

PIGGAREP 2008 WORK PLAN & BUDGET (in USD)

Proj. Code	Activity	Outcome	Lead / Collaborating Agencies	Year 1 Quarters				Year 1 Total	Comments
				1	2	3	4		
CK1	Mangaia Power System Upgrade	Technical	French and Aust govts, SOPAC and MIC	10,000	10,000			20,000	
CK4	Public Awareness Campaigns	Awareness	Energy, Media & NGOs			2,500	2,500	5,000	With support from Environment and its Climate Change activities
CK8	Wind Farm integration study	Technical	Energy / TAU	15,000	15,000			30,000	
CK11	MAM Wind resource assessment	Technical	Energy, MET & OMA		5,000	5,000	5,000	15,000	For Mauke, Atiu & Mitiaro
CK13	Exposure visit to the recycling facilities for cooking oil at USP and NZ RE / Green Award Programme for the tourism sector	Awareness	Peter Marett				5,000	5,000	To address the environment problems relating to the disposal of used cooking oil.
CK16	Support to the Committee working on renewable energy standards	Technical Awareness	Transport / Energy	750	750	750	750	3,000	
Sub-total Cook Is				25,750	30,750	8,250	18,250	83,000	
FJ1	Hydro resource assessment in the upper Navua River Areas	Technical	DoE	500	500	500	500	2,000	Based on the REEP report, a hydro site in the upper Navua river is to be installed with a long term monitoring station
FJ4	Strengthen energy statistics in terms of renewable based data (prices, capacity, supply, potential, etc. etc)	Technical	DoE			5,000	5,000	10,000	
FJ5	Establishment of the Biogas market	Market	DoE			10,000		10,000	This is to provide rebates/incentive to renewable energy based companies to expedite renewable energy developments in Fiji
FJ6	Holistic training provided for Energy staff, rural communities, village technicians and relevant stakeholders of the Renewable Energy sector	Market	DoE	5,000	5,000	5,000	5,000	20,000	This involves the training of the Energy staff in areas that are relevant to the development of the Energy Sector such as economics, accounting, policy, management, etc. Such short courses are offered by USP, TPAF, PSC and international institutions
FJ7	Holistic training provided for staff members of the Energy (economics, accounting, policy, management, and other technology related training)	Institutional	DoE	10,000	10,000	10,000	10,000	40,000	Given the vast projects that are part of DOE's Annual Business Plan, it hopes to recruit project posts for specific renewable based projects
FJ8	Review/adopt/enact relevant policies, frameworks, legislations for RET; Enactment of Fiji's Energy Bill	Policy	DoE	2,500	2,500	2,500	2,500	10,000	
Sub-total Fiji				18,000	18,000	33,000	23,000	92,000	
KI3	Technical visits to biofuel developments either in Vanuatu and Majuro or Philippines	Technical Awareness	KCMC, PUB, EPU		10,000			10,000	
KI4	Technical visits to PV-Grid developments in Tuvalu.	Technical Awareness	EPU, SEC & PUB	10,000				10,000	
KI5	Consultations on the National Energy Policy and drafting of an Action Plan	Policy	EPU, MELAD, MISA				7,000	7,000	
KI10	Refresher technical training following the EDF 8 OI electrification project.	Technical	SEC			10,000		10,000	
KI12	Feasibility study on PV-grid pilot project at SEC Headquarter.	Technical	SEC, EPU, PUB			9,000	9,000	18,000	
KI5	Training component related to the installation of the new RESCO Manager	Awareness	SEC			17,000		17,000	
KI16	Migrating RESCO Manager to an open source platform.	Technical	SEC		6,000	6,000	7,000	19,000	Awareness raising activities linking RE projects to mitigating potential to climate change, and their benefits to environment and economy
KI22	Public awareness campaigns	Awareness	EPU, MELAD,media		500		500	1,000	
Sub-total Kiribati				10,000	16,500	42,000	23,500	92,000	
NA2	Information dissemination on renewable energy – all types (paper, radio, TV, leaflets, booklets, educational material) and translation into Nauruan	Awareness				2,500	2,500	5,000	
NA3	Awareness raising and public education – educational material, information days in all communities, (working with NGOs and community leaders), school fairs, renewable energy competitions, meetings with government officials, information day for government	Awareness				2,500	2,500	5,000	
NA4	Create an 'Energy and Environment' curriculum for the schools	Institutional Awareness	Energy Efficiency Officer (Utilities) and schools	10,000	10,000	10,000	10,000	40,000	
Sub-total Nauru				10,000	10,000	15,000	15,000	50,000	
NI4	Capacity Building, NPC/Private Sector'	Awareness	NPC	1,000	2,000	1,000	1,000	5,000	NPC
NI6	Energy Coordinator / AFO	Institutional	NEAP	3,750	3,750	3,750	3,750	15,000	NPC
NI7	Develop renewable energy plans and targets for 2010, 2020 and 2050	Policy	NEAP	1,500	1,500	1,500	1,500	6,000	GON/NZ/AIDAUSAid
NI8	Develop/Review fiscal policies to facilitate the achievement of the RE targets / Expansion	Policy	NEAP			3,000	3,000	6,000	NPC/GON
Sub-total Niue				6,250	7,250	9,250	9,250	32,000	
PN1	Buakap Aidpost Solar PV System	Technical	ATCDI at PNG University of Technology			4,452		4,452	Have vaccine fridge to treat emergencies, reduce long distance travel & decrease health problems.
PN2	Investigating The Possibility Of Using Coconut Oil As A Substitute Fuel For Diesel Engines	Market	Department of Mechanical Engineering at PNG University of Technology	6,148				6,148	Identify effect on diesel engines and make improvements. Cheap fuel for engines. Growers will have a market to sell their crop & generate additional income.

	PN3	Rehabilitation of the Bogo School Micro Hydro Power Scheme	Technical	ATCDI at PNG University of Technology	2,673					2,673	Continue to provide electricity for the Health Centre to continue with provision of improved medical services.
	PN4	Solar Photovoltaic Project for the Baieta Village Aidpost In the Madang LLG, Madang Province	Technical	ATCDI at PNG University of Technology	2,774		2,000			4,774	Have vaccine fridge to treat emergencies, reduce long distance travel & decrease health problems. Completely burn hospital wastes and minimise environmental pollution
	PN5	Clinical Waster Gasifier Project for Asaro Health Centre in the Eastern Highlands Province	Technical	ATCDI at PNG University of Technology	1,292					1,292	
	PN6	Renewable Energy Training in the four regions of PNG for Development workers (1. Kokopo - New Guinea Islands, 2. Lae - Momase, 3. Goroka - Highlands and 4. Port Moresby - Southern)	Awareness	ATCDI at PNG University of Technology				3,000		3,000	Development workers can have basic knowledge to assess projects like micro hydro & solar power
	PN7	Exposure visit / training attachments visit to (1) CASE in Perth WA, Australia, (2) RPC in Nimbin, Old, Australia	Awareness	ATCDI at PNG University of Technology				5,000		5,000	Improved performance by staff with improved design of projects & local trainees to benefit greatly.
	PN11	PIGGAREP - PNGSEL - Bismark Energy Ltd and New Guinea Gold Collaboration on Geothermal Energy	Market					70,000		70,000	
		Sub-total PNG			12,887	-	6,452	76,000		97,339	
	SA1	2.3.1 (3.1.3) - Capacity Building training needs on RETs (ADB)	Technical	Energy Division, energy stakeholders, EPC, Private sector, MWCSO, SWA,			1,000			1,000	
	SA2	2.3.2 (3.1.4) - Training programme on RETs (ADB)	Technical	Energy Division, PSC, Energy Stakeholders, SWA, MWCSO, MNREM, RDIS			1,000			1,000	
	SA4	2.4.1 Coordinate the development of an RE programme with the RDIS	Technical	RDIS, Energy Division, MNREM, EPC, MAF, SWA	1,000					1,000	
	SA5	2.2.4 Establish the Designated National Authority (DNA) for CDM activities	Technical	Energy Division, MNREM, MWTL, MWCSO, EPC,			2,500			2,500	
	SA6	2.2.5 Build capacity in CDM process and implementation	Technical	SUNGO, consultants Energy Division, MNREM, MWTL, MWCSO, EPC,			5,000			5,000	
	SA7	2.2.7 Establish a Clean Energy Fund	Technical	SUNGO, consultants Energy Division, MNREM, MWTL, MWCSO, EPC,			2,500			2,500	
	SA8	2.2.8 Build capacity in Clean Energy Fund operational processes	Technical	SUNGO, consultants Energy Division, MNREM, MWTL, MWCSO, EPC,			5,000			5,000	
	SA9	3.6.1 Consultancy to identify relevant DSM activities	Technical	EPC, Energy Division, MNREM, NUS, consultants					1,000	1,000	
	SA10	3.6.2 Develop DSM strategies	Technical	EPC, Energy Division, NEC					1,000	1,000	
R3	SA11	Hydro data collection programme Assess the practicality of REESCOs in maintaining RETs	Technical	EPC, MNREM, Energy Division, Energy Stakeholders	30,000					30,000	EPC
	SA13	RE and related products Development & promotion annual programme	Market	SAME, Energy stakeholders, private sector, MNREM				10,000		10,000	
	SA14	2.4.3 (2.1.2, 5.3.1, 4.3.1) - prefeasibility studies on identified projects for 1 potential source identified in 2.1.1	Market	SAME, Energy stakeholders, private sector, MNREM			10,000			10,000	
	SA15	2.4.4 (2.1.3) Full feasibility study on identified projects in 2.1.1	Finance	Energy Division, RDIS, MNREM, MAF, MWCSO, NUS, EPC, SWA, consultants			5,050			5,050	
	SA16	1.4.1 (3.4.2) Coordinate the development of an Energy demand and supply database - collection of RE data.	Finance	Energy Division, Statistics, energy stakeholders, EPC, MNREM, MWTL, MOR, Gas companies, Oil companies				7,100		7,100	
	SA17	2.4.2 Develop funding proposals for 2.4.1	Finance	RDIS, Energy division, MNREM, MAF, MWCSO, NUS, EPC, SWA, consultants	825					825	
	SA18	1.2.2 (2.1.4) Develop an Energy Bill - RE component	Finance	Energy Division, energy stakeholders, MNREM, AG, consultants			1,000	1,025		2,025	
	SA19	Development of standards required to meet GHG emission reduction requirements and use of RE for local manufacture and export productions - trainings dissemination	Policy & Regulation	SAME, private sector, energy stakeholders, MNREM, EPC, MWTL, MWCSO	1,500					1,500	
	SA20	2.2.1 (4.1.4, 4.2.3, 4.4.1, 5.2.1, 5.3.1) National energy awareness campaign day	Policy & Regulation	Energy Division, energy stakeholders, MNREM, MAF, MWTL, MESC, RDIS, NUS, EPC, SSC, SAA, STA, Oil companies, gas companies, SUNGO, SAME, COC, MEDIA			1,000	1,000		2,000	
	SA21		Info & Awareness				10,000			10,000	
		Sub-total Samoa			33,325	18,000	27,075	20,100		98,500	
	SI3	Feasibility study of economic of scale of production/use of coconut oil /bio-fuel as fossil fuel substitute in power generation in rural areas.	Market	MME, Italian Gov't	4,000	4,000				8,000	A study to see if coconut oil can be used to power generators so that they can be used in rural communities as an extension for from the schools and clinics

SI5	Feasibility study for mini hydropower plants on Rori (Malaita) under Rural Electrification Framework	Market	SIEA, MME, SOPAC	2,500	2,500	2,500		7,500	To kick-start the Rori Mini-hydro scheme
SI6	RE Electricity Pricing Study	Finance	MME, SIEA, SOPAC	2,500	2,500	2,500		7,500	High priority. To produce a standardised rural electrification tariff calculation guidelines, and tariff calculation templates that provide pro-forma methods of calculating tariffs using costs based on generation technology location and other factors, as
SI8	RE surveys and assessments for hydro, wind and solar	Technical	MME,SIEA,SOPAC			2,000	2,000	4,000	There are potential sources and sites on the 7 main islands of the solomonos for hydro and almost all populated rural communities on the coastal areas of the islands for solar
SI11	Support to investment Development Projects	Market	SIG, MME, SIEA, Private Sector	2,000	2,000	2,000	1,000	7,000	
SI12	RE Conservation and Efficiency Programmes	Technical	MME, SIEA, SIG, SOPAC	300	500	500	200	1,500	
SI14	Setup of RE Unit	Institutional	SIG, SIEA, (REEEP?)	2,000	2,000	2,000	2,000	8,000	
SI16	Energy Supply/Demand Studies	Policy	MME, SIEA, (SOPAC?)	300	1,000	1,000	200	2,500	
SI17	Feasibility study of economic of scale of production/use of coconu oil /bio-fuel as fossil fuel substitute in power generation in outer islands SIEA power stations.	Market	MME, SIEA, Private or SOPAC		1,000	2,000	2,000	5,000	
SI18	Feasibility study of solar Grid interactive system for National Referral, Lata, Kira Kira, Auki, Malu'u,Gizo, Tulagi and Helena Goldie Hospitals	Market	MME, SIEA, Private		2,000	2,000	1,000	5,000	
SI20	Micro Biofuel Enterprise Development	Market	Frelin Enterprise & Fred Conning		2,000	2,000	2,415	6,415	
SI21	Rural Communities Solar PV lightings/water pumping projects feasibility studies and funding	Market	MME, SITAFE, Private Solar PV Companies			2,000	2,000	4,000	
SI22	Solar system grid connect at SITAFE	Technical	Choice Electrics, Australia, SITAFE		2,500	2,500	2,500	7,500	
SI24	Technical Support to the SITAFE Renewable energy library centre	Awareness	Australia (OTEN - NSW TAFE)		2,000			2,000	
SI26	Micro hydropower prefeasibility study at vaious sites at Atoifi Hosp., Kounabusu (Kwaio), Manawai (upgrade), Masupa'a, River Side and Rara village, all in Malaita	Market	PELENA (Renewable Company)		2,000	2,000	1,000	5,000	
SI27	Biofuel Study & Development	Market	Pro Solution, (SOPAC?)		1,000	1,000	1,000	3,000	
Sub-total Solomon Is				13,600	27,000	26,000	17,315	83,915	

TO1	Joint annual committee meetings	Institutional	EPU, HSES & NFSES	6,000					6,000	The joint annual meetings should then lead to the establishment of the National Steering Committee. Ha'apai's, installed in 2002, is to be evaluated next year while Niua's, installed in 2006, will be in Year 2 and both on Year 5.
TO2	Technical evaluation of the solar installations	Technical	EPU, HSES & NFSES	3,000					3,000	Training is to be part of the JICA solar water pumping project for Niuaotupapu. Also include training for NFF and Ha'apai technicians based on the outcome of the evaluations.
TO3	Training of village water committees and island technicians	Awareness	EPU			6,000			6,000	To cover solar, wind and bio-fuel. To begin early in the project thereby allowing AMREC members to bid for activities in the Italian and EDF 10 projects.
TO09	Training on RE for AMREC	Awareness	EPU & AMREC		15,000				15,000	A follow-up to the RE Bill. To review existing energy-related legislations and whether they can all be merged into an Energy Bill. To sites will be selected based on the Vergnet wind atlas project which will be completed by Sept 07.
TO11	Energy Legislation Review	Policy	EPU & Crown Law & Consultant					20,000	20,000	A development Licence has been granted to WM. Study is to look at the feasibility of the distilling operations.
TO12	Wind resources assessments	Technical	EPU	2,500	2,500	2,500	2,500		10,000	To begin after the exposure visit to Vanuatu and other PICs. To include production of a RE documentary, establishment of an RE information centre at the EPU and the District Solar Energy Societies, a monthly radio programme and an annual RE award programme.
TO14	Biofuel feasibility study	Market	EPU & Waste Mgmt Ltd	10,000	10,000				20,000	
TO15	Demonstration of the viability of copra oil for remote islands electrification	Technical Financial	EPU and Island Community					5,000	5,000	
TO17	RE Awareness Programme	Awareness	EPU	1,500	1,500	1,500	1,500		6,000	
Sub-total Tonga				23,000	29,000	10,000	29,000		91,000	
TV3	Dissemination of biogas technology introduced by PIEPSAP	Awareness	Alofa Tuvalu			5,000	5,000		10,000	
TV4	Support to TEC's outer island grid connected renewable energy projects	Technical	TEC	5,000	5,000	5,000	5,000		20,000	Studies of wind potential and solar hybrid system. Also includes exposure visits to RE development projects in Vanuatu and other PICs.
TV5	Study and establishment of a RE Unit at TEC	Institutional	TEC					25,000	25,000	A follow-up to the PIEPSAP-funded base tariff review study. Unit will also look at loss reduction, DSM and fuel substitution
TV6	Training of TEC Outer Islands Supervisors on RE Technology	Policy		20,000					20,000	
TV7	Support implementation of Policy and Strategic Action plan	Institutional	Energy			6,250	6,250		12,500	
Sub-total Niuafo				25,000	5,000	16,250	41,250		87,500	
VU5	Vanuatu Hydropower Resource Mapping	Market	Energy Unit, Consultant			5,000	5,000		10,000	
VU6	Feasibility Study of the Tasiriki River hydro resource potential	Technical	EU			10,000	10,000		20,000	
VIII1	Review of the Rural Electrification Policy	Policy	Energy Unit, NACCC, SOPAC	6,000		7,000	7,000		20,000	
VU12	Renewable Energy and Energy Efficiency Programmes	Awareness	Energy Unit, SOPAC, UNELCO			2,000			2,000	
VU14	Review of the 2002 Talise Mini Hydro Feasibility Study	Market	Energy Unit, Consultant		9,000	9,000			18,000	
VU16	Study of the viability of changing fishery freezers to run on RE	Technical	Fisheries, Consultant			10,000			10,000	
VU17	Community Awareness	Awareness	VANREPA, local Theatre Group		1,500	1,500			3,000	
VU18	Identification & Promotion of income generation activities	Market	VANREPA, Peace Corps					3,000	3,000	
Sub-total Vanuatu				0	16,500	44,500	25,000		86,000	

Grand Total for Year 1 Country Activities:	177,812	178,000	237,777	299,665	893,254
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PMO Costs					
International Consultants (PM)	25310	25310	25310	25310	101,240
Local Consultant - PA	2500	4500	4500	4500	16,000
Local Consultant - APA	3000	9000	6000	6000	24,000
Administration Fess	4500	4500	4500	4500	18,000
Contractual Services - Ind	1250	1250	1250	1250	5,000
Travel, Audits and Reviews	10000	15000	5000	5000	35,000
Contractual Services - Co	1250	1250	1250	1250	5,000
Equip and Furniture	500	500	500	500	2,000
Comm & Audio Equip	750	750	750	750	3,000
Supplies	500	1000	1000	706	3,206
Info Tech Equip	3000	3000	3000	3000	12,000
Audio Visual and Print Prod	500	500	500	500	2,000
Total for PMO	53,060	66,560	53,560	53,266	226,446

GRAND TOTAL FOR 2008	230,872	244,560	291,337	352,931	1,119,700
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