



GREENSPUN

College of
URBAN AFFAIRS

URST 451

Corporate Sustainability

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SYLLABUS



INSTRUCTOR

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Course Overview

Corporate sustainability, or environmental governance by large private sector organizations, requires rethinking how firms operate in response to urgent climate and social challenges, and aligning business strategy with decarbonization, and balancing stakeholder expectations with long-term value creation. The rise in corporate sustainability presents the opportunity for firms to redefine their purpose, serving society rather than markets only. This course trains students to lead in corporate sustainability in terms of both the theory and applied practice, across several key areas: Energy efficiency, carbon target setting, decarbonizing energy consumption, stakeholder engagement and materiality assessment, financing sustainable goals, tracking and disclosing internal climate metrics, and calculating carbon footprint. This includes setting carbon targets using the Science-Based Targets Initiative (SBTI) target setting tool; reading live building energy system analytics and understanding how inefficiencies are detected and remedied in real time; how to navigate different sources and forms of climate finance, including incentives, to defray the cost of achieving sustainability goals and environmental law compliance; using internal stakeholder engagement and materiality assessment from large firms to understand how effective stakeholder engagement and materially relevant impacts by firm operations are assessed; how tracking and disclosure of climate metrics to key repositories such as CDP is conducted to enable climate performance assessment; and how to calculate greenhouse gas emissions equivalences of large corporate activities and events. By integrating theory, data, and hands-on exercises, this course equips students with the skills needed to lead corporate sustainability efforts and meet the growing demand for climate accountability in business.

Course Objectives

By the end of this course, a student who has participated fully will understand:

1. How organizations decarbonize, or reduce their greenhouse gas emissions, by way of improving energy efficiency and using renewable rather than fossil fuel for energy consumption
2. How to calculate organizational GHG reduction targets that are aligned with international climate goals
3. How organizations assess what stakeholders, both internal and external, are meaningfully impacted by operations, and how to engage these stakeholders for positive impacts
4. What sustainability performance and broader indicators which organizations measure, and where these measurements are disclosed to make organizational efforts transparent to stakeholders

5. Why organizations are pursuing climate leadership goals, how business is changing to that end, and what it means for the world
6. What skills are in growing demand in the private sector for expertise in corporate sustainability

Getting in-the-know on corporate sustainability: *Subscribe to at least two newsletters from the following sites:*

- <https://www.bloomberg.com/green>
- <http://3blmedia.com/>
- <http://www.theguardian.com/us/environment>
- <http://www.csrwire.com>
- <http://green.blogs.nytimes.com/>
- <http://www.corporateregister.com>
- <http://www.environmentalleader.com>
- <http://www.greenbiz.com>
- <http://www.grist.org>
- <http://www.sustainablebrands.com>
- <http://www.responsible-investor.com>
- <http://www.treehugger.com/>

Week 1 | **Introduction to corporate sustainability**

Before learning detailed applications of corporate sustainability—which this week is Improving energy efficiency—it is important to introduce you to the general background of corporate sustainability. The corporate world has come a long way since Friedman’s (1970) thesis that firms need only concern themselves with profit. Over the past 50 years, corporate environmentalism has emerged both as a result of increased government pressure and advent of business sustainability as a profitable strategy (Whelan and Fink, 2016). For many, but not all firms, fighting climate change came to be understood not as an impediment to growth, but a complement (Kormann, 2019), with even the world’s largest money manager (BlackRock) calling on CEOs to go green (Fink, 2022). The below readings explain the overall context that rests at the foundation of the modern corporate sustainability practices that you will learn in this course.

Readings:

- Friedman, Milton, 1970. “[The Social Responsibility of Business Is to Increase Its Profits](#),” *The New York Times Magazine*, September 13, 1970.
- Kormann, Carolyn, 2019. “[The false choice between economic growth and combatting climate change](#)”, *The New Yorker*.
- “[The Power of Capitalism](#).” BlackRock Chairman & CEO Larry Fink’s 2022 Letter to CEOs.
- Whelan, Tensie and Carly Fink, 2016. [The Comprehensive Business Case for Sustainability](#), *Harvard Business Review*.

Weeks 2 – 3 | **Improving energy efficiency**

What systems and strategies are used by organizations to achieve gains in energy efficiency, or the reduction of energy use, cost and environmental impact? How do managers achieve these gains? In these two weeks, students are given access to UC Irvine’s live building energy analytics systems and learn how the system is used to spot and remedy energy inefficiencies in buildings. Lessons learned are to be applied to the design of a sustainable hotel room.

Readings:

- Kathryn Cleary and Karen Palmer, 2020. "Energy Efficiency 101," *Resources for the Future*, https://media.rff.org/documents/Energy_Efficiency_101.pdf
- Pine, Tom, 2018. "Reines Hall - MBCx Final Report - v2," Altura Associates, Inc.

Videos:

- [How energy efficiency actually works](#)
- [Better Climate Challenge Road Show: Whirlpool](#)

EXERCISE: In the video "How energy efficiency actually works" Professor Leffel accessed UCI's Skyspark system, the system used to track building energy analytics. UCI Facilities have granted Professor Leffel special permission to allow students to access the same data, so you can experience what building energy tracking and efficiency improvements look like. Follow these instructions:

1. First, read about the "Energy Conservation Measures (ECMs)" in the "Reines Hall - MBCx Final Report" reading. On page 6, it notes "2.2.9 ECM-9: Zone Motion Occ Sensors: Zone motion occupancy sensors are too sensitive, which causes zones to become occupied sporadically during unoccupied periods. This induces heating and cooling loads during times when zones are not occupied. The sensitivity and timeout periods should be changed to eliminate this issue." Let's zoom in to the actual energy data during that time to see how they identified and managed this problem.
2. **Go to:** <https://uci.alturaanalytics.com/> ([Links to an external site.](#))
3. **Enter the below username and password:**
username: ██████████
password: ██████████
4. In SkySpark, choose "Historian". Select Jan-2017 (select the "month" to highlight the whole month), then hit:
5. "Select" > Site > Reines Hall > Floor 03 – Physics > 3111A, 3111B OFFICES > SAV-P320 > htg load (ensure you actually click "SAV-P320" to bring out the drop-down menu, as *that's* where the proper "htg load" button is found)
6. "Select" > Site > Reines Hall > Floor 03 – Physics > 3111A, 3111B OFFICES > SAV-P320 > occ eff status
7. Do you see the same energy efficiency picture as in the video? Notice how less energy is being used because the room occupancy sensors (bottom) were originally too sensitive and were false triggering, which was causing the local controls to cycle from heating to cooling, inducing a significant amount of unnecessary heating and cooling load (top). Engineers then tuned those occupancy sensors, causing less false triggering and thus less energy use. This can be seen on Sat 7th, where bottom stops triggering and top shows less energy use.
8. Let's look at another example, this time from the other building which we have access to, ALP (Anteater Learning Pavilion). To view this, look it up on SkySpark as follows:
9. Click "Historian"
10. Choose the time period as Month of Jan 2020
11. Site > ALP > Mechanical Equipment > AHU-4 > ALP AHU-4 supply fan vfd motor speed cmd
 - a. Notice what happens after Jan 24th
12. Site > ALP > Metering > Whole Site Electrical Meter > total elect power (calculated)
13. Site > ALP > Metering > HTW BTU Meter > hhw htg load
14. Compare the pre-Jan 24 heating loads to post. What do you think happened here? Describe your thoughts in our Discussion task for this week.

Discussion: In no more than 200 words, describe what you think may have happened in ALP, having observed the Skyspark data. Is there an energy efficiency story here?

Assignment: Designing a sustainable hotel room: Your objective for this assignment is to design a hotel room by incorporating into the design (a) sustainability best practices learned from the materials from this week and (b) new sustainable practices you find based on independent research on hotels. In a 1-page brief, describe your hotel room design that incorporates at least three of the areas described in the materials for this week (Green Restaurant Practices, Digital Platforms, Measuring and Managing Energy Consumption, Optimizing Heating and Cooling Systems, Installing Energy-Efficient Lighting, Implementing Guest Room Sensors, Housekeeping), and no more than three additional innovations inspired from hotels you find from independent research on sustainable hotel practices. Cite your sources.

Weeks 4 – 5 | *Financing corporate sustainability*

How do firms finance sustainability efforts? In these next two modules, students will learn about how businesses finance costly decarbonization measures, from finding energy efficiency rebates and loans to other subsidies and incentives such as grants.

Readings

- U.S. Energy Information Administration (EIA) [Renewable energy explained: Incentives](#) (eia.gov)
- Leffel, B., Lyon, T. P., & Newell, J. P. (2024). Filling the climate governance gap: Do corporate decarbonization initiatives matter as much as state and local government policy? *Energy Research & Social Science*, 109, 103376. <https://doi.org/10.1016/j.erss.2023.103376>
- McKinsey, [“The Inflation Reduction Act: Here’s what’s in it”](#)

Exercise:

- *Federal:* While many grant searches begin with searching through [grants.gov](#), many others begin with searching through the Department of Energy’s (DOE) [various offices](#) for grant opportunities. Navigate to the pages listed on this [DOE page](#) under the heading “FUNDING OPPORTUNITY ANNOUNCEMENTS (FOAS) ACROSS DOE”. What grant opportunities do you find? Note that each office has specific instructions for applying, for instance, EERE has [its own process](#). Suppose you are interested in semiconductor grants: Look across all offices of DOE, but also other relevant agencies such as the [EPA](#), that may offer grants relevant to semiconductors.
 - *Strategy:* Describing how a grant application fits into existing DOE programs or initiatives can be advantageous. Consider how your grant application could, for instance, fit into [DOE’s hydrogen hubs network](#). When applying for federal grants, it can be advantageous to tell your congressional representatives that you are applying, emphasizing how it will help their district-- i.e., job creation, environmental goals, etc. Often Reps will call DOE and tell them “look for *this* application”.
- *State:* Many grants that are not visible via a federal (i.e., DOE) search can be viewed on your state’s public utility commission website. An example for Nevada is seen [here](#). Also visit DOE’s [State and Community Energy Programs Project Map](#), click a state, learn about the states’ programs. Refer also to the [competitively awarded projects](#) page to get an idea of what kinds of projects have been awarded (in other words, what is considered competitive).
 - *Rebates:* Rebates are a popular form of financial incentive not unlike grants, often available at the state-level. Suppose you are in Nevada, you can start by searching for rebates offered by one of the local utilities, in this case [SW Gas](#). Suppose you want to get a rebate for restaurant-related equipment within your business. You could then look up Nevada specific rebates for food, using appropriate radio button selections. This will allow you to find such relevant rebates as this one for [food service](#). Another pathway is searching for eligible rebates via sources owned by one of the local utilities. For example,

[CA EnergyWise](#) is owned by one of our local utilities, SouthWestGas, and offers a host of rebates.

- Alternatively, suppose you want to get a rebate for an ENERGY STAR Certified central air conditioning system. For this, you might navigate to the [ENERGY STAR rebate finder](#), and under “Select Product Category”, and under Heating and Cooling, choose central air conditioning. This allows you to locate rebates available by ZIP code.

Discussion: In no more than 400 words, take on the role of a hypothetical company in an industry of your choosing, in which you are a sustainability officer tasked with finding a way to reduce the costs of an energy efficiency goal of your choosing, for which you seek out external financing of the sorts covered in our exercise. Explain in a few sentences what your company is and what the energy efficiency goal is. Then find a real financial incentive (and/or grant) from the above exercise and explain how you will use it to accomplish that goal.

Assignment: Consider [the case of Hotel Verdant](#) mentioned in the linked news piece by *Inside Climate News*. Access to financial incentives (or climate finance) was key for this Hotel to afford its energy efficiency upgrades. Have students break into groups, choose a major hotel in any given state (it could be Wisconsin and the Verdant itself, or any other hotel in any other state), and use the [DSIRE database](#) to identify incentive programs that they'd hypothetically use to fund an energy efficiency upgrade similar to the one described in the article (or any upgrade that they could make up, like HVAC upgrade, solar installation, electrification, etc.), and have each team do a short proposal on their incentive of choice and how they'd implement the project/pay for it. Note, you may also use sources other than the DSIRE database to find incentives/grants, including but not limited to state government websites.

Steps: (1) select a hotel in any state; (2) look at their sustainability report to extract at least a carbon target, or more specific climate ambitions/goals; (3) propose decarbonization measures “pursuant to” those ambitions (bonus points for linking your incentive to targets/needs listed in the company’s sustainability report); (4) look up an eligible financial incentive to pay for (or defray the cost of) those measures in that state, using the DSIRE database.

Weeks 6 – 7 | *Greening the energy mix*

The how and why of greening the energy mix

This section provides an introduction to electricity generation using renewable versus fossil (non-renewable) sources, and the choices that electricity consumers make to reduce fossil fuel-based energy. The below reading and data exercise provides a general overview of the energy mix: Just like governments, businesses increasingly work toward “cleaning up” their energy mix by working toward consuming energy generated from renewable sources (solar, wind, hydro, and so forth) more so than from fossil fuels (oil, natural gas, coal).

Readings:

- [Decarbonizing U.S. Power \(C2ES\)](#): This reading introduces the challenges of decarbonizing the power sector specifically
- [State of the US Clean Energy Transition: Recent Progress, and What Comes Next](#)
- [MGM RESORTS’ 100-MEGAWATT SOLAR ARRAY: CLIMATE ACTION THROUGH SOLAR FARMING](#) (doe.gov)

Data illustration:

- [Electricity mix](#): In both the section “Share of electricity production by source” and “Share of electricity generation from fossil fuels, renewables and nuclear,” click “Edit countries and regions”,

clear selections then select United States. Notice the proportion of fossil fuel (non-renewables such as oil and natural gas) and renewables (solar, wind, and so forth) in different states. The objective is to increase the proportion of renewables to non-renewables as high as possible. Often, when a state has a greener energy mix, there are more renewable energy options from local utilities available to businesses. One solution to a lack of renewable energy generation options used by individual businesses and governments (as energy customers) and energy utilities (as energy producers), is to use off-site options. Ambitious and well-resourced firms often purchase their own means of producing renewable energy, as is the case for MGM (covered in the readings), and [IKEA's purchase of a 165-megawatt wind farm](#) in Cameron County, Texas to replace its conventional electricity which used largely non-renewable sources. However, firms often will obtain off-site renewable energy from sources owned and operated by other entities such as power companies. Such is the case with power purchase agreements.

Power Purchase Agreements (PPAs): PPAs are one off-site option for obtaining energy generated by renewable sources. PPAs represent a contractual agreement between an electricity generator (the seller) and an electricity consumer (the buyer). The agreement outlines the terms for the sale of electricity, including price, quantity, and duration. The primary purpose of a PPA is to provide a predictable revenue stream for the generator and a stable supply of electricity for the buyer, often at a fixed price.

Case studies of PPAs: (1) Washington DC [entered into a solar PPA](#) by working with third party developers Sol Systems and WGL Energy to generate local rooftop solar energy, allowing for many local buildings to use solar power. Often in urban settings, however, such on-site renewable options are limited, so PPAs are often off-site and represent a viable solution for greening the energy mix; (2) **Google** [signed PPAs](#) for renewable energy projects in the U.S., Europe, and South America, including 18 new energy deals deriving 1,600 megawatts from wind and solar projects. This in part replaced traditional grid electricity generated from non-renewable sources; (3) **Microsoft** replaced their conventional grid electricity using [several PPAs for wind energy](#), including a 20-year PPA for the Keechi Wind Farm project in Texas, which provides 110 megawatts of wind energy; (4) **Apple** replaced some of their conventional grid electricity [with solar PPAs](#). For example, in 2015, Apple entered into a \$848 million PPA with First Solar to power its California operations with 130 megawatts from the California Flats Solar Project.

Renewable Energy Certificates (RECs): A REC represents evidence that one megawatt-hour (MWh) of electricity was generated from a renewable energy source, such as wind, solar, hydro, or biomass. These certificates are used to verify and track the production and consumption of renewable energy.

Setting green energy targets

This section introduces students to how to set green energy targets using the [SBTi Target Tool](#) from the Science Based Targets initiative (SBTi), which provides a tool that helps companies set science-based emissions reduction targets. Specifically, students learn how to set emissions reduction targets for the power sector itself, which requires the generation of more energy via renewable sources. Students are also given the opportunity to chart a pathway to reaching those targets using lessons learned in this module.

Science-based Targets Exercise (POWER SECTOR)

In this exercise you assume the point of view of a hypothetical power company called State Energy Company, and you will use the SBTi tool to set carbon targets based on inputs which will be provided to you. You will then propose ways to meet those targets.

Instructions:

- (1) Access the SBTi Tool:** Go to the official SBTi website: [Science Based Targets](#). Navigate to the "Resource Library" section and find the "Corporate Near-Term Tool" and click the link "The science-based target setting tool". Download the latest version of the SBTi target setting tool (typically provided as an Excel spreadsheet). Open the Excel spreadsheet.
- (2) Inputting Data:** Sectoral Decarbonization Approach: This approach involves incorporating both the emissions and the production activity of the company contributing to emissions (in this case, for the Power sector). *Note that the Sectoral (SDA) method is based on an emissions intensity approach, calculating an emissions intensity target in the chosen target year, considering several factors (described in [Foundations of Science-based Target-setting](#) and the [original paper on the SDA method](#)). The equivalent absolute emissions are then calculated using the calculated intensity and the projected activity output. Depending on the inputs, this can result in SDA emissions reduction targets that are lower (or higher) than that of the Absolute Contraction approach using the same inputs (i.e., absent the activity output figure which is not in the Absolute Contraction Approach but is in the sectoral approach). The outputs for SDA will include calculation of how much GHG the company will need to reduce while also producing the amount of specified output/product in the target year.*
- (3) Under Scope 1&2 Tool**
- o Enter company name: State Energy Company
 - o Target setting method: Sectoral Decarbonization Approach
 - o SDA sector: Power
 - o Base Year: 2020
 - o Base Year | Activity Output: 50,000
 - o Base Year | Generation-related emissions: 25,000,000
 - o Target Year: 2030
 - o Target Year | Type of activity projection: Target year output
 - o Target Year | Activity Output: 60,000 WHw (i.e., how many megawatt hours the company wants to sell by that target year; the tool will calculate how much GHGs will need to be reduced by the target year to meet the 1.5C scenario while still producing the desired amount of product in the target year).

Note that "Target Year | *Activity Output*" is unique to the SDA. The target year activity output can be either higher or lower than the base year activity output-- it should be an accurate projection of what a company expects to produce in the target year. For more details on how the SDA calculations are done, you can review this paper on the [Foundations of Science-based Target-setting](#) and the [original paper on the SDA method](#). The projections produced from the tool mean how much GHG the company will have to reduce emissions if it still wants to meet 1.5C while also producing the specified target amount of output. For SDA, you focus on projecting the company's future production and emissions.

Assignment: Students are to write a one-page brief based on the power sector exercise with the SBTi tool for State Energy Company (using the Sectoral Decarbonization Approach). Enter the specified inputs provided to you and then collect the outputs. Discuss at least one strategy that this power company may use to reduce its emissions. Being that this is a power company, the principal source of its emissions is from the power it generates. Propose at least one strategy by which State Energy Company could reduce its emissions and be within the 1.5C scenario, based on what you have learned this week. Specifically, are Power Purchase Agreements and/or RECs viable? If so, identify real PPAs/RECs that are currently available. What about transitioning power generating facilities from fossil-to-renewable fuel? If so, describe the steps you would follow to accomplish that. Once you have identified at least one strategy, be specific about where and how

State Energy Company will acquire the necessary resources to achieve its strategy. Be sure to insert visuals and numeric figures produced from the SBTi tool on the GHG reduction requirements needed for State Energy Company to be within the 1.5C scenario.

Weeks 8 – 10 | **Stakeholder engagement & materiality**

In the next two weeks, students will learn about stakeholders in company operations, from internal stakeholders such as shareholders, employees and customers to external stakeholders like government, the environment and broader society. Students will learn about how these stakeholders are assessed and engaged as part of sustainability strategy.

Note: Week 9 is Spring Break—no class

Readings:

- Delannon, N., Raufflet, E., & Baba, S. (2016). Corporate community engagement strategies and organizational arrangements: A multiple case study in Canada. *Journal of Cleaner Production*, 129, 714–723. <https://doi.org/10.1016/j.jclepro.2016.03.047>
- Case: Recycling at Keurig Green Mountain: A Brewing Problem. WDI Publishing. Case 1-430-482. *Note: This is an example of material obstacles companies face as they pursue sustainability goals, and to think which internal and external stakeholders should be engaged and how to meet the stated recycling goals.*
- Ane Casajús-Burutaran, Tina C. Ambos, and Gilbert Probst, 2023, "[Do You Have a Corporate Philanthropy Strategy?](#)" *MIT Sloan Management Review*
- Lyon, Thomas P., et al. "CSR Needs CPR: Corporate Sustainability and Politics." *California Management Review* (2018).

Stakeholder engagement

- **Community Engagement:** MGM's partnership with the Grant A Gift Autism Foundation, which focuses on providing job placement for young adults on the autism spectrum, illustrates their commitment to inclusive employment opportunities. This initiative aligns with MGM's ESG strategy by contributing to the social pillar, specifically by enhancing diversity, equity, and inclusion in the workplace and supporting vulnerable community members.
- **Supporting the Military Community:** MGM's annual event honoring wounded warriors and their families showcases their commitment to the military community. This initiative aligns with their ESG goals by fostering community engagement and support for veterans, demonstrating a commitment to social well-being and appreciation for the sacrifices made by military families.
- Source: [MGM 2022 Social Impact and Sustainability Report](#)
 - **Community Investment:** Caesars' investment of \$81 million in communities across its operational footprint, including through the Caesars Foundation and team member volunteering, emphasizes their commitment to local development and social welfare. This investment aligns with their ESG strategy by addressing social issues, enhancing community well-being, and fostering a sense of responsibility and connection between the company and its communities.
 - **Diversity, Equity, and Inclusion Initiatives:** By aiming for gender and racial parity in leadership roles by 2025 and achieving a significant increase in the representation of people of color in senior leadership roles, Caesars is advancing its DEI goals. These initiatives align with the company's ESG strategy by promoting an inclusive and equitable work environment, which fosters innovation, employee satisfaction, and community trust.

- **Evolving local ESG trends in stakeholder engagement: [City-Business Climate Alliance](#):** This is a joint effort between major climate organizations CDP, C40 Cities and World Business Council for Sustainable Development that advocates for creating public-private partnerships between city hall and local businesses when they both are implementing climate action efforts. Engaging city hall on sustainability represents an important method of stakeholder engagement. [CBCA case studies](#) show co-financing, alignment of climate targets, and other means of engagement. The [CBCA guidebook](#) shows a 4-phase model for developing alliances, an initial attempt to create a concept/process: Phase 1: Assess your climate goals and identify partnership opportunities; Phase 2: Engage potential partners; Phase 3: Form your alliance; Phase 4: Create and activate your alliance's plan. Businesses or city governments may initiate this staged process, though city government is often the first-mover.

Materiality assessment

A Materiality Assessment involves a firm identifying the most relevant areas in which its operations impact the environment and broader society, including identification of the full range of people impacted by these operations, or "stakeholders": These can include immediate stakeholders such as customers and shareholders, governments, and people impacted by environmental decisions of the firm. It can also include broader entities such as the media, the rest of the industry, and global communities. How the firm's operations impact stakeholders' decisions is in particular important to a materiality assessment. This week, we use Caesars Entertainment's internal materiality assessment documents to observe the planning process and inputs needed to create a materiality assessment, and the publicly available end product.

- **[SASB's Materiality Finder](#):** (1) Under the "Overview" tab: First read "The research scope of SASB Standards encompasses a range of sustainability-related risks and opportunities" (near bottom of page), which shows the different categories that are materially relevant to the sustainability risks and opportunities of a company, then read "SASB Standards are industry based" (near top of page) how six industries have different sustainability risks and opportunities (i.e., GHGs are a risk to some industries, particularly dirty ones (mining), but not necessarily others like Advertising).

(2) Under the "Find Industry Topics" tab, search for any company, then upon viewing the result, click "See Disclosure Topics". This will bring you to a new page. For each "General Issue Category" (left column) read the corresponding "Disclosure Topics". Do the particular areas listed as materially relevant make sense for the industry? What does this tell you about the nature of the relationship between that industry and the environment?
- **Caesar's Materiality Assessment:**
 - The inputs:
 - "Caesars Materiality Assessment Steps": This covers the individual steps that need to be taken to perform the different proportions of the materiality assessment, including the definition and inputs required for, as well as examples of, Stakeholder Mapping, Stakeholder Engagement and Policy/Position Statements, Materiality Assessment, and ESG Risk Analysis
 - "Caesars Materiality Assessment Workflow" is the document outlining the steps taken and the chronological workflow (with deadlines) needed to produce a Materiality assessment, broken down by Stakeholder Mapping, Materiality Assessment, Stakeholder Engagement and Policy/Position Statements and ESG Risk Analysis.
 - The output (end product): Caesars published: [This Materiality assessment](#) and this [Position on Stakeholder Engagement](#)
 - Read through the above documents:

- (1) compare how each component of the “Steps” presentation was translated to the finished product, i.e., the published [Materiality Assessment](#) and [Position on Stakeholder Engagement](#). For instance, are the examples of stakeholder engagement in “Steps” (from other companies) similar to those reported by Caesars in the finished reports?
- Compare the materiality assessment in the final [Materiality Assessment](#) report to the examples of the materiality assessments from other companies in the same industry (i.e., from Hilton) in the “Steps” presentation. What differences are there between Caesars and the example companies? Also, under the PEOPLE, PLANET and PLAY (pages 9-11), read the “Stakeholder Expectations” for each Topic, and think about what these expectations mean and how they are important for the company.
- In the [Position on Stakeholder Engagement](#) document, read Appendix 1. The “How we impact” and “How they influence” columns define the interaction which Caesars has with each type of stakeholder group. What is the nature of each interaction and why do they matter?

Discussion: In at least 400 words, based on lessons learned from this module on external engagement and partnership strategies, propose a strategy for a company of your choosing (not Caesars) to engage in new community engagement activities, specifically the sort that the City-Business Climate Alliance is championing, that are materially relevant to stakeholders.

Assignment:

Compare Caesars’ materiality assessment to another company in a different industry (i.e., non-hospitality). Describe similarities and differences in the kind of stakeholders, interactions with and expectations of stakeholders, and material issues each have. Are there elements that one company missed that the other could have included? What does this tell you about overarching issues in business’ impacts on the environment and society (materiality)?

Weeks 11 – 12 / **Tracking and disclosing climate metrics**

The next two weeks, students are introduced to the process and substance of voluntary disclosure of corporate climate metrics, including to major platforms such as CDP. Students will observe and critically assess real corporate disclosures, and also will have an opportunity to earn extra credit with an environmental footprint calculation exercise.

Readings:

- L. Luo, Y.-C. Lan, and Q. Tang, 2012, “Corporate Incentives to Disclose Carbon Information: Evidence from the CDP Global 500 Report,” *Journal of International Financial Management & Accounting*, vol. 23, no. 2, pp. 93–120
- C. Flammer, M. W. Toffel, and K. Viswanathan, “Shareholder activism and firms’ voluntary disclosure of climate change risks,” *Strategic Management Journal*, vol. 42, no. 10, pp. 1850–1879, Oct. 2021, doi: 10.1002/smj.3313.
- HBS case, 2022, “Sustainability Reporting at Dollar Tree”.
- [KPMG Survey of Sustainability Reporting 2022](#): Read “Executive Summary”, pages 1-10, only.
- Sustainability reporting through the CDP Global System:
 - CDP: Formerly Carbon Disclosure Project, CDP is the world’s largest repository for voluntarily-disclosed corporate climate metrics. It is generally considered the gold-standard of disclosure, and

while there are other prominent reporting platforms such as [SASB](#) and [GRI](#), we will focus on CDP this week.

- To understand the range of climate information reported by companies to CDP, read “CDP Questionnaire, Questions Only (2023)”, which lists the individual questions by category that companies are to answer in their climate disclosures to CDP (For reference, I also include the full 2023 questionnaire, which includes the guidelines for possible answers, “CDP 2023 Questionnaire (Full)”).
- To see an example of a company’s responses to these questions, read “MGM CDP 2023 Responses”.

Discussion: Our reading, “HBS case - Sustainability Reporting at Dollar Tree”, details how a company goes about responding to shareholder demands for sustainability, in which sustainability reporting plays a prominent role. Answer the following questions in at least 400 words: (1) What is the role of sustainability reporting in Dollar Tree’s actions, both before and after the shareholder resolution; (2) What is the relationship to environmental goals, and does reporting go hand-in-hand with environmental efforts? (3) How does this compare to insights gained from our other readings (Flammer et al., 2021 and Luo et al., 2012) on the motivations of voluntary disclosure of sustainability metrics? What does this say about the state of practice in corporate sustainability?

Assignment: Write a maximum 2-page brief including your response to both of the below items:

- (1) Read “MGM CDP 2023 Responses”. While this provides a detailed picture of the company’s climate metrics for one year, it also communicates information on progress made toward sustainability goals over time, and the strategy guiding these goals. Progress is often communicated in the context of changes from the previous year, or in terms of longer-range progress on the sustainability goals of the business. Carefully read the items in the MGM disclosure, and find instances of progress made in any form, the goals on which they represent progress, and the relationship both have to the business’ sustainability strategy. Choose two major categories of MGM’s CDP questionnaire responses (i.e., “C1 Governance” + “C4 Targets and performance”, or any other pair of these categories) and answer: (1) on what specific areas did the company make progress and how? (2) what organizational sustainability goals did these actions mark progress toward? (3) How does this relate to the broader overarching sustainability strategy of MGM?
- (2) Pick a company other than MGM Resorts, and compare three years of reports. Answer these three questions: Is the company’s goals and overall narrative about sustainability consistent? Are there changes over time in terms of format and content? Does the company tout success all throughout, or does it address challenges and failures? If so, how?

Week 13 | Event carbon footprint measurement

In order to report the environmental metrics of your company to platforms like CDP, your company will first need to calculate these metrics. Aggregate and facility-level GHG emissions (Scope 1, or direct on-site GHGs; Scope 2, or GHGs from generating the electricity that you purchased; and Scope 3, or GHGs from the production and/or shipping of products you purchased) are among the most common and important metrics. Accurately calculating the collective GHGs of a company requires accounting not just for daily operations, but for special circumstances in which emissions-related activity is particularly high. For many companies, this can take the form of a large event it has organized. Below is an exercise calculating an event environmental footprint:

Calculating the environmental impact or footprint of a given event is important for organizations that hold large convenings that consume large amounts of resources. A general approach for doing this may include the following:

1. Define the Scope

- Scope 1: Direct emissions from sources owned or controlled by the event organizers (e.g., fuel consumption in company-owned vehicles).
- Scope 2: Indirect emissions from the generation of purchased electricity, steam, heating, and cooling consumed by the event.
- Scope 3: Other indirect emissions (e.g., travel of attendees, waste generated, production and transport of materials).

2. Data Collection

- Energy Consumption: Gather data on electricity, heating, and cooling used during the event.
- Transportation: Collect information on the travel modes and distances traveled by attendees, staff, and suppliers.
- Waste Management: Measure the amount and types of waste generated (e.g., food waste, recyclables, general waste).
- Water Usage: Record the amount of water consumed during the event.
- Materials: Track the materials used, including paper, plastics, and other supplies.

3. Emission Factors

- Use emission factors (i.e., from the [EPA GHG Equivalencies Calculator](#)) to convert certain amounts of activity associated with your event (i.e., how much CO₂ is associated with vehicle kilometers traveled) into CO₂ equivalents (CO₂e).
- For example, on the [EPA GHG Equivalencies Calculator](#), follow these instructions:
 - (1) Under Step 1, select “Emissions data”, and under “Enter data”, input “1” into “Carbon Dioxide or CO₂ equivalent”, select “Kilograms” on the right, then scroll down and click “Convert data”. This will produce (under “Step 2”) results showing what 1 kilogram of CO₂e is equivalent to across a range of variables, including miles driven by a gasoline-powered vehicle.
 - (2) Under Step 1, select “Energy data”, and under “Enter data”, select the Unit “Kilowatt-hours used”, and under “Amount” enter “1”. Then click “Convert data”. Under Step 2, use the drop down menu to select “Kilograms”, which will then show the kilograms of CO₂e that 1 kWh is associated with.

Assignment: A conference held by your company has 1,000 attendees, in which the average distance traveled by each attendee is 300 miles by car, and the estimated energy consumption of the event is 10,000 kWh.

Calculate the total metric tonnes of CO₂ produced by the event.