Regional rail: connecting the net zero transition to regional prosperity

Peter Newman, Curtin University and Ray Wills Future Smart Strategies

The Great Southern Railway before it closed in 1978.

With full Australind rail services restored between Perth and Bunbury, and legislation advancing a potential return of the state's freight rail operation to public control, there is an opportunity to ask a bigger question. What should a modern regional transport network actually deliver to improve regional trains and make them a bigger part of the net zero transition and regional development?

There are emerging community-led answers that bring together ambitions for better regional passenger connections, tourism services and freight infrastructure. A new civil society advocacy group CountryNet has formed to help bring these ideas together. There are many ideas already circulating with costed railway projects from Balingup to Bunbury, from Brookton to Mundijong and the Tier 3 rail lines in the Wheatbelt. But there is a bigger proposition to consider along with all these potential rail infrastructure ideas.

How can these regional rail ideas provide infrastructure for economic development, accessibility and the energy transition, not simply to reopen a collection of old lines or to even provide new lines that shorten trips. What can rail do to help with regional sovereignty?

Regional Sovereignty

Regional sovereignty is increasingly being seen as a necessary way to consider how regions can exist with both a greater independence and a greater role in the major city that it is attached to for a diversity of functions. In a recent article in Renew Economy titled "Freight, energy and regional sovereignty", we argue that regional transport planning should not be just about rail and trucks, it should better integrate both to lower costs, reduce road trauma, strengthen resilience and build regional capability in the rapidly accelerating transition to a net zero economy.

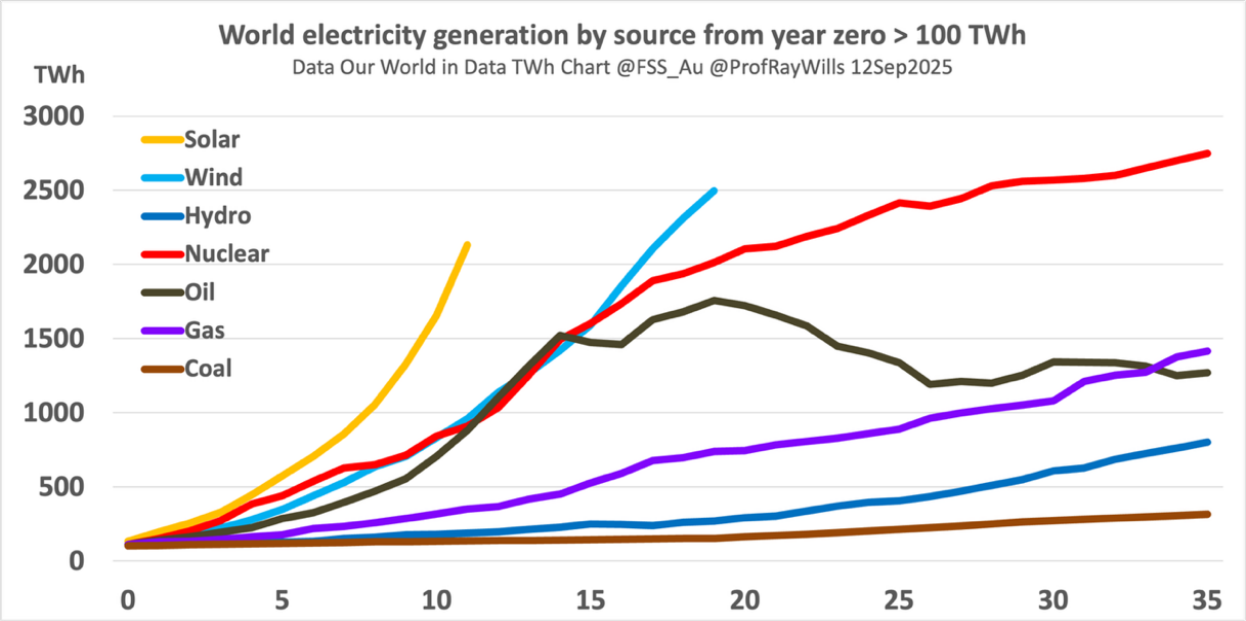
Regional rail also has another central role in that transition as it helps to focus economic activity, not simply as a lower-emissions freight carrier, but as infrastructure connecting renewable-powered precincts, productive industries and growing communities in the net zero transition.

The proposal from *Back on Track* developed by CountryNet, provides a foundation for applying this thinking to the Great Southern as part of a process of developing a broader perspective on country rail, for freight and passengers. Its combination of network improvements, selected branch-line restoration, intermodal terminals and passenger services is more than a railway rehabilitation program. It is a regional development proposition for the next economy.

The whole region serviced by trains can strengthen their proposition to grow more economically, by explicitly linking rail investment to renewable energy, electrification and the economic opportunities emerging around regional hubs as part of the global energy transition.

The global energy transition – fastest in history

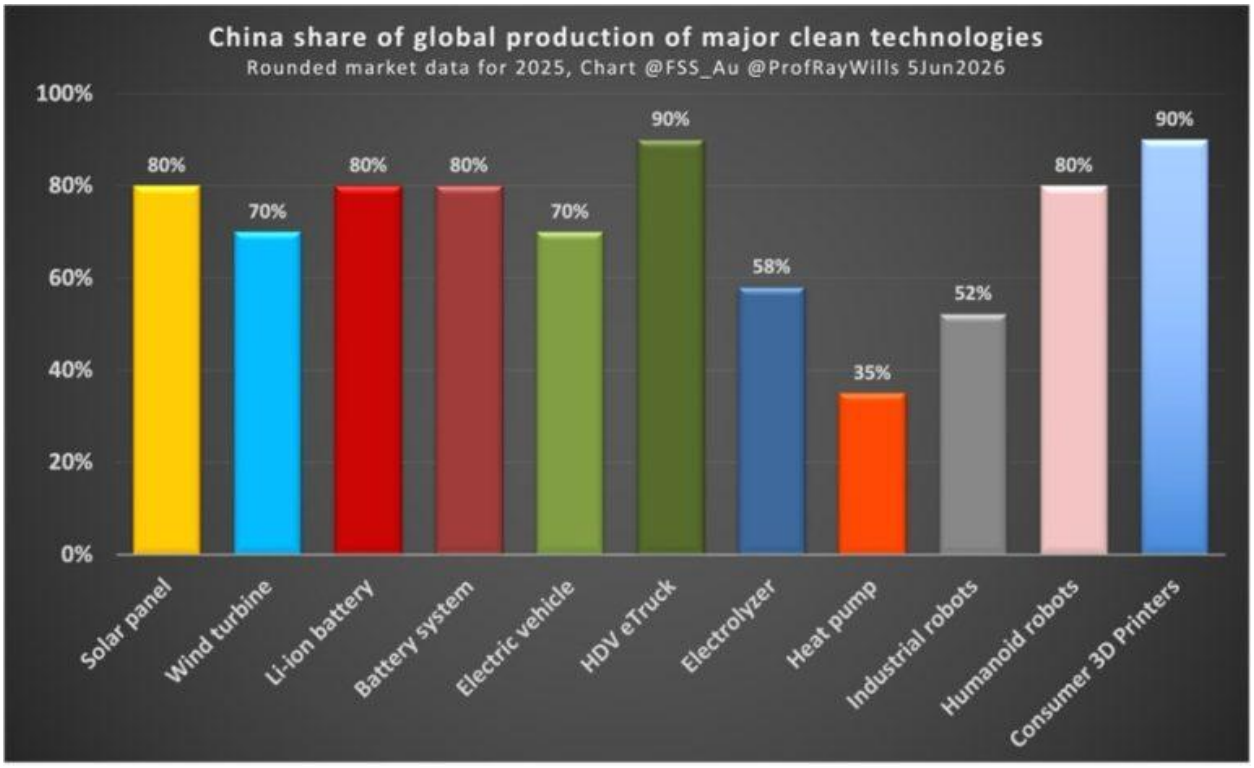
The adoption of solar energy supported by mass production of PVs on rooftops, batteries and EV's has accelerated in the past decade to be faster than anyone predicted.



Solar the fastest energy transition in history.

The oil crisis has added to this rapid change as diesel is best replaced by electric transport in cars, trucks and trains, all of which are becoming rapidly adopted as they are both cheaper to buy and to run.

China's mass production of these new technologies has spilled over from its domestic market to provide a global market with significantly cheaper electricity that works best in a local, distributed way. Australia has made the most of this new market due to its zero tariffs on China and its geographic proximity and trade partnerships with iron ore and critical minerals.



Chinese production in net zero technologies.

The first major net zero market of solar, batteries and EVs was in cities. Chinese mass production is now moving to all forms of freight (trains and trucks), agricultural machinery and mining machinery which are going to be focussed on rural and regional areas. From 2027 this will lead to rural and regional economic growth and can be facilitated by the new opportunities created by a revamped country rail service.

From railway corridors to connected precincts

A series of papers in the Fifth Estate developed the idea of renewable oriented development and design: bringing energy, transport, employment and services together at precinct scale. This works in cities and also the country.

The regional extension is straightforward. A grain receival site, freight terminal, industrial estate or station precinct should not be planned as an isolated facility. Each can become a node in a connected regional economy, supported by renewable generation, storage, appropriate network capacity and coordinated investment.

This is the next economic development phase in rural and regional Western Australia.

Rail provided the high-capacity link between country nodes since 1871 and can have a growing role in freight and passenger transport in this new era as its advantages in capacity can be tapped into the sun and managed through local, distributed systems

that are driving all the economic activity on farms and in the market towns and distribution centres.

Trucks and trains in partnership.

Electric trucks provide flexible collection and distribution around trains that are the safest and highest capacity freight technology. Renewable electricity supplies the depots, loading equipment, workshops, processing facilities and, progressively, all the transport fleets and on-farm vehicles.

This next economy development process requires integrated action from government rather than silos of separate plans for railways, roads, electricity and regional development.

For example, the Great Southern, could examine how Brookton, Narrogin, Wagin, Katanning and Albany could perform complementary roles within this new network. At this stage it is important not to push particular solutions but to make sure that the rural and regional public in each area, can enable options to begin to be discussed seriously.

The proposals will need to identify locations for potential intermodal activity. The additional contribution is to ask what industries, services and energy infrastructure could grow around those transport functions, rather than treating terminals merely as places to transfer freight. Passenger services can build on that.

Why rail matters for net zero

Rail remains particularly valuable for concentrated, predictable freight volumes over longer distances. Moving suitable grain, minerals and containerised products by rail can reduce the heavy-vehicle task on regional roads. Its benefits extend beyond transport emissions to road maintenance, community safety, freight reliability and supply-chain resilience. These are public benefits that a narrow railway operating account cannot fully capture.

This is now well understood by anyone using country roads. Rail can help solve the congestion and safety problem. It can also be electrified using batteries as Fortescue is doing with its electric ore trains.

Fortescue electric ore train.

Equally, battery-electric trucks change the comparison. Rail cannot rely solely on its historic emissions advantage over diesel road freight. Its strongest case combines energy efficiency with reduced road exposure, high-volume capacity and regional development. Electric road transport and rail should reinforce each other, with trucks serving farms, businesses and the first and last kilometres around rail hubs.

Building regional value around the network: a role for passenger rail?

An energy-rich freight precinct must support more than vehicle movements. Shared generation, batteries and electrical infrastructure can also enable cold storage, food processing, workshops and other productive activity. Investment in transport energy can become investment in regional competitiveness, retaining more expenditure locally and reducing dependence on imported fuel. This is the development logic established in precinct and regional energy-sovereignty articles.

Passenger rail deserves consideration within that wider framework. Freight upgrades may create opportunities for passenger services, but do not automatically establish their viability. Country passenger rail should assess service frequency, accessibility, connections and operating requirements alongside tourism, education, health access and the renewal of station precincts. The question is what useful regional mobility a modern network could deliver. Such questions were asked with each step in the modernisation of Perth's rail system and the economic, environmental and social advantages defined along with the politics.

Its time to do this now with regional rail.

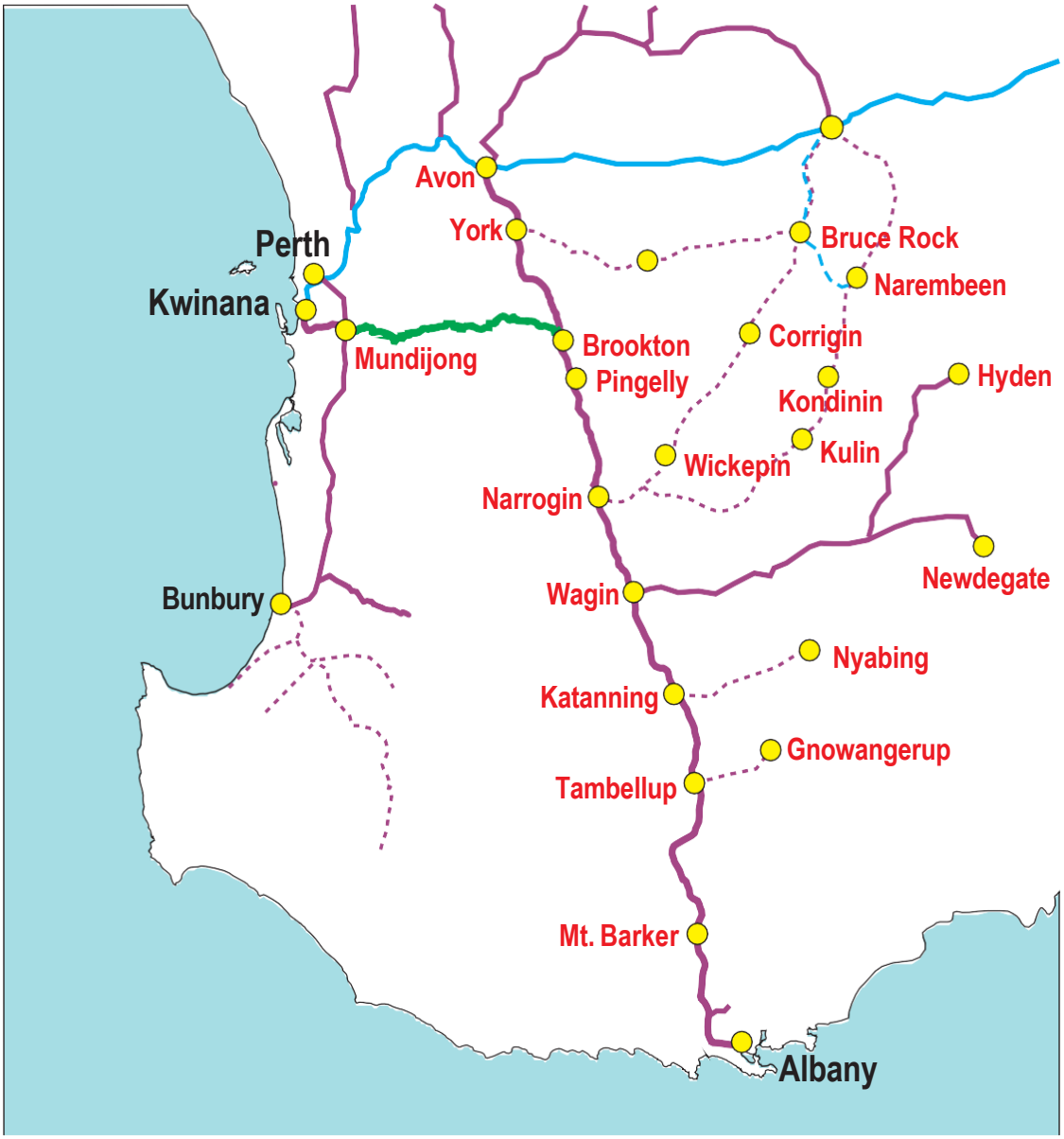
Next steps

The next step in this transition should combine a clear regional vision with staged, evidence-based delivery of infrastructure. It should:

- Identify freight and passenger demand and opportunities as well as community priorities throughout the South West region;
- Map precinct and energy opportunities for the new economy servicing the net zero transition in regional centres;
- Assess rail infrastructure for major projects as well as terminal, siding, crossing and passing-loop improvements; and
- Compare those investments with selective branch-line restoration and major new links.

Can community-led processes make a difference?

A community-led process can bring local governments, producers, businesses and residents into a new future for rural and regional places in WA. Regional rail is not being promoted as nostalgia nor as an automatic answer to every freight task. It is strategic infrastructure whose value grows when planned with renewable energy, modern logistics and regional services. The ambition is not simply to put trains back on tracks. It is to put regional communities on a stronger path to embrace the dramatically accelerating energy transition and to build a more lasting prosperity for country WA.



The rail network in the South-West of WA.