

# AI, Energy, and Climate: Driving Sustainability and Energy Security

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Speakers: Josh Parker, Bernhard Lorentz, David Sandalow, Lauren Risi	
Lauren Risi - work with policy Bernahard Lorentz - Professor and Deloitte David Sandalow - Columbia Josh Parker - NVIDIA	

## 1 AI and Energy: AI's energy footprint

Deloitte published a paper on AI's footprint in November and about a year ago we would say that there is not enough data for this. Paris Summit for AI - large increase in data centers. "Not such a big deal to be honest" - 1.4% usage globally. Given the general increase in energy demand, we need to be cautious about the way that we manage the use of energy supporting demand.

Data center usage globally - 1.5 – 2% and in the US about 5%. Electric cooling may use more than data center usage. Why is the energy use of data centers getting attention? The usage is centralized in one area geographically. Comparing China and India vs US: US has had flat electricity demand so the US systems do not anticipate the increase in demand for electric and can't handle them the same way as other countries.

Lauren: Policy makers, do they even think about this issue? Policy makers are concerned and looking for data varies wildly depending on which state they are located in - more concern where there are more data centers being built. Figure out adaptations towards industry leaders and their approaches to data centers and new technology overall.

## 2 Handprint of AI

Roadmap on the use of AI and climate; Simulate materials that don't exist but have favorable properties in areas like light-weight steel, fuels, and in battery chemistry. (David) Major question: How to accelerate progress in technology and the climate?