

AAMRI Feedback on the Australian Synchrotron Access Model and Guidelines for Applicants, External Reviewers and Program Advisory Committees

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The Association of Australian Medical Research Institutes (**AAMRI**), as a shareholder of the Australian Synchrotron, appreciates the opportunity to comment on the proposed new Australian Synchrotron Access Model, and Guidelines for Applicants, External Reviewers and Program Advisory Committees (**PACs**). On behalf of our 46 member medical research institutes, we would like to raise some concerns with the proposed changes.

Merit process

National benefit & applications of the proposed research

The proposed selection criteria for merit-based Synchrotron access have a new 30% weighting for 'National Benefit and Applications of the Proposed Research'. This criterion captures both the alignment of the research proposal to the National Science and Research Priorities (**NSRPs**), and evidence that the research is likely to create beneficial national impacts (economic, environmental, health, social or cultural).

There is understandable concern among our members that this National Benefit and Applications of the Proposed Research criterion will have negative implications on Synchrotron access for discovery research (the facilitation of which is a prime function of the Synchrotron) and other research areas not captured by the NSRPs.

This new criterion does not align with the International Union of Pure and Applied Physics (**IUPAP**) principles of access to major user facilities (listed on page 2 of the Access Model document), and we are aware of other international synchrotron facilities that make no reference to national benefit and research priorities in assessing merit-based applications.

The use of NSRPs in the selection criteria for Synchrotron access also doesn't align with the intended purpose of the NSRPs. As the Department of Industry, Innovation and Science website states, the NSRPs were never intended to be exclusive or exhaustive. Rather, they were intended to identify areas of critical need and national importance and ensure that a certain *proportion* of Commonwealth Government research investment is allocated to these.¹ This intent is quite distinct from using the NSRPs as a broad-based selection criterion for all applications that significantly reduces the 'merit' of research proposals outside these relatively narrow priorities. The Commonwealth Government also states that NSRPs should "not mean that funding should be directed to applied, mission-based research to the exclusion of other forms of research. Even in the priority areas, a significant amount of the research will need to be early-stage, basic research."² It would be nonsensical should discovery research awarded Commonwealth Government funding through the Australian Research Council (**ARC**) or National Health and Medical Research Council (**NHMRC**) be uncompetitive for Synchrotron time because it does not align with an NSRP or have an immediate national impact.

¹ <http://www.science.gov.au/scienceGov/ScienceAndResearchPriorities/Pages/default.aspx>

² Ibid

In the case of medical research institutes, we note that the NSRPs include a 'Health' priority: "Build healthy and resilient communities throughout Australia by developing treatments, solutions and preventative strategies to improve physical and mental well-being and improve the efficiency and effectiveness of Australia's health care system." However, we also note that this Health priority focusses mainly on health services and public health research,³ which would clearly have little need for Synchrotron access compared with other health and medical research fields.

We request clarity in the Guidelines, and assurance from the Synchrotron Director, that the NSRPs will be applied in their broadest context. In the case of the Health NSRP, this should capture any health/disease-related research, including discovery research.

We also recommend reducing the weighting for the National Benefit & Applications of the Proposed Research criterion so that it gives research aligned with the NSRPs or with an obvious national impact a 'competitive edge', rather than potentially eliminating high quality discovery research that doesn't align with an NSRP.

MX2 beamline and cancer research

Related to this new criterion, the Australian Cancer Research Foundation (**ACRF**), together with several research organisations, recently provided funding for a new detector for the MX2 beamline. Through its funding agreement, the Synchrotron has committed a certain percentage of MX2 time for cancer-related research. According to the examples in the Guidelines, we presume that any cancer-related project could thus claim this non-government organisation support under the National Benefit criterion. We also seek clarification whether such a justification would be limited to MX2, or could extend to the whole Synchrotron facility.

Quality of the scientific proposal

Nowhere does the selection criteria consider whether a research proposal has secured competitive, peer-reviewed funding, such as ARC or NHMRC funding. Any Australian researcher who has received peer-reviewed grant funding has already gone through an extensive and highly competitive process based on the quality of the scientific proposal and the track record of the applicant. It would be illogical should research awarded Commonwealth Government funding through the ARC or NHMRC not have access to Synchrotron time to complete this research. The Synchrotron should not act as a gatekeeper over and above the Research Councils.

We recommend that securing Commonwealth Government or other competitive, peer-reviewed funding for a research proposal should be included as strong evidence of the quality of the scientific proposal, and should contribute to the score of merit-based applications for Synchrotron access.

Track record (relative to opportunity)

There is a very superficial treatment of track record 'relative to opportunity' in the Synchrotron Guidelines document. This does not meet the peer review guideline standards of other Commonwealth Government agencies (e.g. NHMRC and ARC) in providing guidance on how to deal with career interruptions (e.g. for maternity/paternity leave), etc.

We recommend clear and comprehensive guidelines for external reviewers regarding the scoring of track record 'relative to opportunity', with particular reference to early-career researchers and researchers with career interruptions (e.g. due to maternity/paternity leave, carer responsibilities, health/family issues, or time spent in other sectors).

³ <http://www.science.gov.au/scienceGov/ScienceAndResearchPriorities/Pages/Health.aspx>

Need for Synchrotron radiation

We welcome the replacement of the 'Need for Synchrotron Radiation' score with a simple yes/no decision.

An appropriate balance between discovery and applied research

The Access Model states that the facility will work with PACs to manage an appropriate balance between discovery and applied research, as defined by reference to the Australian Government's Science and Research Priorities and directives from the Commonwealth Government. (This balance appears to be separate from recognising the impacts and NSRPs in the merit access selection criteria, which is a separate section in the Access Model document.)

It is not clear how this 'managing of an appropriate balance' between discovery and applied research interacts with the merit-based selection criteria. Is the intention that selection criterion B (i.e. National Benefit and Applications of the Proposed Research) ensures an appropriate balance, or will there be a separate mechanism if it is found that the selection criteria do not result in an appropriate balance?

It is also unclear how this and selection criterion B interact with the requirement that PACs include a recommendation on whether proposals adequately address national benefit when providing their ranked lists to the Synchrotron Director (section 3(h) of the Guidelines). Strangely, the definition of 'national benefit' in this section of the Guidelines includes whether a proposal contributes to the diversity of the Synchrotron user community (e.g. spread of research topics, geographic spread, range of user experience levels). This is considerably different to the interpretation of 'national benefit' under criterion B, which refers to NSRPs and national impacts. This causes quite a bit of confusion.

Finally, no guidance is given in the Access Model on what is perceived to be an 'appropriate balance' of discovery versus applied research.

We recommend that the Access Model and Guidelines be re-drafted to ensure consistency and clarity with regard to how an appropriate balance of discovery and applied research will be achieved, and what this appropriate balance is.

Targeted access

The Access Model states that if requests for paid/proprietary access to existing beamlines exceed the 10% limit, more time may be allocated from either remaining targeted access time or merit time, at the Synchrotron Director's discretion. Given that there is only moderate use of the facility by industry, it seems that this will be unlikely. Nevertheless, this does have the potential to take merit-based beamline time away from academic researchers, and no guidelines have been provided in the Access Model on whether this use of merit-based time by industry would be on a fee-for-service basis and/or be based on the competitiveness of their application compared with other merit-based applications.

We recommend clarity in the Access Model around the potential use of merit-based beamline time by industry.

For new beamlines, the Access Model allows funders to compete for merit-based beamline time in addition to their targeted access. In cases where a funder is from industry, this could allow industry free merit-based access to new beamlines, rather than the normal paid/proprietary access time. While this is unlikely to be a major issue, we have raised it in case this was not the intent.

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AAMRI Members

