CHAPTER 10:
Socio-Economic Impacts

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10. SOCIO-ECONOMIC IMPACTS

This section is based on the specialist study by Johan van der Walt (ACER Africa).

10.1 Introduction and Methodology

10.1.1 Overview and approach

A socio-economic study was conducted as part of the original EIA (CSIR, 2002b). As part of the Technology Review, an updated socio-economic study was prepared that focuses on the potential changes that the revision in technology may have on the impacts identified and assessed in the 2002 socio-economic study (van der Walt, 2002).

10.1.2 Assumptions

The updated socio-economic study is based on information provided by Alcan in the document titled Coega Aluminium Smelter Terms of Reference: Differences between AP50 and AP35 Technology (Alcan, 2004a and 2005). It has been assumed that all the potential changes to inputs and outputs are captured in these documents.

Based on information provided by Alcan, it is assumed that the only output which will be changed by the application of different technology, and which may have an effect on the socio-economic impacts of the proposed project, is the number of direct jobs created during the operations phase (Table 10.1).

There is no change in the number of construction jobs to be created as a result of the change from an AP50 to an AP35 proposal. However, for the AP35 proposal, the sequential construction of two potlines results in construction being spread over a longer period. As described in Section 2.10 (Chapter 2), the construction of the first potline is expected to require 24 to 28 months (similar to the AP50 proposal), with construction of the second potline commencing some 12 months later and continuing for a further approximately 21 months. In summary, the duration from beginning of the construction to operation at full capacity is expected to be approximately 60 to 70 months.

The operational life of the smelter is expected to be 30 to 40 years.

10.2 Updated Project Description

As indicated in Section 10.1.1 and 10.1.2, the changes in the project description relevant to the socio-economic study are the construction of a second potline and an increase in the output of direct jobs created during the operation of the proposed smelter. Table 10.1 shows that the AP35 proposal results in an additional 300 permanent employees during operations.
### Table 10.1 Comparison of direct job opportunities between AP50 and AP35 technology

<table>
<thead>
<tr>
<th>Phase</th>
<th>AP 50</th>
<th>AP35</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>4,000 average 6,500 at peak</td>
<td>4,000 average 6,500 at peak</td>
<td>No change on average No change at peak</td>
</tr>
<tr>
<td>Operation</td>
<td>750 employees</td>
<td>1,050 employees</td>
<td>300 additional employees</td>
</tr>
<tr>
<td></td>
<td>200 to 300 sub-contractors</td>
<td>200 to 300 sub-contractors</td>
<td>No change in the number of sub-contractors</td>
</tr>
</tbody>
</table>

(Alcan: 2004a and 2005)

#### 10.3 Key Issues and Impacts Potentially Affected by Changes in the Project Proposal

The duration of the construction phase is to increase from approximately 26 months (for the single potline AP50 proposal) to covering a period of approximately 60 to 70 months (for the AP35 proposal with two potlines built sequentially one after the other). This will lead to an extension of the period of employment of the 4,000 (average) to 6,500 (peak) construction workers. However, since the employment creation during construction has already been rated as a **positive impact of high significance** in the original Environmental Impact Report (EIR) (CSIR, 2002b) there is **no change** in the rating of this socio-economic impact.

This section therefore, only deals with impacts that may occur during the operations phase. The updated impact description is based on the original impact description in the EIR (CSIR, 2002b), and only includes impacts potentially affected by the change in technology (i.e. change in the number of operations employees). Thus, impacts not indicated in this report remain unchanged to that originally reported in the EIR (CSIR, 2002).

#### 10.3.1 Employment creation

Operation of the smelter would require approximately 1,050 full-time, permanent, long-term employees (an increase of 300 from the original 750 employees required for a single potline AP50 smelter). It can be estimated that approximately 770 of these positions will be occupied by semi-skilled and skilled, waged employees. The remaining approximately 280 employees will occupy highly skilled technical and management positions. During operations, the majority (if not all) of the non-core activities will be outsourced to external contractors. Approximately 200 to 300 direct subcontractors would thereby be permanently employed for smelter operations. As indicated in Section 10.2, this figure remains unchanged between the two technologies.

#### 10.3.2 Opportunities for local labour

The skills required for employment in an aluminium smelter are highly specialised and technical. However, a broad spectrum of skills is required during operations. It is expected that the majority
of these skills can be sourced locally. The commitment by Alcan to undertake comprehensive skills training and local capacity building through knowledge transfer, provides opportunities for employing an increasing number of local people in the more technical and highly skilled positions over time.

Therefore, with an increased number of full-time, permanent, long-term employees required, the opportunities for local employment are anticipated to increase.

10.3.3 Training and skills development opportunities

Direct training and skills development opportunities are more limited during operation than construction, mainly because of the requirement for a much smaller number and more specialised team of employees. The intensity and complexity of the training that is given to permanent employees will, however, have long-term positive effects for the South Africa.

The increased number of full-time, permanent, long-term employees, therefore, also increases the opportunity for training and skills development.

10.3.4 Utilisation of surplus public transport

In the original Transport Specialist Study, it was indicated that, during operations, 140 private car trips and 40 minibus taxi trips would be made during a typical peak hour (Lamprecht and Jones, 2002). The Transport Specialist Study has been updated as part of the Technology Review and results indicate that these trips may increase to approximately 160 private car trips and 45 minibus taxi trips during typical a peak hour.

10.3.5 Additional impacts

No additional negative socio-economic impacts have been identified, which may occur due to the changes in technology, although the duration of the positive impact of employment creation during the construction phase is extended due to the sequential construction of the two potlines.

10.4 Updated Impact Assessment and Mitigation

This revisits the original assessment of impacts that are potentially affected by the change in smelter technology. Table 10.2, which is based on an extract from Table 14.1 in the original EIR, provides a summary of these impacts.

10.4.1 Employment creation

The positive impact of employment creation at a local scale during operations, remains of high significance. No change in mitigation is required.
10.4.2 Opportunities for local labour

The number of local people who would directly benefit from employment during operation of the smelter remains small. Therefore, the significance of the positive impact remains low in the absence of measures to enhance the positive aspects, and still increases to medium when enhanced.

10.4.3 Training and skills development opportunities

The positive impact of training and skills development during operation of the smelter remains of medium significance, both with and without the implementation of additional benefit enhancement measures.

10.4.4 Utilisation of surplus public transport

The NMMM is reported to have spare public transport capacity (van der Walt, 2002). The utilisation of spare public transport capacity during operations results in a positive impact, but this remains of low significance due to the small amount of additional transport required.

10.5 Review of Implications for the Rod

Section 8.12 of the ROD (DEAE&T, 2002) deals with conditions pertaining to social aspects. None of these conditions will be affected by the change in smelter technology and no additional conditions are suggested.
Table 10.2 Summary assessment of social impacts projected for the Coega Aluminium Smelter (AP35)

<table>
<thead>
<tr>
<th>Nature of Impact</th>
<th>Status</th>
<th>Extent</th>
<th>Duration</th>
<th>Intensity</th>
<th>Probability of Occurrence</th>
<th>Confidence</th>
<th>Significance (without mitigation)</th>
<th>Significance (with mitigation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment creation</td>
<td>Positive</td>
<td>Local</td>
<td>Long-term</td>
<td>Medium</td>
<td>Definite</td>
<td>High</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Opportunities for local labour</td>
<td>Positive</td>
<td>Local</td>
<td>Long-term</td>
<td>Low</td>
<td>Definite</td>
<td>High</td>
<td>Low</td>
<td>Medium</td>
</tr>
<tr>
<td>Training/skills development opportunities</td>
<td>Positive</td>
<td>Local</td>
<td>Medium-to Long-term</td>
<td>Medium</td>
<td>Definite</td>
<td>High</td>
<td>Medium</td>
<td>Medium</td>
</tr>
<tr>
<td>Utilisation of surplus public transport</td>
<td>Positive</td>
<td>Local</td>
<td>Long-term</td>
<td>Low</td>
<td>Probable</td>
<td>High</td>
<td>Low</td>
<td>Low</td>
</tr>
</tbody>
</table>