

Eskom/CSIR

Institutional Framework for Cooperation

Eskom/CSIR Proposals Review Process Feedback Session

20 May 2013

Eskom/CSIR SteerCom

- Berenice Lue Marais, Pat Manders, Barry McColl, Chris Gross -



Strategic Intent

- Eskom and the CSIR entered into a Memorandum of Agreement (MoA) in October 2010 to collaborate on R&D in areas of mutual interest and in the national interest.
- A Steering Committee (SteerCom) has been established to agree on areas of cooperation and to ensure that there is meaningful progress and achievement within the ambit of the MoA.
- A guideline has been developed to assist participants and ensure alignment and governance
 - aims to provide a balance in achieving an enabling environment and responsible management of resources, and will be amended as necessary to ensure efficient and effective processes.

Areas of Cooperation

- The MoA focuses on supporting collaborative R&D in specific areas of cooperation, wherein new capability could be established.
- Areas of cooperation are established in the MoA, but are reviewed and amended on an ongoing basis based on national and organizational priorities.
- Members of Eskom and the CSIR may propose new areas of cooperation at SteerCom meetings subject to:
 - Existing discussions between Eskom and CSIR staff, establishing the broad objectives of the R&D and the level of mutual interest, and
 - Prior consultations between the proponents and SteerCom members in their respective organizations to ensure at least reasonable fit with the intentions of the MoA.
 - Should new areas of cooperation be included, the SteerCom will propose and agree on champions from the respective organizations to facilitate future activities, project identification and progress reporting.

Cooperation Areas & Taskteam Coordinators

	SteerCom	Berenice Lue Marais, Strategic Partnerships/ Pat Manders, R&D Management	Barry MacColl, Technology Strategy & Planning/Chris Gross, Research, Testing & Planning
#	Cooperation Areas	CSIR	Eskom
1	Demand Side Management & Energy Efficiency/ Renewable Supply Site Options (RESO)	Thomas Roos	Ronel Clarke/Kubeshnie Bhagwandin/Tebatso Mogale, Sumaya Nassiep/Stephen Koopman
2	Energy Storage	Mkhulu Mathe	Peter Langley
3	Integrated Resource Scenarios	Bob Scholes, Marius Claassen	Nalini Pillay
4	Climate Change	Francois Engelbrecht	Tebatso Mogale/ Mandy Rambharos
5	Smart Grids	Ntsibane Ntlatlapa,, Simukai Utete	Nick Singh, Vic Lawrence
6	Clean Coal Technologies	Brian North	Naushaad Haripersad
7	Water	Harrison Pienaar	Gerhard Gericke/ Dave Lucas
8	Laser Cladding/ Refurbishment	Ndumiso Cingo, Hardus Greyling	Chris Gross
*	Other to be determined as required	-	-

CSIR/Eskom Coordinator Roles

Approach

- Understand the Eskom/CSIR MoA
 - Take a strategic perspective
 - Take an institutional perspective

Operational

- Establish communication link with counterpart
- Develop shared understanding of the intent of the cooperation area
- Develop concepts for joint projects
- Respond to enquiries from colleagues
 - Advise and filter
- Test project concept
 - Steering Committee
 - Firstly with institutional representative
 - Own institutional entity
- Develop and submit project proposals
 - Meet own institutional process requirements
 - Align with guidelines and criteria provided

Funding

- Projects supported will typically be funded by shared investment by Eskom and the CSIR.
- Eskom has established a Task Order process to facilitate Eskom funding.
- CSIR will typically utilize Parliamentary Grant funding for their contribution.
- Each case will be considered on its merits.
- Third party funding may be secured in addition to, or in lieu of, one or both party's contribution.

Project Proposals

- Proposals are submitted for consideration using the approved template.
- The SteerCom will advise participants on the timing for proposal submission.
- The SteerCom may request detailed research plans for the projects at its discretion.
- Project proposals must be routed through the respective organizations' approval framework prior to submission.
- Please note that funding is limited and likely to be over-subscribed.
- Projects that have been through the SteerCom process will be prioritized for review.

Eskom/CSIR Project Proposal Template

ESKOM/CSIR PROJECT PROPOSAL TEMPLATE (Not to Exceed 5 Pages)								
PROJECT TITLE:								
ESKOM CHAMPION:				CONTACT NO:				
CSIR CHAMPION:				CONTACT NO:				
Strategic Objectives								
Project Objectives								
Scope of Work/ Key Research Questions								
Key Milestones							Due Date	
Outputs							Due Date	
Detailed proposal / research plan attached?							Yes/No	
Proposed Budgets								
	2013/14	2014/15	2015/16	2016/17	2017/18	TOTAL		
Eskom		R	R	R	R	R	R	
CSIR		R	R	R	R	R	R	
Other		R	R	R	R	R	R	
TOTAL		R	R	R	R	R	R	
Risks Identified for this Project								
Health and Safety (Yes/No)		Environmental (Yes/No)			Resources (Yes/No)			
List		List			List			
Commercial (Yes/No)		Technology transfer (Yes/No)			Ethical (Yes/No)			
Specify		Specify			If yes, specify aspects that will require ethics committee clearance			

Project Selection Criteria

The following criteria are not absolute requirements, but should be considered as a guideline:

- Strategic alignment with intent of the MoA
- Co-development of the project concept between Eskom and CSIR
- Co-investment as appropriate
- Clear value proposition
- Clearly defined impact
- Demonstrated understanding of the competitive landscape
- Clear objectives, milestones and end point deliverable/s
- Feasibility of implementation
- Appropriate competence of the research team
- Committed and passionate champions
- Appropriate research and / or industry partners
- Sharing of facilities where appropriate
- Skills transfer / training

ESKOM/CSIR Institutional Collaboration

Project Proposals Review 11 March 2013



SteerCom Project Proposals Review, 11 March 2013

#	Project Proposal	Comments/Suggestions	SteerCom Decision, 11/03/13
1	Regional Air Quality Modelling over the Waterberg Priority Area	<ul style="list-style-type: none"> Well motivated Has strong HCD component Shows collaboration Aligned with Eskom strategy Research questions articulated clearly Aligned with CSIR R&D Group has worked well in the past 	Approved
2	Laser-based Refurbishment of Turbine Blades	<ul style="list-style-type: none"> Existing collaborative relationship Good technology development Good impact Mutually beneficial Supported on the basis of good work done 	Approved subject to Chris Gross sign off on funding allocation
3	Concentrated Solar Energy – Solar Melting/ Recycling of Aluminium	<ul style="list-style-type: none"> Good problem statement Address needs for implementation System approach Good feasibility analysis Should not be limited to aluminium smelting – should address solar augmentation industry, beginning with a broad feasibility study Aligned to Eskom strategy not clear 	Thomas Roos to rework and discuss with Barry MacColl
4	Research and Development of Spunlaced Nonwoven Filters Made from PPS and P84 Fibres for Air Filtration Applications in Energy and Power Sectors	<ul style="list-style-type: none"> Potential IP and procurement risks Contribution by Eskom is in-kind (evaluation) Fundamental research - might take too long Not sure what is the current state of technology development Budget not clarified Lacks feasibility analysis 	<p>Not supported. Rethink/rewrite and clarify what will be achieved</p> <p>Naushaad Haripersad to provide technical advice</p>

SteerCom Project Proposals Review, 11 March 2013

#	Project Proposal	Comments/Suggestions	SteerCom Decision, 11/03/13
5	Prevalence of skin problems related to exposure to sun radiation in Distribution and Transmission	<ul style="list-style-type: none"> No scientific development or collaboration Contract R&D 	Rejected
6	Oxyfuel Combustion	<ul style="list-style-type: none"> Good proposal Uses existing facilities at CSIR and Eskom facilities There appears to be a mismatch between CSIR and Eskom needs Should be a joint submission 	<p>Rework/Establish scope and feasibility/realign scope and budget</p> <p>Naushaad Haripersad to provide technical advice</p>
7	Thermal Desalination	<ul style="list-style-type: none"> Systems analysis required to test feasibility What is the benefit to Eskom? Collaboration aspect unclear Some milestones have already been completed? Proposal not clear 	<p>Rework/clarify scope and feasibility</p> <p>Jenny Reeves to provide technical advice</p>
8	Redox Flow Batteries	<ul style="list-style-type: none"> Proposal scope unclear Research seems to be a pilot plant Large budget required for initial studies Not clear what the outputs will be Research on batteries has not succeeded in the last 15 years at Eskom No delivery dates Problem statement should be revised 	<p>Rejected/rework/clarify scope</p> <p>Kenneth Ozoemena to discuss with Peter Langley and get Eskom buy-in</p>

SteerCom Project Proposals Review, 11 March 2013

#	Project Proposal	Comments/Suggestions	SteerCom Decision, 11/03/13
9	Hydrogen storage	<ul style="list-style-type: none"> • Strengthen proposal • Great idea but no clear focus • Capital intensive • Not a priority at Eskom • Lack of clarity from the technical team • Need strategic discussion with steering committee around storage 	<p>Peter Langley to provide technical advice</p> <p>Rejected</p>
10	Cell phone electricity theft	<ul style="list-style-type: none"> • Service provision, not a collaborative project • Has not followed the submission process • Not aligned to MoA priorities <p>However:</p> <ul style="list-style-type: none"> • Great idea • Research very useful • Project could be supported if accepted by Eskom commercial services 	<p>May be supported as these are specialised/unique consulting services subject to sign off by Eskom Commercial Services</p>
11	Omega 3 fatty Acids for microalgae	<ul style="list-style-type: none"> • Proposal too brief • Lacks background information • Problem statement not clarified • Pilot scale at Eskom not feasible 	<p>Rejected/ rework/ contextualise</p> <p>Naushaad Haripersad to provide technical advice</p>

Thank you

