

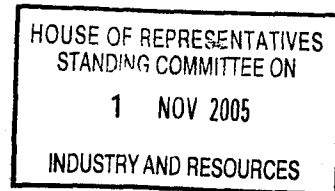


Australian Government



Nuclear-based science benefiting all Australians

Jerome Brown
 Department of the House of Representatives
 Suite R1-108
 Parliament House
 CANBERRA ACT 2600

26th October 2005

Dear Jerome,

As per your e-mail of 13th October, and the House of Representatives, Standing Committee on Industry and Resources Hansard of that date, we have noted the Committee's questions to us during the public hearing requiring our submission of some further information. Please pass on the following information to the Committee members.

1) We were asked to include Australia in the table we presented to the Committee on comparative electricity generating costs around the world for nuclear, coal and gas as projected for the year 2010. This is provided in Attachment 1. Please note that the original source data did not include Australia, thus a different source has been used for the Australian figures giving an indicative rather than direct comparison.

2) Question with regard to the number of deaths from uranium mining and operations:

Uranium mining deaths (by mine)

Ranger (opened 1981) ERA	1 (1996) ¹
Olympic Dam (first production 1988) WMC/BHPbilliton	2 (1 death 1992 ¹ , 1 death, July 2005)
Beverley (Feb 2001) Heathgate Resources	Nil ²

¹ SOURCE: OCCUPATIONAL HEALTH AND SAFETY IN URANIUM MINING AND MILLING, Dr J. Leigh, Worksafe Australia (Research paper, Senate Select Committee on Uranium Mining and Milling 1997)

² Heathgate Resources <http://www.heathgateresources.com.au/homepage.jsp?xcid=1>

As mentioned during our presentation, in comparison, there have been 112 coal mining deaths in NSW alone since 1979.

3) Question with regard to how much waste, by volume, is generated by the 440 power reactors per year:

- Nuclear power generation facilities produce about 200,000 m³ of LILW (low and intermediate level waste) and 10,000 m³ of HLW (high level waste including spent fuel designated as waste) each year worldwide.
- The generation of electricity from a typical 1000 MW(e) nuclear power station, which would supply the needs of a city the size of Amsterdam, produces

approximately 300 m³ of low and intermediate level waste per year and some 25-30 tonnes of spent fuel which equates to 3 m³ of vitrified waste. However if the spent fuel is reprocessed, only 3% of it emerges as high level waste.

- By way of comparison a 1000 MW(e) coal plant produces some 300,000 tonnes of ash alone per year, containing among other things radioactive material and heavy metals which end up in landfill sites and in the atmosphere.

SOURCE: IAEA Factsheet 'Managing Radioactive Waste' 2003.

Please do not hesitate to contact me if there are any further questions from the committee,

Yours sincerely,

A handwritten signature in black ink that reads "Ron Cameron". The signature is written in a cursive style with a large initial "R" and "C".

DR RON CAMERON
Chief of Operations

Attachment One

Comparative electricity generating cost projections for 2010			
	nuclear	coal	gas
Finland	2.76	3.64	-
France	2.54	3.33	3.92
Germany	2.86	3.52	4.9
Switzerland	2.88	-	4.36
Netherlands	3.58	-	6.04
Czech Rep	2.3	2.94	4.97
Slovakia	3.13	4.78	5.59
Romania	3.06	4.55	-
Japan	4.8	4.95	5.21
Korea	2.34	2.16	4.65
USA	3.01	2.71	4.67
Canada	2.6	3.11	4
Australia*	-	3.00-3.50 (black coal) 3.60-4.00 (brown coal)	3.50-4.50

- US 2003 cents/kWh, Discount rate 5%, 40 year lifetime, 85% load factor:
Source:OECD/IEA NEA 2005
- *Aust cents/kWh in 2010. Australian figures from 'Securing Australia's Energy Future' Commonwealth, 2004. Sources: Australian Government estimates based on IEA (b 2001), IPCC (2002), US DOE (2004), ABARE (2003 b), BCSE et al (2002) and unpublished data.