

# Enhancing regulatory and policy frameworks for power trade: experience from outside Asia

Asia Clean Energy Forum

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Kuungana Advisory Limited  
Company Reg. No: 9872349



**Kuungana**  
Advisory

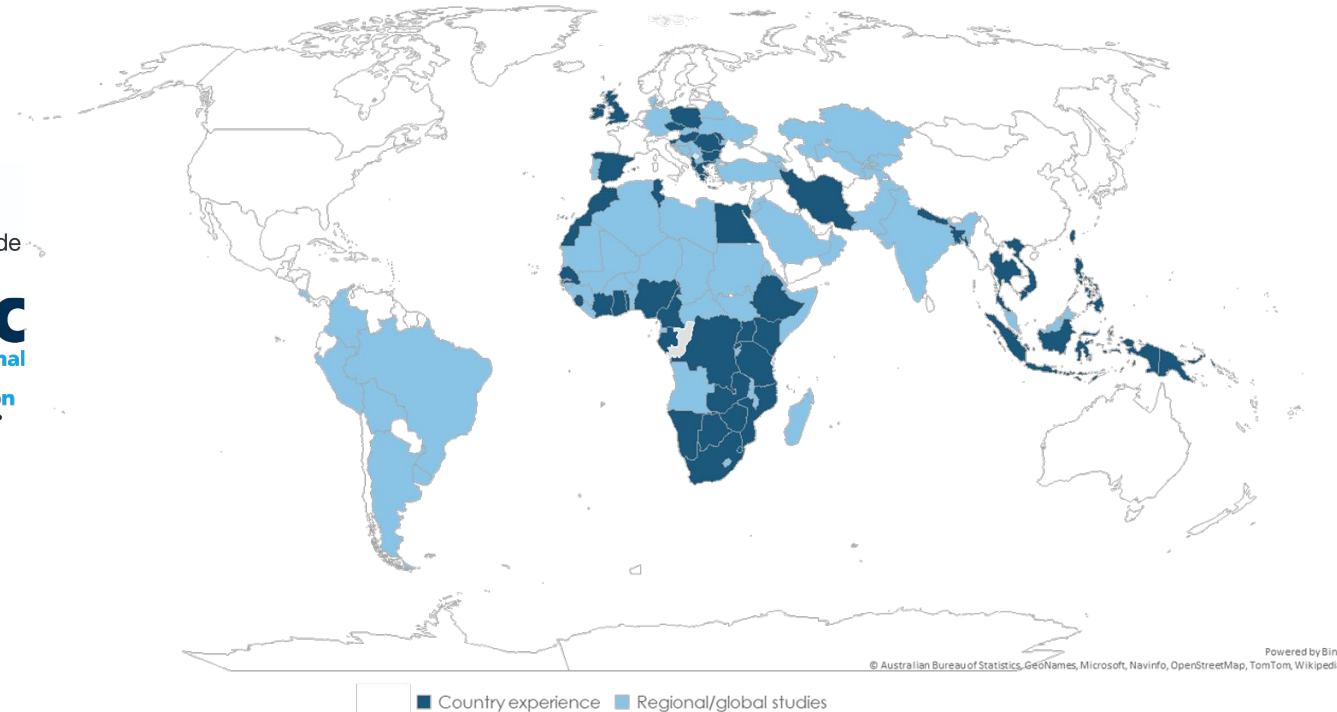


- Kuungana Advisory is an energy economics advisory firm, based in London and focused on middle- and low-income countries.
- We work on advisory projects that facilitate the transformational change required to connect communities to environmentally sustainable and affordable energy supply.

## Our clients...

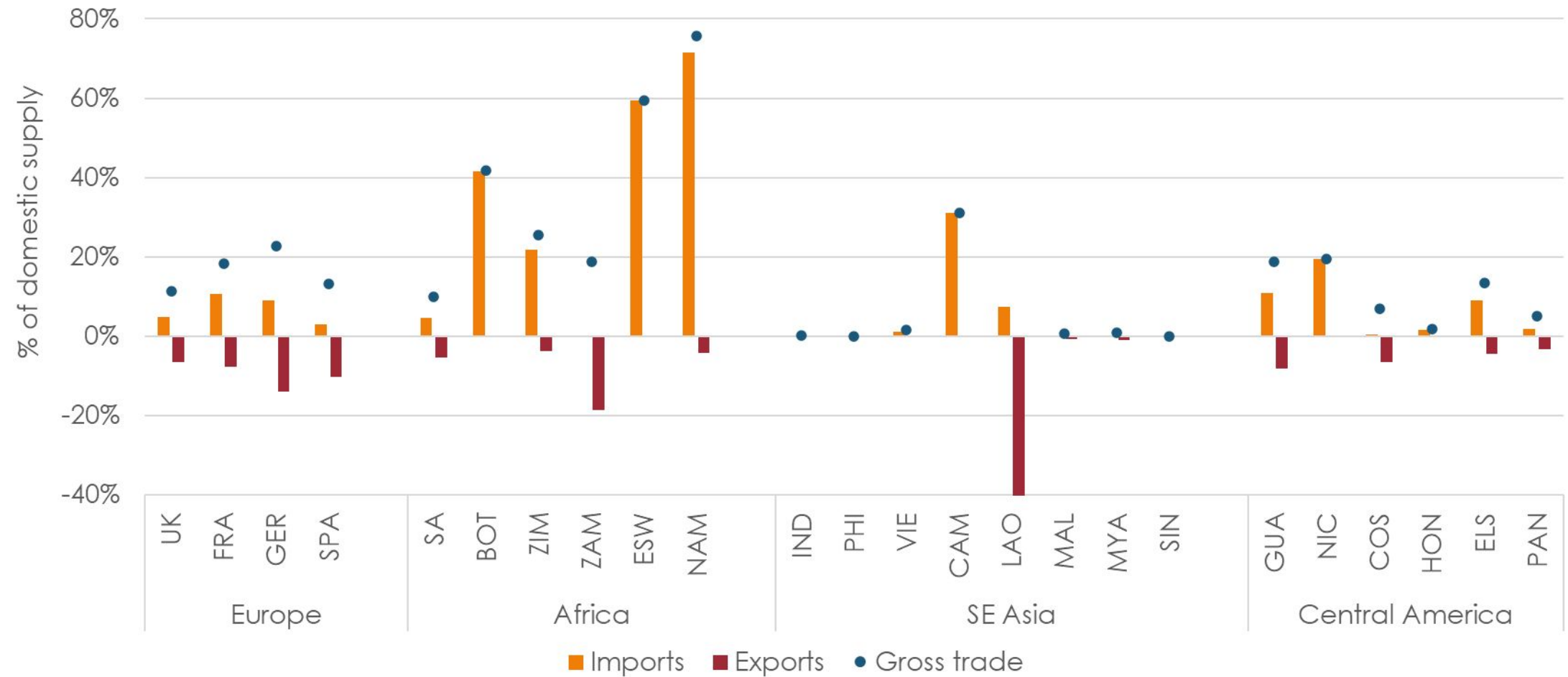


## Our geographical coverage...



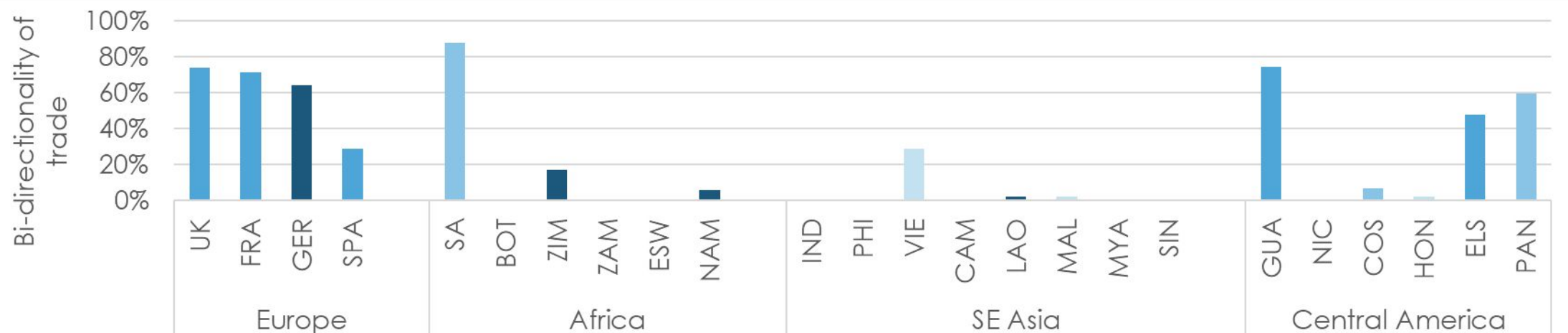
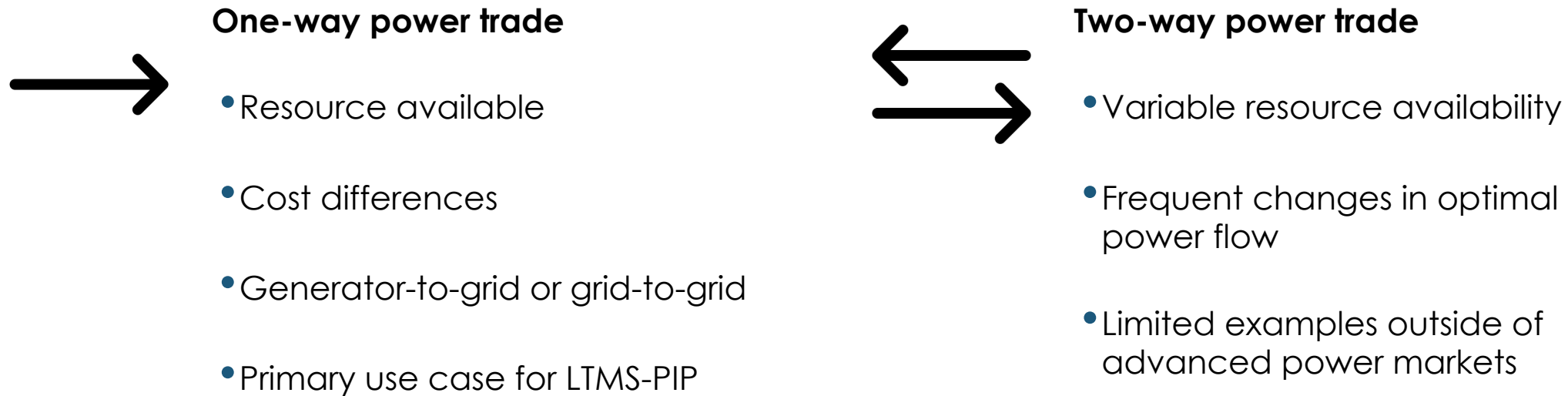
# Global trends in electricity trade

*Electricity trade remains low globally, but especially so in SE Asia*



# Drivers of power trade

*Renewables integration increases the need for two-way trade*



# The role of market arrangements

*Modelling of SAPP demonstrates the importance of liberalised trade*

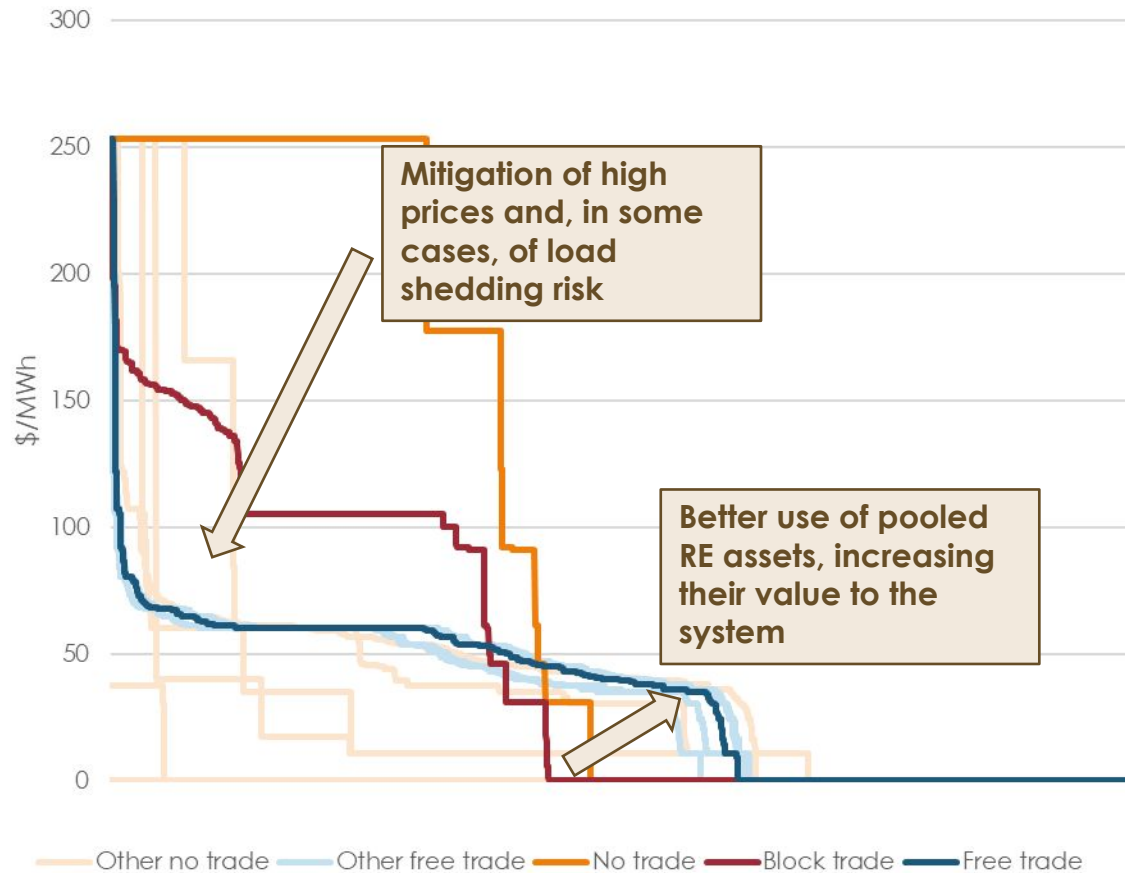
	<b>No trade</b> <i>Interconnectors cannot be used at all</i>	<b>Block trade</b> <i>Bilateral unidirectional trade, driven by persistent price differences</i>	<b>Free trade</b> <i>Multilateral and flexible trading of power on granular timescales</i>
<b>Base Case</b> <i>Supply mix broadly in line with today</i>		→ -1.3%	→ -5.3%
<b>High Renewables</b> <i>Much higher penetration of variable renewables</i>	↓ -54.8%	→ -11.0%	→ -11.3%

- The biggest cost reductions come through decarbonisation of the power system, regardless of trading arrangements. Note that the % reduction shown is only SRMC-based – capital costs will be higher in the High Renewables scenario.
- The importance of interconnectors and electricity trade grows in a low carbon power system.
- Trading arrangements are at least as important as the physical infrastructure in place in determining the benefits of trade.



# The role of market arrangements

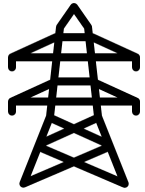
## *Modelling of SAPP demonstrates the importance of liberalised trade*



- The impact of trade on electricity prices will vary by country – this is often the obstacle as countries struggle to agree on cost allocation and benefit sharing mechanisms.
- Overall, trade reduces the number of extreme high and low-price periods.
- This also allows for better use of existing renewable energy assets, reducing curtailment.

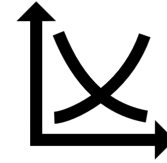
# Ingredients of low carbon power trade

*Hard infrastructure alone will not unlock the benefits of trade*



## Infrastructure

- Trade cannot take place without grid infrastructure being in place
- Technical interoperability is key



## Economics

- Strong business case underpinned by fundamentals
- Resilience to multiple scenarios



## Regulatory and market structures

- Wholesale power markets
- Regional markets / market coupling
- Temporal granularity






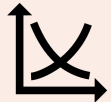




## Commercial / financing model

- Contracting structure that allows for flexibility
- Active engagement of lenders to ensure bankability

# Comparison of regional markets

*There is no perfect model, but SE Asia can draw on the experience of other regional blocs*

				
<b>Infrastructure</b> 	✓	✓	✓	✓
<b>Economics</b> 	✓	✓	✓	✓
<b>Regulatory and market structures</b> 	✓	✓		✓
<b>Commercial / financing model</b> 	✓	✓	✓	✓



# Key messages

- Strong regional interconnections will be an important ingredient to achieving a **least cost transition**
- This is **not just about building infrastructure** – although this is clearly very important!
- **Market and commercial arrangements** will be critical to unlocking the benefits
- Responsive and multi-directional trade **requires a more liberalized market framework** than baseload uni-directional trade



[www.kuungana-advisory.com](http://www.kuungana-advisory.com)



**Global Compact**  
Network UK

Kuungana Advisory is a participant of the United Nations Global Compact and the UN Global Compact Network UK, and adheres to their principles-based approach to responsible business.