

## EDUCATION, SCIENCE AND TRAINING

### SENATE LEGISLATION COMMITTEE - QUESTIONS ON NOTICE 2004-2005 ADDITIONAL ESTIMATES HEARING

**Outcome:** 2  
**Output Group:** 2.4 – Funding for Higher Education

#### DEST Question No. E751\_05

Senator Carr provided in writing.

#### Question:

##### *Shortage of physicists*

Is DEST aware of comments by the Chief physicist of CSIRO (reported 21/12/04), Dr Gerry Haddad, about the extent and implications of the decline in the number of Australian physicists and physics students?

What is the Government doing by way of positive and urgent action to:

- a) support university physics departments;
- b) increase the number of students of physics, especially at postgraduate level;
- c) provide incentives for Australian physicists to remain in Australia; and
- d) provide specifically targeted funding for physics-related research in CSIRO?

#### Answer:

##### *Shortage of physicists*

The Government is concerned that supply of persons with science, engineering and technology qualifications is appropriate to meet the needs of industry and the scientific research community.

Against this background, DEST is aware of the comments by Dr Haddad about the decline in the numbers of Australian physicists and physics students. While it is concerning that the numbers of physics students has declined over recent years, it is encouraging to note that from 2001-2003 the total number of physics students increased from 1,452 to 1,580 and the numbers of post-graduate physics students increased from 732 to 766 (Source: ENROL 2001-2003).

In August 2004 the Australian Government announced an audit of science, engineering and technology skills to evaluate supply of and demand for graduates from major scientific disciplines.

The audit will focus on the extent to which Australia's current and future industry and research body needs are being met by the higher education and vocational education and training (VET) sector in the supply of science, engineering and technology graduates. In particular, it will provide an understanding of where shortages lie and examine:

- the supply of science, engineering and technology skills from all training and education sectors and report on supply trends;
- public and private sector demand for science, engineering and technology skills from industry, the research community and education providers, both now and into the future;
- how successful the education sectors are in meeting existing science, engineering and technology skill needs and responding to emerging needs;

- the long and short-term trends in the emigration and migration of science, engineering and technology graduates and the impact this 'brain gain, brain drain' issue will have on Australia's skills base – particularly as we face an ageing workforce and countries with greater research expenditure. Global demand for skills in these fields will also be analysed.

The audit will consider the supply and demand of science skills across a broad range of science, technology and engineering disciplines and conduct case studies of specific industries. It will include high level analysis of existing data and may also involve the collection and analysis of new data. The audit will involve extensive consultation with a broad range of stakeholders, and will be overseen by a high level Steering Committee comprising representatives from industry bodies, the science community, university sector, learned academies and VET sector.