



## FREQUENTLY ASKED QUESTIONS

### **Q: What is the production capacity being considered and what are the options for growth?**

The aluminium smelter at Similajau, Sarawak, would have an initial production capacity of 720,000 tonnes per year. Feasibility studies will examine options for growth, but the smelter could be expanded up to 1.5 million tonnes per year.

### **Q: Where would the smelter be located?**

A parcel of state owned land in the Samalaju industrial area, 60 kilometres from Bintulu, has been allocated to the smelter, which will be one of the cornerstones of the Sarawak Corridor of Renewable Energy (SCORE). It is planned the smelter and some associated industries will be located within the industrial precinct.

### **Q. What is the timing of this smelter project? How long will it take to build? When would construction begin?**

These details will be finalized in the feasibility studies. If the decision is made to develop the smelter then first production could begin two to three years after the completion of the studies, timed to coincide with the availability of power from the Bakun Dam and the development of a deep water port at Similajau.

### **Q: What does the smelter mean for Sarawak?**

The SALCO aluminium smelter will be the catalyst for economic development and growth in Sarawak and Malaysia, and a cornerstone development of the Sarawak Corridor of Renewable Energy (SCORE) development. The proposed smelter would also foster development of additional infrastructure in Sarawak (including ports, roads, water supply and a new town). The SALCO aluminium smelter is expected to generate 1,900 direct jobs and 5,700 indirect jobs and create significant GDP for Malaysia and Sarawak. Revenue generation from exports of aluminium is expected to generate RM 2.4 billion annually for Malaysia's GDP.

### **Q. What is the potential for downstream industries from the SALCO aluminium smelter for Sarawak?**

Discussions have started with producers in downstream industries and SALCO wants to ensure that the benefits are shared locally. Downstream industries from the Aluminium Smelter can potentially double the GDP impact of the project.

### **Q. Why has Rio Tinto chosen to build the Smelter in Sarawak?**

Sarawak is strategically located between alumina supplies and markets for aluminium. The energy for powering the smelter is readily available, and there is good investment potential in Malaysia. Rio Tinto has been considering Malaysia as an investment destination for more than 20 years. Malaysia is, currently, a net importer of aluminium. When the SALCO smelter is fully operational, Malaysia will become a net exporter of the commodity.

### **Q. Does Rio Tinto Alcan plan to build an alumina refinery in Samalaju?**

Rio Tinto is not currently looking to build an alumina refinery in Samalaju. However, it does not rule out the possibility at some stage in the future. Any proposal for an alumina refinery would be subject to a separate Detailed Environmental Impact Assessment (DEIA) and feasibility study.



**Q. What technology will be used in the SALCO Aluminium Smelter and what is its impact on the environment?**

CMS and RTA have signed a MoU with French technology developer Aluminium Pechiney (a subsidiary on Rio Tinto Alcan) for the supply of AP37 technology for the SALCO smelter. AP37 is one of the world's most advanced aluminium smelting production technologies available today, and one of the aluminium industry's 'cleanest' technologies available, with very low greenhouse gas emission levels and consumption of raw materials and energy. Backed by 30 years of intensive research, Pechiney is renowned in the aluminium industry as being a leader in reduction cell technology. Choosing such technology is an integral part of SALCO's goal to minimize its environmental impact.

**Q. What will be the environmental impacts of the SALCO smelter?**

SALCO is undertaking a public Detailed Environmental Impact Assessment (DEIA) to ensure that all impacts, social, economic and environmental, associated with the proposed development are fully examined and evaluated. The DEIA will also include a draft environmental management plan, integrating legal requirements and SALCO's environmental management commitments. The draft DEIA report will be available on the SALCO website, and we will advertise in Sarawak newspapers during the public comment period so all interested parties can have their say on the project. Environmental protection will be an integral part of the management of the SALCO smelter during construction and operation.

**Q. What hazardous emissions will be discharged by the SALCO smelter into the air and how can these be managed, especially if output is expanded to 1.5 million tones per annum?**

The smelting processes produce small amounts of fluorides and polycyclic aromatic hydrocarbons (PAHs). Modern gas collection and treatment technology will be installed to capture and treat these gases before release to the atmosphere. Sulphur dioxide is also generated in parts of the smelter and is controlled by limiting the sulphur levels in raw materials used to make carbon anodes. The SALCO smelter will be constructed and operated to meet national and international ambient air quality standards.

**Q. What is the solid waste from the production of aluminium?**

The reaction that produces aluminium metal from aluminium oxide during the smelting process does not produce any solid waste. However, the lining of the cell within which the reaction takes place has to be replaced every five to seven years. The "spent cell lining" (SCL) will be temporarily stored in a dry enclosed building. The SCL can be used as a feedstock in cement kilns. The kiln processes the material and renders it benign, incorporating it as a component of cement which is safe to use. . This is SALCO's proposed method of disposal of SCL.

**Q. How do you manage greenhouse gas emissions?**

Carbon dioxide is produced when carbon in the anode combines with the oxygen in aluminium oxide during smelting. Perfluorocarbons (PFCs) are greenhouse gases that are produced in the smelting process during brief upset conditions known as "anode effects". Anode effects are prevented and minimized by use of technological and operational controls such as sophisticated computer controls, changes to alumina feeding techniques and employee training.

**Q. Is there any wastewater or other liquids that will be discharged in the smelting process? How are they treated or managed?**

Smelting is a dry process and it does not use water or produce wastewater. Fresh water from Bintulu will be used for cooling the metal casting machines. This cooling water will be recycled but a small amount of salty water will be removed from the recycling system and either reused on site, or released into the ocean. There are no other liquid discharges.

**Q. What is the cost of energy as a percentage of total production cost?**

This depends on the plant, but it could be around 20 per cent to 25 per cent of the total production cost.



**Q. Where is the most likely location for a new township?**

The location of a new township to support the Samalajau Industrial Park will be decided by the Sarawak State Planning Unit together with the Bintulu Development Authority.

**Q. Will there be opportunities for local contractors to work on the construction of the SALCO smelter?**

Ensuring local communities and local contractors benefit from SALCO activities will be strong focus during the feasibility study. This is an essential part of making sure the SALCO smelter makes a sustainable, long term contribution to the local community and the economy.