New Energy Transport

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Submission to the Productivity Commission

Impacts of Heavy Vehicle Reform
Submitted by: New Energy Transport (NET)
Date: December 2025

1 Executive summary

New Energy Transport (NET) welcomes the Productivity Commission's *Impacts of Heavy Vehicle Reform* inquiry and strongly supports the reform directions that enable rapid uptake of heavy zero emission vehicles (HZEVs) and improve freight productivity. NET is establishing fully electrified heavy road freight services and can provide operational data and site archetypes to inform modelling. Below we summarise our key asks for the Commission's consideration and recommendation.

1. **Fast-track strategic charging sites**
    - Support the rollout by identifying zones alongside heavy freight corridors that have good road access and suitable capacity / accessibility of medium & high voltage (MV & HV) power connections, in order to minimise future development costs and timelines.
2. **Enable co-location of charging, BESS and renewables**
    - Recognise co-located battery energy storage systems and solar as core components of truck charging depots to reduce operating costs, manage grid impacts and maximise renewable utilisation.
    - Treat charging as an ancillary use to renewables projects where appropriate and treat renewables as ancillary to transport/truck depots and highway service centres to enable efficient co-location and land use.
3. **Interagency planning collaboration**
    - Encourage State Planning Departments to coordinate with Transport, DNSPs and transmission agencies to map grid hosting capacity against freight corridors and fast-track approvals for strategic sites.
4. **Planning definition and LEP consistency**
    - Amend the definition of highway service centres to explicitly include facilities for servicing and charging electric vehicles, allow non-public fleet depots, and permit on-site renewable generation and storage.
    - Promote consistent permissibility across LEPs and rural zones to avoid patchwork barriers.
5. **Curfew reform for HZEVs with safeguards**
    - Support targeted reductions or exemptions from local curfews for heavy zero-emission vehicles to unlock off-peak operations, reduce congestion, and enable midday charging aligned with solar surplus, subject to noise and safety monitoring.

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6. **Transitional incentives and transparency**
    - Recommend time-limited, targeted incentives (for example road user charge relief or connection support) and encourage DNSPs/TransGrid to publish hosting capacity maps and standardised connection timelines to reduce investor uncertainty.

NET would welcome further engagement.

2 Introduction

NET is an Australian startup delivering fully electrified heavy road freight *at price parity with diesel*. We will begin operations on regional corridors between Newcastle and Canberra (NSW) from an initial depot near Wilton NSW, with planned expansion to inter-city line haul.

NET takes advantage of the fact that electric trucks are between three and five times more energy efficient than diesel trucks (when comparing the calorific content of diesel and electricity).

We achieve price parity through a combination of cheap electricity (using MV/HV grid connections, site Battery Energy Storage Systems, and on-site solar where practical), and ultra-fast charging using the megawatt charging standard (MCS) to minimise productivity impacts versus diesel.

The site infrastructure is also designed to minimise NET's draw on the grid at peak periods, improving electricity network stability.

We **strongly support** the Commission's reform package directions—expanding road access for zero-emission trucks, accelerating the National Automated Access System (NAAS), implementing the National Heavy Vehicle Driver Competency Framework reforms, removing barriers to charging infrastructure, and reducing or removing curfews for HZEVs. These measures, together, unlock productivity, emissions reduction, and community amenity while improving grid stability.

3 NET's evidence from demonstrations

Our electric freight demonstrations have shown material benefits relative to diesel:

- **Air quality and health:** Reduced tailpipe emissions improve local air quality and lower health burdens, benefitting communities, drivers and warehouse/depot personnel.
- **Noise abatement:** Lower drivetrain and engine noise benefits communities and drivers (industrial deafness is significant for drivers).
- **Energy security:** Less reliance on imported diesel reduces Australia's exposure to price volatility and supply shocks.
- **Emissions reductions:** Particularly when paired with renewable electricity generation.
- **Faster deliveries:** Due to the superior torque of electric motors, EV trucks are quicker to reach posted speed limits and can maintain pace on hills (better grade performance).
- **Potential road safety benefits:** Better grade performance could reduce risky overtaking from following vehicles, potentially yielding improved road safety outcomes.
- **Superior energy efficiency**: Electric trucks consume significantly less energy per tonne kilometre compared with diesel trucks, by a factor of three to five.

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- **Total cost of ownership:** While we have demonstrated parity pricing is achievable with today's technology, there is also a pathway to lower TCO as vehicle and charging capital costs decline and utilisation increases.

4 Support for proposed reforms

4.1 Increasing heavy vehicle road access

NET supports expanding access under the HVNL (e.g., higher axle mass limits, network expansions, targeted upgrades) where asset integrity can be maintained. This would:

- **Increase payloads per journey:** Improving productivity and enabling viable HZEV uptake.
- **Encourage EV adoption:** Removing structural disadvantages for heavier ZEV vehicles.
- **Enhance road safety:** Better grade performance by EVs reduces risky passing manoeuvres by other motorists.

We recommend the Commission consider harmonised standards to enable imported ZEV trucks to comply without repurposing, and a prioritised program of targeted bridge and pavement upgrades at key freight pinch points.

4.2 National Automated Access System (NAAS)

NET strongly supports accelerated NAAS implementation. Automated, vehicle-specific access decisions will:

- **Cut administrative burden:** Shrink permit delays and uncertainty.
- **Improve network utilisation:** Dynamic, condition-aware approvals optimise routing.
- **Reduce costs:** Lower compliance overhead for operators.

We recommend EV-specific access layers (e.g., permissive curfew logic, charging-informed routing) and transparent data sharing with operators to plan compliant journeys in real time.

4.3 National Heavy Vehicle Driver Competency Framework

NET supports accelerated rollout of the agreed reforms—redesigned learning and assessment, experience-based progression, and strengthened training governance. For HZEVs, we also recommend:

- **EV-specific competencies:** Electrical safety, charger operation, regenerative braking management, energy-aware routing, and depot procedures.
- **Micro-credentials:** Stackable modules to upskill diesel drivers quickly for EV operations.
- **Instructor capacity:** National support to train trainers, including EV-specific equipment access.

4.4 Removing barriers to EV truck charging infrastructure

Key requirements for heavy truck charging:

- Benched sites near freight corridors, with bidirectional heavy vehicle access to the highway

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- Proximity to substations with suitable capacity for medium and high voltage (MV & HV) connections
- Co-location of BESS and solar to enable peak shaving, resilience, lower LCOE, etc.
- Coordinated planning and fast-tracking sites

Interagency collaboration

- **Ask:** Encourage collaborations between Planning, Transport, DNSPs and grid operators to identify strategic zones and grid connection opportunities, then fast-track approvals.

Planning definition changes for highway service centres

- **Amend "highway service centres" to include:**
  - **"Facilities for servicing and charging electric vehicles."**
  - **Non-public access facilities:** Permit private fleet depots and restricted-access hubs.
  - **On-site battery and renewables:** Enable integrated generation and storage; reduces grid dependence.
- **LEP consistency across zones (including rural):**
  - **Goal:** Uniform permissibility to avoid patchwork barriers that slow deployment on strategic freight routes.

Alignment with renewable energy projects

- **Ancillary use recognition, bidirectional:**
  - **Treat charging as ancillary to renewables projects** where freight corridor access is suitable.
  - **Treat renewables (solar + BESS) as ancillary to transport depots and highway service centres** to enable co-location and efficient land use.
- **Benefits:** Reduced grid augmentation needs, improved project economics, faster deployment, and better utilisation of renewable generation/storage close to load.

5 Curfew reform for EV trucks

- **Exempt or reduce curfews for HZEVs:**
  - **Community amenity:** Quieter operations lessen night-time noise impacts.
  - **Productivity:** Off-peak movements reduce congestion and speed up freight flows.
  - **Grid stability:** Daytime depot charging leverages solar surplus and avoids early-evening peaks; curfew flexibility allows scheduling around grid conditions.
- **Safeguards:**
  - **Localised conditions:** Speed, routing, and buffer zones near sensitive receptors.
  - **Monitoring:** Noise and safety outcomes, with adaptive management if issues arise.
  - **Coordination:** Alignment with NAAS rulesets to operationalise EV-specific curfew logic.

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6 Additional policy interventions

- **Targeted incentives:**
  - **International signal:** Germany's toll exemption for ZEV trucks (extended to 2031) shows how pricing signals can accelerate uptake.
  - **Australian options:** Time-limited road user charge rebates, accelerated depreciation/instant asset write-off for ZEV trucks and depot charging, grants or low-cost finance for multi-MW connections/BESS, and streamlined approvals for strategic sites.
- **Data and transparency:**
  - **Ask:** Public release of grid hosting capacity maps (DNSPs/TransGrid), standardised connection timelines, and transparent augmentation costs to enable investment decisions.
- **Standards alignment:**
  - **EV imports:** Clear harmonisation pathway for ZEV truck certification, MCS standards adoption, and interoperability requirements for public and private ultra high-speed charging.

7 Economic, revenue, and distributional impacts (directional)

- **GDP and productivity:**
  - **Freight efficiency gains** from expanded access, NAAS automation, and curfew flexibility reduce transit times and logistics costs.
  - **Dynamic efficiency:** Accelerated ZEV adoption drives innovation in energy management, depot design, and fleet operations.
- **Households:**
  - **Prices and amenity:** NET's ability to provide electrified freight at diesel prices would insulate households from increased costs associated with the energy transition; communities benefit from quieter, cleaner freight, particularly along freight corridors.
  - **Health:** Reduced exposure to diesel particulates, NOx and other air pollutants lowers public health burdens. Reduced noise exposure for households living near freight corridors.
- **Industry and employment:**
  - **Sectoral output:** Electrified fleets improve freight performance (shorter delivery times due to performance on grades); local jobs in electrical works, civil construction, and depot operations increase.
- **Government revenue:**
  - **Net impacts:** Combination of near-term incentives and long-term savings (health, noise mitigation, and energy security). Over time, broader tax base effects from productivity gains can offset transitional support.

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8 Requests for the Commission's consideration

- **Recommend HVNL reforms** to expand road access for HZEVs, supported by targeted asset upgrades and harmonised standards.
- **Identify suitable zones** for truck charging facilities, given suitable corridor access and adjacent grid capacity.
- **Prioritise NAAS acceleration** with EV-specific access layers and real-time operational data sharing.
- **Support rapid implementation** of the Driver Competency Framework with EV-specific modules and instructor capacity building.
- **Back planning reforms**: highway service centre definition changes, LEP consistency, and ancillary-use recognition in Renewable Energy Planning Frameworks to enable co-location of charging, BESS, and solar.
- **Endorse EV truck curfew exemptions or reductions** with safeguards, highlighting productivity, amenity, and grid benefits.
- **Encourage transitional incentives** (time-limited and targeted) to give electric freight a leg-up consistent with national health, energy security, and climate objectives.

9 Contact

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