



## Grantee Spotlight: Global Power System Transformation Consortium

The [Giving Green Fund](#) is awarding a restricted grant to the [Global Power System Transformation Consortium \(GPST\)](#) to support power system operators in Southeast Asia through two workstreams: 1) power system planning for battery storage deployment in Malaysia and 2) a regional roadmap for the control room of the future. GPST is a public-private consortium that connects power system operators, manufacturers, utilities, and research institutions to solve the technical challenges of running reliable grids on high shares of wind, solar, and battery storage.

GPST's work falls within our philanthropic strategy of [derisking clean electricity investments in LMICs](#) and, more specifically, our sub-strategies of implementing grid planning and reliability best practices and of building and sharing knowledge that strengthens regional capacity. Please see Giving Green's strategy report for more information, including potential risks and co-benefits, recommended sub-strategies, theory of change, funding need, and key uncertainties.

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### What Is GPST?

GPST was founded in 2019 by six system operators from Australia, Denmark, Great Britain, Ireland, and the U.S. It pairs research institutions and regional partners, who deliver country-level technical assistance, with communities of practice where operators work through shared challenges together. Over the past five years, GPST and its research institutions have worked with more than 36 actively engaged system operators, representing roughly one-third of global power generation.

[EPRI](#), a GPST core team member, will carry out the work funded by our grant. EPRI is an independent nonprofit research organization that works with more than 450 companies in 45 countries, and its research covers control room modernization and power system planning for inverter-based resources. The [ASEAN Centre for Energy](#), also a core team

member, supports GPST's work in Southeast Asia and will support disseminating findings across the region.

## What Are We Funding, and How Could It Help Address Climate Change?

**Battery storage planning in Malaysia:** As part of our sub-strategy of implementing grid planning and reliability best practices, we are funding GPST—working through EPRI—to help Malaysia's system operator bring energy storage into its transmission and resource planning processes. This work includes:

- **Assessing current planning practices** through structured interviews with the system operator
- **Co-developing a roadmap** of near-, medium-, and long-term actions
- **Providing technical assistance** on resource adequacy, production cost modeling, transmission planning, and storage valuation
- **Delivering an in-person training workshop** for key stakeholders

Like many countries, Malaysia has not planned much of its grid with storage in mind. Treating storage as a core planning resource will support faster deployment of storage and enable greater renewable generation, reducing electricity emissions.

**A regional roadmap for the control room of the future:** As part of our sub-strategies of (1) building and sharing knowledge that strengthens regional capacity and (2) implementing grid planning and reliability best practices, we are also funding GPST to develop a regional roadmap for control room modernization across Southeast Asia. This work includes:

- **Developing a regional framework** with a shared vision and modernization priorities
- **Assessing current and future-state capabilities** through document review and expert interviews
- **Translating the findings into an implementation plan** with prioritized initiatives, milestones, and timelines

The tools and processes a grid operator's control room uses will affect how much renewable energy capacity can be reliably integrated onto the grid. A shared regional baseline of best practices will let each grid operator build a national roadmap without commissioning separate analysis specific to their own grid, and will in turn allow more renewable energy to be integrated reliably onto LMIC grids.

## Why Do We Think GPST Will Use This Funding Well?

EPRI and GPST have already supported control room modernization in Indonesia, Pakistan, and Colombia. According to GPST, several Southeast Asian grid operators have since asked for deeper support on battery storage planning and control room modernization. Both projects we are funding would respond to those requests, which we think would increase the likelihood of operator buy-in, and would also fill a funding gap left by the recent dismantling of the U.S. Agency for International Development.

Due to GPST's experience with control room modernization in other LMICs, its existing work with system operators across Southeast Asia and the ASEAN Centre for Energy, and its team's technical expertise in grid planning and inverter-based resource integration, we think GPST is well suited to help the LMIC grid operators integrate substantially more renewable energy onto their grids.

*We publish grant spotlights to offer transparency to [Giving Green Fund](#) donors and resources for those interested in the impact strategies each grant supports. Giving Green believes our [Top Climate Nonprofits](#) have the greatest impact potential for large, unrestricted gifts. [For several reasons](#), we also disburse and recommend grants to other organizations surfaced through [our research process](#) for work that we believe is at least as impactful as grants to our top recommendations.*

*This is a non-partisan analysis (study or research) and is provided for educational purposes.*

*EPRI is a registered nonprofit in the U.S., and GPST is an independent project under Agora Think Tanks, a nonprofit in Germany.*