

Environmental Impact Statement

The environmental cost of our compute, stated openly.

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OWNER	Ops Lead
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1 Purpose & Scope

This statement sets out how LinkScape understands, tracks, and works to reduce the environmental impact of its activities. For an AI nonprofit, that impact is overwhelmingly the energy consumed by compute. This document establishes a lightweight, honest tracking practice and a set of sustainability goals proportionate to a ~10-person youth-led organization.

Our commitment is candor over greenwashing: where we do not yet measure something, we say so and provide a template to capture it once data is available. We do not publish invented figures. This statement complements — and draws its usage data from — F-03 Compute Resource Usage.

- In scope: energy and carbon associated with LinkScape's compute fleet, plus incidental impacts (SaaS tooling, member travel to events).
- Out of scope: embodied manufacturing emissions of hardware LinkScape does not own or control, and the operational footprint of Hack Club / HCB as our fiscal sponsor.
- Audience: members, fellows, beneficiaries, and partners who want to understand our footprint honestly.

2 Our Environmental Footprint

LinkScape's footprint is dominated by one thing: training and running AI models on GPUs. Everything else — laptops, Slack, Notion, Zoom, occasional travel — is small by comparison. We therefore focus our tracking effort where it matters.

2.1 Footprint Breakdown (relative)

Source	Relative significance	Notes
GPU compute (80× H100 fleet)	Dominant	Training and inference; the single largest driver of our energy use
SaaS & communication tools	Minor	GitHub, Slack, Notion, Zoom, WeChat — hosted on vendor infrastructure
Member devices	Minor	Personal laptops; mostly remote work per O-10
Event travel	Occasional	Hackathons and conference travel (e.g. paper presentation); episodic, not continuous

3 Compute Energy Usage

The compute fleet — 80× NVIDIA H100 GPUs — is LinkScape's most significant resource and its dominant environmental footprint. Access to the fleet is tiered and logged per F-03 Compute Resource Usage, and that same logging is the foundation of our energy tracking: every logged GPU-hour is an energy datapoint.

3.1 Why Compute Dominates

- Each H100 draws substantial power under load, and training jobs can occupy many GPUs continuously for hours or days.
- Cooling and supporting infrastructure add overhead on top of the GPUs' direct draw (commonly expressed as a data-center PUE multiplier).
- Idle-but-powered GPUs still consume energy — so utilization discipline, not just raw efficiency, is central to reducing impact.

3.2 Estimating Energy from Compute Logs

We estimate energy consumption from the GPU-hour logs maintained under F-03, using a transparent formula so anyone can check our math. Values are estimates, clearly labeled as such.

1. Pull total GPU-hours for the period from the F-03 access logs.
2. Multiply by an assumed average per-GPU power draw (kW) to get GPU energy (kWh).
3. Apply a data-center overhead multiplier (PUE) to account for cooling and infrastructure.
4. Record the assumptions used so the estimate is reproducible and revisable.

3.3 Energy Tracking Template

The values below are intentionally blank. They are populated each reporting period from F-03 logs and our stated assumptions — we do not publish placeholder or invented numbers.

Field	Value	Source / assumption
Reporting period		Quarter/year
Total GPU-hours		F-03 access logs
Assumed avg. power per H100 (kW)		Documented assumption
Estimated GPU energy (kWh)		GPU-hours × power
Assumed PUE (overhead multiplier)		Documented assumption
Estimated total energy (kWh)		GPU energy × PUE
Fleet utilization (%)		Active vs. powered GPU-hours

4 Carbon Footprint Tracking

Energy becomes carbon at a rate that depends on where and when the electricity is generated. Because LinkScape does not directly operate the data center powering its fleet, our carbon figures are estimates derived from energy usage and grid emissions factors, and we are explicit about that limitation.

4.1 Estimation Method

- Carbon estimate = estimated total energy (kWh, from Section 3) × grid carbon-intensity factor (kgCO₂e/kWh) for the relevant region.
- Where the hosting region and its grid mix are known, use a region-specific factor; otherwise use a conservative published factor and note the uncertainty.
- Report emissions as an estimated range, not a false-precision single number, when inputs are uncertain.

4.2 Carbon Tracking Template

Blank by design — populated when energy data and a defensible emissions factor are available. LinkScape will not report a carbon number it cannot substantiate.

Field	Value	Source / assumption
Reporting period		
Estimated total energy (kWh)		From Section 3.3
Grid carbon-intensity factor (kgCO ₂ e/kWh)		Region-specific or conservative published factor
Estimated emissions (kgCO ₂ e)		Energy × factor
Estimation confidence		High / medium / low + reason

4.3 Limitations & Honesty

We disclose the boundaries of these figures: they exclude embodied hardware emissions, depend on assumptions we may refine, and cover only scopes we can reasonably measure. Improving the accuracy of these estimates is itself one of our sustainability goals (Section 5).

5 Sustainability Goals

Our goals are chosen to fit our size: things a small team can actually do, that reduce real impact, and that reinforce good compute discipline we already need for cost and fairness reasons (F-03).

5.1 Efficiency Goals

- Maximize useful work per GPU-hour: prefer efficient architectures, mixed precision, early-stopping, and reusing checkpoints over redundant re-training.
- Reduce idle-but-powered GPU time through the tiered scheduling and logging already required by F-03.
- Favor sharing pretrained/open models and datasets (E-06) over training from scratch when it meets the research goal.

5.2 Measurement Goals

- Populate the Section 3 and 4 templates at least once per reporting cycle from F-03 logs.
- Improve estimate confidence over time by pinning down the hosting region's grid factor and a realistic PUE.
- Surface a simple energy/utilization summary in the annual impact reporting cycle (I-07 / G-09).

5.3 Culture & Awareness Goals

- Include a short 'is this compute justified?' prompt in high-impact project review (feeds the environmental-cost criterion in E-05).
- Encourage remote-first collaboration (O-10) and virtual meetings (Zoom) to keep travel episodic.
- Report honestly — including when a goal is missed — rather than optimizing for appearances.

6 Roles & Review

6.1 Ownership

Role	Responsibility
Ops Lead (owner)	Maintains this statement; populates templates each cycle; reports the summary
CTO	Provides fleet utilization data and efficiency guidance; owns the compute fleet
Members using the fleet	Log usage per F-03; apply efficiency practices in Section 5.1

6.2 Review Cadence

This statement is reviewed annually alongside financial and impact reporting, or sooner if the compute fleet's scale or hosting arrangement changes materially. Updates and the latest populated templates are stored per O-04 Document Management.

Cross-references: F-03 Compute Resource Usage (primary source of usage data and access tiers), E-05 Ethical Review Board (environmental-cost review criterion), E-06 Open Source Contribution, O-04 Document Management, O-10 Remote Work, I-07 Annual Impact Report, G-09 Annual Reporting.

Approval and Adoption

Adopted upon signature by the officers below. Pending ratification at Sprint 0 (see LS-REG-001).

Document Maintenance Log

Version	Date	Author	Changes
1.0	July 23, 2026	LinkScape Leadership	Initial release

LinkScape operates as a fiscally sponsored project of The Hack Foundation dba Hack Club, a 501(c)(3) nonprofit. Hack Club holds the charitable status and every dollar moves through Hack Club Bank.
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