Philippine Green Energy Auction Program (GEAP) Primer

Oct 2024

INDEX PARTNERS

GEAP Background and Introduction

PRINCIPLES AND OBJECTIVES

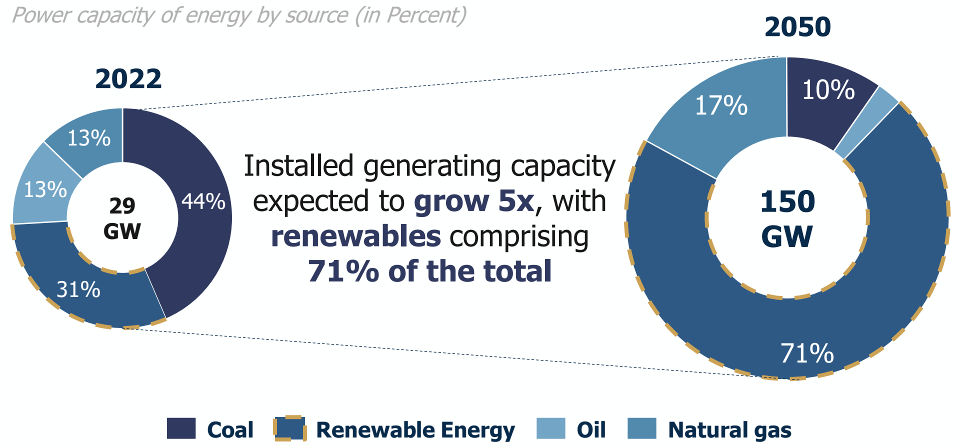
GEAP as the base for RE development

- The Green Energy Auction Program (**GEAP**) is designed to accelerate the country's shift toward renewable energy.
- The Department of Energy **(DOE)** uses these auctions to secure capacities and competitive tariffs.

GEA1	GEA2
1,967 MW of New RE capacities	**3,441 MW** of New RE capacities

Philippine renewable energy targets

Power capacity of energy by source (in Percent)



TIMELINES

- **2001** – EPIRA liberalized the energy market by establishing the **WESM** and unbundling **generation, transmission, distribution and supply sector**
- **2008** – Renewable Energy (RE) Act (RA 9513) **accelerated the development of RE**
- **2021** – **GEAP launched by the DOE** to increase renewable energy capacity through **competitive auctions**
- **2022** – 1st GEAP auction held on 17 Jun 2022, and **c. 2,000MW of RE capacity were awarded**
- **2023** – 2nd GEAP auction held on 3 July 2023, and **c. 3,500MW of RE capacity were awarded**
- **2024** – 3rd GEAP auction to be held Q4 2024 / Q1 2025, with a target of **c. 4,400 MW of RE capacity to be awarded**

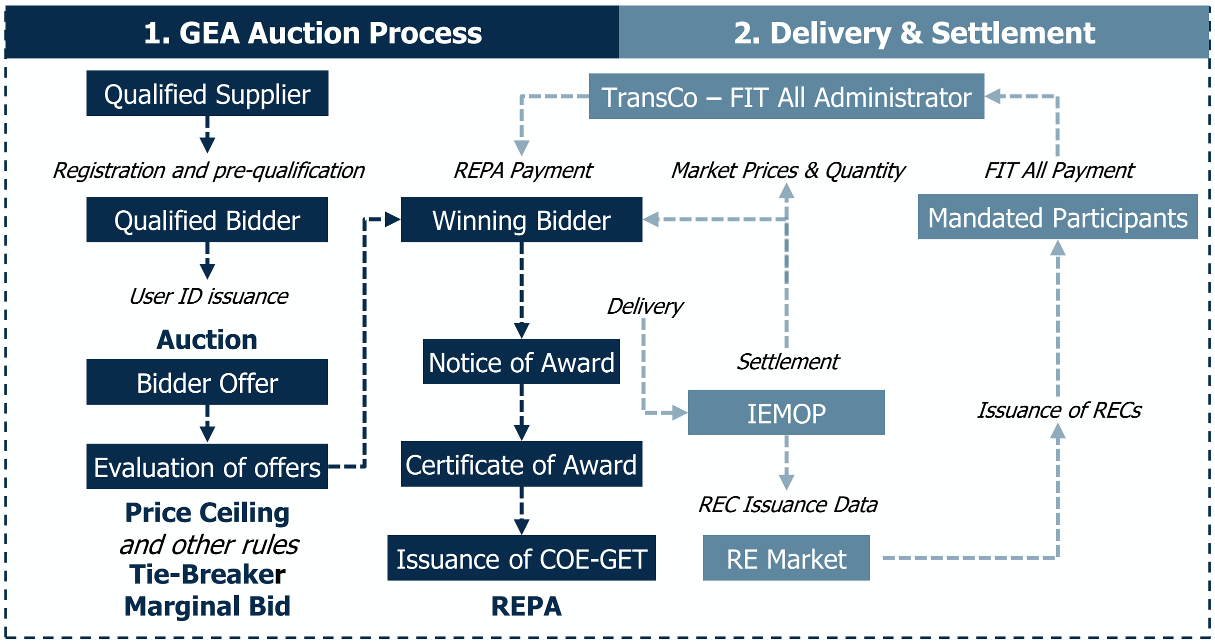
COMPARISON OF OFFTAKE OPTIONS

	Green Energy Auction Program	Contract with DU or EC	Contract with Retail Electric Supplier (RES)	Wholesale Electricity Spot Market (WESM)
Description	Offtake contracts secured through government auctions	Bilateral contracts with a Distribution Utility (DU) or Electric Cooperative (EC)	Offtake agreements under the Retail Competition and Open Access regime	Selling uncontracted energy in the spot market
Market Players	ERC, TransCo	Meralco, davao light, visayan electric, CENECO	MPower, San Miguel Global Power, First Gen, AboitizPower, ACEN RES	GTM
Pros	✓ Transparent and **competitive process** ✓ Long-term contracts provide **revenue stability**	✓ **Direct contracts** can simplify energy distribution ✓ Long-term contracts provide **revenue stability**	✓ **Flexibility** in pricing and contract terms. ✓ Multiple customers **reduces dependency on single buyer**	✓ Opportunity to capitalize on **favorable spot market prices** ✓ **Immediate access to market** without contract delays
Cons	× **Competitive bidding** may lower prices × Limited **flexibility**	× Dependence on a **single buyer** increases risk × **Competitive selection process** may cause delays	× **Uncertain demand** from customers may lead to inconsistent earnings	× Price fluctuations increase revenue instability (option to hedge pricing through **Green Tiger Markets** (GTM) forward market)

Sources: DOE, ERC, NGCP, Index Partners Analysis

GEAP Overview, Mechanics, and Auction Design

STRUCTURE OF GEAP



1. Renewable energy (RE) developers **that meet the DOE criteria** are recognized as **qualified bidders**.
2. Competitive auction process begins in which **GEAR prices** are set to **establish a price ceiling**.
3. REPA's[1] are awarded to the lowest bidder **to promote affordable renewable energy development**.
4. IEMOP settles transactions via the WESM **based on market prices and quantities delivered**
5. TransCo. acts as the **counterparty for the REPA** ensuring winning bidders are compensated while managing any price differences between spot (WESM) and contracted rates

GEAP Qualified Suppliers/Offers

- Renewable energy developers or generators that have **registered with the DOE**
- RE facilities built after the RE act with **no existing PPA/PSA** with distribution utilities at the **time of the agreed delivery date**
- Legacy RE facilities with expanded capacities that have **independent metering** in which additional capacity is eligible for RPS compliance

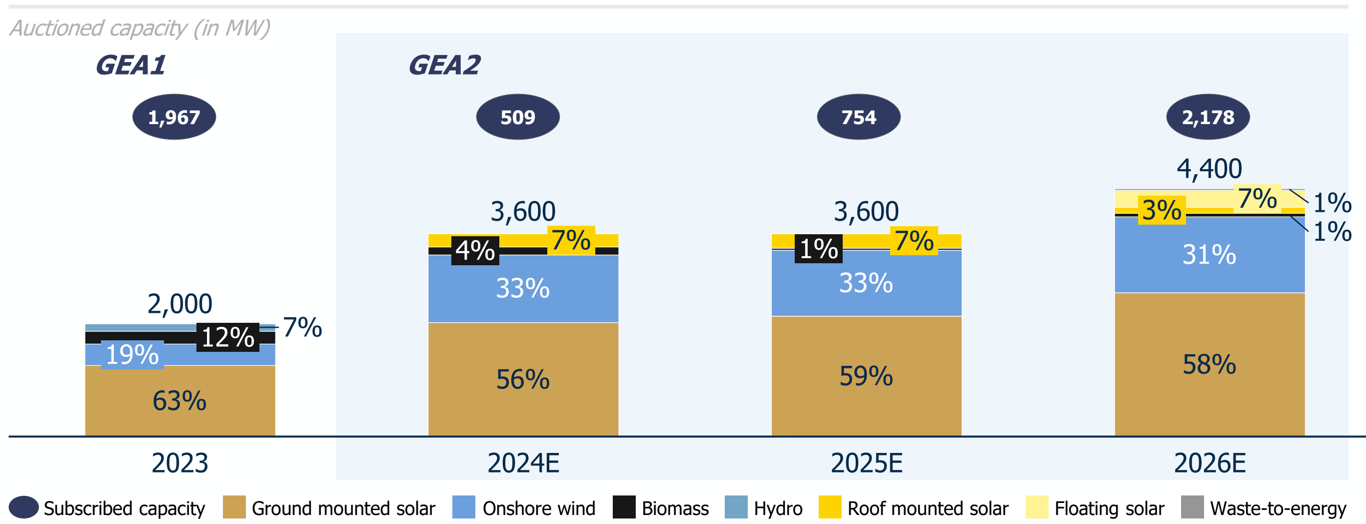
AUCTIONED CAPACITY

Philippines

2,000MW (GEA1)
Total auctioned capacity

11,600MW (GEA2)
Auctioned capacity from 2024 to 2026

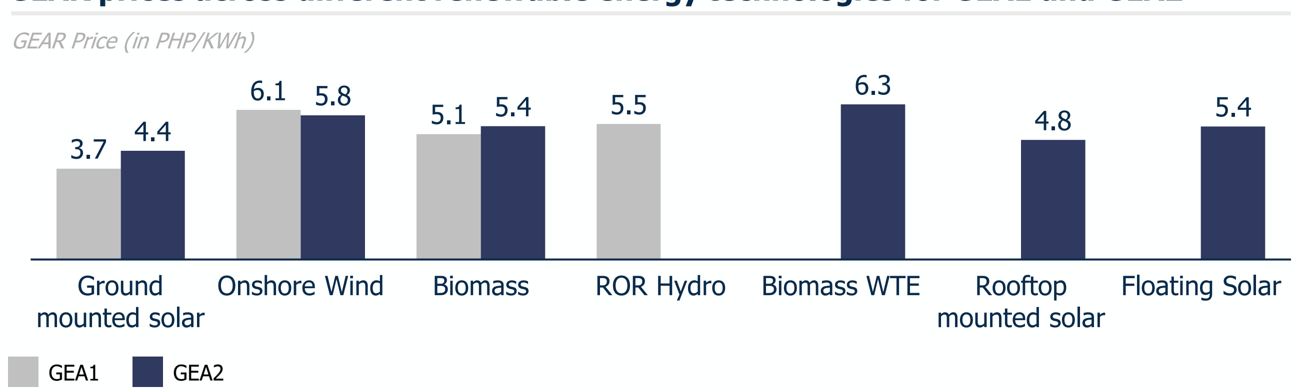
Expanded capacity offering under GEA2 reflects Philippines' commitment to scaling RE as part of its national goals



GREEN ENERGY AUCTION RESERVE (GEAR) PRICING

- GEAR prices set by ERC ensure **competitive bids** while maintaining financial viability for RE developers
- Promote **cost efficiency** and the development of **affordable energy**
- Varying prices across technologies **encourage diverse energy mix**

GEAR prices across different renewable energy technologies for GEA1 and GEA2



Notes: (1) Renewable Energy Payment Agreements, (2) Independent Electricity Market Operator, (3) Wholesale Electricity Spot Market
Sources: Index Partners Analysis, DOE, ERC

Key Results and Future Outlook of Auctions

KEY RESULTS OF COMPLETED AUCTIONS

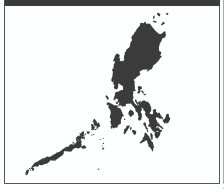
Total number of RE projects awarded

90 GEA2 projects (from 11 in GEA1)
Total no. of projects awarded in Luzon

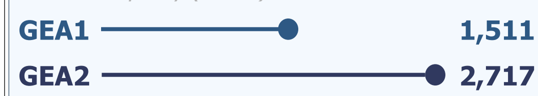
11 GEA2 projects (from 2 in GEA1)
Total no. of projects awarded in Visayas

4 GEA2 projects (from 6 in GEA1)
Total no. of projects awarded in Mindanao

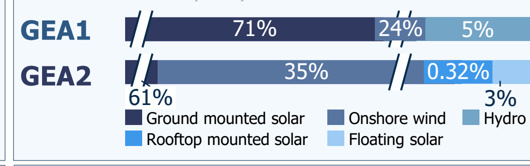
Luzon



Total awarded capacity
Awarded capacity (in MW)



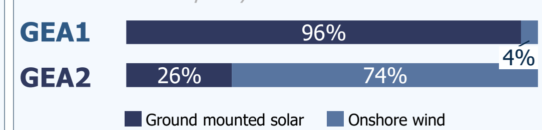
Renewable technologies mix
Percent of total capacity



Visayas

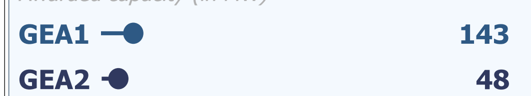
Total awarded capacity
Awarded capacity (in MW)

Renewable technologies mix
Percent of total capacity

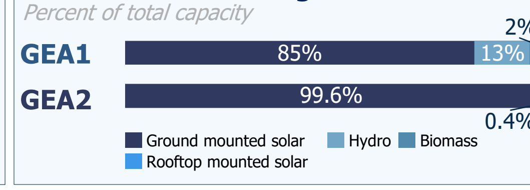


Mindanao

Total awarded capacity
Awarded capacity (in MW)



Renewable technologies mix
Percent of total capacity



Total awarded capacity in GEA2 increased to 3,440 from c. 1,967 in GEA1 presenting RE developers with a **promising landscape for large-scale projects**

Diversification of technologies to expand on floating solar and onshore wind **create new investment avenues that meet different geographical and operational needs**

Regional growth opportunities drive **RE expansion in the Philippines**, with other regions emerging as a promising market for additional investments

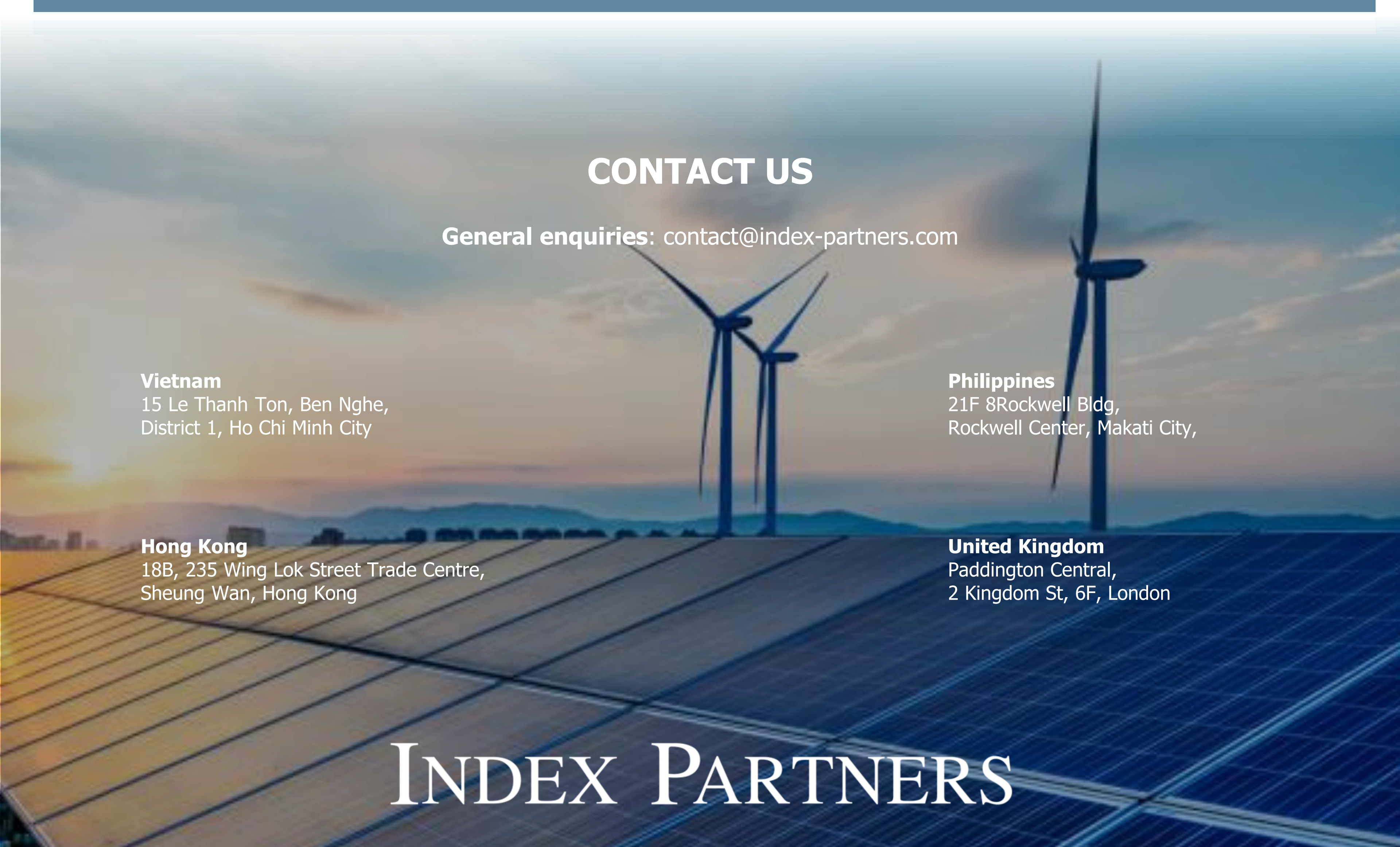
FORTHCOMING AUCTIONS

	GEA1	GEA2	GEA3	GEA4	GEA5
Auction Date	Jun 2022	Jul 2023	Q4 2024 to Q1 2025	[2025]	[2025]
Auctioned Capacity (MW)	2,000	11,600	4,475	8,400	[3,000-6,000]
Awarded (MW)	1,967	3,441			
Technology	▪ Ground-mounted solar ▪ Onshore wind ▪ Hydropower ▪ Biomass	▪ Ground-mounted solar ▪ Rooftop solar ▪ Floating solar ▪ Onshore wind	▪ Impounding hydro (a) ▪ Pumped-storage hydro (b) ▪ ROR hydro (c) ▪ Geothermal (d)	▪ Unsubscribed capacities of GEA2 ▪ IRESS (renewable + storage) ▪ LNG	▪ Offshore wind
Key Requirements	i) Proof of financial capability ii) Service contract	i) Letter of Interest through EVOSS	Developer's performance or non-performance vis a vis service contract commitments/timelines to be considered for qualification[1]		
Delivery Periods	2024	2024-2026	2028-2030 for a & b 2026-2028 for c 2024-2030 for d	[TBD]	[TBD]
Bid Bond	PHP 1m/MW (USD 18k/MW)				
Performance Bond[2]	▪ 20% of total project cost (TPC)	▪ 20%-30% of TPC, if cash/MC or surety bond/SBLC	[Lower performance bond requirements are currently being lobbied and discussed]		
GEAR Price (PHP/kWh)	3.7 (solar) to 6.1 (wind)	4.4 (solar) to 6.3 (biomass)	[TBD]	[TBD]	10 (fixed) to 15 (floating)[3]

Notes: (1) As indicated in the Senate finance subcommittee hearing on the DOE's budget held last 10 Oct 2024, (2) Performance Bond implications: i) Delivery delay <1 year: up to 36.5% of PB (0.1% per day), ii) Delivery delay >1 year: 100% of PB + offtake contract revocation, (3) Per initial study commissioned through OWC, CESI, and The Lantau Group

Index Partners helps maximize value for clients in the Green Energy Auction Program

Our services	How Index Partners can help
Offtake Advisory	• **Tender Assistance**: Provide full support in preparing and submitting bids for upcoming GEAP rounds, increasing chances of securing long-term PPAs. • **Case Study Insights**: Provide detailed analysis of past GEAP rounds, including capacity, winners, and pricing per technology to inform decision-making. • **Securing PPAs**: Guide developers through the process of securing Power Purchase Agreements (PPAs) with various off-takers, ensuring stable, long-term revenues.
Strategic Partnerships	• **Partner Screening**: Identify and connect developers with strategic partners to create synergies and enhance the value of renewable energy ventures. • **Joint Venture Structuring:** Index Partners facilitates joint ventures with local and international players, optimizing risk-sharing and operational success for GEAP projects**.** • **Strategic Advisory**: Additional value-added guidance to ensure success of the JV going forward.
Capital Raising	• **Debt and Equity Capital Raising:** Connect developers with global and local investors to raise capital for GEAP projects, ensuring tailored financing solutions. • **Project Structuring**: Design optimal financial structures to make projects bankable, reducing risks for both lenders and investors.



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