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CSIR National Laser Centre Rental Pool Programme Application Manual

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PART 1: INTRODUCTION

1.1 Purpose

This manual provides information on opportunities for funding within the CSIR National Laser Centre Rental Pool Programme (RPP) grant scheme and serves as an addendum to the Strategy for the CSIR National Laser Centre RPP document. It should be read in conjunction with the strategy document, which can be accessed at www.nrf.ac.za.

The manual is intended to be an easy reference guide to the grant scheme and to assist potential participants in accessing the available funding. It does not, however, constitute a complete set of policy, procedures or systems involved in the programme.

1.2 Background

The establishment of the CSIR National Laser Centre provides higher education institutions (HEIs) with the opportunity to access to a large number of state-of-the-art lasers, laser diagnostic equipment and laser laboratories.

The Department of Science and Technology has made funds available which will be used to support HEI research specifically within the laser environment. These funds are managed by the CSIR National Laser Centre.

1.3 Strategic intent

The sole purpose of the programme is to develop, encourage and support a unique programme of building and growing a sustainable corps of expert laser researchers in South Africa.

1.4 Strategic objectives

- To effectively manage and expand the RPP grant scheme that stimulates research at South African HEIs and other research organisations such as museums and science councils
- To render technical and scientific support to RPP participants at HEIs and other research organisations
- To develop the next generation of scientists to rejuvenate and strengthen the ageing South African scientific community
- To strengthen the scientific community on laser research in South Africa by growing the number of quality young scientists.

PART 2: SUBMISSION AND ASSESSMENT PROCESS

Application forms are available on the CSIR website http://www.csir.co.za/lasers/rental_pool.html and at the research offices of the relevant institutions after the call is opened.

The CSIR National Laser Centre will assist the applicant in the completion of the application; primarily gathering information on equipment availability and pricing; and suitability of equipment. The scientific and technical contents of the project will be refereed through a peer-review mechanism to confirm project alliance with national priorities. Applications must be substantial and comprehensive to allow proper assessment of the research proposed.

2.1 Funding

The programme allows access to equipment at the CSIR National Laser Centre facilities and rental of equipment for use at an institution's own facility. The programme also makes provision for the upgrading of existing equipment in order to ensure suitability for the proposed project. In summary, the grant funds the following activities:

- Preparation and upgrade of equipment
- Delivery, set-up and return charges
- Maintenance costs
- Insurance costs
- Provision for replacement
- Consultation
- Accommodation and travel
- New equipment
- Consumables
- User meetings.

Each project will be eligible for new ancillary equipment (smaller diagnostic equipment) to the value of R7 000 and consumables such as optics to the value of R75 000. Consumables will remain the property of the grant holder and will assist in establishing in-house laser infrastructure.

The fund makes provision for:

- Preparation and upgrade of equipment, where necessary
- Maintenance of equipment
- Delivery, set-up and return cost where necessary
- Consultation cost
- Insurance cost for equipment while at the HEI
- Travel and accommodation cost only for travelling to CSIR National Laser Centre laboratories for approved research purposes
- Grant holders and their students to attend a mid-term reporting session in the form of a user meeting
- Replacement of older equipment as newer equipment is purchased; or older equipment retired to educational institutions via a long-lease agreement. Under the long-lease the

institution will be responsible for all maintenance and running costs at a very low monthly rate. To ensure continuous growth and competitiveness in the laser industry, the facility will budget to purchase equipment it has not acquired, and deemed necessary for research projects.

All of the above-mentioned costs will contribute to form the budget of each grant holder based on the equipment they request for their laboratories.

2.2 Call for applications

Applications should be submitted to the CSIR National Laser Centre via the institution's research office by the stipulated deadline in order to be considered for funding for the next cycle. The research office will endorse the applications and the successful applicants will then be awarded.

Please submit electronically as a scanned pdf by return email to nlcrentalpool@csir.co.za

The time-lines for the RPP grant scheme call are shown below. Also listed, are the expected dates for the outcomes announcement of the applications.

2.3 Participation

All HEIs may participate in the grant scheme.

CALL	OPEN	CLOSE	OUTCOMES ANNOUNCEMENT
May	1 June	31 July	30 November -15 December

Participation of post-graduate students, registered at a recognised South African higher education institution, is of paramount importance, as well as collaboration with other researchers based at the applicant's institution and other institutions. These should be stated clearly by the researcher in the application. Although student involvement is a priority, the grant should not be used only for training without the research component.

2.4 Eligibility criteria

The programme considers applications from researchers who are:

- Involved in laser-based research in any field in natural science, engineering, technology, social science and humanities
- Holders of at least a Master's degree
- Employed at South African Higher Education Institutions on a full-time or full-time contract basis. If on contract, the length of the contract should at least be for the duration of the research project applied for and be clearly indicated in the application.

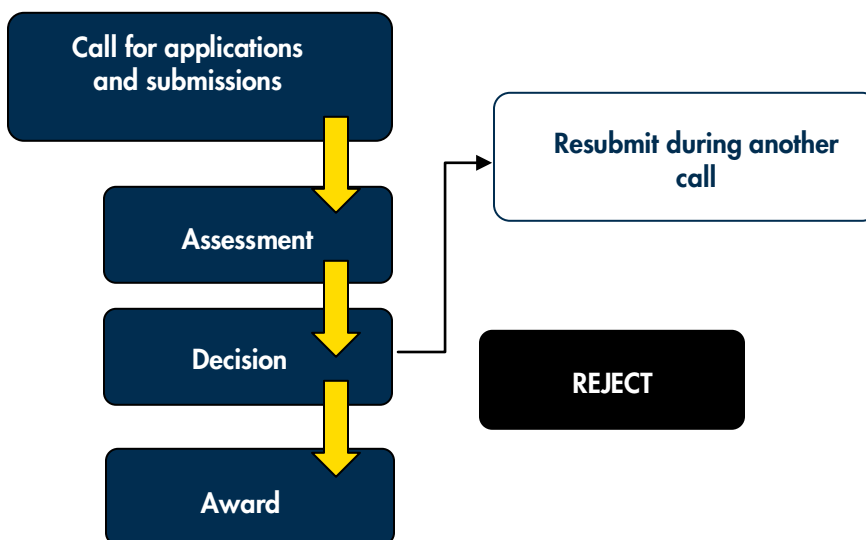
2.5 Selection criteria

The selection of successful applicants will be based on the institution's Strategic Research Plan which sets out, amongst other things:

- The research objectives
- The relevance of the equipment in research areas which they wish to target for growth and development
- How their proposed use of equipment relates to existing research or capacity, as well as overall institutional development
- The indirect financial contribution that the HEI can commit to the maintenance of the equipment
- Their approach to recruiting suitable candidates for collaboration
- The milestones they will use to assess the impact of equipment on their research performance in terms of knowledge and human capacity outputs.

2.6 Submission & assessment process

The process is as illustrated below:



2.6.1 Submission process

- Application is made to the CSIR National Laser Centre by completing the attached application form and submitting it via the research office of the affiliated institution before the closing date.
- All applications should be submitted electronically (containing the original relevant signatures).

Submit electronically as a scanned pdf by return email to nlcrentalpool@csir.co.za.

2.6.2 Assessment process

All applications will be submitted to a review panel consisting of experts from industry, universities and international members. The assessment will primarily focus on scientific merit, capacity building, output, and equity and redress. Continuation applications will also be assessed on progress; hence progress reports submitted to the CSIR National Laser Centre earlier this year will form part of the application.

Assessment criteria will be used to maintain consistency during the assessment of research proposals. Each criterion is assigned a weight (see table below). This is captured in the application form template.

Criterion	Details	Weight
Management plan 10%	Feasibility and efficiency of management plan	10%
Scientific merit 40%	Scientific/technical excellence	15%
	Scientific impact/outputs	25%
HR development 40%	Research students and post-doctoral Fellows	5%
	Black & female students	20%
	Staff development	10%
	PI track record	5%
Relevance and impact 10%	Scientific, social, economic and environmental	10%

PART 3: MANAGEMENT OF GRANT AND EQUIPMENT

3.1 Reporting and use of equipment

The grant holder and the institution will jointly sign the contract based on the intentions of the grant holder. On accepting the award (signing the contract), the grant holder will be required to deliver on the annual research plan that formed part of the accepted application. A mid-term report in the form of a user meeting is compulsory for each grant holder.

At the end of the calendar year, the grant holder will be required to prepare and submit an annual report addressing the milestones and expected outcomes presented in the research plan to the CSIR National Laser Centre.

3.2 Duration of the grant

The CSIR National Laser Centre RPP grant will be tenable for a maximum of three years; an annual report should be submitted to the CSIR National Laser Centre.

3.3 Payment of grants

The applications are endorsed by the applicant's institution of employment as payments are made to the CSIR National Laser Centre. Payments will be made after actual expenditure is claimed, using a tax invoice as per expenditure.

3.4 Assistance

Should you require clarification on any of the processes, criteria or plans presented in this manual, please do not hesitate to contact Thomas du Plooy on 012 841 4188 or 082 443 1128, email nlcrentalpool@csir.co.za

PART 4: EQUIPMENT AND RESEARCH FOCUS AREAS

4.1 Equipment accessible at the User Facility:

- Nd: YAG pulsed lasers
- Nd: YAG meso machining system
- Excimer lasers 4Kw Nd: YAG laser system with robot manipulation (for laser material processing)
- CW CO₂ lasers
- CO₂ pulsed lasers
- 5Kw CO₂ laser system (for laser materials processing)
- Pulse laser deposition system
- Laser systems for spectroscopy
- Mobile lidar pollution monitoring system
- High-resolution FTIR system
- Surface characterising facility
- Femtosecond laser system.

4.2 The CSIR National Laser Centre research focus areas:

- Biophotonics research
- Solid-state laser development research
- Laser materials processing research
- Laser-based measurements and diagnostics
- Lidar research
- Ultra-fast optics.