

DEVELOPMENT PIPELINE- PROJECT SUMMARY -

Nov - Dec 2009

No.	Project Name Overview	Investment Amount / Financing USD Millions	PFAN Involvement	Status
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Section 1 - Financial Close Achieved

001-FC Type: Developer: Investor: Features:	Small Hydro Project, Mexico • ,5 MW RoR Hydro • Mexican & US CE Developers • FE Clean Energy • 25 Yr Concession 8	17 (Total Inv.) 0.22 Dvpt Finance 6.25 Equity 10,4 Bank Loan 10 Yrs (OPIC G'tee)	Review & Control of TS S&A for Debt Finance Proposal S&A during achievement of CPs	Financial Close Achieved Disbursement of funds
002-FC Type: Developer: Investor:	BioDiesel Project, Brazil BioDiesel Refinery (ca 60.000 tpa capacity) Brazilian CE Entrepreneur FE Clean Energy	• 18 (Total Inv.) • 5.4 Equity • 12,6 PF Bank Debt	Review & Control of TS S&A for PF Proposal S&A during achievement of CPs	Financial Close Achieved subject to agreement of final documents Investment Confirmed Closing negotiation with developer Q4 08
009-FC Type: Developer: Features:	EDS Hazyview, RSA Production of Biomass Pellets EDS Projects (Africa) Pty. Ltd Phase 1 – Investment in Manufacturing Plant & roll out in SA Phase 2 – Investment in International Roll Out Phase 3 – Investment in pelletisation projects in SA and internationally	1 (Total Investment for Phase 1) 5 (Phase 2)	S&A for overall Project Dvpt. Introduction of Investor & Financing Sources S&A for Equity & PF Proposals	Financial Close for Phase 1 Achieved Terms & Conditions for Phase 2 under negotiation

Section 2 - Development Pipeline Asia (excluding India & China)

026 Type: Developer:	Spring 1, Thailand 10 MW integrated biogass to energy & bio-compost plant Full Advantage / Silverdale	 33,4 5 already committed by developer New Equity 11,7 Debt 16,7 	S&A for overall Project Dvpt. Introduction of Investor & Financing Sources S&A for Investor Negotiations & Valuation of offers	Deal Facilitation in Process AFCEF / CTI Award winner
Type: Developer: Features	Asia Clean Diesel, Singapore – ASEAN Region Waste to Clean Diesel Conversion EVJ, Alphakat & Aequero Development of plants throughout ASEAN region	• 12 (Equity)	Introduction of Investor & Financing Sources S&A for Investor Negotiations & Valuation of offers	Deal Facilitation in Process AFCEF / CTI Award winner
028 Type: Developer: Features:	Advon, Singapore Development of an absorption chiller for integrated EE water desalination & air conditioning Advon Early stage venture capital technology play	1,5 (Equity) For prototype development & commercialisation	S&A for overall Project Dvpt. Introduction of Investor & Financing Sources S&A for Investor Negotiations & Valuation of offers	Deal Facilitation in Process AFCEF / CTI Award winner

		Investment		
No.	Project Name Overview	Amount / Financing	PFAN Involvement	Status
		USD Millions		
025	ABC, Sri Lanka			
Type:	6 MW integrated waste to energy & bio- compost plant	= 52,5	 S&A for overall Project Dvpt and structuring of Financing Preparation of BP & IM 	■ Phase 2
Developer:	■ Anaerobic Biotech Corp (ABC)		 Introduction of Investor & Financing Sources 	
034 Type:	Sunlabob, Laos Solar Rural Electrification & Lighting	• 1	S&A for overall Project Dvpt.	AFCEF Finalist
Developer:	■ Sunlabob	• 50 % Equity • 50 % Debt	 Structuring of Financial Model Introduction of Investor & Financing Sources 	Phase 2
Features	Replacement of kerosene lanterns with rechargeable solar lanterns		■ S&A for PF Proposal	
	 Innovative PPP model Replication in Africa 			
035 Type:	Nam Kong Hydro, Laos 75 - 150 MW Hydro	• 52	■ S&A for overall Project Dvpt.	■ Phase 1
Developer:	RHPSL / Silverdale	■ 20 – 30 % Equity ■ 80 – 70 % Debt	 Preparation BP & IM Introduction of Investor & 	
Features	Off-take by EGAT (Thailand) or Vietnam or local industry		Financing Sources	
036	CleanTech Phils, Philippines	I		1
Type: Developer:	18 MW bio-gass waste to energy plant CleanTech Phils	■ 5 ■ 30 % Equity	 S&A for overall Project Dvpt. Preparation of BP & IM 	■ Phase 2
Features:	Retrofit of existing fuel oil fired plant	■ 70 % Debt	 Introduction of Investor & Financing Sources 	
	 Captive Plant situation for waste stream & offtake 			
040 Type Developer	Gikiko, Indonesia Landfill Gas & Methane Capture Gikiko	■ 10	S&A Investor procurementBP preparation	AFCEF FinalistPhase 2
tCO ² e red:	204.000 tonnes pa		Deal facilitation	- Filase 2
	LAGEA BUILL			
042 Type: Developer:	ASEA, Philippines 195 MW Biomass Asea One Power Corp	■ 487,5 ■ 73 Equity	S&A Investor procurementBP preparation	AFCEF FinalistPhase 2
tCO ² e red:	• 403 – 673.000 tonnes pa	• 414 Debt	Deal facilitation	Discussions with Investor
Features:	Replication Model of ca 20 MW Cogeneration units in diverse locations			
045	Cleansave Waste Corp, Philippines			
Type: Developer:	7MW W2ECleansave Waste Corp	■ 21,7 ■ 6,51 Equity	S&A Investor procurementBP preparation	Philippines FinalistPhase 2
tCO ² e red:	■ 284.000 tonnes pa	■ 15,19 debt	Deal facilitation	
046	Project Spreadlight, Philippines			
Type: Developer:	Solar lanternsSolarco	■ 0,1	S&A Investor procurementBP preparation	Philippines FinalistPhase 2
			Deal facilitation	
047	Langogan Hydro, Philippines			
Type: Developer:	6,8 MW RoR Small HydroLangogan Holdings Corp	• 20 • 5 Equity	S&A Investor procurementBP preparation	Philippines FinalistPhase 2
tCO ² e red:	■ 264.603 tonnes pa	■ 15 Debt	Deal facilitation	
048 Type:	SURE, Philippines 1 MW Tri-generation Heat & Power Plant	■ 1,1 ■ 0.22 Equity	S&A Investor procurement PP proposation	Philippines Finalist
Developer: Features:	SURE Dedicated Facility for Pepsico Bottling Plant	• 0,33 Equity • 0,77 Debt	BP preparationDeal facilitation	■ Phase 3
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No.	Project Name Overview	Investment Amount / Financing USD Millions	PFAN Involvement	Status
048 Type: Developer: tCO ² e red:	Global Synergy, Indonesia 2 x 55 MW Geothermal power plant PT Banten 652.000 tonnes pa	• 275	S&A Investor procurement BP preparation Deal facilitation	Indonesian FinalistPhase 2
O49 Type: Developer: tCO ² e red:	Tiara Energy, Indonesia 5 x 2 MW Biomass power plants PT Tiara 55.000 tonnes pa	• 28	S&A Investor procurement BP preparation Deal facilitation	Indonesian FinalistPhase 2
050 Type: Developer:	Elektra Egra, Indonesia 1 MW Wind power plant PT Mekanika Elektra Egra	• 1,5	S&A Investor procurement BP preparation Deal facilitation	Indonesian FinalistPhase 2
051 Type: Developer: tCO²e red:	Selo Kencana Energi, Indonesia 3 x 2,5 MW Small Hydro PT Selo Kencana Energi 21.000 tonnes pa	• 12	S&A Investor procurement BP preparation Deal facilitation	Indonesian FinalistPhase 2
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052 Type: Developer: tCO ² e red:	Mitra Edssa Markati, Indonesia 10 MW Geothermal power plant PT Tiara 59.000 tonnes pa	• 25	S&A Investor procurement BP preparation Deal facilitation	Indonesian FinalistPhase 2
053 Type: Developer: tCO ² e red:	Clean Tech Energy Systems, Philippines 1,5 MW W2E power plant Clean Tech Energy Systems 60.000 tonnes pa	• 2,17 • 0,87 Equity • 1,3 Debt	S&A Investor procurement BP preparation Deal facilitation	Philippines Finalist Phase 2

Section 3 - Development Pipeline India & China

037 Type: Developer:	Bhavnagar, ReRolling Cluster, India EE in steel rolloing mills ICETT / CTI / Winrock Int. India	• TBA	 S&A for overall Project Dvpt. S&A for design of financing programme Introduction of Investor & Financing Sources 	■ 2 nd Phase
O38 Type: Developer: tCO²e red: Features:	Wuyang Hydro, China 20 MW Hydro JGYJ Power Investment Co 1,8 million tones over project lifetime Cooperation with ITTC / Tingshua Univ.	• 26 • 35 % Equity • 65 % Debt	S&A for overall Project Dvpt. Preparation of BP & IM Introduction of Investor & Financing Sources	China FinalistPhase 3
Type: Developer: tCO ² e red: Features:	Nanjing. Longterm Environment Technology Development Co Landfill Gas Projects Nanjing LETDC 380.000 tonnes over phase 1 Portfolio of existing & new projects under development	- 1,75	 S&A for overall Project Dvpt. Preparation of BP & IM Introduction of Investor & Financing Sources 	■ China Finalist ■ Phase 1
054 Type: Developer: Features:	Mai-Ke-Ka • Electric Car Development • Changzhou Mai-Ke-Ka Eletric Vehicle Co 5 patents approved / 4 pending	- 10 - 4,4 Equity - 5,6 Debt	S&A for overall Project Dvpt. Preparation of BP & IM Introduction of Investor & Financing Sources	China Finalist Phase 2

No.	Project Name Overview	Investment Amount / Financing USD Millions	PFAN Involvement	Status
055 Type: Developer: tCO ² e red: Features:	Hebei EPP Construction Project EE / ESCO – 600 MW EPP Project Hebei Fakai Scientific Power Utilisation Service Co 9 million tones over project lifetime Pipeline of replication projects in Hebei Prov.	- 439	S&A for overall Project Dvpt. Preparation of BP & IM Introduction of Investor & Financing Sources	• China Finalist • Phase 2
056 Type: Developer: tCO ² e red:	Biomass Power Generation Project 2 x 15 MW Biomass power plant AGET 11,5 million tones over project lifetime	- 41	S&A for overall Project Dvpt. Preparation of BP & IM Introduction of Investor & Financing Sources	■ China Finalist ■ Phase 2
057 Type: Developer: tCO ² e red:	Beijing Bai An Nengqi Manufacture of Biomass Pellets for Cofiring Beijing Bai An Nengqi Tech Co 1,12 million tones over project lifetime	• 5	 S&A for overall Project Dvpt. Preparation of BP & IM Introduction of Investor & Financing Sources 	• China Finalist • Phase 2
058	Nantong Sky Solar			
Type: Developer: Features:	Dvpt & Manufacture of PV Solar Cells Nantong Sky Solar PV Technology Co Dvpt of nano crystal titanium dioxide pv cells	- 10	 S&A for overall Project Dvpt. Preparation of BP & IM Introduction of Investor & Financing Sources 	China FinalistPhase 2
Type: Developer: tCO ² e red: Features:	Fuxin Bio-diesel 1 0 tpa biodiesel plant Fuxin Shouxin Tech Development Co 4 million tones over project lifetime Chinese developed refinery technology	- 7,3	S&A for overall Project Dvpt. Preparation of BP & IM Introduction of Investor & Financing Sources	• China Finalist • Phase 2
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O60 Type: Developer: tCO ² e red: Features:	Taida Biogas Project • 1MW methane to Power plant • Hebei Fakai Scientific Power Utilisation Service Co • 640.000 tones over project lifetime (phase 1) Methane Capture form manure of largest dairy enterprise in China. 1st of 3 phases with total capacity of 15 MW.	- 5,1	S&A for overall Project Dvpt. Preparation of BP & IM Introduction of Investor & Financing Sources	China FinalistPhase 2
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061 Type: Developer: tCO²e red:	Wanpahe Hydro 12,6 MW Hydro power plant Lanpinghuineng Hydropower Dvpt Co 940.000 tones over project lifetime	- 10,3	S&A for overall Project Dvpt. Preparation of BP & IM Introduction of Investor & Financing Sources	• China Finalist • Phase 3
062	7huhai I ED Straatlight Project			
Type: Developer:	Zhuhai LED Streetlight Project ■ Expansion of LED production capacity ■ Zhuhai Hy\uaanyuzhiguang Energy Co	- 1,5	S&A for overall Project Dvpt. Preparation of BP & IM Introduction of Investor & Financing Sources	■ China Finalist ■ Phase 2

No. Project Name Amount / PFAN Involvement Status Overview Financing USD Millions	No.	•	Financing	PFAN Involvement	Status
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<u>Section 4 – Development Pipeline Latin America & Caribbean</u>

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022 Type: Developer:	San Francisco, de Mostazal, Chile 15 MW Biomass Cogeneration Plant Compania Papeiria del Pacifico / Empresas COIPSA	• 27	 S&A for overall Project Dvpt. Introduction of Investor & Financing Sources S&A for Investment Proposal 	■ Phase 2 in progress
O29 Type: Developer: Features:	HV Hydro, Chile 15 MW bundled Hydro in 4 separate locations HV High capacity plants with low capital costs. Grid access g'teed by Utility. Spot sales into grid	• 23 • 25 – 30 % Equity • 75 – 70 % Debt	 S&A for overall Project Dvpt. Introduction of Investor & Financing Sources 	Phase 2 in progress Partner identification
030 Type: Developer: Features	LLC. Chile 14 (Ph 1) – 28 MW (Ph 2) Bio-gas Waste to Energy from landfill LLC Santiago Phased development. 3 MW already in operation. Long term contract for waste supply.	• 40 (Total) • 23,7 (Phase 1) • 16,3 (Phase 2)	 S&A for overall Project Dvpt. Introduction of Investor & Financing Sources S&A for Investment Proposal & Negotiations 	Phase 2 in progressPartner Identification
O31 Type: Developer: Features	International Energy Efficiency Financing Protocol, Chile Dvpt of programme to implement & finance EE improvements for municipal & private Chilean entities CORFO / Ministry of Energy Credit Risk Guarantee Structure Programme. Eventual participation of USAID DCA	- ТВА	S&A for overall Project Dvpt. Introduction of DCA and other financing sources S&A for ministry in negotiations with MIF od IADB	Phase 2 in progress Negotiations with MIF / IADB and DCA Phase 2 in progress Region 1
032 Type: Developer: Features:	Cornucopia, Brazil Creation of sustainable agricultural & RE microenterprises & systems Magister Network R & D, pilot projects for each sector, product capacity building, marketing of end products	• 5	S&A for overall Project Dvpt. Structuring of Financial Model Introduction of Investor & Financing Sources	Phase 3 in progress Negotiations for grant equity funding in progress
033 Type: Developer: Features	International Energy Efficiency Financing Protocol. Columbia Dypt of programme to implement & finance EE improvements for municipal & private Chilean entities Columbian Ministry of Environment Credit Risk Guarantee Structure Programme. Eventual participation of USAID DCA	- TBA	S&A for overall Project Dvpt. Introduction of DCA and other financing sources S&A for ministry in negotiations with MIF od IADB	Phase 2 in progress Negotiations with MIF / IADB and DCA Phase 2 in progress Registrations with MIF / IADB and DCA Phase 2 in progress Registrations with MIF / IADB and DCA

No. Project Name Amount / PFAN Involvement Status Overview Financing USD Millions

<u>Section 5 – Development Pipeline Africa / CIS & Eastern Europe</u>

O10 Type: Developer: Features:	Project Suburtalo, Georgia 9,3 MW Geo-Thermal Facility (hotwater & heating) Geothermia Ltd, Georgia Project developed by UNDP & KfW Rehabilitation & Expansion of existing geothermal wells Output: 200m³ / hr of hot water (ca 80.000 MWh pa.)	5 (Total Investment incl. Initial working capital) 0,5 – 1 Equity 4 – 4,5 PF debt supported by ECA Finance & Government Subsidy	S&A for overall Project Dvpt. Structuring of Financial Model Introduction of Investor & Financing Sources S&A for PF Proposal	Phase 1 Induction Progress to Phase 2 subject to agreement & coordination with Developer & UNDP
O63 Type: Developer: Features:	FENIX Co-Generation Unit, RSA Development of Innovative Cookstove & Rural Electrification Solution Phambili Energy (Pty) Ltd The FCU combines cook-stove with water heater, freshwater supply and localised electricity generation for household use fired by carbonized charcoal from biomass	• TBA	S&A for overall Project Dvpt. Preparation of BP & IM Introduction of Investor & Financing Sources	• Phase 2
064 Type Country	MZ Biomass Gasification Fisheries Biomass gasification to establish off-grid cold chain for MZ fishing villages Mozambique	• TBA	S&A for Feasibility & Project Development Investor procurement BP preparation	Information gathering & analysis
O65 Type: Developer: Features	Sunlabob, Uganda & Togo Solar Rural Electrification & Lighting Sunlabob & NIDA & TSSD Uganda Replication of successful model from Asia Replacement of kerosene lanterns with rechargeable solar lanterns Innovative PPP model	• 1 - 2 • 50 % Equity • 50 % Debt	S&A for overall Project Dvpt. Structuring of Financial Model Introduction of Investor & Financing Sources S&A for PF Proposal	• Phase 1

<u>Section 5 – Projects Undergoing Research & Review for Consideration in</u> <u>Development Pipeline</u>

012-P	EDS Bio-Mass Pellet Production, Indonesia	• 1 (Phase 1 Investment)	Introduction of Investor S&A for Equity & PF Proposals	 Information gathering & analysis
024-P Type Developer Country	Gammaduwa Plantations Ltd (GPL) Gliricidia Biomass Project GPL Sri Lanka	• 3,3 (Total Investment)	S&A Investor Procurement	 Information gathering & analysis
026-P Type Developer Country	Oval Biofuels Ltd (OBL) Biofuel Refinery (Jatropha) OBL Zambia	• 3	S&A Investor procurement	Information gathering & analysis
041-P Type: Developer:	W2E, Indonesia, Cambodia & Vietnam • Waste to Energy • W2E	• 10	S&A Investor procurement Deal facilitation	AFCEF Finalist Discussion with developer
043-P Type Developer Country	PUC Biomass Tri-generation PUC Thailand	• 1,8	S&A for Project Development Investor procurement BP preparation	AFCEF Semi-finalist
044-P Type Developer Country	SKE 7,5 MW RoR Hydro SKE Indonesia	• 10MW	S&A for Project Development Investor procurement BP preparation	AFCEF Applicant

No.	Project Name Overview	Investment Amount / Financing USD Millions	PFAN Involvement	Status
066-P Type Country	Meru Carbonised Charcoal Project Production of Carbonised Charcoal from biomass Kenya	■ TBA	S&A for Feasibility & Project Development Investor procurement BP preparation	Information gathering & analysis
068-P Type Developer Country	Small Hydro in DRC Small Hydro Projects DRC Authorities DRC	• ТВА	S&A for Project Development Investor procurement	Project Scoping Initial Research
069-P Type Developer Country	Solar Irrigation in Burkino Faso Solar powered irrigation BF Authorities Burkino Faso	■ TBA	S&A for Project Development Investor procurement BP preparation	Project ScopingInitial Research
070-P Type Developer Country	IDUN - Integrated Distributed Utilities Network Solar powered mini-grids for coms RASCO Guinea	■ 3,5	S&A for Project Development Investor procurement BP preparation	Project Scoping Initial Research
071-P Type Developer Country	Clean Energy Initiative Manufacture & deployment of small wind turbines for off-grid electrification Clean Energy Company Mozambique	■ 0,2	 S&A for Project Development Investor procurement BP preparation 	Project ScopingInitial Research

GLOSSARY: abbreviations and technical terms have the following meaning:

<u>Abbreviation</u>	Meaning / Explanation
AFCEF BP BD CE CORFO CPS Dvpt EIA EPC FSR Gvt IM Inv PDA PF PPA Ref RoR S&A Tba TS WC	Asia Forum for Clean Energy Financing (see www.cleanenergy-financing.com) Business Plan Bio Diesel Clean Energy Chilean Economic Development Agency Conditions Precedent Development Environmental Impact Assessment Engineering & Procurement Contract Feasibility Study Government Investment Memorandum Investment Project Development Agreement Project Finance Power Purchase Agreement Refinery Run of River Support & Advice To Be Announced Technical Study/(ies) Working Capital
W2E	Waste to Energy

Exact Figures / Amounts are given where known and / or already agreed. Figures given as percentages indicate planned, expected and / or hoped for outcomes.

Please note that some names and details are restricted from publication for confidentiality reasons.

Peter Storey 25.11.2009