

### III. C.1 Large Industrial Emitters: A Comprehensive Approach (cont'd)

- **Sectors proposed for inclusion on basis of emissions intensity**
  - thermal electricity generation (coal, oil, and gas)
  - oil and Gas (upstream extraction, oil and gas pipelines, gas utilities, petroleum refining)
  - mining (both metal and non-metal)
  - pulp and Paper production
  - chemical production (industrial inorganic chemicals, industrial organic chemicals, and chemical fertilizers and fertilizer materials)
  - iron and steel production
  - smelting and refining
  - cement and lime production
  - glass and glass container production
- **Not proposed for inclusion are light manufacturing, car assembly, service sectors which are “low intensity” emitters**

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Illustrative Costs for Selected Industries with 85% Free Permit Allocation (at \$10/Tonne Carbon Price)					
Sector	\$ per Unit	Cost/ Price (%)	Sector	\$ per Unit	Cost/ Price (%)
Conventional Oil (\$/ barrel)	0.03	0.09	Electricity - Coal (c/KWHR)	0.14	1.94
Heavy Crude Oil (\$/ barrel)	0.015	0.05	Electricity – Oil (c/KWHR)	0.12	1.57
Oil Sands – Bitumen (\$/barrel)	0.10	0.34	Electricity – Gas (c/KWHR)	0.04	0.60
Oil Sands – Synthetic (\$/barrel)	0.12	0.31	Cement (\$/ tonne)	1.18	1.18
Natural Gas (\$/ mcf)	0.005	0.14	Lime (\$/tonne)	1.85	2.50
Pipelines (\$/ mcf)	0.0014		Pulp and Paper (\$/tonne)	0.59	0.06
Refined Petrol Products (\$/ m <sup>3</sup> )	0.17	0.03			
Steel – Conventional (\$/ tonne)	2.10	0.29	Industry Chems (\$/ tonne)	0.31	
Steel – Electric Arc (\$/ tonne)	0.60	0.08	Agriculture Chemicals, Fertilizers, etc (\$/tonne)	2.63	1.46
Aluminum (\$/ tonne)	4.73	0.23			