

Debunking the Myths of Climate Economics

Firstly, thank you to the Economics Students Society of Australia for having me. It's great to be back speaking to economists — people who, unlike the rest of the population, actually enjoy being told they're wrong with a regression.

I did my undergrad in Commerce and Arts at Melbourne University, before going on to do my PhD in Economics at Oxford. Great memories of this place — mostly of being confused but pretending otherwise, which turns out to be excellent preparation for a career in economics.

Since those days, my career has gone in directions I never could have predicted. Back then I thought I'd be an economics journalist focused on China. Then I joined the World Bank, which I thought would be my home — until I realised it wasn't quite what I'd imagined. Then McKinsey, which I thought would be two years and turned into ten, spent across the Middle East, Europe and Asia. Then I left to set up an economic strategy firm called AlphaBeta in Singapore. From there, I co-founded Sun Cable — an attempt to build the world's largest renewable energy project, supplying Southeast Asia with solar power via undersea cable from Australia. And now I'm co-founder of Cyan Ventures, where we build and support the first-of-a-kind projects needed to get us to net zero.

Why do we do it? About 70% of the technologies we need for net zero aren't yet commercially deployed — everything from low carbon liquid fuels to next-generation battery solutions. These sectors are genuinely hard: no natural customers, financing structures that weren't designed for them, supply chains that don't exist yet. Our job at Cyan is to wade into that mess and drag these projects into the market faster. We use our economics toolkit every day — designing policy instruments, stress-testing financial structures, trying to make the numbers work on things that have never been done before.

I mention all of this because an economics degree can take you places you genuinely can't imagine from where you're sitting right now. And frankly, you've picked a great time to study it. This would be a much more uncomfortable speech if I were talking to a room full of computer science students.

So — what do I want to talk about tonight? I wanted something that would make you think, but also give you something practical to take away. So I landed on this: debunking five myths of climate economics.

Climate economics is drowning in received wisdom — ideas that sound sensible, get repeated endlessly in policy circles, and quietly misdirect billions of dollars and decades of effort. Tonight I want to challenge five of them. Not to be contrarian — though I admit I do enjoy it — but because getting these wrong has real costs for real people.

MYTH 1: "Without a carbon price, nothing will happen"

Carbon pricing is the economists' favourite policy instrument. And I get it — it's theoretically elegant, it's efficient, it lets markets do the work. We love it. The problem is that markets have to survive contact with politicians.

Australia's carbon price lasted 732 days before repeal in 2014. In policy terms, that's basically a long weekend.

But here's the deeper problem. Even with a carbon price, some sectors start at such enormous cost that no plausible carbon price would shift them. Sustainable aviation fuel currently costs around \$800 per tonne of abatement to decarbonise. The EU carbon price is around €60–70. You can see the gap.

The key insight is that abatement costs are a movie, not a snapshot. Solar PV went from roughly \$76 per watt in 1977 to around 20 cents today — a 99.7% cost reduction. That didn't happen because someone put a price on carbon. It happened because deployment drove learning curves, which drove cost reductions, which drove more deployment.

So a carbon price is useful — but it is not a prerequisite for transition. Other instruments are emerging: mandates, contracts for difference, sovereign co-investment. At Cyan, this is exactly what we work on every day.

MYTH 2: "The clean energy transition will be equitable"

This one is said with great confidence at every climate conference, usually by people who own their homes.

The transition is currently structurally regressive. Rooftop solar requires a roof you own — about 32% of Australian households rent, and in Melbourne it's closer to 40%. Home batteries cost \$12,000–15,000 installed, which requires both capital and the kind of property security renters simply don't have. And renters pay the same network charges as homeowners — in some cases effectively cross-subsidising grid upgrades that make solar viable for everyone else.

To be clear: we have created a system where renters pay to make their landlords' electricity bills cheaper. If you're looking for material for your next policy paper, there it is.

There are emerging solutions. We're supporting a company called Smartizer that offers plug-and-play batteries for renters — no installation, no landlord permission required. But even they're running into regulations that weren't designed for innovation. Getting it approved requires changes at both Federal and state level — because apparently we designed our regulatory system to be maximally inconvenient.

MYTH 3: "The lowest-cost country will win on clean energy manufacturing"

The obvious implication here is: China wins, everyone else goes home. And if this were purely a cost competition, that would be largely correct. China has up to 90% market share across key clean energy supply chains — polysilicon, solar cells, batteries.

But the market is bifurcating. The US is paying four times the Chinese price for polysilicon produced outside China. Europe is moving in the same direction. Suddenly the question is no longer "can you match Chinese costs?" It's "can you profitably serve the non-China premium market?"

Australia — trusted partner, stable democracy, world-class mineral endowments — is actually well positioned here. We're not trying to win a race to the bottom. We're trying to win a different race entirely. At Cyan, we're working with an Australian polysilicon producer doing exactly this.

MYTH 4: "First Nations communities are peripheral to the clean energy transition"

This one might be the most consequential myth of all, and it is stated — or more often implied — with remarkable confidence by people who have never looked at a land tenure map.

43% of the clean energy infrastructure we need by 2060 will be built on First Nations Estate. 65% of iron ore assets and up to 79% of critical minerals projects sit on land covered by native title or similar rights.

This is not a consultation checkbox. This is a project delivery constraint. You cannot build nearly half of net zero infrastructure without the people whose country it sits on. And yet current mechanisms — slow, imbalanced Indigenous Land Use Agreements, token benefit-sharing models — consistently fall short.

The economics here are also compelling in the other direction. Done properly, First Nations partnerships in clean-tech manufacturing could generate \$3 billion in direct benefits to communities by 2035, rising to \$20 billion by 2050, and between 17,000 and 35,000 new jobs. That is not a consolation prize — that is a central economic story of the transition. Models from Canada and the US are ahead of Australia on co-ownership and equity participation. We should be catching up fast.

MYTH 5: "Australia is doomed to lose the clean energy race"

If you designed an athlete for the clean energy transition, you'd design Australia. Enough solar irradiance to power the world one hundred times over. Enough degraded land to supply the world's bioenergy needs. Critical mineral endowments that the rest of the world would very much like to have access to. A stable, trusted democracy in a neighbourhood — Japan, South Korea, Singapore, the emerging manufacturing hubs of Southeast Asia — that is energy-hungry and resource-poor.

The question isn't whether Australia has the hand to win. The question is whether we're bold enough to play it.

I used to live in Singapore, and I keep coming back to a quote from Lee Kuan Yew, the founding father and first Prime Minister of Singapore — a man who took a city-state with no natural resources and turned it into one of the wealthiest nations on earth:

"A nation is great not by its size alone. It is the will, the cohesion, the stamina, the discipline of its people and the quality of their leaders which ensure it an honourable place in history."

We have the resources. The question is whether we have the will.

Closing: A Better Agenda

Dismantling these myths points toward something more useful than the conventional climate economics playbook:

- **Instruments over ideology** — a portfolio of carefully designed policies to address market failures, not endless ideological battles over carbon prices
- **Equity by design** — redesign energy policy around renters and low-income households, not just asset-owning homeowners
- **Bifurcated market strategy** — build Australian clean-tech manufacturing around the non-China premium market
- **First Nations at the centre** — treat First Nations land rights and partnership as a foundation, not a risk to manage
- **Confidence we can win** — and the policy ambition to match

The transition is not inevitable. But it is achievable. The economics are on our side — if we get the instruments right, the institutions right, and the politics honest.

Thank you.