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Restructuring the Australian economy to emit less carbon

Grattan Institute seminar

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Grattan Institute
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“Take home” messages

Free permitting regime under the draft CPRS

- $20b waste of money
- Reduces incentives to efficiently reduce carbon emissions

Fears of “carbon leakage” are greatly exaggerated

- Jobs are not going offshore; plants are not going to close
- A very small number of industries in trouble, but if they leave global emissions will reduce

Carbon pricing is a manageable change

- Fewer jobs at stake than tariff reform or electricity competition reform
- Much less compliance than GST
- Limited effect on household budgets

Grattan Institute study of industries with high carbon emissions

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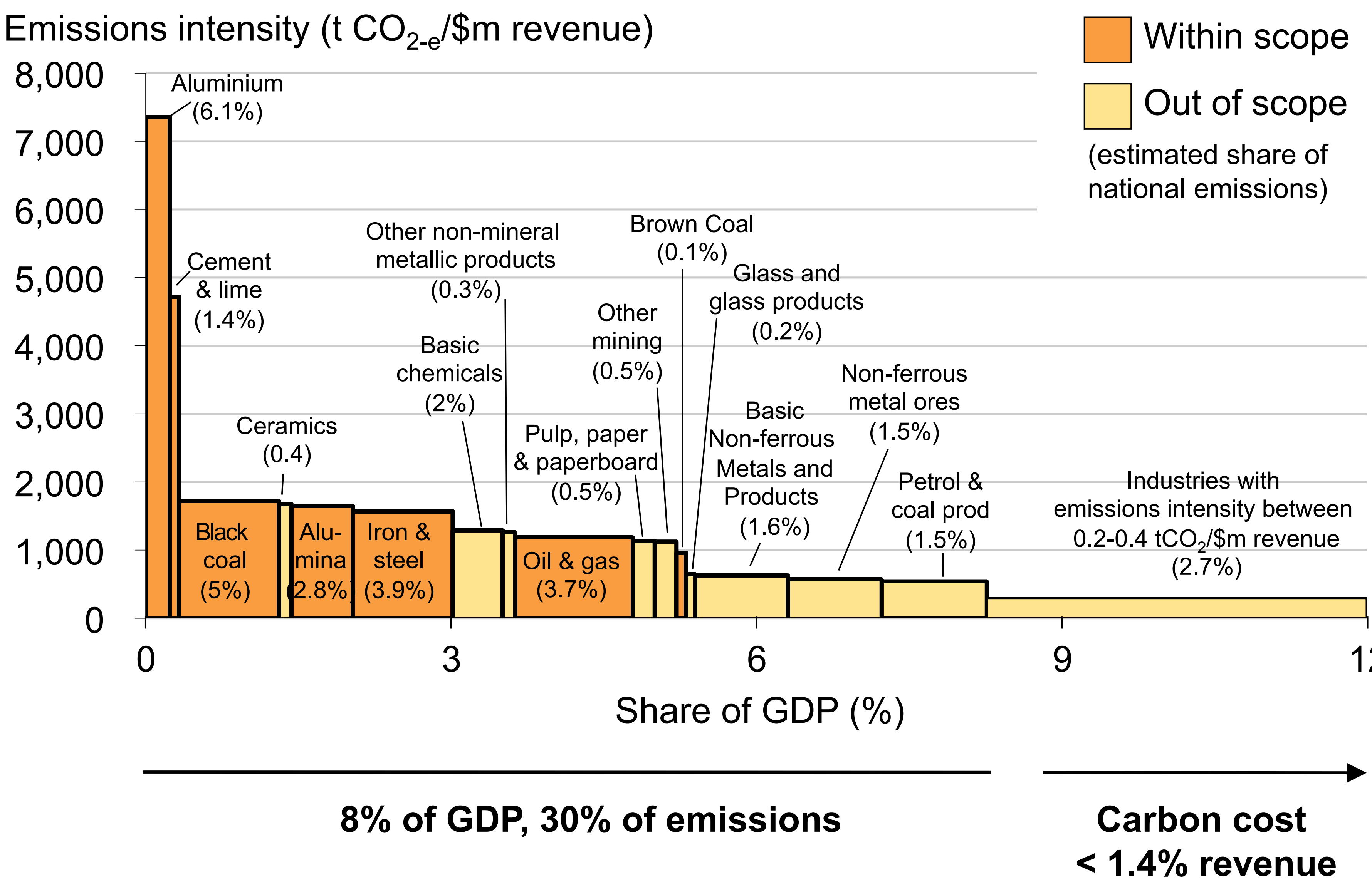

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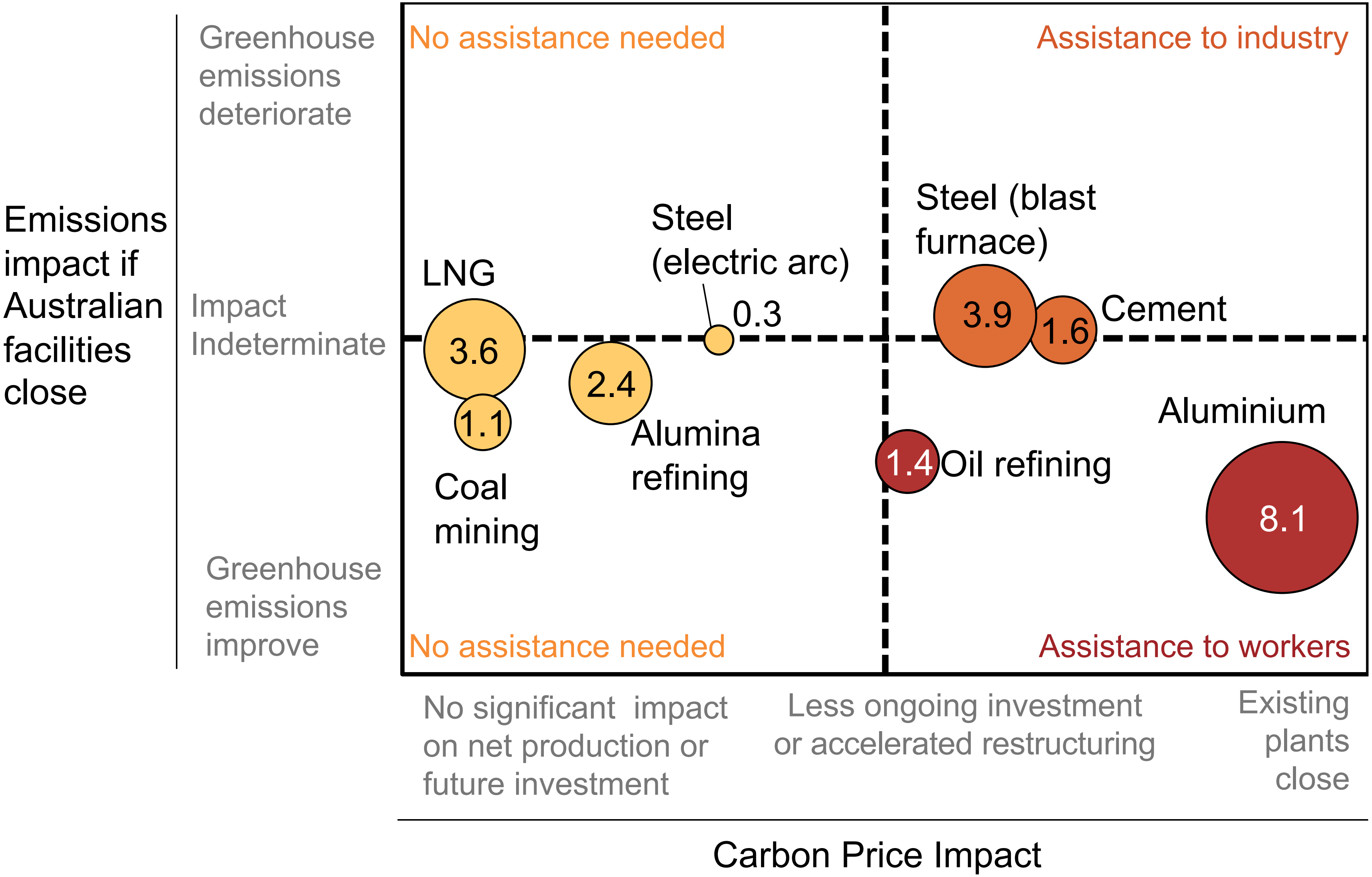
A targeted response to “carbon leakage”



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Problems with free permits

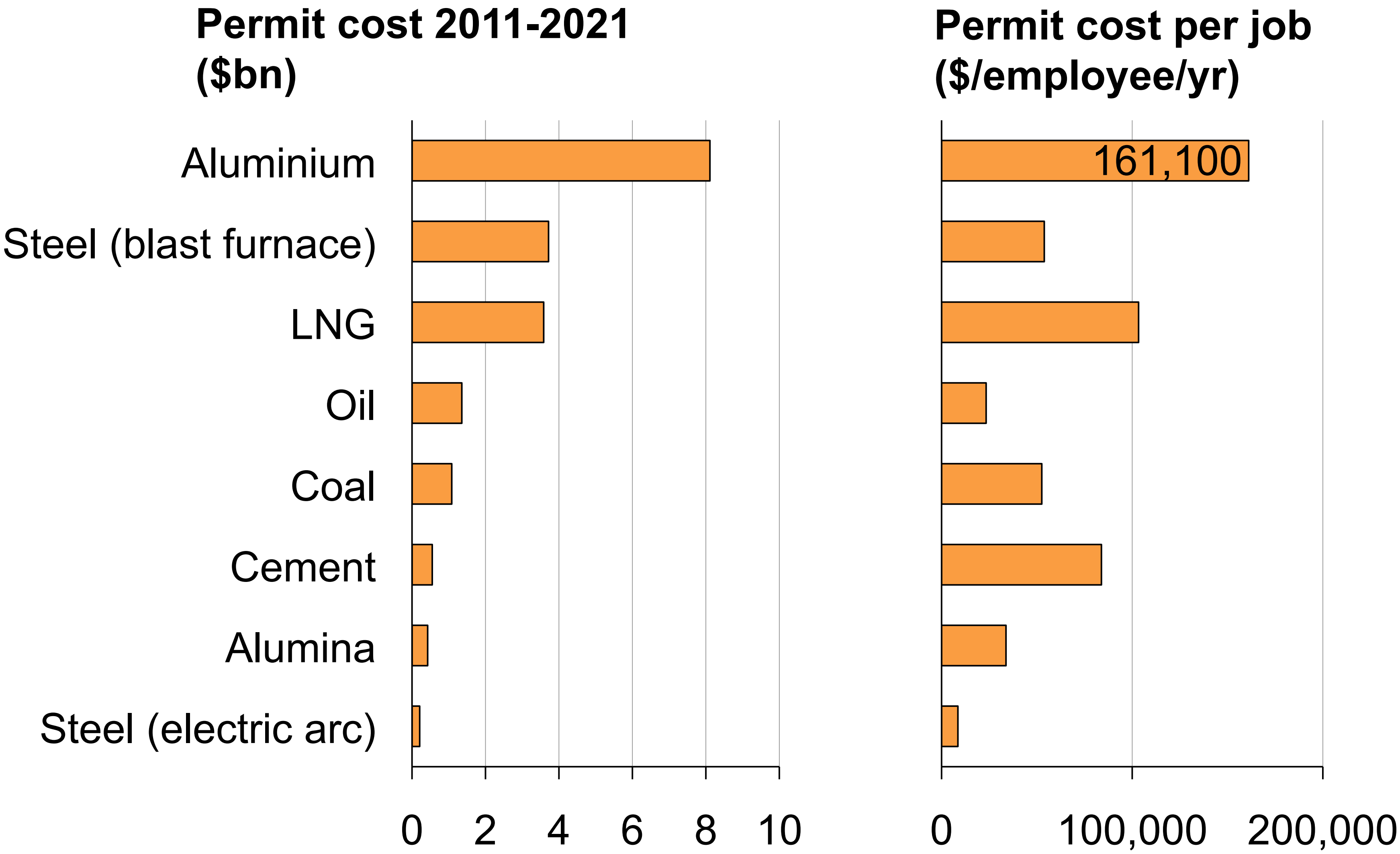
Less incentive to reduce emissions

- No incentive to reduce emissions beneath level of free permits allocated (no “windfall gains” provision)
- Less incentive for product substitution (wood for steel)
- Less incentive to move to low emissions facilities if different free permits entitlements within industry (blast furnace steel to electric arc steel)
- Work less hard if no burning platform
- No incentive to move offshore for lower emissions

Free permits aren’t free

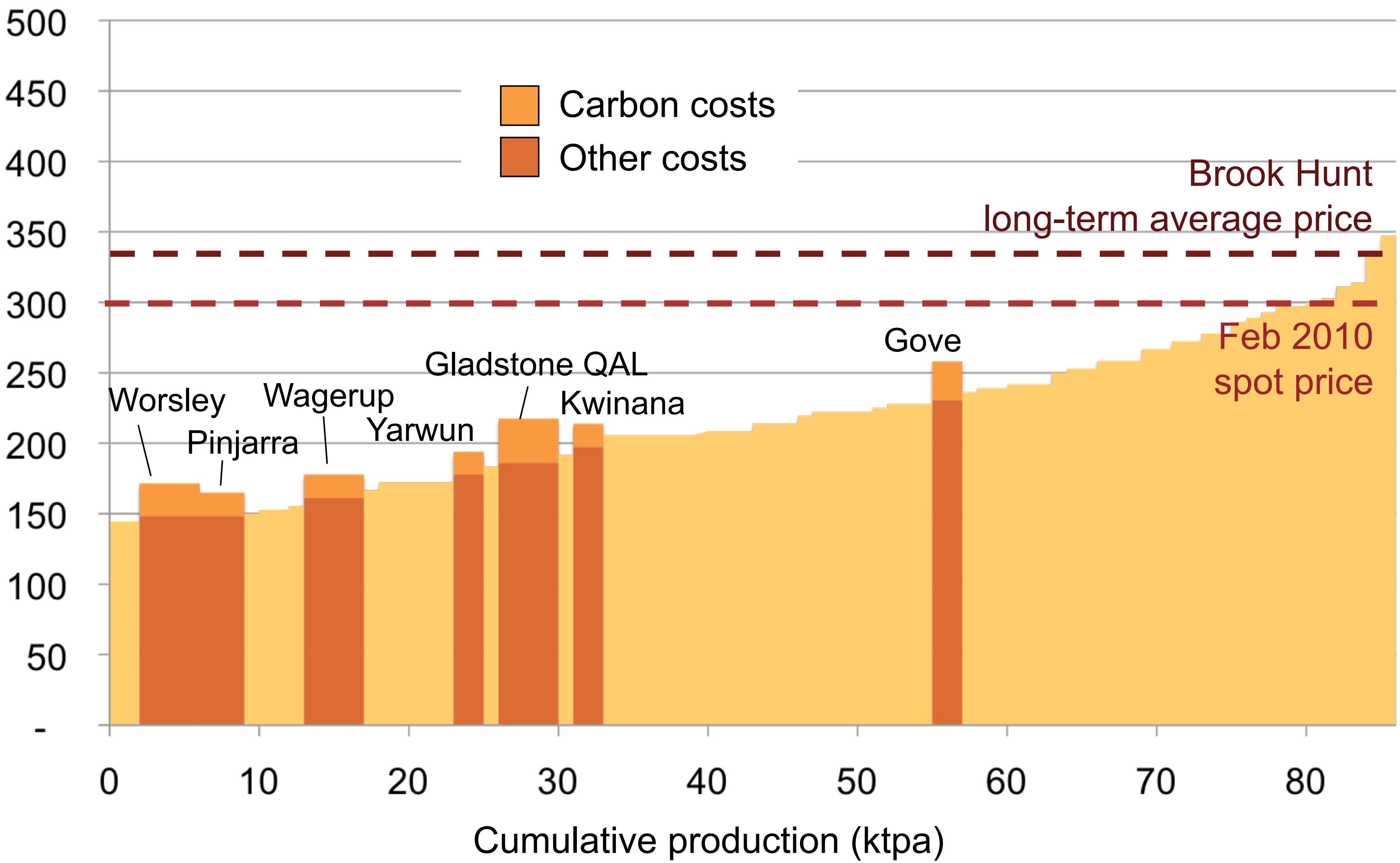
- Recipients “pollute for free” – others will have to abate to compensate
- $20bn tax exemption

Free permitting regime – substantial industry assistance



Alumina – still in business

Alumina cash costs (US$/t)



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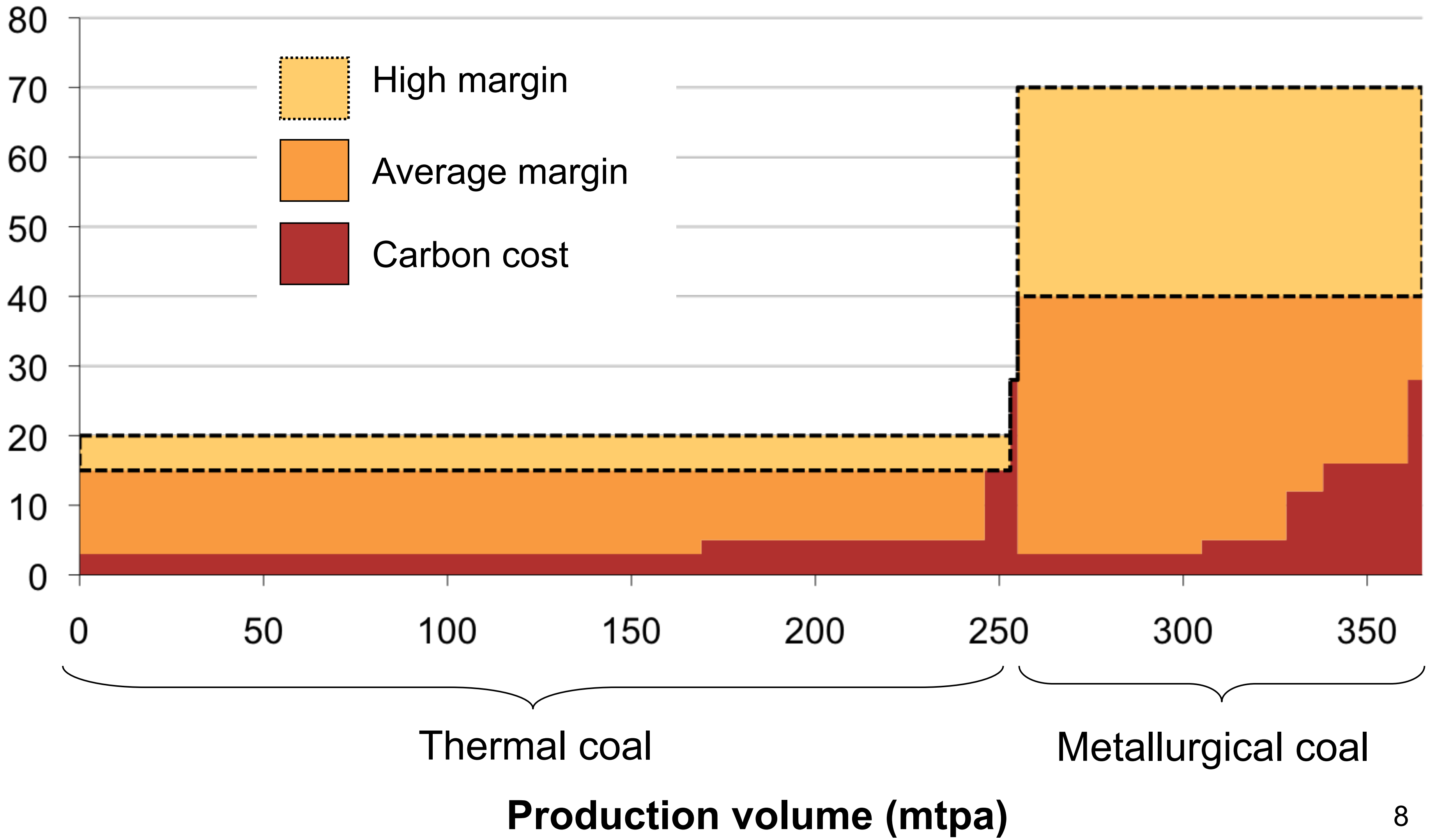
Coal – only a few mines affected

Coal margins and carbon cost (US$/t coal)



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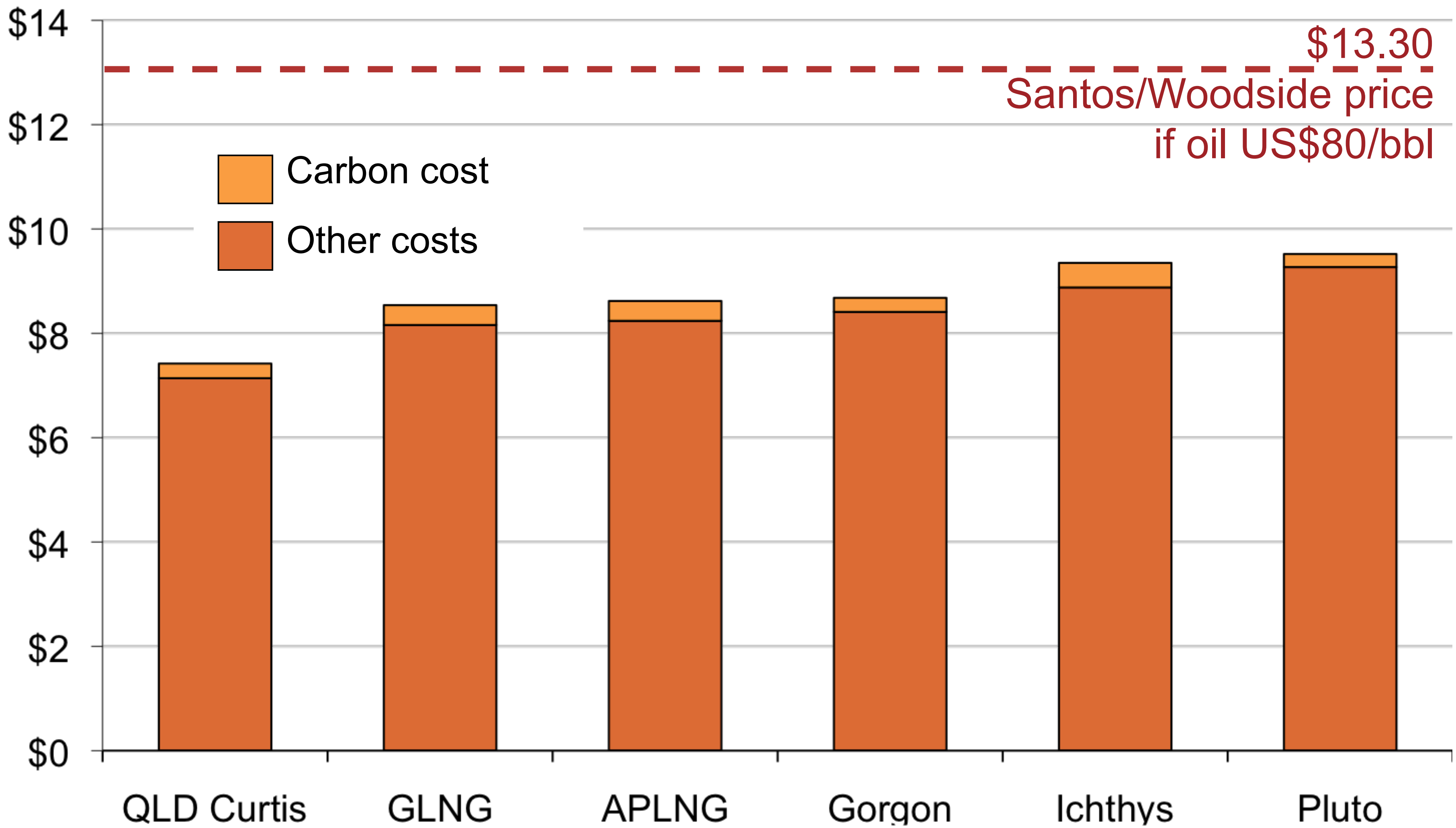
LNG - strong investment returns at current prices

LNG price required for 12% return on projects ($A)



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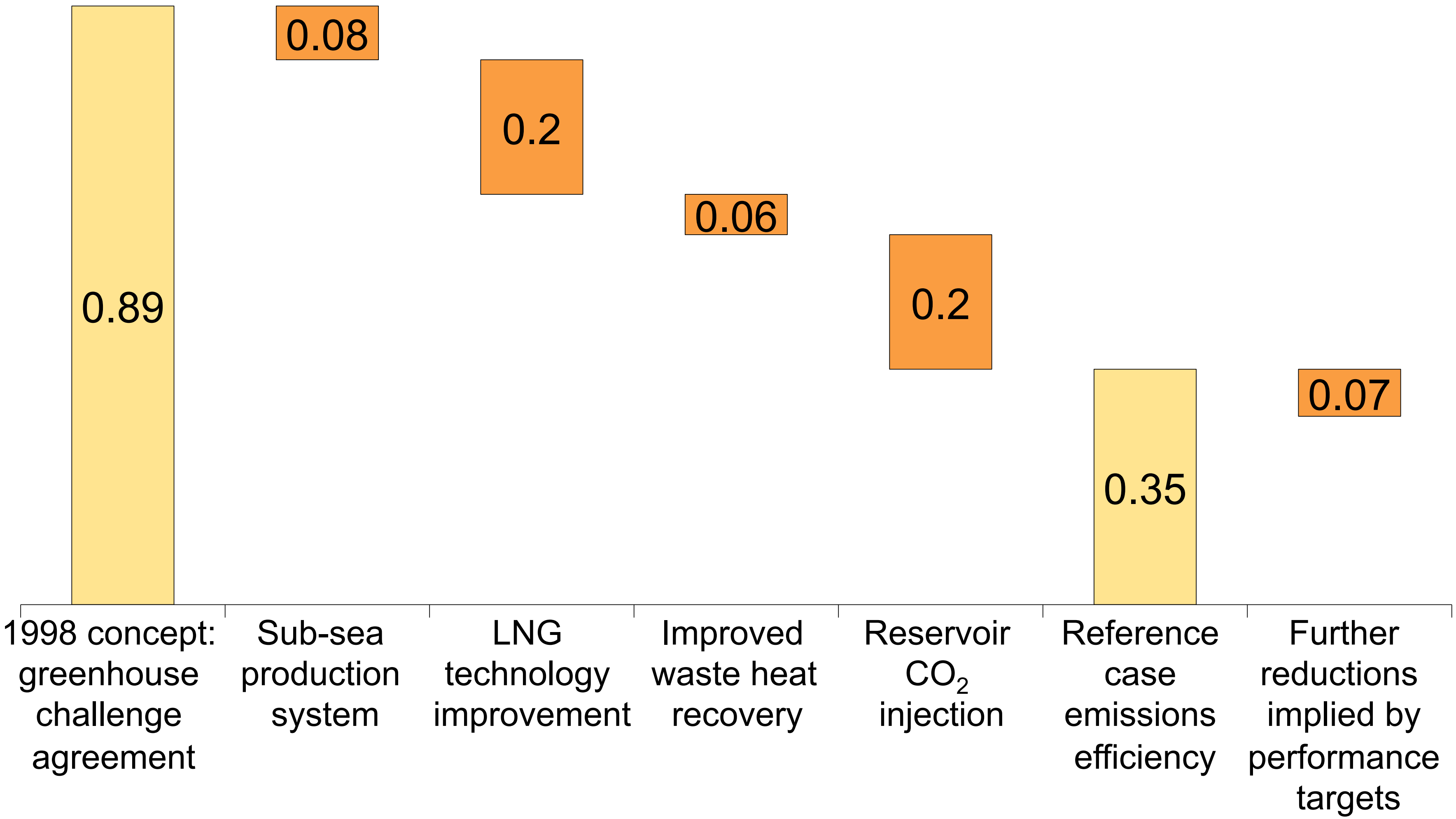
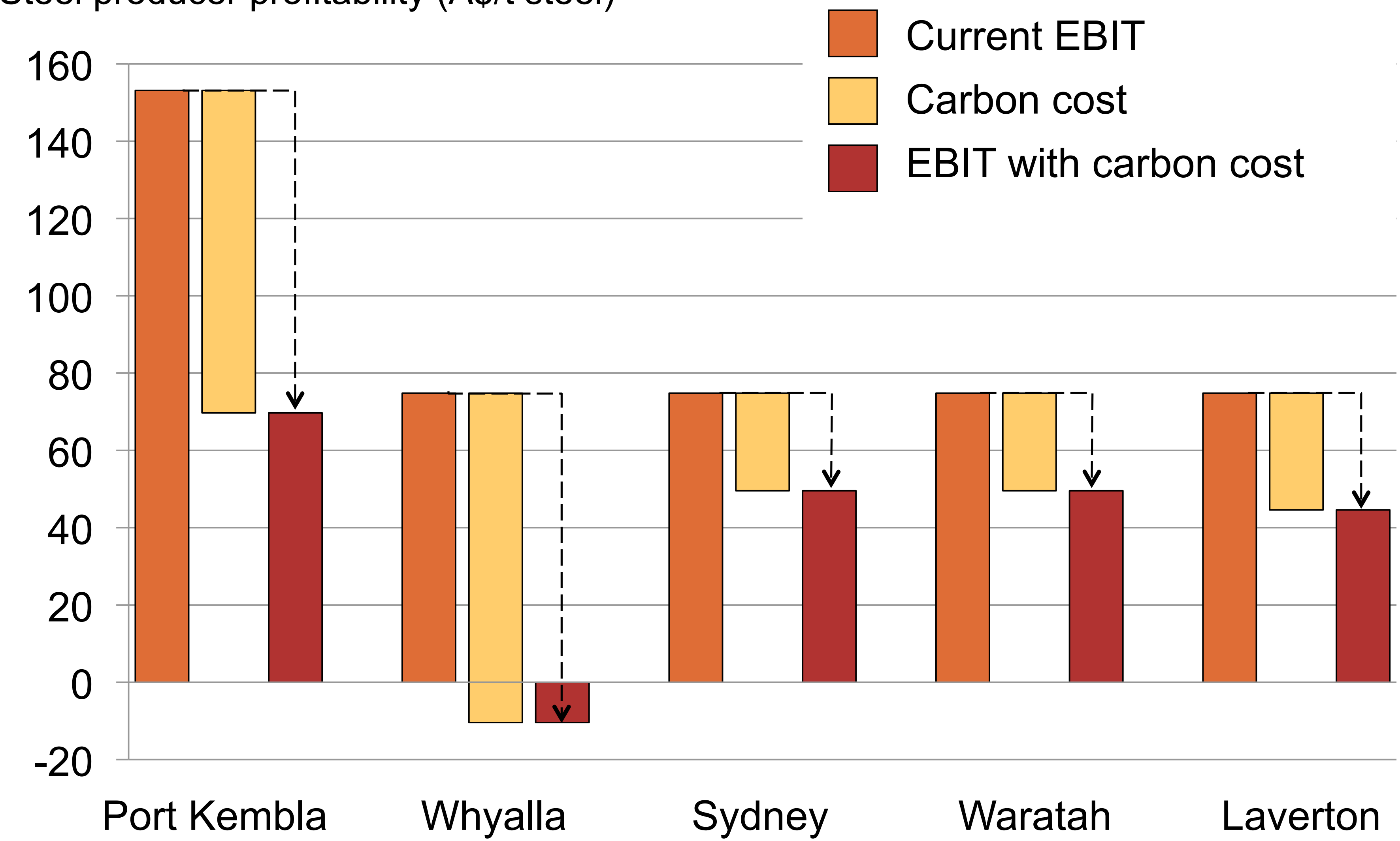
LNG – carbon price can change the outcome

Projected emissions intensity for Chevron project (CO_2 / t LNG produced)



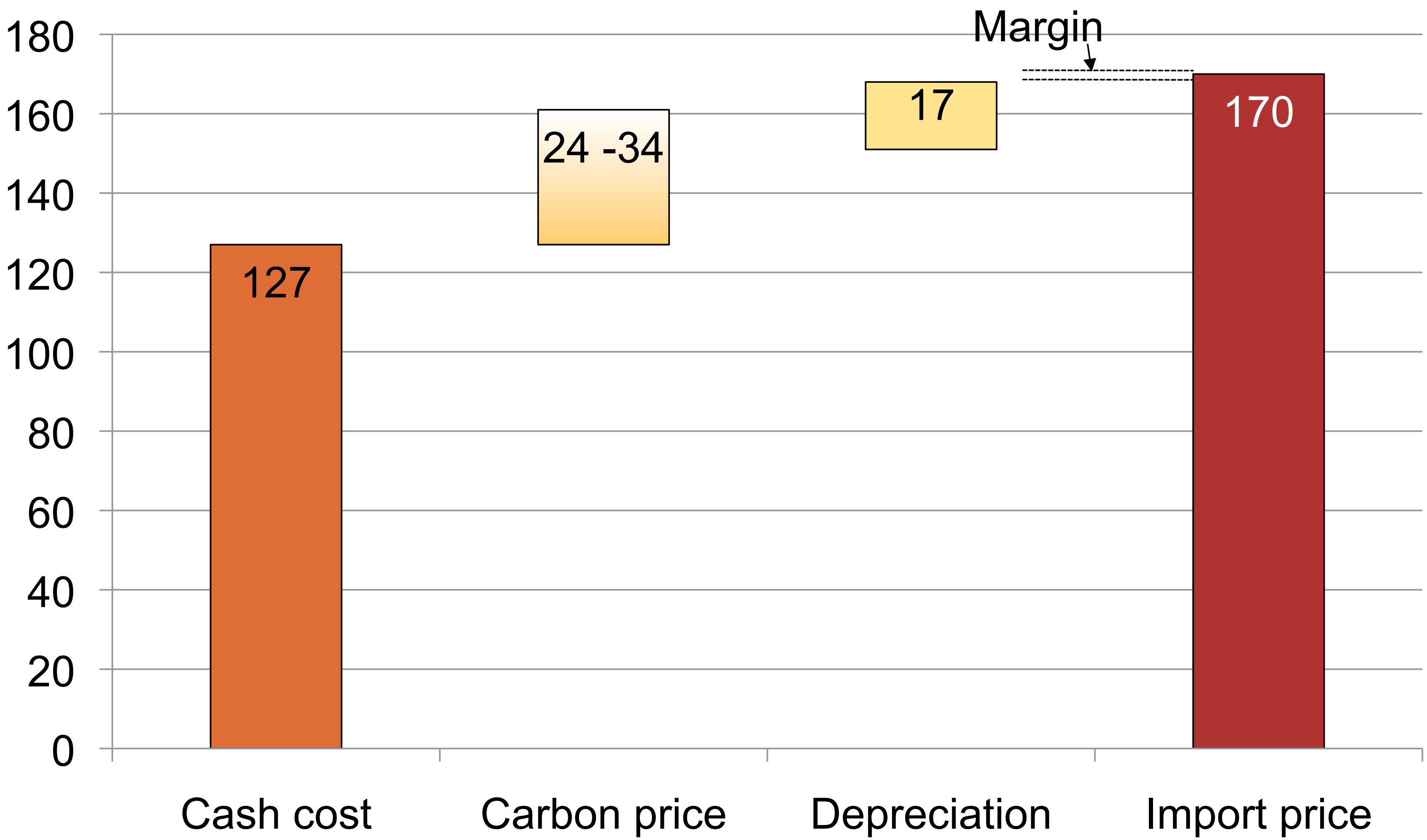
Steel profitability marginal after carbon costs

Steel producer profitability (A$/t steel)



Cement profitability marginal after carbon costs

Cement prices and carbon costs (A$/t cement



Border adjustments better than free permits

Free permits impair carbon-efficient economic restructuring

- Reduce incentives to switch from steel and cement to wood and plastic
- More efficient producers have no incentive to reduce emissions further under “no windfall gains” provisions
- More free permits for steel blast furnaces than electric arc furnaces – mutes incentives to shift production to electric arc

Border tax on imports complies with WTO rules provided local and imported production treated consistently (UK Government Carbon Trust)

Rebate tax on steel exports to countries without carbon price

Australian aluminium production threatened by market electricity prices and carbon prices

Smelter		Change in Al production cost		Cost position (Quartile)			
		Market electricity prices	Carbon price	Current	Market electricity price	Carbon price	market electricity AND carbon price
Portland		$307	$623	1st	low 3rd	low 4th	hi 4th
Point Henry		$330	$623	up 1st -low 2nd	mid 3rd	mid 4th	hi 4th
Boyne/ Glad-stone	L1&2	$210	$488	mid 2nd	low 3rd	mid 4th	hi 4th
	L3			1st	hi 2nd	mid 3rd	hi 4th
Bell Bay		$576	$110	? 3rd	hi 4th	? hi 3rd	hi 4th
Tomago		$266	$448	low 1st	low 3rd	low 3rd	4th
Kurri Kurri		$293	$522	? 3rd	4th	hi 4th	hi 4th

Replacement aluminium capacity likely to be lower emissions <u>on average</u>

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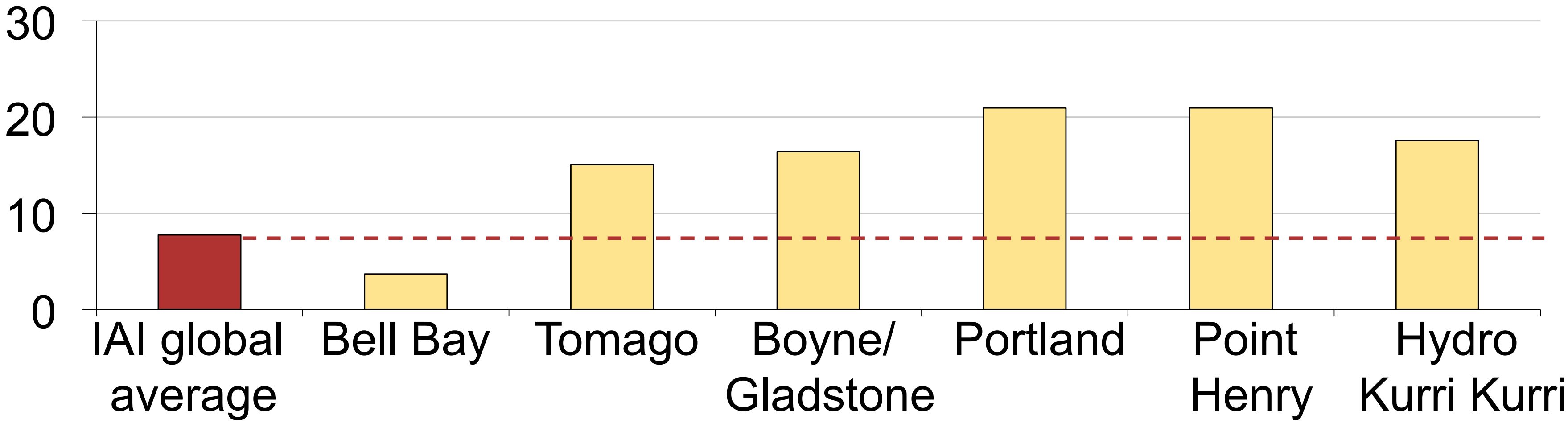
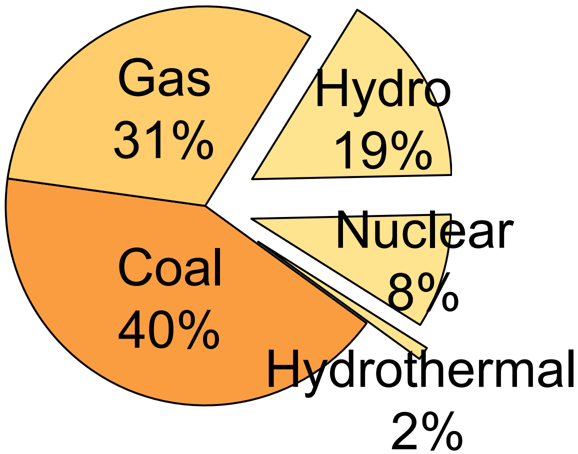
<u>Existing</u> global emissions (t CO_2 / t Aluminium)



<u>New</u> global capacity (power source)



"The future belongs to those who can produce aluminium with less energy, less emissions and less cost"

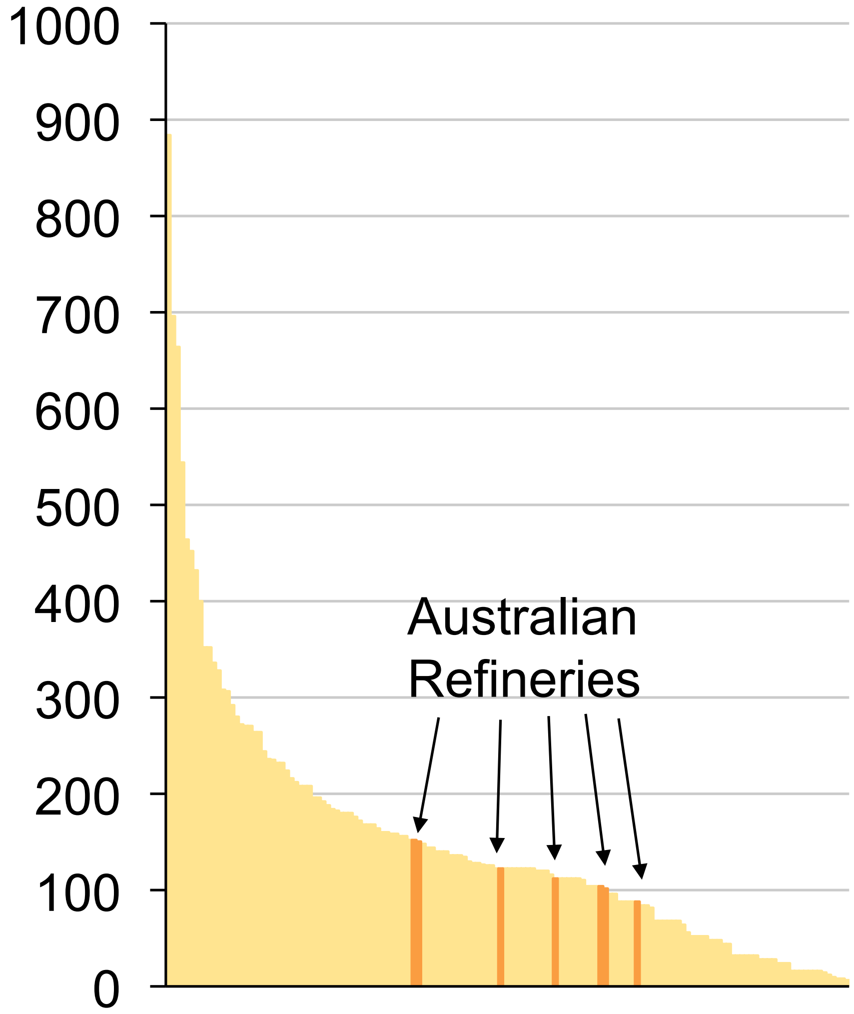
2009 Annual Report of Norsk Hydro

"Growth in smelting restricted to stranded low carbon power options with expansion potential"

BHPB Aluminium investor presentation 2009

Australian oil refining has legacy sub-scale facilities with higher emissions

Asian refinery capacity ('000 barrels/day)



Security issues

- Local refineries not important to secure domestic supply
  - Outage in old local plant more concern than shipping accident
  - Still reliant on stable international crude oil flow (80% of domestic demand)
- Most refineries not required for secure defence supply
  - Need adaptation to refine Australian oil for general purposes
  - Defence does not require all of the existing plants
- Need targeted program for security issues

Carbon pricing reforms in context

Impact	Historic reforms		Carbon pricing
Job losses	Tariff reductions	• Car manufacturing employment fell from 100,000 to 45,000 • TCF employment fell from 113,000 to 49,000	70,000 workers in facilities of studied industries – most continue to be viable
	Electricity competition reforms	• Electricity sector employment fell from 330,000 to 154,000	
Compliance burden	GST	• Every business for every transaction • $4.5b admin cost	1,000 firms with reporting obligations
Inflation	GST	• One-off 2.8% increase in CPI	One-off 1-1.5% increase in CPI

Policy implications

Redesign industry assistance for carbon pricing

- Abolish free permits regime – no industry assistance for aluminium, alumina, coal, LNG, oil refining
- Border tax adjustment for steel and cement
- Targeted assistance to workers and communities where closure possible (gassy coal mines, aluminium, oil refining) – possibly about 10,000 jobs

Push ahead with a carbon price

- Australia can afford it
- Restructuring the economy better sooner than later
- Provide certainty to affected workers, communities, and businesses

Public materials: www.grattan.edu.au