

from hydroelectric power production. Various proposals followed, involving the States of New South Wales and Victoria, and the Commonwealth. This culminated in the setting up in 1947 of a joint Commonwealth-States Technical Committee to investigate the whole question of the possible use of the Snowy River.

As a result of the recommendations prepared by the Technical Committee, the Commonwealth Government in 1949 passed the Snowy Mountains Hydroelectric Power Act. In doing so, it established the Snowy Mountains Hydroelectric Authority as the body responsible for the detailed investigation, design and construction of the dual-purpose Snowy Mountain Scheme.

The Snowy Mountains Hydroelectric Scheme is one of the most complex integrated water and hydroelectric power schemes in the world. The Scheme collects and stores water that would normally flow east to the coast and diverts it through trans-mountain tunnels and power stations. The water is then released into the Murray and Murrumbidgee Rivers for irrigation.

The Scheme stands as a tribute to the men who had the foresight and courage to initiate the construction of what became the largest single engineering project ever undertaken in Australia. In an area of over 3,200 sq. km of

mountainous country the Authority constructed some 80 km of aqueducts, over 140 km of tunnels, 16 large dams, a pumping station, and seven power stations, two of which are underground. Hundreds of kilometers of transmission lines interconnect the power stations and transmit electricity to the supply system of New South Wales and Victoria.

The Scheme took 25 years to build and was completed in 1974. More than 100,000 people from 30 countries came to work in the mountains to make true a vision of diverting water to farms to feed a growing nation and to build power stations to generate electricity for homes and industries. The cost of the Scheme was approximately \$820,000,000. The Scheme is operated and maintained by Snowy Hydro Limited. Today, Snowy Hydro continues to play a vital role in the growth and development of Australia's national economy, by diverting water that underwrites over \$3 billion in agricultural produce and by generating clean renewable energy.

Snowy Hydro currently provides over 70% of all renewable energy that is available to the eastern mainland grid of Australia, as well as providing fast response power to light up the morning and evening rush hours of the capital cities of Sydney, Brisbane, Canberra and Melbourne and Adelaide.

For further details on the Scheme, readers may access the website: <http://www.snowyhydro.com.au>

ANNOUNCEMENT

RESEARCH PROPOSALS FOR GEOLOGICAL DISPOSAL OF NUCLEAR WASTES

Repository Programme Section, Nuclear Recycle Group, Bhabha Atomic Research Center, Mumbai invites research proposals in thrust areas of geological disposal of nuclear wastes outlined below:

(1) Natural basaltic glass alterations, i.e. mechanism of dissolution, alteration rates, products, time dependent alteration under sea water and fresh water, geochemical behaviour of alkalis, REE and silica etc during alteration. (2) Swelling clays, shale/intrusive contact geochemistry, mineralogical alterations, quantification of alterations in terms of rates and time. (3) Granite alterations around thermal springs and geochemical reactions; alteration along granite fractures and dating; diffusion of certain elements (Sr, Cs, Ca, REE etc) through matrix as well as filled fractures. (4) Groundwater modelling in fractured rock and contaminant transport; groundwater chemistry modifications in granites, clays and shales as function of depth and temperature. (5) Strain rate determination in selected areas and stability models of areas in terms of seismicity, neotectonics, palaeohydrology, palaeoseismology and palaeoclimate. (6) Excavation induced damage zones in hard rocks and their measurements, Finite element and discrete element modelling of such zones and flows.

Relevant proposals will be considered for financial funding through various schemes available in this department. Leading researchers from institutes, national laboratories and university earth sciences departments with proven record of excellent research activities are requested to respond at the earliest. For further details and assistance in formulating research projects, please contact R.K. Bajpai, 207 WIP Building, Repository Programme Section, Back End Technology Development Division, Nuclear Recycle Group, Bhabha Atomic Research Center, Trombay, Mumbai 400085. **Phone:** 022-25591149 (O), 022-25500411(R). **Email:** rkumar@apsara.barc.ernet.in; rkbajpai1@yahoo.com