

CREEC presentation

General presentation about CREEC

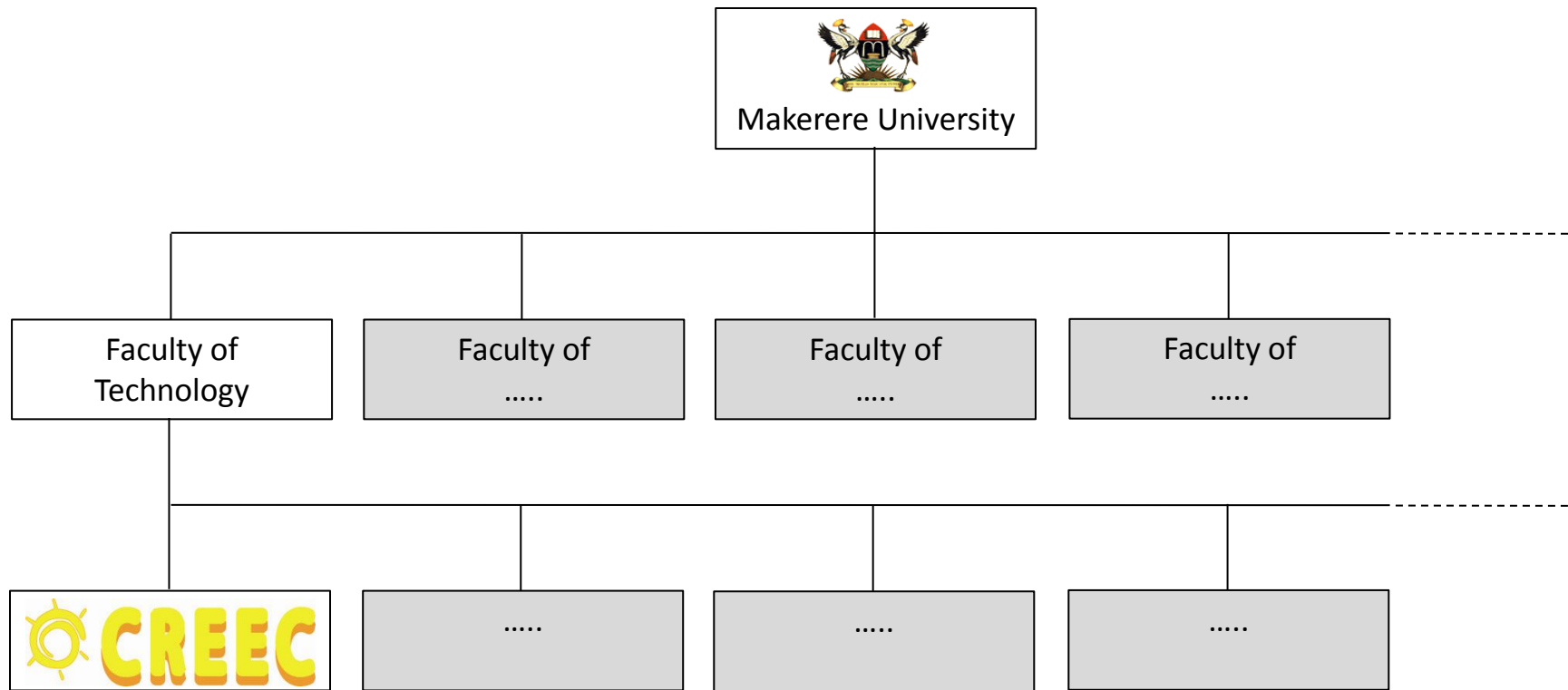
April 01, 2010

Kampala

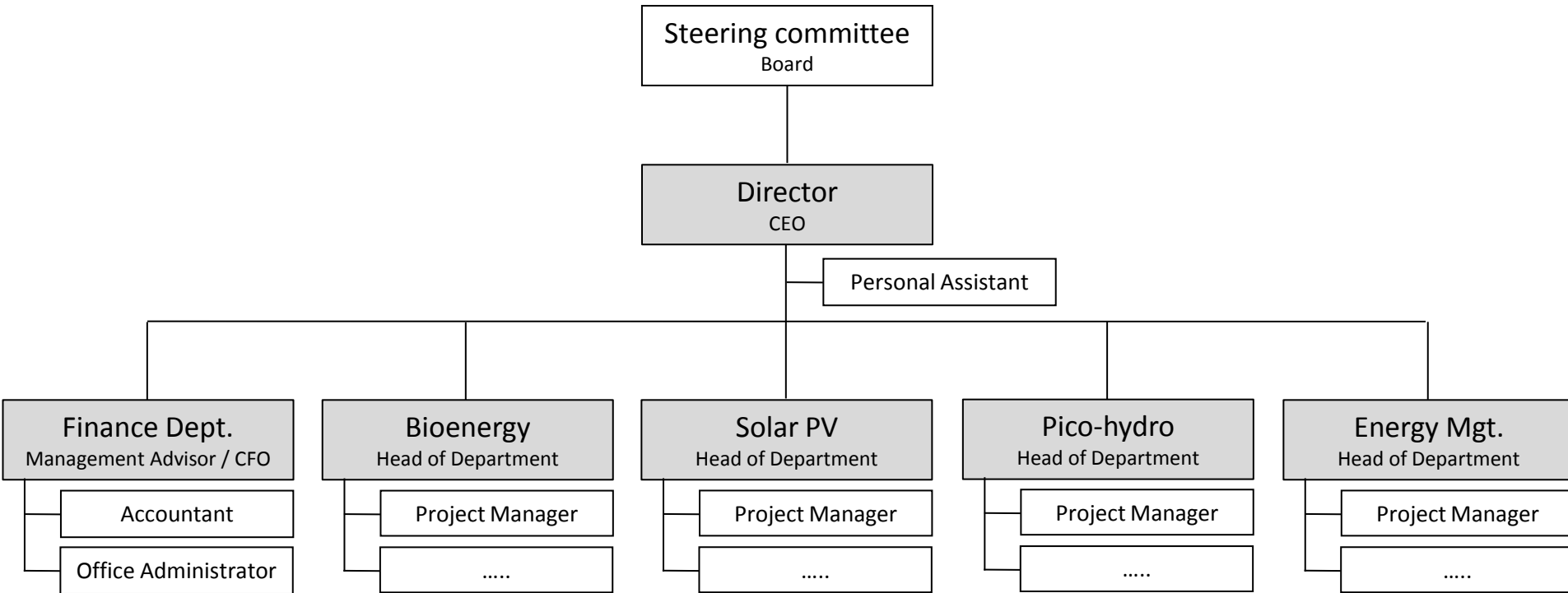


Centre for Research in Energy and Energy Conservation

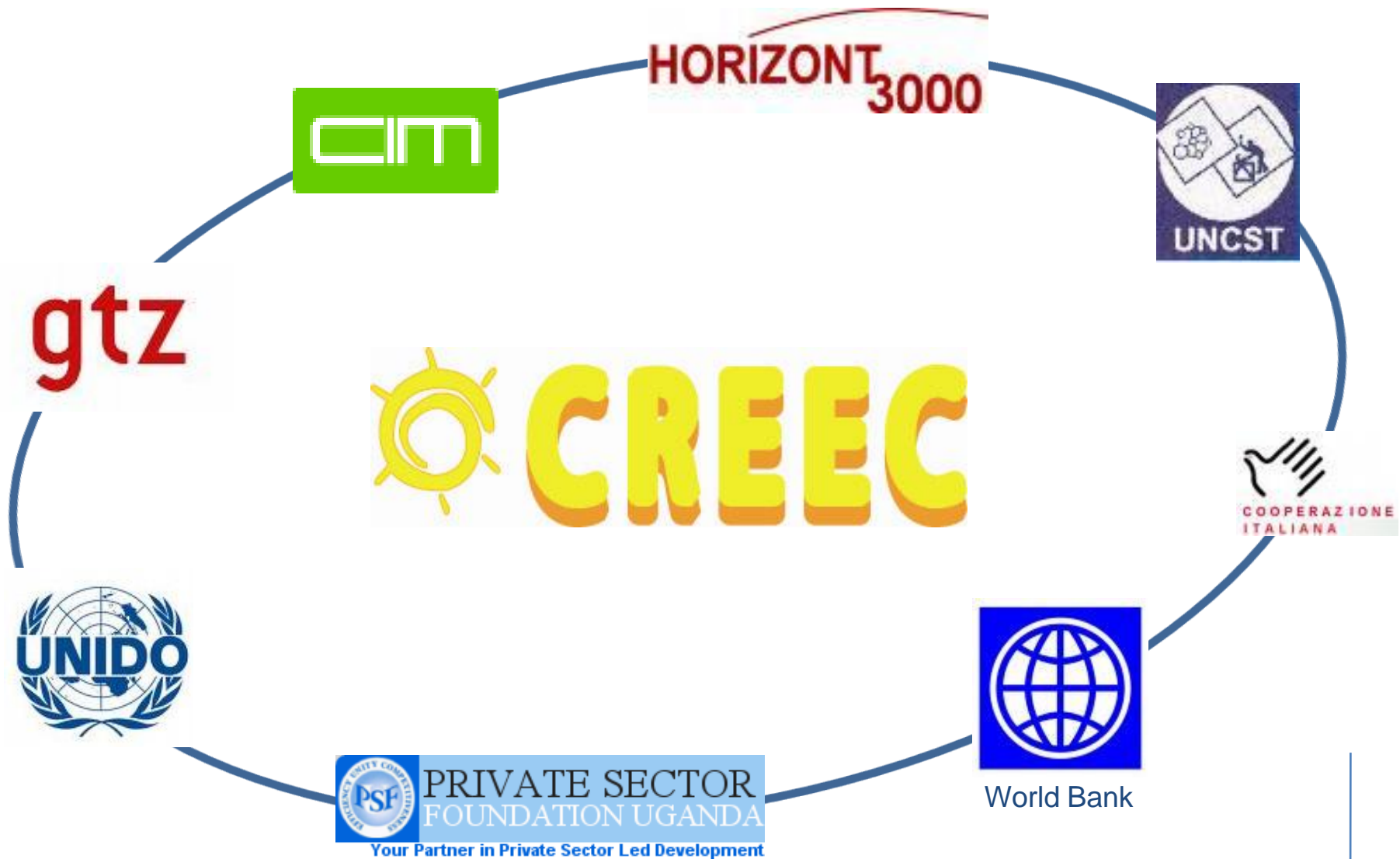
CREEC organisation (1/2)



CREEC organisation (2/2)



Partners of CREEC



Current projects

Our projects:

- UNCST (World Bank): Millennium Science Initiative (MSI)
Rural Electrification - Access to modern types of energy
 - PhD1: GIS mapping
 - PhD2: Appropriate technology
 - PhD3: Business models
- World Bank: Biomass Energy Initiative Africa (BEIA)
Introduction of Top-Lit UpDraft (TLUD) stove
- PSFU (BUDS-ERT)
Training of 20 solar PV technicians, 5 energy auditors
and 5 pico-hydro engineers

Mission and vision

Our mission:

To enhance access to modern types of energy through research, training and consultancy in East-Africa

Our vision:

To be the leading centre of excellence in renewable energy for an East Africa where access to modern types of energy is a reality for everybody



CREEC

Centre for Research in Energy and Energy Conservation
Faculty of Technology, Makerere University
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Core values

Our core values:

- We respect human dignity
- We do not compromise on honesty, integrity and transparency
- We commit ourselves to sustainable solutions

Guiding principles

Our guiding principles:

- We are convinced that access to modern types of energy is crucial to high living standards and economic development.
- We focus our activities on fostering the use of renewable energy to attain sustainable solutions in a economic, organisational and environmental sense.
- We value a balanced life for CREEC staff and our partners, leaving room for spirituality, family, and work.
- We say “NO” to corruption.
- We believe in “open source” and share our knowledge.
- All CREEC projects have a capacity building component and we involve students and trainees whenever possible to build for the future.
- We expect every staff member of CREEC to improve and develop continuously in his/her expertise.
- We want to deliver high quality output in everything we do.
- We believe that government, private sector and academia have to work together in order to make a difference.



What is expected from us?

Customers and their needs:

- donor community: capacity building, project implementation and studies
- government agencies: support in strategic and policy development, consultancy
- private sector: training, testing, consultancy, energy saving, product and process improvement and support in project implementation
- students: capacity building
- communities: indirect through project partners



Where are we now?

	Research	Training	Consultancy
Solar PV	<p>-</p> <ul style="list-style-type: none"> • no lab 	<p>0</p> <ul style="list-style-type: none"> • demonstration equipment available • more training kits necessary 	<p>-</p> <ul style="list-style-type: none"> • only one person with competence • equipment to do testing is missing
Pico hydro	<p>-</p> <ul style="list-style-type: none"> • test rig • one person has some training • no dedicated person 	<p>-</p> <ul style="list-style-type: none"> • no pilot plants • test rig not enough • no dedicated person • no training program 	<p>0</p> <ul style="list-style-type: none"> • some knowledge • no dedicated person
Bioenergy	<p>0 / +</p> <ul style="list-style-type: none"> • dedicated person • good support from others • need to focus more • prototypes required • some equipment available (PEMS) 	<p>- / 0</p> <ul style="list-style-type: none"> • knowledge available • no established training • no training program • equipment available but no demonstration unit 	<p>+</p> <ul style="list-style-type: none"> • good expertise available • no experience in implementation
Energy Management	<p>--</p> <ul style="list-style-type: none"> • research is no focus area 	<p>0 / +</p> <ul style="list-style-type: none"> • competence and equipment available • no experience • no training program 	<p>+</p> <ul style="list-style-type: none"> • experience available, but only person • equipment available • methodology available

What do we want in 2010? (1/2)

	Research	Training	Consultancy
Solar PV	<p>YES:</p> <ul style="list-style-type: none"> • applied research • quality assessment & benchmarking • mapping of solar insolation in Uganda <p>NO:</p> <ul style="list-style-type: none"> • basic research • product development • solar thermal 	<p>YES:</p> <ul style="list-style-type: none"> • training of technicians (home & institutional systems) • training of trainers (vocational institutes) <p>NO:</p> <ul style="list-style-type: none"> • grid connected systems • solar thermal 	<p>YES:</p> <ul style="list-style-type: none"> • evaluations of proposals / concepts • consultation on solar policy • feasibility studies for innovative projects <p>NO:</p> <ul style="list-style-type: none"> • Individual systems • sales of equipment • solar thermal
Pico hydro	<p>YES:</p> <ul style="list-style-type: none"> • low priority • mapping of head and flow in Uganda • MSI PhD2 <p>NO:</p> <ul style="list-style-type: none"> • any research; only in cross-cutting projects 	<p>YES:</p> <ul style="list-style-type: none"> • training of technicians, but only after dedicated person available <p>NO:</p>	<p>YES:</p> <ul style="list-style-type: none"> • projects within scope of PSFU ERT Phase II <p>NO:</p> <ul style="list-style-type: none"> • any further consultancy

What do we want in 2010? (2/2)

	Research	Training	Consultancy
Bioenergy	<p>YES:</p> <ul style="list-style-type: none"> • applied research • energy efficient stoves (1st prio) • baseline / benchmark studies in biogas • biogas plant (2nd prio) • gasifier (3rd prio) • biofuel (4th prio) <p>NO:</p> <ul style="list-style-type: none"> • basic research • briquettes • SVO 	<p>YES:</p> <ul style="list-style-type: none"> • training in stove manufacturing and utilisation • training of students / researchers in stove testing • training in biogas <p>NO:</p> <ul style="list-style-type: none"> • training for gasification and biofuel 	<p>YES:</p> <ul style="list-style-type: none"> • awareness campaigns and demonstrations with various technologies • stove testing service <p>NO:</p> <ul style="list-style-type: none"> • gasification • large scale bioethanol
Energy Management	<p>NO:</p> <ul style="list-style-type: none"> • any research 	<p>YES:</p> <ul style="list-style-type: none"> • training of auditors • training of production managers and engineers through new auditors 	<p>YES:</p> <ul style="list-style-type: none"> • execute audits • facilitate implementation • supervise / monitor implementation <p>NO:</p> <ul style="list-style-type: none"> • any implementation itself

What do we need to get there?

	Research	Training	Consultancy
Solar PV	<ul style="list-style-type: none"> • testing lab • knowhow for testing 	<ul style="list-style-type: none"> • ability to do trainings • training program • additional training kits 	<ul style="list-style-type: none"> • test equipment
Pico hydro	<ul style="list-style-type: none"> • dedicated person, however low priority • build-up expertise 	<ul style="list-style-type: none"> • dedicated person • complete test rig • pilot plant • training program 	<ul style="list-style-type: none"> • dedicated person
Bioenergy	<ul style="list-style-type: none"> • Approvecho testing knowhow • pilot plants • build-up expertise, especially in biogas 	<ul style="list-style-type: none"> • hands-on expertise to manufacture equipment • pilot plants • training program 	<ul style="list-style-type: none"> • get experience in implementation • establish stove testing & labelling service
Energy Management	<ul style="list-style-type: none"> • no requirements 	<ul style="list-style-type: none"> • increase capacity • build-up expertise • training program 	<ul style="list-style-type: none"> • increase capacity • build-up expertise • auditing standards

Management

- Internal guidelines and procedures need to be extended
- Improvement of accounting and introducing auditing
- Further training in managerial skills (time management, supporting and reporting)
- Strategy and work plans have to be developed further and implemented
- Increased visibility and uniform communication (website, logo's, etc.)
- Institutionalize organization

Focus (1/2)

Focus on:

- four areas (solar PV, pico hydro, bioenergy & energy mgt)
- applied research
- adaptation of systems to Ugandan environment
- emphasis on systems with components that can be manufactured locally
- include students in our projects whenever possible
- implementation of projects / pilot plants (MSI & BEIA projects)

and not on:

- basic research
- social science research
- agricultural research (we take agricultural product as input)
- solar thermal, wind energy and municipal solid waste



Focus (2/2)

Empowering the energy sector through:

- technical expertise
- clearly defined product
- no surprises (communication, deadlines, reliability)
- ethics (honesty, transparency and accountability)
- quality output
- competitive pricing
- increase visibility
- internal procedures and guidelines
- emphasize the importance of the triple helix (academia, government and private sector)



Goal for 2010

produce more kW
and
less paper