



Long Duration Energy Storage
Council
Boulevard Saint-Michel 65/6
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Belgium

Submission to the Climate High-Level Champions and the Marrakech Partnership on the five-year vision and plan for the Global Climate Action Agenda (2026–2030) August 2025

Introduction

The Long Duration Energy Storage (LDES) Council appreciates the opportunity to provide input to the Climate High-Level Champions and the Marrakech Partnership on shaping the next five years of the Global Climate Action Agenda (GCAA).

The LDES Council is a global organization advancing decarbonisation by facilitating the accelerated deployment of long-duration energy storage solutions. Our members span mechanical, thermal, electrochemical, and chemical pathways, and we provide fact-based guidance to enable effective deployment. We are a newer organization, launched at **COP26**, and became accredited in **2024**. Our mission is to enable the **8 TW LDES market needed by 2040** to support the transition to a decarbonized, reliable, and affordable energy system.

LDES is more than a technology. It is a **system enabler and a connector**: unlocking renewable integration, accelerating coal-to-clean transitions, powering industrial heat, and enhancing resilience. Equally, it connects multiple strands of the climate action ecosystem by providing flexibility to an ever-changing system as well as risk mitigation addressing fuel volatility.

The LDES Council already collaborates with more than 20 organizations—including **RMI, WRI, GEAPP, TERI, GTI, GRA, GWEC, GSC, IGA, IGH, GH2, IRENA, IEA, the World Bank, and multiple governments**—spanning innovation, finance, policy, and deployment. These partnerships are essential to support collaborative policy change in these urgent times. The clock is ticking.

- **Global Renewables Alliance (GRA)** – Founding member and current Chair. Under our leadership, the GRA spearheaded the **global target to triple renewable energy capacity to 11 TW by 2030**, which became part of the **COP28 final UNFCCC decision text**. This was historic — the first time such language was enshrined in UN climate outcomes, proving that industry is not just an observer but a **credible, accountable partner** shaping binding global frameworks.



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- At **COP29**, together with GRA, IRENA, IEA, and utilities worldwide, we secured the **Energy Storage and Grids Pledge** — setting the goal of **1.5 TW of energy storage by 2030**, now endorsed by **over 60 countries and 100 industry partners**. The next step is to **embed this target in UNFCCC language** and ensure its incorporation into updated NDCs.

The LDES Council's collaborative ecosystem spans worldwide as our members are in 24 countries and we look forward to working with the GCAA to combine our efforts:

- **MoU partnerships** with the **U.S. Department of Energy Office of Technology Transitions (OTT)**, **Edison Electric Institute's Institute for the Energy Transition**, and **EPRI** to accelerate commercialization and deployment.
- Partnership with **Sustainable Energy for All (SE4All)** and signatory of the **24/7 Carbon-Free Energy Compact**, promoting equitable access to clean energy by 2030.
- Collaboration with the **Greening the Islands (GTI) Foundation** to deploy LDES as the backbone of 100% renewable island energy systems.
- **MoU with the Kyoto Club (Italy)** to develop LDES policy toolkits and educational outreach.
- Partnership with the **Energy Storage Coalition** to scale deployment across Europe.
- **New (July 2025) – MoU with TERI (The Energy and Resources Institute, India)**: advancing LDES deployment through policy, capacity building, demonstration projects, financing models, and the creation of a **Centre of Excellence on LDES (CoE-LDES)** at TERI.

These strategic collaborations span **policy, finance, deployment, innovation, and access**—enabling emerging markets to benefit from a **coordinated, not fragmented, ecosystem**. Our role is to reduce fragmentation by **linking initiatives, avoiding duplication, and aligning with UNFCCC's call for coherence and complementarity** in the GCAA.

Finally, our industry associations have proven their **seriousness and accountability** by showing up with measurable pledges that entered UNFCCC outcomes. These include the **COP28 “tripling renewables / doubling efficiency” decision language** and the **COP29 1.5 TW storage pledge**. Together, they chart a path toward **140 TWh of LDES deployed globally by 2040**, delivering **\$540 billion per year in system benefits** through lower costs, improved reliability, and accelerated fossil phase-out.



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How Our Industry Voice Adds Value to GCAP

The LDES Council ensures the **Global Climate Action Portal (GCAP)** reflects **real industry progress, not just pledges**:

1. **Deployment reality** – Our members' pilots and projects (grid, off-grid, distributed) feed real-world outcomes into GCAP.
2. **Data-driven insights** – We will publish **annual, comparable data** on costs, value, and deployment for inclusion in the Yearbook.
3. **Customer adoption signals** – Capturing how **utilities and industries** are integrating LDES into operations, providing demand-side proof of impact.
4. **Equity and global tracking** – GCAP entries will be **disaggregated** to show progress in **LMICs, islands, and off-grid systems**, making the tool relevant for all.
5. **Transparency & MRV** – We want to working with partners and GCAP on piloting **digital tracking and third-party verification** for LDES metrics, strengthening GCAP as a reliable dashboard.

This can make the GCAP a **living industry dashboard**, not just a registry.

1. What should success look like, and how to measure it?

Success will be: **coordinated, accountable delivery** of GST-aligned outcomes — in large grids, off-grid villages, island systems, and distributed community projects. This is depicted by:

- Inclusion of LDES-backed flexibility in NDCs/NAPs.
- Growth of Multi-hour to multi-day storage capacity growth from GW/GWh to TW/TWh
- Reductions in curtailment, avoided fossil output, enhanced reliability.
- Investment in finance and is mobilized, especially for emerging markets and system critical solutions.
- Resilience indicators (hours of essential service preserved) created and monitored.
- Jobs created and local supply chains established in LMICs.



Our Big Ask: A unified set of priorities, led by industry and aligned with Parties — most critically, **mobilizing finance for innovative, system-critical solutions like LDES**. The Partnership Alignment Hub is not just as a “coordination tool,” but as a platform for shared leadership and local co-design.

2. How can the GCAA enable impactful engagement?

- **NDC/NAP Clinics:** Accelerating pipeline creation and integrate LDES into country strategies. (targets, integrated policies, market access).
- **Model policy packages:** Scaling flexibility procurement, seasonal storage incentives. (capacity markets, seasonal storage, distributed energy tenders).
- **Finance roundtables:** Mobilizing concessional/blended capital.
- **Partnership Alignment Hub:** Mapping initiatives (GRA pledges, TERI CoE, GTI pilots, SE4All compacts, US DOE/ and Global EPRI programs) to country needs; bundling support in integrated offers- consolidating initiatives and delivering one coordinated offer.

LDES should be recognized as both a mitigation and adaptation solution.

3. How to ensure inclusivity and equity?

- Prioritize LMICs and climate-vulnerable communities.
- Co-design with local actors with training and workforce development tailored to community and off-grid deployments as well as transition plans.
- Build regional supply chains and workforce for LDES solutions as they can be part of all industries, economies and communities.
- Use the Hub to simplify navigation and ensure one coordinated offer by reporting results in GCAP disaggregated by region and system type.
- Explicitly link LDES to adaptation and resilience benefits: power for hospitals, food security, disaster recovery.



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LDES is not only about system efficiency — it is about ensuring families, hospitals, schools, and businesses have reliable and affordable energy in a warming world.

4. How to improve transparency and reporting?

- Strengthen **GCAP** with modeling including fields with LDES-specific fields (on and off grid).
- Consolidated entries for joint programs as well as multi-organization initiatives.
- Publish an annual **LDES Progress Note** in the Yearbook disaggregated by region/system type.
- Link with corporate disclosures (CDP, SBTi).
- Encourage **independent verification** of system outcomes and consider deploying digital MRV tools for transparent, verifiable reporting.

Industry will not just report its progress, it will help design MRV systems that are simple enough for smaller organizations, local governments, and communities to contribute to as well.

5. The LDES Council's five-year contribution (2026–2030)

If supported together we can deliver 20+ Clinics in LMICs as well as:

1. Maintain Global Deployment Tracker (grid and off grid).
2. Convene Annual Finance Roundtables annually.
3. Launch an LDES Access Facility for emerging markets.
4. Publish open-source tools for system planners and mini-grid developers.
5. Pilot the Partnership Alignment Hub under the GCAA.

Conclusion

The LDES Council, with its partners, has demonstrated industry's seriousness by with the **11 TW renewables by 2030, and 1.5 TW storage targets by 2030**. Now, the GCAA must build on these foundations to deliver implementation.



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By aligning behind **One Big Ask (finance for innovation and deployment)** and by creating a **Partnership Alignment Hub**, the GCAA can avoid duplication, amplify impact, and accelerate progress — especially for emerging markets. The LDES Council stands ready to provide the enabling conduit of a net-zero, resilient energy system with our ecosystem.

For the LDES Council, long duration storage is not only about on and off grids and markets — it is about people. It ensures hospitals have power and heat during climate-driven storms, that schools and businesses in remote communities have reliable electricity, and that women and youth in emerging economies can access new jobs and opportunities in the clean energy transition. By linking mitigation and adaptation, LDES delivers not just efficiency and cost savings, but resilience, equity, and human security. As industry, we commit to not only deploying technology but co-creating solutions with governments, utilities, customers, local actors, and underrepresented groups. This is how the Global Climate Action Agenda can move from pledges to lived impact.

Julia Souder

A handwritten signature in green ink, consisting of stylized, overlapping loops and strokes, representing the name Julia Souder.

CEO, Long Duration Energy Storage Council