

## Brief comments received

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1	<p>Here is a link to a short note regarding a USA General Motors VP's view on heavy vehicles/road safety/automation/drivers which maybe useful background. I have often suggested we could have specific lanes for automated trucks on long haul routes ie Adelaide to Darwin etc. I suspect more cost effective than heavy rail.</p> <p><a href="https://alum.mit.edu/slice/road-safety-drives-vp-gm">https://alum.mit.edu/slice/road-safety-drives-vp-gm</a></p>
2	<p>If you want to increase heavy vehicle productivity, travel efficiency, less breakdowns, less off the road maintenance and repairs time, then eliminate pot holes, uneven surfaces, dangerous animal crossing sections of roads, highways and freeways across Australia and bring Australian road infrastructure closer to northern hemisphere highway, freeway, autobahn standards so all roadworthy transport across Australia can travel safely at 150 - 160 kph on highways and freeways subject to weather, traffic volumes, under the gaze of cameras and variable electronic speed signage.</p>
3	<p>The NSW Government's organization "Transport for NSW" has published a series of documents entitled "Freight Policy Reform Consultation Paper", April 2024, "Freight Policy Reform Interim Directions", September 2024 and "Delivering Freight Policy Reform", June 2025". It is evident from these documents that this investigation into the NSW freight industry was thorough, meticulous, and yet compromised by unsupported assumptions about safety and sustainability that were presented as recommendations to the Government in "Delivering Freight Policy Reform" and in the earlier papers. Safety was not included in the terms of reference of any of the Freight Policy Reform documents. Emissions reduction was not included in the terms of reference either despite rising emissions from transport, and neither was cost recovery and nor was there any obvious evidence that acknowledged experts were consulted. Safety was only mentioned in a minor heading in the guiding principles in the initial "Freight Policy Reform Consultation Paper" despite the unending toll of deaths and injuries caused by interminable truck crashes. What is most iniquitous about this situation is that the majority of those killed and injured in truck crashes are other road users. For example, of the people killed in fatal truck crashes in 2021, approximately 50 per cent were travelling in a light vehicle, 25 per cent were other road users (pedestrians, motorcyclists or pedal cyclists) and only 25 per cent were occupants of the truck. The combustion of diesel, petrol and LPG produces approximately 21% of NSW's greenhouse gas emissions yet no mention is made in any of the Freight Policy Reform documents that emissions from diesel, the fuel used in heavy vehicles, are rapidly increasing or that this is most probably the result of the uncontrolled growth in the number of heavy vehicles. Significantly, there is no discussion of any results from models that could have been used to study the effects on safety or emissions or cost recovery resulting from the recommended expansion of road freight. How were the underlying assumptions and the recommendations tested? There are numerous problems with these poorly researched documents and their recommendations. Perhaps the greatest being that the authors are too closely connected with the freight industry and have received support from Transport for NSW, a government agency that gives the appearance of a</p>

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	<p>compromised regulator that has become a facilitator of the road freight industry. Transport for NSW's Freight Policy Reform papers should properly be regarded as submissions by the road freight industry and not used as a basis of freight reform.</p>
4	<p>This report appears to underrepresent a critical dimension of heavy vehicle reform: the operational reality and system-wide requirements of electrified heavy transport, particularly for long-haul freight.</p> <p>1. Incomplete System View of Heavy EV Deployment While the report acknowledges charging infrastructure, mass limits, and curfews, these are treated largely as incremental regulatory adjustments, rather than components of a fundamental system transformation. Heavy electric vehicles are not a like-for-like replacement for diesel assets. Their deployment requires:</p> <ul style="list-style-type: none"> <li>• Integrated energy systems (generation, storage, and charging working together)</li> <li>• High-power, location-specific infrastructure aligned to freight routes, not just depots</li> <li>• Operational redesign of freight networks, including dwell times and charging cycles</li> </ul> <p>Without recognising this system-level shift, policy risks underestimating both the scale of infrastructure required and the opportunity to reshape national freight productivity and resilience.</p> <p>2. Freight Corridors Are the Missing Link The report focuses heavily on vehicle access and regulatory harmonisation, but does not sufficiently address corridor-based electrification, which is essential for heavy transport. Heavy vehicles operate on fixed, high-volume corridors. Electrification requires:</p> <ul style="list-style-type: none"> <li>• Strategically located high-power charging hubs</li> <li>• Alignment with freight demand, not just road access</li> <li>• Planning at a national corridor level</li> </ul> <p>3. Underestimation of Energy Constraints and Grid Limitations The report identifies grid connection as a barrier but treats it as a project-level issue rather than a systemic bottleneck. Many freight routes lack sufficient grid capacity. Grid upgrades are often cost- and time-prohibitive. Without alternative solutions such as battery-integrated or low-grid systems, deployment will stall.</p> <p>4. Productivity Framing Should Include Energy and Resilience The report links reform to GDP uplift and productivity gains. However, it does not fully capture:</p> <ul style="list-style-type: none"> <li>• Energy security and reduced reliance on imported diesel</li> <li>• Supply chain resilience during fuel disruptions</li> <li>• Rapid deployment advantages of off-grid or low-grid systems</li> </ul> <p>5. Charging Infrastructure Is Not Just a Planning Issue Charging infrastructure for heavy vehicles must support megawatt-scale demand, accommodate large vehicles, and often integrate energy systems. This is closer to energy infrastructure than traditional EV charging.</p> <p>6. Recommendation - Shift to System-Level Reform Reform should move toward a system-level approach including:</p> <ul style="list-style-type: none"> <li>• National freight corridor electrification strategy</li> <li>• Recognition of integrated energy solutions</li> <li>• Alignment of transport and energy policy</li> <li>• Acceleration mechanisms for critical infrastructure</li> </ul> <p>Closing The transition to heavy electric transport is a system transformation of both freight and energy delivery. Recognising this is essential to unlock productivity, reduce emissions, and strengthen national resilience.</p>
5	<p>Has any Government Department, University, Testing Organisation, other in Australia set up a facility that can wind tunnel test heavy vehicle rigs - vehicle and attached load trailers, to see how shape can raise or lower slip stream efficiencies by attaching after market sections or designing at manufacturing stage, the frontal and side shape of heavy vehicle engine movers and their attached loads that gives the best economy, stability on the road at any</p>

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	<p>envisaged speed? The very boxy nature of prime movers and their attached loads would suggest that slip stream considerations are way down the list of heavy vehicle build specifications and this doesn't bode well for movement efficiencies</p>
6	<p>How are heavy vehicle efficiency rates, variables, constants, measured, if at all e.g. tyre conditions, tyre pressures, engine, transmission, running gear best products, servicing, loads carried, etc. so that there are benchmarks on heavy vehicle set ups, maintenance, servicing that gives the best possible load carrying efficiency levels, subject to truck type, speed and load optimums, so owners are running energy hungry, poor efficiency vehicles? That is if you don't use the heavy vehicles in the most economical, load, speed efficient set ups how can you get the best outcomes for truck, driver, function, company? If drivers of heavy vehicles aren't across factors for most economical use of their vehicles how can any organisation get the best from their machines and those who use such?</p>
7	<p>Why is there no use of variable electronic speed signage (VESS) on freeways, highways, interstate roads e.g. on the Hume Highway? VESS that regulates heavy vehicle and all vehicle speeds according to road conditions e.g. road works, pot hole sections of road/highway, fog, rain, heavy animal crossing points at dawn or dusk, heavy road traffic and speed is reduced for sections and for very light traffic, bright dry daylight, heavy vehicle and all vehicle speeds can be increased so the drivers are more alert to and adjust to driving conditions to suit environment. So instead of one all conditions legal speed of 100 or 110 kph static fixed speed signage, the use of VESS gives a safer speed signage between 40 kph - 140 kph over stretches of the various highways, freeways, roads with no obligation to drive at maximum VESS speed if for any reasons the drivers don't wish to drive at top speed just as at present on 100 kph stretch some drivers will do 80-90 kph.</p>
8	<p>Why aren't there any hybrid heavy vehicles i.e. diesel or petrol engines along side matched to electric motors like in hybrid cars, to keep torque and horsepower at same or higher levels in a hybrid heavy vehicle platform mode? Yes cost of such hybrid heavy vehicles may increase but at a lower carbon fuels use level for same or better performance? Surely there are modellers and designers who could build scaled down heavy vehicle rigs and do airflow, fuel consumption modelling and testing in air flow tunnels, that when scaled up to full size would give a fairly accurate measure of fuel consumption and flow thorough air. Why not do real live tests on the Hume Highway i.e. take two heavy vehicle rigs, one your standard rig of today the other a hybrid streamlined shaped rig, load them up to same weight and get them to drive Melbourne to Albury or Albury to Canberra or Sydney to Melbourne on same day at same speeds on one test and variable speeds (highest speeds possible) on another test and see what fuel consumption figures you get. My prediction is the loaded up hybrid, streamlined heavy vehicle rig would be around 30% more economical towing the same weight as a conventional heavy vehicle rig, over the same distance and route. By streamlining I mean reducing frontal air resistance on hybrid heavy duty vehicle and designing a rear section that acts like a positive tail wind. Additionally add momentum energy converters on the hybrid heavy vehicle rig that transforms the rotation of the wheels into additional</p>

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	<p>energy supply to electric motors. Look at Bullet Trains for design inspiration of road "train" heavy vehicle design, and use air flow more effectively to more better cool internal combustion engines in the hybrids.</p>
9	<p>Road freight productivity has shown appreciable growth over the past 35 years, due to substantial government investment in roads (over \$30 billion a year for a few years now by Australia's three levels of government) and regulatory reform. The result has been the placement of "heavier, higher, longer and wider" trucks on Australian roads for many years. However, there are valid concerns about road safety, road cost recovery from heavy vehicles where the present arrangements have not allowed the productivity gains to truck operators and their clients to be shared with the road authorities, and the high external costs of road freight. The current fuel crisis suggests, that for many freight movements, as rail transport uses one third of the diesel that road freight does, that attention now needs to be paid to improvements in rail freight productivity. Here, over the past 35 years, improvements in Australia to rail freight productivity have mainly been confined to the iron ore trains operating in the Pilbara region of Western Australia. In South East Australia, where most of Australia's population resides, there has been very limited improvements in rail freight productivity.</p>