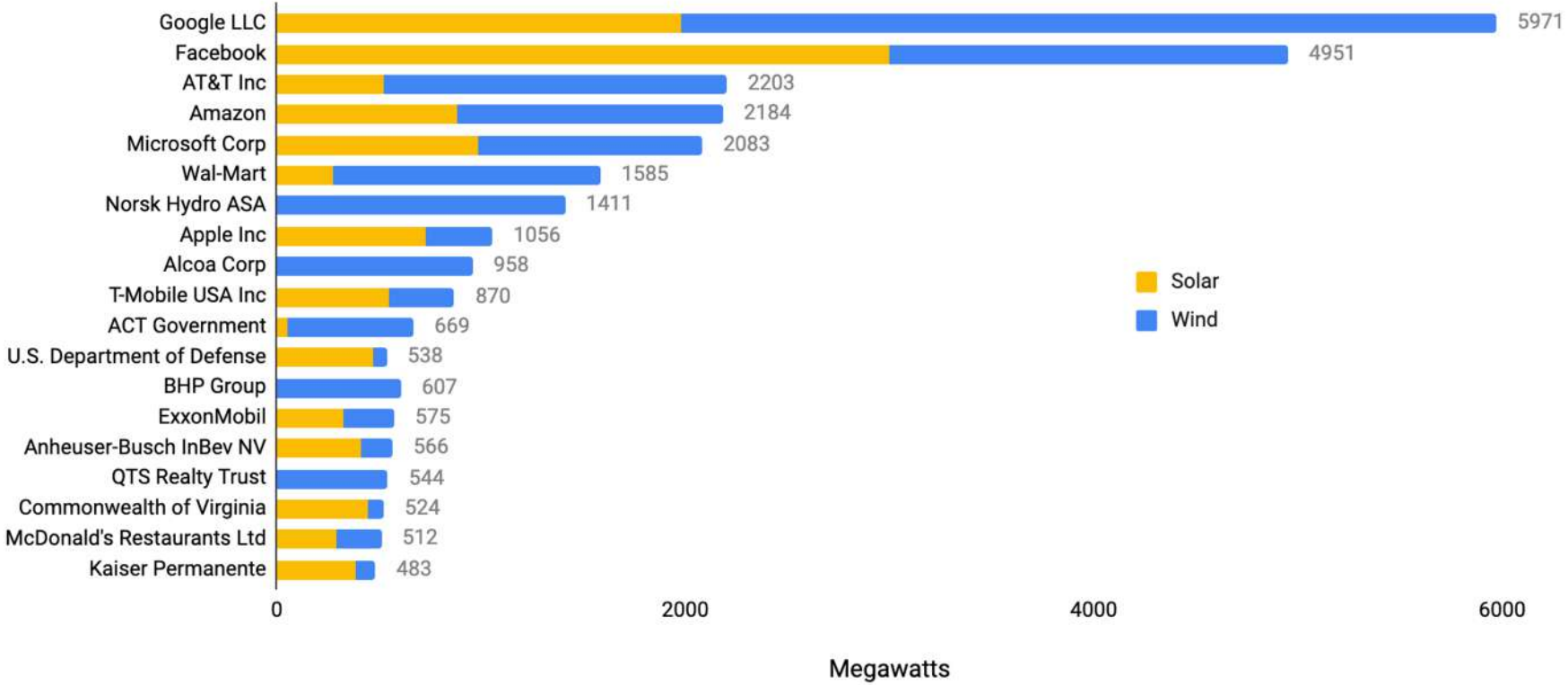

Google
24/7 Carbon-Free Energy by 2030

Products with >1 billion users

Corporate renewable energy purchased globally



Source: *Bloomberg New Energy Finance (BNEF), as of January 2020*
Note: *BNEF rates solar capacity in DC, while Google uses AC*

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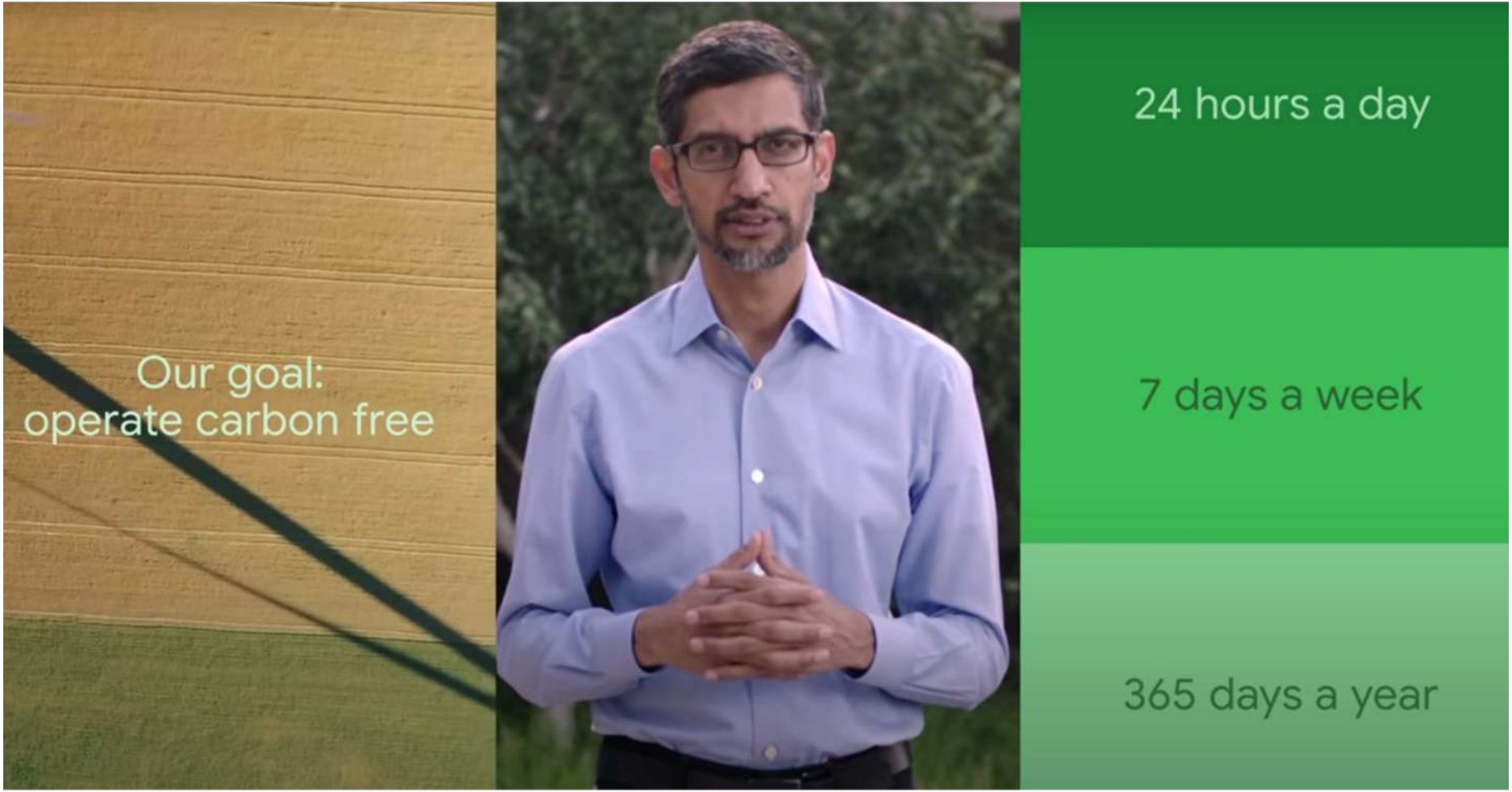
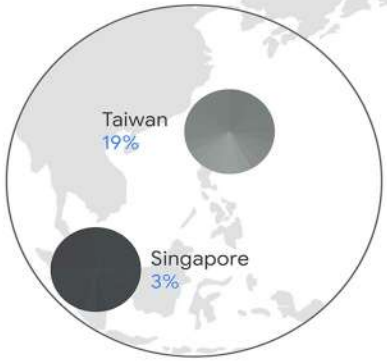
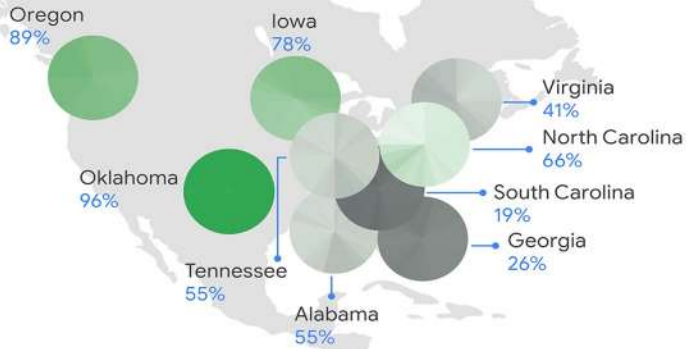
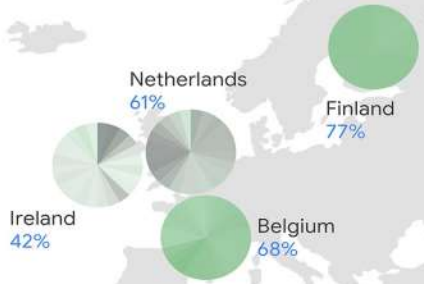
Google CEO Sundar Pichai announcement on 14 September 2020

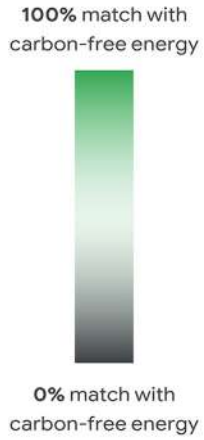


Where we stand currently





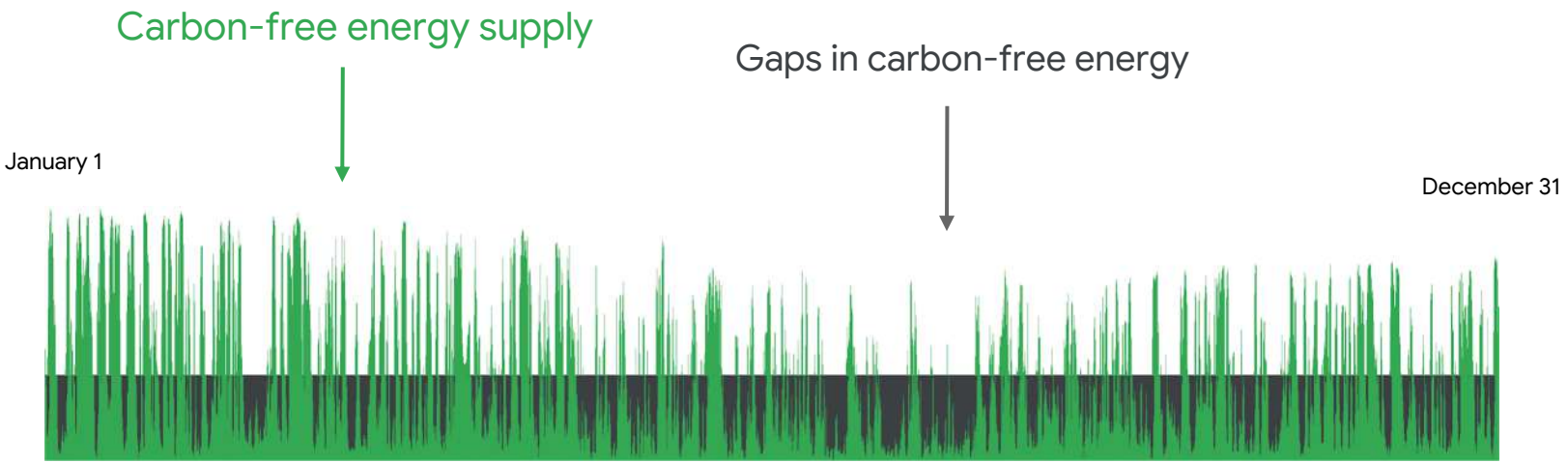




Globally, performance in 2019 varies across sites; our global ***hourly*** clean energy average is **61%**

100% RE does not fundamentally solve the problem

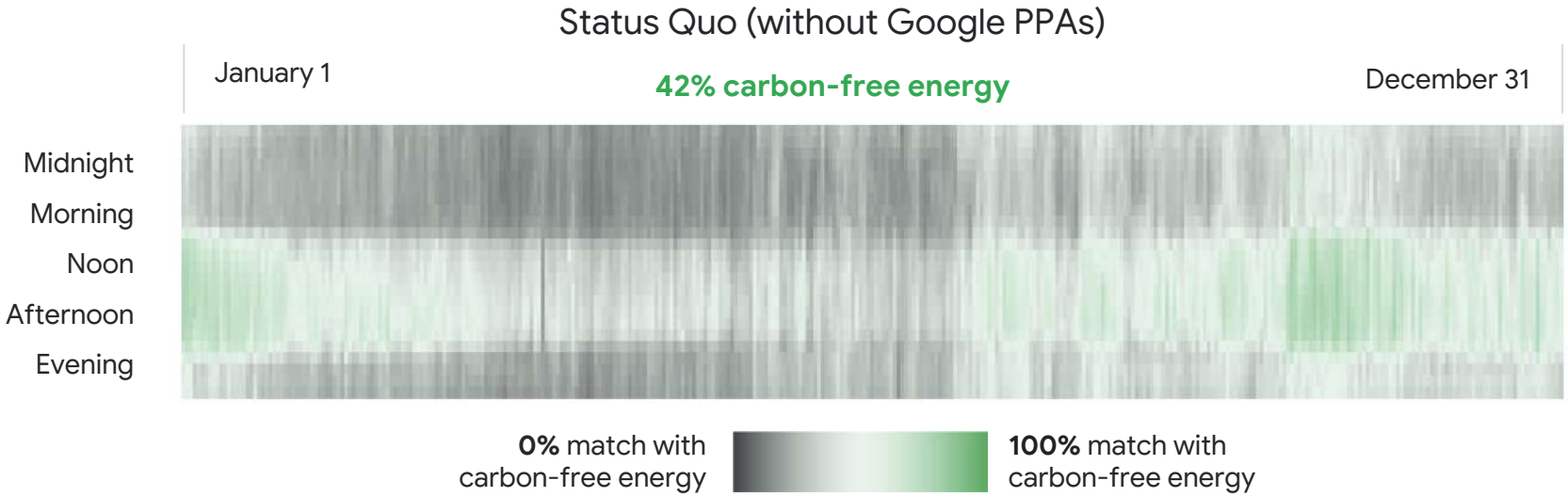
Due do the variability associated with renewables, we still rely heavily on coal and gas from the grid during periods of low wind or solar



Iowa data center hour by hour (2018)

Scenario: every hour of electricity use at Chile data center

Without solar and wind PPAs, just over half our energy use in Chile would be matched with carbon-free sources on an hourly basis



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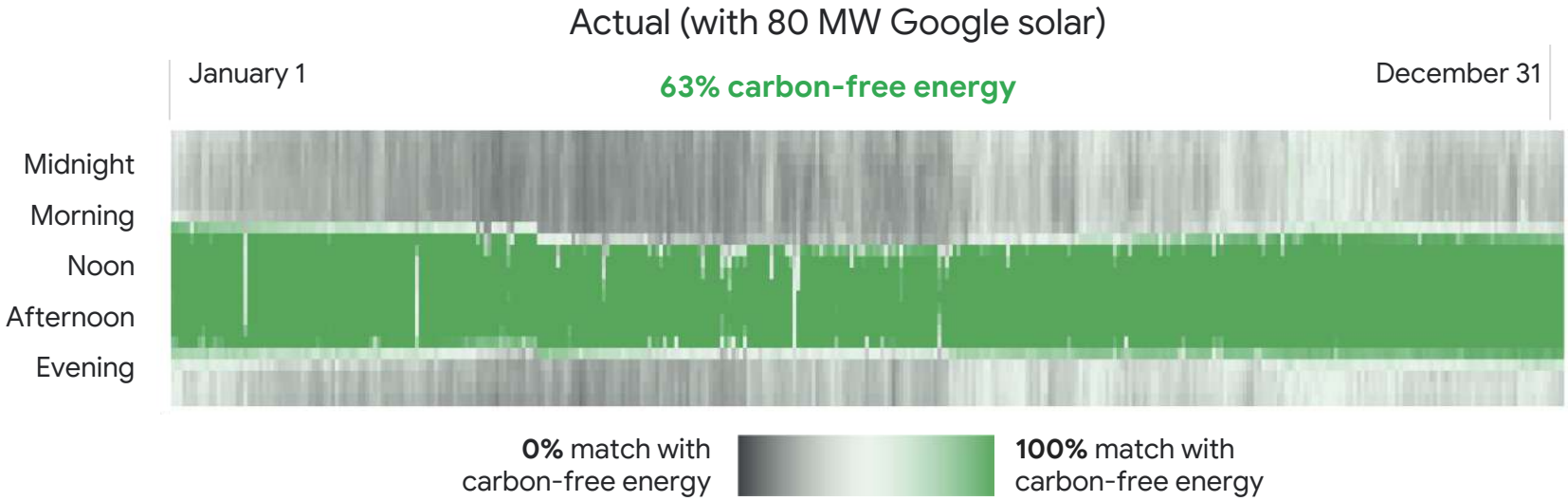
Actual: every hour of electricity use at Chile data center

Google's first solar PPA in Chile significantly increased our data center's carbon-free matching



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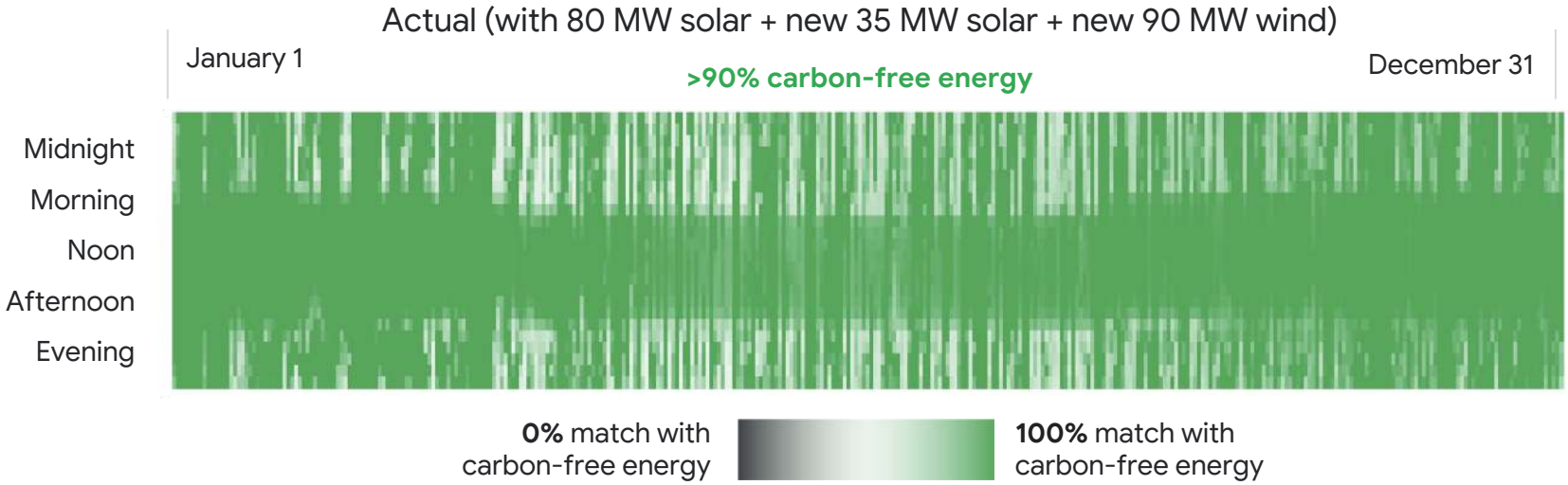
Projected: every hour of electricity use at Chile data center

A new solar + wind PPA will fill in the gaps, enabling us to match almost 100% of our electricity use with carbon-free resources on an hourly basis



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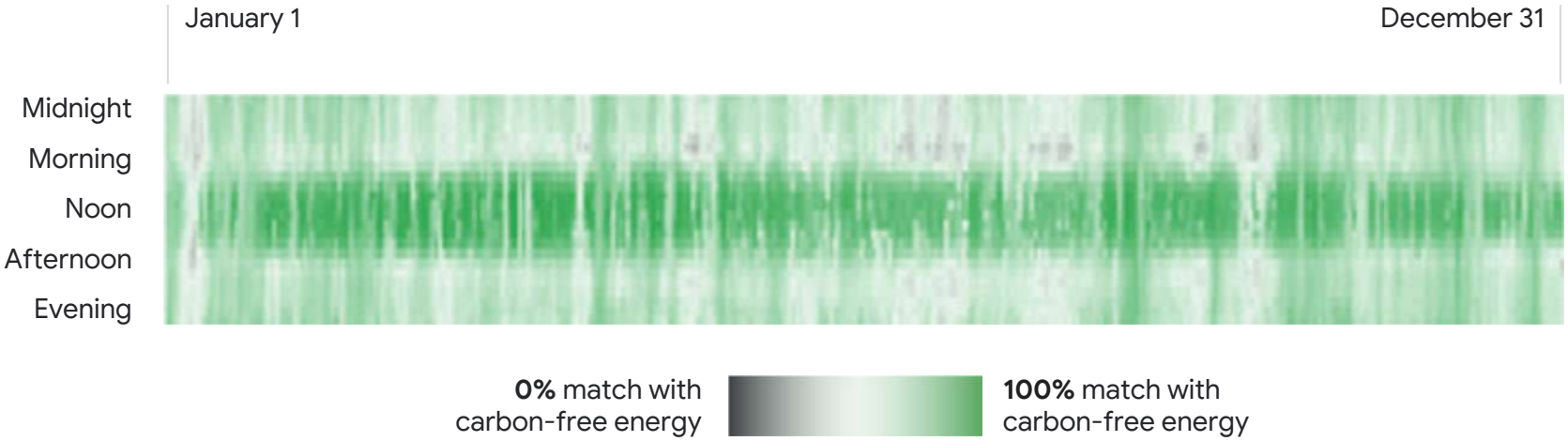
We aspire to source **100%** carbon-free energy at all times



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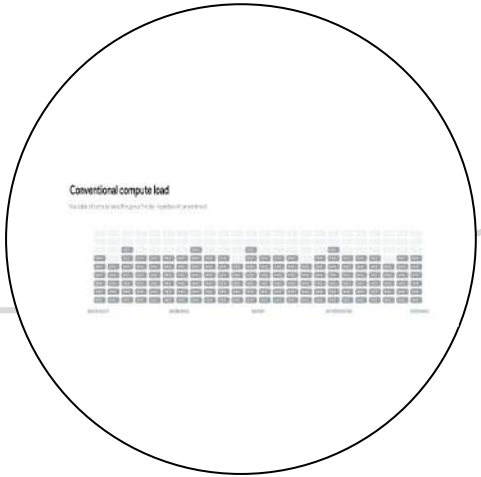

Technology

Accelerate technology innovation.

Transactions

Buy more and different types of clean energy deployed locally.

RE-Source
European platform for corporate renewable energy sourcing

Policy

Advocating for policy changes to decarbonize electricity grids.

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Carbon-intelligent load-shifting

Reducing data center carbon footprints by shifting flexible compute tasks to align with greener hours on the grid

Conventional compute load

Execution of compute tasks throughout the day, regardless of carbon impact

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