



International Copper
Association Asia
Copper Alliance

The Copper Alliance™ Update on RE programs

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Presentation Contents

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- Introduction to Copper Alliance™ and its Value Proposition
 - Program examples

A member-driven organization

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- Leading organization for promoting copper
 - 43 global-level members
 - Producers representing 60% of world copper production
 - 11 of the world's largest copper and copper alloy fabricators
 - Nearly 500 local members and partners
 - 31 offices in 24 countries on 6 continents
 - 2012 budget, including co-funding: \$95 million

43 Global Member Companies

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Anglo American Chile
Antofagasta Minerals S.A.
Aurubis
BHP Billiton Plc
Boliden AB
Compañía Minera Doña Inez Collahuasi
Compañía Minera Zaldívar
CODELCO
Freeport McMoRan Copper & Gold
Kennecott Utah Copper Corp.
KGHM Polska Miedź S.A.
LS-Nikko Copper Inc.
Mexicana de Cananea, S.A. de C.V.
Mexicana de Cobre, S.A. de C.V.
Minera Alumbrera Ltd.
Minera Antamina S.A.
Minera Escondida Limitada
Minera Esperanza
Minera Los Pelambres
Minera El Tesoro
Mitsubishi Materials Corporation
Palabora
Pan Pacific Copper

Rio Tinto Plc
Sociedad Contractual Minera el Abra
Sociedad Minera Cerro Verde S.A.A.
Southern Copper Corporation
Sumitomo Metal Mining Co., Ltd.
Teck
Tenke Fungurume
Xstrata Copper
Yunnan Copper Industry (Group) Ltd.

FABRICATORS
Chinalco Luoyang
Daechang Co., Ltd.
Golden Dragon Precise Copper Tube
Halcor S.A.
KM Europa Metal AG
Luvata
Mueller Industries
Nexans
Outotec Oyj
Revere Copper Products, Inc.
Wieland-Werke AG

Operating Principle

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- Working together, partners collectively fund activities to grow sustainable energy that accomplish much more than by working individually

Value Proposition

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- Position copper and the copper industry as delivering significant benefit to society in areas of critical current concern:
 - Energy Efficiency
 - Alternative (renewable) energy
 - Energy access (electrification)

Program Example:
Renewable Energy & Energy Access

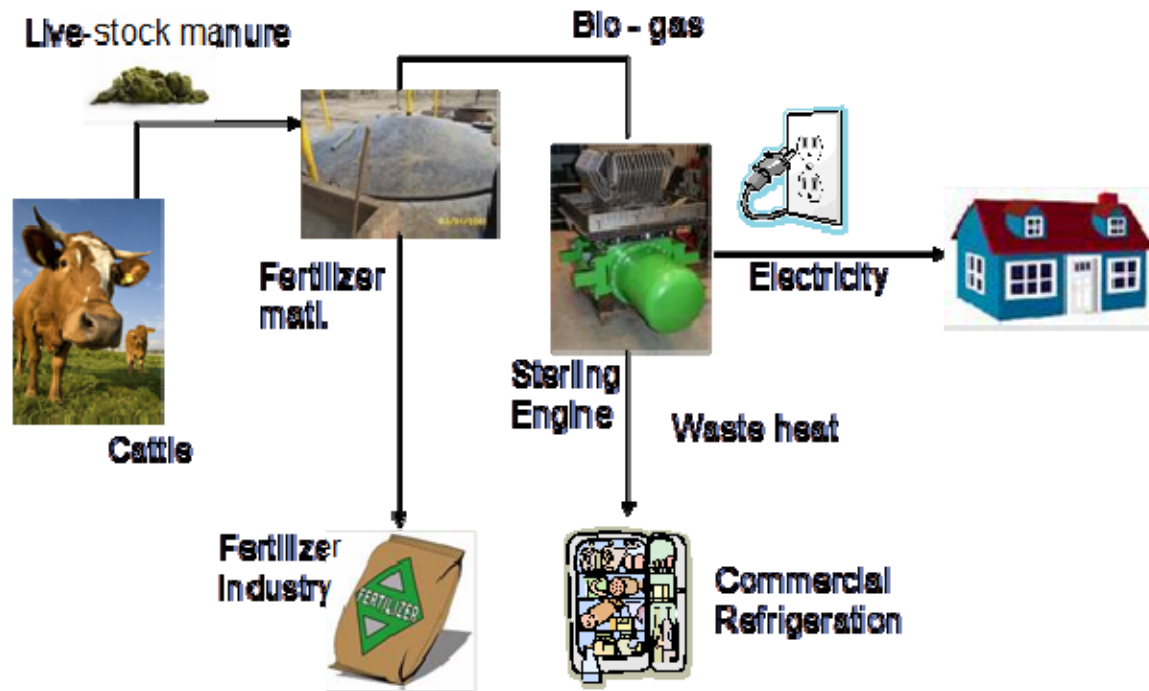
Bioenergy for Rural Electrification

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- Bangladesh
 - Weak, fragmented & uncoordinated electricity infrastructure
 - Poor rural communities – Needs jobs
 - Huge cattle stock
 - ICA together local MFI institution, NGO , technology investors & MIT (USA) Technology
 - To improve & deploy bioenergy energy technology
 - To produce electricity with stirling engine
 - To use waste heat for food processing, accelerating local businesses

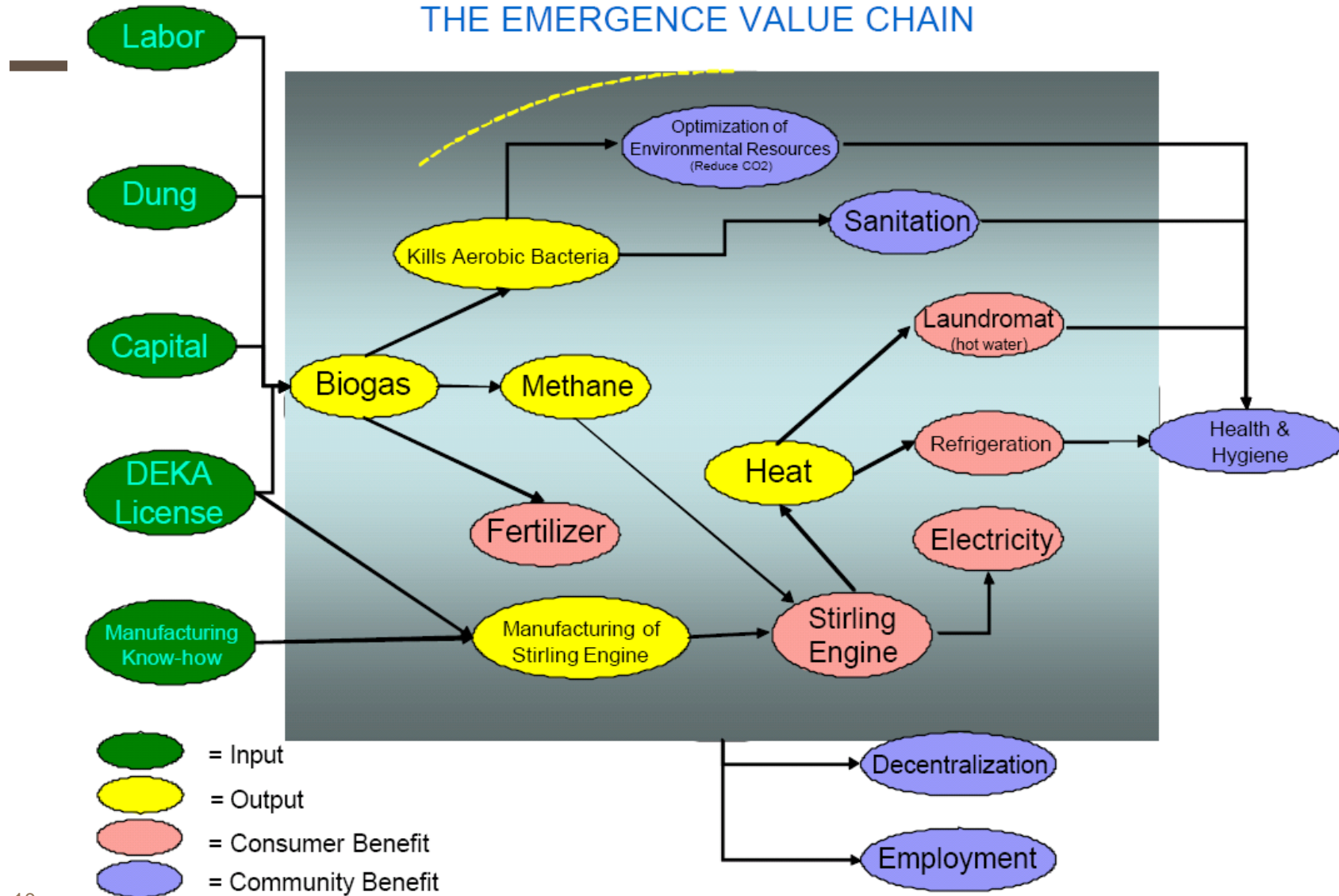
Project Description

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Bioenergy for Rural Electrification

THE EMERGENCE VALUE CHAIN



Philippines - Alliance for Mindanao Off-grid Renewable Energy – Phase 3 (AMORE)

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- Provide electrification to rural areas in Autonomous Region of Muslim Mindanao
 - About 25,000 households, 150 schools, and the installation of seven mini- or micro-hydro power plants
- Build capacity of village enterprises to invest, implement, operate RE systems; strengthen the supply chain
- Funding – USAID, DoE (Philippines)
- ICA Role –
 - Capacity building for entrepreneurs (technology, certification for solar PV installers; financing; marketing)
 - Support awareness and information campaign;
 - Feasibility studies for developing micro-hydro power plants

Thailand – Energy Efficiency & Renewable Energy Project in Agricultural Sector

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- Reduce diesel dependency in agricultural sector in Thailand & Vietnam
- Promotion of high efficiency motors (HEMs) for pumps (rice farming) and aerators (shrimp farming) + solar PV
- ICA Role:
 - Pilot project in Thailand (shrimp farms) + development of financial models + best practices guide + initiate ESCO + dissemination;
- Funded by Nordic Fund and ICA

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- Formation of Alliance of manufacturers & developers – An industry platform
 - To promotes small-scale wind turbines: street lighting, telecom cell sites
 - Product performance & safety standards development in China
 - Training courses
 - Support government to develop for policy incentives for small wind power
 - Finance demonstration projects for street lighting and advertising boards lighting in Beijing

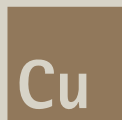
Solar Thermal Project - India

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- National Agenda - Solar Mission
 - Plan
 - Phase I (2010-13) 7 million sq meters
 - Phase 2 (2013-17) 8 million sq meters
 - Phase 3 (2017-22) 5 million sq meters
 - Cumulative by 2022 –20 million sq meters
 - ICA Role
 - Partner with the New & Renewable Energy Ministry of India, National & State Institutes to develop skilled Solar Thermal Installers
 - Develop promotional tools, installation guide-book, user manuals
 - Funding and implementing partner of the GEF-UNDP-UNEP-ICA Global SWH program (barriers removal)

Thank you

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