

MGM Resorts International - Climate Change 2020

C0. Introduction

C0.1

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

MGM Resorts International (NYSE: MGM) is an S&P 500® global entertainment company headquartered in Las Vegas Nevada.

Our national and international locations feature best-in-class hotels and casinos, state-of-the-art meetings and conference spaces, incredible live and theatrical entertainment experiences, and an extensive array of restaurant, nightlife and retail offerings. MGM Resorts creates immersive, iconic experiences through its suite of Las Vegas-inspired brands.

The MGM Resorts portfolio encompasses 29 unique hotel and destination gaming offerings in the United States and Macau, including some of the most recognizable resort brands in the industry such as Bellagio, MGM Grand, ARIA and Park MGM. The Company's 50/50 venture, ROAR Digital LLC, offers U.S. sports betting and online gaming through market-leading brands, including BetMGM and partypoker. The Company is currently pursuing targeted expansion in Asia through the integrated resort opportunity in Japan.

The global employees of MGM Resorts are proud of their company for being recognized as one of FORTUNE® Magazine's World's Most Admired Companies®. More information is available at www.mgmresorts.com.

Through our "Focused on What Matters: Embracing Humanity and Protecting the Planet" initiative, MGM Resorts commits to creating a more sustainable future, while striving to make a bigger difference in the lives of its employees, guests, and in the communities where it operates. Details on these efforts are available at www.mgmresorts.com/focused

We have publicly committed to being a global advocate in accelerating the fight against climate change including by ensuring long-term viability through climate resiliency planning and ongoing carbon reduction; using our voice to advocate for sound governmental policy on climate change and by supporting innovations with broad application to accelerate the fight against climate change. Relatedly, we have a long standing commitment to sustainable design and construction, through which we build with tomorrow in mind.

We recognize that climate change presents both risks and opportunities for our company and are pleased to participate in this CDP Climate Change 2020 Questionnaire.

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	Select the number of past reporting years you will be providing emissions data for
Reporting year	January 1 2019	December 31 2019	Yes	1 year

C0.3

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

China, Macao Special Administrative Region
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-CN0.7/C-RE0.7

(C-CN0.7/C-RE0.7) Which real estate and/or construction activities does your organization engage in?

New construction or major renovation of buildings
Buildings management

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
Director on board	Members of the MGM Board of Directors Committee for Corporate Social Responsibility (CSR) have responsibility for managing information on climate related issues and guiding decisions on what the company will do vis a vis climate risks and opportunities. The Committee is headed by a Board Director. This committee was established in 2011 to oversee all of the company's activities related to CSR, including most recently all social impact and sustainability initiatives under our commitment to be "focused on what matters". The Committee governs four main pillars of company activity: fostering diversity & inclusion, investing in community, caring for one and other and protecting the planet. Energy and climate related issues are the predominant issues governed by the Committee within the protecting the planet pillar. Notably, MGM's Board Director who is Chair of the Board CSR Committee is a global expert in clean energy, with over two decades of experience in advocacy in legislative and utility regulatory proceedings relative to renewable and clean energy policy in Nevada and across the U.S. One example of a climate-related decision guided by the committee is the decision by MGM to commission a 100MW solar array to help significantly lower our long term carbon footprint in our home region of Las Vegas.

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	Scope of board-level oversight	Please explain
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Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Scope of board-level oversight	Please explain
Scheduled – some meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding annual budgets Reviewing and guiding business plans Setting performance objectives Monitoring implementation and performance of objectives Overseeing major capital expenditures, acquisitions and divestitures Monitoring and overseeing progress against goals and targets for addressing climate-related issues Other, please specify (Reviewing communications strategies on all CSR and climate related matters to all constituents including employees, management, customers and investors.)	<Not Applicable>	The Corporate Social Responsibility (CSR) Committee of the Board of Directors provides oversight of all climate-related issues at a detailed level. Prior to, after, and during the reporting year of 2019 this has included: 1. Reviewing and giving input on energy efficiency investments. 2. Reviewing and giving input on renewable energy investments. 3. Reviewing and giving input on 2025 and 2030 goals for energy, climate, water and materials diversion 4. Reviewing and giving input on Science-Based Targets 5. Reviewing and giving input on value-chain engagement on sustainability including customer and supplier engagement on climate-related issue 6. Reviewing and giving input on climate risk management 7. Reviewing and giving input on the company's extensive materials and waste management activities, including its extensive food waste reduction and landfill diversion efforts.
Please select	Reviewing and guiding major plans of action	<Not Applicable>	

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)	Reporting line	Responsibility	Coverage of responsibility	Frequency of reporting to the board on climate-related issues
Chief Executive Officer (CEO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	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).

The Chief Executive Officer (CEO) is the highest management-level position with direct responsibility for management of climate-related issues at MGM Resorts International. The CEO reports to the Board of Directors.

The two main divisions with climate-related implementation oversight within the company are the Social Impact & Sustainability Division, led by our Chief People, Inclusion and Sustainability Officer and MGM Resorts Design & Development (MRDD), led by our President of Design & Development, who also oversees Facility Management. Both of these division leader positions report directly to the MGM CEO. Thus, in this structure the CEO is primarily responsible for all climate-related issues and as such reports on these matters directly to the MGM Board of Directors.

Ultimately property level teams and /or functional teams within functional Centers of Excellence (COEs) are responsible for execution of energy reduction and waste reduction plans (including food waste reduction).

Climate related issues are monitored by the CEO with regular input from experts in these teams. The CEO signs off and tracks progress on climate goals and other forward-looking commitments such as our current public commitment to establish a Science Based Target (in process, to be submitted by 2021); oversees all energy and climate related investments; and formally reports to the Board CSR Committee with the support of these experts. The CEO also reviews and signs off on MGM's CDP Response including all risks and opportunity disclosures.

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	The MGM Board of Directors Compensation Committee has historically considered the CEO and named executive officer's participation in ESG initiatives in determining whether to increase, reduce or eliminate their annual bonuses. The Company's ESG initiatives include goals related to climate change strategy.

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
Chief Executive Officer (CEO)	Monetary reward	Emissions reduction target Energy reduction target Other (please specify)	The MGM Board of Directors Compensation Committee has historically considered the CEO's participation in ESG initiatives in determining whether to increase, reduce or eliminate their annual bonuses. The Company's ESG initiatives include goals related to climate change strategy.
Other C-Suite Officer	Monetary reward	Emissions reduction target Energy reduction project Other (please specify)	The MGM Board of Directors Compensation Committee has historically considered named executive officer's participation in ESG initiatives in determining whether to increase, reduce or eliminate their annual bonuses. The Company's ESG initiatives include goals related to climate change strategy.
Please select	Please select	Please select	

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	2	We consider short-term risks along the same time scale as our operational and financial planning, generally 1 - 2 years.
Medium-term	3	5	We consider medium-term risks along the same time scale as our capital planning, generally 3 - 5 years.
Long-term	6	10	We consider long-term risks along the same time scale as our social impact & sustainability planning, generally 6 - 10 years. Our public goals in these areas are established for 2025 and 2030 (the latter to align with U.N. Sustainable Development Goals)

C2.1b

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

We define substantive financial or strategic impact to be related to risks that most directly threaten the achievement of the Company's most important long-term strategic objectives:

1. Real Estate Strategy
2. Maximizing Operating Efficiency
3. Disciplined Capital Allocation
4. Future Growth Opportunities

More specifically, A modest (low) financial impact is defined as a potential impact with a net present value of less than \$1.0M. A substantive (medium) financial impact is defined as any potential impact with a net present value between \$1.0M and \$10.0M. A severe (high) financial impact is defined as any potential impact with a net present value of \$10.0M or greater. An example indicator utilized would be the evaluation of a climate-related operating expense element such as an analysis of the market price of carbon-based energy vs. renewable energy.

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
Downstream

Risk management process

A specific climate-related risk management process

Frequency of assessment

Annually

Time horizon(s) covered

Short-term
Medium-term
Long-term

Description of process

MGM Resorts has a specific climate-related risk management process that is managed jointly by the Social Impact & Sustainability Team and the Facilities team. On an annual basis, the full suite of climate related risks and opportunities is reviewed and prioritized for action in the short term operating plan and/or the medium term capital plan and/or the long term strategic plan. Where possible, the financial impact of the risk is quantified. This climate-related risk management process includes the following steps: 1. Regular interaction takes place between the Social Impact & Sustainability and Facilities teams and all MGM property operators. This interaction includes the Facilities Center of Excellence (COE) regular monthly update meetings with an agenda tailored to property Facilities executives. This interaction also includes topic-specific ongoing interactions as required. 2. Company-wide climate-related risks are identified by the Social Impact & Sustainability and Facilities teams at the corporate level and incorporated at the property level via these interactions as required. Alternatively, operational factors including climate-related risks are identified by property operators for attention by the Social Impact & Sustainability and Facilities teams. 3. An assessment of all climate-related risks is completed where possible according to likelihood, time horizon, and magnitude of impact (modest or less than \$1.0M in net present value, substantive or between \$1.0M and \$10.0M in net present value, or severe as in more than \$10.0M in net present value). An example of a physical risk being identified included the assessment by multiple Las Vegas property operators in Las Vegas in 2019 of property central plant chillers and associated pumps and infrastructure. The age of multiple properties, and their associated equipment as much of it was original installation, necessitated a multi-property review to protect against potential heating and cooling failures that would adversely affect hotel guest comfort and safety. The result was a capital proposal to upgrade multiple chillers at multiple properties in one coordinated project that was presented to MGM senior management and the Board of Directors. The project was implemented and now guards against these risks as well as improve property energy efficiency. An example of a transitional risk included the assessment of MGM Resorts in 2016 of an action to separate from the fully-bundled sales system of the local electric utility on behalf of its Las Vegas properties. The company determined that such an action would result in direct control of its supply portfolio of electricity and provide the ability to source a greater share of renewable energy directly. This larger share of renewable energy helps to mitigate the risk of increasing fossil-fuel energy and potential future carbon costs. In the future, the separate climate risk management process will be more directly incorporated into the Company's Enterprise Risk Management processes. This process of integration began in 2020.

C2.2a

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

	Relevance & inclusion	Please explain

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	<p>MGM Resorts is affected by a broad array of current regulations that present multiple potential risks. One example of an area of such regulation is Energy Efficiency Policy. MGM Resorts International actively supports legislation at State and Federal levels to encourage utility and end-user energy efficiency measures, as well as the use of combined heat and power (CHP). The company also supports efforts in developing lighting policy standards through the U.S. Department of Energy (DOE). These regulations, and their effects, present operational risks in that they may impact the cost of implementing energy conservation initiatives, both within the Company and elsewhere. These risks are identified in the first step in the MGM Resorts climate-related risk management process, interaction between the Social Impact & Sustainability team, the facilities team, and property operators. They are further identified and assessed as to the magnitude of potential impact through the remaining steps and utilized in applicable tactics such as the development of energy conservation budgets, which are ultimately approved by the Senior Management. As such, MGM takes an active role in the promotion of policies to help facilitate such measures at the most attractive terms possible in the communities in which it does business. A second example of a potential risk area in terms of supply influenced by current regulation is in the area of water conservation and management. More than 80% of the hotel rooms of MGM Resorts exist in Las Vegas, an area of potential drought. As such, MGM actively supports organizations to develop sound water policy. These groups include WaterStart, Springs Preserve, ONE Drop, and the Southern Nevada Water Authority. These efforts help to mitigate future potential water supply disruption risks that may impact business operations in Las Vegas. Third, there are current regulations affecting operational risk in energy supply markets. As such, MGM actively supports the development of renewable energy through regulatory processes. In jurisdictions such as Nevada, the adoption of more renewable energy helps to lower the overall regional emissions of greenhouse gases. Lower emissions help to mitigate future forms of carbon costs such as potential carbon taxes as well as diversify local economies and improve local health.</p>
Emerging regulation	Relevant, always included	<p>Emerging regulations may affect MGM Resorts in a myriad of ways and present ongoing climate-related operational risks. For instance, MGM Resorts has provided input on several energy efficiency and sustainability bills in Nevada and continues to participate in Legislative and Regulatory processes in climate-change related areas. These efforts serve to diversify the future supply of energy, a critical business resource to all company operations. One specific example is emerging Renewable Energy Policy. Emerging policy in this area presents operational risk in that it may affect the future cost of energy and the implementation plans of MGM Resorts to increase its share of energy sourced from renewable resources. This risk is a critical component of the MGM risk management process in that it begins with the first step in the process, interaction of the Chief Executive Officer (CEO), Social Impact and Sustainability Division, the MGM Resorts Design & Development Team, and company departments such as Government Affairs. Emerging policy elements are assessed in terms of their potential impacts on the costs or timeline of Company plans. Tactics are then developed and approved as part of the risk management process such as targeted interaction with regulatory bodies at the local, state, and Federal levels. Prior company activities as a result of this process have included interactions with the Nevada State Legislature and the Governors Panel on climate change, the Harry Reid Blue Ribbon Energy Panel, the Southern Nevada Solar Energy Lab Development Committee, and frequent interactions with state representatives for input on energy related issues. MGM Resorts has provided input on several renewable energy related bills in Nevada. Most notably in April 2019, MGM supported SB 358 which was signed into law, and substantially increased the renewable portfolio standard (RPS) in Nevada.</p>

	Relevance & inclusion	Please explain
Technology	Relevant, always included	<p>Technological changes present risk in terms of the potential for MGM Resorts to fail to keep up with industry best practices and customer expectations in climate-related areas. As such, best practices are studied both within the operations of MGM Resorts as well as in organizations and industries external to the company. Operators provide direct company day-to-day experience, while the Social Impact & Sustainability Division provides a broad perspective through external research. Tactics developed include the use of existing and emerging technologies such as practices to establish and advance smart-building systems and energy management platforms. These help to mitigate the risk of rising energy costs and lower the dependence on fossil fuels. Specific tactics are prioritized according to the relative potential impacts they represent. These may be in the form of energy conservation to be achieved and thus the mitigation of future rising operating costs. All such tactics are ultimately approved by Senior Management. Specific risks to the company include failing to keep up with best-in-class standards in terms of energy management within the hospitality industry. To mitigate this risk, MGM Resorts, through the Social Impact & Sustainability Division, along with the Facilities Division, maintains constant monitoring of emerging technologies. The best concepts are incorporated into the annual capital budget dedicated exclusively to the promotion of energy and water conservation initiatives. Continual investment in appropriate technologies helps to strengthen the reputation of MGM Resorts as a leader in Sustainability. This, in turn, helps to mitigate the risks of losing competitive position or advantages, as well as the erosion of market share and customer reputation. We also leverage technology to mitigate market risks associated with climate change. For example we have significantly improved the digital assets we use to share our commitment to climate action. This includes using major updates in 2019 to our Social Impact & Sustainability websites; the use of large format displays describing our commitment to solar at Mandalay Bay, and widespread use of social media to communicate our energy and environmental programs.</p>
Legal	Relevant, always included	<p>The overall Social Impact & Sustainability plan at MGM Resorts serves as a framework and guides all company actions to reduce the environmental impact of operations. Activities taken to influence policy at the local, state, and national level are reviewed in the context of this framework and with senior management and/or the Corporate Social Responsibility (CSR) Committee of the Board of Directors. Further, key stakeholders both internal and external to the organization are consulted where appropriate. These efforts result in the development and support of applicable legislation and regulations affecting environmental responsible operations and practices. An example of a risk type included in our climate-related risk assessment is one or more possible fines and litigations from alleged legal violations to the Clean Air Act. MGM operations are under the effects of many regulations within multiple jurisdictions such as facility air emissions regulated by the US Environmental Protection Agency (EPA) and the Clark County Department of Air Quality in the Las Vegas region, where we can also be subject to possible litigation from alleged violations. Risks in this area are reviewed as part of the MGM risk management process via interactions between the Social Impact and Sustainability team, Facilities Team, property operators, and the Legal department. MGM operators continually maintain operational best practices in this area and work regularly with pertinent officials to comply with all applicable laws and regulations. The practices are incorporated into Standard Operating Practices (SOPs). These efforts serve to mitigate the risk of any non-compliance assessments or fines or other legal actions.</p>

	Relevance & inclusion	Please explain
Market	Relevant, always included	Discerning customers in the hospitality industry are demanding higher environmental and climate-related standards from the resorts they visit. We believe the acceleration of climate change will give rise to a greater number of such customers, and a deeper focus on this issue as a reason to support businesses. Failing to meet this growing market demand, especially in the business to business convention client segment may result in loss of business and erosion of long-term market share. To address these risks, one example strategy MGM has developed is a proprietary package of sustainable event options for clients considering business meetings or conventions. This was developed through a collaboration between the Social Impact & Sustainability Division and Convention Sales, Catering & Services teams. The sustainable event options cover themes from Venue & Space, Decor & Signage, Food & Beverage and Outreach & Education. The environmental benefits these options help drive relate to energy & climate, water, and materials and waste. In addition, MGM offers detailed environmental impact reports for client events, which include detailed calculations of the events environmental footprints including estimated energy, carbon emissions, water, and materials & waste associated with the event. These best practices are incorporated into annual strategic plans to mitigate the risk of market share loss and improve the brand and reputation of MGM Resorts. In addition, MGM Resorts is one of the world' largest non-chain, multi-concept operators of restaurants, and we have a very substantial banquets and conventions business. As such our business is highly reliant on potentially price volatile agricultural commodities, particularly those most susceptible to climate change. We believe climate change is already giving rise to decreased crop and increased price volatility.
Reputation	Relevant, always included	One driver of environmental sustainability efforts at MGM Resorts - including all climate change related efforts - is the ability for these efforts to advance the company's reputation. In particular extensive renewable energy efforts have a discernible positive impact on company reputation with multiple stakeholders. A key example of potential risk in this area is the risk to the company represented by the perception of MGM Resorts to be a significant consumer of energy; and in particular, of fossil-fuel based, carbon intensive forms of energy. This risk has been identified as part of the risk management and through the interaction of the CSR Committee of the Board of Directors, the Chief Executive Officer, the Social Impact and Sustainability Division, Facilities division, property operators. Feedback from both customers and employees has been assessed. In 2018 MGM Resorts announced a partnership with Invenery, North America's largest independent renewable energy company, to develop a 100 megawatt (MW) solar energy facility 25 miles north of Las Vegas to be exclusively dedicated to the Las Vegas properties of MGM Resorts. This is one example of the Company taking aggressive and proactive actions to make meaningful progress in Sustainability and to mitigate any reputational risks to the Company in the area of climate-risk management.
Acute physical	Relevant, always included	Extreme weather conditions, exacerbated by climate-change may cause property damage or interrupt business, which could harm the business and results of operations at MGM Resorts. Certain company properties are located in areas that may be more subject to extreme weather conditions, including, but not limited to hurricanes, droughts, coastal floods, fires and other water stresses in the United States and severe typhoons and coastal floods in Macau. Such extreme conditions may interrupt operations, damage properties, and reduce the number of customers who visit MGM facilities in such areas. Many of these acute physical risks manifest as water related risks with the potential to cause property damage and business interruption. For example, according to the WRI Aqueduct Water Risk Atlas, our resorts Beau Rivage in Biloxi, Mississippi and Borgata in Atlantic City, New Jersey face Medium-High risks of coastal flooding. Our resort Gold Strike Tunica faces extremely high risk of riverine flooding. And our Las Vegas properties face high water stress and low to medium drought risk. Our primary business footprint is in Las Vegas and our operations here could be adversely impacted by a drought or other cause of water shortage. An extensive duration of drought in Las Vegas or in other regions in which MGM operates could adversely affect business and results of operations. More than 80% of company hotel rooms are located in Las Vegas, making such a drought in Las Vegas for instance, a material risk with a substantive financial impact potential. These risks are actively incorporated into key strategic plans including annual insurance levels and limits. Further, MGM takes an active role in climate-risk management such as diversification of its annual energy supply plan to incorporate increasing levels of renewable energy. The company also supports water conservation and advanced water management technologies to mitigate potential supply risks in areas such as Las Vegas. This is a key part of the climate-related management process and plans at MGM Resorts.

	Relevance & inclusion	Please explain
Chronic physical	Relevant, always included	Chronic physical risks include potential water supply issues, long term changes in precipitation and potential sea level rise. These issues are included in the climate-related risk management process of MGM and informed by research conducted by the Social Impact & Sustainability Division, in partnership with the Facilities Division. As part of our water supply strategy, we focus on water conservation and management within our own operations and support external efforts to manage water sheds and conserve water through technology used within and outside our hotels . In response, MGM has assessed the risk to the Las Vegas community associated with potential future water challenges. We collaborate on these matters with local experts and regulatory bodies such as the Southern Nevada Water Authority (SNWA) and we provide funding to several water conservation, awareness and outreach efforts, including WaterStart, Springs Preserve, and ONE Drop. These efforts help to mitigate future potential water supply disruption risks that may impact business operations in Las Vegas. Outside Las Vegas our focus is on developing Business Continuity Plans to manage risks at the properties most at risk of coastal flooding that may increase based on rising sea levels. In addition, we provide messaging for guests and means to conserve water such as through towel and linen reuse programs and water conserving options when planning meetings and conventions at company facilities.

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?

Upstream

Risk type & Primary climate-related risk driver

Current regulation Carbon pricing mechanisms

Primary potential financial impact

Increased direct costs

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

For MGM Resorts, global Scope 2 GHG emissions are generated from the 29 unique hotel and resort destinations operated by the company. These Scope 2 emissions are the result of purchased electricity in each of the markets in which the company operates. The total volume of this purchased electricity is approximately 1.4 billion kilowatt hours annually at about \$90 million of operating expense. MGM is unique in the gaming industry in that a significant portion of the company portfolio is located in the single region of Las Vegas. More than 66% or 2/3 of the total volume of kilowatt hours are sourced on behalf of the Las

Vegas operations of the company. The state of Nevada is one of the most generally progressive states in the area of renewable energy, with a primary example being SB 358 signed into law in April 2019 that raised the states Renewable Energy Portfolio Standard (RPS) to 50% by 2030. The progressive stance of Nevada carries a risk of future costs of fossil-fuel energy rising as a result of a carbon tax or other market factors.

Time horizon

Medium-term

Likelihood

More likely than not

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

14850000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

The financial impact figure of \$14.85M is 25% of the current annual operating cost of the company global portfolio of energy with the 66% proportional volume allocation to the Las Vegas region (\$90M X .25 X .66). This 25% adjustment is the result of a review of recent historical market prices of electricity from high carbon intensive sources versus low carbon intensive sources.

Cost of response to risk

87000000

Description of response and explanation of cost calculation

MGM Resorts manages the risk of increased operating costs resulting from total Scope 2 GHG emissions through the following actions: 1. MGM has established the goal of achieving 50% of its electricity from renewable resources 2. MGM has completed a review of available onsite rooftop space suitable for solar photovoltaic (PV) installations in order to source more renewable electricity 3. In 2016 MGM commissioned the final phase of the 8.3-megawatt rooftop solar PV installation at Mandalay Bay in Las Vegas 4. MGM actively supports legislation designed to increase the share of renewable electricity of the wider grid, most recently via SB 358 signed into law in Nevada in April 2019 5. MGM works with all energy providers to increase the share of renewable electricity A significant case study is the October 2016 transaction completed by MGM for its Las Vegas properties to exit the sales system of the local utility and source its electricity from the wholesale market. This was adjudicated by the Public Utilities Commission of Nevada (PUCN). Following this transaction MGM announced a partnership with Invenergy to develop a 100 megawatt utility-scale solar PV plant for the exclusive use of its properties. This plant is now in development and will begin operation in 2021. It will significantly increase the share of electricity sourced from renewable means at the company. The cost of management of \$87.0 million is the one-time exit fee of the October 2016 transaction imposed on MGM by the PUCN.

Comment

The cost of management is the one-time exit fee paid by MGM Resorts to exit the fully-bundled sales system of NV Energy, the local electric utility in Las Vegas. The transaction enabled MGM to source its electricity from a greater share of renewable resources, thus mitigating the potential effect of rising market prices of fossil-fuel based energy.

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Current regulation	Mandates on and regulation of existing products and services
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Primary potential financial impact

Increased direct costs

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

MGM Resorts International operates 10 resort campuses in Las Vegas. Of these, 8 are included in the U.S. Environmental Protection Agency (EPA) Title V Air Emissions Permit of MGM Resorts under the Clean Air Act. These 8 resort campuses in Las Vegas collectively total more than 61% of all global MGM Resorts Scope 1 emissions and more than 49% of all global Scope 2 emissions. As holders of this Title V Air Emissions Permit, MGM must adhere to strict operational requirements and regulatory oversight as to the control of air emissions of certain facility assets such as boilers and other heating and cooling equipment. Failure to properly comply carries the climate-related risk of regulatory penalties including fines which would increase operating costs at these 8 Las Vegas resort campuses.

Time horizon

Medium-term

Likelihood

Unlikely

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

600000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

The financial impact figure is a computation of the maximum fine of \$10,000 per day that is imposable under the EPA Title V Air Emissions regulations per the Nevada Division of Environmental Protection (NDEP) multiplied by a 60 day typical period of resolution ($\$10,000 \times 60 \text{ days} = \$600,000$ potential impact at a single resort).

Cost of response to risk

250000

Description of response and explanation of cost calculation

MGM Resorts actively manages the climate-related risks associated with failure to comply with regulatory oversight of its US EPA Title V Air Emissions Permit via the following actions: 1. Development of a complete inventory of all affected assets at each applicable resort 2. Development and deployment of best-practices in operational record keeping of all affected assets 3. Monitoring of air emissions on a continual basis 4. Reporting of air emissions to required regulatory agencies 5. Compliance with on-site audits of regulatory agencies For the reporting year of 2019 MGM Resorts was not subject to any penalties or fines from the U.S. E.P.A. or local regulatory agencies in regard to its EPA Title V Air Emissions Permit. A recent case study of this management is the April 2019 audit that was conducted on behalf of MGM Resorts by an outside party to ensure that the above actions were properly conducted during the 2019 reporting year. The

results of the audit included recognition of a commitment of MGM Resorts to invest \$100,000 on resources and systems improvements in furtherance of the above management actions. These resources included and emissions units labelling program, internal procurement system, and a Management of Change (MOC) system written procedures and training. These resources were applicable to all 12 affected properties of MGM Resorts in Las Vegas. The cost of management in the \$100,000 noted above plus \$150,000 (2,000 internal hours at \$75/hour).

Comment

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Upstream

Risk type & Primary climate-related risk driver

Market	Increased cost of raw materials
--------	---------------------------------

Primary potential financial impact

Increased direct costs

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

MGM Resorts International operates 29 unique hotel and resort destinations globally. It must purchase approximately 1.4 billion annual kilowatt hours of electricity at an operating cost of \$90 million each year for these facilities. In operating each of its resorts, MGM bears the climate-related risk of lower energy efficient operations, higher energy use and environmental impact, and associated higher costs of energy as a raw material, over time through aging of equipment and building systems. A company-specific example includes the assessment by multiple Las Vegas property operators in 2019 of property central plant chillers and associated pumps and infrastructure. These properties included Mandalay Bay, Luxor, Park MGM, Mirage, Bellagio and MGM Grand. The age of these properties, and their associated equipment as much of it was original installation, necessitated a multi-property review to protect against potential heating and cooling failures that would adversely affect hotel guest comfort and safety as well as higher energy costs as a result of increasingly inefficient operation. The result was a capital proposal to upgrade multiple chillers at multiple properties in one coordinated project that was presented to MGM senior management and the Board of Directors. The project was implemented and now guards against these risks including escalating energy costs.

Time horizon

Medium-term

Likelihood

About as likely as 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)

1800000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

The financial impact figure is 2% of the historical annual total cost of electricity of \$90 million. MGM estimates that without active energy conservation investment and efforts, its resorts will use 2% more electricity each year as a result of aging equipment and building systems. This 2% figure was derived through examination of the company's historical trend of electricity usage.

Cost of response to risk

7200000

Description of response and explanation of cost calculation

MGM Resorts actively manages the climate-related risks associated with lower energy efficient operations, higher energy use and environmental impact, and associated higher costs of energy as a raw material, over time through aging of equipment and building systems via the following actions: 1. MGM has established the goal of 30% lower energy use per square foot at its resorts by 2030 2. The MGM Design & Development Facilities team manages annual capital and operating budgets dedicated to the deployment of energy efficient measures 3. MGM educates and encourages all employees to take an active role in energy and water conservation A case study of this comprehensive effort of energy conservation is in the company's broad scope to upgrade over 1.5 million light bulbs from legacy technology to highly energy efficient lamps such as light-emitting diodes (LEDs). This has been accomplished through the execution of Energy Management Plans at each resort. This effort has contributed to total cumulative savings of over 1.9 billion kilowatt hours (kWh) of electricity over the past several years. This is the amount of electricity equivalent to the annual usage of more than 180,000 average US homes. The annual cost of management of \$7.2M was calculated by taking the \$1.8M in avoided increase in annual energy costs multiplied by an average four-year payback on energy conservation investments.

Comment

Identifier

Risk 4

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

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

Several of our properties are in regions facing risks of increased severity and frequency of extreme weather events such as cyclones or floods. Specifically, our property at Gold Strike Tunica faces significant riverine flooding risk; our properties at Borgata, Beau Rivage and Macau face hurricane and coastal flooding risk. In addition, the increased frequency of snowstorms in our properties in the U.S. Northeast may also impact our ability to effectively operate our business.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)**Potential financial impact figure – maximum (currency)****Explanation of financial impact figure**

Our financial impact is based on revenues loss estimates due to risk of property closure. We estimated days of lost business based on low, medium, high scenarios across the 5 properties we deem most likely to face acute physical risk related to coast and riverine weather events; and 6 related to higher probability of extreme precipitation events.

Cost of response to risk**Description of response and explanation of cost calculation**

Estimate additional employee time to develop property level Business Continuity Plans, and then to implement the BCP in the event of severe weather events.

Comment

Identifier

Risk 5

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Chronic physical	Rising sea levels
------------------	-------------------

Primary potential financial impact

Decreased asset value or asset useful life leading to write-offs, asset impairment or early retirement of existing assets

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

All our coastal properties including Beau Rivage, in Biloxi, Borgata in Atlantic City and MGM Macau and MGM Cotai in Macau face potential chronic long term risk if sea levels rise in accordance with IPCC long term predictions.

Time horizon

Long-term

Likelihood

Unlikely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)**Potential financial impact figure – maximum (currency)****Explanation of financial impact figure**

Cost of response to risk

Description of response and explanation of cost calculation

Comment

Identifier

Risk 6

Where in the value chain does the risk driver occur?

Upstream

Risk type & Primary climate-related risk driver

Market	Increased cost of raw materials
--------	---------------------------------

Primary potential financial impact

Increased direct costs

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

As a major operator of restaurants and provider of convention and banquet services, our business is highly reliant on agricultural commodities. As climate change disrupts weather patterns and gives rise to increased droughts and floods, price volatility is expected to increase.

Time horizon

Please select

Likelihood

Very likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Cost of response to risk

Description of response and explanation of cost calculation

Comment

Identifier

Risk 7

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

Increased insurance claims liability

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

As there is an increase in severity and frequency of climate change related extreme weather events such as cyclones, floods, snowstorms etc, many of our properties with greatest exposure to these effects will likely face both an increase in insurance claims, and potentially an inability for us to secure insurance needed to protect our investments.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)**Potential financial impact figure – maximum (currency)****Explanation of financial impact figure****Cost of response to risk****Description of response and explanation of cost calculation****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?

Upstream

Opportunity type

Energy source

Primary climate-related opportunity driver

Use of lower-emission sources of energy

Primary potential financial impact

Reduced direct costs

Company-specific description

MGM Resorts International operates 29 unique hotel and resort destinations globally. These destinations are comprised of approximately 96 million square feet of total building area and have a well understood energy demand curve. Carefully structured long-term agreements for renewable energy can provide a significant opportunity for long term energy cost reduction. In fact, in line with this opportunity in 2018, MGM announced a partnership with Invenergy to develop a 100-megawatt utility-scale solar PV plant for the exclusive use of its properties in Las Vegas. We have executed a twenty-year Power Purchase Agreement (PPA) with commercial operations commencing in 2021. This utility scale solar array features over 300,000 panels on 700 acres in Dry Lake Valley, NV (northern Clark County) in a U.S. Bureau of Land Management (BLM) Solar Energy Zones. The array is projected generate ~295K annual megawatt hours (MWh), or 35% of MGM baseline wholesale electricity use of 838K MWh in Las Vega. At peak production, this array alone will help MGM meet >95% of daytime energy use for entire Las Vegas building portfolio (>65M Square feet), and all power generated is for the exclusive use of Las Vegas properties of MGM Resorts. The financial impact of this array includes an estimated \$2.65M+ in projected operating savings in 2021 and estimated \$27M+ in net present value savings vs. wholesale electricity prices over the PPA term, assuming wholesale prices consistent with 2021 over the full term. In addition, the rooftops, garages and parking spaces of some MGM buildings have been examined for their suitability for the development of onsite solar photovoltaic (PV) systems. These onsite solar PV systems represent opportunity for MGM Resorts to increase the share of its electricity from renewable means and in turn reduce its exposure to higher GHG emissions associated with fossil-fuel based sources of electricity.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

27345799

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

The financial impact figure is based upon a Q2 2020 review of forward market rates for wholesale electricity available to MGM Resorts in the Las Vegas area. This review resulted in a positive average variance of \$8.75 per MWh for wholesale electricity vs. the cost of renewable energy in development for 2021 delivery to MGM Resorts. This \$8.75 savings of the renewable energy multiplied by 295,000 projected megawatt hours (MWh) of volume to be produced equals an annualized savings of \$2,581,250 in 2021. The absolute

savings on this basis over the full 20-year duration of the Power Purchase Agreement (PPA) is \$51,625,000. The corresponding present value calculation of this full 20-year absolute figure using a 7% discount rate is \$27,345,799 of positive impact.

Cost to realize opportunity

387500

Strategy to realize opportunity and explanation of cost calculation

MGM Resorts undertook the following actions to realize the opportunity available to the company via the use of lower-emission sources of energy: 1. Completed an inventory of available spaces with potential suitability for solar photovoltaic (PV) systems 2. Conducted market research including formal Requests for Proposals (RFPs) for solar PV systems 3. Executed transactions for multiple solar PV systems A recent case study of this effort is the January 2018 announcement of our partnership with Invenergy to establish a 100MW solar array in North Las Vegas. Additionally, in May 2019 we announced that our newest resort, MGM Springfield in Massachusetts has received the world's first LEED Platinum for new construction in the gaming industry. A key component of this certification is the property's 1.13 megawatt solar canopy on the parking garage. The cost to realize these opportunities is calculated at over \$387,500. This is broken down into the following components: 1. \$100,000 – expert consulting and renewable energy market review 2. \$100,000 – outside legal review 3. \$187,500 – Five primary internal company employees at 500 hours each (2,500 hours total) multiplied by an internal rate of \$75/hour

Comment

Identifier

Opp2

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Markets

Primary climate-related opportunity driver

Access to new markets

Primary potential financial impact

Please select

Company-specific description

In Las Vegas MGM Resorts operates 13 resorts. Each of these resorts have rooftop spaces with varying potential for the development of on-site renewable generation such as solar photovoltaic (PV) facilities. The total potential area available is 3,042,827 square feet. This area has the potential to develop up to 31,000 annual megawatt hours (MWh) of solar electricity. In Nevada, there is a state-level system for the tracking and commerce of Nevada-specific Portfolio Energy Credits (PECs) from renewable sources of generated electricity. These PECs are the state equivalent of Renewable Energy Credits (RECs). The PECs are marketed and tracked for the purpose of compliance with the Nevada Renewable Portfolio Standard (RPS). These available PECs are marketable instruments to the multiple organizations that are subject to compliance with the Nevada RPS. As such, MGM has the opportunity to realize increased revenues through the sale of PECs generated at its resorts.

Time horizon

Medium-term

Likelihood

About as likely as not

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

155000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

The financial impact is an estimate of 31,000 annual Portfolio Energy Credits (PECs) at \$5.00 per PEC. The 31,000 annual PEC volume figure the potential solar photovoltaic (PV) renewable electricity production of 3,042,827 square feet of total available rooftop space across the 13 Las Vegas resorts of MGM Resorts. Nevada has a state-level system to manage inventory and commerce of Nevada-specific Portfolio Energy Credits (PECs) from renewable sources of generated electricity. These PECs are the state equivalent of Renewable Energy Credits (RECs) and are marketed and tracked for the purpose of compliance with the Nevada Renewable Portfolio Standard (RPS). These available PECs are marketable instruments to multiple organizations that subject to compliance with the Nevada RPS. The \$5.00 average value per PEC is based upon review of recent historical transactions in Nevada for Nevada-specific PECs, the state equivalent of Renewable Energy Credits (RECs). In 2019 MGM Resorts participated in a private transaction to sell 25,000 Nevada PECs to another entity at \$5.00 per PEC. This resulted in an increase in revenue to Mandalay Bay in Las Vegas of \$125,000 in 2019. This increased revenue represents expansion into a new market unavailable to MGM in previous years.

Cost to realize opportunity

18750

Strategy to realize opportunity and explanation of cost calculation

MGM Resorts has undertaken the following steps to realize the opportunity of increased revenues associated with the sale of Nevada-specific Portfolio Energy Credits (PECs): 1. Completed the installation of solar PV systems at multiple Las Vegas properties 2. Completed registration with Nevada NV TREC and regional WREGIS online systems of RECs inventory and tracking 3. Conducted research on local and regional Nevada PEC/REC markets including availability and pricing 4. Negotiated transactions with outside parties for the sale of MGM generated Nevada RECs increasing revenue The primary case study is the 2016 completion of the final phase of the rooftop solar PV system at the Mandalay Bay Convention Center in Las Vegas. This system in 2019 generated approximately 25,000 annual Nevada-specific Portfolio Energy Credits (PECs), the Nevada equivalent of Renewable Energy Credits (RECs) for the purpose of compliance with the Nevada Renewable Portfolio Standard (RPS). These available PECs are marketable instruments to the multiple organizations that are subject to compliance with the Nevada RPS. As such, MGM has entered into multiple transactions to sell these PECs and realize increased revenues as a result. The cost to realize this overall opportunity is calculated at \$18,750. This is the value of 250 hours of internal expertise and time undertaken at \$75 per hour.

Comment**Identifier**

Opp3

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

In Las Vegas MGM Resorts operates 10 resort campuses. Of these, 5 are major convention center properties; Aria, Bellagio, Mandalay Bay, MGM Grand Las Vegas, and The Mirage. At these 5 major convention resorts in particular, meetings and conventions customers have increasingly requested methods to minimize the greenhouse gas (GHG) emissions and environmental impacts of their meetings held at MGM properties. As such, MGM has the opportunity to exhibit its company leadership in this space and position itself in a better competitive position among the highly impactful meetings and conventions segment of the hospitality industry in Las Vegas. In 2019, MGM had over \$95M in revenue associated with customers directly requesting sustainable event support such as quantification of environmental impact, planning for carbon neutral or zero waste events.

Time horizon

Short-term

Likelihood

Very likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

23750000

Potential financial impact figure – maximum (currency)

95000000

Explanation of financial impact figure

Partly driven by customer concerns related to climate-change, in 2019 MGM Resorts had \$95,000,000 of revenue from meetings and conventions customers who directly requested sustainable event support such as quantification of environmental impact, planning for carbon-neutral or zero waste events. The minimum estimate of \$23,750,000 is calculated at \$95,000,000 total revenue from sustainability minded meetings and convention customers multiplied by a projected 25% share that have a specific interest in climate change. The maximum estimate of \$95,000,000 is calculated at \$95,000,000 total revenue from sustainability minded meetings and conventions customers multiplied by a projected 100% share that have a specific interest in climate change.

Cost to realize opportunity

334000

Strategy to realize opportunity and explanation of cost calculation

We are leading the hospitality industry and the private sector in the emerging area of sustainable events. As the host of thousands of events every year, we are well positioned to make a significant impact in this field, particularly as meeting planners are striving to make more deliberate choices that drive societal and environmental benefits from their events. In the past two years, we have worked with more than 70 companies to help them bring their sustainability commitment to their meetings and trade shows. In 2019, nearly \$100 million in revenue was generated by events with a formal sustainable plan or report, and the business is rapidly growing. We have made it easy for clients to make more sustainable choices, including in venue and space, décor and signage, food and beverage and outreach and education. Our program enables a business to tailor its event to match its values. For example, a company might choose a LEED-certified hotel, go carbon-neutral, use digital or recyclable signage, opt for organic produce—or all of the above. Our leadership on sustainable events has attracted the world’s most respected businesses and served as a model for the industry. Globally recognized brands have worked with us to develop their sustainable events. Our VP spoke at COP25 the UN Climate Change Conference on the growing potential of this area. The Events Industry Council invited us to join as a founding partner of the new Centre for Sustainable Events. . Our process included: 1. Conducting research into convention client sustainability needs 2. Creating a formal Sustainable Events Program covering four thematic areas (Venue & Space, Food & Beverage, Decor & Signage and Outreach & Education) and four impact types (Energy & Climate,

Water, Materials & Waste, Engagement) 3. Executing multiple formal Sustainable Event Plans in 2017, 2018 and 2019, including but not limited to events seeking ambitious goals such as Carbon Neutrality (e.g. CISCO), Zero Waste (e.g. Subaru), Zero Single Use Plastics (e.g. AWS) etc. 4. Engaging in industry groups to advance sustainability including through MGM's sponsorship of the Events Industry Council Center for Sustainable Events. The cost to realize this opportunity has been calculated at \$334,000 with the following breakdown: 1. \$100,000 – direct marketing costs through various media to convention clients 2. \$234,000 – a total of 3,120 hours of internal labor time multiplied by an internal labor rate of \$75 per hour

Comment

Identifier

Opp4

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Resource efficiency

Primary climate-related opportunity driver

Use of more efficient production and distribution processes

Primary potential financial impact

Reduced direct costs

Company-specific description

MGM Resorts is one of the largest operators of non-chain restaurants in the world. Project Drawdown has projected reducing food waste as the #3 solution opportunity for fighting against climate. As such our substantial efforts to manage and reduce food waste represent a significant opportunity to reduce our climate impacts, and to show leadership in a very tangible way. These efforts that have been in place for many years at MGM have established us as a leading global company on this topic. We have gained significant national and international prominence and a large and increasing set of major convention customers point to our leadership in this area as one reason they continue hosting their major events at MGM properties. We have implemented a range of best-practice food waste recovery programs and have a commitments to further limit food waste to landfill by 50% by 2030. This further reduction in food waste and further expansion of these types of programs is a major opportunity with multiple environmental & social benefits, including climate mitigation. Our 5 main programs are described below: 1. Source Reduction MGM has a range of source reduction programs to avoid food waste being generated. These include food waste analysis, portion and plate size reduction, employee and client communications to encourage responsible consumption. 2. Scraps to pig farms Since 2012 MGM properties in Las Vegas have collected food scraps and sent them to Las Vegas based pig farms. Since our program began we have sent over 50,000 tons of food scraps to pig farms. 3. Grease to biodiesel Since starting this program in 2007, MGM properties have diverted over 17,000 tons of yellow grease from landfill, and most of the grease is converted to biodiesel. 4. Unserved food to food banks In 2016, MGM launched an innovative food donations program through which we rescue unserved food all types including prepared meals, unprepared food and non-perishable food. Since the program began, MGM has donated over 1.2 million pounds of food, equal to over 1 million meals. 5. Oyster shells to oyster beds In 2017 we started collecting oyster shells from restaurants. Shells are dried and then transported for replanting in the Chesapeake Bay to restore oyster beds. Since the program began, MGM has sent over 60,000 pounds of used oyster shells to the ocean. Collectively these programs deliver a triple benefit of waste reduction, emissions reduction and reputation enhancement.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Cost to realize opportunity

Strategy to realize opportunity and explanation of cost calculation

Comment

C3. Business Strategy

C3.1

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

Yes

C3.1a

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

Yes, qualitative, but we plan to add quantitative in the next two years

C3.1b

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

Climate-related scenarios and models applied	Details

Climate-related scenarios and models applied	Details
2DS	<p>MGM has done scenario planning as part of our Science Based Target setting. This covers efforts by MGM to reduce our scope 1, 2 and 3 emissions in line with 2 degrees and significantly less than 2 degree scenarios. However, as of end 2019 we have not yet conducted full scenario analyses focused on climate risk and MGM's potential financial exposure to risks under different future scenarios. We plan to conduct such scenario planning in the next two years. In 2018 MGM engaged World Resources Institute (WRI) to support climate-related scenario analysis for MGM Resorts. WRI provided expertise on climate-scenarios to examine. Highlights of this exercise are below: - The Absolute Contraction scenario was selected due to its wide acceptance as a robust form of analysis with methods that are consistent with the level of decarbonization required to keep global temperature below 2°C compared to pre-industrial temperatures. - Inputs to the analysis included the 2018 inventory of Scope 1 and Scope 2 emissions of MGM Resorts International and annual quantified reductions in these emissions consistent with levels necessary to be aligned with the 2°C scenario according to the IPCC's Fifth Assessment Report - Other inputs includes a comprehensive inventory of Scope 3 emissions of MGM Resorts including those associated with all relevant sectors - A fifteen-year time horizon (2033 target date with a 2018 baseline) was selected to incorporate potential future developments of MGM as well as complement existing intensity targets for energy and carbon emissions reductions at the company (2030 targets with a 2007 baseline). - All areas of company operations under MGM operational control, and thus contributors to MGM Scopes 1-3 emissions, were considered. - The results of the Absolute Contraction scenario analysis included a quantified set of required annual reduction figures in MGM total Scope 1 and Scope 2 emissions (815,188 total metric tonnes in 2018) for the period of 2018-2033 (annual compound annual reduction rate of 1.67% or 18.4% total from 2018 to 2033) - The results also included guidance on setting engagement targets for MGM suppliers (covering \$2.9B in total 2018 spend) - The scenario analysis has informed MGM's strategy on two primary drivers. The first is a growing share of zero or low carbon intense sources of energy. The second is continual energy conservation efforts reducing the overall demand for energy and associated Scope 1 and Scope 2 emissions. - The MGM Procurement team was also engaged on a Scope 3 supplier engagement target. - The single most significant action to date consistent with this strategy is the 2018 announcement of a partnership between MGM Resorts and Invenergy, North America's largest independent renewable energy developer, on a 100 megawatt solar photovoltaic (PV) array in Clark County, Nevada for the exclusive use of the Las Vegas properties of MGM Resorts. When completed by late 2020, this array will significantly lower the carbon emissions of MGM Resorts operations. - Also, in May 2019 MGM Springfield in Massachusetts announced that it is the first property in the gaming industry to be awarded a LEED Platinum certification by the U.S. Green Building Council. A significant enabler of the LEED Platinum rating is the property's new solar array, which will supply renewable electricity to the facility. In partnership with GE Solar, a subsidiary of General Electric that is based in Massachusetts, MGM Springfield will install a 1.13 MW solar canopy on the 8th floor, on top of the MGM Springfield garage. This array is expected to generate more than 1,600 megawatt hours of electricity, helping reduce the property's annual carbon footprint by approximately 410 metric tons of CO2e (carbon dioxide equivalent). - Further, discussions are ongoing on means to source zero or low carbon intensive sources of energy in new development projects.</p>

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

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	<p>In Las Vegas MGM Resorts operates 10 resorts campuses. Of these, 5 are major convention center properties; Aria, Bellagio, Mandalay Bay, MGM Grand Las Vegas, and The Mirage. At these 5 major convention resorts in particular, meetings and conventions customers have increasingly requested methods to minimize the greenhouse gas (GHG) emissions and environmental impacts of their meetings held at MGM properties. As such, our climate strategy has expanded over the 2018-2020 period to include a suite of new product offerings to these meetings and convention customers. We have developed a robust Sustainable Events Program to engage and support major convention clients with interest in sustainability including related to carbon neutral, zero waste and low food waste events. We expect these product offerings to continue to expand over the next 1-2 years in particular. A recent relevant case study occurred in June 2019 with the Subaru Zero Waste Event at Mandalay Bay in Las Vegas. This convention was undertaken with the goal of achieving zero waste to landfill and lower carbon emissions associated with better materials management. This was achieved through careful analysis of all incoming materials and consideration of final destinations including reuse, composting, recycling donation or upcycling, and high level consideration of the embodied carbon associated with certain material choices. Also partly driven by our concerns related to climate change (and strong awareness that reducing food waste is a major solution in the fight against climate change), we have developed a comprehensive food waste management program. This includes measurement, reduction and diversion from landfill or incineration of a large number of food waste types (prepared perishable food, unprepared perishable food, non-perishable food & beverages, yellow grease, brown grease, food scraps, oysters, coffee grounds, compostable food & beverage packaging). We have established an industry-leading program in this area. Over the years we have developed a world class food waste management program that has led to the diversion of over 200,000 tons of food and beverage from landfills or incineration to multiple environmentally preferable and climate-friendly destinations such as: animal farms, composting sites, biofuel refiners, oyster aquaculture providers, etc.</p>
Supply chain and/or value chain	Evaluation in progress	<p>Since 86.5% of the Scope 3 greenhouse gas (GHG) emissions of MGM Resorts are attributed to purchased goods and services, we have started to place more emphasis on conducting assessments on how suppliers manage energy and GHG emissions within their operations. In 2019, MGM formally decided to explore usage of the CDP supply chain program as a potential mechanism through which to engage our supply chain in climate risk assessment and emissions reduction activities. Though we did not proceed to join the CDP Supply Chain program in 2019, we intend to review this decision again for 2021 and expect to make our final decision by Q1 2021.</p>
Investment in R&D	Yes	<p>The majority of the operations of MGM Resorts are located in Las Vegas, a city in the Mojave Desert region that continues to have significant challenges in managing domestic water supplies and water consumption. The current drought on the Colorado River system is a direct climate-related risk with vital implications to the region. In response to this risk, MGM has incorporated water tactics into its overall climate strategy, primarily over the short and medium term time horizons. The company has undertaken multiple actions to actively promote water conservation over the 2007-2019 period. These efforts have resulted in a cumulative savings of more than 8.0 B gallons from 2007 – 2019. Further, with recognition of the high climate-related risk in water supplies in the Mojave Desert and the company goal to help mitigate them as the decision driver, MGM Resorts has made direct research and development investments in this area, outside of company operations. These investments have been in the short and medium term time horizons and have been made via contributions to water-oriented organizations such as WaterStart, Springs Preserve, and ONE Drop. One case study in this area is the support ONE Drop has given to research and development to support improved access to water, sanitation, and hygiene (WASH) in regions of need. In 2019 ONE Drop reported that more than 98,000 inhabitants from the rural and peri-urban communities of Colombia, Guatemala, Mexico, Nicaragua, and Paraguay were direct beneficiaries of research and development funding, in part from MGM Resorts, in these WASH priorities.</p>

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Operations	Yes	<p>There are substantial climate-related risks to the operations of MGM Resorts in the failure to property adapt to changing market conditions where warranted. This has directly impacted the climate strategy at MGM Resorts in that the company has adopted the practice of proactively considering prior practices in light of potentially better ways of doing things. Correspondingly, there are opportunities to demonstrate climate-related leadership by taking prudent risks and being willing to adapt operating practices in areas where material improvements may be made in climate-related impacts. This also has directly influenced the climate strategy at the company. For instance, all properties of MGM Resorts use substantial amounts of energy in their operation. Globally, MGM procures approximately 1.4 billion kilowatt hours (kWh) of electricity each year at total spend of about \$90 million. This is the source of the 689,594 metric tonnes of Scope 2 emissions for 2019. Substantial volatility in the price of grid-based electricity presents both financial (in terms of rising costs) and climate-related (in terms of higher fossil-fuel based sources of electricity) risks. One key case study as such, is that MGM has undertaken substantial activities to adapt to this external risk and gain further control over the source of its electricity. In October 2016 MGM Resorts completed an exit from the fully-bundled sales system of NV Energy, the local electricity utility in southern Nevada (where the majority of total company electricity is purchased). The primary driver behind the decision to take this action was to gain the ability to directly source a larger share of renewable energy for the exclusive use of the company. Since this time, the Las Vegas properties of MGM Resorts have sourced electricity on the wholesale power market. NV Energy continues to provide transmission, distribution, and electrical grid ancillary services to MGM Resorts. This transaction resulted in the 2018 announcement of a partnership for renewable energy with Chicago-based Invenergy to develop a 100 MW solar photovoltaic (PV) array north of Las Vegas that will be exclusively dedicated to the properties of MGM Resorts on the Las Vegas Strip. This action, when completed by mid-2021, will result in significant mitigation of the environmental impact of energy sourced at MGM Resorts.</p>

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

	Financial planning elements that have been influenced	Description of influence
Row 1	Direct costs	<p>MGM Resorts International is dedicated to helping protect our planet. As such, climate-related issues, including both risks and opportunities, are continuously under evaluation and incorporated into our overall business objectives and financial planning. Tactics taken as a direct result of this process are in the short, medium, and long-term time horizons. A key climate-related risk MGM Resorts is subject to is the potential for higher electricity costs in the future as a direct result of high carbon-intensive generation sources being affected by inflationary pressures, including potential carbon taxes and other climate-related factors. MGM has carefully considered this risk, and in turn, set the business objective to increase the proportion of low or zero carbon-intensive generation sources in its overall portfolio of electricity procurement. The most substantial business decision made in this regard, in direct support of this business objective, was in 2018 MGM set the target of receiving a minimum of 50% of its electricity from renewable resources by 2030. Further, MGM in 2018 also set the target to reduce its overall carbon emissions per square foot by 50% by 2030 using 2007 as a baseline. These two targets directly influenced tactics taken in the short, medium, and long-term time horizons. As such, the business strategy at MGM Resorts incorporated these energy and emissions reduction targets. The business strategy has incorporated management of direct greenhouse gas emissions as a key aspect of climate change. Applicable elements are incorporated into the annual budgeting process and overall financial plan via projections of energy expenditures. A key case study deployed over the long-term time horizon to meet the business objective of reducing this climate-related risk of potential higher future electricity costs is the 2018 announcement between MGM Resorts International and Invenergy, North America's largest independent renewable energy company, to develop a utility-scale 100-megawatt (MW) solar photo-voltaic (PV) plant 25 miles north of Las Vegas for the exclusive use of the Las Vegas properties of MGM Resorts. The primary driver behind the decision to take this action was to gain the ability to directly source a larger share of renewable energy for the exclusive use of the company. Progress continued on this project in 2019, with the array set to come online beginning in mid-2021. It will result in a significant portion of our company's electricity demand coming directly from a designated renewable energy facility and play the key role in meeting the above-mentioned 50% renewable electricity target by 2030. It will also have a positive effect on the company's financial planning by helping to mitigate the risk of increasing fossil-fuel based sources of energy. Also, as part of our Energy Management Program, we invested over \$50M in energy efficiency between 2007 and 2019 with an annual focus on the short and medium-term time horizons. Select highlights include: - More than 1.9 billion kilowatt hours (kWh) of electricity cumulatively saved over the past eleven years, the equivalent to the annual usage of more than 180,000 average U.S. homes - More than 8.1 billion gallons of water cumulatively saved over the past ten years, the equivalent volume as contained in 12,000 Olympic-sized swimming pools</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?

Both absolute and intensity targets

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

2019

Target coverage

Company-wide

Scope(s) (or Scope 3 category)

Scope 1+2 (location-based)

Base year

2018

Covered emissions in base year (metric tons CO₂e)

938044

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

97

Target year

2034

Targeted reduction from base year (%)

37.5

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

586277.5

Covered emissions in reporting year (metric tons CO₂e)

938044

% of target achieved [auto-calculated]

0

Target status in reporting year

Replaced

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)

Originally initiated in 2018, and continuing into 2019, MGM Resorts International engaged with World Resources Institute (WRI) to help MGM set a Science-based absolute target. The base year for this goal was originally set for 2018 with a target year of 2033. This was changed upon updated guidance from the Science-based Targets initiative (SBTi) in October 2019. The base year for this goal is now set for 2019 with a target year of 2034. This was done to comply with the "well below two degrees Celsius scenario" mandated by the SBTi. This goal represents a mid-term length goal of 15 years into the future and complements existing intensity-based energy and carbon emissions reductions targets of MGM (each with a target year of 2030 utilizing a baseline of 2007). This draft SBT for Scope 1 and 2 emissions has been reviewed by Senior management and our Board Committee.

C4.1b

(C4.1b) Provide details of your emissions intensity target(s) and progress made against those target(s).

Target reference number

Int 1

Year target was set

2017

Target coverage

Company-wide

Scope(s) (or Scope 3 category)

Scope 1+2 (location-based)

Intensity metric

Metric tons CO₂e per square foot

Base year

2007

Intensity figure in base year (metric tons CO₂e per unit of activity)

30.2

% of total base year emissions in selected Scope(s) (or Scope 3 category) covered by this intensity figure

100

Target year

2025

Targeted reduction from base year (%)

45

Intensity figure in target year (metric tons CO₂e per unit of activity) [auto-calculated]

16.61

% change anticipated in absolute Scope 1+2 emissions

-16

% change anticipated in absolute Scope 3 emissions

Intensity figure in reporting year (metric tons CO₂e per unit of activity)

22.2

% of target achieved [auto-calculated]

58.8668138337012

Target status in reporting year

Underway

Is this a science-based target?

No, but we are reporting another target that is science-based

Please explain (including target coverage)

In 2019 MGM Resorts recognized eleven years of formal progress in company leadership in sustainability and environmental responsibility. The Corporate Sustainability Division (CSD) was established in 2007,

providing an eleven-year track record of achievement. As such, the target established during the reporting year 2017 is to continue our reduction in Scope 1 and Scope 2 emissions per square foot, normalized for divested/acquired operations, to a total of 45% by the year 2025, with 2007 as the baseline year. As of year-end 2019, the actual reduction in Scope 1 and Scope 2 emissions per square foot, normalized for divested/acquired operations, since 2007 is 26.7%, making the target well on track.

Target reference number

Int 2

Year target was set

2017

Target coverage

Company-wide

Scope(s) (or Scope 3 category)

Scope 1+2 (location-based)

Intensity metric

Metric tons CO₂e per square foot

Base year

2007

Intensity figure in base year (metric tons CO₂e per unit of activity)

30.2

% of total base year emissions in selected Scope(s) (or Scope 3 category) covered by this intensity figure

100

Target year

2030

Targeted reduction from base year (%)

50

Intensity figure in target year (metric tons CO₂e per unit of activity) [auto-calculated]

15.1

% change anticipated in absolute Scope 1+2 emissions

-20

% change anticipated in absolute Scope 3 emissions

Intensity figure in reporting year (metric tons CO₂e per unit of activity)

22.2

% of target achieved [auto-calculated]

52.9801324503311

Target status in reporting year

Underway

Is this a science-based target?

No, but we are reporting another target that is science-based

Please explain (including target coverage)

In 2019 MGM Resorts recognized eleven years of formal progress in company leadership in sustainability and environmental responsibility. The Corporate Sustainability Division (CSD) was established in 2007, providing an eleven-year track record of achievement. As such, the target established during the reporting year 2017 is continue our reduction in Scope 1 and Scope 2 emissions per square foot, normalized for

divested/acquired operations, to a total of 50% by the year 2030, with 2007 as the baseline year. As of year-end 2019, the actual reduction in Scope 1 and Scope 2 emissions per square foot, normalized for divested/acquired operations, since 2007 is 26.7%, making the target well on track.

C4.2

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

Other climate-related target(s)

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

2017

Target coverage

Company-wide

Target type: absolute or intensity

Intensity

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

Energy consumption or efficiency | MWh

Target denominator (intensity targets only)

square foot

Base year

2007

Figure or percentage in base year

30.9

Target year

2025

Figure or percentage in target year

23.2

Figure or percentage in reporting year

26.1

% of target achieved [auto-calculated]

62.3376623376623

Target status in reporting year

Underway

Is this target part of an emissions target?

Yes, it is part of our emissions target of 45% reduction in total carbon emissions per square foot by 2025, using 2007 as the baseline year (designated as Int 1). This separate target of a reduction in energy usage of 25% by 2025, using 2007 as the baseline year (designated as Oth 1) is a key contributor to the emissions target as energy usage is a primary component of total carbon emissions.

Is this target part of an overarching initiative?

Science Based Targets initiative

Please explain (including target coverage)

Yes, it is part of the Science-based Targets initiative (SBTi) of 37.5% absolute reduction in total carbon emissions by 2034, using 2019 as the baseline year (pending final approval by the SBTi). This separate target of a reduction in energy usage of 25% by 2025, using 2007 as the baseline year (designated as Oth 1) is a key contributor to the SBTi as energy usage is a primary component of total carbon emissions and the absolute SBT.

Target reference number

Oth 2

Year target was set

2017

Target coverage

Company-wide

Target type: absolute or intensity

Intensity

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

Energy consumption or efficiency	MWh
----------------------------------	-----

Target denominator (intensity targets only)

square foot

Base year

2007

Figure or percentage in base year

30.9

Target year

2030

Figure or percentage in target year

21.6

Figure or percentage in reporting year

26.1

% of target achieved [auto-calculated]

51.6129032258064

Target status in reporting year

Underway

Is this target part of an emissions target?

Yes, it is part of our emissions target of 50% reduction in total carbon emissions per square foot by 2030, using 2007 as the baseline year (designated as Int 1). This separate target of a reduction in energy usage of 30% by 2030, using 2007 as the baseline year (designated as Oth 2) is a key contributor to the emissions target as energy usage is a primary component of total carbon emissions.

Is this target part of an overarching initiative?

Science Based Targets initiative

Please explain (including target coverage)

Yes, it is part of the Science-based Targets initiative (SBTi) of 37.5% absolute reduction in total carbon emissions by 2034, using 2019 as the baseline year (pending final approval by the SBTi). This separate target of a reduction in energy usage of 30% by 2030, using 2007 as the baseline year (designated as Oth 2) is a key contributor to the SBTi as energy usage is a primary component of total carbon emissions and the absolute SBT.

Target reference number

Oth 3

Year target was set

2018

Target coverage

Business activity

Target type: absolute or intensity

Absolute

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

Waste management	metric tons of waste diverted from landfill
------------------	---

Target denominator (intensity targets only)

<Not Applicable>

Base year

2019

Figure or percentage in base year

14820

Target year

2030

Figure or percentage in target year

7410

Figure or percentage in reporting year

14820

% of target achieved [auto-calculated]

0

Target status in reporting year

New

Is this target part of an emissions target?

No - this is a separate target.

Is this target part of an overarching initiative?

Other, please specify (EPA Food Loss & Waste Champions)

Please explain (including target coverage)

In 2018, MGM became an EPA Food Loss & Waste Champion. We committed to reducing food loss and waste in our operations by 50 percent by 2030 through activities targeting the prevention of food loss and waste before it arises, recovery of wholesome, otherwise wasted food for donation, and recycling of food loss and waste to other uses such as animal feed, compost and energy generation. Specifically, we committed to the following activities: 1. Audits of food waste in landfill. 2. Source reduction in employee dining rooms and during events 3. Feeding people through a comprehensive food donations program 4. Feeding animals through a comprehensive food to feed program 5. Biofuel production through repurposing yellow grease and brown grease 6. Composting program development As part of the activity #1 in the list

above, in 2019 we conducted an extremely detailed audit of the food waste in our landfill stream. This was to help us establish a baseline volume of food products hidden within our landfill stream (i.e. not diverted through our multiple food waste diversion programs). This audit conducted by a leading third party waste characterization and measurement firm led us to conclude that approximately 27% of our materials to landfill in the USA was food waste. This translated to 14,820 tons of food waste to landfill as our U.S. baseline in 2019. Our commitment to reduce this by 50% by 2030 implies a goal of less than 7,410 tons of food waste to landfill by 2030. We will track progress to this goal by conducting similarly detailed audits in 2023, 2027 and 2030. .

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	17	11749
To be implemented*	7	2510
Implementation commenced*	1	790
Implemented*	21	19220
Not to be implemented	10	2826

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)

11423

Scope(s)

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

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

1746541

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

2519876

Payback period

1-3 years

Estimated lifetime of the initiative

3-5 years

Comment

High efficiency air handler filter installations covering high traffic area air handlers at MGM domestic properties (12)

Initiative category & Initiative type

Energy efficiency in buildings	Lighting
--------------------------------	----------

Estimated annual CO2e savings (metric tonnes CO2e)

2585

Scope(s)

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

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

527893

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

650947

Payback period

1-3 years

Estimated lifetime of the initiative

6-10 years

Comment

Upgrade of convention meeting rooms lighting to high-efficiency units, warehouse lighting to high-efficiency units, and exterior building wash lighting to high-efficiency units (3)

Initiative category & Initiative type

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

Estimated annual CO2e savings (metric tonnes CO2e)

5212

Scope(s)

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

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

918126

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

2870500

Payback period

1-3 years

Estimated lifetime of the initiative

11-15 years

Comment

Upgrade of building chillers to new, high-efficiency units (6)

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

Method	Comment
Dedicated budget for energy efficiency	The MGM Facilities Center of Excellence (COE) was established in 2019 at MGM Resorts and oversees and implements a dedicated annual energy conservation capital budget for projects throughout the company.
Financial optimization calculations	The optimization of the dedicated energy reduction capital budget considers both financial and emission reduction benefits within the prioritization of projects.
Compliance with regulatory requirements/standards	Compliance within MGM Resorts EPA Title V permit is also a contributing factor to the deployment of capital within the scope of these projects.
Employee engagement	The MGM Facilities Center of Excellence (COE) and MGM Social Impact and Sustainability teams work extensively on non-capital required efforts that result in emissions reductions activities. The most significant example is the 2018-2021 partnership between MGM and Invenergy, North America's largest independent renewable energy company, to develop a 100 megawatt solar photovoltaic (PV) array in Clark County, Nevada for the exclusive use of the Las Vegas properties of MGM Resorts. The array will be online by mid-2021. It is being capitalized by Invenergy, with no capital outlay by MGM. MGM is the exclusive off-taker of all energy produced through a power purchase agreement (PPA) with Invenergy.

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**

Company-wide

Description of product/Group of products

We help convention customers estimate the carbon emissions associated with their events at our properties. We also estimate the relative emissions reduction associated with hosting a convention at an

MGM facility vs. other similar venues.

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

Avoided emissions

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

Other, please specify (We have an internal process of projecting volumes of electricity, natural gas, and waste associated with specified events at our properties. These volumes are then converted into greenhouse gas emissions figures using the overall CDP methodology.)

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

0

% of total portfolio value

<Not Applicable>

Asset classes/ product types

<Not Applicable>

Comment

Specific revenue share is not determined at this time.

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 2007

Base year end

December 31 2007

Base year emissions (metric tons CO2e)

169979

Comment

Total Scope 1 emissions in calendar 2007; includes all property operations in effect during this year, including select operations that have since been divested.

Scope 2 (location-based)

Base year start

January 1 2007

Base year end

December 31 2007

Base year emissions (metric tons CO2e)

687083

Comment

Total Scope 2 emissions in calendar 2007; includes all property operations in effect during this year, including select operations that have since been divested.

Scope 2 (market-based)**Base year start****Base year end****Base year emissions (metric tons CO2e)****Comment****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)

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)**

278476

Start date

January 1 2019

End date

December 31 2019

Comment

Total Scope 1 emissions for all MGM global operations under company operational control.

Past year 1**Gross global Scope 1 emissions (metric tons CO2e)****Start date****End date****Comment**

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

Total gross Scope 2 emissions (location-based) include all MGM global operations under MGM Resorts operational control and Scope 2 emissions associated with market or grid purchased electricity. Total gross Scope 2 emissions (market-based) include all MGM purchases of electricity generated on site from the solar photovoltaic (PV) system (behind the meter) at Mandalay Bay in Las Vegas.

C6.3

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

Reporting year

Scope 2, location-based

689594

Scope 2, market-based (if applicable)

0

Start date

January 1 2019

End date

December 31 2019

Comment

Total gross global Scope 2 emissions (location-based) figure includes all emissions associated with market or grid purchased electricity for all global MGM operations under MGM control. Total gross Scope 2 emissions (market-based) figure include zero emissions associated with energy purchased from the on-site solar photovoltaic (PV) system at Mandalay Bay in Las Vegas.

Past year 1

Scope 2, location-based

Scope 2, market-based (if applicable)

Start date

End date

Comment

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?

No

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

1965795

Emissions calculation methodology

Scope 3 emissions from purchased goods and services were estimated using aggregated spend data provided by MGM's procurement department. Spend data was broken down into relevant industry sector categories and input into the Scope 3 Evaluator tool from Quantis. Spend data includes purchased goods and services from both operations and construction projects.

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

100

Please explain

Scope 3 emissions from purchased goods and services were estimated using aggregated spend data provided by MGM's procurement department.

Capital goods

Evaluation status

Relevant, calculated

Metric tonnes CO2e

37396

Emissions calculation methodology

Scope 3 emissions from purchased goods and services were estimated using aggregated spend data provided by MGM's procurement department. Spend data was broken down into relevant industry sector categories and input into the Scope 3 Evaluator tool from Quantis. Spend data includes purchased goods and services from both operations and construction projects.

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

100

Please explain

Capital goods include assets such as machinery.

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

Evaluation status

Relevant, calculated

Metric tonnes CO2e

262112

Emissions calculation methodology

Relevant fuels included in the fuel-and-energy-related activities scope 3 analysis include natural gas, diesel, gasoline, jet fuel, compressed natural gas, propane, and electricity generated in both the United States and China. All fuel volumes were converted to kilowatt hours and emissions were calculated using a template provided from the World Resources Institute (WRI).

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

100

Please explain

All data obtained from utility meters or other supplier and company reports.

Upstream transportation and distribution**Evaluation status**

Relevant, calculated

Metric tonnes CO2e

773

Emissions calculation methodology

Scope 3 emissions from purchased goods and services, including upstream transportation and distribution, were estimated using aggregated spend data provided by MGM's procurement department. Spend data was broken down into relevant industry sector categories and input into the Scope 3 Evaluator tool from Quantis.

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

100

Please explain

Emissions from third-party transportation and logistics.

Waste generated in operations**Evaluation status**

Relevant, calculated

Metric tonnes CO2e

26088

Emissions calculation methodology

These emissions were calculated by applying the emission factor for mixed municipal solid waste to landfill as provided by the EPA Waste Reduction Model (version 14), Management Practices Chapters (relevant Exhibits). The EPA Waste Reduction Model (version 14), Management Practices Chapters (relevant Exhibits) also provides for calculation of Scope 3 credits attributable to recycled volumes. MGM determined that total credits of (89,465) metric tonnes CO2e were associated with its total volume of recycled materials. This credit total, netted against the gross total for mixed municipal solid waste to landfill of 25,816 results in a net overall credit of (63,649) metric tonnes CO2e associated with all waste generated in operations, including both volumes sent to landfill as well as volumes recycled.

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

100

Please explain

Waste volumes were generated from multiple waste management providers and partners. These emissions were calculated by applying the emission factor for mixed municipal solid waste to landfill as provided by the EPA Waste Reduction Model (version 14), Management Practices Chapters (relevant Exhibits).

Business travel

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

5225

Emissions calculation methodology

Business travel data in total miles traveled was obtained from MGM Resorts business travel partners. This was segmented into total business air miles traveled short-haul (less than 300 miles), medium-haul (between 300 miles and 2,500 miles) and long-haul (more than 2,500 miles). The appropriate emission factor for each segment was obtained via the EPA Emission Factors for Greenhouse Gas Inventories, March 2018; Table 8.

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

100

Please explain

Business travel data in total miles traveled was obtained from MGM Resorts business travel partners. This was segmented into total business air miles traveled shorty-haul (less than 300 miles), medium-haul (between 300 miles and 2,500 miles) and long-haul (more than 2,500 miles). The appropriate emission factor for each segment was obtained via the EPA Emission Factors for Greenhouse Gas Inventories, March 2018; Table 8.

Employee commuting

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

20400

Emissions calculation methodology

This data was estimated using the Scope 3 Evaluator tool from Quantis, based on companies in the hotel and hospitality industry with over 10,000 employees.

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

0

Please explain

This data was estimated using the Scope 3 Evaluator tool from Quantis, based on companies in the hotel and hospitality industry with over 10,000 employees.

Upstream leased assets

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

530

Emissions calculation methodology

Scope 3 emissions from purchased goods and services, including upstream leased assets, were estimated using aggregated spend data provided by MGM's procurement department. Spend data was broken down into relevant industry sector categories and input into the Scope 3 Evaluator tool from Quantis. Spend data includes purchased goods and services from both operations and construction projects.

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

100

Please explain

Emissions from leased assets.

Downstream transportation and distribution

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

As a hospitality organization in a service industry, MGM Resorts has no material downstream transportation and distribution activities.

Processing of sold products

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

As a hospitality organization in a service industry, MGM Resorts has no material processing of sold products activities.

Use of sold products

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

As a hospitality organization in a service industry, MGM Resorts has no material processing of sold products activities.

End of life treatment of sold products

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

As a hospitality organization in a service industry, MGM Resorts has no material end of life treatment of sold products activities.

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

As a hospitality organization in a service industry, MGM Resorts has no material downstream leased assets activities.

Franchises

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

As a hospitality organization in a service industry, MGM Resorts has no material franchises activities.

Investments

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

As a hospitality organization in a service industry, MGM Resorts has no material investment activities relevant.

Other (upstream)

Evaluation status

Not evaluated

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

Other (downstream)

Evaluation status

Not evaluated

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

C-CN6.6/C-RE6.6

(C-CN6.6/C-RE6.6) Does your organization assess the life cycle emissions of new construction or major renovation projects?

	Assessment of life cycle emissions	Comment
Row 1	Please select	

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

0.000075

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

968070

Metric denominator

unit total revenue

Metric denominator: Unit total

12899672000

Scope 2 figure used

Location-based

% change from previous year

8.21

Direction of change

Increased

Reason for change

Higher global revenue in reporting year vs. prior year was offset by higher combined Scope 1 and Scope 2 emissions. Scope 1 and Scope 2 emissions were higher in the reporting year vs. prior year primarily due to the first full calendar year of operations for MGM Cotai during the reporting year. MGM Cotai is located in the Macau region where the emissions factor for Scope 2 emissions is more than double that of the Las Vegas, Nevada region, the region with the majority of company operations. The reporting year is the first year that MGM Cotai has been included in the overall company emissions inventory. Also, the reporting year was the first full calendar year of operations for MGM Springfield in Springfield, Massachusetts. The addition of this new property being included in the overall company emissions inventory also caused an increase in Scope 1 and Scope 2 emissions. These factors were partially offset via an overall energy usage decrease in the reporting year vs. prior year, excluding new property operations. This energy usage decrease was the result of multiple energy conservation measures implemented during the reporting year of 2019. One of these energy conservation activities was the installation of high-efficiency air handler filters in the high-traffic areas of property operations at twelve properties.

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 CO2e)	GWP Reference
----------------	---	---------------

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	278188.55	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	131.07	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	156.24	IPCC Fourth Assessment Report (AR4 - 100 year)
HFCs	0	IPCC Fourth Assessment Report (AR4 - 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 CO2e)
United States of America	269602
China, Macao Special Administrative Region	8874
Japan	0
Middle East	0

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)
MGM Nevada operations	214732
MGM China	8874
MGM regional operations - MS and MI	19926
MGM regional operations - East	34943

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)
United States of America	519783	0	1238777	12923
China, Macao Special Administrative Region	169811	0	192311	0
Japan	0	0	0	0
Middle East	0	0	0	0

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)
MGM Nevada operations	403520	0
MGM China	169811	0
MGM regional operations - MS and MI	63300	0
MGM regional operations - East	52963	0

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?

Increased

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	53908	Increased	6.61	For its Las Vegas properties that had access to the wholesale market for electricity, in the reporting year 2019 a somewhat lesser share of renewable electricity was incorporated into the overall portfolio of electricity procured. The result was an increase of 53,098 metric tons CO2e due to this decrease in renewable electricity. In 2018, our gross global emissions (Scope 1 and 2) were 815,676 metric tons CO2e. Therefore, we increased our gross global emissions 6.61% in 2019 as a result. Formula: $(53,908 / 815,676) \times 100 = 6.61\%$.
Other emissions reduction activities	19220	Decreased	2.36	MGM Resorts International reduced Scope 1 and 2 combined emissions by 19,220 metric tons due to implemented emissions reduction activities in the reporting year 2019. In 2018, our gross global emissions (Scope 1 and 2) were 815,676 metric tons CO2e. Therefore, we reduced our gross global emissions 2.36% in 2019 as a result. Formula: $(19,220 / 815,676) \times 100 = 2.36\%$.
Divestment		<Not Applicable>		
Acquisitions	118864	Increased	14.57	MGM Resorts International increased Scope 1 and 2 combined emissions by 118,864 metric tons due to two new properties being included for the first time in the reporting year 2019. These two properties were MGM Cotai in the Macau region and MGM Springfield in the Massachusetts region. In 2018, our gross global emissions (Scope 1 and 2) were 815,676 metric tons CO2e. Therefore, we increased our gross global emissions 14.57% in 2019 as a result. Formula: $(118,864 / 815,676) \times 100 = 14.57\%$.
Mergers		<Not Applicable>		
Change in output		<Not Applicable>		
Change in methodology		<Not Applicable>		
Change in boundary		<Not Applicable>		
Change in physical operating conditions		<Not Applicable>		
Unidentified		<Not Applicable>		
Other	1158	Decreased	0.14	This is the result of a change in the location-based Scope 2 emission factors for the MGM properties outside of Las Vegas. A greater share of purchased electricity for MGM domestic properties outside of the Las Vegas came from regions with lower emissions factors per the eGrid tables as published by the U.S. Environmental Protection Agency (EPA). The total effect of this was a decrease of 1,158 metric tons CO2e. In 2018, our gross global emissions (Scope 1 and 2) were 815,676 metric tons CO2e. Therefore, we reduced our gross global emissions .14% in 2019 as a result. Formula: $(1,158 / 815,676) \times 100 = .14\%$.

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?

Location-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	No
Consumption of purchased or acquired cooling	Yes
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

	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)	0	1199841	1199841
Consumption of purchased or acquired electricity	<Not Applicable>	223714	1182983	1406697
Consumption of purchased or acquired heat	<Not Applicable>	0	106737	106737
Consumption of purchased or acquired steam	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired cooling	<Not Applicable>	5116	19275	24391
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	0	<Not Applicable>	0
Total energy consumption	<Not Applicable>	228830	2508836	2737666

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	No
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	Yes

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

1052242

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

860954

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

191288

Emission factor

0.05311

Unit

metric tons CO2e per million Btu

Emissions factor source

For 2019: EPA Emission Factors for Greenhouse Gas Inventories, March 2020; For 2018, 2017: EPA Emission Factors, March 2018; WRI - Calculation Tool for Direct Emissions from Stationary Combustion. Version 4.1 (2016, 2015 and 2014), Version 4.0 (2013/2012/2011/2010)

Comment

The volume of natural gas fuel consumed for self-cogeneration or self-trigeneration is the volume utilized by the combined heat and power plant at ARIA in Las Vegas for self-cogeneration.

Fuels (excluding feedstocks)

Propane Liquid

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

19020

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

19020

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Emission factor

0.06171

Unit

metric tons CO2e per million Btu

Emissions factor source

For 2019: EPA Emission Factors for Greenhouse Gas Inventories, March 2020; For 2018, 2017: EPA Emission Factors, March 2018; WRI - Calculation Tool for Direct Emissions from Stationary Combustion. Version 4.1 (2016, 2015 and 2014), Version 4.0 (2013/2012/2011/2010).

Comment

Propane utilized primarily in the Macau region.

Fuels (excluding feedstocks)

Petrol

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

40913

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Emission factor

0.03267

Unit

metric tons CO2 per liter

Emissions factor source

WRI - Calculation Tool for Direct Emissions from Stationary Combustion. Version 4.1 (2019, 2018, 2017, 2016, 2015 and 2014), Version 4.0 (2013/2012/2011/2010).

Comment

All MWh of Petrol consumption is for moving vehicles. Emission factor shown above is metric tons CO2e per liter, converted from metric tons CO2e per gallon of .00863 as reported by the source tool above.

Fuels (excluding feedstocks)

Diesel

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

15283

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Emission factor

0.03846

Unit

kg CO2e per liter

Emissions factor source

WRI - Calculation Tool for Direct Emissions from Stationary Combustion. Version 4.1 (2019, 2018, 2017, 2016, 2015 and 2014), Version 4.0 (2013/2012/2011/2010).

Comment

Emission factor shown above is metric tons CO2e per liter, converted from metric tons CO2e per gallon of .01016 as reported by the source tool above.

Fuels (excluding feedstocks)

Aviation Gasoline

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

72383

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Emission factor

0.03165

Unit

metric tons CO2e per liter

Emissions factor source

WRI - Calculation Tool for Direct Emissions from Stationary Combustion. Version 4.1 (2019, 2018, 2017, 2016, 2015 and 2014), Version 4.0 (2013/2012/2011/2010).

Comment

Emission factor shown above is metric tons CO2e per liter, converted from metric tons CO2e per gallon of .00836 as reported by the source tool above.

(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	76097	76097	12923	12923
Heat	42192	42192	0	0
Steam	0	0	0	0
Cooling	0	0	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 on-site/off-site generator owned by a third party with no grid transfers (direct line)

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

12923

Comment

Off-grid energy consumption from an on-site installation or through a direct line to an off-site generator owned by another company.

C9. Additional metrics

C9.1

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

Description

Waste

Metric value

8003

Metric numerator

Metric tons CO2e from food waste in landfill

Metric denominator (intensity metric only)

% change from previous year

Direction of change

<Not Applicable>

Please explain

Based on a detailed food waste audit in 2019, we estimate that in 2019 there was 14,820 tons of food waste in our landfill stream. Based on the EPA WARM tool, this equates to 8003 tons of carbon emissions.

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	Please select	

C-RE9.9

(C-RE9.9) Does your organization manage net zero carbon buildings?

Please select

C-CN9.10/C-RE9.10

(C-CN9.10/C-RE9.10) Did your organization complete new construction or major renovations projects designed as net zero carbon in the last three years?

No, but we plan to in the future

C-CN9.11/C-RE9.11

(C-CN9.11/C-RE9.11) Explain your organization's plan to manage, develop or construct net zero carbon buildings, or explain why you do not plan to do so.

We are considering retiring a portion of the Portfolio Energy Credits (PECs) associated with our emerging 100MW MGM to render one or more of our properties as net zero carbon for 3 years. In addition, MGM is bidding to build a major integrated resort in Japan. In our plans for this resort we have completed detailed designs for 3 net zero buildings. This plan is however contingent on MGM winning the license in Japan.

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

[MGM CY 2019 S1-S2 GHG Verification Statement_FINAL_20200824.pdf](#)

Page/ section reference

1-3

Relevant standard

Corporate GHG verification guidelines from ERT

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

[MGM CY 2019 S1-S2 GHG Verification Statement FINAL 20200824.pdf](#)

Page/ section reference

1-3

Relevant standard

Corporate GHG verification guidelines from ERT

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: Purchased goods and services

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Underway but not complete for current reporting year – first year it has taken place

Type of verification or assurance

Please select

Attach the statement**Page/section reference****Relevant standard**

Please select

Proportion of reported emissions verified (%)

Scope 3 category

Scope 3: Capital goods

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Underway but not complete for current reporting year – first year it has taken place

Type of verification or assurance

Limited assurance

Attach the statement

Page/section reference

Relevant standard

Corporate GHG verification guidelines from ERT

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

Underway but not complete for current reporting year – first year it has taken place

Type of verification or assurance

Limited assurance

Attach the statement

Page/section reference

Relevant standard

Corporate GHG verification guidelines from ERT

Proportion of reported emissions verified (%)

100

Scope 3 category

Scope 3: Waste generated in operations

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Underway but not complete for current reporting year – first year it has taken place

Type of verification or assurance

Limited assurance

Attach the statement

Page/section reference

Relevant standard

Corporate GHG verification guidelines from ERT

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

Underway but not complete for current reporting year – first year it has taken place

Type of verification or assurance

Limited assurance

Attach the statement**Page/section reference****Relevant standard**

Corporate GHG verification guidelines from ERT

Proportion of reported emissions verified (%)

100

Scope 3 category

Scope 3: Upstream transportation and distribution

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Underway but not complete for current reporting year – first year it has taken place

Type of verification or assurance

Limited assurance

Attach the statement**Page/section reference****Relevant standard**

Corporate GHG verification guidelines from ERT

Proportion of reported emissions verified (%)

100

Scope 3 category

Scope 3: Employee commuting

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Underway but not complete for current reporting year – first year it has taken place

Type of verification or assurance

Limited assurance

Attach the statement**Page/section reference****Relevant standard**

Corporate GHG verification guidelines from ERT

Proportion of reported emissions verified (%)

100

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?

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C6. Emissions data	Financial or other base year data points used to set a science-based target	Third-party consultant review.	In 2018 MGM engaged with World Resources Institute (WRI) in the development of a Science-based Target (SBT). This work included a complete review of MGM 2018 emissions and relevant financial and other benchmarking data in preparation of and Absolute Contraction Science-based target consistent with the level of decarbonization required to keep global temperature increase below 2°C compared to pre-industrial temperatures. This work continued in 2019.
C8. Energy	Renewable energy products	Power Purchase Agreement (PPA).	MGM entered into a power purchase agreement (PPA) with NRG (now Clearway) for the exclusive use of the energy generated by a 8.3 megawatt solar photovoltaic (PV) system atop the Mandalay Bay Convention Center in Las Vegas. Metering information is done third-party and verified by Clearway.
C1. Governance	Emissions reduction activities	Environment & Social (E&S) rating by ISS Corporate Solutions.	In 2018 MGM began participation in the Environment & Social (E&S) rating by ISS Corporate Solutions. This service is a comprehensive rating platform including Risks and Opportunities, Carbon and Climate, Natural Resources, and Waste and Toxicity disclosures.
C4. Targets and performance	Financial or other base year data points used to set a science-based target	Third-party consultant review.	In 2018 MGM engaged with World Resources Institute (WRI) in the development of a Science-based Target (SBT). This work included a complete review of MGM 2018 emissions and relevant financial and other benchmarking data in preparation of and Absolute Contraction Science-based target consistent with the level of decarbonization required to keep global temperature increase below 2°C compared to pre-industrial temperatures. This work continued in 2019.

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)?

No, and we do not anticipate being regulated in the next three years

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 origination

Project type

Solar

Project identification

MGM Resorts does not participate in a formal carbon emissions scheme; however, we do create and trade State of Nevada Portfolio Energy Credits (PECs). We do so in partnership with NRG Energy (now Clearway as of 2019) and in the following way: [1] In 2019 we operated a 6.4 MW solar photovoltaic (PV) facility on the Mandalay Bay Convention Center Roof (Phase I of the project). [2] In 2019 that array generated 9,985 MWh of renewable energy which is the equivalent of 4,245 mtCO_{2e}. [3] Instead of retiring these credits ourselves and claiming the renewable energy generation / carbon avoidance, we traded the PECs with a counterparty under Nevada State regulations.

Verified to which standard

Other, please specify (State of NV Renewable Portfolio Standard)

Number of credits (metric tonnes CO_{2e})

4245

Number of credits (metric tonnes CO_{2e}): Risk adjusted volume

4245

Credits cancelled

Yes

Purpose, e.g. compliance

Compliance

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 low-carbon investment
Identify and seize low-carbon opportunities

GHG Scope

Scope 2

Application

MGM actively analyzes the source of its energy with the objective to increase the share of energy generated from renewable resources in the future. As such, financial analytics utilize a price of carbon in the form of market price characteristics for fossil-fuel energy as well as renewable energy.

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

20

Variance of price(s) used

Uniform pricing is used.

Type of internal carbon price

Shadow price

Impact & implication

MGM's shadow pricing on carbon has been used to inform MGM's business strategy on the procurement of renewable energy. In October 2016 MGM Resorts completed an exit from the fully-bundled sales system of NV Energy, the local electric utility in Las Vegas after conducting financial analyses including carbon pricing estimates. This transaction enables MGM to control its portfolio of electricity serving its Las Vegas properties (more than 80% of the hotel rooms of MGM are in Las Vegas) and access the wholesale market for electricity. As such, in 2018 MGM announced a partnership with Invenergy, North America's largest independent renewable energy company, to develop a 100-megawatt solar photovoltaic (PV) system in Clark County, Nevada for the exclusive use of the Las Vegas properties of MGM. When completed by mid-2021, this system will materially increase the percentage of renewable energy in the overall energy portfolio of MGM Resorts. In the future, MGM intends to examine other renewable energy options. In doing so, MGM has established an internal price of carbon via financial analyses designed to interpret market pricing characteristics of both fossil-fuel generated energy, as well as renewable energy.

C12. Engagement

C12.1

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

Yes, our customers

Yes, other partners in the value chain

C12.1b

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

Type of engagement

Education/information sharing

Details of engagement

Run an engagement campaign to education customers about your climate change performance and strategy

% of customers by number

80

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

Portfolio coverage (total or outstanding)

<Not Applicable>

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

In 2019, MGM actively engaged overnight hotel guests in our climate change strategy by participating in the WWF Earth Hour program, for the 12th consecutive year. Our rationale for selecting this group of customers is based on the fact that overnight hotel guests represent the broadest cross section of our customer base, from convention guests to entertainment guests to casino guests and others. By reaching overnight guests with our climate message we ensure MGM's commitment to protecting the planet is understood by all segments of our customer base. In our 2019 Earth Hour message to overnight hotel guests, MGM explained that "Earth Hour is one of the many ways MGM Resorts focuses on bringing awareness to conservation and increasing the energy efficiencies of our buildings. For example, between 2007-2017, we reduced energy use by 16%, partly by installing over 1.5 million LED lightbulbs across our resorts. The cumulative energy we've saved over this period is equivalent to the annual usage of more than 125,000 average U.S. homes. MGM has committed to reduce our carbon emissions per square foot by 50%. Earth Hour participation in 2019 occurred at all MGM Resorts' major Las Vegas properties, as well as Beau Rivage and Gold Strike in Mississippi, Borgata in New Jersey, MGM National Harbor in Maryland, and MGM Macau and Cotai, in China. Collectively these resorts reflect approximately 80% of the company's rooms.

Impact of engagement, including measures of success

The impact of this engagement is that among the hotel guests exposed directly to our Earth Hour activation and indirectly among guests that heard about our Earth Hour and other efforts on social media. The ultimate impact is increased reputation and loyalty. We measure the engagement we receive on our official social media accounts including YouTube, Facebook, Twitter, LinkedIn, and Instagram) and we actively track views, likes, impressions and sentiment. Video views over 1,000 are considered successful and impressions over 10,000 are considered successful.

Type of engagement

Education/information sharing

Details of engagement

Share information about your products and relevant certification schemes (i.e. Energy STAR)

% of customers by number

5

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

Portfolio coverage (total or outstanding)

<Not Applicable>

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

We select convention clients for direct engagement on climate related products, services through our Sustainable Events program. We are a major host of business events in Las Vegas which is a global capital of business events. Our highly respected Sustainable Event Program is discussed with many major convention clients. In 2019, we engaged convention clients with a total revenue value of over \$95 Million in our sustainable events program.

Impact of engagement, including measures of success

Selection of lower carbon food, beverage and decor options. Requests to calculate event related carbon emissions; purchase of carbon offsets for selected events.

C12.1d

(C12.1d) Give details of your climate-related engagement strategy with other partners in the value chain.

At MGM Resorts we look to partner with external organizations to advance sustainability and environmental responsibility where appropriate. We believe that a greener business is a better business and that advancements at other organizations, or made in coordination with them, helps reduce demand on the world's limited resources.

We consider other partners in the value chain to be external organizations that are neither direct customers nor direct suppliers to MGM Resorts. We look to engage with such organizations where we can leverage external expertise in maximizing the promotion of sustainability and action on climate change, or where MGM Resorts operations may serve as an appropriate test market for new concepts.

One example of engagement on climate and water related matters with other partners in the value chain is the MGM Resorts partnership with WaterStart. The organization's website is www.waterstart.com.

Since climate change and water stress are intricately linked, our support for WaterStart and engagement with innovative water industry innovators through this program is a clear example of engagement with a broad set of value chain partners. WaterStart is a Nevada based water innovation accelerator, sitting at the nexus of technology, research and economic development. WaterStart provides channels for innovation for various stakeholders and water resource managers; including: technology companies, management agencies and policy makers and provides services ranging from commercialization funding to business development. As it continues to bring together strategic resources and expertise, its core mission will create quality job growth and help diversify the economy of the region.

In coordination with MGM Resorts, WaterStart creates and maintains an innovations priority list for water-related technologies and has identified and evaluated the applicability of technologies for use in MGM operations. Additionally, WaterStart has leveraged its local and international network to conduct research and use MGM operations as a test-bed for companies working to improve water resource management. This helps us contribute to mainstreaming innovations that can help mitigate water related issues connected with climate change.

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
- Funding research organizations
- 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
Energy efficiency	Support	Energy Efficiency Policy – MGM Resorts International actively supports legislation at State and Federal levels to encourage utility and end-user energy efficiency measures as well as the use of combined heat and power; managing utility tariffs; and developing lighting policy standards through the U.S. Department of Energy (DOE).	MGM Resorts has provided input on several energy efficiency and sustainability bills in Nevada. These have included programs to promote energy conservation at both the residential and commercial levels of local utility systems.
Other, please specify (Water conservation)	Support	Water Conservation and Awareness - including funding access to clean water for impoverished communities; developing educational programs locally about the importance of water conservation and working with regional municipalities to develop sound water policy.	MGM provides funding to several water conservation, awareness and outreach efforts, including WaterStart, Springs Preserve, and ONE Drop.
Clean energy generation	Support	Renewable Energy Policy – including interactions with the Nevada State Legislature and the Governors Panel on climate change, the Harry Reid Blue Ribbon Energy Panel, the Southern Nevada Solar Energy Lab Development Committee, and frequent interactions with our state representatives for input on energy related issues.	MGM Resorts has provided input on several renewable energy related bills in Nevada. Most notably, in April 2019, MGM supported SB 358, a measure to raise renewable energy generation standards to 50% by 2030.
Other, please specify (Climate change awareness)	Support	Climate Change and Environmental Sustainability Awareness - including participation with the World Travel and Tourism Council and International Tourism Partnership to standardize measurement and communications of Greenhouse Gas Emissions to guests across the hospitality industry; as well as providing input and guidance for the WTTC in developing sustainability policy and direction.	MGM has supported the adoption of the HCMI standards across the industry.

C12.3b

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

C12.3c

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

Trade association

Impact NV (www.impact-nv.org), (formally GreenChips), Nevada's Sustainability Alliance. Impact NV is Southern Nevada's leading sustainability voice creating innovative partnerships among businesses, government, and non-profits through education, community projects, and collaboration.

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

ImpactNV is a 501(c)(3) non-profit catalyst organization, founded in 2008, that is dedicated to building community through collaborative partnerships for a more sustainable future. Sustainability is, in many facets, a transformational word. It is transformative first in that the understanding of what it means to be "sustainable" has changed over several decades. Originally defined as the productive harmony between humans and nature that was necessary to guarantee the flourishing of mankind, sustainability has since taken on far more meaning. The economy, health, nature, built environment, energy, community, social equity, and transportation now make up the components that ensure the endurance of prosperity. Impact NV's position is that Sustainability is best achieved through cooperation among business, government, and non-profits through education, community projects, and collaboration.

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

MGM Resorts is a founding member of Impact NV, with Company executives servicing on both the Board of Directors as well as the working group of the non-profit organization. The mission of Impact NV is consistent with the objective of MGM Resorts to be a positive influence in the each of the communities in which we do business. MGM uses this position to promote energy efficiency, renewable energy infrastructure, and community awareness for organizations who help meet these ends within the community.

Trade association

Sustainable Purchasing Leadership Council (SPLC).

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

SPLC works to advance sustainable purchasing policies and practices, including those that drive long term supply chain emissions reductions.

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

MGM's Vice President of Corporate Sustainability was the Founding Chair of SPLC and has influenced the organization's focus on prioritizing sustainable purchasing activities in produce categories of highest embedded environmental impacts.

Trade association

ReFED

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

ReFED is a multi-stakeholder nonprofit, powered by an influential network of the nation's leading business, nonprofit, foundation, and government leaders committed to reducing U.S. food waste. ReFED takes a data-driven approach to move the food system from acting on instinct to insights to solve our national food waste problem. As food waste solutions are implemented, there will likely be a corresponding reduction in climate impacts.

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

MGM's Vice President of Corporate Sustainability is Chair of the governance Committee at ReFED.

C12.3d

(C12.3d) Do you publicly disclose a list of all research organizations that you fund?

No

C12.3e

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

MGM Resorts continues to engage activities to develop and support sustainable practices in the regulatory arenas on the local, state, and national levels. These efforts include active guidance and participation in Impact NV, formally Green Chips (www.impact-nv.org), a public/private non-profit partnership dedicating to promotion sustainability in Southern Nevada, the Clark County Department of Air Quality (DAQEM), Nevada State Legislature, the U.S. Department of Energy's Better Buildings Alliance Efficiency Forum, Commercial Real Estate Energy Alliance (CREEA), Events Industry Council (EIC) Center for Sustainable Events, Sustainable Purchasing Leadership Council, and others.

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?

Our environmental policy establishes priorities for the company and serves as the foundation for ensuring that all engagement is consistent through the review and consultation process. If any engagement is determined inconsistent, this would be identified by the CSR Committee of the Board and other key stakeholders, and then all engagement activities would cease or be addressed as appropriate.

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

[2019-MGM-Annual-Report.pdf](#)

Page/Section reference

6, 7, 20

Content elements

Governance

Strategy

Risks & opportunities

Comment

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 People, Inclusion & Sustainability Officer	Chief Sustainability Officer (CSO)