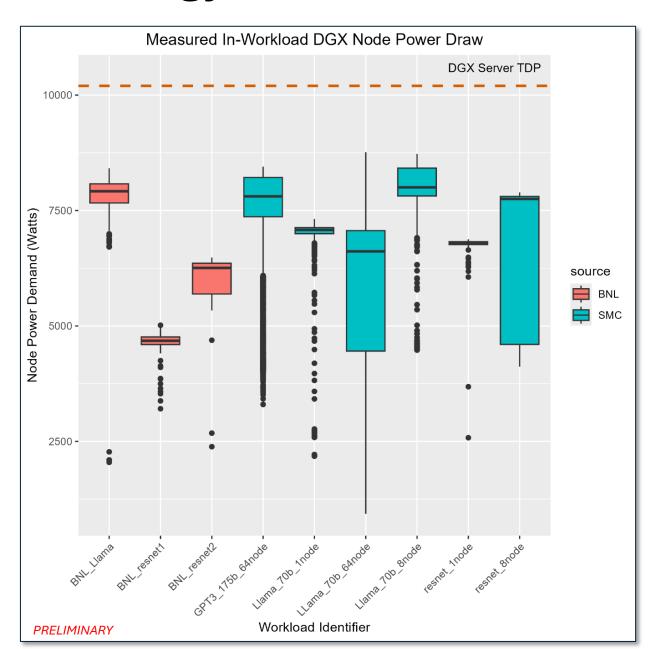
A Climate and Energy Amendment to the AI Bill of Rights



Costa Samaras, PhD

Director, Scott Institute for Energy Innovation

Trustee Professor of Civil and Environmental Engineering

Professor, Engineering and Public Policy

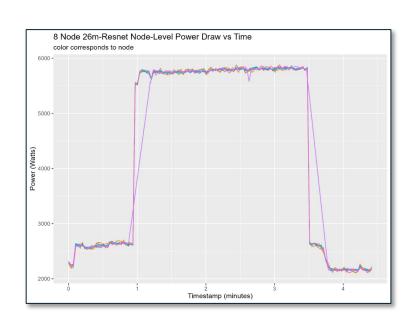
Lead PhD student: Alex Newkirk

National Academies September 12, 2024 <u>csamaras@cmu.edu</u> CostaSamaras.com @CostaSamaras.com

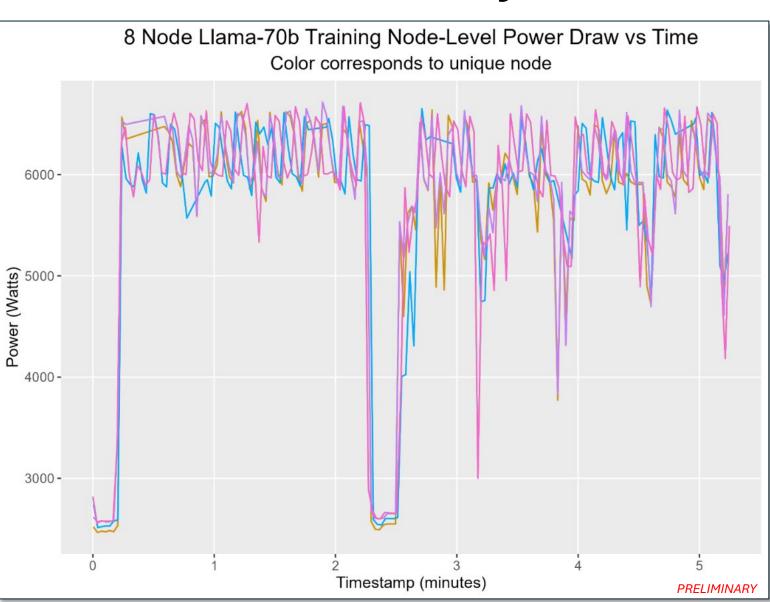
Carnegie Mellon University
Wilton E. Scott Institute
for Energy Innovation

Source: Newkirk, Alex C., Jared Fernandez, Jonathan Koomey, Emma Strubell, and Constantine Samaras. 2024. "Al Energy Use: Empirically Grounded Estimate of Training IT Power Demand and Pathways for Future Research."

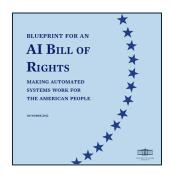
Need Open Data and Uncertainty Management for Grid Reliability, Resilience, and Sustainability



Source: Newkirk, Alex C., Jared Fernandez, Jonathan Koomey, Emma Strubell, and Constantine Samaras. 2024. "Al Energy Use: Empirically Grounded Estimate of Training IT Power Demand and Pathways for Future Research."



Principles for Ethical Al Include Energy and Climate











Data Privacy



Notice and **Explanation**



Human Alternatives,
Consideration, and
Fallback

Source: The White House, 2022

- Doesn't raise people's energy bills
- Adds more clean power to the grid than it uses
- Invests in distribution system infrastructure
- Increases reliability, flexibility, and resilience
- Open data and rising efficiency targets
- Doesn't add local pollution and is net-zero emissions
- Develops clean data center community benefits agreements