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International  
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# ***Challenges and solutions Vietnam's clean energy transition***

Vietnam Initiative for Energy Transition

**Beyond Net Zero**  
an international perspective on how decarbonisation strategies  
can foster a just transition and global cooperation

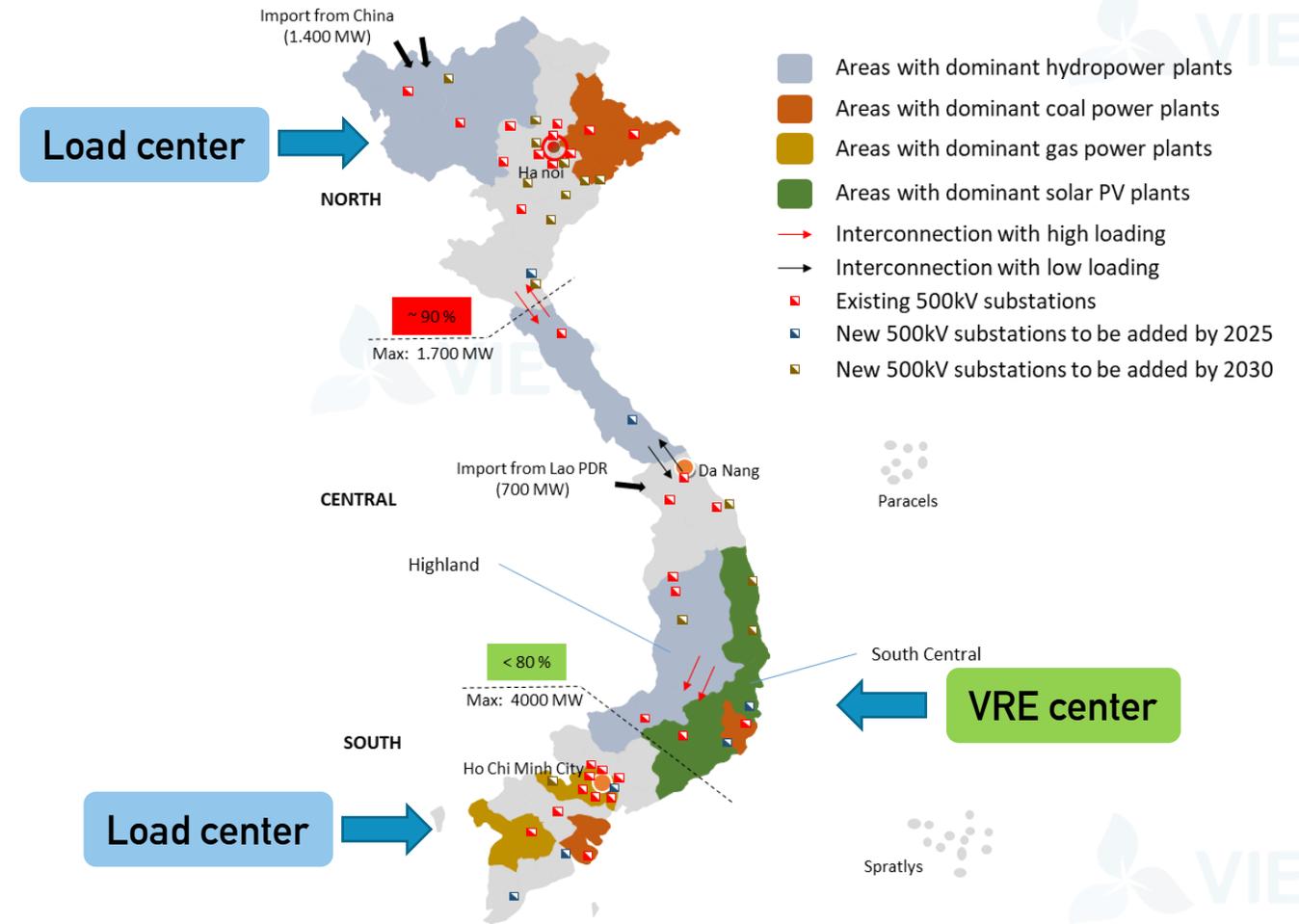
*INETTT side event at BETD 2023  
Berlin, 30 March 2023*





# Vietnam's power system has distinctive characteristics

- Fast-growing electricity demand (~11%/year pre-covid).
- High electricity elasticity → room for EE improvement.
- Fossil fuel self-sufficient until 2015. Dependency on imported fossil fuels increases rapidly.
- Substantial hydropower sources but almost fully exploited.
- High RE potential regions are far away from load centers → need for regional transmissions.
- High electrification rate (99.7% of households have access to national grid)
- Wholesale competitive market operated since 2019 but all buyers are EVN's subsidiaries. The state regulates retail prices. Retail competitive market is being developed.



Source: VIETSE



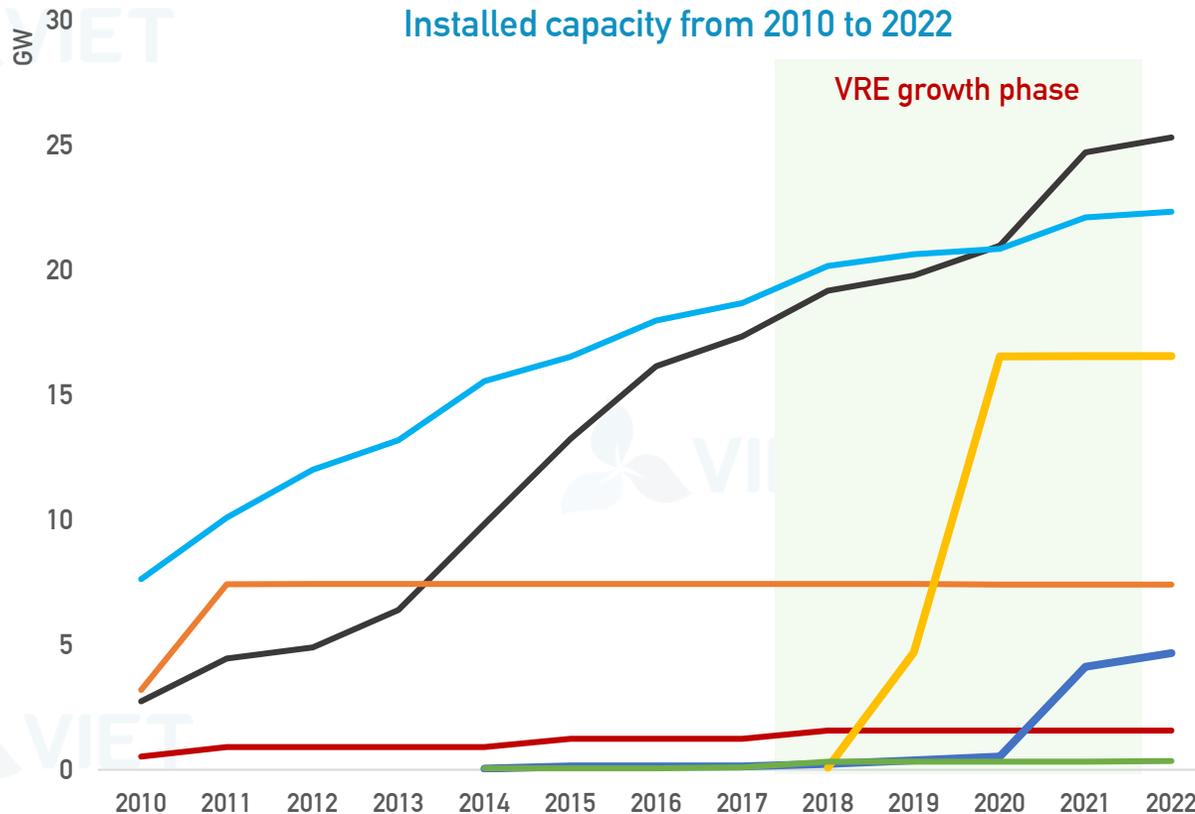
# Energy transition gained momentum

## But fossil fuel still provides a large portion of electricity

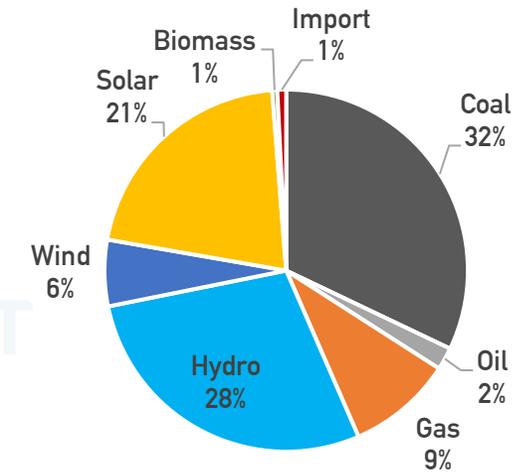
Vietnam ranks 1<sup>st</sup> in SEA in terms of

- Power system capacity ~ 79 GW
- Installed VRE capacity ~ 21 GW

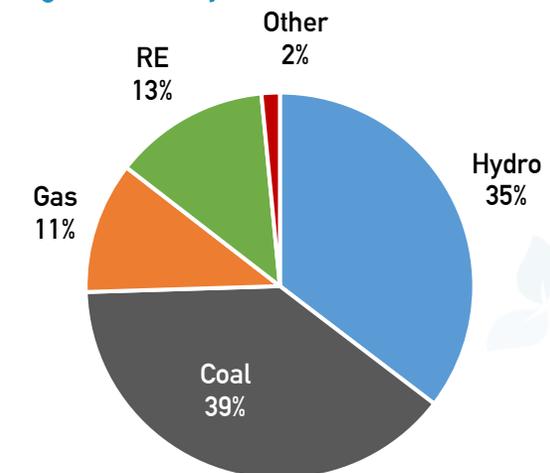
Installed capacity from 2010 to 2022



Installed capacity 2022 (Total ~79 GW)



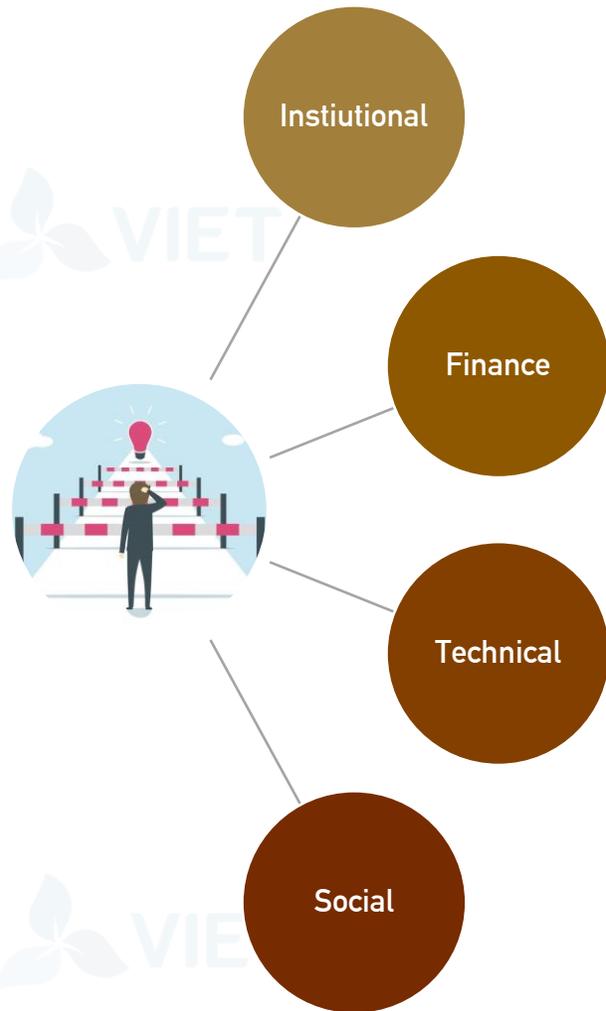
Power generation by sources 2022 (Total 268 TWh)



# Key challenges/elements to accelerate clean energy transition



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## Immediate

- PDP8 not yet approved
- DPPA not yet approved
- Auction mechanism is in design

- JETP negotiation
- Innovative financing mechanisms
- Grid infrastructure upgrade

- Power system lack of flexibility
- Lack of storage capacity

- Just transition framework
- Lack of skilled workforce
- Awareness & understanding

## Medium term

- Technical standards
- Aligning legal docs

- Public debt ceiling
- ODA process
- Large investment needs
- Carbon pricing

- Continuous growing demand
- Supply chain for clean energy is underdeveloped
- Repurposing unabated fossil fuel assets

- Education, training & Reskilling to be strengthen
- Enhance public discourse

## Long term

- Ministerial collaboration and coordination

- Low electricity price  
*(challenges for utilities to mobilise sufficient funds to finance supply expansion)*
- Stranded assets risks

- Smart grid & demand response
- Carbon capture & storage
- Interconnections

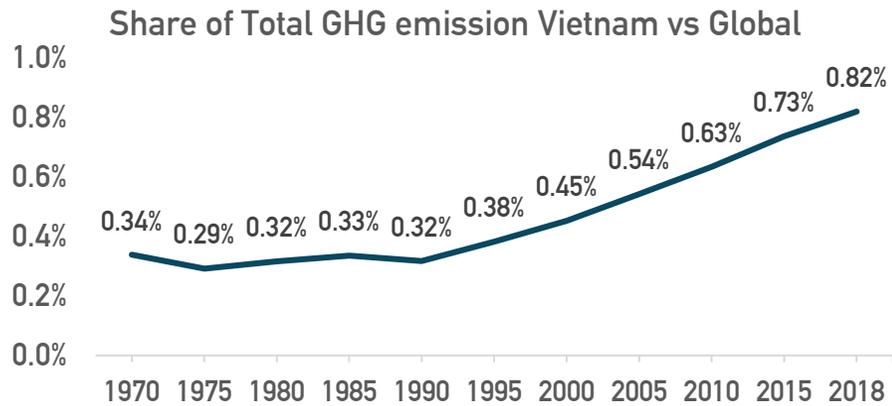
- Social safety net



# Role of Vietnam in global transformation to a net zero community

Vietnam's responsible for a small fraction of global GHG emissions...

...but is taking bold steps in scaling up RE and showing strong political wills in climate protection



Rank of Vietnam by GHG emissions among 208 countries

2018	22
2010	30
2000	35
1995	42



04.11.2021

**GLOBAL COAL TO CLEAN POWER  
TRANSITION STATEMENT**

Doubled emissions reduction targets  
in Updated NDC 2022

Collaborating with international partners in  
raising climate ambition (i.e. JETP,...)



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# Thank you!



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