

24 June 2022

Hydrogen Safety  
Petroleum & Gas Inspectorate  
Resources Safety & Health Queensland  
GPO Box 1321  
Brisbane Qld 4001  
Via [hydrogensafety@rshq.qld.gov.au](mailto:hydrogensafety@rshq.qld.gov.au)

## **GAS ENERGY AUSTRALIA RESPONSE: RESOURCES SAFETY & HEALTH QUEENSLAND PETROLEUM & GAS INSPECTORATE: DEVELOPING A HYDROGEN SAFETY CODE OF PRACTICE**

Dear Hydrogen Safety,

Gas Energy Australia (GEA) appreciates the opportunity to respond to the Resources Safety & Health Queensland Petroleum & Gas Inspectorate (PGI) Consultation Draft: Developing a Hydrogen Safety Code of Practice.

GEA is the national peak body representing the downstream gas fuels industry, encompassing Liquefied Petroleum Gas (LPG), Liquefied Natural Gas (LNG), Compressed Natural Gas (CNG) and Hydrogen (H<sub>2</sub>). The industry comprises major companies and small to medium businesses in the gaseous fuels supply chain, including refiners, fuel marketers, equipment manufacturers, gas transporters, consultants and service providers to the industry.

In our submission dated 12 November 2021 on PGI's proposal to develop a code of practice, GEA welcomed PGI taking a leadership role and recommended that rules and regulations be developed in a nationally coordinated and consistent manner, integrating with existing regulatory frameworks rather than developing new ones. Further we recommended where possible, Australian standards should be adopted or reviewed to include other fuels rather than developing detailed state based prescriptive codes of practice.

Unfortunately, the structure of the PGI Hydrogen Safety Code of Practice (CoP) May 2022 Consultation Draft (Consultation Draft) does more to continue to keep jurisdictions such as Queensland apart rather than harmonise Australian regulations. GEA provides the following comments on the policy proposals issued in the Consultation Draft and urges PGI to work with industry to harmonise hydrogen standards and practice across Australia.

### **A7.1 Prescribed quality of hydrogen**

Figure 1: *Scope of common operating plant and gas related devices to hydrogen* (Consultation Draft Page 2) recognises that there are some areas which are out of scope as they are regulated nationally such as Aviation, Space (CASA) and Marine vessels (AMSA). It does not include key interactions with Australian Federal Government regulation which should also be considered as out of scope of this consultation. GEA points to Mobile Fuel Cell Gas Systems that are administered as part of a component

of a motor vehicle under the Australian Road Vehicle Standards Act 2018<sup>1</sup> and must be supplied fuel in accordance with the Australian Fuel Quality Standards Act 2000<sup>2</sup> which are both regulated nationally.

GEA supports the prescription of a hydrogen fuel quality specification in accordance with the AS/ISO 14687 for use **only** in fixed installations as a fuel gas.

The Queensland Government should recommend to the Australian Federal Government that:

- Australian Fuel Quality Standards Regulation 2019<sup>3</sup> be amended to include hydrogen as a fuel
- a new Fuel Quality Standards (Hydrogen) Determination be developed to reference AS/ISO14687 as the fuel quality standard for motor vehicles, and
- the Australian Road Vehicle Standards Act legislative instruments be amended to include Regulation No 134 of the Economic Commission for Europe of the United Nations (UN/ECE) — Uniform provisions concerning the approval of motor vehicles and their components with regard to the safety-related performance of hydrogen-fuelled vehicles.<sup>4</sup>

This would assure national harmonisation of motor vehicles and automotive fuels and result in a common fuel quality specification for both fuel gas and transport fuels.

#### **A7.2 Hydrogen gas distribution systems**

GEA notes that the hydrogen as a fuel gas is outside the scope of AS/NZS 4645, however the principles espoused in the document are valid for any fuel gas network and we recommend that Queensland PGI put forward a project to expand the scope of AS/NZS 4645 to include hydrogen networks.

#### **A7.3 Prescribed odour**

GEA notes there is a need for flexibility in the code of practice to recognise that it may not be practicable for gas systems using hydrogen to comply with a prescribed odour requirement.

GEA supports flexible requirements for fixed networks and installation to be able to use unodourised gas. GEA does not support Queensland regulating mobile gas systems that should be certified under the Australian Road Vehicle Standards Act with fuel supplied to a new Australian Fuel Quality Standards.

GEA notes that there is already significant consumer understanding that leaking fuel gas is detectable by smell through community experiences with natural gas and LPG use. Therefore flexibility within the code to allow the operator to identify risk and ameliorate them is required.

GEA suggests that odourisation should not be prescribed.

#### **A7.4 Fuel Gas Delivery Network Operating Plant**

GEA notes that the expanded definitions of a fuel gas network could include a mobile gas system. These systems should be regulated under the Australian Road Vehicle Standards Act, not by individual jurisdictions.

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<sup>1</sup> <https://www.legislation.gov.au/Details/C2021C00555>

<sup>2</sup> <https://www.legislation.gov.au/Details/C2021C00266>

<sup>3</sup> <https://www.legislation.gov.au/Details/F2021C00770>

<sup>4</sup> <https://op.europa.eu/en/publication-detail/-/publication/8aad3d19-7870-11e9-9f05-01aa75ed71a1/language-en>

### **A7.5 Gas Device Approval**

GEA suggests that the best way to promote uniform national safety regulation would be for each jurisdictional regulator to remove appliance regulation and consumer safety regulation (in this case type A appliances), which are embedded into gas regulatory frameworks, and transfer these regulatory powers to a single national body. The Australian Competition and Consumer Commission, which already has the national role as consumer protection and product safety, would be a logical home to ensure national consistency.

### **A7.6 Gas System Installation**

GEA is unsure as to why a product that has been certified as being suitable for installation in Queensland but has been imported is singled out and requires installation and commissioning by the package supplier. Rather than this should follow the same process and be installed by design approval instructions or to a reference standard.

GEA is also concerned that with the infancy of hydrogen training programs and authorisations that approvals and installation could be hampered with a Queensland only approach and suggests that mutual recognition of Gas Industry Training packages should be further explored.

### **A7.7 Type B Multiple Device Approval**

GEA submits that the Type B appliance approval should be overhauled for all gas fuelled appliances. GEA would prefer to see an approval process similar to type A appliance used for type B appliances. If the Type B appliance has been certified to the relevant standards it should not have to be recertified each time it is installed. An appliance certification process would cover the requirements of instructions, markings, design and construction and operation performance as outlined in the Petroleum and Gas Inspectorate Guideline for Gas Safety and Compliance Information required for gas device (type B) approval<sup>5</sup>. This could be recognised once as a "type approval" as it is for Type A appliance certification which also includes mutual recognition giving national consistency.

GEA recognises the level complexity of a Type B installation and as such suggests that certification and installation be separated for Type A and Type B fuel gas appliances.

GEA supports the inclusion of a definition for fuel cell gas systems for stationary installations only. GEA is concerned it may conflict with future adoptions of Australian Road Vehicle Standards Act legislative instruments which should include approval of motor vehicles **and their components** to UNR134.

### **A7.8 New and Updated Terms**

GEA does not support updated terms that duplicate Australian vehicle requirements.

## **6.7 Workshop Requirements**

GEA notes the comments in Appendix 4 - General hydrogen safety considerations that "*Currently, there are no Australian Standards for hydrogen workshops*". While this is technically the case there is an Australian Standard AS 2746: *Working areas for gas fuelled vehicles* that is currently used by the automotive service industry and regulators in both LNG/CNG and LPG fuelled vehicle workshops.

GEA would urge the Department of Petroleum and Gas Inspectorate to seek to amend AS2746 which is already used in workshops for compliance to include hydrogen rather than adopt another international standard such as NFPA which requires detection systems that are in accordance with NFPA codes.

### **Omissions**

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<sup>5</sup> <https://www.rshq.qld.gov.au/resources/documents/occupational-health-and-hygiene/guideline-gas-safety-compliance-info-required-gas-device-type-b-approval.pdf>

GEA believes that the interaction with the Australian Dangerous Goods Code of Practice<sup>6</sup> has not been considered in the code but has been captured in Figure 1 *Scope of common operating plant and gas devices related to hydrogen* in the tile “Road and Rail delivery networks”. GEA suggests that Road and Rail delivery should be out of scope and covered by the ADG Code and that a separate tile “Delivery Network” should be created to illustrate better what is in and out of scope.

GEA is also seeking clarity on blending of fuel gases. It is inferred in the Consultation Draft that if the fuel specifications fall within limits of the infrastructure standards (AS/NZS 4645 notes 15% hydrogen in a natural gas network) the network would be regulated as based on the primary gas being transported in that network. This is an important point for other fuel gas blending in the future.

### Summary

GEA believes that the proposed CoP for Queensland could do more to harmonise national regulation. GEA recommends that:

- AS/ISO 14687 be adopted for use only in fixed installations as a fuel gas, but to ensure harmonisation, the Australian Fuel Quality Standards Regulation 2019 be amended to include hydrogen as a fuel and a new Fuel Quality Standards (Hydrogen) Determination be developed to reference AS/ISO14687 as the fuel quality standard for motor vehicles,
- Australian Road Vehicle Standards Act legislative instruments be amended to recognise Regulation No 134 of the Economic Commission for Europe of the United Nations (UN/ECE) — Uniform provisions concerning the approval of motor vehicles and their components with regard to the safety-related performance of hydrogen-fuelled vehicles.
- Queensland PGI submit a project proposal to Standards Australia to expand the scope of AS/NZS 4645 to include hydrogen networks,
- Gas appliance type A regulation which is embedded into gas regulatory frameworks be transferred to a single national body such as the Australian Competition and Consumer Commission,
- Type B appliance certification should be “type certification” rather than an individual site certification,
- Queensland PGI submit a project proposal to Standards Australia to amend AS 2746: Working areas for gas fuelled vehicles to include hydrogen, and
- Recognise that the ADG Code has a role in hydrogen regulations.

GEA would like to continue to work with PGI to harmonise hydrogen and blended fuel gas standards and urges progress through Australian Standards rather than jurisdictional development.

Kind regards,

A handwritten signature in black ink, appearing to read "Brett Heffernan".

Mr Brett Heffernan  
Chief Executive Officer  
Gas Energy Australia

<sup>6</sup> [https://www.ntc.gov.au/sites/default/files/assets/files/ADG%20Code%207.7\\_0.pdf](https://www.ntc.gov.au/sites/default/files/assets/files/ADG%20Code%207.7_0.pdf)