

FRAMEWORK FOR NAMA PROJECT PIPELINE DEVELOPMENT

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WHAT IS A PROJECT PIPELINE WITHIN A CLIMATE FINANCE PROGRAM—SUCH AS A NAMA?

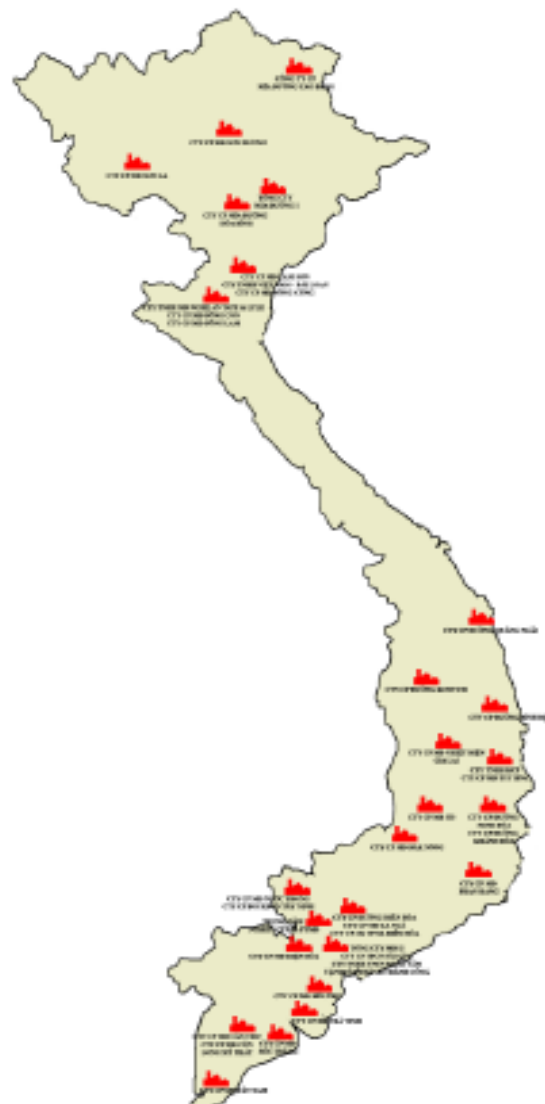
- Typically, a portfolio of individual investment opportunities that will take advantage of a financing mechanism initially seeded by climate fund(s)
- This portfolio should demonstrate:
 - Economic and technical feasibility of the underlying mitigation actions
 - Vision how these investments contribute to the paradigm shift/transformational change of a sector
 - Commitment of sectorial stakeholders to undertake investments—provide equity
 - Commitment of domestic banking sector to finance them—provide debt

CHALLENGES FOR PROJECT PIPELINE DEVELOPMENT

- Understanding what is a project pipeline
 - Projects in the pipeline should be directly linked to the identified mitigation opportunity—transformational change, be economically and technically feasible, replicable, and serve to demonstrate how barriers are being addressed
 - Long-term on-the-ground presence
 - Need to understand sectorial specifics
 - Why are economically viable activities not taking place already?
 - Policy & regulatory issues
 - Technology
 - Financing
 - Full stakeholder buy-in
-

UNDERSTANDING A SECTOR

- GIZ's Energy Support Program in Vietnam and CF Ready Program allowed for in-depth investigation of the biomass and sugar sectors
- Of the 41 sugar mills in the country, the NAMA development team visited 10, meeting with:
 - Executive management
 - Financial management
 - Technology management
- Plus meetings with sugar cane farmers, local & national governments, industry association, banks, technology providers, foreign donors and cooperation partners, local experts



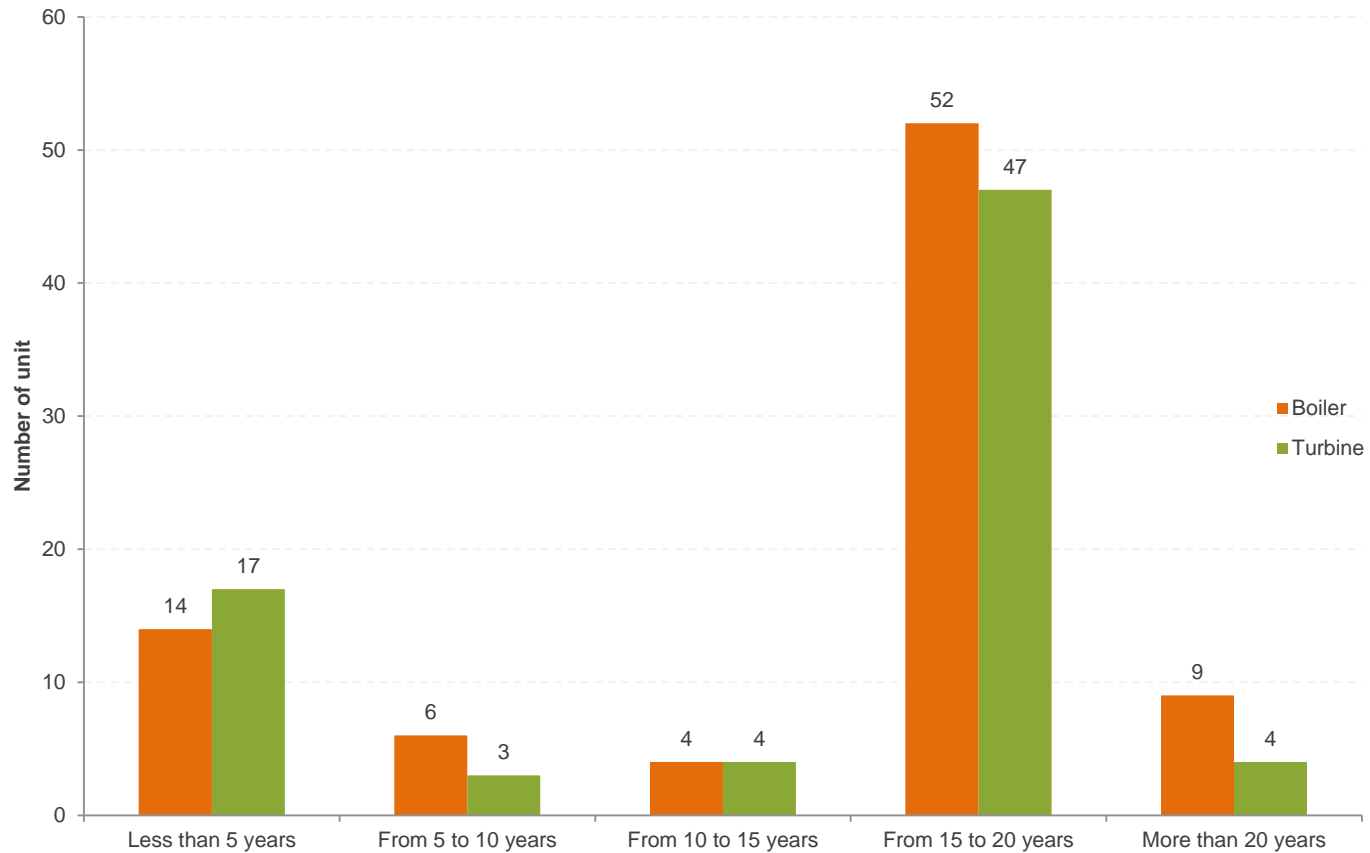
DEVELOPING SECTORIAL UNDERSTANDING

- Extensive on-the-ground presence resulted in identifying individual investment opportunities and understanding of the barriers in the way of these investments
- Effort resulted in identifying 700 MW in new renewable energy capacity in Vietnamese sugar mills, requiring new investments of over \$1 billion



UNDERSTANDING A SECTOR-TECHNOLOGY

Age of boilers and turbines in Vietnamese sugar mills



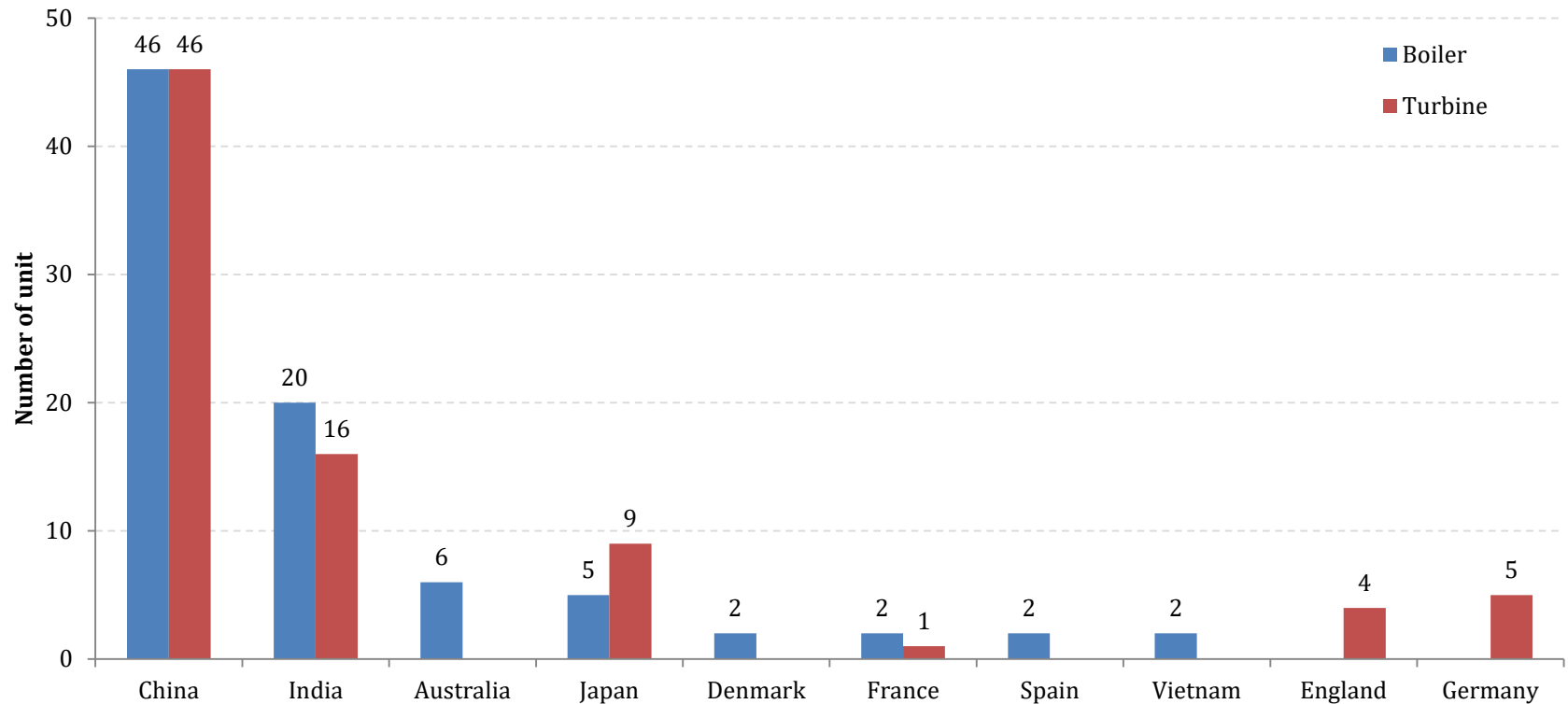
UNDERSTANDING A SECTOR – TECHNOLOGY (2)

Efficiency of boilers in Vietnamese Sugar Mills

	Boiler & Turbine/Generators operating pressure (bar)	Bagasse to Energy (kg bagasse/kWh)	Number of referenced sugar mills
1	Around 21 to less than 25 bar	5.0 – 5.42	2
2	Around 25 bar	4.5 – 4.81	2
3	Around 40 bar	3.28 – 3.32	2
4	Around 60 bar	2.71 – 2.94	1
5	Around 100 bar	2.15	1

UNDERSTANDING A SECTOR – TECHNOLOGY (3)

Origin of energy generation technology in Vietnamese sugar mills



CHALLENGES FACED BY THE SUGAR SECTOR IN INCREASING RE GENERATION

	Current Situation	New Scheme
Main concern	Internal production	External customer
Power production efficiency	Lesser priority	Major concern
Engineering	In-house	Out-source
Investment volume	Low	High
People (recruitment, compensation)	Sugar industry (home turf)	Power sector
Communications	Informal	Formal

CHALLENGES FACED BY THE SUGAR SECTOR IN INCREASING RE GENERATION

TECHNOLOGY BARRIERS

- Lack of technology know-how within the sugar mills sector
 - Dependence on offers of energy plants by technology suppliers, rather than by independent expertise
- Lack of domestic technology suppliers and vendors
 - Dependence on foreign vendors and suppliers

SOLUTION

- Targeted technical assistance to sugar mills and domestic biomass technology sector

CHALLENGES FACED BY THE SUGAR SECTOR IN INCREASING RE GENERATION

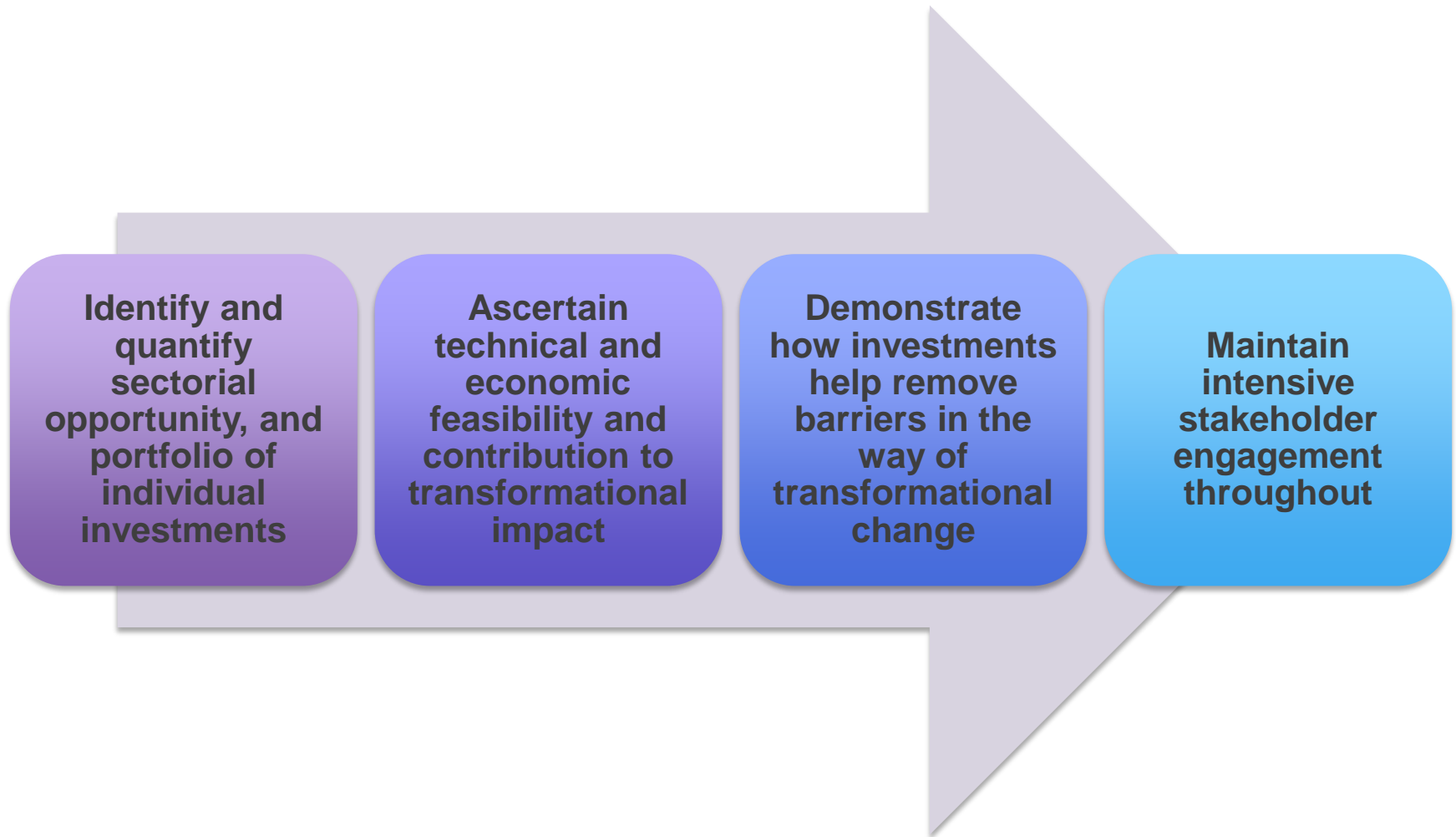
FINANCING BARRIERS

- Lack of financing options for sugar mills to finance new power capacity
 - Banks perceive as too risky
 - Technology
 - Fuel supply
 - Profitability
 - Counterparty
 - Banks also viewed sector as not large enough to develop financing products

SOLUTION

- Credit Guarantee Fund to reduce risk of local banks to provide financing to sugar mills
 - Fund will allow banks to extend financing to sugar mills
 - On the ground work also resulted in identification of full investment potential and significant financing opportunity

FRAMEWORK FOR PROJECT PIPELINE DEVELOPMENT



THANK YOU

For more information,
please visit us at

www.ccap.org.

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