1) INTRODUCTION TO BCURA

BCURA – the Research Association, 1938 to 1971

Early in the 20th century the creation of the Co-operative Industrial Research Association Scheme facilitated the establishment of several Research Associations of which the British Coal Utilisation Research Association (BCURA) became one of the largest.

BCURA was established in 1938 following an address by Lord Rutherford to the Coal-burning Appliance Maker's Association on the need to establish research into coal use. Coal mine owners committed support by making a levy for every ton of coal mined and this was backed pound for pound by the UK government.

The first Director General of BCURA was J G Bennett. Initially BCURA had around 60 staff, an annual income of around £16k and operated from several locations in the London area. Staff numbers grew rapidly reaching over 300 by 1943 with annual income averaging £200k by 1945. In 1944 BCURA purchased a 20 acre site at Leatherhead and then began to consolidate its operations there. Professor D T A Townend was the first Director-General at the Leatherhead site and under his stewardship BCURA established an international reputation and collaborated with similar overseas organisations such as Begbau Forschung and the Dutch State Mines.

BCURA's programme of work as agreed with its Members and included research for the domestic, industrial, gasification and the power generation sectors. For power generation pioneering work was undertaken on fluidised bed systems and magneto hydro dynamics.

By the late 1960s the NCB had become the principal funder of BCURA and the government deemed that it no longer met the criteria of a Research Association. Consequently government funding was withdrawn and in 1969 BCURA became a wholly owned subsidiary of the NCB. In 1971 the NCB announced BCURA's closure with some relocation of staff and the BCURA library to the NCB's Coal Research Establishment at Stoke Orchard. Part of the Leatherhead site remained active through until 1984 as the NCB Coal Utilisation Research Laboratories (CURL) under the leadership of Raymond Hoy OBE and during this period groundbreaking R&D into pressurised fluidised bed combustion was undertaken.

Famous Alumni of BCURA include Dr Marie Stopes, Dr Rosalind Franklin and C J Seyler. Marie Stopes was a palaeobotanist who became more famously known for her work on family planning. Rosalind Franklin was an X-ray crystallographer who worked at BCURA in the early 1940s but is better remembered for her work at Kings College on X-ray diffraction images of DNA although her contribution to the discovery of DNA was not acknowledged at the time. C J Seyler worked at BCURA during the war and again in the 1950s and is known for his pioneering work on coal classification by carbon and hydrogen content.

BCURA Charity - R&D Funding and Other Activities

Because of the origin of the funding, disposal of proceeds from the sale of the BCURA site presented some legal challenges. Agreement was reached to use this money to promote research and other activities concerned with the production, distribution and use of coal and its derivatives and the BCURA charity was formed for this purpose. As part of this aim, BCURA offered grants to academic institutions to undertake research in the field of coal

science. These grants have typically supported postgraduate or post-doctoral research and have taken the form of a bursary in addition to allowing for the purchase of research equipment. The BCURA Coal Research Programme was inaugurated in 1978 and has since supported over 100 projects many of which were PhD studies. A full list of BCURA research projects can be found elsewhere on the BCURA website. Some examples of BCURA funded research follow together with information on funding, research strategy and project management.

During the early years of the BCURA Coal Research Programme assistance was given to various institutions to strengthen their coal research bases. This included support to help establish a Coal Technology Unit at Sheffield University and also help in establishing an Energy Centre at the Northern Carbon Research Laboratories, University of Newcastle.

Although BCURA sponsored fundamental studies the foci of research reflected market needs. Until the mid 1980s coal carbonisation, fluidised bed combustion technology and catalysts for syngas production were priority areas. During the 1980s and 1990s coal liquefaction, coal gasification and the environmental impact of coal use came to the fore. More recently there has been interest in co-utilisation of coal with biomass and minimisation of carbon dioxide emissions. Throughout the whole period generic and cross-cutting research was also supported including coal characterisation, handling, transport, slagging and fouling.

The BCURA Council provided the direction and strategy of its Coal Research Programme with implementation managed by a small team comprising the Company Secretary, the Technical Officer and Industrial Supervisors.

Through until 1991 BCURA wholly funded the R&D activities. In 1991 a joint research programme commenced in conjunction with the UK DTI with each party providing 50% finance. This enabled a somewhat larger programme to be funded although over the years BCURA's capital started to erode. In 2001 the BCURA Industrial Panel was formed with Industrial Members paying subscriptions to an industrial fund towards the joint BCURA/DTI Research Programme. The UK DTI and its successors BERR and DECC continued to fund new project starts through until March 2008. The last two BCURA projects commenced in late 2008 and were funded exclusively through the BCURA Industrial panel. An attempt was made to secure follow on public sector funding but this was unsuccessful. BCURA's R&D activity concluded in early 2011 with the completion of the last projects.

In addition to supporting R&D, the BCURA charity also maintained the BCURA Library, the BCURA Coal Bank and sponsored the Coal Science Lectures. Further information on these topics can be found elsewhere within the BCURA website.

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