THE UNIVERSITY OF NEW MEXICO

GREENHOUSE GAS INVENTORY

FY2025 UPDATE:

Scope 1 & 2 Emissions | Albuquerque Campus | Prepared by UNM Office of Sustainability & Lobo Energy, Inc.

UNM 2030 Emissions Target: 45,085 $MTCO_2e$

75,600	-15%	-25%	-37%
Total Scope 1 & 2 Emissions FY25 $MTCO_2e$	**Annual Decrease in Emissions vs. FY24** ~89,300 $MTCO_2e$ in FY24	**Emissions Reductions vs. FY06 Baseline** from ~100,200 $MTCO_2e$	**Reduction in GHG Intensity vs. Basline** $MTCO_2e/ft^2$

BACKGROUND & METHODOLOGY

UNM's FY2025 GHG Inventory is the second annual report since GHG accounting was relaunched in 2024 at UNM, covering Scope 1 (direct) and Scope 2 (purchased electricity) emissions for the main Albuquerque campus, excluding UNM Hospital buildings. FY2006 (July 1, 2005-June 30, 2006) serves as the baseline year to align most closely with the Paris Agreement and New Mexico's Executive Order 2019-003. This update is meant to be a supplemental document to the UNM Greenhouse Gas inventory conducted for FY24, which provides additional background and detail on methodology.

Data is managed through Lobo Energy Inc. and the ECAP Carbon Hub platform, which ingests utility data from ECAP Utility Management and applies current emissions factors:

- Scope 1 (Natural Gas & Fleet): uses a fixed gas emissions factor plus fleet fuel data
- Scope 2 (Purchased Electricity): uses PNM's annual emissions factor, updated annually

Scope 3 emissions were not considered in this inventory, and UNM is beginning to investigate them as part of the 2025 UNM Sustainability Strategic Plan.

FY25 EMISSIONS RESULTS

Total Scope 1 + 2 emissions fell in FY25 to approximately 75,600 $MTCO_2e$ — a roughly 15% drop from FY24's 89,300 $MTCO_2e$ and the lowest total since tracking began in FY06. However, a portion of this drop is due to issues with one of UNM's co-generation turbines and the full amount of emissions reductions likely will not be sustained.

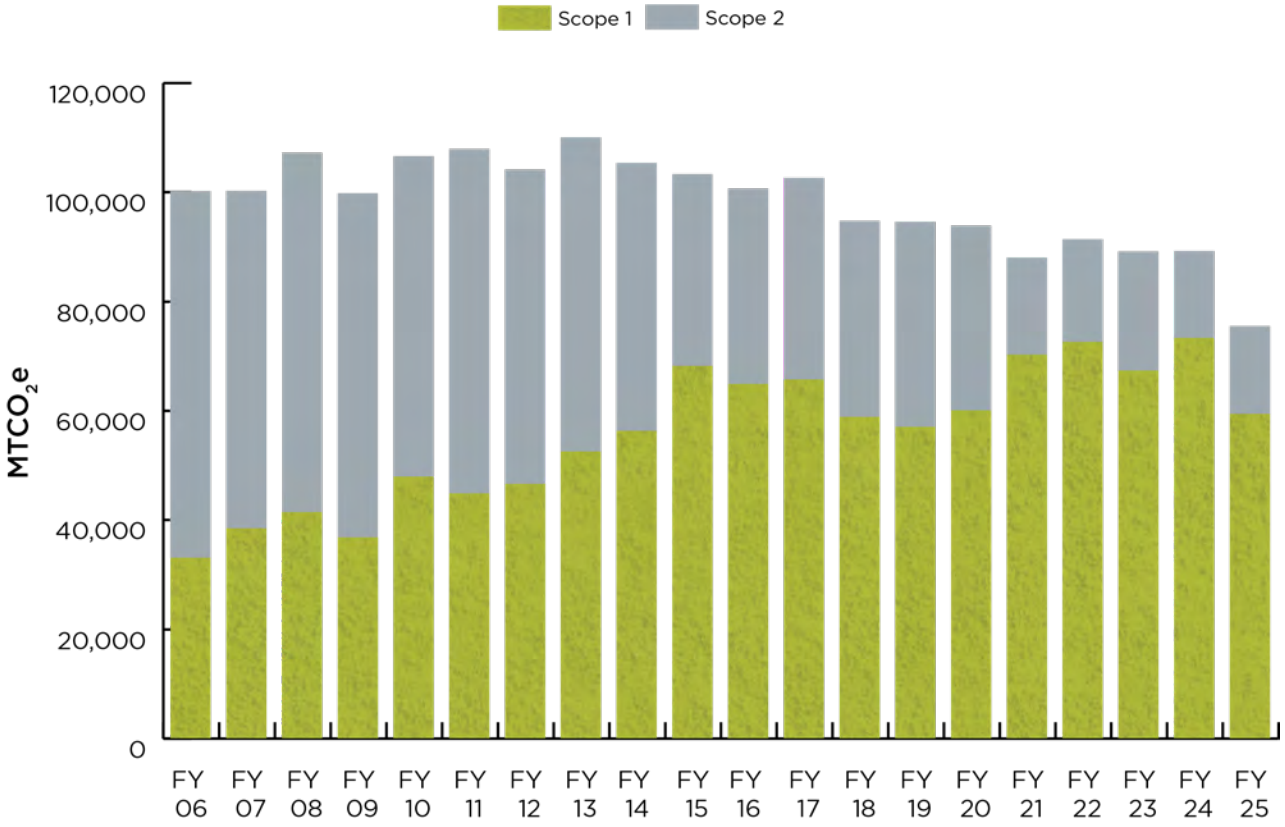

Figure 1. UNM Scope 1 and 2 greenhouse gas emissions FY2006-FY2025

Scope 1 — Direct Emissions (Natural Gas & Fleet)
Scope 1 emissions dropped to approximately 59,400 $MTCO_2e$ in FY25, down from ~73,300 $MTCO_2e$ in FY24. The dominant driver of Scope 1 emissions is the Ford Utilities Center co-generation system, which supplies 50–67% of campus electricity needs. In FY25, one of the co-generation turbines was offline for approximately six months, substantially reducing UNM's onsite natural gas combustion.

Scope 2 — Purchased Electricity Emissions
Scope 2 emissions held near record lows at approximately 16,000 $MTCO_2e$, continuing a decade-long decline driven by PNM's grid transformation. PNM delivered 80% carbon-free electricity in 2025, and the company is on track to meet New Mexico Energy Transition Act targets, which mandate 100% carbon-free generation by 2045. As PNM's emissions factor falls, each kWh UNM purchases carries a smaller carbon burden, even without changes to campus electricity consumption.

EMISSIONS WILL LIKELY RISE IN FY25

The FY25 reduction is expected to be a one-time anomaly, not a structural trend. The UNM Ford Utilities Center co-generation turbine that was offline for 6 months has returned to full operation, so Scope 1 natural gas combustion is expected to rebound toward FY24 levels (~73,300 $MTCO_2e$). Stakeholders should not interpret FY25 as evidence that UNM's emissions trajectory has dramatically improved without additional decarbonization action.

A CASE STUDY IN GRID DECARBONIZATION

The FY25 data offer a compelling thought experiment: what would UNM's carbon footprint look like if the campus drew more of its energy from PNM's increasingly low-carbon grid rather than generating onsite through natural gas co-generation? Also, how much would this shift cost the university financially?

With the turbine offline, UNM was effectively forced to purchase more grid electricity. The result was a significant total emissions reduction, even though Scope 2 usage increased, because PNM's grid is now less carbon intensive than onsite gas combustion. This illustrates a fundamental shift in the emissions calculus:

- In early years, onsite co-gen was often cleaner than coal-heavy grid electricity
- Today, PNM's 80% carbon-free grid (solar, wind, nuclear) has a lower carbon intensity than natural gas combustion
- By 2040, PNM's target of 100% carbon-free generation would make purchased electricity effectively zero-carbon

This suggests that the long-term path to deep decarbonization at UNM likely involves electrifying campus utilities and shifting load to the grid — rather than continuing to generate electricity onsite from fossil fuels. The UNM Grid Modernization project under active scoping by Facility Services and included in the 2025 UNM Sustainability Strategic Plan could achieve an 80% reduction in Scope 1 emissions and represents exactly this kind of strategic shift. However, this shift to electrification could incur an additional cost burden to the university and make electricity more expensive.

PROGRESS TOWARD 2030 CLIMATE GOALS

UNM committed to 45% reduction from FY06 by 2030. At ~75,600 $MTCO_2e$, FY25 is ~25% below baseline and over halfway to its target. The 2025 Sustainability Strategic Plan includes a pathway to electrify campus heating, install battery energy storage, and ultimately develop a geothermal borefield to decarbonize the campus: this is an important pathway forward if the university is going to meet its decarbonization targets.

LOVE RED. LIVE GREEN.
THE UNIVERSITY OF NEW MEXICO