

Comprehensive Exam-Earned Element (Option 1)

a) Thought-leadership Piece

Running on Clean Energy, Every Hour of Every Day

By Sundar Pichai, CEO of Google, March 14, 2026

When electricity first spread across the industrialized world in the early twentieth century, it did not reach everyone equally. It arrived first where capital was concentrated, powering factories and cities while vast communities waited decades for the same access. I grew up in a household where power cuts were simply part of life. You planned around them; you adapted; and you understood, without anyone explaining it to you, that the infrastructure shaping your daily life had not been built with you at the center of it.

That experience has stayed with me, and it is part of why I feel a genuine sense of responsibility about the energy decisions Google makes today. The clean energy transition underway right now carries the same risks as those earlier infrastructure revolutions. The decisions that technology companies make in the next five years will help determine whether it reaches everyone, or whether it once again concentrates where capital is already abundant.

Climate change is no longer a distant or abstract threat. It is increasingly local and personal.

Technology companies that consume significant amounts of energy have a particular obligation to respond, not just with commitments, but also with progress that can be independently measured and honestly reported.

That obligation is at the heart of one of Google's most important long-term goals: to operate on carbon-free energy, 24 hours a day, 7 days a week, across all of our data centers and offices, by

2030. Matching annual energy use with renewable purchases, something we have done every year since 2017, is meaningful. But it is not sufficient. Grids still rely on fossil fuels at certain hours, particularly in the evenings when solar generation drops. Our goal is to match our electricity consumption with clean power generated on the same grid, in the same hour. That is a harder problem. It is also the right one.

The progress we have made gives me real confidence that this is achievable. In 2024, we reduced our data center energy emissions by 12%, even as our electricity consumption grew by 27% to support expanding AI workloads. We signed contracts for more than 8 gigawatts of new clean energy, the largest annual total in our history. And we signed the world's first corporate agreement to purchase power from small modular nuclear reactors, a technology that can provide reliable, always-on carbon-free energy in a way that wind and solar alone cannot.

I also want to be honest about where we fall short, because I think humility on this matters. Our global carbon-free energy percentage reached 66% in 2024, meaningful progress, but still a considerable distance from our goal (Google 2025 Environmental Report). In Asia Pacific, that figure sits at just 12%. Achieving 24/7 carbon-free energy requires smarter grids, better storage, and sustained collaboration with utilities and governments that takes years to build. No single company can do this alone, and I think it is important to say that plainly.

By 2030, every search, every email, every AI query running on Google infrastructure should be powered by clean energy, at the hour it is consumed. That is the standard we have set for ourselves. It will not be easy. But I think it is exactly the kind of goal this moment asks of us.

- b) Strategic Note: This thought-leadership piece introduces Google's 24/7 carbon-free energy commitment as a sustainability initiative anchored in the values the company consistently

upholds: accountability, inclusion, and responsible innovation. By opening with a personal lens, grounding the argument in data, and explicitly acknowledging where gaps remain, this piece positions Sundar and Google as leaders who are as honest about the difficulty of the work as they are ambitious about its outcome. Google has long established itself at the forefront of environmental responsibility, and this piece reinforces that by demonstrating the depth of thinking behind its 2030 goal. It ultimately positions Google not only as a company that responds to demands of the moment, but also as the one that helps define what responsible industry leadership looks like for others to follow.

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