

export to its refinery in Norway, stating that for the \$160 million needed for a refinery only 300 jobs would be created, whereas a new mine at about the same cost would create 800 to 900 new jobs. In general, it was suggested the money could be better spent in several areas: exploration, research, mine development and environmental improvements.

Under its exemption, Inco is allowed to ship an unspecified amount of nickel oxide sinter to its plant in Clydach, Wales for processing, continuing a long established relationship. It is also allowed to ship nickel sulphide under long-term contract to two Japanese refineries in which it has an equity interest.

The acid rain issue has focused attention upon the nonferrous smelters, especially the nickel smelters. This has resulted in numerous studies being conducted and reported upon as listed in the data sheets. The underlying theme of these reports is that while the nonferrous smelters are the most cost effective means to reduce SO₂ emissions, the industry requires financial assistance to conduct R&D to develop and implement affordable technology in order to be in a position to reduce this pollution and at the same time to remain competitive.

4. Evolving Environment

The demand for nickel in the western world is expected to grow at an average rate of 1.5 to 2.0 percent until 1990 and somewhat less thereafter. By the year 2000, total western world nickel consumption could approach 658,000 tonnes. This compares with an average annual growth rate of over six percent in the period 1946 to 1979 and a meager one percent in the period 1974 to 1982.

On the supply side, present world nickel supply capacity is 850,000 tonnes and this could increase if Cuba and USSR follow through on expansion plans.

Despite the cost-competitiveness of Canadian nickel producers, this sector is not likely to return to the level of production experienced in the 1970's. Production will be affected by several factors, including global overcapacity, slower growth in world demand and environmental regulations.

5. Competitiveness Assessment

It is generally acknowledged that sulphide nickel producers (such as those in Canada) have lower costs than the lateritic nickel producers (those in tropical countries). In fact, some estimates place laterite production costs at 1.5 - 2.0 times higher. Part of this difference is attributed to the by-product credits received by sulphide producers from the sale of copper, cobalt, platinum group metals and other precious metals. In relative terms, energy constitutes as much as 60 percent of lateritic nickel costs. Labour represents about 30 percent of Canadian operating cost with energy at about 15 percent. It is thus not surprising that Canadian producers have accelerated bulk mining methods, which are expected to result in significant improvements in productivity. Fuel oil prices will determine the relative competitiveness of the lateritic nickel producers in the long term.

While Canadian producers are expected to remain the lowest cost producers in the western world, the experience of the past three years indicates that cost competitiveness does not ensure protection of market share. In fact, Canadian producers have absorbed most of the recent production curbacks while state-controlled producers have continued to keep unprofitable facilities operating. Inco and Falconbridge reduced output by 48 percent in 1982 alone.

At this juncture, both Inco and Falconbridge have rationalized their operations to the extent that production costs are matching the current depressed nickel price. Cost-cutting measures are continuing which are expected to further reduce nickel cost below U.S. \$2.00 a pound.