



# Powering football's biggest game with 100% renewable, carbon-free energy.

2.9.24

How the Las Vegas Raiders and Allegiant Stadium turned an energy grid in the desert green and made history.

# Day 1 of a New Green Legacy in Sports

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A groundbreaking achievement driven by the host team's own sustainability ambitions.



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It's well known that football's biggest game is both a high-stakes contest between the league's two best teams and the country's preeminent sports and commercial mega event. But this year, at Allegiant Stadium, it's also a history-making moment for sustainability, one that is driven by the host team and stadium, without any additional environmental offset programs, committee directives or sponsored initiatives. It is, what we hope, a new model for others to follow.

# Allegiant Stadium vs. Other Big Game Sites

## Previous Sites

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A city's host committee would work with local utility companies to purchase carbon offsets or renewable energy credits. They may also hold recycling programs, partner with Waste Management facilities to divert waste out of landfills or plant trees to help absorb carbon emission.

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Football's biggest game is also one of sports' largest spectacles – a massive event with a considerable carbon footprint. Depending on the location and efficiency of the host stadium, the electricity needed to power a 4-hour game would produce nearly 11-20 MTCO<sub>2e</sub> emissions.

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The global sports sector is estimated to be responsible for about 50-60 billion tonnes of CO<sub>2e</sub> per year, or about 11-13 billion cars worth of emissions. This game in particular has a reputation for generating a significant amount of waste and using a tremendous amount of resources, with an inadequate sustainability story.

## February 11 at Allegiant Stadium

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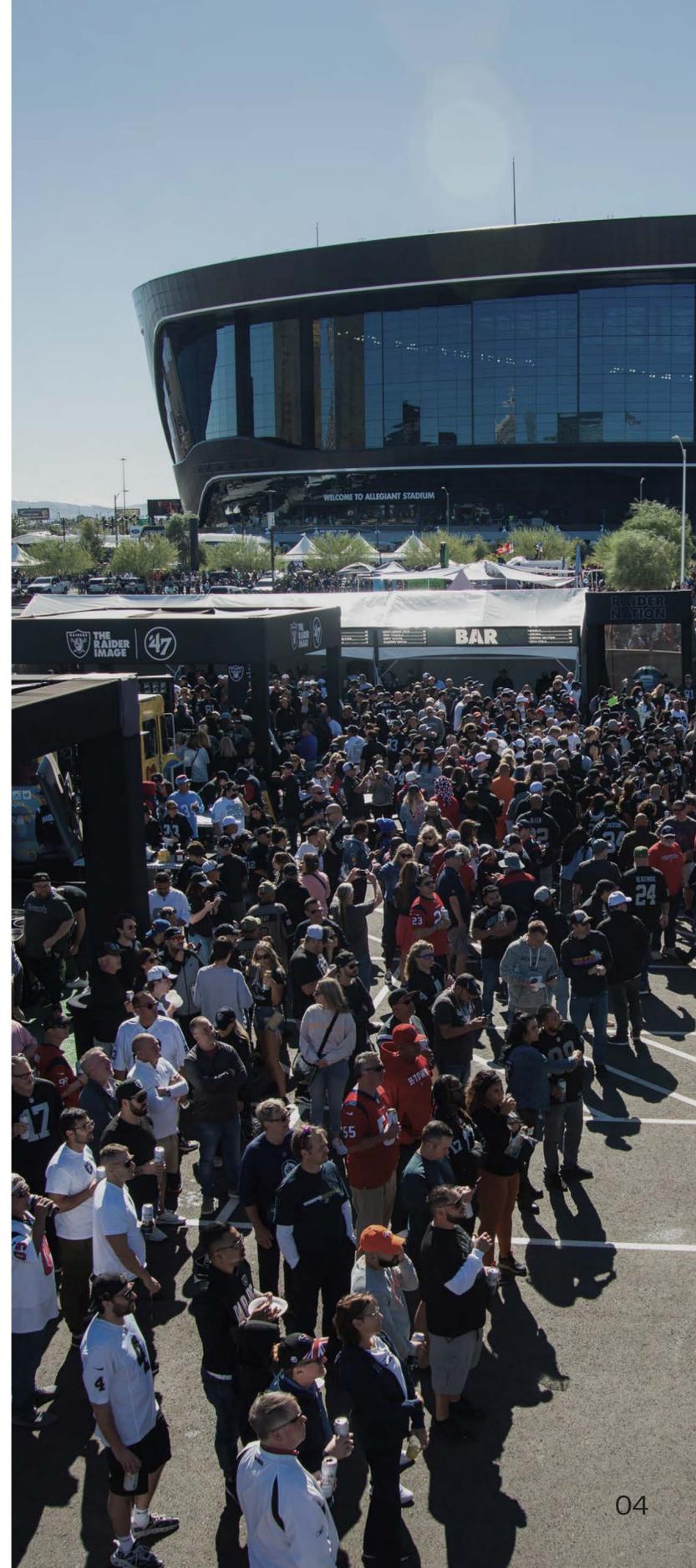
The Raiders have embedded sustainability in their purpose, corporate culture and decision-making. As a result, **no additional environmental offset program encouraged by a host committee, corporate sponsor or the league is required.** This year's big game becomes the beneficiary of the innovations, energy partnership and programming spearheaded by the host team and stadium.

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Allegiant Stadium is estimated to use 28 MWh of electricity to power the roughly 4-hour game – **equal to the power it would take for 46,052 households** across the country to watch the game. Because the stadium is powered by 100% renewable energy, the country's premier sporting event will have **0 electricity-associated emissions.**

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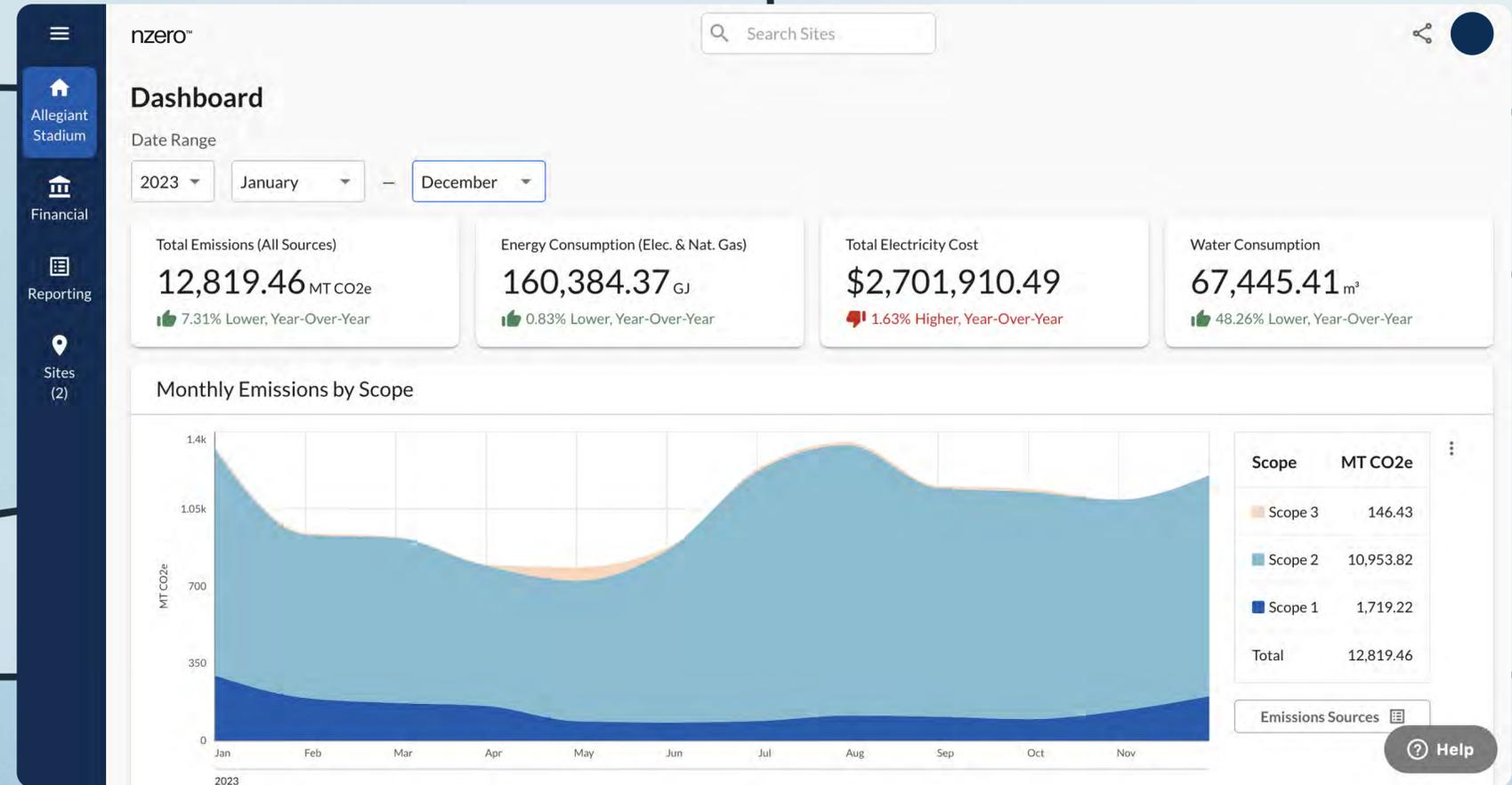
The Raiders have **set a new standard for sustainability in sports**, and on its biggest stage will show what pioneering innovations and realizing commitments means for fans, players, community and planet.



# NZero Platform

The Raiders and Allegiant Stadium's energy and emissions data have been quantified and independently validated by NZero, a real-time data and decarbonization platform committed to accuracy against the most stringent international protocols. Trusted by the Department of Energy and selected by the GSA to participate in their Green Proving Ground program, NZero helps Allegiant Stadium monitor its decarbonization plans on game-days and off days, by the hour, and across scopes, and guides stadium operators and sustainability team members on its roadmap to net zero.

Schedule a demo at [nzero.com](https://nzero.com)





“It's important to have visibility into our carbon emissions, understand where they are coming from and how we can decrease them moving forward. This will be impactful not only for us, but for others in the world of sports looking for examples of sustainable business in our industry. We're excited to work with NZero for insight and guidance on this important topic.”



**Christopher Sotiropulos**  
Vice President of Stadium Operations

Las Vegas Raiders



# Carbon-free energy through a landmark energy supply agreement.

At the center of this achievement is the 25-year energy supply agreement between the Raiders and NV Energy, which, starting last October, ensures a commitment to power Allegiant Stadium, Raiders' administrative facilities and the Henderson practice facility entirely with 100% carbon-free energy (CFE), including energy from new, in-state solar power plants along with grid-tied battery energy storage systems.

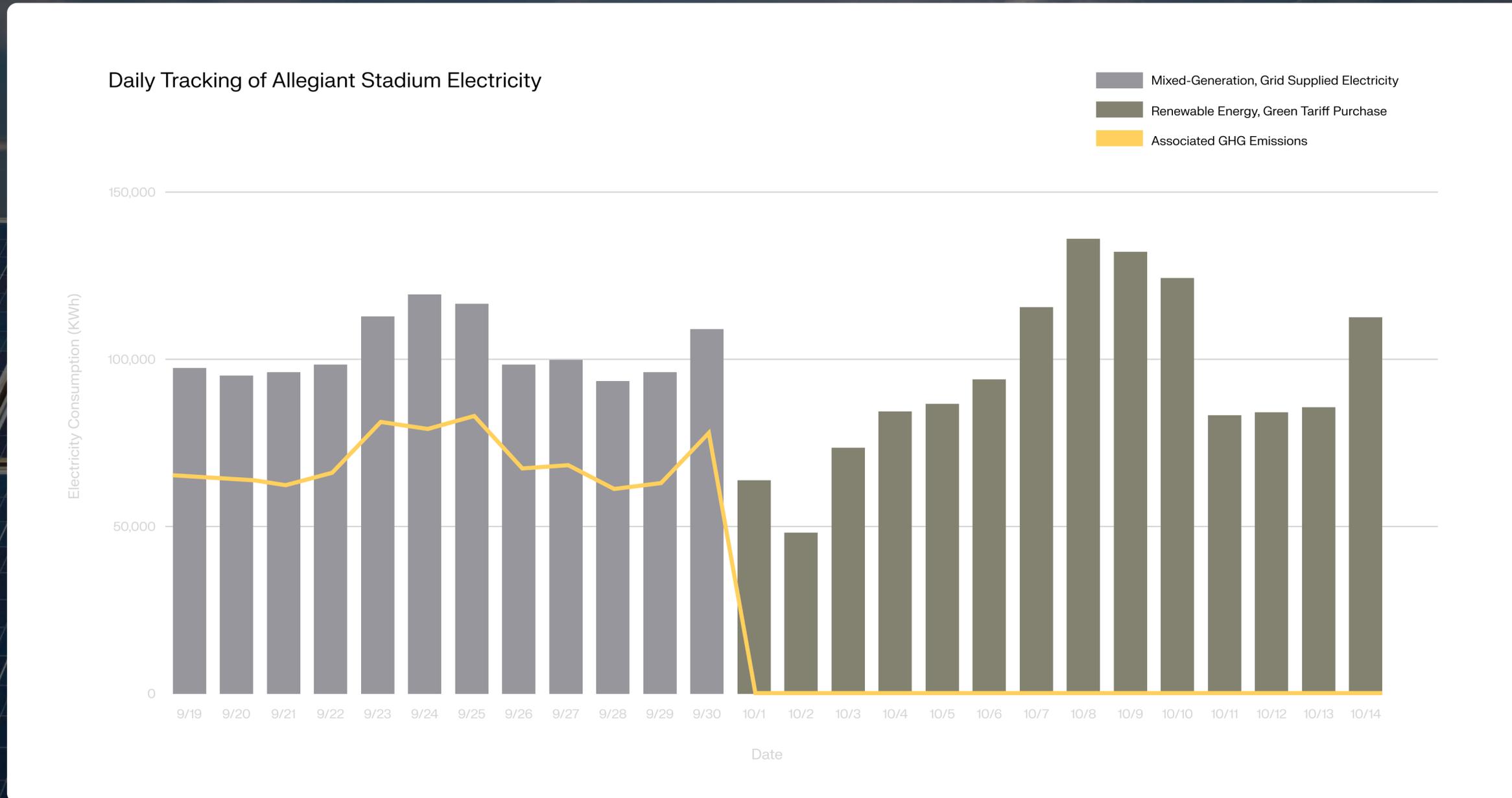
Through this agreement, the Raiders are actively engaging in initiatives that advance the integration of clean and renewable energy into Nevada's electric grid.

# 100%

Carbon Free Energy (CFE)



Since October 2023, Allegiant Stadium's conversion to 100% renewable energy has produced 0 electricity-associated emissions, as tracked by NZero.





Since 2022, waste diversion has avoided emitting 955 MTCO<sub>2</sub>e, equal to taking 75,777 cars off the road for Sunday's big game.

Allegiant Stadium repurposes, reuses, or donates 20 material streams, including:



Paper



Compost



Scrap metal



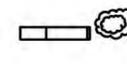
Rubber Turf pellets



Plastic



Cardboard



Cigarettes



Sod for livestock bedding

This year's big game will also benefit from the Raiders and Allegiant Stadium's waste diversion program, recognized by the Green Sports Alliance with their Play to Zero Award. To date, Allegiant Stadium's proactive sustainable waste management practices diverted over 1,400 tons of waste from the landfill and avoided emitting nearly 595 MTCO<sub>2</sub>e in 2022. In 2023, through October, the organization diverted over 950 tons of waste from the landfill, avoiding over 360 MTCO<sub>2</sub>e GHG emissions.



# On top of being one of just seven NFL stadiums to attain LEED certification.

In July of 2023, Allegiant Stadium became LEED GOLD certified, representing a significant achievement in green building design and environmental sustainability.



# 2022 vs. 2023

A comparison between 2022 and 2023 emissions for the Raiders organization reveals a significant emissions reduction, mainly attributed to Scope 2, Electricity emissions. In 2022, the organization emitted 16,827 metric tons of CO2 equivalent (MTCO2e) across all sources, whereas in 2023, emissions decreased to 11,748 MTCO2e.

This marks a notable difference of 5,079 MTCO2e, equaling a 30% annual reduction. The emission reduction facilitated by the NVE contract is equivalent to the emissions of nearly 570 passenger vehicles being driven over the course of 1 year, or 988 homes' electricity use for one year

## 2022 Breakdown

### Allegiant Stadium

|                                   |                  |
|-----------------------------------|------------------|
| Scope 1                           | 1,749.8 MTCO2e   |
| Natural Gas                       | 1,698.2 MTCO2e   |
| Fleet (diesel, gasoline, propane) | 51.6 MTCO2e      |
| Scope 2 (Electricity)             | 11,860.3 MT CO2e |
| Scope 3 (Waste)                   | 220.8 MTCO2e     |

### Raiders HQ + Ancillary Properties

|                       |                |
|-----------------------|----------------|
| Scope 1 (Natural Gas) | 0.33 MTCO2e    |
| Scope 2 (Electricity) | 2,995.6 MTCO2e |
| Scope 3               | Not tracked    |

## 2023 Breakdown

### Allegiant Stadium

|                                   |                 |
|-----------------------------------|-----------------|
| Scope 1                           | 1,719.2 MTCO2e  |
| Natural Gas                       | 1,691.08 MTCO2e |
| Fleet (diesel, gasoline, propane) | 28.1 MTCO2e     |
| Scope 2 (Electricity)             | 7,962.1 MT CO2e |
| Scope 3 (Waste)                   | 146.4 MTCO2e    |

### Raiders HQ + Ancillary Properties

|                       |                                                                     |
|-----------------------|---------------------------------------------------------------------|
| Scope 1 (Natural Gas) | 0.36 MTCO2e                                                         |
| Scope 2 (Electricity) | 3,062.6 MTCO2e(TBD depending on properties covered by NVE contract) |
| Scope 3               | Not Tracked                                                         |

## 2024 Planning

Assuming no change in Scope 1 and Scope 3 emissions during 2024, the Raiders' emissions are projected to decrease to 3,786 MTCO2e, an achievement, again, attributed to Allegiant Stadium being 100% powered by renewable energy. The organization is projected to achieve an overall 7,962 MT CO2e reduction from 2022 Emissions, equalling a remarkable 68% reduction in emissions in only 2 years.

The reduction is equivalent to the annual carbon footprint of nearly 550 US households (avg US household = 14.5 MTCO2e/year)





Allegiant Stadium is not just the greenest arena, it's also the highest-grossing – proving that leadership doesn't require choosing between best-in-class sustainability practices and business goals.

The Raiders are showing the world that even in the desert an energy grid can be green, sustainability practices can thrive and the biggest sports event in the country can be powered carbon-free.





NZero is a real-time data and decarbonization platform for sustainability leaders.

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Learn more and  
schedule a demo  
at [nzero.com](https://nzero.com)

Our hourly tracking, decarbonization planning and simulation forecasting helps businesses, governments and climate consulting practices measure, analyze, report and act on a roadmap to net zero.