



# **CTI PFAN (Private Financing Advisory Network)**

**Mobilizing Private Sector Financing  
for Mitigating Climate Change and  
Promoting Development**

## **Infrastructure Workshop**

Collin Green, GCC Specialist  
EGAT/ESP/Climate

**December 13 – 17, 2010**

# CONTENTS

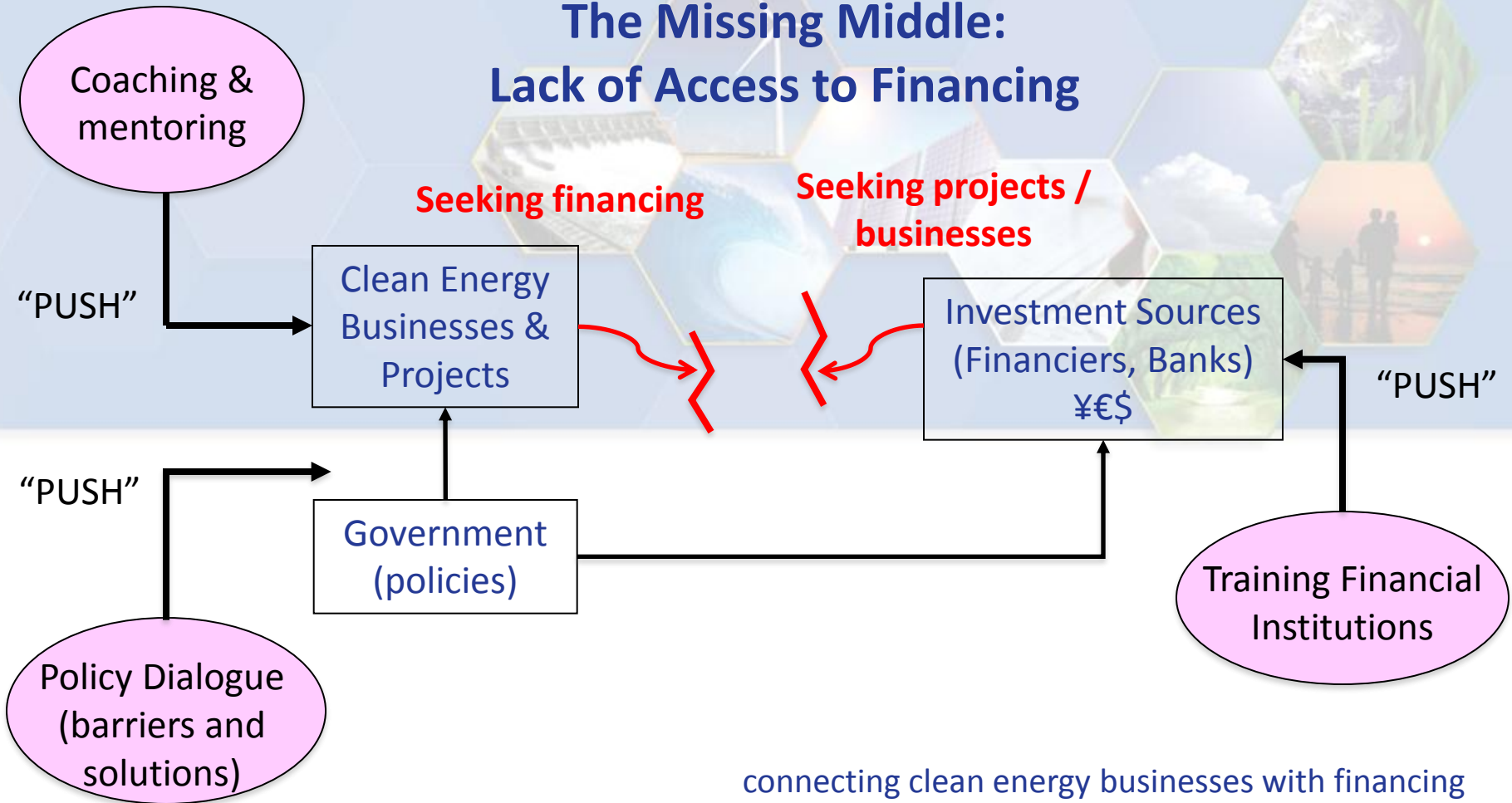
- ❑ Background & Introduction
  - Missing Middle
- ❑ Overview of CTI PFAN
  - What it is and how it works
  - Network Overview
- ❑ Activity Highlights 2010
  - AFRICEF
  - Pipeline Analysis
  - Sample Projects
  - Testimonials & Video Contributions
- ❑ Added Value of CTI PFAN / Summary



# CTI PFAN – Integrated Programme Design

*How a multi-pronged approach can scale up clean energy deployment*

## The Missing Middle: Lack of Access to Financing



# WHAT IS CTI PFAN?

- ❑ CTI PFAN is a Multi-Lateral Public Private Partnership
  - CTI Countries / APP / ICETT / REEEP / USAID
- ❑ Network of Private Sector Professionals
  - Investors / Consultants
  - Developing Country experience & appetite
  - Over 40 full members & growing fast
  - Large database of investors > 100
- ❑ CTI PFAN goals:
  - to accelerate technology transfer and diffusion under the UNFCCC
  - to reduce GHG
  - to promote low-carbon, sustainable economic development
  - to increase financing opportunities for promising clean energy projects
- ❑ Connects CE projects with Investors / Financing
  - Real projects on the ground making a real impact
- ❑ Triple bottom line approach

# CTI PFAN'S FUNDING PARTNERS



**USAID**  
FROM THE AMERICAN PEOPLE



renewable  
energy  
& energy  
efficiency  
partnership



# CTI PFAN NETWORK MEMBERS



Management  
Consultant  
Regulatory  
Economics &  
Finance



FE CLEAN ENERGY GROUP  
INC.



# WHAT SERVICES DOES CTI PFAN OFFER?

- ❑ CTI PFAN provides support & advice to selected projects to help them meet the criteria of the Investment Community
- ❑ **Free** coaching service to project sponsors & developers to help them raise private sector finance
  - Project Development / Commercial & Financing Structure
  - Marketing / Technical Issues / Growth Strategy
  - Preparation of Business Plans, Investment & Financing Proposals
  - Sourcing Equity & Debt
- ❑ Technical Assistance
  - Contributions to the cost of technical studies etc
- ❑ Matchmaking Service: Contact Broking & Introductions
- ❑ Investment / Financing – directly from PFAN Members & their Networks



# HOW DOES IT WORK?

## ❑ 2 Entry Points

### ❑ Unsolicited Proposal Submission for Development Pipeline

- From any source
- Induction Review: rigorous but non-bureaucratic
- PFAN Member assigned to project as dedicated Coach
- 3 Phase Development Framework
  - Preparation of the BP
  - Introduction to Investors
  - Guidance to Investability & Financial Closing

### ❑ Regional & Country based CE Financing Forums

- RFP – project selection
- Intensive Coaching on Business Plan & Investor Pitch
- Showcasing in front of Investors at Forum
- Projects inducted into Development Pipeline

# COSTS

- ❑ PFAN Services are provided **free** to the project developer / sponsor
  - Subject to selection
- ❑ Cost of providing the PFAN Services is absorbed by the Funding Partners (CTI / USAID / APP / ICETT / REEEP etc).
- ❑ Provision of services subsidised by the PFAN Members
  - Trade-off: access to the project pipeline for business development
  - Right of First Offer to provide services / financing (non-binding & fully competitive terms)
- ❑ Success Fee on Financial Closing
  - Shared between PFAN and the involved PFAN Consultant according to an agreed schedule



# PROJECT CRITERIA

- ❑ Target Project Size: USD 1 – 50 million total investment volume
  - Smaller & larger projects possible
  - Ca 15% of portfolio for Micro-Projects (< USD 1 million)
- ❑ Commercial & Technical Viability
  - Adequate return on investment
- ❑ GHG reduction / abatement potential
- ❑ Typical Project Type: CE / RE mitigation projects for generation of power or production of biofuels
  - Wind, Solar, Geothermal, Biomass, Biofuels, Small Hydro
  - PFAN is technology neutral
  - EE / Adaptation / Forestry / Upstream Technology Dvpt Projects
- ❑ Other developmental benefits
  - MDGs: agricultural development, poverty reduction, health, education, female economic participation etc

# Network Overview

## - Latin America / Caribbean

### □ Latin America & Caribbean Regional Network

- Dedicated Coverage in Brazil, Chile, Columbia, Mexico
- All other countries in the region eligible
- 11 Projects in Pipeline / USD 132 million investment volume
- USD 35 million raised / 2 projects closed
- Brazil Mini CE Financing Forum in 2010
- Major Scale Up Effort in Central America & Caribbean SIDs from April 2011.

# Network Overview

## - Asia

### ❑ Dedicated Networks

- China
- India
- Indonesia
- Philippines
- Supported / managed by USAID ECO Asia Programme

### ❑ Regional Coverage

- Across South East Asia (Vietnam / Cambodia / Laos)
- Sri Lanka / Nepal / Bangladesh

### ❑ 69 Projects in Development Pipeline



# Network Overview

## - Africa

### □ Africa Regional Network

- Dedicated Country Networks in Mozambique, Uganda and South Africa
- Transfer Project from Brazil to Mozambique: solar hydroponics
- 30 Projects in the Development Pipeline – \$ 127 million
- USD 8 million investment raised / 2 projects closed
- Africa Regional CE Financing Forum (Sep 2010)

# Activity Highlights 2010

- ❑ Launch of India Network & Activities
- ❑ 7 CE Financing Fora
- ❑ Establishment of in-country Networks in Mozambique, Uganda & South Africa
  - Base for regional & sub regional African networks
- ❑ 15 New Projects reaching Financial Closure
  - USD 158 million of new investment raised / leveraged

# CLEAN ENERGY FINANCING FORUMS

## □ Typical CE Financing Forum Format

- Call for Proposals – project selection & shortlisting
- Intensive 1-on-1 coaching
- Project Development & Financing Workshops
- Investor Workshop to target projects at investors
- Showcasing of projects thru an “Investor Pitch”
- Business Plan Competition
- CTI PFAN CE Financing Awards for best projects

## □ Successful Tool for Project Identification & Network Expansion



# Fora Summary

## ❑ 7 CE Fora in 2010

- AFCEF 2 / Philippines 2 / Indonesia 2 / China 2 / AFRICEF / India
- Mini-Forum in Brazil

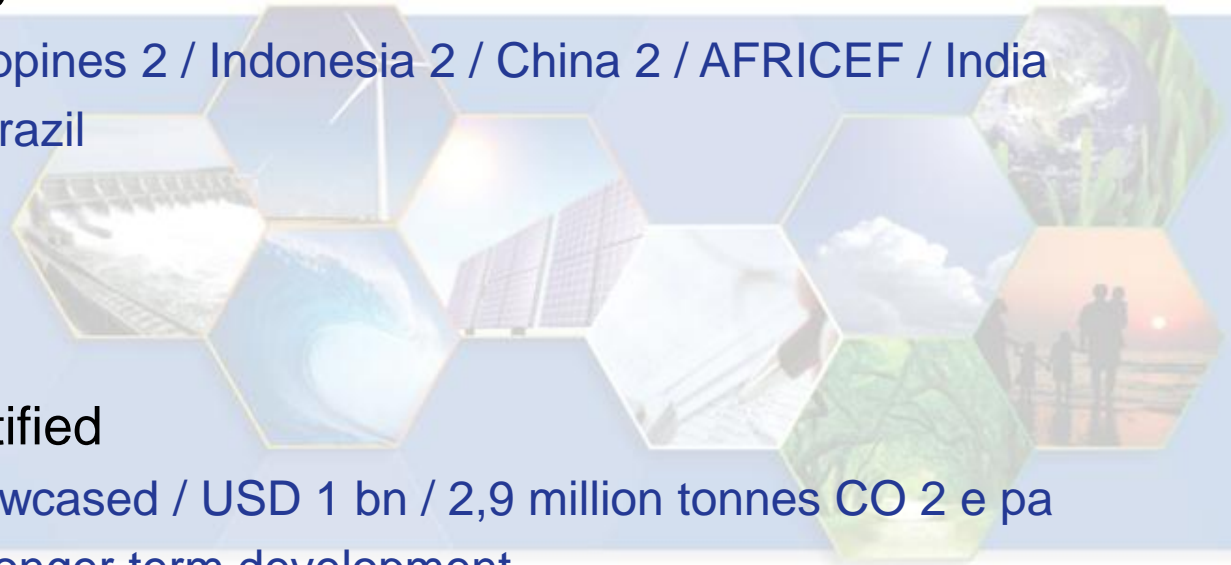
## ❑ 1100 Participants

## ❑ 264 Projects Identified

- 56 Projects Showcased / USD 1 bn / 2,9 million tonnes CO<sub>2</sub>e pa
- 42 Projects for longer term development

## ❑ 13 Projects Closed

- USD 168 Million Investment raised



# Development Pipeline Summary

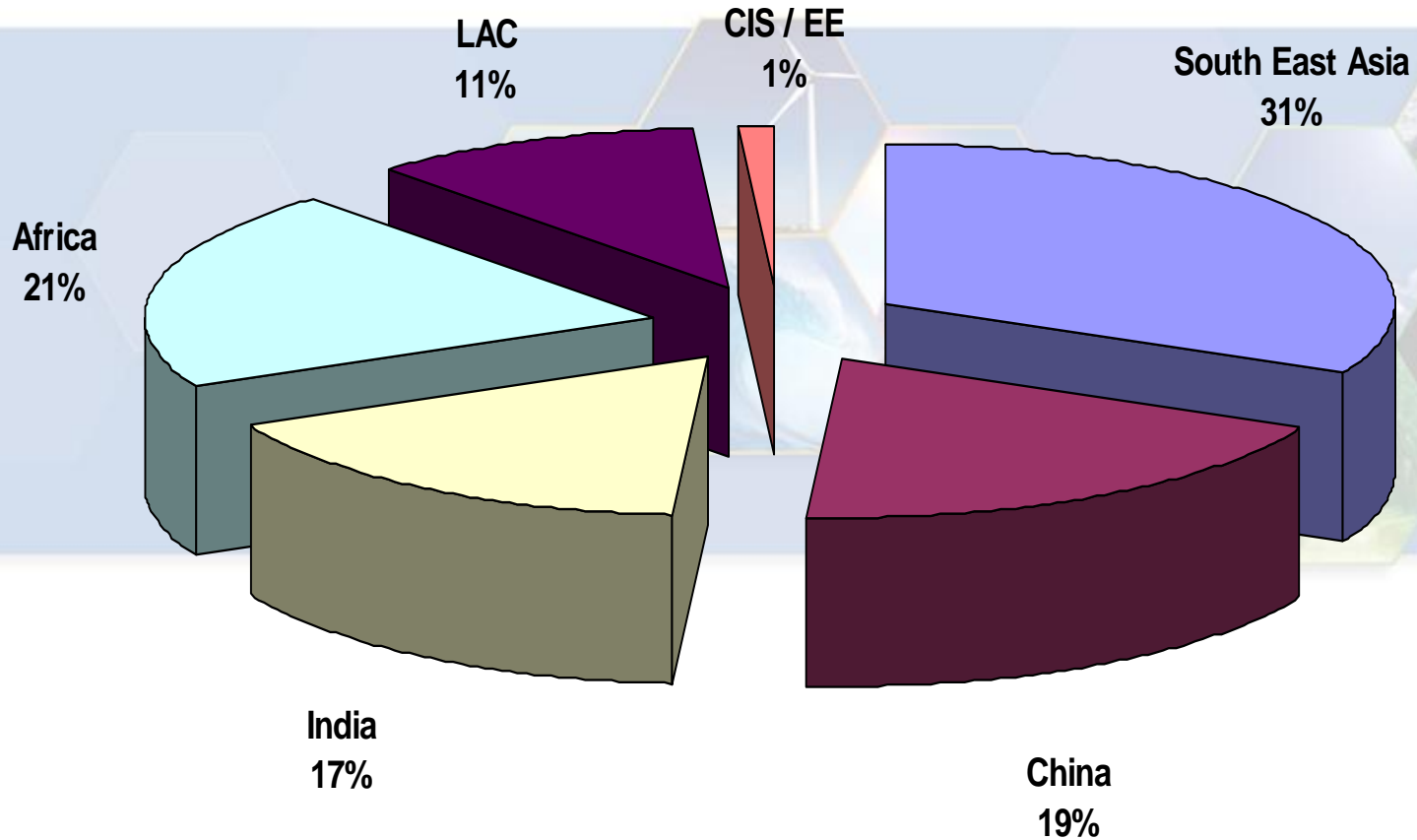
## □ 101 projects

- 63 projects in process of induction during Q4 2010
- 40 – 50 less mature projects undergoing longer term development for pipeline induction

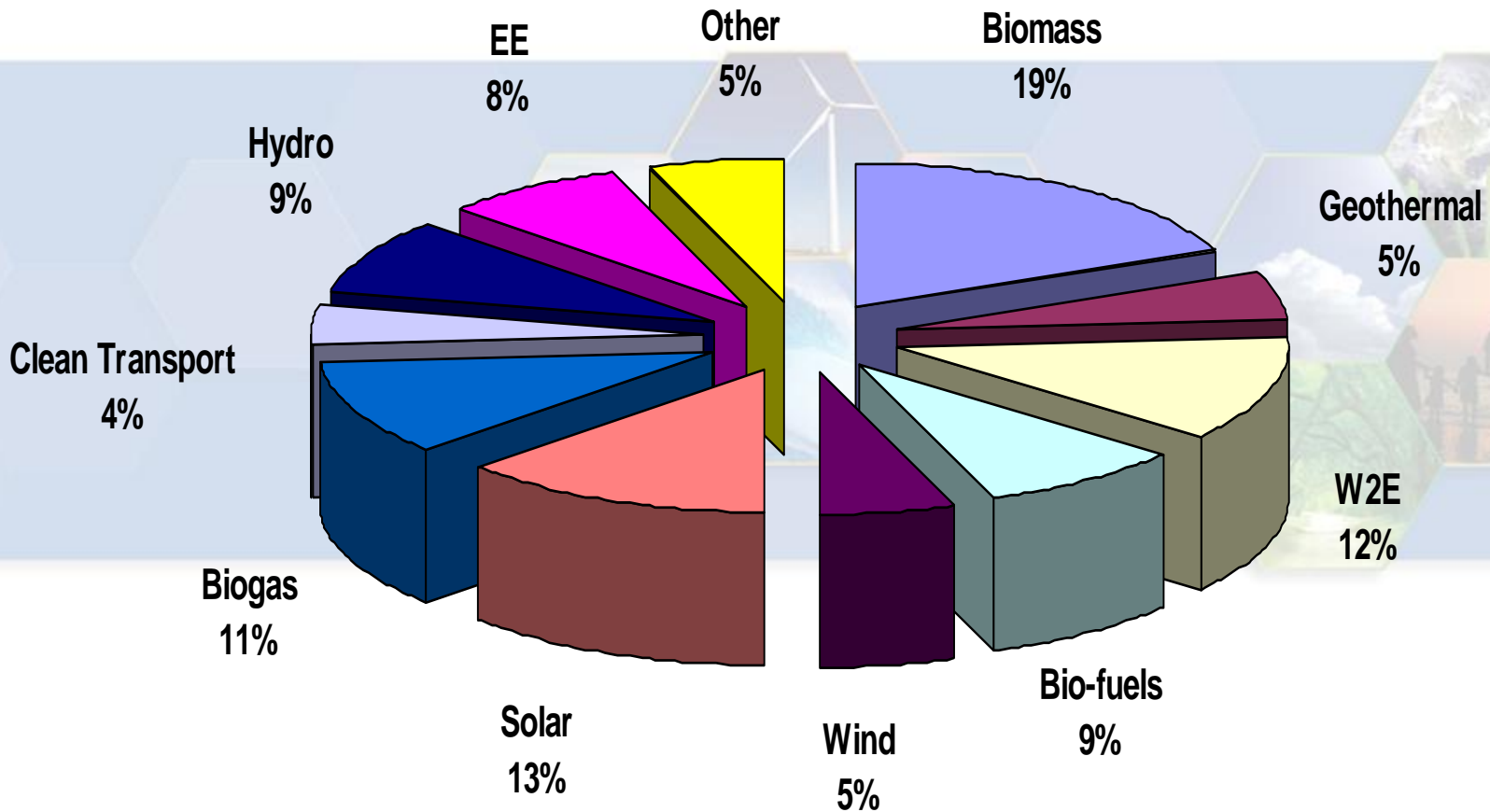
## □ USD 2,4 billion of total aggregate investment

## □ > 4,6 million tonnes CO<sub>2</sub> e reduction potential pa

# Pipeline Analysis by Region



# Pipeline Analysis by Technology



# Closed Projects

## □ 21 Projects Closed in Total

- USD 232 million of Investment in Total
- 240 MW of Clean Capacity Installed
- 1,26 million tonnes CO<sub>2</sub> e reduction pa
- 61,3 GWhrs pa Energy Savings (4 EE projects in China)

## □ Closure Rate is Accelerating

- 7 projects currently in investor negotiations

# Recent Successes in Asia

## ❑ W2E Project in Thailand / USD 5 million

- 80 tonnes MSW / day anaerobic digestion to biogas / 1 MW
- Scale up to 300 tonnes / day - ca 3,5 MW
- Introduction of gasification for solid waste / non organic component
- 4 Revenue Streams: Gate Fee / PPA / Sale of Fertiliser / Carbon
- Replication

## ❑ SURE Inc, Philippines – USD 2 million

- 1 MW Biomass to Power
- Pepsico Philippines as Captive Off-taker
- Scalable



# SAMPLE PROJECTS – Barefoot Power / Regional

## ❑ Rural Lighting Solution

- Commoditisation of Small Scale Household Solar Kits & Appliances
- 0,5 – 15 W solutions including solar panel, LED light, Cell Phone & Laptop Chargers
- Basic Kit including panel & light retails at ca USD 36

## ❑ Kerosene & Battery Replacement

- Global Market is estimated at USD 10 – 30 billion / 1,5 billion users
- Average annual spend on kerosene & batteries in Tanzania is USD 129
- Current Order Book of USD 1 Million: Monthly T/O approaching USD 500K

## ❑ USD 3 million Total Investment

- \$ 1 million equity / \$ 2 debt
- Consolidate & scale up existing operations in Uganda & Kenya
- Replicate in Mozambique, South Africa & other Sub-Saharan Countries

# SAMPLE PROJECTS – Dalin Yebo / RSA

- ❑ 7 MW Biomass Power Plant
  - Maize Residue as feedstock
  - Long term Supply Agreements with local farms / own sourcing logistics
  - Pre-feasibility completed
  - Modular replication / expansion to 35MW
  
- ❑ 3 income streams
  - Sale to Captive Off-taker – local Agricultural Company
  - Excess production to the grid addressing local power deficit
  - Production & sale of Furfural – synthetic bio-chemical as high value by-product
  
- ❑ USD 13,5 million total investment
  - Ask: USD 4 million equity / USD 8 million debt
  - Equity IRR: > 50 %

# Other Project Samples

## ❑ Productive Energy in Northern Mozambique

- Establishment of Cold & Logistics Chain to get fish to cash markets
- Gasification of Coconut Husks / Containerised Solution / Mini-grids
- 6 Village Pilot (USD 1 million)
- 200 village target / 800 village potential @ 12.000 kg / village pa

## ❑ South - South Technology Transfer

- Brazil – Mozambique: Solar Powered Hydroponic Farming
- India – Philippines: Battery technology for E-Trikes

# Added Value of CTI PFAN

- ❑ Early stage development tools like PFAN are important
- ❑ Resource Optimisation
- ❑ Access to Deal Pipeline for Investors
- ❑ Direct Access to Investors for Developers
- ❑ Symbiotic Network Effect
- ❑ Risk Reduction through targeting of key risk points
- ❑ Reduction of Transaction Costs for all parties
- ❑ Accelerated Development Progress

# Planning for 2011

- ❑ Launch of Sub-regional Networks in Africa
  - Southern Africa / SADC: RSA, Mozambique, Tanzania, Botswana
  - EAC: Uganda, Kenya, Rwanda
  - West Africa: (Ghana, Togo, Cameroon)
- ❑ Capacity Building Workshops & Mini Investor Fora in each region with local institutions, banks and government agencies
- ❑ Launch of Adaptation Stream
  - 2 Workshops / Pilot Programme
- ❑ Mini CE Fora in Philippines & Indonesia leading into AFCEF 3 in September
- ❑ Launch of network in Eastern Europe & CIS
  - CE Financing Forum
- ❑ Consolidation and Expansion in LAC – Launch in Caribbean SIDs

# Summary

- ❑ Strong Development Pipeline Growth & Activity
  - Broad Regional & In-Country Coverage
- ❑ High Levels of recognition in the Market
  - Especially Asia
  - Increasingly Africa & LAC
- ❑ Value Provided to Investors & Developers
  - Good Success Rates
  - Getting More Projects to Financial Close & facilitating Interaction between Developers & Investors
- ❑ High Financial Leverage Rate
- ❑ Potential for Scale Up and Positioning of CTI-PFAN post 2012