The Australian Performance Based Standards (PBS) scheme is an alternative access system that is designed to allow higher productivity commercial vehicles access to the road network provided that they meet adequate safety and infrastructure protection standards.

Performance Based Standards are considered a smarter way of regulating heavy vehicle weights and dimensions. They have been informed by a large body of research that has demonstrated that prescriptive regulations can lead to poor safety outcomes. This increased understanding has led to innovations in technology as well as regulations.

Active safety systems in particular electronic vehicle stability systems have emerged over the past decade and have proven to be successful in reducing vehicle crashes by intervening in unsafe dynamic situations. Arguably these technological developments have outpaced Performance Based Standards. PBS doesn’t incentivise the fitment of active brake system technology; in fact, to pass some performance tests requires that these systems be disengaged.

Of course the Performance Based Standards Scheme is primarily about increasing productivity which is what encourages participation in the optional scheme. It is not surprising then that it has been proposed that in cases where a vehicle fails one more of the dynamic safety standards an active safety system may be fitted to mitigate the safety risk. Understandably regulators have been cautious of this idea.

This paper assesses whether or not the Australian Performance Based Standards are still relevant in light of emerging active safety technologies. It includes a review of the various technologies available, how they effect PBS performance, the tensions between delivering safety and productivity and an evaluation of alternative regulatory mechanisms, in particular the ECE R13 braking standard.

A review of approved PBS designs evaluates how the standards have influenced vehicle design. Physical testing will compare the PBS performance of a vehicle fitted with and without a commercially available electronic vehicle stability system.

The high-speed dynamic safety standards in general have not required a vehicle to be fitted with electronic stability control systems. However, in certain instances they have been successful in forcing vehicle designers to carefully select suspensions and work hard to design bins to reduce the payload centre of gravity height.

Performance Based Standards are particularly relevant for larger multi-combination vehicles. However, it is clear that certain standards are easily met by certain more ubiquitous vehicle types. This suggests that compliance costs may be saved by requiring vehicles to be assessed only against applicable standards.

The Static Rollover Threshold standard is central to PBS and has a well established link to vehicle crashes. However, the scheme may benefit by allowing flexibility in how compliance with this standard is assessed.