

The Aluminium Smelter Saga: There Has Never Been an Electricity Subsidy

Kerry McDonald*

Independent studies show that the Tiwai Point Aluminium smelter is one of New Zealand's most successful developments. The first (1971) study estimated a 10% real annual return to NZ in terms of net national economic benefit over the smelter's life; and subsequent studies estimated increasingly higher returns. The studies all included the full economic cost of the electricity used.

On the other hand Comalco and its two Japanese partners were the victims of unprincipled government actions, entirely outside the letter and intent of their agreements, to impose extraordinary increases in the smelter's electricity prices.

The smelter's cost of electricity has never been subsidised. Under the first pricing agreement price was based on the actual cost of supply plus a 10% margin. That margin was subsequently increased dramatically, to the Crown's substantial benefit and the detriment of the smelter's competitiveness - highlighting New Zealand's high sovereign risk for foreign investors. My last assessment was that the smelter was paying the full cost of the Manapouri Power Scheme and all other smelter-linked electricity assets every 14 months!

*Formerly: economist/Director NZIER, co-author of several independent studies on the Manapouri/Tiwai Point development and numerous economic studies on major developments in Aus & NZ; from 1981 Chief Economist Comalco Group, then an MD, including responsibility for NZ; Chairman Comalco Power NZ; Deputy Chairman Transpower Establishment Board etc; involved with electricity issues/agreements/major projects in Tasmania, Queensland, NSW, Brunei/Malaysia, NZ, France/EdF, Norway, Venezuela, USA/BPA/NY Power Pool, Canada/Hydro Quebec/BC Hydro, MiddleEast, etc; director/chairman/advisor to numerous companies in Aus, NZ and elsewhere.

In the late 1950s New Zealand aggressively pursued a Manapouri linked smelter development with Comalco. Its economy was in serious difficulty (remember the Midland Bank loan) and it desperately needed to increase its export volume, value and diversity away from pastoral agriculture products. These were 90% of total exports, 70% to the UK which had ended guaranteed import prices for NZ in 1955 - and import-dependent NZ was struggling.

Because of its other development commitments Comalco would need partners but initial attempts to get these failed because of New Zealand's size, remoteness, lack of heavy industry and weak economy.

So in spite of having met its obligations to NZ under the initial 1960 water rights agreement, it advised the Government it could not proceed and offered to surrender the water rights. The Government asked "if we commit to build the power station will Comalco commit to build the smelter". The answer was "no" but we will use "best endeavours". Significantly, the Government went ahead anyway which was a very bold decision and a new agreement simply gave Comalco an option for taking the electricity.

With the power station under construction Comalco was finally able to persuade two major Japanese companies to join the project, forming the NZAS Consortium and on this basis Comalco exercised the option to build the smelter and take/use the electricity.

The cost plus power price was, appropriately, much lower than for the average consumer because of the economics of supplying a very large quantity of electricity on a long term "take or pay basis, continuously (24 hours per day every day) over the short distance from Manapouri at a very high/efficient voltage (220,000 volts).

Nevertheless the power price was a matter of public controversy and PM Muldoon forced a price increase of 350% on the company in 1977, under threat of legislation and the cost plus price was replaced by an average price index link. This was a disaster for a business dependant on highly competitive international markets.

For the smelter's owners this was a shocking development - an imposed very large increase to a price already giving a 10% profit margin to the Crown, in a Western democracy which purported to respect fair dealing and the rule of law. It left seasoned executives in tears and also did serious damage to NZ's sovereign risk rating and reputation.

The increase took the power price to a level at which any notion of a subsidy was ridiculous. A fortuitous lift in aluminium prices allowed short term survival and was followed by dramatic cost reductions and productivity increases. But the basis for the investment in the smelter was irreparably lost.

As if that was not enough subsequent poorly designed and implemented electricity sector reforms simply became a vehicle for successive government to gouge all electricity consumers and maximise government revenue through asset sales and outrageous electricity pricing arrangements. Although the Crown retained a majority interest in them the generators were not obliged to act in the national interest - or even to have any regard for it. Consequently there have been many examples of exploitive/inappropriate behaviour (from a National Interest viewpoint) by the generators, including managing capacity or system incidents to maximise prices and profits, regardless of the impact on consumers. And Transpower and the lines companies were also allowed to use various devices to inflate their costs and prices to consumers, including the smelter. These arrangements, still in place, mean that electricity prices are much higher than they should be, that all consumers are being exploited and that electricity using industries face severe cost penalties.

The overall effect of these changes on the smelter's electricity prices has been dramatic, elevating them well above anything contemplated when the cost plus arrangement was agreed and was the basis for the smelter investment. Consequently the competitiveness of the smelter became increasingly marginal while the Crown's coffers benefitted enormously and the concept of a smelter price subsidy was left orders of magnitude behind.

There are frequent comments that the power price has never been disclosed, which is incorrect.

First the original power pricing agreement was set out in detail in the relevant empowering legislation, including how the power price was to be calculated - basically cost plus 10%. Anyone could make their own assumptions and calculate a price - and many did.

Second there were significant electricity negotiations in the mid-1990s under the Bolger Government, as a precondition to a major (some \$600m) refurbishment, upgrade and modest expansion of the smelter. It was made a condition of the resulting agreement that the power price was disclosed - and it was, with considerable supporting detail, including graphs. It was sent to all media outlets and interested parties and there were also media briefing/Q&A events.

So, the original Comalco power price was cost plus a profit margin then the Muldoon increases and the Sector "reform" increases meant that the price of electricity was, far from being subsidised, one of the most profitable revenue sources for the government, with the smelter paying the full capital cost of its supply every 14 months.

Smelters are not for ever. Typically electricity demand grows and the electricity on which it was based goes from having little/no opportunity value to a much higher one. Smelter electricity contracts are usually for at least 20 years and as they are renegotiated over time prices rise and the smelter becomes less economic and slides down the efficiency/competitiveness ranking, until it closes.

Comalco's strategic planning by the early 1990s prioritised Sovereign Risk mitigation. A significant plant upgrade was important and a modest capacity increase at the same time made sense but a number of electricity issues had to be resolved before any money was spent.

In terms of sovereign risk a 100% foreign owned smelter was now a highly vulnerable political target in NZ so it was decided to list Comalco NZ on the NZX to maximise the NZ interest in the smelter, mitigate the risk and give Comalco and partners a progressive exit strategy. Unfortunately, when the CRA/RTZ dual listing was announced, only days before the listing the new London-based parent Board cancelled it - and Rio Tinto is still struggling with the consequences of this.

Thus we have the current position. The high sovereign risk has crystallised, the Government espouses the myth of subsidised electricity, the community doesn't know any better and the smelter is struggling and now slated to close.

What is there to regret!

Under Comalco (pre Rio Tinto) the smelter developed excellent systems and processes. It: had World-leading productivity and product quality; an empowered, well paid all-staff workforce; was an important exporter of non-agricultural goods; set very high standards for environmental and safety performance; made a major contribution to Invercargill, Southland and beyond; gave an excellent economic return to NZ; and allowed many NZers to achieve their full potential - well beyond the self- expectations of many.

All of this is now lost although the smelter still has the potential to operate and make a significant contribution to NZ - economically and otherwise.

If it was my decision I would close, unless there was a robust minimum 10 year agreement, with reasonable close or continue options thereafter, a realistic electricity price and robust sovereign risk mitigations.

It is not widely known but at one stage I commissioned the US engineering firm Bechtell to advise on the cost of relocating the smelter offshore. They estimated a cost saving of between 10% and 20% compared with building a new smelter but the age of Tiwai Point now makes that option less attractive.

I absolutely do not expect consumers to benefit from a smelter closure. The electricity industry enthusiasm for bleeding its customers to maximise its own profits is too deeply entrenched, it has too many easy options to achieve it and the support of the government for the increased revenue it contributes to their coffers.