



Global Energy Alliance for People and Planet (GEAPP)

Accelerating Green Grids: Global BESS Consortium

June 2024

GEAPP is a mission driven organization driven by its goal to enable clean energy access & economic opportunities in low- and middle-income countries (LMICs)

Impact Focus Areas



Access



Carbon



Livelihoods

Key Levers



Enabling Environment



Innovation and Entrepreneurship



Risk Capital

Anchor Funding Partners



IKEA Foundation



At GEAPP, we believe clean energy is development. Without it, every other form of progress is undermined so we're building a movement to unlock a new era of inclusive green economic growth while enabling the global community to meet its critical climate goals during the next decade.



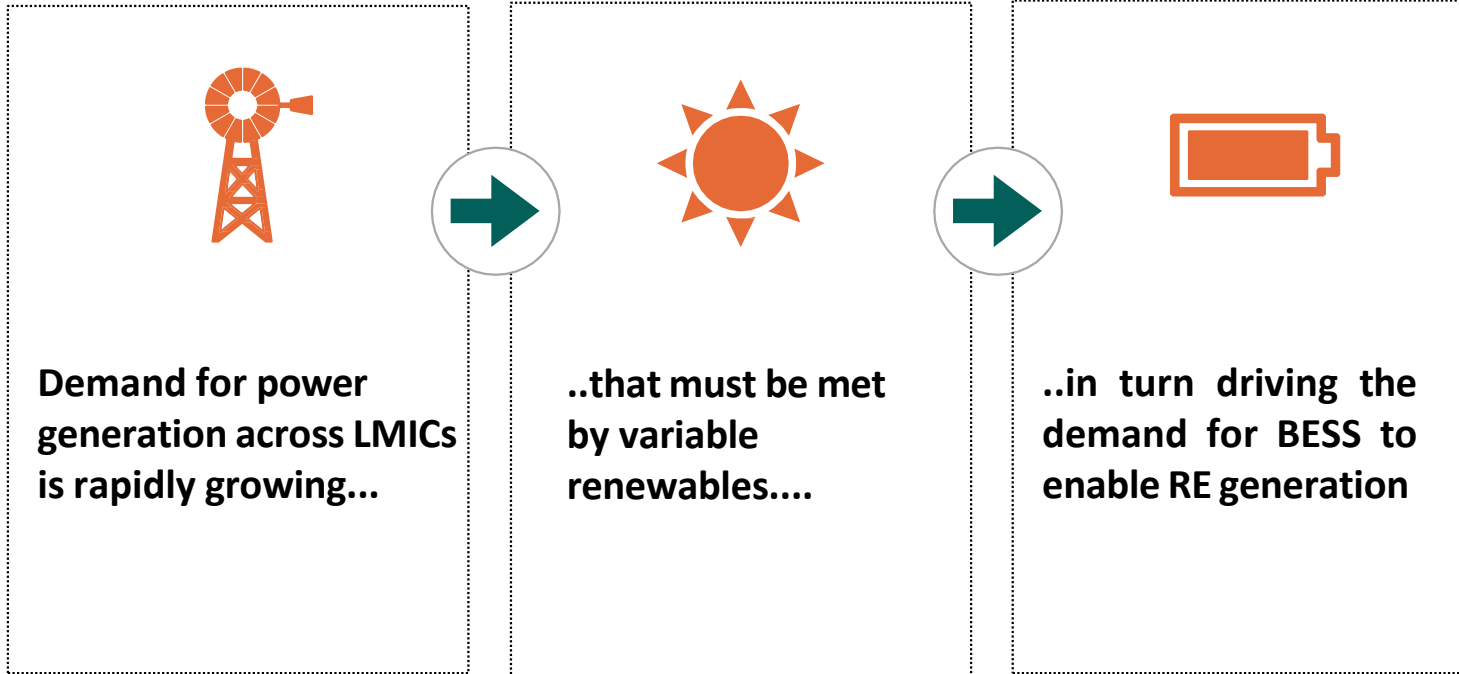
Join us and together, let's change energy for good.





GEAPP operates in Africa, Asia, Latin America and the Caribbean

Global Battery Energy Storage Opportunity



What is needed to accelerate and scale?



1. Financing to fast-track projects
2. National BESS roadmaps
3. Policy and regulatory upgrades
4. Pooled procurement and supply chains
5. Best in class technology

~90 GW

Peak demand storage capacity unlocked

~400 GW

Renewable energy integration enabled

>3 BN

People with more reliable electricity access

1 Gigaton

Of CO₂ emissions reduced



BESS Consortium Progress

We are building a prospective pipeline of project opportunities in collaboration with commercial and concessional financing partners

15

Countries have joined the Consortium.

Barbados, Belize, Burkina Faso, Egypt, Ghana, Honduras, India, Kenya, Malawi, Mauritania, Mozambique, Nigeria, Togo, Morocco, and Vietnam

19

Resource partners have made commitments to formally join the Consortium.

AfDB, World Bank, IADB, ADB, French Development Bank, RMI, GIZ, Africa 50, Masdar, Infinity Power, AMEA Power, COP28 Presidency, NREL, Net Zero World, SEforALL, Bezos Earth Fund, Rockefeller Foundation, Faraday Institute, and Ikea Foundation



1
Expression of interest
from relevant national
authority



2
Opportunity
assessment

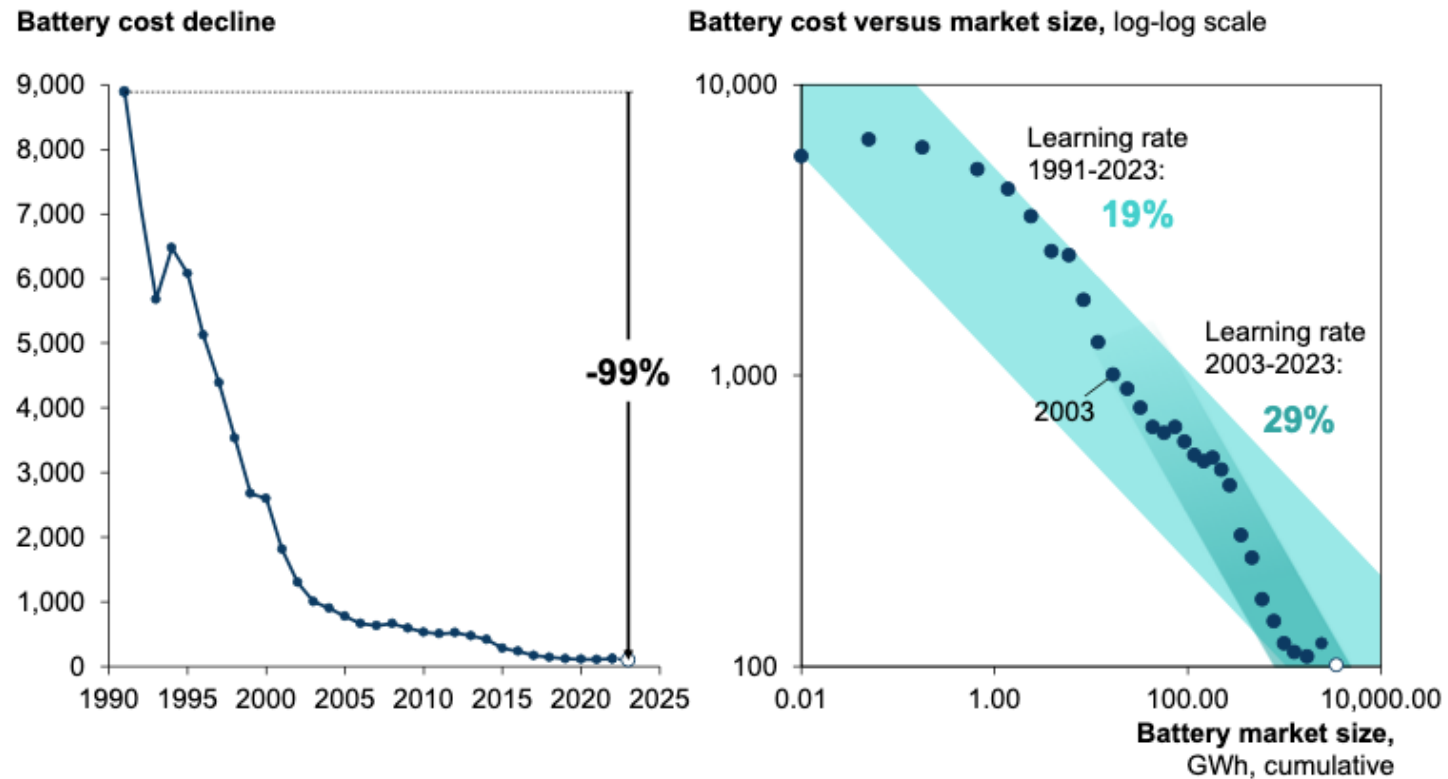


3
Design exercise to
formalize package



The cost of lithium-ion battery storage has dropped 99% over the past decades

Figure 3: Lithium-ion battery prices, \$/kWh (left), \$/kWh log scale (right)



Source: Ziegler and Trancik, BNEF, RMI



GEAPP's BESS program is simple with a clear mandate; 5 GW of BESS by 2030 in 30 countries in global south to catalyze the market (~90 GW potential)

2030 Impact goals:

- **Indirect impact:** 400GW of renewable energy; 1 gigaton of CO₂ emissions; 90GW \$100+ billion BESS market
- **Direct impact:** 5GW of BESS through 100 projects across 30 countries by 2030

WHAT?

Technical support

(cross-cutting and replicable)

- Regulatory advocacy and technical support to originate projects and enable BESS revenues and value demonstration + capacity building

Catalytic capital

(project-specific)

- Grant-based capital subsidies
- Concessional debt and guarantees
- Pooling capital towards various projects

HOW?

The BESS consortium

(global)

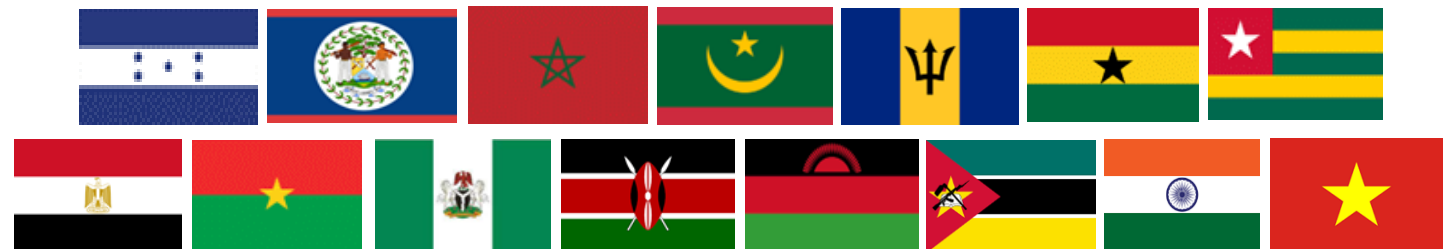
- Pipeline of projects in countries
- Aligns and deploys technical and financial support
- Coordinated action for consistency and scale

WHERE?

Existing projects



Additional countries engaged through BESS consortium



GEAPP, ADB, and RMI are supporting EVN to develop a pilot grid-connected BESS.

- **Scope & Legal basis**

- The pilot BESS of 50MW/50MWh to be developed by EVN has been approved in Vietnam's Just Energy Transition Partnership – Resource Mobilization Plan and in the Implementation Plan of PDP8.

- **Project location**

- At a high-voltage substation in a consumption-intensive area in North Vietnam where electricity demand is growing the fastest.

- **BESS use**

- BESS will be providing ancillary service (frequency control out of deadband 50Hz +/- 0.2Hz) and support power system reliability & security through peak shifting application. The project lifetime is proposed at 12 years.

- **Investment**

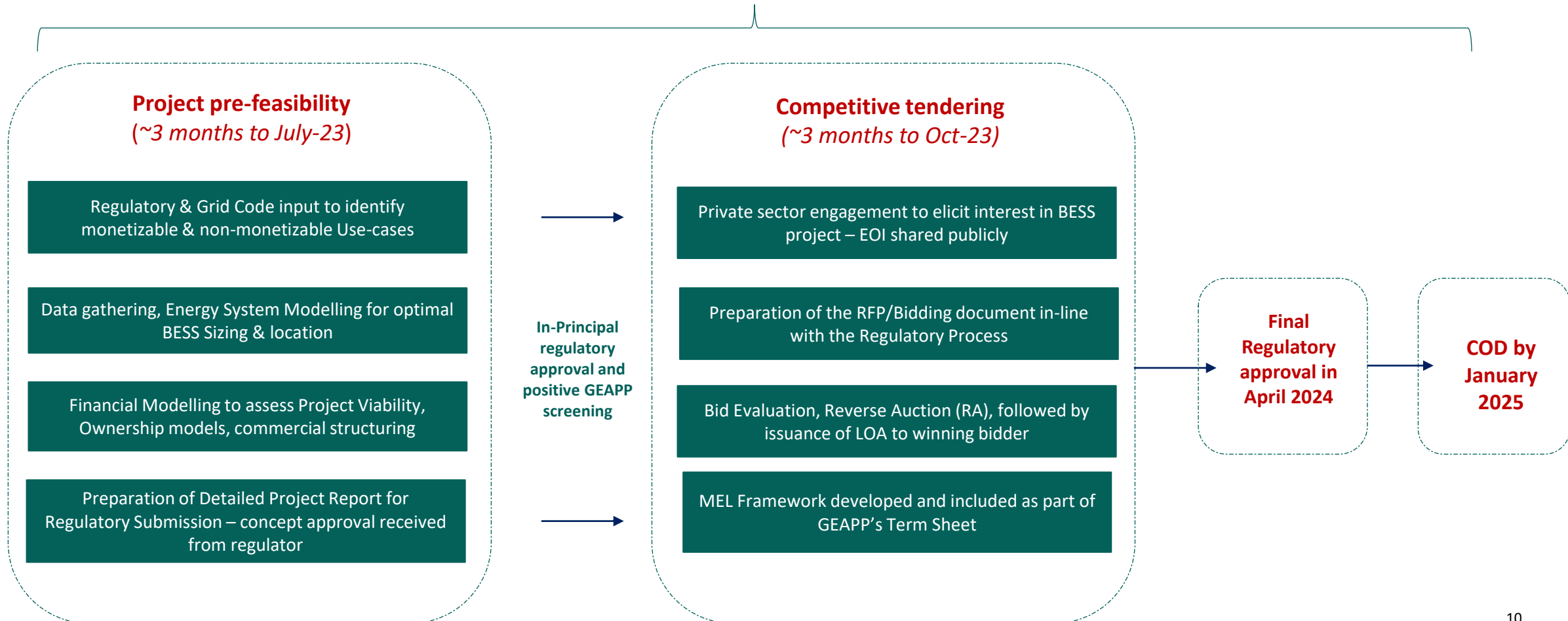
- Conservatively estimated at \$30.17m or \$600/kWh.

GEAPP has provided hands-on support to BRPL throughout the project development lifecycle to achieve several milestones in record time



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GEAPP's, supported by consultants, has led technical and commercial support to BRPL from pre-feasibility to competitive tendering with a view to demonstrating the value of BESS at the DISCOM level. **This direct involvement has ensured timely and optimal execution and means GEAPP has retained many learnings that it can take to future transaction.**





Thank you