

Emissions, impacts, and embodiment

A techno-economic sustainability analysis of AI data centers

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Calvin Engineering

Wisdom in the Age of AI

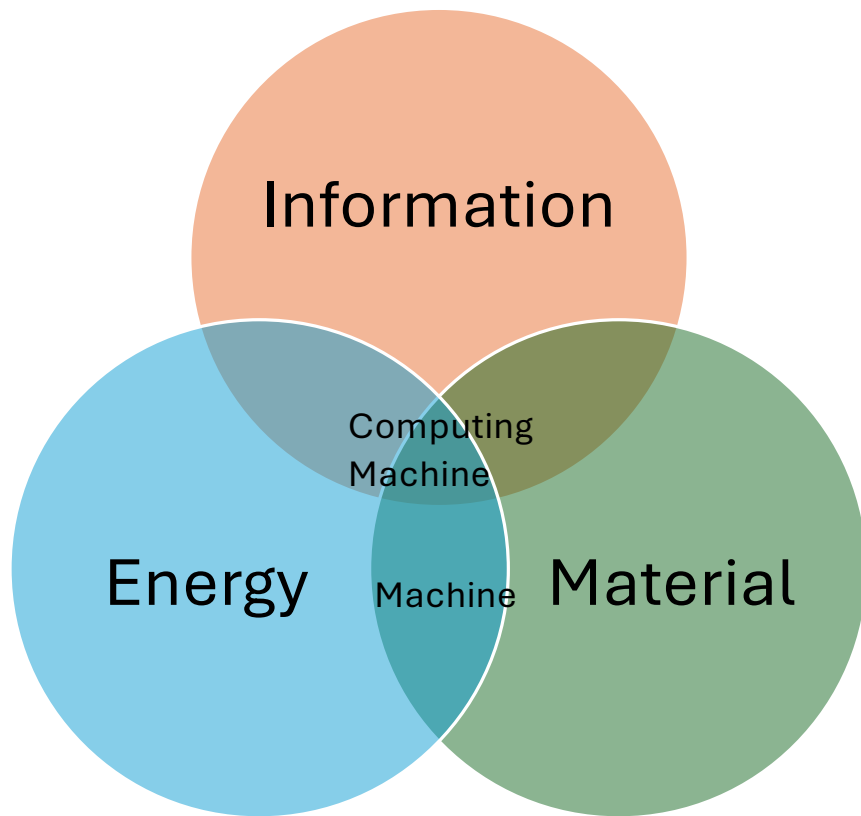
October 8, 2026

Biblical Wisdom



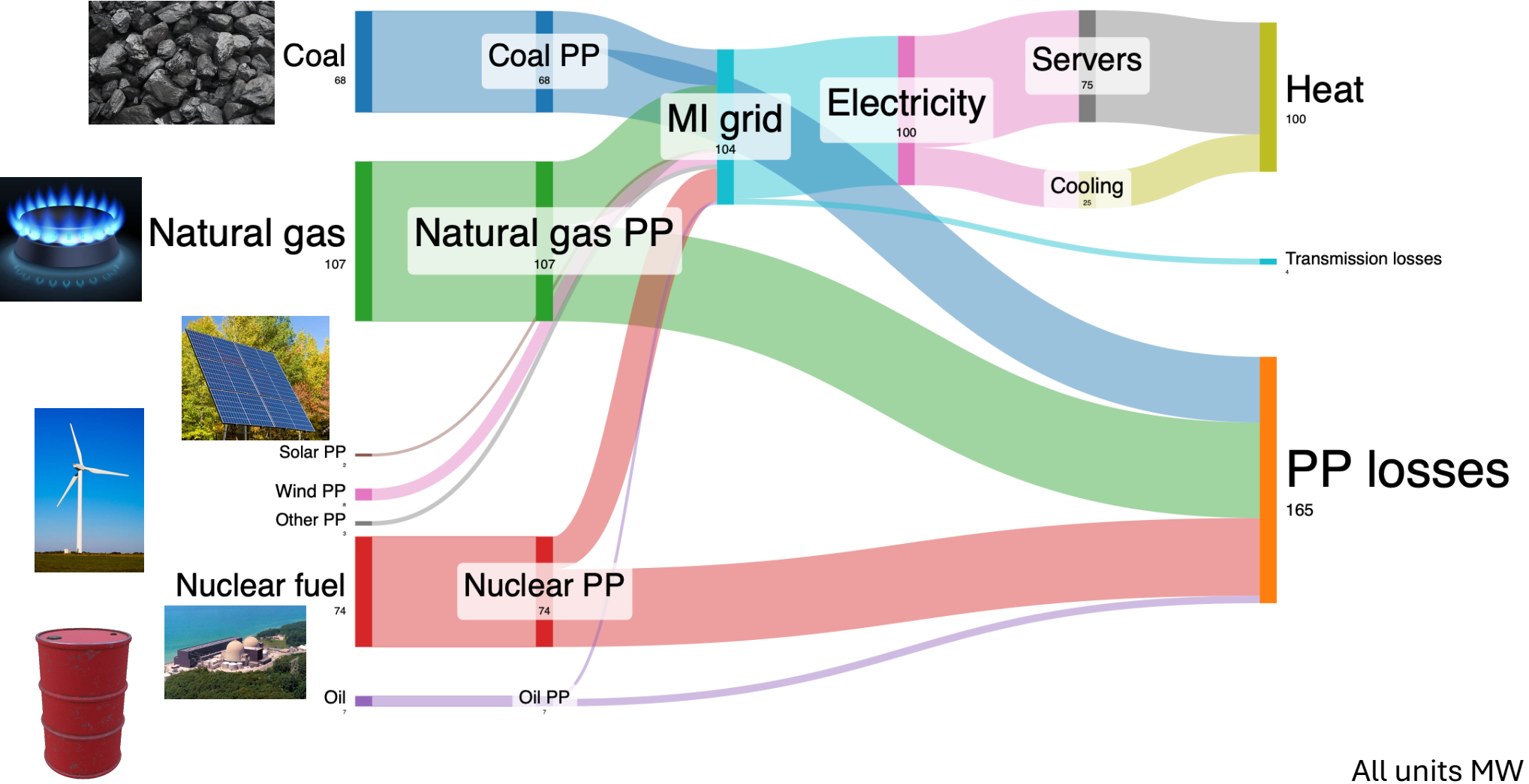
Prudence	Discernment	Self-control
Logic	Spiritual Perception	Will
Shrewd vs. simple Prov 8:5 Prov 14:15	Prophet vs. scoffer Prov 8:6-12 Prov 14:16 1 Thes 2:13	Disciplined vs. sluggard Prov 25:28 Prov 19:24 Prov 4:23; 5:8; 7:8,25
Constraints Cost/Benefit Risk Prioritization	Can I see the truth? What is really going on? What are motives or intentions?	Can I do the good thing I've already decided to do? Can I avoid avoidable temptation?

AI is Embodied



Wall-I [proposed] Gibraltar, MI (Raeden 2025)

100 MW data center



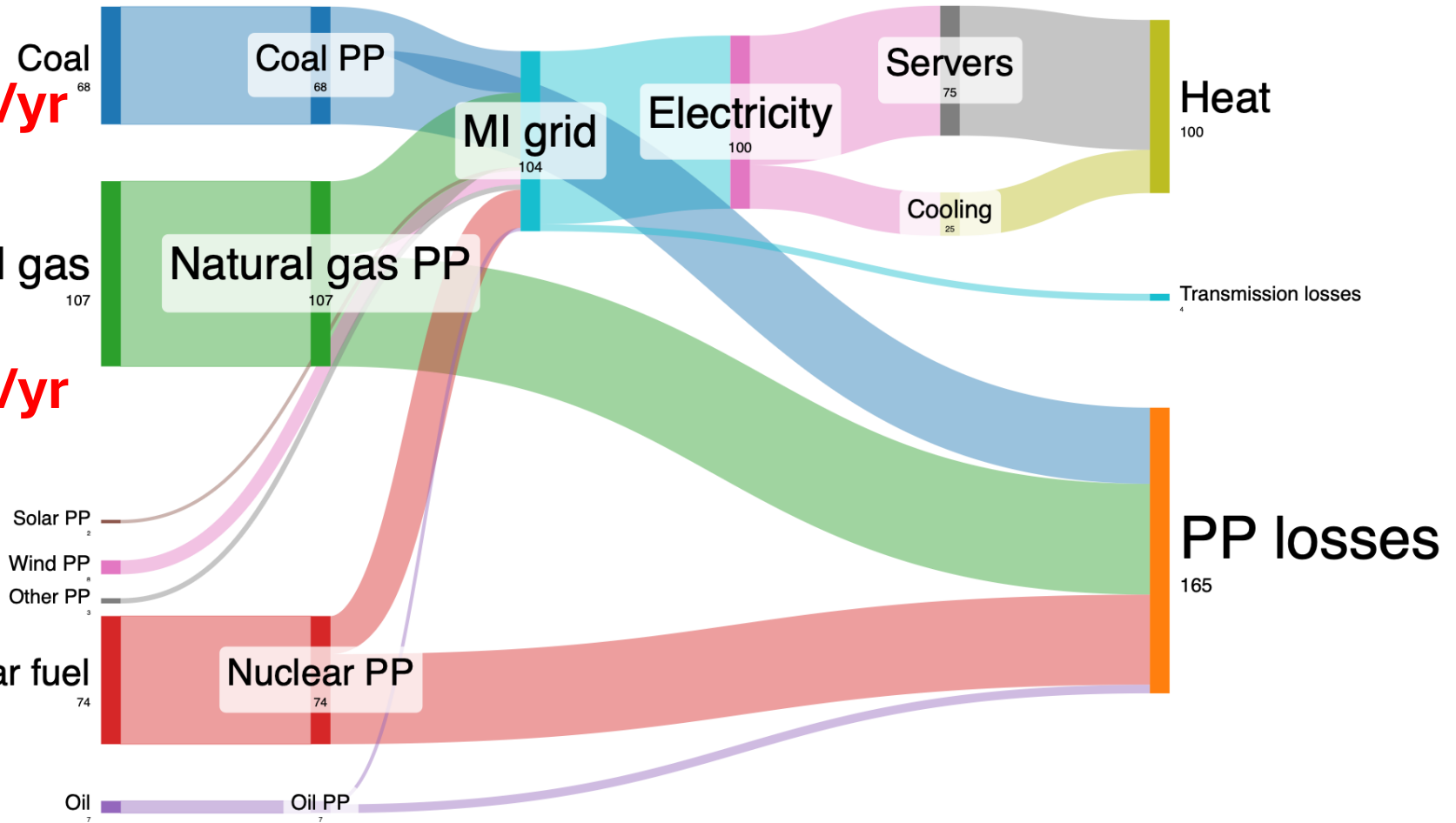
All units MW

100 MW data center

**200,000
tonnes CO₂/yr**

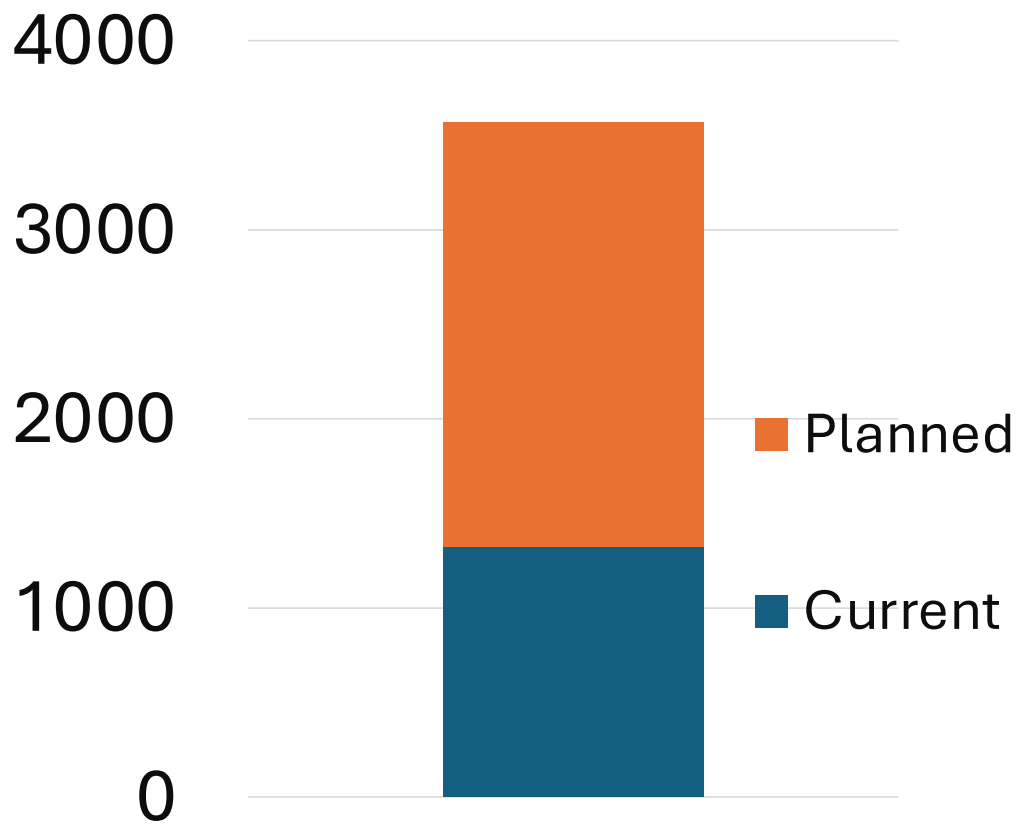
**175,000
tonnes CO₂/yr**

180 Mgal water/yr

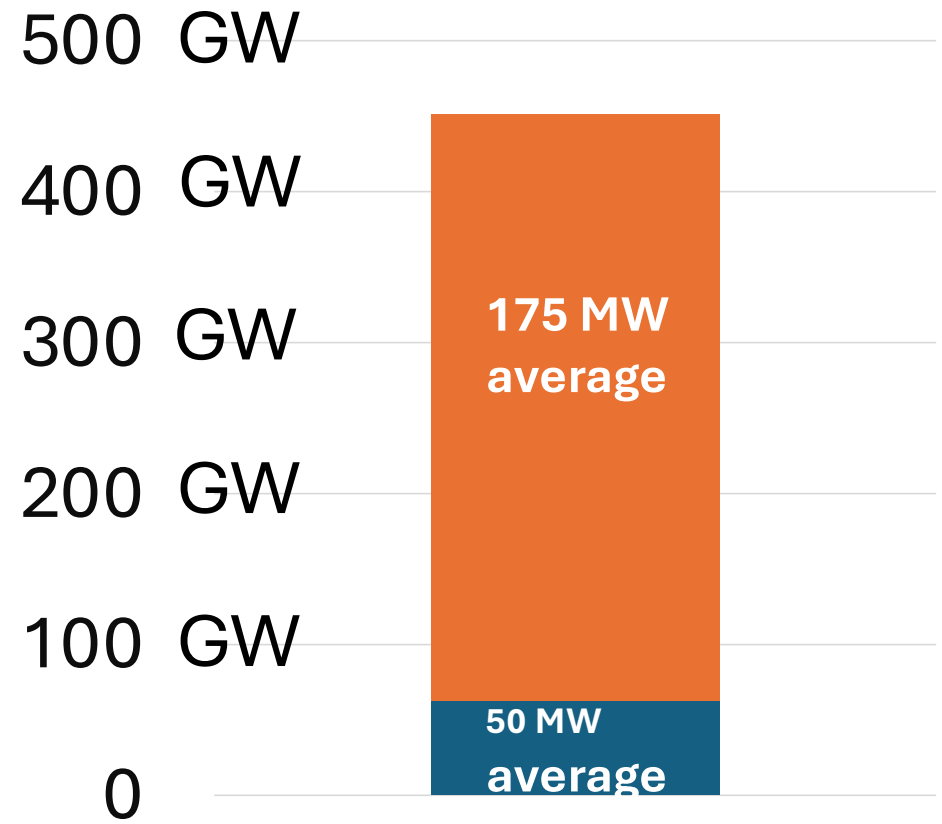


All units MW

Number of US data centers



Total rated power



Projected global data center electricity use 2005-2035

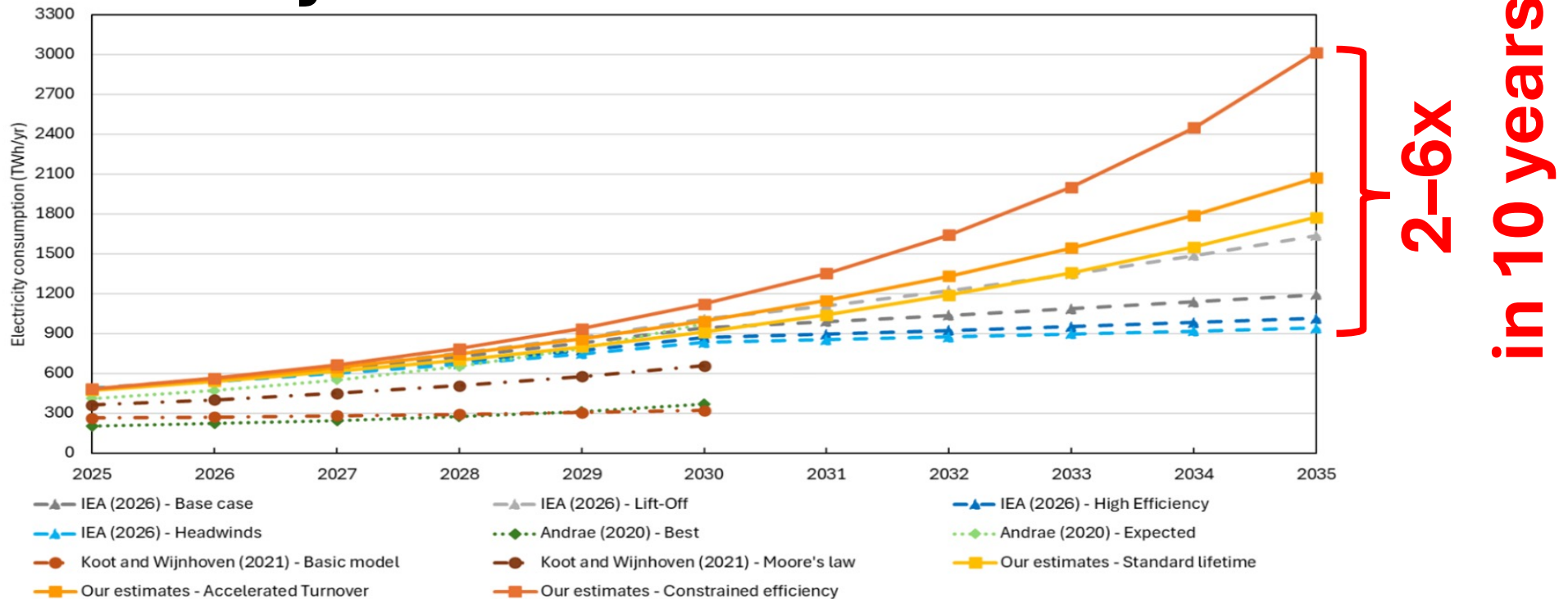
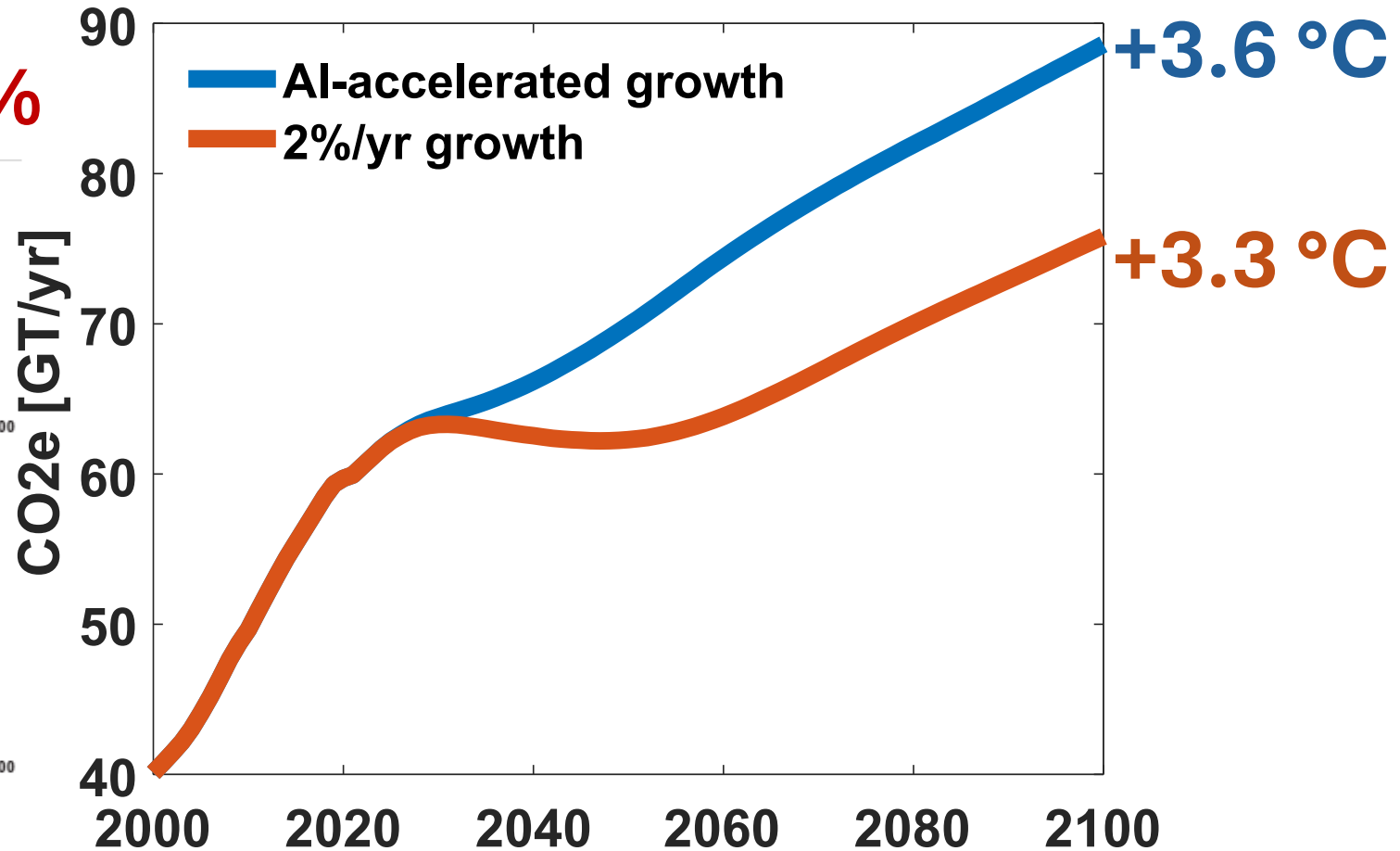
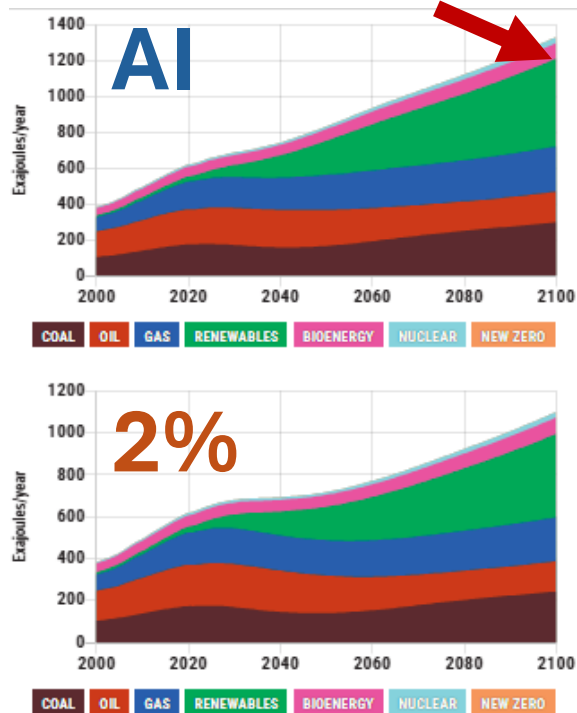


Figure 8 - Comparison between different scenarios for datacentre electricity consumption. World electricity demand for datacentres until 2035, comparison between our results and recent literature (*A. S. G. Andrae, 2020; International Energy Agency (IEA), 2026b; Koot & Wijnhoven, 2021*).

Pinto, Ricardo, Tiago Domingos, Paul E. Brockway, Matthew Kuperus Heun, and Tânia Sousa. 2026. *Energy Demand of Computing Devices to 2035: Efficiency, Scenarios, and the Role of Datacentres*. Draft paper in preparation likely to be submitted to *Energy*.

Net effect of AI on environment depends on economy

Energy +20%



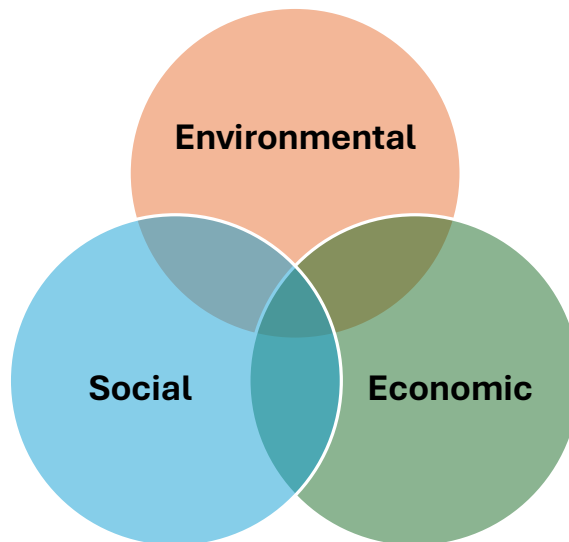
Prudential Wisdom

Cost/Benefit
Constraints
Priorities

Risk

Ignorance

Uncertainty



Risk
= likelihood x
consequences



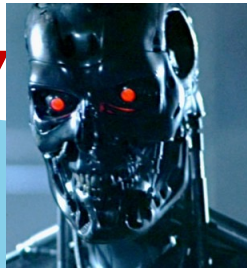
**Is this a good
idea?**

Prudential Wisdom

Cost/Benefit
Constraints
Priorities

Risk

Ignorance



Social

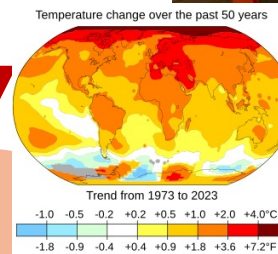
Uncertainty



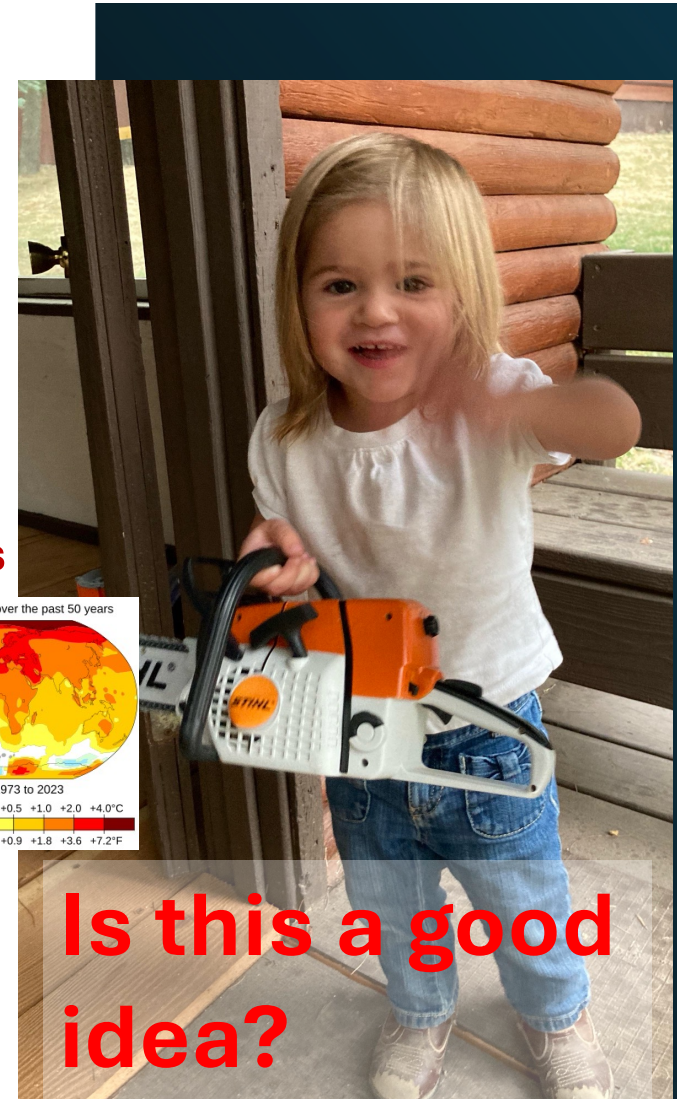
Economic



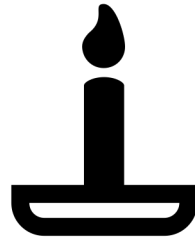
Risk
= likelihood x
consequences



Environmental



Discernment



Two lies

- The lie of truth
- The lie of creativity

Three truths

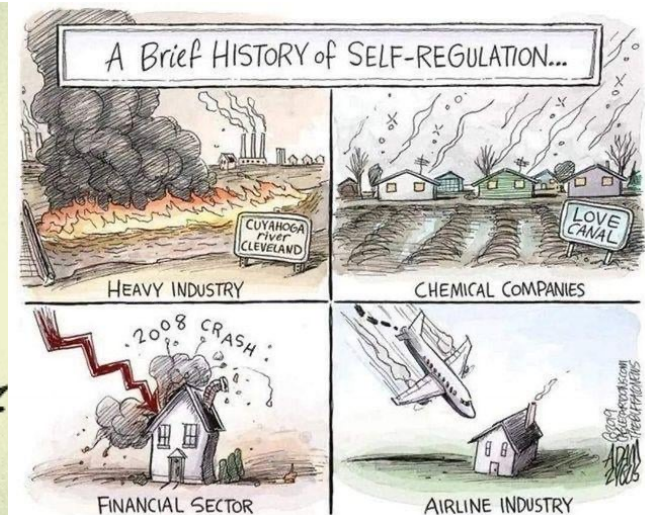
- Unvalued workers
- Imbalance of power
- Vested interests



How do the sunglasses stay on the cat's face?



The rich man and Lazarus



Self-control

- Individual (virtue)
- Corporate (justice)

Virtuous response to injustice

- Lament
- Prophetic voice
- Organize



Self-control



“A sluggard buries his hand in the dish;
he will not even bring it back to his mouth!”

Prov 19:24

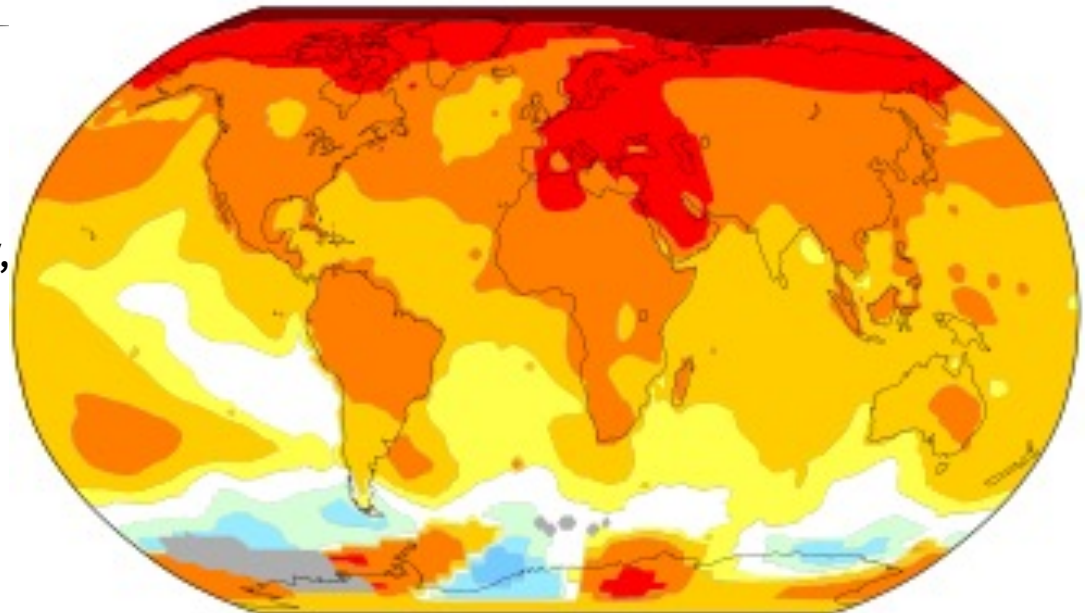
“The lips of the adulterous woman drip honey,
and her speech is smoother than oil;
but in the end she is bitter as gall,
sharp as a double-edged sword.
Her feet go down to death;
her steps lead straight to the grave.”

“Keep to a path far from her,
do not go near the door of her house,”

“lest strangers feast on your wealth
and your toil enrich the house of another.”

Prov 5:3-5, 8, 10

Temperature change over the past 50 years



Trend from 1973 to 2023

