other regions and have started using a shadow price to prioritize energy and carbon efficiency projects in North America.

Type of internal carbon price

Shadow price

Impact & implication

Using a price on carbon provides a number of advantages including greater awareness of the value of carbon reduction, prioritization of projects that favors carbon reduction, and an increase in project spend available in regions where cap and trade is in effect as experienced in our facility in Korea where we sold credits to the market. GM modified our Energy Savings project tracking system (ETQ) in Reliance software to include in the savings based on our internal price on carbon to increase the return on investment for projects that have a more favorable carbon reduction. As an example, an LED retrofit project in USA with the same cost and savings would have a quicker payback than a similar project in Canada, where the carbon emission factor for electric is lower than in US.

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?

Yes, our suppliers

Yes, our customers

C12.1a

(C12.1a) Provide details of your climate-related supplier engagement strategy.

Type of engagement

Information collection (understanding supplier behavior)

Details of engagement

Collect climate change and carbon information at least annually from suppliers

% of suppliers by number

2

% total procurement spend (direct and indirect)

82

% of supplier-related Scope 3 emissions as reported in C6.5

23

Rationale for the coverage of your engagement

General Motors' sustainability strategy is synonymous with its business strategy. Our vision for personal mobility is a world with zero crashes, zero emissions and zero congestion. By delivering safer, simpler and sustainable transportation solutions for our customers, we'll realize that vision. In the process, our goal is for GM to become the most valued automotive company. In order to build the most valuable automotive company, we must recognize that our impacts go beyond the walls of GM to include our entire value chain, of which customers and suppliers make up a significant part. The importance of strong supply chain management and relationships is further underscored as new issues arise due to business expansion into emerging markets and increased participation in more advanced technologies, such as electricity-powered vehicles.

This year, we started the Supplier Sustainability Council consisting of about 12 suppliers leading different areas like logistics, services and parts manufacture. The focus of the council is to develop the best method for sharing ideas on reducing energy, emissions and water throughout GM's entire supply chain. We seek to partner with suppliers who share our purpose and values. We expect our employees who work with suppliers to hold them accountable to the same environmental principles and ethical standards to which we hold our own employees and operations—so we all win with integrity. Engagement with suppliers to reduce GHG in auto parts life-cycle is an enormous task that needs prioritization. We use life cycle analysis (LCA) of GHG for each supplier to determine the impact on our Scope 3 emissions and include the top



emitters that are mostly in the top spend group also in our engagement with CDP Supply Chain. GM participates with CDP Supply Chain in both Climate Change and Water and we asked about 300 suppliers, comprised of the majority of spend at 82% and large GHG emitters groups, to engage in 2019. We use CDP Supply Chain GHG data to calibrate our LCA emissions for auto parts and to engage with them on collaboration to reduce the effects of Climate Change.

Impact of engagement, including measures of success

The number of suppliers responding to CDP Climate Change increased by 11% in 2019 with the assistance of CDP Supply Chain and internal resources. Measuring our supply chain's disclosure and performance related to Climate Change shows increased governance, emissions reporting, Suppliers engaging with their suppliers, increase in number of Suppliers reporting a target by 3%, and 30 Suppliers reporting a renewable energy target. It is encouraging to see our suppliers engaged in Science based targets with 38% having an approved one or anticipating an SBTi within the next two years. A total of 12% have Renewable energy targets and 3% have committed to RE-100, similar to GM. We have engaged with one supplier on reducing the impact on forests with the development of an airless tire. GM suppliers reported reduction of over 67 million tons of GHG with energy efficiency and conservation efforts that amounted to \$3B USD in savings. Forty suppliers are interested in Action Exchange, an increase of over 50%. GM measures success in supply chain engagement on Climate Change by measuring year over year continuous improvement (CI), here are the important results for 2019 vs. 2018: - Suppliers reporting to CDP based on GM request increased by 11% - Suppliers reporting targets increased 3% -Scope 1 emissions reporting increased by 1% -GHG Emissions reduction activities in tons GHG more than doubled. GM's expectation for CI is 5% improvement for important aspects of supply chain engagement in Climate Change as shown above. Interest in CDP Action Exchange continued with 40 suppliers joining.

Comment

C12.1b

(C12.1b) Give details of your climate-related engagement strategy with your customers.

Type of engagement

Collaboration & innovation

Details of engagement

Other, please specify

Engage with customers to increase use of electric vehicles with sales, infrastructure, and regulation.

% of customers by number

7

% of customer - related Scope 3 emissions as reported in C6.5

5

Please explain the rationale for selecting this group of customers and scope of engagement

GM is committed to a world with Zero emissions and is selling battery electric vehicles (BEV) that emit lower carbon emissions than internal combustion engines. Among the key learnings from our 2019 materiality assessment, including customers' input, are: -Climate change-related topics emerged as a key area of concern and for the first time, the market development for electric vehicles (EV) and zero emission vehicles (ZEV) emerged as the top-ranked issue. Closely-related topics — technological innovation, vehicle fuel economy, CO2 emissions and climate change management — all ranked within the top 10 topics. GM had sales of over 120,000 BEV in 2019 demonstrating that some of our customers support a lower carbon economy. The scope of engagement is to sell electric vehicles and support the development of EV infrastructure to increase EV sales. GM's collaboration effort toward an all-electric future is demonstrated by our proposed National Zero Emission Vehicle (NZEV) program. Under the plan we have submitted, manufacturers would need to meet steadily increasing targets for electrifying a portion of their light-duty vehicle fleets. In addition, we support further dialogue on continued EV research, EV infrastructure investment and federal incentives. The program could put more than 7 million long-range EVs on the road while reducing CO2 emissions by 375 million tons over current levels between 2021 and 2030. A 10% market penetration for GM would mean targeting 7% of our customers for EV sales in the near future.

We aim to earn customers for life, which ensures the long-term sustainability of our business in a competitive and changing marketplace. GM's engagement with customers includes

i.) Participating in customer satisfaction surveys to understand what vehicle attributes customers value; ii.) Partnering to expand EV charging infrastructure by providing customers with easy access to charging stations; and iii.) Educating customers on the benefits of EVs. As an example, GM has developed a wide range of tools to help more than 200,000 Chevrolet Volt and Bolt EV customers find fast, affordable and convenient charging solutions. We want to get



as many EVs on the road as possible. By mid-decade, our intent is to sell a million EVs per year in our two largest markets: North America and China, working with our JV partners.

Impact of engagement, including measures of success

Success with the collaboration is measured by continuous improvement (CI) in EV development and sales. In 2019 GM EV sales increased by 38% to over 120,000 vehicles indicating that customers are gaining interest in a low carbon future. Our global commitment to realize an all-electric, zero-emissions future — from battery chemistry and architecture to safety validation and infrastructure — requires unprecedented investment in people and resources. This is why we’ve announced our intent to allocate more than \$20 billion in capital and engineering resources to

EV and autonomous vehicle (AV) programs between 2020 and 2025. With our partner LG Chem, we have announced plans to build a \$2.3 billion plant in Lordstown, Ohio, to mass produce battery cells for our fleet of EVs. The plant, which will be about the size of 30 football fields, will have an annual capacity of more than 30 gigawatt hours and room for expansion. Also, as EV infrastructure is an enabler to increasing sales, GM announced its intentions to collaborate with EVgo, ChargePoint, and GreenLots — three of the nation’s leading EV charging networks — to give our EV customers access to more than 31,000 charging ports, data about charge station availability and compatibility, and other real-time, data-driven features through the myChevrolet app. These CI measures demonstrate advancing collaboration with our customers toward an all EV future for automobiles.

C12.3

(C12.3) Do you engage in activities that could either directly or indirectly influence public policy on climate-related issues through any of the following?

- Direct engagement with policy makers
- Trade associations
- Other

C12.3a

(C12.3a) On what issues have you been engaging directly with policy makers?

| Focus of legislation | Corporate position | Details of engagement | Proposed legislative solution |
|----------------------|--------------------|-----------------------|-------------------------------|
|----------------------|--------------------|-----------------------|-------------------------------|

| | | | |
|--|----------------|---|--|
| <p>Other, please specify</p> <p>Increase access to electric charging</p> | <p>Support</p> | <p>GM joined 45 auto-industry peers as signatories to the Guiding Principles to Promote Electric Vehicles and Charging Infrastructure, a commitment to the collaboration between the government and industry to increase consumer access to electric vehicles and charging infrastructure all across the US. This engagement deepens the partnerships and collaborative relationships that are needed to successfully drive nationwide EV adoption into the mainstream and focuses on strategizing EV infrastructure, regulatory, and policy enablers at the state and federal level.</p> | <p>One example of GM support included Pacific Gas & Electric Company’s application before the Public Utilities Commission of the State of California to install infrastructure to support electric vehicle charging at multi-unit dwellings, workplaces, and public interest destinations. In its application, PG&E will convene a program advisory council comprised of representatives from state agencies, ratepayer advocates, environmental justice groups, technology providers, automakers, and others to provide feedback and guidance on pilot design and implementation.</p> |
| <p>Other, please specify</p> <p>National Zero Emission Vehicle</p> | <p>Support</p> | <p>Another step toward an all-electric future is our proposed National Zero Emission Vehicle (NZEV) program. It is a comprehensive approach to help move the U.S. faster toward zero emissions, while encouraging American innovation and preserving the country’s industrial strength.</p> | <p>Under the plan we have submitted, manufacturers would need to meet steadily increasing targets for electrifying a portion of their light-duty vehicle fleets. In addition, we support further dialogue on continued EV research, EV infrastructure investment, and federal incentives. The program could put more than 7 million long-range EVs on the road while reducing CO2 emissions by 375 million tons over current levels between 2021 and 2030.</p> |

C12.3b

(C12.3b) Are you on the board of any trade associations or do you provide funding beyond membership?

Yes

C12.3c

(C12.3c) Enter the details of those trade associations that are likely to take a position on climate change legislation.

Trade association

The Alliance of Automobile Manufacturers (Auto Alliance) position on climate change is that reducing transportation sector greenhouse gas emissions will require the mass market commercialization of electric vehicles. That includes technologies such as hybrid electrics, plug-in hybrid electrics, battery electrics, and fuel cell vehicles. Widespread consumer acceptance of these technologies will require that efforts be focused on important considerations such as: supporting infrastructure, incentives for consumer adoption, the alignment of regulatory efforts and the removal of market barriers. One example of how the Auto Alliance has attempted to influence climate change policy is through the issuance of statements on behalf of its members. The Auto Alliance has called for a single, national program because conflicting requirements from several regulatory bodies raise costs, ultimately losing value to consumers.

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

The Alliance of Automobile Manufacturers (Auto Alliance) position on climate change that reducing transportation sector greenhouse gas emissions will require the mass market commercialization of electric vehicles. That includes technologies such as hybrid electrics, plug-in hybrid electrics, battery electrics, and fuel cell vehicles. Widespread consumer acceptance of these technologies will require that efforts be focused on important considerations such as: supporting infrastructure, incentives for consumer adoption, the alignment of regulatory efforts and the removal of market barriers. One example of how the Auto Alliance has attempted to influence climate change policy is through the issuance of statements on behalf of its members. The Auto Alliance has called for a single, national program because conflicting requirements from several regulatory bodies raise costs, ultimately taking money out of consumers' pockets and hurting sales. We all want to get more fuel-efficient autos on our roads, and a single, national program with a strong midterm review helps us get closer to that shared goal.

How have you influenced, or are you attempting to influence their position?

GM is an active supporter of Alliance of Automobile Manufacturers (Auto Alliance). GM's position is consistent with the Auto Alliance position so there is no need to influence the position.

C12.3e

(C12.3e) Provide details of the other engagement activities that you undertake.

GM was a founding signatory for the Renewable Energy Buyer's Alliance (REBA) and a founding member of REBA, along with the Business Renewables Center. GM is an active member of Solar Energy Industry Association (SEIA) and American Wind Energy Association (AWEA). In early 2019, GM partnered with Google, Facebook, Walmart, and more than 300 other companies to launch REBA as a standalone entity—the largest group of corporate renewable energy buyers in the United States. By working to unlock the marketplace for organizations to buy renewable energy, REBA hopes to bring more than 60 gigawatts (GW) of new renewables online in the U.S. by 2025. The new association functions as a membership organization spanning diverse industries and business types, and whose leadership circle alone represents annual revenues of \$1 trillion, millions of jobs and more than 1 percent of U.S. annual electricity consumption (48 terawatt-hours).

C12.3f

(C12.3f) What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?

GM's Global Public Policy (GPP) group is responsible for ensuring that all of our direct (e.g.: government relations) and indirect activities (e.g.: membership in various organizations) that influence climate change policy are consistent with the Company's climate change strategy. The GPP has four primary business processes in place to ensure consistency between our actions and strategy:

- 1) Policy position development process
- 2) GM Political Action Committee candidate selection process
- 3) Strategic External Stakeholder Engagement process
- 4) GM Corporate Giving & Global Philanthropy budget and grant approval process

Overseeing the first three processes and supporting the fourth process is the GPP leadership team which includes GM's Senior Vice President of Global Public Policy and direct reports. GM's Senior Vice President of Global Public Policy is on GM's Executive Leadership Team, GM's most senior management body which includes the CEO, CFO, and President. Regular weekly and monthly meetings have been established to review, analyse, debate, and decide on positions and partnerships to ensure consistency between the Company's strategy, action, and position on climate change. GM's vice president of global government relations and GM's vice president of GM North America Public Policy play a key role in ensuring day-to-day consistency between our actions and strategy. Furthermore, Senior Vice President of Global Public Policy and direct reports support in a variety of ways the review and approval of organizations that receive funding primarily along the areas of STEM, Safety, and Sustainable Communities. GM's Corporate Giving and Global Philanthropy also provides funding to address energy and environmental issues. Therefore, organizations addressing climate change such as the World Wildlife Fund are recipients of philanthropic grants. An example of aligning process with climate change strategy is

GM's recent contribution to the WWF in support of science-based targets and renewable energy. GM belongs to numerous organizations that take positions on many issues. It is not uncommon that an organization may take a different position than GM. In regard to climate change, GM makes public its position on climate to ensure there is no confusion on where GM stands. However, GM may consider leaving an organization as it did when GM decided to no longer provide funding to the Heartland Institute and American Legislative Exchange Council due to their positions against addressing climate change.

C12.4

(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).


Publication

In mainstream reports

Status

Complete

Attach the document

 GM 2020 10k for 2019 2-5-2020.pdf

Page/Section reference

Page 7, paragraph 4;

Content elements

Strategy

Emissions figures

Emission targets

Comment

GM's 2020 10k report contains information about GM's response and Climate Change strategy related to our operational GHG emissions. "We continue our efforts to increase our use of renewable energy, improve our energy efficiency and work to drive growth and scale of renewables. We are committed to meeting the electricity needs of our operations worldwide with renewable energy by 2040, pulling forward our previous commitment by 10 years. Through December 31, 2019, we implemented projects and signed renewable energy contracts globally that brought our total renewable energy capacity to over 400 megawatts, which represents approximately 20% of our global electricity use. In 2019, we executed our largest green tariff to date with DTE Energy Company, sourcing 300,000 megawatt hours of renewable energy that will begin supplying us in early 2021. We continue to seek opportunities for a diversified renewable energy portfolio including wind, solar, and landfill gas. In 2019 Energy Star certified one assembly plant in Canada through Natural Resources Canada and eight buildings in the U.S. for superior energy management. We also met the EPA Energy Star Challenge for Industry (EPA Challenge) at two additional sites globally by reducing energy intensity an average of 11% at these sites within two years. To meet the EPA Challenge, industrial sites must reduce energy intensity by 10% within a five year period. In total, 73 GM-owned manufacturing sites have met the EPA Challenge, with many sites achieving the goal multiple times for a total of 131 recognitions. Additionally, we received recognition from the U.S. Department of Energy (DOE) of 50001 Ready status for 27 facilities. The U.S. DOE 50001 Ready program is a self-guided approach for facilities to establish an energy management system and self-attest to the structure of ISO 50001, a voluntary global standard for energy management systems in industrial, commercial and institutional facilities. These efforts minimize our utility expenses and are part of our approach to address climate change by setting a GHG emissions reduction target, collecting accurate data, following our business plan to operate more efficiently and publicly reporting progress against our target."

Publication

In voluntary sustainability report

Status

Complete

Attach the document

 GM_2019_SR 8-11-2020.pdf

Page/Section reference

There are 51 references to Climate Change in our 2020 sustainability report. A few key references are: Page 5, paragraph 3; Page 25, paragraph 4; and Page 31, paragraphs 1,2. and 9.

TCFD section starts on page 146 and continues to page 160.

Content elements

Governance

Strategy

Risks & opportunities

Emissions figures

Emission targets

Comment

An entire section of GM's Sustainability report in 2020 is related to Task Force on Climate-related Financial Disclosure Response (TCFD). The General Motors Board of Directors is committed to overseeing the company's integration of environmental, social and governance (ESG) principles throughout the enterprise. GM is fortunate that several of its Board members have extensive business experience in managing ESG- and climate-related issues, such as transitioning from high- to low-carbon-emitting technologies or managing environmental impacts within the supply chain. The Board is committed to elevating GM's leadership profile and reputation among investors, policymakers and others on ESG issues and practices and believes GM has a unique opportunity to address these important issues.

The Board's activities in ESG oversight include an annual multiday session devoted to discussing, debating and validating management's overall strategy. In the past year, these strategic reviews and discussions have included labor and workforce issues, electric vehicle (EV) and autonomous vehicle (AV) execution, fuel economy regulation, capital allocation, workplace and vehicle safety, and various alternative future business scenarios.



C15. Signoff

C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

C15.1

(C15.1) Provide details for the person that has signed off (approved) your CDP climate change response.

| | Job title | Corresponding job category |
|-------|-------------------------|-------------------------------|
| Row 1 | Chief Financial Officer | Chief Financial Officer (CFO) |

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

| | I am submitting to | Public or Non-Public Submission | Are you ready to submit the additional Supply Chain Questions? |
|-----------------------------|------------------------|---------------------------------|--|
| I am submitting my response | Investors Customers | Public | Yes, submit Supply Chain Questions now |



Please confirm below

I have read and accept the applicable Terms