FASTS Science & Innovation Federal Election Questionnaire 2010

Responses from the Australian Labor Party, Liberal/National Coalition, and The Greens.

NOTES:

The table below allows you to compare the policies and positions of each Party to the priority science and innovation issues identified by FASTS after consultation with its members.

Where questions have not been directly answered, an attempt has been made to extract the most relevant information from the statement provided by the Parties. To ensure you can view the questionnaire responses in their entirety, a link has been provided at the FASTS website to the complete document received by FASTS (www.fasts.org).

- The ALP, addressed individual questions as provided in the questionnaire.
- The Liberal/National Party addressed the priority issues provided by FASTS but not the individual questions.
- The Greens provided a broad policy response and reference to their policy website which includes further detail.

Priority 1:

Maintain public investment in science and innovation.

Will your Party support the 10-year innovation strategy set out in Powering Ideas: An Innovation Agenda for the 21st Century?

Yes we will. Federal Labor devised Powering Ideas to guide innovation policy over the next decade, and a Gillard Labor Government will see it through. In government the Coalition will always seek scientific advice from public and private research bodies where appropriate. We will always treat provision of scientific advice with care, and the scientific community with the utmost respect. In government the Coalition will always treat provision of scientific advice with care, and the scientific community with the utmost respect. In government the Coalition will always treat provision of scientific advice with care, and the scientific community with the utmost respect. In government we will use the recommendations and results of the Powering Ideas report to guide our policies towards science and innovation. However, the following general statement about science and innovation policy was provided: The Greens value science and innovation very highly. Not only do we prize the pursuit of knowledge for its own sake, but we believe that we the way our society produces and consumers resources are fundamentally unsustainable, and that only with science and innovation can we invent a sustainable future. The latter, in particular, is urgent. The Australian Green's Science and Technology policy includes the following goals: - a society where the acquisition of fundamental knowledge and the sustainable application of new techniques are valued in the education system and by Australian business; - research and development culture
- research and develonment culture

that addresses national goals and prepares Australia for emerging challenges and opportunities;

- a national focus on innovative technology and methods to address the challenges facing Australia and the world;
- increased expenditure on research and development to at least the OECD average of GDP; and
- the CSIRO to conduct research that is in the public interest, is independent and is world class.

Will your Party ensure that funding in the Federal Budget for science and innovation is maintained?

ALP	COALITION	GREENS
Federal Labor has increased investment in science and innovation by 34 per cent since 2007. We have no intention of taking Australia backwards – unlike the Coalition.	The Coalition has always supported public funding for impartial scientific research. It was in fact the Menzies Liberal government that oversaw a massive increase in funding for the CSIRO in the 1950s and 1960s. The Coalition will continue to ensure science and innovation is adequately funded. The Labor government has left the public finances in very poor shape and sadly at this time we can neither make any commitment to fund a review of Australian science institutions nor substantially increase funding for scientific research.	Not specifically answered. Please refer to party's policy website - http://greens.org.au/policies/media-arts-science/science-and-technology

What is your Party's strategy for boosting investment in science and innovation so that Australia's investment in this area is comparable with our international competitors?

ALP	COALITION	GREENS
Total Commonwealth outlays on	Certainly the Coalition aspires to	Not specifically answered. Please
research and innovation declined by	have funding levels for scientific	refer to party's policy website -
around a quarter as a share of GDP	research to match and exceed	http://greens.org.au/policies/medi
under the previous Coalition	those of our international	a-arts-science/science-and-
Government. Federal Labor's task	competitors. Our first priority in	<u>technology</u>
from 2007 has been to repair this	government however is to pay	
neglect and make a new beginning.	down Labor's debt and deficit.	The Greens questionnaire response
		includes the following statement:
Labor has increased Federal		
Government spending on research		With regards to current
and innovation by 34 per cent since		Government's reform agenda, like
2007. We are determined to		FASTS, we welcome the increase in
continue building the innovation		R&D funding relative to the
system Australia needs, including by		Howard Government, but we
improving the effectiveness of		remain concerned that we are still
measures to encourage investment		falling behind the leading nations.
and collaboration by industry.		

Priority 2: Improve fiscal and regulatory environments to support science-based innovation

What will your Party do to improve fiscal and regulatory environments to allow more science-based innovation?

ALP	COALITION	GREENS
The Gillard Labor Government's new R&D Tax Credit is the most important reform to business innovation support in a generation,	The Coalition thwarted the Labor Government's attempts to decimate support for research and development (R&D) this year.	Refer to party's policy website - http://greens.org.au/policies/media- arts-science/science-and-technology
and is worth \$1.6 billion a year to business. By stalling the legislation in the Senate, the Coalition have	Labor had been proposing to rip apart arrangements that have been	The Greens questionnaire response includes the following statement:
denied countless small businesses upfront cash credits for their investment in innovation.	operating successfully for 25 years by altering definitions of what constitutes R&D.	The Australian Green's Science and Technology questionnaire response includes the following goal: - research and development culture
Alongside programs such as Enterprise Connect, public sector innovation reforms, and Federal Labor's Industrial PhDs, the tax credit will help transform Australian research and industry into a powerhouse of global innovation.	Modelling and surveys undertaken by independent organizations consistently showed that the new laws would have reduced support for the vast bulk of R&D currently conducted by Australian businesses. They would have also created great uncertainty for future R&D planning, and substantially increased compliance costs even for the few enterprises that might have received help.	that addresses national goals and prepares Australia for emerging challenges and opportunities; - increased expenditure on research and development to at least the OECD average of GDP
	growth of our economy and the Coalition supports the existing R&D framework.	
	In government we will continue to work with key stakeholders like FASTS to examine how we can better encourage research and development in Australia.	

Priority 3: Address workforce issues

Will your Party pursue development of the Research Workforce Strategy?

ALP	COALITION	GREENS
Yes we will. Federal Labor pledged	The Coalition will consider the	Refer to party's policy website -
to complete the Research Workforce	submissions made to the Research	http://greens.org.au/policies/medi
Strategy as part of its Science for	Workforce Strategy along with the	a-arts-science/science-and-
Australia's Future package, which	accompanying consultation	technology
was announced on 10 August 2010.	document.	
Federal Labor will deliver the		The Greens questionnaire response
research workforce Australia needs		includes the following statement:
to safeguard and improve our		

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standard of living, our technological sophistication, and our social and material prosperity. That is why Federal Labor is developing its Research Workforce Strategy, in partnership with universities, researchers and industry. Good progress is being made and a reelected Gillard Labor Government will deliver a practical, evidence based Research Workforce Strategy in its second term.

The Greens believe we need a transformation to deal with both climate change and peak oil. This will require fundamentally reinventing the way we produce and use energy, the way we produce and deliver goods and services, our transport systems, the way we grow and distribute food and fibre, the buildings that we live and work in, and the way we manage the natural landscapes. Further, adapting to climate change poses additional challenges, particularly in the health and agriculture sectors. In other words, this challenge involves a large proportion of the science and technology workforce.

The Greens commit to systematic, long-term, predictable and adequate investment in the national science and technology workforce. We will work in the Senate to ensure that the national science workforce is given the support they need now and into the future, and we look forward to working closely with FASTS in order to achieve this.

How will your Party seek to identify and address research workforce issues such as those outlined?

ALP

Federal Labor is dealing with these and related issues through the Research Workforce Strategy, which is currently under development. The strategy will address frankly the strengths and shortcomings of our current national trajectory in order to identify our needs and potential strategies for addressing them. Specific issues are dealt with below.

COALITION

Beyond the Coalition's commitment to good economic management, the Coalition will introduce a genuine paid parental leave scheme that will improve the productivity of Australian workplaces.

It will provide mothers with 26 weeks paid parental leave, at full replacement wage (up to a maximum salary of \$150,000 per annum) or the Federal Minimum Wage, whichever is greater. And it will include superannuation contributions at the mandatory rate of nine per cent.

This measure will make it easier for women who want to have children to have long-term careers in the science and innovation sector. It will redress the observed

GREENS

Not specifically answered. Please refer to party's policy website - http://greens.org.au/policies/media-arts-science/science-and-technology

imbalance between maternity leave provisions available in the public and private sectors. And women will find it much easier to take career breaks to care for their children without having to leave the paid work force.

What policies will your Party pursue to rectify the under-representation of women in the science workforce, particularly at senior levels?

ALP

Federal Labor recognises that we have to harness all of Australia's potential. To do otherwise is not only unfair and discriminatory; it is also inefficient and delivers less than the full capacity of which the nation is capable. This applies to all sections of the community that are under-represented in the research sector, including women, Indigenous Australians, people from rural and regional Australia, people from economically disadvantaged backgrounds, and those from some outermetropolitan areas.

The Gillard Labor Government has announced the introduction of two dedicated Prime Minister's Laureate Fellowships to encourage applications from women for these prestigious awards. This is just a start – Labor recognises that encouraging application, and providing support and training, are the most effective ways to improve participation. A Gillard Labor Government will address these issues as an essential part of the Research Workforce Strategy.

COALITION

The Coalition is committed to building women's participation in all parts of Australian life and to fostering capacity building for Australian women.

We support business appointing women to management positions and recognise that this is a means of harnessing skills in the Australian workforce as well as reducing discrimination and improving Australian productivity.

GREENS

Not specifically answered. Please refer to party's policy website - http://greens.org.au/policies/media-arts-science/science-and-technology

Will your Party implement or advocate for mandatory annual reporting of the rank and retention rates of women in publicly funded research agencies?

ALP	COALITION	GREENS
Evidence-based policy relies upon good data. While Labor is sensitive to the burden data collecting can place on institutions, we are committed to achieving good public policy outcomes – including in the area of equity – and improving productivity based on good evidence. Federal Labor will consider the public interest merits of introducing such measures, balanced against the real cost.	Not specifically answered. Please refer to party's policy website - http://www.liberal.org.au/Policies.aspx	Not specifically answered. Please refer to party's policy website - http://greens.org.au/policies/media-arts-science/science-and-technology

What steps will your Party take to address the impact of career breaks and/or secondments on the progression of researchers?

ALP	COALITION	GREENS
Federal Labor is committed to ensuring that time off from research duties – such as for family reasons, to develop new skills or to pursue other opportunities – does not harm researchers' prospects. Labor has overseen the evolution of the Australian Research Council's new method of assessing track record relative to opportunity, the Research Opportunity and Performance Evidence paradigm.	Not specifically answered. Please refer to party's policy website - http://www.liberal.org.au/Policies.aspx	Not specifically answered. Please refer to party's policy website - http://greens.org.au/policies/media-arts-science/science-and-technology

What will your Party do to improve links and promote collaboration between academia and industry and between industries?

ALP	COALITION	GREENS
Federal Labor has already committed to improving links with Industry – for example, by establishing the Joint Research Engagement Scheme and by introducing Industrial PhDs under our proposed Clean 21 ARC Linkage Industry Research Training Awards Scheme. But we recognise that a lot more can and must be done to build	Not specifically answered. Please refer to party's policy website - http://www.liberal.org.au/Policies.aspx	Not specifically answered. Please refer to party's policy website - http://greens.org.au/policies/media-arts-science/science-and-technology
research skills in industry. This will be considered as part of the wider Research Workforce		
Strategy.		

Priority 4:

Boost mathematics and science education and training

What will your Party do to lead coordinated action across governments to:

- Boost mathematics and science education?
- Raise the standard of science literacy in Australia?
- Address the shortfall of qualified mathematics and science teachers in schools?
- Improve training and support for mathematics and science teachers?
- Turn around the diminished state of mathematical science in universities?
- Showcase the usefulness of mathematics and statistics and their links to science and innovation?

GREENS ALP COALITION Federal Labor has implemented a The Coalition acknowledges the Not specifically answered. Please number of schemes that address special place of mathematics and refer to party's policy website these issues. A Gillard Labor science in education. http://greens.org.au/policies/media-Government will implement arts-science/science-and-technology Science for Australia's Future. The The Coalition understands that the centrepiece of this package is quality of maths and science Inspiring Australia, the country's teaching can have a substantial first ever national strategy for impact on Australia's future science engagement. It will help to economic growth and productivity. ensure that Australia has workers That's why when last in who can handle advanced government we invested more technologies, citizens who can than \$8.3 billion specifically to boost science and innovation in make informed decisions about scientific questions, and Australia. communities that can use the Of these funds, \$200 million was products of science to increase opportunities and improve their used to fund 2,000 extra places at quality of life. university for science and mathematics, and almost \$40 Additionally, a re-elected Gillard million funded a new teaching Labor Government will introduce initiative to boost science, Teach Next to provide innovation and mathematics professionals, including teaching. mathematicians, scientists and other research trained experts, In government the Coalition will with a new teacher career continue to support improving pathway. The example and science and mathematics. inspiration that these teachers will We propose to improve the provide, combined with the National Curriculum in engagement measures in Inspiring Australia, will deliver on Federal government. We will ensure the Labor's commitment to encourage Curriculum is rigorous and young Australians to study science comprehensive, giving due regard and pursue science-related careers. to the importance of science and For more information please see mathematics. And we have a programme to reward good Federal Labor's Science for Australia's Future and Teach Next teachers with extra pay, which will fact sheets. help local principals to retain quality mathematics and science

teachers.

What is the position of your Party on the issues outlined in Priority 4?

ALP	COALITION	GREENS
Federal Labor recognises that teaching and learning, as well as research, are crucial for a scientifically literate community, and a scientifically-enabled workforce.	See answer provided to Priority 4 questions above.	Not specifically answered. Please refer to party's policy website - http://greens.org.au/policies/media-arts-science/science-and-technology
Federal Labor, led by Julia Gillard as Education Minister, has done vital and unprecedented work in delivering a national curriculum. The very first subjects considered were mathematics and the sciences, alongside English and history. Consultation on the draft senior secondary curriculum took place recently and the draft achievement standards for each of the senior secondary courses will be available for consultation and trialling in early 2011. A Gillard Labor Government will continue to take seriously the challenges confronting the nation, and will work with universities, States and Territories, school communities and industry to find		
ways to improve participation in science.		

What approach will your Party take to maintain Australia's research output?

ALP	COALITION	GREENS
These issues are being canvassed in Federal Labor's Research Workforce Strategy, which a re-elected Gillard Labor Government will continue to develop and prosecute in full.	Not specifically answered. Please refer to party's policy website - http://www.liberal.org.au/Policies.as px	Refer to party's policy website - http://greens.org.au/policies/me dia-arts-science/science-and-technology The Greens questionnaire response includes the following statement: The Green's Science and Technology policy includes the following goal: Research and development culture that addresses national goals and prepares Australia for emerging challenges and opportunities.

How will your Party support HDR students and their transition to the research workforce?

ALP	COALITION	GREENS
Federal Labor is on track to	Not specifically answered. Please refer	Not specifically answered. Please
deliver its promise of doubling	to party's policy website -	refer to party's policy website -
the number of Australian	http://www.liberal.org.au/Policies.aspx	http://greens.org.au/policies/media-
Postgraduate Awards by 2012.		arts-science/science-and-technology
Additionally, we increased the		
APA stipend by 10 per cent in		
2009-10, restoring the value		
eroded by the Coalition. The		
Gillard Labor Government		
knows that the higher degree		
by research pipeline – including		
recruitment, retention,		
completion and transition – is		
the foundation of a successful		
Research Workforce Strategy,		
and these issues will be		
considered within the context		
of that strategy.		

Priority 5: Improve the internationalisation of science

How will your Party assist Australian researchers to participate actively in international research to capitalise on and access the 97 per cent of research generated overseas?

ALP	COALITION	GREENS
A re-elected Gillard Labor Government will continue to strengthen Australia's links with the best international researchers and institutions. This is a core objective of Science for Australia's Future. As FASTS notes, Australia produces an impressive 3 per cent of the world's knowledge, but that still means 97 per cent is produced elsewhere. This is why international collaboration is so important. Federal Labor will forge closer partnerships with leading players such as China, Europe, India, Japan and the United States; and with countries that have complementary capabilities such as Brazil, Canada, Chile, Indonesia, Israel, New Zealand, Singapore, South Africa, and South Korea. We will pursue multilateral collaboration through the OECD, mega-science projects, and other avenues. Labor will also work to improve Australia's access to major international research facilities, enabling our scientists to undertake research that requires infrastructure not available in this country.	The Labor Government has left the public finances in very poor shape and sadly we cannot make any commitment to increase further the funding available to support Australian researchers to participate in international research activities.	Not specifically answered. Please refer to party's policy website - http://greens.org.au/policies/media-arts-science/science-and-technology

Priority 6: Effective science communication

Does your Party accept science and the peer review process and accept that peer reviewed scientific evidence should be used as a primary source of information in decision-making?

ALP	COALITION	GREENS
Yes. One of the first things Federal	The Coalition accepts that peer-	Not specifically answered. Please
Labor did on taking office was to	reviewed scientific journals provide	refer to party's policy website -
restore the integrity and	considered, rigorous and objective	http://greens.org.au/policies/media-
independence of the research	analyses of scientific matters.	arts-science/science-and-technology
system, with charters to underpin		
the rights and responsibilities of	We believe all government	
public research agencies such as	decisions should be considered and	
CSIRO, and new rules to protect	well informed, and where	
researchers and funding agencies	appropriate scientific evidence and	
from the kind of political	opinion must be consulted.	
interference we saw under the		
former Coalition Government. A		
Gillard Labor Government will keep		
faith with this commitment.		
We have seen the scientific method		
coming under public attack,		
undermining science and replacing		
it with irrationality, all in the		
pursuit of cheap political		
advantage. Federal Labor is		
committed to supporting the		
evidence of systematic, peer-		
reviewed, evidence-based enquiry		
across all fields of knowledge, and		
values the input that such evidence		
provides to policy-making.		

Will your Party implement the recommendations listed in the Inspiring Australia: A National Strategy for Engagement with the Sciences report? If so, how and when? If not, what strategy will your Party adopt to promote effective communication of science to the broader community?

ALP	COALITION	GREENS
A re-elected Gillard Labor Government will implement Science for Australia's Future, including our new Inspiring Australia program, Australia's first ever national strategy for science engagement. As its name suggests, this scheme addresses issues outlined in the Inspiring Australia report. It will have four elements: Recognising achievement. Federal Labor will continue to run the Prime Minister's Prizes for Science, which play a vital role in raising the profile of science and alerting the community to the achievements of individual scientists and science	The Coalition will consider in government the recommendations and findings of the <i>Inspiring Australia: A National Strategy for Engagement with the Sciences</i> .	Not specifically answered. Please refer to party's policy website - http://greens.org.au/policies/media-arts-science/science-and-technology

teachers. We will also contribute to the Australian Museum's Eureka Prizes

National Science Week. Federal Labor will continue to support National Science Week, Australia's premier vehicle for bringing science and research to the people, right across the country. It is an annual, nationwide celebration of Australian achievements and capabilities in science. It aims to identify, engage, inspire and ultimately enlist and mobilise the best Australian talent in science and research. It provides hundreds of opportunities each year to get the community involved in science and to promote scientific careers among young people.

Unlocking Australia's full potential. Federal Labor will support science events and activities in Australia's cities, regional and remote areas all year round. There will be specific programs for young people, outermetropolitan and regional areas, and Indigenous and remote communities, as well as programs integrating science into popular community events such as writers' weeks and music festivals. Activities will involve educators, industry, and physical and social scientists, and will build long-term partnerships and networks. We will also renew support for programs delivered through the Higher **Education Research Promotion** program.

Connecting with mainstream and new media. Federal Labor will promote science through public, commercial and online media outlets, which are ideally placed to communicate Australian science issues and achievements to the public. We will provide targeted, on-the-job media training to improve the ability of scientists and researchers to work with the media. We will also support cadetships for future science communicators. This will boost science literacy in the media and

the ability of journalists to make	
science meaningful to the widest	
possible audience.	

Priority 7: Improve Governance

Will your Party

- Continue to support the Office of the Chief Scientist?
- Maintain FASTS' membership of PMSEIC?
- Support the appointment of a Chief Scientific Adviser in all major Federal and State Government Departments?
- Establish mechanisms to identify and maximise the use of Australian Public Servants with science skills?

ALP	COALITION	GREENS
Federal Labor has delivered on its election promise to appoint a full-time Chief Scientist for Australia, restore the dignity of the position, and expand the Chief Scientist's role, including in science communication. The Gillard Labor Government has no plans to change the configuration of the Prime Minister's Science, Engineering and Innovation Council, which includes an ex-officio representative of FASTS. Some Federal agencies already have positions similar to this, and others obtain scientific advice from other Commonwealth organisations, including CSIRO. State and Territory arrangements are a matter for those jurisdictions. Federal Labor will continue to consider the measures outlined in	We have no plans to change the role or funding for the Office of the Chief Scientist, nor does the Coalition intend to alter FASTS' membership of the PMSEIC. The Labor government's rampant borrowing means we cannot make promises to appoint new scientific advisers. We believe state governments are best placed to make a decision about whether they need to employ additional scientific advisers.	Not specifically answered. Please refer to party's policy website - http://greens.org.au/policies/media-arts-science/science-and-technology
the recent report on public sector innovation, <i>Empowering Change:</i> Fostering Innovation in the Australian Public Service, including those directed towards identifying and using specialist skills in the public sector workforce, such as scientific expertise.		

Priority 8:

Maintain the voice of science by supporting FASTS

Will your Party

- provide Government funding to FASTS to support core infrastructure and operations?
- work with FASTS to support the establishment of a FASTS Parliamentary Secondment Scheme?

ALP	COALITION	GREENS
In Science for Australia's Future, Gillard Labor has committed to renewing its support for activities within the Higher Education Research Promotion program, which will include support for activities delivered by FASTS.	The Coalition strongly supports the role of FASTS in the community. Certainly in government will see FASTS as key stakeholder in the area. We would consult with you before considering any substantive changes to science or innovation	Not specifically answered. Please refer to party's policy website - http://greens.org.au/policies/media-arts-science/science-and-technology
Federal Labor is open to discussion with FASTS on this proposal.	policy. The Labor government has left the public finances in very poor shape and sadly we can neither make any commitments to fund new Australian science institutions not substantially increase funding for scientific research at this time.	