



# Business Opportunities for Technology Transfer



International Council for Capital  
Formation, Brussels, 28 June 2006

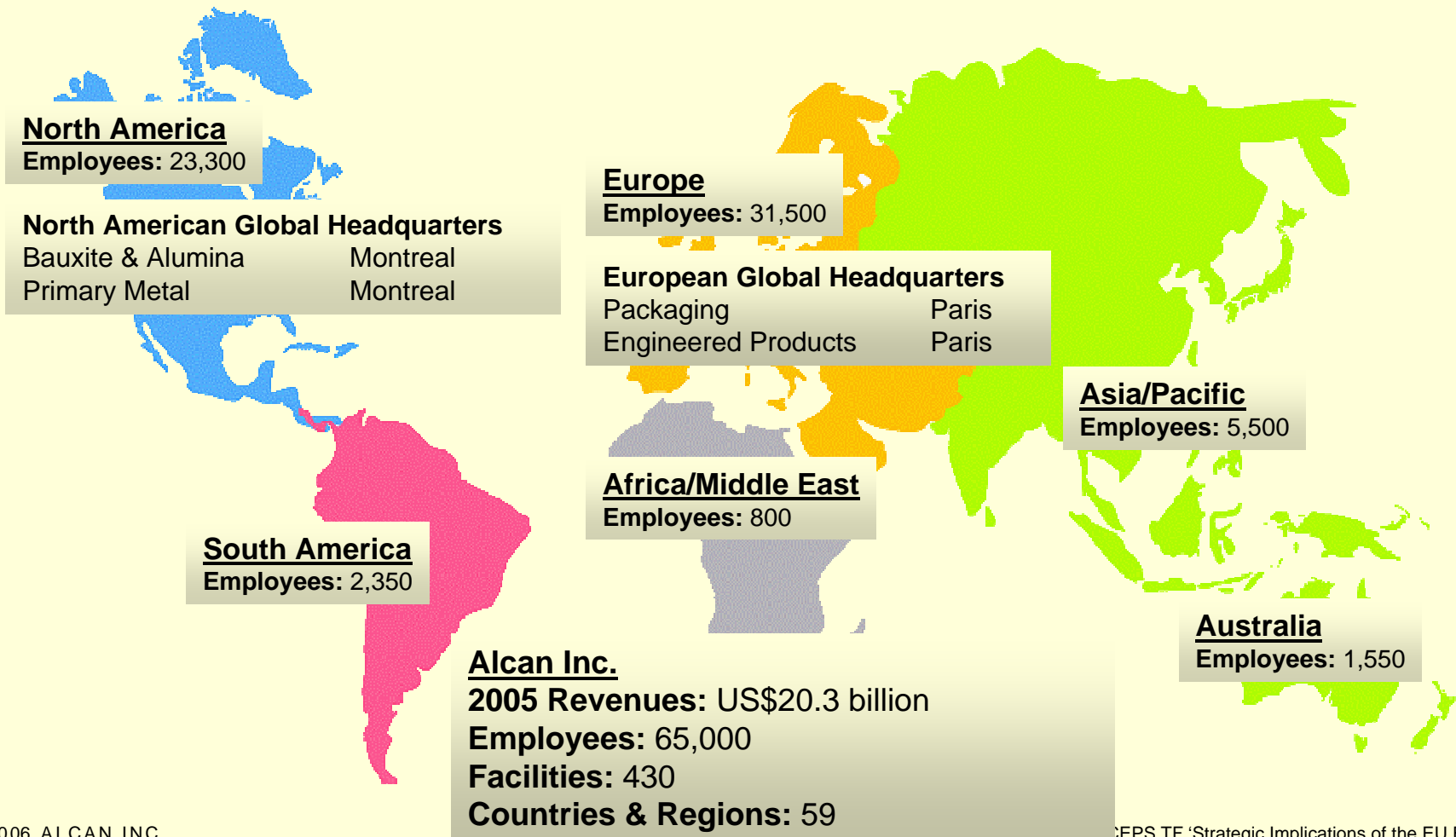
**Hugh Porteous, Vice-president,  
Government Relations Europe,  
Alcan Inc.**





# Global Presence

*A balanced presence and a global reach*



# Business Groups



## BAUXITE AND ALUMINA



## PRIMARY METAL



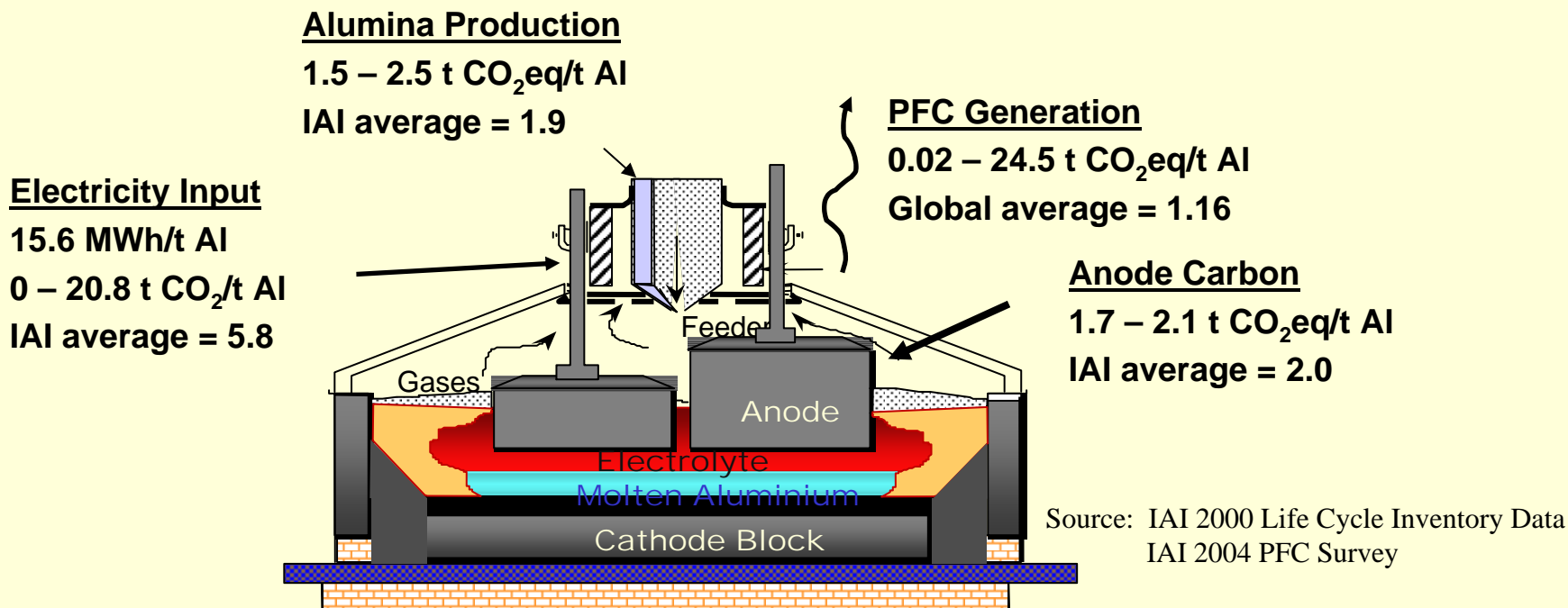
## ENGINEERED PRODUCTS



## PACKAGING



# GHG Emissions and Aluminium Production

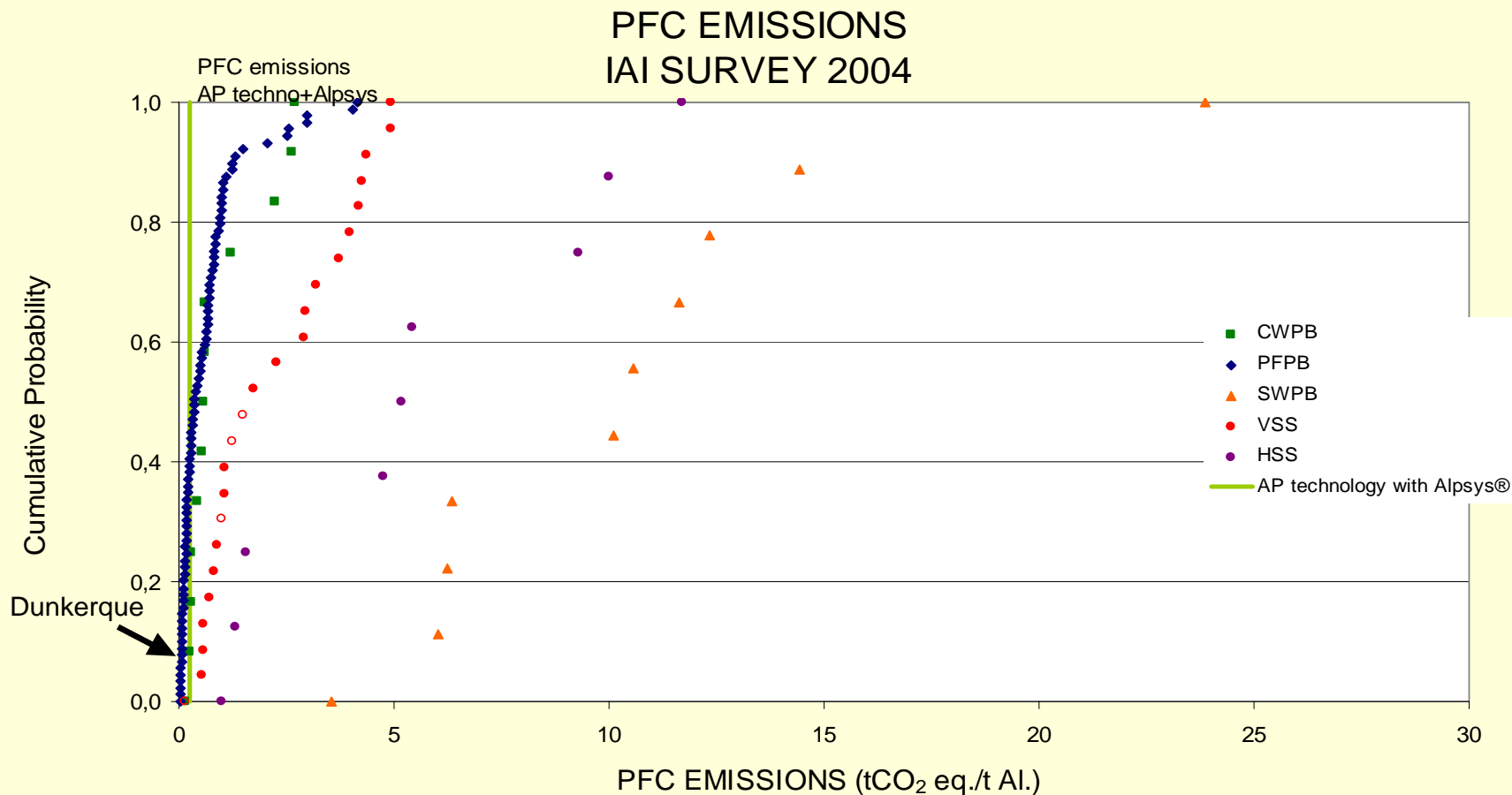


- Two PFC (perfluorocarbon compounds - CF<sub>4</sub> and C<sub>2</sub>F<sub>6</sub>) contribute about 40% of direct primary aluminium GHG emissions
- Anode consumption generates 60 per cent of direct primary aluminium GHG emissions
- GHG emissions from electricity generation are the largest source of Aluminium industry emissions; limits set by the available energy source(s)

## Alcan's Best Technology



- Alcan owns technology which can contribute significantly to reducing energy use and GHG emissions
- These solutions represent a win - win case for the environment and the economy as they reduce energy use and GHG emission while reducing also the production cost.
- Occupational safety is also improved.

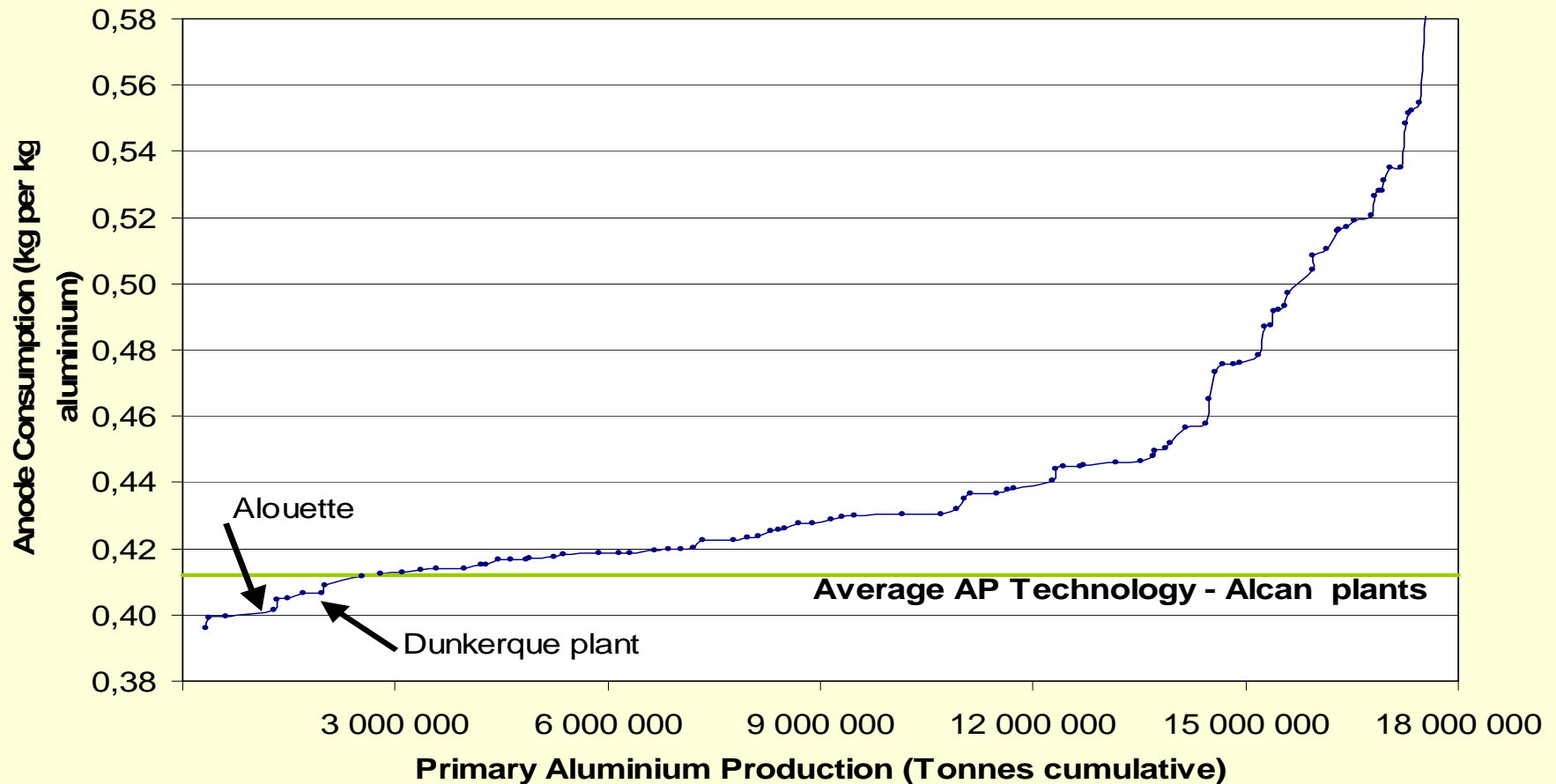


Alcan's AP technology, when using the Alpsys® process control system, provides benchmark PFC performance (less than 0,1 tCO<sub>2</sub>eq / t Al)

# AP Technology, the net carbon consumption



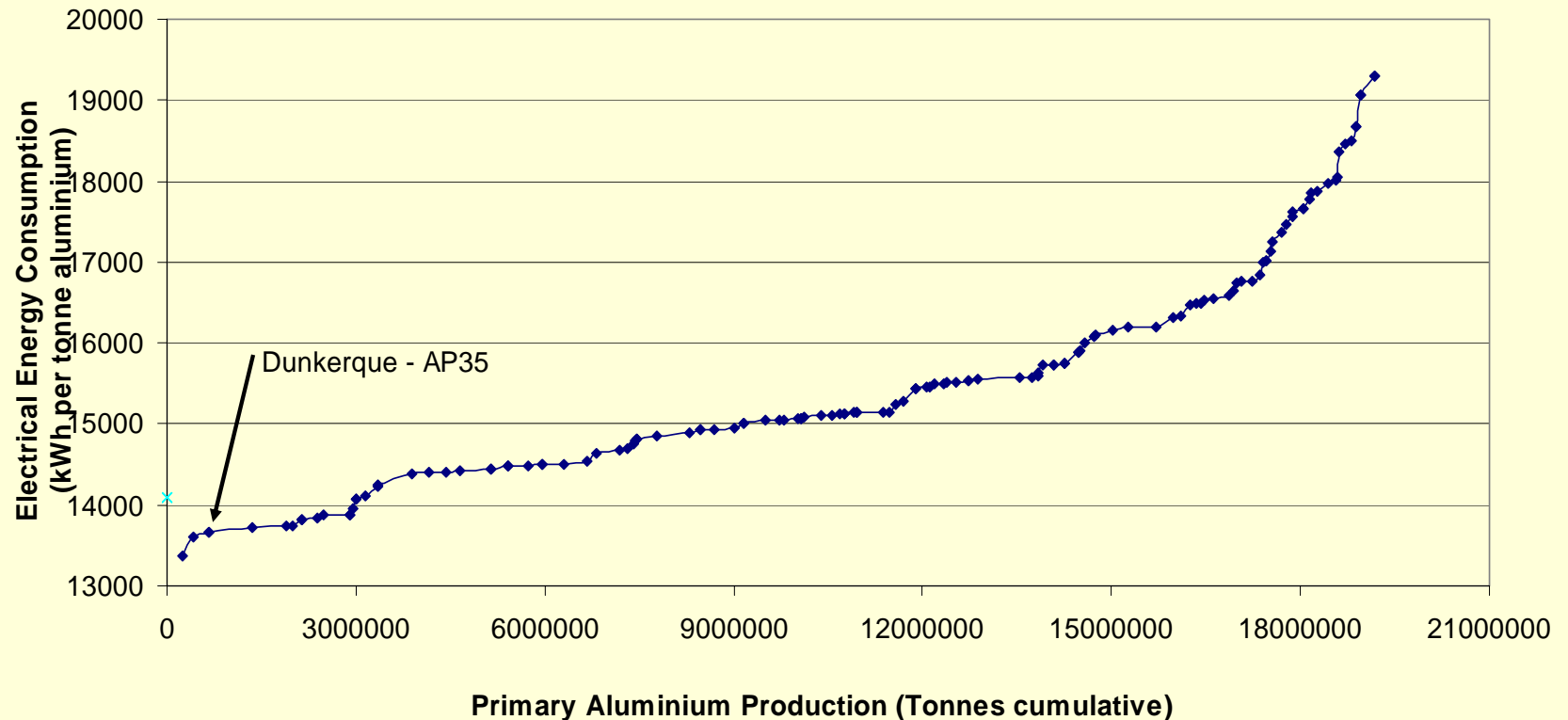
2004 IAI Energy Survey  
Primary Aluminium Smelting - Anode Consumption  
All technology



# AP Technology, energy consumption



2004 IAI Energy Survey  
Primary Aluminium Smelting - Electrical Energy Consumption  
All Technology



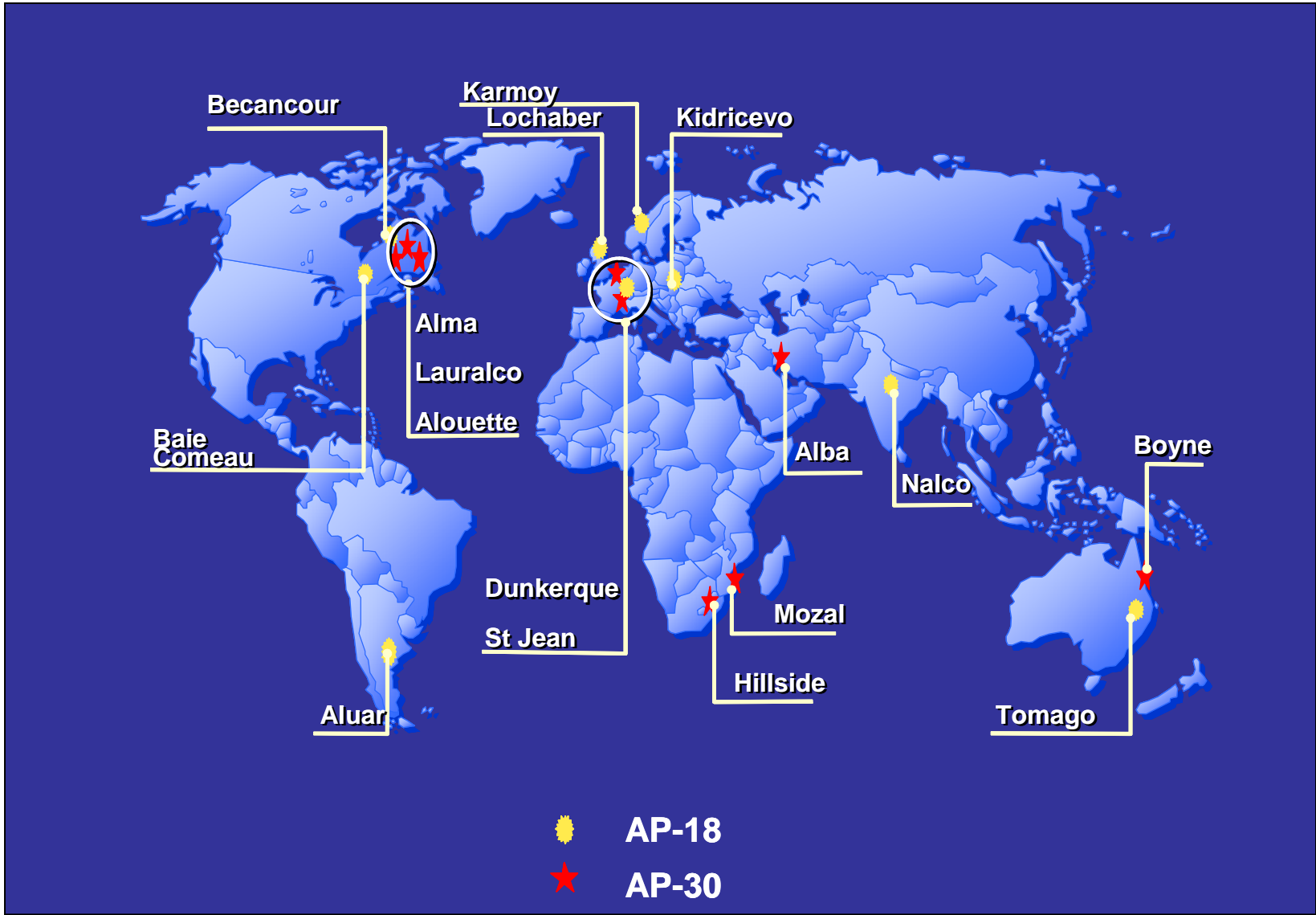
Alcan's AP technology is benchmark for energy consumption



# Technology Transfer to Developing Countries



- The transfer of these technologies to developing countries companies (India, Africa, Latin America, Middle East) has taken place under contractual market conditions since the early eighties
- The commercial conditions for transfer to developing country industry has been the same as for technology transfer to developed country companies.



# Policy Platforms



- The push and incentives for further technology transfers under international instruments such as AP 6 or CDM should be developed in a way compatible with Intellectual Property Rights and current licensing market based practices (9% to 12% of the cost of a new smelter)

# Automotive Applications



# Recycling



- **Recycling only requires 5% of the energy**
- **Greenhouse gas emitted is 95% less**

