

ENGINEERING PLANNING - THE EARLY DAYS

In 1969 I was working at EMGAS HQ as Planning and Development Engineer, estimating future gas demands based on our experience of the 1962/3 winter, preparing outline designs of extensions to the supply system within the Board's area and working with Percy Johnson of Finance introducing Discounted Cash Flow methods to obtain Board approval for new plant items. I was also responsible for Communications and Instrumentation (C&I) and the installation of radio telemetry equipment on the Board's transmission system.

In January 1970, I moved to London and joined Gas Council to start up and head up Engineering Planning, a new department.

At that time, gas supplied was coal gas, although conversion to natural gas was being done in Burton-on-Trent as a trial. Natural gas from the North Sea was for the most part reformed into part of the coal gas supply.

The Gas Act of 1949 had established 12 Area Boards whose Chairmen were appointed by the Minister of Power, and were responsible to him. Gas Council was established at the same time, and was tasked to carry out research useful to the industry. However, the rapid increase in gas demand for space heating, coupled with the prospect of further finds of off-shore natural gas meant that there was a strong need for co-ordination of the whole Industry. At that time, within Gas Council, engineering was headed by Denis Rooke with Bill Walters as Director, Planning and Geoff Roberts, Director, Operations. I was appointed as Engineering Planning Manager, with Hugh Jones who had previously co-ordinated some pipelining activities with Regions, and Frank Dean, Environmental Planning manager answering to me. I then appointed four Regional Planning engineers and four assistants in order to be able to co-ordinate engineering activities much more closely with Regions.

The role of Engineering Planning was to develop and justify future plant investments on what was to become the National Transmission network and to work closely with Regional Engineers over the Regions' planned future engineering investments, so that future capital expenditure across the whole Industry would be rationalised. These broad aims remained the same through changes brought about by the formation of the British Gas Corporation and then later on, its privatisation.

The tasks carried out by my Engineering Planning Section were:

Headquarters Planning Using projected future gas demand estimates, plan extensions to the transmission system - pipelines, compressor stations, LNG and other storage installations. Write up papers justifying these projects, and submit them to the Corporation's Special Expenditure Committee for Members' approval. I presented these papers to the Committee.

Regional Planning Regional Planning engineers liaised with engineers in the Regions over Regions' future projects and assisted where appropriate in preparing papers justifying the investments. In later years, it was decided that the largest Regional projects should be considered by the HQ Special Expenditure Committee, and I presented these to the Committee.

Transmission Planning Prior to Engineering Planning being established, Hugh Jones had had the title of Transmission Planning Engineer. Among his responsibilities was the design of extensions to the high pressure system using computer analysis. He and his group were put under me and the title was not changed although most of the design work for the National Transmission System was done by HQ Planning. But Paul Gardiner in this group continued to co-ordinate the whole industry requirement of steel and cast iron pipelines, and I worked with the HQ Purchasing Dept. in discussions with British Steel over specification and quantity requirements.

Another group provided a project control service to the HQ Construction Department.

Environmental Planning Frank Dean's group found sites for above ground installations – compressor stations, LNG installations and coastal terminals for reception of offshore gas. These installations were all either potentially very noisy (compressors driven by powerful aero type gas turbines) or visually intrusive (LNG storage tanks and coastal terminals), and they always needed to be sited close to where they were needed to support the system and within the countryside. Consequently, getting these accepted by Town Planners was always very difficult. The group worked with architects with appropriate experience to produce drawings and specifications and Frank Dean's people presented these to Planning Committees. Sites were always found, and our designs and standards gained awards. Very few complaints were received about these installations. This was an important factor when searching for new sites.

Pipeline routes and Above Ground Installations (AGIs) for pipeline pressure reducing stations and other purposes were dealt with by HQ Pipelines Department.

Other Activities

Liaison Apart from my task of managing the above groups, I liaised with all the HQ functions – Finance, Marketing, Economic Planning and to a lesser degree Personnel, with the aim of ensuring that we in Production and Supply Division were broadly aware of what the other functions were doing and that they also knew what we were doing. This was achieved partly by my attendance at industry-wide functional Policy Committees.

I was also required to make sure that during the construction phase of HQ projects the P&S Construction department didn't allow the project to drift away from the original aims. This never proved to be a major task.

Computing While I was with EMGAS I had headed up a research project using computer based Direct Digital Control. This was something that the Government were interested in, as was the computer company Elliot Automation. The first UK trial was on a shift conversion plant on Humberbank. My group was aiming to be able to apply this technique to one of the four new Topsøe reformers to be installed at Northampton Works. The study group included a mathematics professor from City University and a Government representative. The trial was successful, but it was not repeated because of the arrival of North Sea gas.

However, I kept a keen interest in computer development, and in order to make the best use of computer knowledge within HQ, I set up a series of regular meetings of those people within HQ who were using computers for scientific work. This was known as the Scientific Computer User's Meeting (SCUM).

Safety In the mid 1970's there was an enquiry into the safety of gas in the UK. At that time, most of the supply system consisted of cast iron lead jointed mains, mechanically jointed spun iron pipes and steel services into customers' premises. Some were in poor condition and there was considerable leakage, which Boards had dealt with as best as they could with the techniques then available. The report recommended that there should be a comprehensive and co-ordinated attack on gas leakage to be undertaken by the Industry. Perhaps this provided the most telling argument in favour of greater co-ordination between Boards, Gas Council and the Research Stations, so justifying the appointment of Charles Townsend as Distribution Planning Engineer and I as Engineering Planning Manager in 1970. The task of Distribution Planning was to work with Regional Distribution Engineers and the Research Station staff to establish new methods of leakage prevention, to get policy agreed throughout the Industry for leakage control and for mains replacement, and as far as possible to make sure that the Regions were following the agreed policy. Both Charles and I answered directly to Bill Walters. It could also be argued that the need for an improvement in safety was one of the elements leading to the formation, in 1973, of British Gas Corporation as an integrated industry-wide organisation.