# National Hydrogen Regulatory Guidebook: Refuelling Facility

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# Annexure 5A: Hydrogen Refuelling Legislation Summaries - Facility Safety

# Introduction

This Annexure 5 (hydrogen legislation summaries) outlines the main facility safety related legislation and regulators across Australia that are relevant to one or more activities in operating a hydrogen refuelling facility.

It should be read in conjunction with chapter 3 and annexure 3 of the Guidebook. Where chapter 3 focuses on providing regulatory transparency directly relevant to key compliance activities, this Annexure 5 provides greater context through an overview of legislation relevant to hydrogen refuelling facilities discussed in the Guidebook and identifies the appropriate regulators for these schemes.

The legislation summarise are separated by jurisdiction. Each jurisdiction then has legislation summaries separated into two sections: regulations with a high degree of relevance to hydrogen refuelling facilities and those regulations that are less directly relevant.

Regulations with a low degree of relevance are those regulations that:

* have less potentially specific application to hydrogen refuelling facilities, or
* are out of scope of the definition of hydrogen refuelling facilities for this Guidebook, or
* are unlikely to apply to hydrogen refuelling facilities but are included for transparency (e.g. because they apply to a similar industry such as natural gas supply chains).

This information is included for completeness and for proponents to be aware of and to consider as to whether to not they have value in terms of enhancing facility safety. Effectively, these are regulatory provisions that support safe practices and outcomes, that proponents of hydrogen refuelling facilities should be aware of and consider their operation and legal application and where appropriate should consider adopting.

# Model Work Health and Safety Laws

In 2011, Safe Work Australia developed the model WHS laws to be implemented across Australia. The model laws have been implemented in all jurisdictions except Victoria (with its similar OHS laws). Some jurisdictions have made variations in their respective WHS laws compared with the model WHS laws. Where these variations are relevant to hydrogen facilities, those changes have been noted in the relevant jurisdiction’s legislation summaries below.

Safe Work Australia is responsible for maintaining the model WHS laws, but it does not regulate or enforce them. Regulation and enforcement is undertaken by the relevant jurisdiction under that jurisdiction’s enactment of the model WHS laws.

The model WHS laws in Australia consist of the model WHS Act, model WHS Regulations, and model Codes of Practice. The WHS Act provides a framework for ensuring the health and safety of workers by outlining the duties of various duty holders, including persons conducting a business or undertaking (PCBU), officers, workers, and other persons at the workplace. The WHS Regulations support the Act by detailing specific requirements for managing risks and hazards in the workplace. Codes of Practice offer practical guidance on achieving the standards set by the Act and Regulations, and while they are not legally binding, they can be used as evidence in court to demonstrate compliance with WHS duties. Commonwealth and State and Territory regulators oversee and enforce the laws in their jurisdictions.

Together, the model WHS Act, Regulations, and Codes of Practice create a comprehensive framework for maintaining health and safety in Australian workplaces, ensuring that everyone from PCBUs to workers plays a role in creating a safe working environment.

| Regulator | Summary |
| --- | --- |
| Safe Work Australia*Note:* Safe Work Australia is responsible for maintaining the model WHS laws, but it does not regulate or enforce them. Regulation and enforcement is undertaken by the relevant jurisdiction under that jurisdiction’s enactment of the model WHS laws. | In 2011, Safe Work Australia developed Model Work Health and Safety Act (WHS Act) and Model Work Health and Safety Regulations (WHS Regulations) to be implemented across Australia The WHS Act establishes legal requirements relevant for proponents of hydrogen refuelling facilities including:* a duty at section 17 of the WHS Act to eliminate or minimise risks to health and safety so far as is reasonably practicable
* the primary duty at section 19 of the WHS Act that a person conducting a business or undertaking (PCBU) must ensure, so far as is reasonably practicable that:
	+ the health and safety of workers at work in the business or undertaking
	+ other persons are not put at risk from the work being carried out as part of the business or undertaking.

Compliance with these duties in the WHS Act, including the primary duty of care, is required so far as is ‘reasonably practicable’. What is ‘reasonably practicable’ is determined by reference to and requires the elements in section 18 of the WHS Act, including:1. the likelihood of the hazard or the risk concerned occurring
2. the degree of harm that might result from the hazard or the risk
3. what the person concerned knows, or ought reasonably to know, about—
	1. the hazard or the risk
	2. ways of eliminating or minimising the risk
4. the availability and suitability of ways to eliminate or minimise the risk and
5. after assessing the extent of the risk and the available ways of eliminating or minimising the risk—the cost associated with available ways of eliminating or minimising the risk, including whether the cost is grossly disproportionate to the risk.

To identify what is reasonably practicable, all the relevant elements in section 18 of the WHS Act must be taken into account and weighed up and a balance achieved that will provide the highest level of protection that is both possible and reasonable in the particular circumstances. This includes what the person concerned knows, or ought reasonably to know about the available means of managing the risk. The knowledge about a hazard or risk, and any ways of eliminating or minimising the hazard or risk, will be what the duty-holder actually knows, and what a reasonable person in the duty holder’s position (e.g. a person in the same industry) would reasonably be expected to know including through reputable technical standards, published scientific and technical literature, and industry publications. A PCBU which does not discharge its duties so far as is reasonably practicable will be guilty of an offence.The WHS Act also establishes various duties relevant to hydrogen refuelling facilities to ensure workplace safety. These include the duties on a PCBU to manage and control workplaces safely (section 20 of the WHS Act), the duty that the fixtures, fittings or plant are without risks to the health and safety of any person (section 21 of the WHS Act), of designers, manufacturers, importers and suppliers to ensure their products are without risks to the health and safety of persons (sections 22, 23, 24 and 25 of the WHS Act), that installation, construction or commissioning of plants or structures is without risks to the health and safety of persons (section 26 of the WHS Act) and the duty of officers of a PCBU to exercise due diligence to ensure that PCBUs comply with their duties (section 27 of the WHS Act), and that workers and other persons at the workplace take reasonable care for their own health and safety and that of others (sections 28 and 29 of the WHS Act). These sections collectively emphasize the shared responsibility of all parties involved in maintaining a safe work environment.Part 5 of the WHS Act also establishes duties to consult including: * if more than one person has a duty in relation to the same matter, each duty holder must, so far as is reasonably practicable, consult, cooperate and coordinate activities with all other persons who have a duty in relation to the same matter. For example, the operator of a hydrogen refuelling facility will have concurrent duties with any contractors and workers onsite, and is required to consult, cooperate and coordinate activities with those duty holders to the extent reasonably practicable (section 46 of the WHS Act)
* a PCBU must consult, so far as is reasonably practicable, with workers who carry out work for the business or undertaking who are, or are likely to be, directly affected by a matter relating to work health or safety (section 47 of the WHS Act).

The WHS Regulations provide specific requirements to support the duties in the WHS Act. Those relevant to hydrogen refuelling facilities include:* Chapter 3 of the WHS Regulations establishes duties for PCBUs to identify hazards, eliminate or reduce risks, provide first aid, a duty to provide first aid, duty to provide Personal Protective Equipment (PPE) to workers where PPE is being used to minimise risks to health and safety, and ensure (so far as is reasonably practicable) persons who are not workers use appropriate PPE. It also mandates the provision of information and training, the development of emergency plans, and the management of hazardous atmospheres.
* Part 4.7 of Chapter 4 of the WHS Regulations focuses on general electrical safety, requiring that electrical installations and equipment work be performed by competent persons and be regularly inspected and tested. Electrical installations at a hydrogen refuelling facility could include power rectifiers, compressors, chillers, and fuel dispensers.
* Chapter 5 of the WHS Regulations addresses the control of risks associated with plant and structures, including maintenance and inspection, pressure equipment, and the registration of plant design and items of plant. Plant/equipment that could require registration as a pressure vessel include hydrogen storage tanks and compressors. Refer to the Production Guidebook for discussion on the application of pressure vessel definitions to electrolyser stacks.
* Chapter 7 of the WHS Regulations deals with hazardous chemicals, covering safety data sheets, packing, labelling, spill management, fire protection, emergency plans, and training. Hydrogen is a hazardous chemical for the purpose of chapter 7.
* Chapter 9 of the WHS Regulations outlines the requirements for Major Hazard Facilities (MHF), including licensing, safety management systems, risk identification and control, and emergency planning. Facilities storing more than 50 tonnes of hydrogen are automatically deemed MHFs, while those exceeding 5 tonnes must notify the regulator for assessment. These regulations ensure comprehensive safety management for hydrogen facilities, protecting workers and the public.

Division 5 of Part 2 of the WHS Act establishes offences and penalties where duties under the WHS Act are not met. Section 30 of the WHS Act defines a ‘health and safety duty’ as a duty imposed under Divisions 2, 3, or 4 of Part 2 of the WHS Act. Section 30A of the WHS Act establishes an offence of industrial manslaughter, where a PCBU or officer whose reckless or negligent conduct causes the death of an individual, section 31 establishes a Category 1 offence for gross negligence or reckless conduct where a person with a health and safety duty engages in conduct that exposes others to a risk of death or serious injury, section 32 establishes a Category 2 offence for failing to comply with a health and safety duty and thereby exposing individuals to a risk of death, serious injury or illness, section 33 of the WHS Act establishes a Category 3 offence for failing to comply with a health and safety duty.The WHS Act also establishes a ‘notifiable incident’ under section 35 and an obligation to notify the regulator immediately after becoming aware that a notifiable incident has occurred and in line with section 39 of the WHS Act preserve as far as reasonably practicable the incident site.Notifiable incidents include the death of a person, serious injury or illness, or a dangerous incident (including near miss) that exposes a person to a serious risk. The Safe Work Australia website provides more guidance on notifiable incidents. For hydrogen facilities, dangerous incidents could include an uncontrolled leak or escape of hydrogen, oxygen or steam or an electric shock (in addition to more general industrial incidents such plant/equipment falling or collapsing).Jurisdictional work health and safety regulators have made a number of WHS model codes of practice to provide practical guidance to achieving the required standards under WHS laws. Compliance with the WHS model codes of practice is not compulsory for compliance with the WHS Act, but the codes of practice are admissible in WHS prosecution proceedings as evidence of whether or not a duty or obligation under the Act has been complied with. More information on the model codes of practice can be found on the Safe Work Australia website. |
| Cth – Comcare | The Commonwealth has adopted the model Work Health and Safety (WHS) laws through the *Work Health and Safety Act 2011* (Cth) (WHS Act) and Work Health and Safety Regulations 2011 (Cth).The WHS Act applies to the Commonwealth, public authorities and a small number of companies (non-Commonwealth licensees). The definition of ‘Commonwealth’ includes any person or body, other than a public authority, that is a non‑corporate Commonwealth entity (within the meaning of the *Public Governance, Performance and Accountability Act 2013*).The Model WHS laws as enacted by a particular State or Territory (or the OHS Act in Victoria) will apply to a place in that State or Territory that is a ‘Commonwealth place’. Where a hydrogen facility is located in a Commonwealth place within a State or Territory, that State or Territory’s WHS laws will apply. |
| WorkSafe ACT | The Australian Capital Territory has adopted the Model WHS Laws through the *Work Health and Safety Act 2011* (ACT) (WHS Act) and Work Health and Safety Regulation 2011 (ACT) (WHS Regulations). The Australian Capital Territory has not made any changes to its implementation of the Model WHS Laws that affect the application to of the obligations summarised in the model laws above to hydrogen refuelling facilities. |
| SafeWork NSW | New South Wales has adopted the Model WHS Laws through the *Work Health and Safety Act 2011* (NSW) and the Work Health and Safety Regulation 2017 (NSW).New South Wales has not made any changes to its implementation of the Model WHS Laws that affect the application to of the obligations summarised in the model laws above to hydrogen refuelling facilities. |
| NT WorkSafe | The Northern Territory has adopted the model WHS laws through the *Work Health and Safety (National Uniform Legislation) Act 2011* (NT) (WHS Act) and the Work Health and Safety (National Uniform Legislation) Regulations 2011 (NT) (WHS Regulations).On the commencement of the *Electrical Safety Act 2022* (NT) on 1 July 2024, Chapter 4 Hazardous Work, Part 4.7 General Electrical Safety of the WHS Act has been repealed. Electrical safety as it applies to hydrogen is governed by the Electrical Safety Act, see above. |
| SafeWork SA | South Australia has adopted the Model WHS laws through the *Work Health and Safety Act 2012* (SA) (WHS Act) and the Work Health and Safety Regulations 2012 (SA) (WHS Regulations).SA has not adopted Chapter 7 Hazardous Chemicals of the model WHS Regulations. SA regulates hazardous chemicals under its *Dangerous Substances Act 1979* (SA) and associated regulations. |
| QLD – Office of Industrial Relations | Queensland has adopted the Model WHS laws through the *Work Health and Safety Act 2011* (QLD) (WHS Act) and Work Health and Safety Regulation 2011 (QLD) (WHS Regulations).The model WHS Laws provide a systemic risk-based approach to safety. Except in the limited circumstances described below and specified PAG Act authorised activities (i.e. joint operating plant), the WHS Act does not apply to operating plant regulated under the PAG Act. The WHS Act will apply to all construction of operating plant except for certain limited work namely, commissioning of an operating plant, and the process called ‘rigging up and down’ of a drill rig (in these circumstances only the PAG Act applies).The PAG Act applies concurrently with the WHS Act to construction work for a stage of operating plant or proposed operating plant mentioned in subsection 672(2) of the PAG Act unless the work is commissioning of an operating plant or ‘rigging up and down’ or a drill rig.  |
| WorkSafe Tasmania | Tasmania has adopted the Model WHS Laws through the *Work Health and Safety Act 2012* (TAS) (WHS Act) and the Work Health and Safety Regulations 2022 (TAS) (WHS Regulations).Tasmania has not made any changes to its implementation of the Model WHS Laws that affect the application to of the obligations summarised in the model laws above to hydrogen refuelling facilities. |
| WorkSafe Victoria | VIC has not adopted the model WHS laws, but rather applies its own OHS regime via the *Occupational Health and Safety Act 2004* (VIC) (OHS Act) and Occupational Health and Safety regulations 2017 (VIC) (OHS Regulations).The OHS Act and OHS Regulations mostly replicate the WHS model laws. There are certain key differences in the terminology between the model WHS Act and the OHS Act relevant to the primary duty provisions. This includes that the model WHS Act utilises the term ‘workers’ which includes individuals who are employees, contractors, sub-contractors, outworkers, apprentices, trainees, work experience students and volunteers while the OHS legislation utilises the term ‘employees’, which includes independent contractors. The model WHS Act also utilises the term ‘PCBU’ whereas the OHS legislation refers to these persons as ‘employers’. Noting the differences above, it is considered that there are no substantial variations between the primary duty provisions in the model WHS Act (sections 17, 18 and 19 of the model WHS Act) and the duties set out in the OHS Act (sections 20, 21 and 23 of the OHS Act) as they apply to hydrogen refuelling facilities.The OHS Regulations like the model WHS regulations deals with plant and equipment, including registration requirements and specific duties in relation to plant. The OHS Regulations take a different approach than the WHS model laws to the definition of dangerous goods where hydrogen is a dangerous substance.The OHS regime also creates offences and penalties, where licenses are required, or certain competencies for particular work activities. There are no prescriptive upfront requirements for Safety Management Systems, safety cases, emergency plans outside of the major hazard facility (MHF) provisions (which are triggered at the threshold quantity (50 tonnes for hydrogen), with the obligation to notify the Regulator of a facility triggered at 5 tonnes for hydrogen, or 10% of the threshold quantity).Emergency plans must be prepared in consultation with emergency services and municipal councils. Information must be provided to the local community about the safety of the MHF. There is a useful approach to setting out the detailed requirements of the safety case and emergency plans within Schedules to the OHS Regulations – see for example Schedule 16 and 17.The definition of hazardous substance is limited to the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) Part 3 (health hazards). Hydrogen is a dangerous substance. The OHS regulations for the purposes of major hazard facility (MHF) designation simply schedules hydrogen instead of relying on GHS or ADG Code definitions. |
| WorkSafe WA | WA has adopted the Model WHS Laws through the *Work Health and Safety Act 2020* (WA) (WHS Act) and the Work Health and Safety (General) Regulations 2022 (WA) (WHS Regulations).Chapter 9 of the WHS regulations governing Major Hazard Facilities is enacted in the Dangerous Goods Act and not the WHS Regulations (WA). |

#  Commonwealth legislation summaries – Facility Safety

## Commonwealth legislation with a high degree of relevance to hydrogen refuelling facilities.

This table outlines a list of existing Commonwealth (Cth) statutory provisions which are relevant to safety and potentially apply to one or more activities anticipated to occur on site in operating a hydrogen refuelling facility.

This list is current as at [date] and is limited to legislation that is potentially applicable to the facility scope outlined in chapters 1.6.2 and 2 of the Guidebook and the facility safety regulatory obligations addressed in chapter 3 of the Guidebook.

| Regulator | Legislation | Summary |
| --- | --- | --- |
| Comcare | Work Health and Safety Laws | Refer to the Work Health and Safety Law Legislation summaries. |

## Commonwealth legislation with a low degree of relevance to hydrogen refuelling facilities.

The legislative instruments set out in the table below:

* have less potentially specific application to hydrogen refuelling facilities, or
* are out of scope of the definition of hydrogen refuelling facilities for this Guidebook, or
* are unlikely to apply to hydrogen refuelling facilities but are included for transparency (e.g. because they apply to a similar industry such as natural gas supply chains).

This information is included for completeness and for proponents to be aware of and to consider as to whether to not they have value in terms of enhancing facility safe.

| Regulator | Legislation | Summary |
| --- | --- | --- |
| Cth – Department of Home Affairs | *Security of Critical Infrastructure Act 2018* (Cth) (SOCI Act) | While they have not been developed specifically for hydrogen-related assets, the SOCI Act’s critical infrastructure risk management program obligation may be a useful model for an all-hazards risk management approach that scales in proportion to an asset’s specific risk profile. As the definitions of liquid fuel and gas do not cover hydrogen. Hydrogen refuelling facilities are not currently subject to the SOCI Act as critical infrastructure assets; therefore, no direct obligations are imposed under either the Act or delegated legislation made under it. While there is no express references to hydrogen refuelling facilities within the definitions of critical gas assets and critical liquid fuel assets, there may be scope for hydrogen-related assets or functions to fall within the existing SOCI Act classes, but only insofar as they meet the relevant critical infrastructure asset class criteria (if they are captured, it will not be for a hydrogen-related reason). |

# Australian Capital Territory legislation summaries – Facility Safety

## Australian Capital Territory legislation with a high degree of relevance to hydrogen refuelling facilities.

This table outlines a list of existing Australian Capital Territory statutory provisions, which go to safety and potentially apply to one or more activities anticipated to occur on site in operating a hydrogen refuelling facility when developed in Australian Capital Territory.

This list is current as at [date] and is limited to legislation that is potentially applicable to the facility scope outlined in chapters 1.6.2 and 2 of the Guidebook and the facility safety regulatory obligations addressed in chapter 3 of the Guidebook.

| **Regulator** | **Legislative Instrument** | **Summary** |
| --- | --- | --- |
| ACT –Environment, Planning and Sustainable Development Directorate | *Construction Occupations (Licensing) Act 2004* (ACT)  | The *Construction Occupations (Licensing) Act 2004* imposes licensing requirements on electrical wiring work and gas fitting work. The installation, maintenance and repair of plant and equipment in hydrogen refuelling facilities will need to be undertaken by a licensed electrician and/or licensed gasfitter. For electrical work a licensed electrician is required to undertake 'electrical wiring work' on an 'electrical installation' as defined in the *Electrical Safety Act 1971* (ACT).Electrical wiring work, which includes the installation, maintenance, repair etc, on any plant and equipment on a hydrogen project in the ACT that falls within the definition of an 'electrical installation' must be conducted by a licensed electrician. An electrical installation includes plant and equipment that incorporate electrical wiring or cables used to carry or control electricity (other than portable generators or storage devices supplying electricity to the installation itself, appliances that receive electricity through a socket connection, lamps, and plant or equipment operating at extra low voltage).A licensed electrician will be required to undertake installation, maintenance and repair work on electrolysers, compressors, chillers, and fuel dispensers and any other plant or equipment that meets the definition of 'electrical installation'.For gas work the gasfitting work and gas appliance work licensing requirements will not apply to hydrogen. Gasfitting work and gas appliance work are defined by reference to the definition of 'gas' in the *Gas Safety Act 2000* (ACT) which only captures hydrocarbons.However, the standards for gasfitting work relating to hydrocarbons provides guidance on what could comprise best practice for hydrogen gas for work on piping systems that carry gas, including connection of gas appliances. Gasfitting work does not include work on gas appliances.Gas appliance work is also a best practice consideration but relates only to Type A and Type B gas burning appliances. Gas appliance work will not apply to hydrogen plant and equipment that do not burn hydrogen, e.g. power rectifiers, electrolysers, fuel dispenser, compressors, chillers, fuel cells etc.The Construction Occupations (Licensing) Act also contains licensing requirements for builders and building surveyors (certifiers) that would be required for construction of a hydrogen facility that needs building approval.Recklessly allowing unlicensed people to perform a construction service is also an offence under section 85 of the Construction Occupations (Licensing) Act.The Construction Occupations (Licensing) Building Surveyors Code of Practice 2019 (an instrument under the Construction Occupations (Licensing) Act) contains details about stage inspections for building work. |
| ACT –Environment, Planning and Sustainable Development Directorate | *Electricity Safety Act 1971* (ACT) (Electricity Safety Act)AndElectricity Safety Regulation 2004 (ACT) (Electricity Safety Regulation) | The Electricity Safety Act and regulations impose various safety obligations relating to electrical safety.Key requirements include: * New electrical installations (or those that are reconnected after 6 months or more of inactivity) are required to pass an inspection test by an electrical inspector. This is undertaken after the electrician provides the Certificate of Electrical Safety to the regulator.
* Electrical wiring work on an electrical installation must comply with the Wiring Rules. The Wiring Rules includes AS/NZS 3000 and the ACT Appendix to AS/NZS 3000, as amended from time to time, and the Work Health and Safety (Managing Electrical Risks at the Workplace Code of Practice) Approval 2020.
* Electrical wiring work on an electrical installation must be tested in accordance with AS/NZS 3017 Electrical installations—Verification guidelines and compliant with the Wiring Rules, and the results given to the regulator and owner of the installation within 14 days.
* Electrical appliances are required to comply with AS/NZS 3820 Essential safety requirements for low voltage electrical equipment.
* Serious electrical accidents (accidents in which electricity causes death or injury, damage to property or a fire) must be immediately reported by occupiers of premises.
* A person must not disturb or interfere with the site of a serious electrical accident before it has been inspected by an inspector, except to make it safe, to do something authorised by an authorised person. This prohibition expires 24 hours after the accident unless the construction occupations registrar extends the period and tells the person of the extension.

The requirements in relation to electrical products and services will apply to plant and equipment used on hydrogen projects that fall within the definition of an ‘electrical installation’ or an ‘electrical appliance’. An electrical installation includes wires, cables etc used for carrying or controlling electricity (other than not more than extra low voltage) and electrical appliances. It does not include appliances that receive its main electricity supply through a socket connection.The term ‘electrical appliance’ is broadly defined and includes wires etc used in electrical installations, as well appliances operated by electricity. |
| ACT –Department of Planning and Sustainable Development | *Water and Sewerage Act 2000* (ACT) (Water and Sewerage Act 2000) | The Water and Sewerage Act 2000 regulates the supply and certification of:* sanitary drainage work
* sanitary plumbing work and
* water supply plumbing work (which means the installation, replacement, augmentation, curtailing, maintenance, repair, or alteration of the location of all or part, of a water service or a hot-water system).

A 'water service' means the part of the water supply pipework used, or for use, for water supply from a primary water source up to and including outlet valves at fixtures and water appliances, including an irrigation system but excluding a fire sprinkler system or part of a water network/water supply pipework intended to become a water network.Obligations that apply to all three types of regulated work include:* the owner of the premises where it is proposed to undertake the regulated work must appoint a certifier in relation to the work.
* the owner of premises can apply to a certifier for approval of a plan, and the certifier must not approve it unless several prescribed conditions are met.
* licensees must give notice to the construction occupations registrar before undertaking the work.

While it is unlikely that sanitary drainage work or sanitary plumbing work will be performed in relation to a hydrogen refuelling facility, water supply plumbing work, including the installation, replacement, augmentation, curtailing, maintenance, repair, or alteration of the location of all or part of the feedwater supply system in a hydrogen production facility, is likely to be regulated as ‘water supply plumbing work’ under the *Water and Sewerage Act 2000*. |
| ACT –Department of Planning and Sustainable Development | Water and Sewerage Regulation 2001 (ACT) (Water and Sewerage Regulation) | The Water and Sewerage Regulation applies under the Water and Sewerage Act. It prescribes additional compliance obligations for work on a sanitary plumbing system or sanitary drainage system, and work on a water service or hot-water system taking its water from a water network. The main water supply related obligations are:* work on a water service or hot-water system taking its water from a water network must be done in accordance with the plumbing code and, if applicable, a plan approved by a certifier
* water plumbing must be tested in accordance with AS/NZ 3500 before it is passed by an inspector
* to ensure that permission of the responsible utility is obtained before water pumping appliances are connected to a pipe that is connected indirectly to the water network.
 |
| WorkSafe ACT | Work Health and Safety Laws | Refer to the Work Health and Safety Law Legislation summaries. |

## Australian Capital Territory legislation with a low degree of relevance to hydrogen refuelling facilities

The legislative instruments set out in the table below:

* have less potentially specific application to hydrogen refuelling facilities, or
* are out of scope of the definition of hydrogen refuelling facilities for this Guidebook,
* are unlikely to apply to hydrogen refuelling facilities but are included for transparency (e.g. because they apply to a similar industry such as natural gas supply chains).

| **Regulator** | **Legislative Instrument** | **Summary** |
| --- | --- | --- |
|  | *Pipelines Act 1967* (NSW) (as applied in ACT) (Pipelines Act)And Pipelines Regulation 2023 (NSW) (as applied in ACT) | The NSW pipelines legislation is applicable to some pipelines in the ACT. NSW licensed pipelines (transmission pipelines) currently deliver natural gas to the ACT and Queanbeyan region. While the legislation is relevant to pipelines that convey hydrogen, it is not relevant to pipelines/piping used for intra-facility conveyance and storage purposes at hydrogen refuelling facilities.The NSW pipelines legislation contains requirements in relation to the construction, operation and maintenance of pipelines. The key obligation is that a licence is required to construct and operate pipelines. Various obligations are then imposed on licensees (e.g. to comply with AS/NZS 2885 in relation to some pipelines, or a standard approved by the Secretary). The definition of pipeline includes pipes used for the conveyance of gaseous substances (i.e. would include pipelines conveying hydrogen). However, the requirements will not apply to pipelines used purely for storage purposes at hydrogen refuelling facilities, as a result of section 5 of the Pipelines Act (except if the Minister declares otherwise). |
| WorkSafe ACT | *Dangerous Substances Act 2004* (ACT) (Dangerous Substances Act)And Dangerous Substances (Explosives) Regulations 2004 (ACT) | The dangerous substances legislation in the ACT regulates the safety of some defined dangerous substances. The Dangerous Substances Act is not relevant to hydrogen refuelling projects, as the definition of a dangerous substances (section 10 of the Dangerous Substances Act) only includes certain dangerous substances (e.g. asbestos, explosives under the Australian Explosives Code and security sensitive substances, i.e. security sensitive ammonium nitrate), and does not include hydrogen. The obligations under the Dangerous Substances Act and regulations include a range of safety duties that are imposed on those that design, manufacture, import, supply, handle etc dangerous substances. There are also licensing requirements which apply to manufacture, import, supply, possess, use and handle explosives and security sensitive substances. The regulations apply to explosives only and are not applicable to hydrogen in the context of the Guidebook. |
| ACT – Environment, Planning and Sustainable Development Directorate  | *Gas Safety Act 2000* (ACT) (Gas Safety Act*)* | The Gas Safety Act imposes various requirements in relation to gasfitting work and gas appliance work. Gasfitting work and gas appliance work are defined by reference to the definition of 'gas' which only captures gases comprised of hydrocarbons.Gasfitting work includes work on consumer piping systems that carry gas (the piping between the meter and the gas appliance), including the connection or disconnection of gas appliances to those systems. The requirements do not apply to hydrogen refuelling facility activities because:* the definition of ‘gas’ does not include hydrogen
* the definition of ‘gas appliances’ is limited to ‘gas burning appliances’ that are manufactured, adapted or designed for connection to a consumer piping system.

However, obligations relating to hydrocarbons may provide good guidance for appropriate standards of practice for hydrogen gasfitting work. Key obligations in the Gas Safety Act include: * Gasfitting work and gas appliance work is required to be carried out safely and in accordance with various Australian Standards
* A certificate of compliance is required to be provided where a gasfitter finishes gasfitting work
* Gasfitters are required to manage safety risks with consumer piping systems.
* The owner of a consumer piping system must ensure that it is safe
* The owner of a gas appliance system must ensure that it is safe
* The user of a gas appliance must ensure it is used safely
* Gas appliances are required to be approved by the regulator in accordance with the regulations
* Occupiers of a premises are required to notify relevant suppliers where a serious gas accident occurs
* Various testing requirements apply in relation to gas-fitting work
* Various obligations apply where consumer piping systems and gas appliances are identified as being unsafe - including defect tagging and notification requirements.
* The occupier of premises at which a serious gas accident occurs must tell each relevant supplier about the accident, by telephone, immediately after becoming aware of it
* A person must not, without reasonable excuse, disturb or interfere with the site of a serious gas accident before it has been inspected by an inspector, except to make it safe or with the permission of an inspector.

The Gas Safety (Code of Practice) Determination 2011 (No 1) is an instrument under the Act that sets out certain applicable standards. |
| ACT – Environment, Planning and Sustainable Development Directorate | Gas Safety Regulation 2001 (ACT) (Gas Safety Regulations) | The Gas Safety Regulations provide further details of the obligations outlined in the Gas Safety Act. The Gas Safety Regulations include requirements in relation to the following: * Testing requirements for gasfitting work
* Requirements for certificates of compliance issued in relation to gasfitting work
* Requirements where consumer piping systems and gas appliances are unsafe - including defect tagging and notification requirements
* The approval by the regulator of gas appliances.

While the obligations relating to hydrocarbons provide guidance for appropriate safety standards for hydrogen gas safety, there is no requirement for regulator approvals or certifications. |

# New South Wales legislation summaries – Facility Safety

## NSW legislation with a high degree of relevance to hydrogen refuelling facilities.

This table outlines a list of existing New South Wales statutory provisions which go to safety and potentially apply to one or more activities anticipated to occur on site in operating a hydrogen refuelling facility in New South Wales.

This list is current as at [date] and is limited to legislation that is potentially applicable to the facility scope outlined in chapters 1.6.2 and 2 of the Guidebook and the facility safety regulatory obligations addressed in chapter 3 of the Guidebook..

Note: NSW has no dangerous goods legislation relevant to hydrogen. Hazardous chemicals are regulated under chapter 7 of the WHS Regulations.

| **Regulator** | **Legislative Instrument** | **Summary** |
| --- | --- | --- |
| NSW – Department of Planning, Housing and Infrastructure | *Environmental Planning and Assessment Act 1979* (NSW) (EP Act)andEnvironmental Planning and Assessment Regulation 2021 (NSW) and State Environment Planning Policy (Resilience and Hazard) 2021 (NSW) | For hydrogen facility safety, the planning regime is relevant by application of the ‘Resilience and Hazards SEPP’ made under the EP Act.The Resilience and Hazards SEPP provides detailed requirements for development applications to meet in respect of land planning requirements in relation to different areas and activities. Chapter 3 relates to hazardous or offensive development. It has been included in the Facility Safety Legislation summaries of potentially relevant legislation because it references hazardous industries and if a potentially hazardous or offensive industry is proposed to be carried out, a hazard and risk assessment must accompany the development application.As it relates to planning instruments, refer to chapter 4 of the Guidebooks (environment and planning) not chapter 3 (facility safety). |
| NSW Fair Trading | *Gas and Electricity (Consumer Safety) Act 2017* (NSW) (GECS Act)And Gas and Electricity (Consumer Safety) Regulation 2018 (NSW) (GECS Regulations). | The GECS Act and the GECS Regulations regulate gas (gas installations, appliances and gasfitting) and electrical (electrical installations, articles, and electrical wiring work) safety.*Electrical safety*An electrical installation means fixed appliances, wires, fittings, equipment etc used for conveying, controlling and using electricity (but does not include equipment operating at extra low voltage and electrical articles connected to and situated beyond electrical sockets). This will apply to hydrogen refuelling facilities to the extent that they include plant that conveys, controls or uses electricity, such as power rectifiers, compressors, chillers, and fuel dispensers.The term electrical article is broadly defined and includes appliances, wires, fittings cables, electrical equipment etc designed for use in or connection to an electrical installation. Electrical articles must meet certain standards around model approvals, approval/registration by the relevant authority for another jurisdiction, or approval under a recognised external approval scheme, before they are sold. There are various exceptions under Part 2 of the GECS Act, for example where an acquisition guarantee is issued and the seller had no reason to believe that the electrical article was noncompliant.Other obligations include compliance with AS300 Electrical Wiring Rules, safety and compliance testing (electrical installations), and notification of serious electrical accidents.*Gas safety* The definition of gas in the GECS Act refers to natural gas and LPG, it does not currently include hydrogen. Further, the GECS Act (other than regulations made under the Act relating to the examination and testing of gas meters) does not apply to or in respect of gas installations, autogas or gas appliances with an inlet pressure/carrying capacity of more than 200 kilopascals that are located partially or wholly within a workplace covered by the *Work Health and Safety Act 2011* (NSW). While the gas-related obligations (including those applying to gas installations, gas appliances, gasfitting work and Autogas installations) do not apply to hydrogen, they may provide guidance for proponents on what is an appropriate safety standard for equivalent matters relating to hydrogen. The Act has requirements in relation to certification of gas appliances and for certification to perform gasfitting work and autogas work. It also has obligations including maintenance to ensure safe operation, labelling of gas appliances, and notification of serious gas accidents.Part 10 of the GECS Regulations prescribes the AS/NZ standards that gasfitting work and autogas work must comply with (analogous). Part 11 of the GECS Regulations prescribes the testing, inspection and compliance requirements following gasfitting and autogas work.*Other matters - water*There are other obligations that will need to be considered where water is required for the hydrogen production facility onsite. The proponent will need to seek approval with the NSW Plumbing Regulator. The proponent will need to provide a performance solution for the water connection to hydrogen production facility. (this may include a drainage as part of the solution).  |
| Building Commission NSW | *Home Building Act 1989* (NSW) (HB Act)And Home Building Regulation 2014 (NSW) (HB Regulations) | The HB Act imposes various licensing requirements in relation to specialist work. Specialist work includes electrical wiring work, gasfitting work, plumbing and drainage work, air conditioning work and refrigeration work. This work is required to be performed or supervised by a person with a contractor licence or supervisor or tradesperson certificate.*Electrical wiring work*'Electrical wiring work' is defined by reference to the *Gas and Electricity (Consumer Safety) Act 2017* (NSW) as work on an electrical installation (specifically, installation, repair, altering, removing or adding to the electrical installation), or the supervising of that work. An electrical installation means fixed appliances, wires, fittings, equipment etc used for conveying, controlling and using electricity. In accordance with the above guidance regarding the *Gas and Electricity (Consumer Safety) Act 2017* (NSW), this will apply to hydrogen refuelling facilities to the extent that they include plant that conveys, controls or uses electricity, such as the power supply system. Applicable pieces of equipment will therefore require licensed contractors, supervisors or tradespersons to undertake their installation (and any repair or maintenance following installation). *Gasfitting work*The requirements relating to gasfitting work are limited to natural gas and LNG, and will not apply to hydrogen. However, the Act may provide guidance to proponents on the nature of skills and competencies appropriate to ensure the requisite safety standard for equivalent matters relating to hydrogen.The current gasfitting licenses captured under the HB Act covers:* Advanced LP gas fitting - involving liquefied petroleum gas only
* Gasfitting - work on a gas installation, connected to a compressed natural gas container
* LP gasfitting - work on a gas installation designed to carry liquefied petroleum gas in vapour phase only at pressures not exceeding 150 kilopascals.

Schedule 4 of the HB Regulations provides extended descriptions of the types of work authorised by licenses. The extended description for gasfitting work under Schedule 4 of the HB Regulation refers to the definition of gasfitting work in the *Gas Supply Act 1996* (GS Act), which, as discussed above in relation to the GS Act, is unlikely to apply to hydrogen refuelling facilities. There is no additional type of work prescribed for licencing that covers hydrogen.*Plumbing and drainage work*Along with other types of specialist work, plumbing and drainage work is subject to:* Licensing requirements
* Restrictions on who can perform the work including supervision requirements.

Plumbing and drainage work means:* plumbing and drainage work within the meaning of the *Plumbing and Drainage Act 2011* (refer to discussion of this Act below);
* any plumbing work or drainage work that, by law, can be done lawfully only by the holder of an endorsed contractor licence, a supervisor or a tradesperson certificate or some other specified person; and
* water plumbing work comprising the construction of or work on a fire suppression system that is connected or to be connected to a water main

The HB Act also has separate licensing for air-conditioning work and refrigeration work which covers any work required to install, maintain and service a refrigeration or air-conditioning system (other than a self-contained single-phase plug-in domestic systems) in a structure, building, vessel, container or vehicle. |
| NSW Fair Trading | *Plumbing and Drainage Act 2011* (NSW) (PD Act)And Plumbing and Drainage Regulation 2017 (NSW) | The PD Act provides for the regulation of plumbing and drainage work in NSW.The definition of plumbing and drainage work is broad and covers work on plumbing installations. A plumbing installation is ‘an installation that conveys, or controls the conveyance of, water but does not include anything connected to, extending or situated beyond the outlet from a fixture, fitting or pressurised line’.This definition is likely to cover the equipment, piping etc present at hydrogen production facilities that feeds into the feedwater supply system (but only includes that equipment until the outlet). It is unlikely that plant or equipment at a hydrogen refuelling facility will be covered by this Act.Plumbing and drainage work that is covered by the PD Act: includes* section 6 - must be carried out by an authorised person
* section 7 - must comply with the Plumbing Code of Australia
* section 8 – must involve authorised fittings
* sections 9, 10 and 11 - must be notified to the regulator under certain circumstances.

Relevantly, owners or occupiers of land who have control of plumbing installations are also required to take all reasonable steps to ensure the plumbing installation does not threaten public health or safety. |
| SafeWork NSW | Work Health and Safety Laws | Refer to the Work Health and Safety Law Legislation summaries. |

## NSW legislation with a low degree of relevance to hydrogen refuelling facilities

The legislative instruments set out in the table below:

* have less potentially specific application to hydrogen refuelling facilities, or
* are out of scope of the definition of hydrogen refuelling facilities for this Guidebook,
* are unlikely to apply to hydrogen refuelling facilities but are included for transparency (e.g. because they apply to a similar industry such as natural gas supply chains).

| **Regulator** | **Legislative Instrument** | **Summary** |
| --- | --- | --- |
| NSW – Department of Climate Change Energy, the Environment and Water | *Electricity Supply Act 1995* (NSW)And Electricity Supply (General) Regulation 2014 (NSW)AndElectricity Supply (Safety and Network Management) Regulation 2014 (NSW) | This legislation imposes a number of requirements in relation to electricity supply, e.g. licensing requirements on electricity distributors. It has been included for transparency, however, it is out of scope as it is not hydrogen specific and would likely be generic in its application to any facility connected to the electricity grid.Of most relevance to hydrogen refuelling projects are the requirements in relation to "customer connection services", which includes where a premises is connected to the electricity network for the first time. These obligations are likely to be of relevance to the construction of hydrogen refuelling facilities when the facility is first connected to the electricity network. The distributor can impose a variety of requirements on a customer and refuse to provide the connection until this occurs, including in relation to service lines, service equipment, transformers and the installation and use of electrical appliances and equipment by the customer. Where such work is required, it can be performed by the distributor, or by a person who is an ‘accredited services provider’ in accordance with the Act. The Electricity Supply (Safety and Network Management) Regulation 2014 (NSW) sets out the process for obtaining accreditation as a provider of contestable services, including making provision for the publication of Scheme Rules. Additionally, distributor authorisation is required to connect an electrical installation to the distribution system or make certain changes to the connection. An electrical installation means the electrical wiring and electrical equipment used to convey and control the conveyance of electricity within premises to which electricity is supplied from a distribution system but does not include anything connected to and extending or situated beyond an electrical outlet socket. Distributor authorisation will be required before plant and equipment on hydrogen refuelling projects that are electrical installations and connected to the network such as the wiring and equipment associated with electrolysers, compressors and chillers on production facilities, compressors, coolers, fuel dispensers on hydrogen refuelling projects. |
| NSW – Department of Climate Change Energy, the Environment and Water | Electricity Supply Corrosion Protection Regulation 2020 (NSW) (ESCP Regulations) | The ESCP Regulations contains various requirements in relation to corrosion protection systems (CPS). These may be relevant for hydrogen refuelling facilities if they operate a corrosion protection system covered by the regulations. Some systems with certain technical specifications are excluded. Relevant obligations under the ESCP Regulations include:* an approval from the Secretary of the Department is required to operate a CPS. Part 2 of the ESCP Regulations details the process for obtaining an approval
* an approved cathodic protection system is required to be operated in accordance with Australian Standard AS 2832, cathodic protection of metals, the series of standards for the cathodic protection of metals
* work on a CPS must be done by a person with an appropriate qualification relevant to the work issued by the Australian Corrosion Association Inc
* notice is to be given to the Secretary within 28 days of a CPS being sold, disposed of or permanently ceasing to operate.

Regulator approval and notification is done online via the Public Register of NSW corrosion protection systems. |
| NSW – Department of Climate Change Energy, the Environment and Water | *Pipelines Act 1967* (NSW) (Pipelines Act)AndPipelines Regulations 2023 (NSW) | The NSW pipelines legislation contains requirements in relation to the construction, operation and maintenance of pipelines. The key obligation is that a licence is required to construct and operate pipelines. Various obligations are then imposed on licensees.The definition of pipeline includes pipes used for the conveyance of gaseous substances which would include pipelines conveying hydrogen. However, the requirements will not apply to pipelines used purely for storage purposes at hydrogen refuelling facilities, as a result of section 5 of the Pipelines Act (except if the Minister declares otherwise). The Pipelines Act is unlikely to be applicable to activities/pipelines within hydrogen refuelling facilities.Obligations under the Pipelines Act include that licensees must: * Ensure that the design, construction, operation, maintenance of pipelines is accordance with AS/NZS 2885 for pipelines for high-pressure gas and liquid petroleum, otherwise a standard approved by the Secretary.
* Implement a pipeline management system which complies with relevant provisions of AS/NZS 2885.
* Appoint an auditor for the pipeline management system and notify the Secretary of the appointment. The role of the auditor is to - conduct regular audits and prepare reports for the Secretary, including regarding compliance with AS/NZS 2885.
* Provide a pipeline management plan to the Secretary and implement the plan
* Comply with various notification and reporting requirements to the Secretary, including in relation to pipeline alterations, certain incidents, repairs, activities and annual reporting requirements
* Appoint a person in charge and notify the Secretary of the appointment.
* Comply with various signage and marking requirements.
 |
| NSW – Department of Climate Change Energy, the Environment and Water | Gas Supply (Safety and Network Management) Regulation 2022 (NSW) | The regulations impose various obligations on network operators (i.e. operators of distribution pipelines for natural gas and distribution systems for gas (including hydrogen)). Network operators are required to operate a safe gas network, implement a safety and operating plan for the network, comply with certain standards, and carry out testing to comply with those standards. These are not relevant to the hydrogen refuelling Guidebooks as they relate to distribution of gas.  |

# Northern Territory legislation summaries – Facility Safety

## Northern Territory legislation with a high degree of relevance to hydrogen refuelling facilities.

This table outlines a list of existing Northern Territory statutory provisions, which go to safety and potentially apply to one or more activities anticipated to occur on site in operating a hydrogen refuelling facility in the Northern Territory.

This list is current as at [date] and is limited to legislation that is potentially applicable to the facility scope outlined in chapters 1.6.2 and 2 of the Guidebook and the facility safety regulatory obligations addressed in chapter 3 of the Guidebook.

| **Department** | **Legislative Instrument** | **Summary** |
| --- | --- | --- |
| NT WorkSafe | *Dangerous Goods Act 1998* (NT) (Dangerous Goods Act)And Dangerous Goods Regulations 1985 (NT) (Dangerous Goods Regulations) | The purpose of the Dangerous Goods Act is to provide for the safe storage, handling and transport of certain 'dangerous goods'.Most of the obligations in the Act and associated regulation only apply to explosives and ‘fuel gas’. The Act does not apply to an activity involving dangerous goods to the extent that the activity is regulated under the *Work Health and Safety (National Uniform Legislation) Act 2011* (NT) (WHS Act). Hydrogen is regulated as a hazardous chemical, under the WHS Act.The definition of fuel gas is unlikely to capture hydrogen because it requires that the gas is ‘burned with air’ which excludes energy produced by a hydrogen fuel cell:‘Fuel gas means a gas or mixture of gases that may be burned with air to produce light, heat or power and includes natural gas, L.P. gas and tempered L.P. gas.’The provisions of Part 4, Division 2 of the Dangerous Goods Regulations also do not apply because the definition of ‘gasfitting work’ incorporates the definition of ‘fuel gas’.The applicable obligations are in Part 3 of the Dangerous Goods Act (which covers the general duties and offences in relation to dangerous goods), but (as detailed above), these provisions will only apply where the WHS Act does not.There are no licensing/permitting/approval requirements for either refuelling (irrespective of thresholds) in the Act or Regulations. As the definition of fuel gas does not include hydrogen, the requirement for a notice of commencement of gas work is not required in relation to the construction or operation of a hydrogen refuelling facility. It would also not apply to the construction and operation of a production facility given that a production facility is not supplying, using or distributing fuel gas. |
| NT WorkSafe | *Electrical Safety Act 2022* (NT) (Electrical Safety Act) | The key requirements of the Electrical Safety Act will apply to plant and equipment on hydrogen refuelling facilities that fall within the definitions of electrical equipment and electrical installations. For example, power supply and conditioning systems, rectifiers, electrolysers, and compressors are likely to meet the definition of electrical equipment.The Electrical Safety Act provides for the regulation of electrical safety, including:* the primary duty for persons conducting a business or undertaking, which is to ensure that the business or undertaking is safe from electrical risk
* electrical work must be licensed
* safety duties of (electrical equipment and installation) designers, manufactures, importers, suppliers, installers, repairers
* duties of people procuring and doing electrical work, including duties as to safety, notifications of incidents and compliance certificates, inspections.
* requirements for certificates of compliance in respect of electrical work to be provided to, among others, the Electrical Safety Regulator
* requirements for ongoing inspection and maintenance by a competent person
* duty to report serious electrical events and dangerous electrical events
* duty to do all that is reasonably practicable to protect a site where a serious electrical event or dangerous electrical event occurs until an inspector arrives at the site or any earlier time that an inspector directs.

**Electrical equipment** means any apparatus, appliance, cable, conductor, fitting, insulator, material, meter or wire that:* is used for controlling, generating, supplying, transforming or transmitting electricity at a voltage greater than extra-low voltage or
* is used or operated at extra-low voltage, but is configured in an electrical installation for controlling, generating, supplying, transforming or transmitting electricity at a voltage greater than extra-low voltage or
* is operated by electricity at a voltage greater than extra-low voltage or
* is part of an electrical installation located in an area in which the atmosphere presents a risk to health and safety from fire or explosion or
* is, or is part of, a cathodic protection system or
* is prescribed by regulation.

Unless specifically included by regulation, electrical equipment does not include any apparatus, appliance, cable, conductor, fitting, insulator, material, meter or wire that is part of, or powered by, a unit of a vehicle, boat or aircraft that provides propulsion.**Electrical installation** means a group of items of electrical equipment that:* are permanently electrically connected together and
* can be supplied with electricity from the electricity infrastructure of an electricity entity or from a generating source and
* does not include items of electrical equipment of an electricity entity.

An item of electrical equipment connected to electricity by a plug and socket outlet is taken not to be permanently electrically connected. A connection achieved through using items of electrical equipment of an electricity entity is not a consideration in determining whether or not electrical equipment is electrically connected. |
| NT WorkSafe | Electrical Safety Regulations 2024 (NT) (Electrical Safety Regulations) | The Electrical Safety Regulations prescribe the details of the electrical safety duties. Including:* duty to identify hazards
* hierarchy of control measures
* maintenance of control measures
* review of control measures.

The Electrical Safety Regulations requires a risk assessments and safe work method statements:* A risk assessment, in relation to electrical work, means a written assessment by a competent person of the electrical risk associated with the electrical work.
* A safe work method statement, in relation to electrical work, means a written assessment of electrical risk that:
* identifies the nature of the electrical work; and
* specifies the hazards associated with the electrical work and the electrical risks associated with those hazards

The Electrical Safety Regulations also requires that:* electrical work must be done in accordance with the wiring rules
* testing and examination of electrical work to ensure compliance with the wiring rules
* the person in control of an electrical installation must do all that is reasonably practicable to ensure any structure supporting an electric line or item of electrical equipment forming part of the electrical installation complies with: the Wiring Rules, any direction the Electrical Safety Regulator gives for ensuring the electrical safety of the installation and any other requirement specified by the operator of the transmission or distribution network to which the installation is, or will be, connected
* a person performing electrical work on electrical equipment, an electrical installation or electrical infrastructure must ensure the work complies with the Wiring Rules
 |
| NT WorkSafe | Work Health and Safety Laws | Refer to the Work Health and Safety Law Legislation summaries. |

## Northern Territory regulations with a low degree of relevance to hydrogen refuelling facilities

The legislative instruments set out in the table below:

* have less potentially specific application to hydrogen refuelling facilities, or
* are out of scope of the definition of hydrogen refuelling facilities for this Guidebook,
* are unlikely to apply to hydrogen refuelling facilities but are included for transparency (e.g. because they apply to a similar industry such as natural gas supply chains).

|  |  |  |
| --- | --- | --- |
| **Regulator** | **Legislative Instrument** | **Summary** |
| NT WorkSafe | *Electricity Reform Act 2000* (NT) (Electricity Reform Act) | Following commencement of the *Electrical Safety Act 2022* on 1 July 2024 the Electricity Reform Act is limited to the Regulation of the electricity supply industry. It is included here for transparency.The objects of the Electricity Reform Act are:(a) to promote efficiency and competition in the electricity supply industry(b) to promote the efficient generation, transmission, distribution and selling of electricity(c) to establish and enforce proper standards of reliability and quality in the electricity supply industry(d) to establish and enforce proper technical standards for electrical installations(e) to facilitate the maintenance of a financially viable electricity supply industry and(f) to protect the interests of consumers of electricity.Although the power supply system at a hydrogen refuelling system is likely to meet the definition of an ‘electrical installation’, the applicable powers and obligations sit with the supplier of the electricity (the ‘electricity entity’) or the regulator, and not the facility operator.  |
| NT –Department of Industry, Tourism and Trade | *Energy Pipelines Act 1981* (NT) (Energy Pipelines Act) | The Energy Pipelines Act makes provision for the construction, operation, maintenance and cessation of use or abandonment of pipelines for the conveyance of energy-producing hydro-carbons, and for related purposes. The Act only applies to blended hydrogen that falls within the definition of energy-producing hydro-carbons. It will not apply to hydrogen at a purity produced by an electrolyser or dispensed at a refuelling facility.The Energy Pipelines Act excludes pipelines that would be within the facility for storage purposes.There are no relevant provisions for the purposes of activities related to hydrogen hydrogen refuelling facilities. The Energy Pipelines Act does require pipelines to be licensed and follows a similar safety regime to WHS primary duties, just specifically for pipelines, in addition to land access/tenure.  |
| NT WorkSafe | *Plumbers and Drainers Licensing Act 1983* (NT) (Plumbers and Drainers Licensing Act) | The Plumbers and Drainers Licensing Act regulates plumbing and drainage work to provide for the protection of the health and welfare of the community.The definition of ‘draining’ does not apply to hydrogen refuelling facilities because it requires that the work involves equipment designed to receive the discharge from soil or water pipes and carry that discharge to a common sewer, drain or septic tank.The definition of ‘plumbing’ is likely to apply to hydrogen production (but not refuelling) facilities because it includes ‘the work of installing, altering, removing or repairing fixtures, fittings and pipes designed to receive and carry sewage or water, and the ventilation of those fixtures, fittings and pipes’. The feedwater supply systems in hydrogen production facilities will likely meet this definition.It is an offence to carry out plumbing work unlicensed, other than in the employment of an advanced tradesman and under the supervision of an advanced tradesman or a journeyman. Section 39 of the Plumbers and Drainers Licensing Act outlines exceptions to the licensing requirement, but none apply to hydrogen production facilities. |

# South Australia legislation summaries – Facility Safety

## South Australia legislation with a high degree of relevance to hydrogen refuelling facilities.

This table outlines a list of existing South Australia statutory provisions, which go to safety and potentially apply to one or more activities anticipated to occur on site in operating a hydrogen refuelling facility in South Australia.

This list is current as at [date] and is limited to legislation that is potentially applicable to the facility scope outlined in chapters 1.6.2 and 2 of the Guidebook and the facility safety regulatory obligations addressed in chapter 3 of the Guidebook.

| **Regulator** | **Legislative Instrument** | **Summary** |
| --- | --- | --- |
| SafeWork SA - Technical Services | *Dangerous Substances Act 1979* (SA) (DS Act)AndDangerous Substances (General) Regulations 2017 (DSG Regulations)AndDangerous Substances (Dangerous Goods Transport) Regulations 2023 (SA) | The object of the DS Act is to regulate the keeping, handling, transporting, conveyance, use and disposal, and the quality, of dangerous substances, and for other purposes. Hydrogen is a dangerous substance within the definitions of the DSG Regulations which rely on the dangerous substances classifications of the Australian Code for the Transport of Dangerous Goods by Road & Rail. Hydrogen production (outside of the commercial production captured by the *Hydrogen and Renewable Energy Act 2023* (SA) (HRE Act) and refuelling facilities will be regulated under the DS Act.The DS Act provides duties relating to hydrogen. The general duty is provided in broad terms to include the safety of property and environmental safety: ‘General duty A person must, in keeping, handling, conveying, using or disposing of a dangerous substance, or in transporting dangerous goods, take such precautions and exercise such care as is reasonable in the circumstances in order to— (a) avoid endangering the health or safety of any person (including himself or herself), or the safety of property; and (b) prevent the risk of environmental harm’. While hydrogen is a ‘dangerous substances’, it is not prescribed within the regulations as a ‘prescribed dangerous substance’. Prescribed dangerous substances are subject to additional obligations under the Act. As such, while general duties apply, there are no upfront safety approvals, licensing, or other obligations outside of general duties at any threshold.Section 12 of the DS Act prescribes duties applying to any plant used or reasonably expected to be used in connection with any dangerous substance, such as taking precautions to ensure safe use and safe condition when not in use.In addition, the DSG Regulations include obligations that do not apply to hydrogen (but will apply to other dangerous gases). There are a number of analogous provisions which require licensing, approvals, labelling, notification and compliance with specific standards for other dangerous gases, specifically LPG. They also license and accredit gas fitting work for those purposes. The DSG Regulations prescribe:* a duty for license holders to give notice to the regulator within 24 hours of any accidents involving dangerous substances, including certain prescribed particulars of the accident
* a duty for employers to provide PPE in accordance with prescribed AS/NS standards and
* a prohibition against carrying out gas fitting work without permit.
 |
| SA – Department of Energy and Mining | *Electricity Act 1996* (SA) (Electricity Act)AndElectricity (General) Regulations 2012 (SA) (General Regulations) | The Electricity Act and associated regulations contain a range of obligations in relation to electrical safety such as the licensing of electricity entities. Operators of hydrogen refuelling facilities are unlikely to meet the definition of an electricity entity which is targeted at generators, distribution/transmission line operators and retailers.In addition, the Act provides for the establishment of safety and technical standards for 'electrical installations'.The requirements will apply to plant and equipment on hydrogen refuelling facilities that meet the definition of an 'electrical installation’. An 'electrical installation' is broadly defined and include wires, equipment etc installed in a place for use of electricity in that place- i.e. will include plant and equipment on hydrogen projects that incorporate wires and electrical components and use electricity. For example, power supply and conditioning systems, rectifiers, electrolysers, and compressors are likely to meet the definition of electrical equipment.The requirements for electrical installations include to comply with the Wiring Rules, to be tested and examined in accordance with the Wiring Rules, and for the results of testing and examination to be recorded by a registered electrical worker on a certificate of compliance prior to energisation and provided to Technical Regulator and owner/operator of the electrical installation/premises within 30 days.Part 6 of the Electricity Act prescribes various safety and technical obligations, including:* a prohibition on prescribed persons not causing or permitting or authorising persons to personally carry out the work of connecting electricity supply from a transmission or distribution network to an electrical installation, or installing or replacing a meter, unless the person personally carrying out the work has the appropriate knowledge and skills required for that purpose
* requirements to ensure that work on electrical installations is carried out as required under the Regulations, tests are compliant with the Regulations and notification and certificate requirements are met
* a prohibition on installing electrical equipment that the person knows or should be reasonably expected to know is, or will be, unsafe in use
* a requirement to ensure that electrical installations are designed in accordance with technical and safety requirements under the General Regulations
* an obligation to report accident involving or associated with any electricity infrastructure, electrical installation or electrical equipment resulting in electric shock, electrical burns or a prescribed fire
* prohibitions on unlawful interference with electricity infrastructure, electrical installations, and unlawful taking of electricity or interference with meters or positioning of lines and
* a requirement to give 7 days' notice of work near electricity infrastructure.

The General Regulations prescribe the following safety obligations:* electrical installations must comply with AS/NZ standards
* electricity supply from a transmission or distribution network must not be connected to an electrical installation unless the connection testing and inspection procedures of the operator of the network have been complied with
* prescribed plant must be capable of being remotely disconnected and reconnected
* persons engaging or preparing to engage in work on or near electricity infrastructure or an electrical installation must treat exposed conductors as live until they are isolated from all sources of electricity supply and proved to be de-energised and if they are high voltage conductors, earthed
* reasonable steps must be taken to ensure safety in work through the provision of protection from adjacent electrical conductors or live parts of electrical equipment, insulated tools and safe work practices
* work involving a danger of accidental direct contact with exposed live conductors, electrical equipment or exposed live parts of electrical equipment must only be carried out by competent and qualified persons and with assistants trained in the work and in resuscitation, releasing persons from live electrical equipment etc
* work must not be carried out in proximity to conductors or electrical equipment unless it is carried out beyond approach limits, subject to exceptions
* work must not be carried out and equipment must not be positioned above exposed high voltage conductors or exposed parts of high voltage electrical equipment unless the work or positioning of the equipment is authorised in writing by the operator of the electricity infrastructure or electrical installation concerned
* work must not be carried out by direct contact with exposed high voltage conductors or exposed parts of high voltage electrical equipment unless the exposed high voltage conductors or exposed parts of high voltage electrical equipment are isolated, and shown by testing to be isolated, from all sources of electricity supply and earthed, subject to exceptions
* electrical work on exposed live high voltage conductors or exposed live parts of high voltage electrical equipment (live line work) must not be carried out unless authorised in writing by the operator of the electricity infrastructure or electrical installation on which the work will be carried out
* persons required to carry out, or to help in carrying out, electrical work must undergo suitable training annually to ensure their continued competency in rescue and resuscitation
* testing equipment must be suitable and records must be kept in relations to testing and calibration of equipment and
* reports must be made in relation to accidents within prescribed timeframes depending on the nature of the accident.
 |
| SA – Department of Energy and Mining | *Plumbers, Gas Fitters and Electricians Act 1995* (SA) (Plumbers, Gas Fitters and Electricians Act)And Plumbers, Gas Fitters and Electricians Regulations 2010 (SA) | The Plumbers, Gas Fitters and Electricians Act and regulations impose licensing and registration requirements on contractors and registration requirements on workers in relation to plumbing, gas fitting work and electrical work.Plumbing work may be applicable to hydrogen where it is connected to a public water supply system. The definition of ‘water plumbing’ may apply as it includes ‘the installation, alteration, repair, maintenance or disconnection of pipes or equipment to be connected directly or indirectly to a public water supply system’.Gas fitting work is not applicable to hydrogen - gas is defined and is limited to gaseous fuel consisting of hydrocarbons.Electrical work licensing and registration requirements will be applicable to plant and equipment used on hydrogen projects that meet the definition of an 'electrical installation.’ Electrical work includes installation, alteration, repair or maintenance of an electrical installation. An electrical installation includes equipment intended for various purposes including the ‘use’ of electricity, where the electricity is supplied by a person or body that supplies electricity to the public at a voltage above extra low voltage (per the Wiring Rules) - i.e. would apply to plant and equipment that use electricity supplied from the grid network at a voltage above extra low voltage e.g. electrolysers on hydrogen production facilities and dispensers, cooling and chilling equipment on hydrogen refuelling projects, where they are supplied by grid electricity.The manufacture and assembly of new equipment are exempted from the licensing and registration requirements, as is minor work such as cleaning, painting etc of electrical installations and replacing fuses.  |
| SafeWork SA | Work Health and Safety Laws | Refer to the Work Health and Safety Law Legislation summaries. |

## South Australia regulations with a low degree of relevance to hydrogen refuelling facilities

The legislative instruments set out in the table below:

* have less potentially specific application to hydrogen refuelling facilities, or
* are out of scope of the definition of hydrogen refuelling facilities for this Guidebook,
* are unlikely to apply to hydrogen refuelling facilities but are included for transparency (e.g. because they apply to a similar industry such as natural gas supply chains).

| **Regulator** | **Legislative Instrument** | **Summary** |
| --- | --- | --- |
| SA – Department of Energy and Mining | *Energy Products (Safety and Efficiency) Act 2000* (SA) (Energy Products (Safety and Efficiency) Act*)*And Energy Products (Safety and Efficiency) Regulations 2012 (SA) (Energy Products (Safety and Efficiency) Regulations) | This legislation imposes requirements in relation to energy products - i.e. that certain energy products cannot be sold unless they are certified and labelled as meeting applicable safety standards. The seller is also required to provide information to the purchaser in accordance with applicable information standards. See section 6 of the Energy Products (Safety and Efficiency) Act. This Act is currently included for transparency as it has no likely operation in respect of appliances, plant or equipment in a hydrogen refuelling facility.The definition of an energy product includes electrical and gas appliances, appliances powered by gas, devices used to convey gas etc. The definition of gas (which is linked to *the Gas Act 1997* (SA)) includes hydrogen. The requirements of section 6 (safety and performance, certification and information obligations) only apply to energy products that are declared by the Government to be subject to the requirements (see section 5). The Energy Products (Safety and Efficiency) Proclamation 2012 sets out electrical and gas products that are subject to section 6 and the applicable standards that are required to be complied with. The list of products to date relates only to domestically used products (e.g. range hoods, hair clippers, domestic fridges etc). Second hand products are exempt from the requirements in section 6.The Energy Products (Safety and Efficiency) Regulations provide a mechanism for persons to obtain certifications of authority from the regulator so as to label their products to indicate their compliance with applicable certification requirements and safety standards as required under section 6 of the Act.  |
| SA – Department of Energy and Mining | *Gas Act 1997* (SA) (Gas Act)AndGas Regulations 2012 (SA) | The Gas Act creates a range of legal obligations for the operators of gas supply infrastructure. The definition of gas expressly includes hydrogen. However, the definitions and operative provisions which create obligations are limited in application to gas distribution systems, gas infrastructure, gas appliances and gas installations (depending on the provision), and do not apply to activities relevant to hydrogen refuelling facilities.The definition of 'gas infrastructure' means any part of a distribution system owned or operated by a gas entity.The definition of 'distribution system' means that the Gas Act is only capturing the distribution of gas to persons for consumption (and does not include a transmission pipeline, or a pipeline installed in a place for the conveyance and use of gas from a pressurised vessel situated in the place and which doesn't take gas to some other place).The obligations in relation to distribution systems and gas infrastructure are relevant to the pipelines Code.This legislation regulates safety matters in relation to: * gas distribution systems and gas infrastructure (i.e. the pipelines which are used to supply gas to customers)
* gas appliances (i.e. appliances that use gas as fuel)
* gas installations - which include fixed gas appliances and fixed pipes for the use of gas in a place

The key safety obligations include: * a licence is required to operate a distribution system, and for the retailing of gas.
* gas infrastructure and gas installations are required to certain safety requirements and standards.
* work on gas infrastructure and gas installations must comply with certain safety requirements including testing and examination and certificates of compliance.
* gas entities, gas fitting workers and occupiers are subject to incident notification obligations in relation to certain accidents.
 |

# Queensland legislation summaries – Facility Safety

## Queensland legislation with a high degree of relevance to hydrogen refuelling facilities.

This table outlines a list of existing Queensland statutory provisions which are relevant to facility safety, and which may apply to one or more activities anticipated to occur on site in operating a hydrogen refuelling facility in Queensland.

This list is current as at [date] and is limited to legislation that is potentially applicable to the facility scope outlined in chapters 1.6.2 and 2 of the Guidebook and the facility safety regulatory obligations addressed in chapter 3 of the Guidebook.

| **Regulator** | **Legislative Instrument** | **Summary** |
| --- | --- | --- |
| QLD – Office of Industrial Relations | *Electrical Safety Act 2002* (QLD) (ES Act)AndElectricity Safety Regulation 2013 (QLD) (ES Regulations). | The ES Act imposes safety and licensing requirements in relation to electrical equipment, electrical installations and electrical work. For the purposes of the ES Act a hydrogen refuelling facility will be considered an atmosphere which presents a risk to health and safety from fire or explosion. The requirements under the ES Act will apply to plant and equipment on hydrogen production facilities that fall within the definitions of electrical equipment and electrical installations. For example, power supply and conditioning systems, rectifiers, electrolysers, and compressors all meet the definition of electrical equipment.Section 14 of the ES Act defines ‘Electrical equipment’ as including appliances, wires, and cables that are:* used for controlling, generating, supplying, transforming or transmitting electricity at a voltage greater than extra low voltage; or
* operated by electricity at a voltage greater than extra low voltage; or
* part of an electrical installation located in an area in which the atmosphere presents a risk to health and safety from fire or explosion.

Section 15 of the ES Act provides that an electrical installation includes a group of items of electrical equipment that are permanently electrically connected and can be supplied with electricity. The key obligations under the ES Act include general safety duties that apply to an electricity entity, PCBUs, designers and installations, manufacturers, importers, suppliers, repairers, officers of PCBUs and those in control of electrical equipment (under sections 29 to 38 of the ES Act inclusive) to ensure that work, electrical installations and electrical equipment is electrically safe. Subsection 10(2) of the ES Act defines ‘Electrically safe’:* for a person or property, that the person or property is free from electrical risk; and
* for electrical equipment or an electrical installation, that all persons and property are free from electrical risk from the equipment or installation; and
* for the way electrical equipment, an electrical installation or the works of an electricity entity are operated or used, that all persons and property are free from electrical risk from the operation or use of the equipment, installation or works; and
* for the way electrical work is performed, that all persons are free from electrical risk from the performance of the work; and
* for the way a business or undertaking is conducted, that all persons are free from electrical risk from the conduct of the business or undertaking; and
* for the way electrical equipment or an electrical installation is installed or repaired, that all persons are free from electrical risk from the installing or repairing of the equipment or installation.

Subsection 10(1) of the ES Act defines electrical risk:* in relation to a person, the risk to the person of death, shock or injury caused directly by electricity or originating from electricity; or
* in relation to property, the risk to the property of:
	+ damage caused by a cathodic protection system; or
	+ loss or damage caused directly by electricity or originating from electricity.

Division 1 of Part 4 of the ES Act establishes licensing obligations for persons to carry out or supervise electrical work including under an electrical work licence per section 55 and an electrical contractor licence per section 56. Section 57AA establishes obligations on the PCBU to ensure workers are appropriately licensed, and section 57AB to keep a register of licensed workers.Section 36 of the ES Act provides that a person who install electrical equipment must ensure that:* the way the electrical equipment or installation is installed is electrically safe; and
* the processes followed for installing the electrical equipment or installation ensure that, when installed, it will be electrically safe; and
* after the electrical equipment or installation is installed, the person tests and examines it to ensure it is electrically safe.

Section 38A of the ES Act provides that officers of PCBUs with duties under the Act must exercise due diligence to ensure that the PCBU complies with its duties. Sub-section 38(5) provides that due diligence includes taking reasonable steps:* to acquire and keep up-to-date knowledge of electrical safety matters; and
* to gain an understanding of the nature of the operations of the business or undertaking of the PCBU and generally of the hazards and risks associated with those operations; and
* to ensure that the PCBU has available for use, and uses, appropriate resources and processes to eliminate or minimise risks to electrical safety from work carried out as part of the conduct of the business or undertaking; and
* to ensure that the PCBU has appropriate processes for receiving and considering information regarding incidents, hazards and risks and responding in a timely way to that information; and
* to ensure that the PCBU has, and implements, processes for complying with any duty of the person conducting the business or undertaking under the Act; and
* to verify the provision and use of the resources and processes mentioned in the previous 3 dot points above.

Section 38 provides that persons in control of electrical equipment at any time must ensure that the electrical equipment is electrically safe.While at work, section 39 of the ES Act provides that workers must:* take reasonable care for the worker’s own electrical safety; and
* take reasonable care that the worker’s acts or omissions do not adversely affect the electrical safety of other persons or property; and
* comply, so far as the worker is reasonably able, with:
	+ any reasonable instruction that is given by the PCBU to allow it to comply with the Act; or
		- any reasonable instruction about electrical equipment located at the workplace given by a person in control of the electrical equipment to allow the person to comply with the Act; and
	+ cooperate with any reasonable policy or procedure of the PCBU relating to electrical safety at the workplace that has been notified to workers.

The ES regulations provide that testing requirements apply to electrical installation prior to being connected, and a certificate of safety is to be provided to the person for whom the work is carried out.Under regulation 221 of the ES Regulations accredited auditors are required to audit high voltage and hazardous area installations before electrification.Notification obligations to the regulator (Workplace Health and Safety Queensland) in relation to serious electrical incidents and dangerous electrical events.A serious electrical incident is an incident involving electrical equipment if, in the incident:* a person is killed by electricity; or
* a person receives a shock or injury from electricity, and is treated for the shock or injury by or under the supervision of a doctor; or
* a person receives a shock or injury from electricity at high voltage, whether or not the person is treated for the shock or injury by or under the supervision of a doctor.

A dangerous electrical event is any of the following:* the coming into existence of circumstances in which a person is not electrically safe, if:
	+ the circumstances involve high voltage electrical equipment; and
	+ despite the coming into existence of the circumstances, the person does not receive a shock or injury;
* the coming into existence of both of the following circumstances:
	+ if a person had been at a particular place at a particular time, the person would not have been electrically safe;
	+ the person would not have been electrically safe because of circumstances involving high voltage electrical equipment;
* an event that involves electrical equipment and in which significant property damage is caused directly by electricity or originates from electricity;
* the performance of electrical work by a person not authorised under an electrical work licence to perform the work;
* the performance of electrical work by a person if, as a result of the performance of the work, a person or property is not electrically safe;
* the discovery by a licensed electrical worker of electrical equipment that has not been marked as required under the Act.

Regulation 126 of the ES Regulations provides that electrical equipment is required to comply with AS/NZS 3820. The ES Act prescribes offences with serious penalties for breaches of electrical safety duties.Also see the relevant Codes of Practice in Queensland that state ways of discharging a person’s electrical safety duty have been published, and include: * Construction and operation of solar farms Code of Practice 2024.
* Electrical safety Code of Practice 2020 – Electrical equipment rural industry.
* Electrical safety Code of Practice 2020 – Working near overhead and underground electric lines
* Electrical safety Code of Practice 2021 – Managing electrical risks in the workplace.

Compliance with the Queensland Codes of Practice is not compulsory for compliance with the ES act. However, these Codes of Practice are admissible in any proceeding as evidence of whether a duty under this Act has been complied with. Also note that under the *Work Health and Safety Act 2011* (Qld), it is mandatory to either comply with WHS Codes of Practice, or manage hazards and risks arising from the work carried out as part of the conduct of the business or undertaking in a way that is different to the Code of Practice but provides a standard of health and safety that is equivalent to or higher than the standard required under the Code of Practice.There are also certain excluded provisions in relation to hydrogen refuelling facilities where the electrical installation or private plant (means equipment used for generating electricity, other than equipment used by an electricity entity under an authority or special approval under the *Electricity Act 1994* (Qld) is regulated under the *Petroleum and Gas (Production and Safety) Act 2004*. Excluded obligations include the general electrical safety duties and the licensing obligations.  |
| QLD – Office of Industrial Relations | Electrical Safety Regulation 2013 (QLD)  | These regulations prescribe requirements for electrical safety. The regulations provide that PCBUs managing the risks to health and safety in relation to electrical risks must do so in accordance with Chapter 3 of Part 3 of the WHS Regulation.The regulations also implement the following requirements:* No electrical work is to be carried out on or near energised electrical equipment unless it is prescribed to do so.
* PCBUs have a duty to determine whether electrical equipment is energised.
* PCBUs must ensure that electrical equipment that has been de-energised to allow electrical work to be carried out on or near the equipment is not inadvertently re-energised while the work is being carried out.
* PCBUs must take preliminary steps before electrical work on or near energised electrical equipment commences:
	+ risk assessment by competent person
	+ work area cleared of obstructions to allow for easy access and exit
	+ point at which electrical equipment can be disconnected or isolated if clearly marked, clear of obstructions and capable of being used quickly; and
	+ consultation with person with management or control of workplace.
* PCBUs to prevent unauthorised access to energised electrical equipment while work being carried out.
* PCBUs must prevent electrical risks from persons inadvertently making contract with an exposed energised part of electrical equipment.
* PCBUs to ensure that electrical work on or near energised electrical equipment is carried out:
	+ by a competent person with the right tools, testing equipment and PPE
	+ in accordance with a safe work method statement and
	+ with a safety observer (unless not required, in cases where the work is only testing work and the PCBUs has conducted a risk assessment that shows that there is no serious risk).
* Testing of electrical equipment prior to energisation and the production of a certificate of compliance.
* Training electrical workers in rescue and resuscitation techniques.
* Electrical work on an electrical installation is required to comply with the wiring rules (AS/NZS 3000 (Electrical installations)).
* PCBUs must ensure that any unsafe electrical equipment is disconnected, isolated and is either replaced or permanently removed form use or not reconnected until repaired and tested and found to be safe.

The following classes of electrical work licences may be issued:* Electrical mechanic licence
* Electrical linesperson licence
* Electrical fitter licence
* Electrical jointer licence
* Restricted electrical work licence
* Electrical work training permit.

A number of provisions in the regulations are included regarding connection to a source of electricity. For example: * an inspection by an accredited auditor is required before connecting an or reconnecting an electrical installation located in a hazardous area
* electrical installations with serious defects or that have not been tested cannot be connected.
 |
| QLD – Resources Safety and Health Queensland | *Petroleum and Gas (Production and Safety) Act 2004* (QLD) (PGPS Act)AndPetroleum and Gas (Safety) Regulation 2018 (QLD) (PGPS Safety Regulations). | The PGPS Act regulates the technical and safety aspects of operating plant, gas production, pipelines, distribution systems, delivery networks and use. The Act introduces: * a performance risk-based safety and health management system approach to addressing regulation; and
* introduced the term ‘operating plant’, which is a legislative label for identifying those facilities and activities that should be subject to safety management plan requirements.

Only those key provisions relevant to hydrogen refuelling facilities are summarized below. The PGPS Act regulates hydrogen refuelling facilities through the application of obligations to the definition of ‘operating plant’.The PGPS Act defines ‘operating plant’ as facilities, places, activities or things which fall into one or more of the following categories:* Individual Operating Plant: a facility, activity or thing prescribed in subsection 670(2) of the PGPS Act, typically a facility, pipeline or distribution infrastructure.
* Specific Activity Operating Plant: a place, or a part of a place, at which an activity prescribed in subsection 670(5) of the PGPS Act is carried out, but only to the extent of the carrying out of the activity, including:
	+ a ‘fuel gas delivery network’ prescribed under subsection 670(5)(a) of the PGPS Act and the PGPS Safety Regulations; and
	+ further activities which are both:
		- prescribed under subsection 670(5)(d) of the PAG Act and the PAG Safety Regulations (such as the production of hydrogen as a ‘fuel gas’) ; and
		- associated with the production, delivery, storage, transport, treatment or use of petroleum or fuel gas.
* Operating Plant includes the authorised activities under various resource authorities as prescribed in subsection 670(6) of the PGPS Act, relevantly including authorised activities for a petroleum authority other than authorised activities related to the operation of a pipeline used only to transport an excluded compound.

The operator under the PGPS Act holds obligations such as notification obligations and requirements for a Safety Management System. The operator is the person who is responsible for managing and ensuring the safe operation of the plant. Where refuelling facilities are not and do not contain ‘operating plant’, they will be regulated by the WHS Act only. In addition, section 670 of the PGPS Act provides that if a facility has been classified as a MHF under a regulation under the WHS Act, it is an operating plant only to the extent which the WHS Act does not apply to the facility. Where a hydrogen facility is a ‘Individual Operating Plant’, or a ‘Specific Activity Operating plant’ then the operating plant is known as several operating plant (and each operating plant can have a separate operator) and the PGPS Act applies to the exclusion of the WHS Act. Where a facility is an ‘Authorised Activity Operating plant’, the plant is known as joint operating plant (relevantly, all joint operating plant have the same operator) and is subject to obligations under both the PGPS Act and the WHS Act (i.e. both apply).Note also that classification as a major hazard facility under the WHS regime precludes a facility from being operating plant under the PGPS Act. Most hydrogen refuelling facilities are likely to be considered Specific Activity Operating Plant. This is because:* the definition of ‘fuel gas delivery network’ (see definition below) is likely to cover most hydrogen refuelling facilities, (but is unlikely to cover production facilities)
* however, only fuel gas delivery networks that are in a prescribed category are operating plant
* for hydrogen, fuel gas delivery networks that are prescribed as Specific Activity Operating Plant are networks that include:
	+ filling a ‘fuel gas container’ with hydrogen
	+ the delivery or supply of hydrogen in a ‘fuel gas container’
	+ the delivery or supply of hydrogen in a tanker and
	+ dispensing hydrogen to a vehicle
	+ fuel gas containers are defined as either: a cylinder to which AS 2030.1 ‘Gas cylinders’, Part 1 ‘General requirements’ applies; or
	+ a tank; and
* the above prescribed categories are likely to cover most hydrogen refuelling facilities.

Hydrogen refuelling facilities that are not ‘operating plant’ may still be covered by the obligations that apply to ‘fuel gas’, if the hydrogen is used or intended to be used as a fuel to produce heat, light or power.‘fuel gas delivery network’—(a) means the supply of fuel gas to or in a container owned or provided (other than by being sold) by a person (a product supplier) to a consumer or another person in the business of distributing fuel gas; and(b) includes an activity that is part of or incidental to the supply mentioned in paragraph (a) that is carried out by the product supplier or the product supplier’s agent.Examples of ‘fuel gas delivery networks’, include:* the delivery of cylinders of fuel gas to a consumer or to a distributor
* the filling and storing of cylinders of fuel gas, including cages of 4kg and 8.5kg exchange cylinders
* the bulk delivery of fuel gas to a container
* the filling of a tanker for delivery of fuel gas
* the maintenance of containers and storage equipment used for the supply of fuel gas
* the dispensing of fuel gas to vehicles.

Where the above definitions apply, the PGPS Act and associated regulations create several obligations, with significant obligations applying to the operator, including the requirement for a safety management system (SMS) for operating plant, and its content at sections 674 and 675 of the PGPS Act. However, there are no upfront approvals required for the facility SMS.The PGPS Act does include hydrogen for the purposes of the regulatory requirement to odourise ‘fuel gas’ supplied (for example) via refuelling facilities. However, the PGPS Safety Regulations also create an exemption to the requirement to odourise where that hydrogen is being used in a fuel cell. It creates two pathways to that exemption. The first is for supply to a hydrogen ‘fuel gas system’, which is likely to cover most refuelling facilities. The second relates to use of hydrogen within plant and equipment (fuel cells), as per section 7.1 of the Hydrogen Safety Code of Practice. The second exemption is not relevant to the hydrogen refuelling facilities as the vehicles (or the fuel cells within them) are not in scope for the refuelling facility Guidebook.  |
| QLD – Resources Safety and Health Queensland | Petroleum and Gas (Safety) Regulation 2018 (QLD) (PAG Safety Regulations).  | Section 11 of the PGPS Safety Regulations prescribes certain activities which fall within the definition of ‘operating plant’ under the PGPS Act. These prescribed categories are likely to cover most hydrogen refuelling facilities.Subsection 11(2) of the PGPS Safety Regulations prescribes the ‘fuel gas delivery networks’ that involve hydrogen and are ‘operating plant’:(a) a network that includes filling a fuel gas container with hydrogen(b) a network that includes the delivery or supply of hydrogen in a fuel gas container(c) a network that includes the delivery or supply of hydrogen in a tanker(d) a network that includes dispensing hydrogen to a vehicle. Subsection 11(3) of the PGPS Safety Regulations prescribes the production of hydrogen used as a ‘fuel gas’ as ‘operating plant’ for the purposes of section 670 of the PGPS Act.The PGPS Safety Regulations also define ‘fuel gas network’, which includes distribution systems as well as ‘fuel gas delivery networks’ as defined in the PGPS Act. Most hydrogen refuelling facilities, which typically involve the dispensing of ‘fuel gas’ to vehicles will meet the definition of ‘fuel gas network’.The PGPS Safety Regulations include a limited number of provisions directly relevant to a hydrogen refuelling facility which is covered by the definition of ‘operating plant’, which include: * Section 17 Matters which must be included in an SMS (noting the requirement for an SMS in sections 674 and 675 of the PGPS Act are not upfront approvals).
* Section 18 prescription of generic SMS, including standards, both mandatory and preferred, to be adhered to.

(Hydrogen refuelling facility) In addition, the PGPS Safety Regulations include a limited number of provisions directly relevant to a refuelling facility (as a ‘fuel gas network’), which include: * section 76 operator must minimise leakage of fuel gas
* section 77 required gauge pressure (for hydrogen 2.0kPa, which can only be exceeded if the higher pressure does not adversely affect the performance of the gas system)
* section 78 when operator must not supply fuel gas to gas system (where the operator knows or ought reasonably to know that the gas system does not comply with safety requirements).
* section 79 testing, inspection and maintenance of fuel gas containers by the owner of the container.
* section 80 operator of fuel gas delivery network must ensure only persons with prescribed skills, knowledge and expertise (including being recorded as a fuel gas supplier for the network in the system), an SMS in place, to supply fuel gas through the network.
* section 82 operator of a fuel gas network, other than a network that dispenses fuel gas to a vehicle, who proposes to start supplying fuel gas through the network to a gas system for the first time, must:
	+ a test point is installed on, or immediately downstream of, the regulator for the gas system that supplies fuel gas at the prescribed pressure under section 77
	+ the pressure at which fuel gas will be supplied to the gas system complies with section 77 and
	+ the gas system is checked in accordance with a relevant method and the check confirms there is no significant leakage of fuel gas from the gas system.
* s 85 operator of a fuel gas delivery network (the supplying operator) must, at least once each year or when otherwise requested by an inspector, give the chief inspector the name, business address, email address and telephone number of each operator of a fuel gas delivery network that the supplying operator has supplied fuel gas to in the previous 1-year period.

The PGPS Safety Regulations mandate the prescribed quality for 'fuel gas' at s72(c) which is compliance with either:* AS ISO 19880.8 ‘Gaseous hydrogen, Fuelling stations, Part 8: Fuel quality control’; or
* SAE J2719 ‘Hydrogen fuel quality for fuel cell vehicles’.

Subsection 73(3) of the PGPS Safety Regulations removes hydrogen being supplied as a fuel gas from the obligation in section 627 of the PAG Act for odourisation, where it is being supplied to a fuel gas system.Chapters 6, 7 and 7A of the PGPS Safety Regulations also regulate gas systems, gas devices and gas work. The definition of gas system will likely include an electrolyser, and associated pipe work, used to produce fuel gas for use in a gas device. Obligations under Chapter 6 relate to gas systems, and include:* notification requirements to the network operator before carrying out gas work involving certain prescribed circumstances
* requirements for gas system compliance plates
* general obligations for owners of gas systems such as taking reasonable steps to ensure suitably qualified people carry out installation, servicing, repair, decommissioning and disposal work
* offences for tampering with gas systems and causing existing gas systems not to comply with safety requirements.

Obligations under Chapter 7 of the PGPS Safety Regulations include obligations regarding gas work licenses and gas work authorisations. Section 131 also requires that a person who installs a cylinder inside premises in an enclosed space, including, for example, in a cupboard, must ensure the enclosed space is vented to the outside and sealed from the gas device that consumes gas from the cylinder and other parts of the premises.Chapter 7 also provides that the qualifications for gas work licenses and authorisations are set out in Schedule 5 of the Regulations. Part 3 of Schedule 5, of the PGPS Safety Regulations specifies which qualifications for gas work (industrial appliances) and gas work major project, are required. The authorisations will be relevant for gas work (which is defined as installing, removing, altering, repairing, servicing, testing or certifying of gas systems, such as electrolysers), for which particular skills and licensing will be required. Parts 1A and 2 of Schedule 2 of the PGPS Safety Regulations prescribes Parts 7.2 and 7.3 of the Hydrogen Safety Code as a preferred (but not compulsory) standard.Chapter 8 of the PGPS Safety Regulations prescribes obligations relating to the transport and supply of fuel gas, including:* prohibitions on transporting cylinders with a water capacity of over 25L (or two cylinders at the same time) in enclosed vehicles, and restrictions on transporting cylinders of a lower capacity in enclosed vehicles
* requirements for sealing cylinders and not overfilling cylinders, not transferring fuel gas between fuel gas containers in residential area, etc.
 |
| QLD – Department of Housing and Public Works | *Plumbing and Drainage Act 2018* (QLD) (PD Act). | The PD Act regulates the carrying out of plumbing or drainage work to reduce risks to public health and safety and the environment.The Act provides for the granting and regulation of licenses for plumbing and drainage work, which includes plumbing or drainage that results from, or is affected by, the plumbing or drainage work, to the extent the context permits.Although drainage work is unlikely to be required for hydrogen refuelling facilities, the definition of plumbing includes an apparatus, fitting or pipe for supplying water to premises from a water service provider’s infrastructure or a water storage tank or carrying water within premises. This definition will likely capture feedwater systems in hydrogen production facilities.Plumbing work includes installing, changing, extending, disconnecting and maintaining plumbing.Under the PD Act, it is an offence to carry out, supervise, or direct plumbing or drainage work unless the relevant person has the applicable license for the work (see sections 56 and 57).Persons who carry out or prepare plans for plumbing or drainage work must ensure the work / plan complies with the applicable code requirements as outlined under the:* the Queensland Plumbing and Wastewater Code
* sections A-E (except part B4) of the Plumbing Code of Australia.
* any applicable part of the Queensland Development Code prescribed by the Plumbing and Drainage Regulation 2019 (QLD)
* the local laws of a local councils relating to plumbing or drainage that are not inconsistent with the Act.

There are also other miscellaneous obligations and offences under this Act, for example:* section 69 a person must not use plumbing or drainage that is the result of permit work, unless an inspection certificate or final inspection certificate has been issued
* subsection 70(1) the owner of premises must take all reasonable steps to ensure all plumbing and drainage on the premises is kept in good condition and operates properly
* subsection 70(2) if a permit has been issued for permit work for plumbing or drainage on premises, the owner of the premises must ensure the plumbing or drainage is operated and maintained in compliance with the conditions of the permit
* Sections 81 and 83 obligations related to ‘notifiable work’ (see Schedule 1 of the Plumbing and Drainage Regulation 2019 (QLD)).
 |
| QLD – Department of Housing and Public Works | Plumbing and Drainage Regulation 2019 (QLD) (PD Regulations) | The PD Regulations supports the PD Act (above) and provides further detail, including by prescribing matters such as:* the types of plumbing and drainage work that are ‘notifiable work’ (see Schedule 1), ‘minor work’ (see Schedule 2) or ‘unregulated work’ (see Schedule 3) for the purposes of the relevant obligations under the Act
* the parts of various documents (such as the Plumbing Code of Australia) that compliance with is required to ensure compliance with obligations under the Act
* sections 11 and 12 describe the ways in which a person can comply with certain obligations under the Act
* the scope of work for various types of licenses issued under the Act (see Schedule 4, Parts 1 and 3)
* Part 6 establishes procedures and requirements for inspecting, enforcing and certifying ‘permit work’ and ‘notifiable work’.
 |
| QLD – Office of Industrial Relations | Work Health and Safety Laws | Refer to Work Health and Safety law Legislation summaries. |

## Queensland regulations with a low degree of relevance to hydrogen refuelling facilities

The legislative instruments set out in the table below:

* have less potentially specific application to hydrogen refuelling facilities, or
* are out of scope of the definition of hydrogen refuelling facilities for this Guidebook,
* are unlikely to apply to hydrogen refuelling facilities but are included for transparency (e.g. because they apply to a similar industry such as natural gas supply chains).

|  |  |  |
| --- | --- | --- |
| **Regulator** | **Legislative Instrument** | **Summary** |
| QLD – Department of Energy and Climate | *Gas Supply Act 2003* (Qld) (GS Act).andGas Supply Regulation 2007 (Qld) | The GS Act and regulations regulate the supply and sale of reticulated natural gas. The Act covers:* A business licensing regime for distributors of reticulated natural gas.
* Powers to ensure sufficiency of gas supply to essential services and other priority customers in the event of a shortage of natural gas supply to an area.
* Rights and responsibilities of gas distributors carrying out gas infrastructure work in publicly controlled areas such as roads.

This legislation imposes obligations in relation to gas distribution, in particular, the GS Act provides for distribution authorisation which authorises a person to transport gas through distribution pipelines and systems and connect premises to distribution pipelines and system. The term ‘primary gas’ includes hydrogen. There are safety obligations imposed under this legislation. e.g. the holder of a distribution authority is required to ensure safe transport and safe connection (section 42). |
| QLD – Department of Trade, Employment and Training | Occupational Licensing *National Law (Queensland) Act 2010* (Qld) (OLNL Act)and Occupational Licensing National Law | The OLNL Act incorporates and applies the Occupational Licensing National Law (**OLNL**) in Queensland. The only operative provisions that may be applicable to hydrogen refuelling facilities are the prohibitions against performing prescribed work (and taking other related actions such as offering to do prescribed work, lending of licenses, etc) unlicensed under Part 2, Division 1 of the OLNL Act. However, there does not currently appear to be any work currently prescribed in respect of hydrogen refuelling facilities. |

# Tasmania legislation summaries – Facility Safety

## Tasmania legislation with a high degree of relevance to hydrogen refuelling facilities.

This table outlines a list of existing Tasmania statutory provisions, which go to safety and potentially apply to one or more activities anticipated to occur on site in operating a hydrogen refuelling facility when operating in Tasmania.

This list is current as at [date] and is limited to legislation that is potentially applicable to the facility scope outlined in chapters 1.6.2 and 2 of the Guidebook and the facility safety regulatory obligations addressed in chapter 3 of the Guidebook.

| **Regulator** | **Legislative Instrument** | **Summary** |
| --- | --- | --- |
| TAS – Department of Justice  | *Electricity Safety Act 2022* (TAS) (Electricity Safety Act) | The Electricity Safety Act regulates electricity infrastructure, electrical installations, electrical equipment, and certain activities near electricity infrastructure and electrical installations and provides for safety and related technical standards to ensure that the electricity infrastructure, electrical installations and electrical equipment are safe, designed, maintained and managed in a manner that protects persons and property.Requirements in relation to electrical work, electrical installations and electrical equipment will apply to plant and equipment on hydrogen refuelling facilities that fall within the definitions of electrical equipment and electrical installations. Electrical equipment means the following: (a) wiring systems, including aerial wiring systems(b) switchgear(c) control gear(d) appliances(e) accessories(f) luminaires(g) any other fittings used for the generation, conversion, storage, transmission, distribution or use of electrical energy and includes in-scope –and out-of-scope electrical equipment manufactured and approved in accordance with the electrical equipment safety system.Electrical installation means a set of wires and associated fittings, equipment and accessories installed in a place for the conveyance, control, protection, measurement, generation, storage or use of electricity, including anything prescribed by the regulations to be, or form part of, an electrical installation, whether or not it is connected to an electricity network at the point of supply.Electrical equipment and installations are likely to include, power supply and conditioning systems, rectifiers, electrolysers, and compressors for example.Key obligations under this Act include the following:* a person who owns or operates an electrical installation must take all reasonable steps to ensure that:
	+ the installation complies with, and is operated in accordance with, any technical and safety requirements imposed under this Act and the regulations; and
	+ the installation is safe and safely operated; and
	+ the installation is maintained in a safe condition and does not pose an electrical safety hazard or risk to the public; and
	+ the installation is maintained and operated in accordance with any safety management system accepted by the regulator under Part 5, and the regulations;
* the owner of an electrical installation must ensure that the operation, maintenance, repair and replacement of any electrical installation beyond the point of supply is such as to ensure the safe use of electricity;
* before the energisation of any electrical installation, or a part of any electrical installation, either for the first time or following isolation, the person energising it must verify that it is safe to energise;
* the owner or operator of any electrical installation, or part of an electrical installation, that is within a hazardous area must ensure that it complies with, and is maintained in accordance with, the requirements determined by the regulator;
* if there is a serious electrical accident, the responsible person must, as soon as practicable after the accident, notify the regulator of the time, place and general nature of the accident. A written report to the regulator containing full details of the accident, including the main cause, any contributing factors leading to the accident and any relevant outcomes must follow within 21 days; and
* a person must not interfere with the site of a serious electrical accident unless the interference is necessary to provide medical or other assistance to a person affected by the accident or to protect life or property, or the interference is permitted by an authorised officer.

Notification requirements in relation to serious electrical accidents will apply, as these apply to the "responsible person".There are currently no regulations made under this Act. |
| TAS – Department of Justice | *Gas Safety Act 2019* (TAS) (Gas Safety Act*)*And Gas Safety Regulations 2021 (TAS) (Gas Safety Regulations) | The *Gas Safety Act* *2019* provides for safety and technical standards that ensure the gas supply industry, gas facilities, gas installations, gas appliances, gas storage systems and gas conditioning systems are constructed, maintained and operated to a high standard of safety and in a manner that protects persons and property.The definition of ‘gas’ includes hydrogen as hydrogen is a permanent gas.The definitions of appliances, gas facilities, gas installations, gas infrastructure, pipeline facilities and licensees, and regulated activities have been developed in the context of natural gas midstream supply and end use. This means that it is not expressly identified how some provisions may operate in their application to hydrogen refuelling facilities. The Tasmania gas safety regulator has provided advice that a hydrogen production facility and refuelling facility are respectively considered a gas pipeline facility and gas installation facility.There are a significant number of provisions which are either applicable or that are appropriate for consideration in the operation of a hydrogen refuelling facilities. In the *Gas Safety Act* *2019* they include:* section 23 of the Act which requires the ‘licensee’ (owner of the pipeline’ facility’) to submit a safety case to the Director, and have that safety case accepted, or provisionally accepted, prior to commissioning
* section 27 certification of safety case for pipeline facility
* section 37 carrying out of certain gas-fitting work
* section 44 approval of appliances
* subsection 54(3) acceptance of gas installations would require, amongst other things:
* providing a copy of any design, analysis, logic flow chart, program, calculation, drawing or specification for the gas installation or gas storage system;
* submitting to the Director independent certification, by a person approved by the Director, that the design, installation, commissioning and testing of the gas installation or gas storage system conforms to any relevant standard, code or determination determined by the Director.
* Part 5 of the Gas Safety Regulations establishes the content of Safety Management Systems.
 |
| TAS – Department of Justice | *Occupational Licensing Act 2005* (TAS) (Occupational Licensing Act) | The Occupational Licensing Act creates the statutory framework to ensure that contractors, practitioners and other persons engaged in certain occupations, trades or callings are appropriately qualified, licensed and regulated to perform their work safely and in accordance with established benchmarks, to promote safety, to provide for the investigation of incidents in those activities. In respect of hydrogen refuelling facilities, the Occupational Licensing Act, and the two sets of regulations that relate to electrical work and gas-fitting work, are likely relevant.The objects of the Occupational Licensing Act are to ensure that:(a) all work carried out in the course of certain occupations, trades or callings is carried out by appropriately qualified and licensed persons; and(b) all such work is carried out safely without injury or damage to any person, property or infrastructure; and(c) all persons carrying out any such work acquire, maintain, further develop and apply their skills properly.There are no definitions of electrical installations, or equipment, or gas installations or equipment within the Occupational Licensing Act.Schedule 2 of the Occupational Licensing Act establishes the types of work that will be regulated, and work on equipment at hydrogen refuelling facilities is likely captured in the descriptions of electrical work.All detailed regulatory obligations sit within the relevant regulations addressed below.The description of regulated gas fitting works refers to gas installations which is a defined term in other legislation, including the *Gas Safety Act 2019* (TAS).Autogas gas-fitting work is only relevant to vehicles and vessels and therefore is not relevant to hydrogen refuelling facilities.Plumbing work is likely to apply to some activities including the feedwater supply system at a hydrogen production facility. |
| TAS – Department of Justice | Occupational Licensing (Electrical Work) Regulations 2018 (TAS) (Occupational Licensing (Electrical Work) Regulations)  | The Occupational Licensing (Electrical Work) Regulations implement the Occupational Licensing Act as it relates to electrical work. The requirements of the regulations in relation to duties and obligations of licensed work will apply to the extent that plant and equipment within a hydrogen refuelling facility meet the definitions of electrical appliances, plant and equipment or the types of electrical work defined.Section 3 of the Occupational Licensing (Electrical Work) Regulations defines electrical installationasequipment, lines and wires for the generation, transmission or distribution of electricity supplied by an electricity entity and includes supporting and protective structures relating to any such equipment, lines and wires;Section 4 of theOccupational Licensing (Electrical Work) Regulations provides the ‘meaning of electrical work’:(1) In this regulation –electrical supply system means a system for the supply of electricity for the starting or propulsion of, or operation of the electrical accessories of, a vehicle or vessel, but does not include a system, for the supply of electricity, that is installed in the vehicle or vessel solely for activities unrelated to the use of the vehicle or vessel as a means of transport.(2) Electrical work means any one or more of the following:(a) work on the installation, repair, alteration or removal of an electrical circuit or associated fittings, equipment or accessories;(b) work on an electrical installation;(c) work on the installation, repair, alteration or removal of electrical infrastructure including lines and wires for the generation, transmission or distribution of electricity and also including supporting and protective structures relating to any such equipment, lines and wires;(d) work on a battery, or other electricity storage system, that is –(i) installed, stationary or fixed in position; and(ii) for the purpose of supplying electricity to an electrical installation –or that is work on fittings, equipment, or accessories, associated with such a battery or other electricity storage system.The Occupational Licensing (Electrical Work) Regulations also require notification of different types of electrical work, including categories of electrical work that require:(a) electrical work that is not required to be notified before it is commenced;(b) electrical work that is required to be notified when it is capable of being energised;(c) electrical work that is not required to be notified when it is capable of being energised;(d) electrical work that is required to be notified after it has been energised;(e) electrical work that is not required to be notified after it has been energised. |
| TAS – Department of Justice | Occupational Licensing (Gas-Fitting Work) Regulations 2018 (TAS) (Occupational Licensing (Gas-Fitting Work) Regulations) | The Occupational Licensing (Gas-Fitting Work) Regulations implement the occupational licensing objectives of the Occupational Licensing Act in relation to gas-fitting work.In section 3 of the Occupational Licensing (Gas-Fitting Work) Regulations Gas-fitting work is defined to include:* Work conducted in relation to the design, installation, construction, testing, commissioning, decommissioning, conversion, modification, relocation, repair, alteration, servicing or maintenance of a gas installation or a gas storage system, or any part of a gas installation or a gas storage system, including all pipes, fittings and auxiliary equipment which is:

(a) downstream of a gas supply point; or(b) associated with a gas storage system.* Work necessary or incidental to the installation, service and repair of an automotive gas fuel system, including work on

(a) a motor vehicle engine or forklift engine providing for the propulsion of the motor vehicle or forklift; and(b) an engine forming part of any industrial equipment fuelled by gas; and(c) a fuel cell that is installed in, or forms part of, a vehicle, vessel or machine and that provides for its propulsion.It is unlikely that hydrogen production through electrolysis is going to meet the definition of gas installation due to the requirement for 'use or intended use', the requirement for 'conveyance' of gas, and 'downstream' of the gas supply point.Section 3 of the Occupational Licensing (Gas-Fitting Work) Regulations defines:* gas installation means, in respect of the use or intended use of gas:

(a) any pipe or system of pipes for, or incidental to, the conveyance of gas, and components or fittings associated with the pipe or system of pipes which are downstream from the gas supply point; or(b) any one or more of the following:(i) any appliance and associated components or fittings.The definition of gas storage system will likely apply to the storage tanks included as part of hydrogen refuelling facilities.Section 3 of the Occupational Licensing (Gas-Fitting Work) Regulations provides a definition of Gas storage system which has the same meaning as in the *Gas Safety Act 2019* (TAS) and means a container, tank or cylinder for storing or holding gas and includes all associated pipe work, components, equipment and fittings, but does not include gas infrastructure.If the production facility is using rotating tube trailers as a means of distributing the hydrogen and does not include a hydrogen storage tank, it is not being stored under these regulations. The same issues would be apparent in respect of the hydrogen refuelling facility scenarios as the production facility. |
| WorkSafe Tasmania | Work Health and Safety Laws | Refer to the work health and safety law Legislation summaries. |

## Tasmania regulations with a low degree of relevance to hydrogen refuelling facilities

The legislative instruments set out in the table below:

* have less potentially specific application to hydrogen refuelling facilities, or
* are out of scope of the definition of hydrogen refuelling facilities for this Guidebook,
* are unlikely to apply to hydrogen refuelling facilities but are included for transparency (e.g. because they apply to a similar industry such as natural gas supply chains).

| **Regulator** | **Legislative Instrument** | **Summary** |
| --- | --- | --- |
| TAS – Department of State Growth TAS – Department of JusticeTAS – Department of Treasury and Finance | *Electricity Supply Industry Act 1995* (TAS) (Electricity Supply Industry Act) | The Electricity Supply Industry Act seeks to promote efficiency and competition in the electricity supply industry, to provide for a safe and efficient system of electricity generation, transmission, distribution and supply, to provide for the safety of electrical installations, equipment and appliances, to enforce proper standards in the performance of electrical work, to protect the interests of consumers of electricity and for related purposes.This has been included for the purposes of transparency. Hydrogen refuelling facilities will not be captured by relevant definitions because they all refer to ‘electricity’ (and hydrogen is not electricity) including:* ‘electrical installation’, because it must form part of a 'power system', which is ‘a system for the generation, transmission or distribution of electricity’,
* ‘distribution network’ which is defined as ‘the apparatus, electric lines, equipment, plant, and buildings, used to convey or control the conveyance of electricity, that the National Electricity Rules specify as, or as forming part of, a distribution system’
* ‘electricity generating plant’ which is ‘a facility or plant that is or could be used to generate electricity, and includes all equipment at that facility or plant", provided that the hydrogen refuelling facilities do not also coexist with electricity generation plant.
 |
| TAS – Department of State Growth  | *Gas Industry Act 2019* (TAS) (Gas Industry Act 2019) | The Gas Industry Act relates to the construction and operation of the gas supply industry in Tasmania from transmission, through distribution to the retailing of gas to consumers to ensure the efficient operation of the industry and take proper account of the (non-safety) interests of those gas consumers. Consumer safety is the responsibility of the Director of Gas Safety under the Gas Safety Act.This Act applies to transmission and distribution pipelines and could apply to blending facilities but does not apply to refuelling facilities as hydrogen refuelling facilities do not meet relevant definitions such as distribution system, gas infrastructure, gas activity, transmission pipeline (even though hydrogen does meet the definitions of gas and regulated substance). The intersection between the Gas Safety Act and the *Gas Industry Act 2019* (TAS) as it relates to licensed operators, is not relevant to hydrogen refuelling facilities.This Act:* provides for the licensing of entities to allow them to carry out gas activities
* provides for entry on and use of land
* provides for gas infrastructure planning corridors and
* prescribes offences in relation to unlawful interference with gas infrastructure/gas activities, unlawful taking or diversion of gas.
 |

# Victoria legislation summaries – Facility Safety

## Victoria legislation with a high degree of relevance to hydrogen refuelling facilities.

This table outlines a list of existing Victoria statutory provisions, which go to safety and potentially apply to one or more activities anticipated to occur on site in operating a hydrogen refuelling facility in Victoria.

This list is current as at [date] and is limited to legislation that is potentially applicable to the facility scope outlined in chapters 1.6.2 and 2 of the Guidebook and the facility safety regulatory obligations addressed in chapter 3 of the Guidebook.

| **Regulator** | **Legislative Instrument** | **Summary** |
| --- | --- | --- |
| Victorian Building Authority | *Building Act 1993* (Vic) (Building Act) | The Building Act establishes a regime for the purposes of the regulation of plumbing work, including the licensing, and the issuance of compliance certificates for designated work.The main purposes of this Act are—* (a) to regulate building work and building standards; and
* (b) to provide for the accreditation of building products, construction methods, building components and building systems; and
* (c) to provide an efficient and effective system for issuing building and occupancy permits and administering and enforcing related building and safety matters and resolving building disputes; and
* (d) to regulate building practitioners, building employees and plumbers; and
* (e) to regulate plumbing work and plumbing standards; and
* (f) to provide for the accreditation, certification and authorisation of plumbing work, products and materials; and
* (g) to regulate cooling tower systems; and
* (h) to limit the periods within which building actions and plumbing actions may be brought

The Building Act regulates plumbing work, draining work, and gas fitting work. Part 12A of the Building Act requires that plumbing work is only carried out by licensed or registered plumbers, with further licensing requirements for specialised plumbing work. Persons are also prohibited from using the titles of plumber, plumbing practitioner, drainer, gasfitter unless appropriately licensed.The obligations relating to plumbing work (which is an umbrella term which is defined in the Building Act to also include gasfitting work, draining work and fire protection work) are relevant to hydrogen refuelling facilities, however the definition of building work is generic and not hydrogen-specific enough to be within scope of the Guidebook. The definition of ‘gasfitting work’ is unlikely to cover hydrogen production facilities, but is likely to be applicable to pipes, appliances, flues, fittings, apparatuses, controls or other items at a hydrogen refuelling facility that are involved with the supply or use of gas and that are fitted downstream of the gas supply point. Draining/drainage work is unlikely to apply to plant and equipment at hydrogen production or refuelling facilities. Work on firefighting equipment onsite at hydrogen refuelling is likely to meet the definition of fire protection work. |
| Victorian Building Authority | Plumbing Regulations 2018 (VIC) (made pursuant to the Building Act) (Plumbing Regulations) | The Plumbing Regulations implement the objectives of the Building Act in relation to regulated plumbing work. The Plumbing Code of Australia is incorporated into the content of the Regulations.Plumbing and drainage work subject to these requirements is:* plumbing and drainage work within the meaning of the *Plumbing and Drainage Act 2011* (which contains further applicable requirements address in another section of this Annexure 5 (Legislation summaries))
* any plumbing work or drainage work that, by law, can be done lawfully only by the holder of an endorsed contractor licence, a supervisor or a tradesperson certificate or some other specified person and
* water plumbing work comprising the construction of or work on a fire suppression system that is connected or to be connected to a water main.

Registered and licensed plumbers are required to carry out plumbing work in a good and workmanlike manner and have regard to manufacturers' instructions and specifications when carrying out plumbing work.Registered and licensed plumbers are required to comply with the requirements of Part B4 of the Plumbing Code of Australia when carrying out fire protection work. |
| WorkSafe Victoria  | *Dangerous Goods Act 1985* (VIC) (DG Act)And Dangerous Goods (Storage and Handling) Regulations 2022 (VIC) (Dangerous Goods (Storage and Handling) Regulations)AndDangerous Goods (Transport by Road and Rail) Regulations 2014 (Vic) (Dangerous Goods (Transport by Road and Rail) Regulations) | The DG Act applies in relation to the manufacture, storage, transport, transfer, sale and use of dangerous goods and the import of explosives into Victoria. The Act applies to hydrogen, as it is designated as a dangerous good by reference to the ADG Code Chapter 2.2: Class 2 – Gases, and the Dangerous Goods (Transport by Road and Rail) Regulations.Obligations under the DG Act include:* requirement for licensees to provide certain information (types and amounts of dangerous goods etc) about dangerous goods to the regulator as soon as practicable after licensing and every three months
* occupiers of licenced premises/premises of a prescribed class are required to maintain manifests, and it is an offence to keep a false or misleading manifest
* occupiers or persons in charge of premises where dangerous goods are manufactured, stored or sold, owners or persons in charge of vehicles or boats used to transport dangerous goods and persons who use, handle or transfers dangerous goods are required to take precautions against tampering, theft or unauthorised access, fire, explosion, leakage, damage. They must also not abandon, discard or otherwise neglect to dispose safely of dangerous goods
* persons must not, without lawful excuse, recklessly engage in the manufacture, storage, transport, transfer, sale or use of dangerous goods that places, or may place, a person in danger of death and
* licensees, prescribed persons and masters of a ship must without delay report fires, explosions, spillages, leakages or escapes involving dangerous goods.

Whilst there are 4 sets of Regulations made under the Act, the key obligations relevant to hydrogen refuelling facilities are found in the Dangerous Goods (Storage and Handling) Regulations. The Dangerous Goods (Transport by Road and Rail) Regulations require that occupiers of premises where the bulk transfer of dangerous goods occurs:* ensure that any hose assembly on the premises that is used, or that is intended to be used, for the transfer (other than a hose assembly brought on to the premises on the vehicle involved in the transfer):
* has been constructed, assembled and maintained in accordance with Chapter 10.1 of the Australian Dangerous Goods Code (ADG Code) and
* has been inspected and tested at the intervals, and in the way, required under that Chapter; and
* satisfies the test under that Chapter.
* ensure, so far as is practicable, that the goods are transferred:
* in accordance with Chapter 10.2 of the ADG Code an
* in a way that averts, eliminates or minimises risk
* keep, in accordance with section 10.1.3.4 of the ADG Code, accurate records of all maintenance work, and each inspection and test, carried out on the hose assembly.

The Dangerous Goods (Transport by Road and Rail) Regulations will regulate the transport of hydrogen for, by example, tube trailer, where that tube trailer is parked in a storage facility.Apart from those obligations, these regulations are only relevant to hydrogen refuelling facilities to the extent those regulations prescribe obligations entities that meet the definitions of consignors, consignees, loaders and packers of dangerous goods, and definitions of various terms which are used in the Dangerous Goods (Storage and Handling) Regulations. The Dangerous Goods (Storage and Handling) Regulations impose obligations which include placarding, manifest, safety data sheets, and notifications to authorities and emergency services. Placarding quantity commences at 500L and includes notification. Manifest, fire protection and notification quantity is 5000L.The Dangerous Goods (Storage and Handling) Regulations do not currently require a hydrogen production facility or refuelling facility to hold a licence pursuant to s21 of the Act. This means that most obligations, except for notification and emergency services engagement at 5000L, are ‘those generally applicable.'Note that pursuant to section 52 of the Dangerous Goods (Storage and Handling) Regulations there is a specific duty on the occupier of the premises to get the written advice of the emergency services in respect of the requirement to have a fire protection system in place above the scheduled quantity of 5000L. Note also (see OHS Act and Regulations below) that if the quantity of hydrogen exceed 5 tonnes (the MHF 10% notification quantity), there is the potential to be designated a MHF facility. |
| Energy Safe Victoria | *Electricity Safety Act 1988* (Vic) (ES Act)And Electricity Safety (General) Regulations 2019 (VIC) (General Regulations)And Electricity Safety (Management) Regulations 2019 (VIC)And Electricity Safety (Registration and Licensing) Regulations 2020 (VIC) | The purpose of the ES Act is to ensure the safety of electricity supply and use, the reliability and security of electricity supply; and the efficiency of electrical equipment.Relevantly for hydrogen refuelling, the ES Act, and associated regulations are relevant to electrical installations and electrical equipment installed in hazardous areas. Electrical equipment will likely include power supply systems, rectifiers, electrolysers, gas-lye units, purification and cooler units and compressors at production facilities, and compressors and chiller units at refuelling facilities. Electrical installations will likely include all of the above electrical equipment, except those pieces of equipment which are part of the electricity company's supply network.The ES Act and regulations set requirements that electrical work on equipment operating at low voltage and above low voltage in hazardous areas is installed, altered, repaired and maintained by licenced electricians and that this work is also, in most circumstances, inspected by a licenced electrical inspector before the electrical equipment is connected to an electricity supply or put into service.Part 2 of the General Regulations prescribes requirements in relation to wiring methods for electrical installations, with additional obligations for high voltage electrical installation work and work in patient areas.Part 5 of the General Regulations prescribes stringent safety standards in relation to high voltage electrical installations, complex electrical installations, etc. It also prescribes supervision duties for persons employing apprentices. Part 5, Division 4 prescribes duties related to electrical installation work carried out on energised electrical equipment, including preliminary steps, work being done by competent persons, with proper tools and in accordance with safe work method statements.Part 6 of the General Regulations prescribes duties applying to the public in relation to protected infrastructure, such as requirements for minimum distances to be maintained in relation to certain infrastructure.The requirements include licencing and inspection requirements and installation and equipment standards, typically based on mandated Standards Australia and International Electrotechnical Commission published standards.Significant parts of the ES Act as they relate to the supply of electricity and in-scope electrical equipment, most bushfire mitigation obligations, and the regulation of electricity supply companies are not relevant for activities of hydrogen refuelling facilities.  |
| WorkSafe Victoria  | Occupational health and safety laws | Refer to Work Health and Safety law Legislation summaries  |

## Victoria regulations with a low degree of relevance to hydrogen refuelling facilities

The legislative instruments set out in the table below:

* have less potentially specific application to hydrogen refuelling facilities, or
* are out of scope of the definition of hydrogen refuelling facilities for this Guidebook,
* are unlikely to apply to hydrogen refuelling facilities but are included for transparency (e.g. because they apply to a similar industry such as natural gas supply chains).

|  |  |  |
| --- | --- | --- |
| **Regulator**  | **Legislative Instrument** | **Summary** |
| WorkSafe Victoria  | *Equipment (Public Safety) Act 1994* (VIC) (Equipment (Public Safety) Act)andEquipment (Public Safety) Regulations 2017 (VIC) | The main purpose of the Equipment (Public Safety) Act is to provide for public safety in relation to prescribed equipment and equipment sites. That is, where hydrogen may be present in 'pressure equipment' but it is not within the context of a 'workplace' (ie not captured by OHS legislation). It is included here for transparency for the purpose of clarifying that the provisions in this Act are NOT relevant to a hydrogen refuelling facility, because these facilities are workplaces covered by the OHS Act which are not being used for the manufacture, construction, alteration, maintenance or repair of prescribed equipment for use outside that workplace.Records of information and inspection must be maintained |
| Essential Services Commission | *Gas Industry Act 2001* (VIC) (Gas Industry Act) | The Gas Industry Act’s purpose is to regulate the gas industry in Victoria. A person may not distribute gas or sell gas by retail without holding a licence or being exempt from the requirement. This Act is included for the purposes of transparency as it is not likely to be applicable to onsite activities for either hydrogen production or refuelling facilities. |
| Energy Safe Victoria | *Gas Safety Act 1997* (VIC)And Gas Safety (Gas Installation) Regulations 2018 | The purpose of this Act is to make provision for the safe conveyance, sale, supply, measurement, control and use of gas and to generally regulate gas safety.The definition of ‘gas’ in the Act includes hydrogen, and the definition of ‘gas incident’ could include an incident involving hydrogen. However, many of the definitions which trigger obligations, e.g. gasfitting work, upstream work, gas appliances, gas installations, gas facility or gas company, were developed in the context of the distribution and reticulation of natural gas into Type A or Type B appliances. Consequently, they either do not apply to a hydrogen refuelling facility activities, plant or equipment, or there is some uncertainty about their application. The use of hydrogen within a fuel cell in a vehicle is omitted from scope in the context of a hydrogen refuelling facility and will end at the point of the hydrogen refuelling dispenser dispensing the hydrogen.This Act and regulations are relevant to other hydrogen industry activities and proposed future regulation. The End use appliances code addresses for example Type B appliances such as hydrogen gas turbines, which will require approval under this Act.The Act establishes general duties akin to WHS primary duties and the requirements for safety cases for gas companies. The requirements for safety cases are very strict and apply to the broad definition of gas company (which does not capture hydrogen production or refuelling facilities).No thresholds of volume or quantum of gas apply to the requirement for safety cases. |

# Western Australia legislation summaries – Facility Safety

## Western Australia legislation with a high degree of relevance to hydrogen refuelling facilities.

This table outlines a list of existing Western Australia statutory provisions, which go to safety and potentially apply to one or more activities anticipated to occur on site in operating a hydrogen refuelling facility in Western Australia.

This list is current as at [date] and is limited to legislation that is potentially applicable to the facility scope outlined in chapters 1.6.2 and 2 of the Guidebook and the facility safety regulatory obligations addressed in chapter 3 of the Guidebook.

| **Regulator** | **Legislative Instrument** | **Summary** |
| --- | --- | --- |
| WA – Department of Energy, Mines, Industry Regulation and Safety | *Dangerous Goods Safety Act 2004* (WA) (the DGS Act)AndDangerous Goods Safety (General) Regulations 2007 (WA) (Dangerous Goods Safety (General) Regulations)AndDangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007 (WA) (Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations)AndDangerous Goods Safety (Major Hazard Facilities) Regulations 2007 (WA) (Dangerous Goods Safety (Major Hazard Facilities) Regulations) | The DGS Act aims to reduce the risk of dangerous goods. It applies to dangerous goods at all times, including during production, storage, handling, piping and transport. It is independent of, but operates in parallel with, the WA WHS Act.Hydrogen is a ‘dangerous good’ for the purposes of this Act as section 4 of the Dangerous Goods Safety (General) Regulations provides that substances (such as hydrogen) listed as Class 2 gases in the Australian Code for the Transport of Dangerous Goods by Road & Rail are ‘dangerous goods’.Under this Act and its regulations, there are three relevant quantities of dangerous goods that trigger legislative obligations:* the ‘threshold quantity’ under the Dangerous Goods Safety (Major Hazard Facilities) Regulations 2007 (WA), 10% of which is the critical quantity (see below). Refer to section 8 of this Regulation for the formula to calculate whether the threshold quantity is met. The threshold quantity does not of itself enliven further legislative obligations
* the ‘critical quantity’ which requires notification of the facility to the Department of Mines, Industry Regulation and Safety for it to determine whether to deem the facility a MHF (10% of the threshold quantity – 5 tonnes for hydrogen) under the Dangerous Goods Safety (Major Hazard Facilities) Regulations 2007 (WA)
* the ‘manifest quantity’ which requires licensing as a ‘dangerous goods site’ (5,000L or 5 tonnes for hydrogen) under the Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations. For the purposes of calculating whether the manifest quantity is reached, add together the number of kilograms of non-liquid dangerous goods (if any), the number of litres of liquid dangerous goods (if any) and the capacity of containers of Class 2 dangerous goods (hydrogen is a Class 2 dangerous good).

The Dangerous Goods Safety (Major Hazard Facilities) Regulations provides for regulation of facilities where the maximum capacity for the dangerous goods exceeds the critical quantity (5 tonnes for hydrogen). This is the only legislation that invokes a licensing threshold (5,000L or 5 tonnes for hydrogen at a dangerous goods site) below the MHF threshold quantity (50 tonnes for hydrogen).Section 13 of the DGS Act and Part 4, Division 1 of the Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations provide for the requirement to license of a dangerous goods site involving the storage or handling of dangerous goods in quantities above the manifest quantity (5,000L or 5 tonnes for hydrogen). While the licensing threshold does sit at 5000L (approximately 150 kg of compressed hydrogen) as a matter of best practice safety hydrogen facilities irrespective of type or quantity, will in general be required to be treated as if they were a MHF. Part 2 of the DGS Act prescribes general duties as to dangerous goods:* persons involved directly or indirectly in storing, handling or transporting dangerous goods must take all reasonably practicable measures to minimise the risk to people, property and the environment from the goods
* if in the course of storing, handling or transporting dangerous goods a reportable situation arises, any person who to any extent has the control or management of the dangerous goods involved must as soon as reasonably practicable report the situation to the regulator. The Regulations prescribe that a reportable situation is:
	+ any dangerous goods incident at a dangerous goods site and
	+ any other situation at a dangerous goods site or that involves dangerous goods in a pipeline if it resulted in, or but for intervening events, could have resulted in, an unexpected spill, leak or other emission of dangerous goods or fire, explosion or other release of energy.
* persons required under the Regulations to prepare safety management documents commit an offence if they fail to do so
* it is an offence to possess or engage in an activity related to storage, handling or transport of dangerous goods if the person does not hold any required license
* persons who have management or control of dangerous goods sites that are required to be licensed are required to obtain the applicable license and
* it is an offence to transport goods that are prescribed under the Regulations to be too dangerous to transport.
 |
| WA – Department of Energy, Mines, Industry Regulation and Safety | Dangerous Goods Safety (Major Hazard Facilities) Regulations 2007 (WA) (Dangerous Goods Safety (Major Hazard Facilities) Regulations) | As noted above, the Dangerous Goods Safety (Major Hazard Facilities) Regulations implement the Major Hazard Facilities (MHF) provisions. The regulations provide that any facility with a capacity exceeding the critical quantity (for hydrogen: 5 tonnes, as this is 10% of the threshold quantity of 50 tonnes) needs to notify the Department of Mines, Industry Regulation and Safety.  At the 10% notification threshold, the Department will assess these facilities and determine if they will be classed as a MHF. As noted above, the Department has published significant guidance regards hydrogen facilities being assessed against the Dangerous Goods Safety (Major Hazard Facilities) Regulations.Any MHF must have a safety report (detailing the potential major incidents, safety critical controls and safety management system) approved by the Chief Dangerous Goods Officer prior to operation. As noted above, the Chief Dangerous Goods Officer has determined that hydrogen facilities irrespective of size, will be required to address the safety requirements of an MHF consistently with how an MHF assessment would otherwise be conducted.The Dangerous Goods Safety (Major Hazard Facilities) Regulations require an emergency plan irrespective of the Regulations' limitation of the manifest quantity (5,000L for hydrogen)).Part 4 of the Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations prescribes the following requirements:* the operator of a dangerous goods site, at which more than the manifest quantity of dangerous goods are stored, must ensure that a risk assessment is made of the dangerous goods stored or handled at the site and that a record is kept of the assessment
* an operator of a dangerous goods site must take all reasonably practicable measures to ensure that the dangerous goods are isolated so that they cannot interact with goods that are not compatible or contaminate any other goods
* an operator of a dangerous goods site must take all reasonably practicable measures to ensure that:
	+ if the stability of the dangerous goods is dependent on the maintenance of levels of stabilisers, those levels are maintained as specified by the manufacturer of the dangerous goods and
	+ if the dangerous goods are required to be stored or handled at, or below, a particular control temperature specified by the manufacturer, they are stored at or below that temperature.
* an operator of a dangerous goods site must take all reasonably practicable measures to ensure that the dangerous goods and any storage or handling system at the site is protected against damage from impact
* an operator of a dangerous goods site must ensure that while dangerous goods at the site are being transferred from one storage or handling system to another, all reasonably practicable measures are taken to:
	+ avoid spillage or overflow of the dangerous goods and
	+ where relevant, minimise any static electricity and
	+ minimise any dust, mist or vapour generation and
	+ ensure that any transfer fittings on the storage or handling systems are compatible and
	+ where relevant, avoid ignition sources.
* an operator of a dangerous goods site must ensure that any ignition source in a hazardous area within the site is eliminated or, if this is not reasonably practicable, the risk arising from the ignition source is controlled
* obligations in relation to ‘hazardous atmospheres’, (which will be applicable to hydrogen as it includes an atmosphere containing Division 2.1 dangerous goods with a concentration more than 5% of the lower explosive limit):
	+ an operator of a dangerous goods site must ensure that any ignition source in a hazardous area within the site is eliminated or, if this is not reasonably practicable, the risk arising from the ignition source is controlled
	+ an operator of a dangerous goods site must otherwise ensure that all risks associated with the presence of a hazardous atmosphere within the site are eliminated or, if this is not reasonably practicable, the risk is minimised
* an operator of a dangerous goods site must ensure that storage or handling systems at the site have been designed, built, installed, commissioned, maintained, and isolated by means of distance or barriers so that, so far as is reasonably practicable, they can be operated with minimal risk to people, property and the environment
* an operator of a dangerous goods site where bulk dangerous goods are stored and handled in a container other than an IBC must ensure that various design standards are met and records are maintained and passed on to any subsequent operator
* an operator of a dangerous goods site must ensure that the area within 3 m of a storage or handling system is kept clear of combustible material that presents a fire hazard to any dangerous goods contained in the system
* the operator of a dangerous goods site must ensure there is adequate fire control equipment on the site, kept in proper working order and measures are taken if any fire control equipment becomes unusable
* an operator of a dangerous goods site must provide equipment and materials identified in the risk assessment as suitable for persons to use for the control of risks to people, property and the environment, other than the fire control equipment referred to in regulation 73, and ensure the equipment is kept at the site and properly maintained
* if dangerous goods are stored or handled on a dangerous goods site in quantities that exceed the manifest quantity, the operator must ensure that there is an emergency plan for the site, it is reviewed and revised if necessary, and provided to the regulator
* an operator of a dangerous goods site must not permit a person under 15 years of age to store or handle the dangerous goods at the site unless the person is being supervised by the operator or an employee of the operator who is 18 years of age or more
* an operator of a dangerous goods site must ensure that a person involved with the storage and handling of dangerous goods at the site is provided with induction, information, training and supervision and keep records of induction and training activities for at least 5 years
* an operator of a dangerous goods site must ensure that a copy of any risk assessment and any emergency plan, is readily available to employees at the site
* an operator of a dangerous goods site must give every employee at the site reasonable opportunity to comment on any risk assessment or emergency plan and consider any such comments before preparing a revised assessment or plan
* an operator of a dangerous goods site must ensure that visitors to the site are provided with supervision and information sufficient to ensure, as far as is practicable, their safety and health while they are visiting the site and
* a person must not damage or otherwise interfere with a storage or handling system so as to increase the risk to people, property and the environment associated with the storage or handling system.

Part 6 Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations prescribes the following requirements in relation to dangerous goods incidents:* an operator of a dangerous goods site must respond to a dangerous goods incident at the site or on the pipeline by ensuring that immediate action is taken to assess and control any risk to people, property and the environment associated with the dangerous situation, including:
	+ bringing any fire, explosion or other release of energy comprising or resulting from the incident under control
	+ stopping, cleaning up and disposing of, or otherwise making safe, any spill or leak of dangerous goods comprising or resulting from the incident and
	+ otherwise making any storage or handling system associated with the dangerous situation and the surrounding area safe so far as is practicable
* the operator must ensure that only persons essential to carrying out the incident response action referred to above remain in the vicinity of the dangerous situation
* an operator of a dangerous goods site or a dangerous goods pipeline must ensure that, if a dangerous goods incident occurs at the site or on the pipeline, any person at an adjacent place who might be affected by the incident is advised of the incident
* an operator of a dangerous goods site must ensure that:
	+ any dangerous goods incident occurring at the site or on the pipeline is investigated and that the investigation, so far as possible, determines the cause or likely cause of the dangerous goods incident and
	+ a record of the dangerous goods incident and the investigation is made, kept until the site or pipeline is decommissioned and made available, on request, to the regulator,
 |
| WA – Department of Energy, Mines, Industry Regulation and Safety | *Electricity Act 1945* (WA) (Electricity Act)AndElectricity Licensing Regulations 1991 (WA)  | The Electricity Act makes provision for the licensing of persons in respect of their competency to carry out works relating to electricity, and the examination, prohibition or approval of electrical appliances.The relevance of certain provisions to hydrogen refuelling facilities is determined by the definitions used in the Act and Electricity Licensing Regulations 1991 (WA) which relate to electrical installations, appliances, equipment and work.The Act includes definitions of electrical installation, and appliance, which are replicated, or otherwise given operative utility within the Regulations. All relevant provisions are held in the regulations. |
| WA – Department of Energy, Mines, Industry Regulation and Safety | Electricity Licensing Regulations 1991 (WA) (Electricity Licensing Regulations)  | The Electricity Licensing Regulations provide for:1. the nature of the work that must be undertaken by a licensed electrician2. the compliance and safety certificates that must be issued in respect of different types of work3. obligations and duties relating to electrical work, including regarding supervision.The application will depend upon the definitions to the different parts of a hydrogen refuelling facility and the nature and characterisation of those. The following are the relevant provisions of the Electricity Licensing Regulations:* electrical appliance meansa device in which electrical energy is consumed or substantially changed in character by conversion into heat, sound, motion, light or otherwise
* electrical work means work:
* on electrical machines or instruments, electrical installations, electrical appliances or equipment to which electricity is supplied or intended to be supplied at a nominal pressure exceeding 50 volts alternating current or 120 volts ripple free direct current or
* comprising an assessment of an electrical installation to ensure that the installation and any work done on the installation complies with the requirements of these regulations.

Electrical work does not include work on components of the propulsion system of a motor vehicle that is propelled by electricity.For the purposes of the definition of electrical work it is immaterial whether or not the thing on or in relation to which the work is performed is part of, or is connected to or to be connected to, any transmission or distribution works or private generating plant and where work is performed on or in relation to any appliance, whether or not electricity is supplied or may be supplied to the appliance through an electric plug socket or socket outlet.* **electrical equipment includes** any component or part of an electrical installation.
* **electrical fitting work means** the work of making, maintaining, repairing, altering, assembling, dismantling, connecting or testing electrical machines, electrical appliances, electrical instruments or other electrical equipment, and includes electrical installing work if that work is assembling, maintaining or altering the wiring between electrical components in plant or machinery
* **electrical installation means:**

(a) an installation (as defined in the *Electricity Act 1945* section 5(1)) includes all wiring, wiring enclosures, switch gear, control and protective gear, appliances, and other components permanently connected to or associated with the wiring, on premises to which electricity is or is intended to be supplied through distribution works, and where electricity is supplied from a private generating plant includes that plant or(b) the network of an exempt operator, other than an exempt operator that is a major network operator or (c) the network of a person who is a network operator under the Electricity (Network Safety) Regulations 2015 regulation 4(1)(h)* **electrical installing work means** electrical work that consists of assembling and fixing in place, altering or adding to any electrical installation or maintaining, removing or connecting to fixed wiring, any electrical equipment
* **notifiable work means electrical installing work** other than — (a) maintenance work, unless that work requires the disconnection and reconnection of the supply of electricity to the electrical installation concerned or the replacement of service apparatus; or(b) the addition or alteration of 1 final sub circuit including the addition or alteration of its protective device; or(c) the alteration of 1 or more final sub circuits.
 |
| WA – Department of Energy, Mines, Industry Regulation and Safety | *Gas Standards Act 1972* (WA) (Gas Standards Act)AndGas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999 (WA) | The Gas Standards Act prohibits a person from performing gasfitting work (as defined in the regulations) unless authorised by a gasfitting permit, certificate of competency or authorisation.The Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999 defines ‘gasfitting work’ as ‘an operation, work or process in connection with the installation, removal, demolition, replacement, alteration, maintenance, or repair of a gas installation’. The Gas Standards Act defines ‘gas installation’ as ‘any appliance, pipes, fittings or other apparatus installed or to be installed for or for purposes incidental to the conveyance, control, supply or use of gas’.The equipment in a hydrogen refuelling facility, which does not include production equipment (i.e. one supplied via a distribution system or a periodically refilled bulk tank), is a gas installation in so far as the particular equipment is associated with the conveyance, control, supply or use of gas. This will likely include most equipment. The equipment in a refuelling facility, which includes production equipment (i.e. one supplied via an electrolyser and related process equipment), is equally a gas installation in so far as the particular equipment is associated with the conveyance, control, supply or use of gas. What particular items of equipment forms part of a given gas installation will vary depending on the configuration of equipment of the refuelling facility but will generally start downstream of the production or refining equipment. The equipment in a hydrogen production facility, is a gas installation in so far as the equipment is associated with the conveyance, control, supply or use of gas. What items of equipment forms part of a given gas installation will vary depending on the configuration of equipment of the production facility but will generally start at the point where production / purification activities end. Additionally, whilst refuelling equipment will not generally constitute a gas appliance, for which approval would be required under the Act, it can still be the subject of prohibition orders if the regulator forms the view that it is or is likely to become unsafe or dangerous. |
| WA – Department of Energy, Mines, Industry Regulation and Safety | Gas Standards (Gas Supply and System Safety) Regulations 2000 (WA) (Gas Standards (Gas Supply and System Safety) Regulations) | The Gas Standards (Gas Supply and System Safety) Regulations includes regulatory obligations that apply to hydrogen refuelling activities to the extent gas is intended to be supplied to consumers via a distribution system.The Regulations define a 'gas plant' as including ’any system of pipes, equipment or apparatus utilised for the purpose of — (i) manufacturing, treating or storing gas with a view to supplying it to consumers through a distribution system; or (ii) converting gas from one form to another with a view to supplying it to consumers through a distribution system...’. 'Distribution system' is separately defined (in the *Energy Coordination Act 1994* (WA)) as ‘... a system of pipelines, mains, and gas service pipes, designed to operate at a pressure of less than 1.9 megapascals, for the transportation of gas to customers ... and any associated apparatus, facilities, structures, plant, or equipment’. To the extent that a hydrogen production or refuelling facility is connected to a distribution system for supplying hydrogen to customers, it will be a gas plant.The Regulations require a safety case to be developed, approved and implemented in respect of all gas plant. A safety case is a document which sets out the safety management and technical practices and procedures to be followed by a plant operator in the operation of a gas plant.The Regulations require network operators to ensure that each prescribed activity is, so far as is reasonable and practicable, carried out in such a way as to provide for the safety of persons and avoid or minimise any damage to property, inconvenience, or other detriment as a result of the activity.If a network operator becomes aware that anything at a place where a prescribed activity is being carried out or the condition of any part of a distribution system or decommissioned distribution system component at anyplace, is a threat to the safety of any person or property, the network operator must investigate the matter as soon as is practicable. If the investigation reveals that there is a threat to the safety of any person or property, the network operator must take such remedial action as is required to remove the threat as soon as is practicable.Part 2, Division 4 of the Regulations prescribes obligations relating to notification of incidents. A network operator must notify the regulator of:* any fire, explosion, or major discharge of flammable gas, in, on or from the distribution system; or
* any incident or event that is caused, or significantly contributed to, by gas and that results in serious injury or serious damage or
* any unplanned interruption to the supply of gas from the distribution system to any consumer whose annual gas consumption usually exceeds, or can reasonably be expected to exceed, 50 TJ.

Network operators must also investigate (within 10 business days) and report on (within 20 business days) notifiable incidents.If a network operator is given notification, the network operator must ensure that, so far as is practicable, the site of the notifiable incident is not disturbed in such a way as to prejudice the examination of the site except as authorised by or on behalf of the Director or as is necessary to restore the supply of gas or to guard against the risk of personal injury, damage, or interruption to the supply of gas.As soon as is practicable after each quarter, or such other period as the regulator allows, a network operator must provide a report of gas incidents that have occurred in that quarter or period.Part 5 of the Gas Standards (Gas Supply and System Safety) Regulations prescribes the following requirements for gas plant safety:* a plant operator must submit a safety case to the regulator for the gas plant of the plant operator;
* a plant operator must nominate an independent auditor for the safety case who must certify the safety case;
* a plant operator must not commission or operate a gas plant unless an accepted safety case has effect in relation to the gas plant;
* a plant operator must, within one month after the end of each auditing period, lodge a periodical audit of the safety case;
* a plant operator must establish and maintain a system for keeping records in relation to an accepted safety case for 5 years.
 |
| WA – Department of Energy, Mines, Industry Regulation and Safety | Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999 (WA) (Gas Standards (Gasfitting and Consumer Gas Installations) Regulations) | The Gas Standards (Gasfitting and Consumer Gas Installations) Regulations impose a range of obligations on gasfitters working on gas installations. While the majority of these obligations related to consumers' gas installations and are accordingly likely irrelevant to hydrogen refuelling facilities, some obligations relate to gas installations more generally. These include obligations to work in a safe manner; to ensure that each part of a gas installation worked on or affected by work is safe to use; to ensure that work is completed to a trade finish; to ensure that equipment is suitably placed within the gas installation; to ensure that equipment is installed in accordance with designer or manufacturer instructions or recommendations; to affix approved badges/labels to completed works; to submitting notices of completion for completed work; and to notify the regulator of defect work liable to render a gas installation unsafe to use.The Gas Standards (Gasfitting and Consumer Gas Installations) Regulations additionally impose incident reporting obligations on people generally. 'Incident' in this context refers to an event or circumstance involving the sudden discharge of gas or that otherwise relates to gas, and which causes or is likely to cause injury to a person or damage to property. This obligation applies generally to the operators of hydrogen refuelling facilities. |
| WorkSafe WA | Work Health and Safety laws | Refer to the Work Health and Safety Law Legislation summaries. |

## Western Australia regulations with a low degree of relevance to hydrogen refuelling facilities

The legislative instruments set out in the table below:

* have less potentially specific application to hydrogen refuelling facilities, or
* are out of scope of the definition of hydrogen refuelling facilities for this Guidebook,
* are unlikely to apply to hydrogen refuelling facilities but are included for transparency (e.g. because they apply to a similar industry such as natural gas supply chains).

| **Regulator** | **Legislative Instrument** | **Summary** |
| --- | --- | --- |
| WA – Economic Regulation Authority | *Energy Coordination Act 1994* (WA) (Energy Coordination Act) | The Energy Coordination Act is an Act to provide for (essentially) economic regulation of gas supplied through distribution pipelines to end use consumers.Included for the purposes of transparency. Unlikely to be relevant to on-site hydrogen refuelling facilities due do the definition of distribution system.**Distribution system means** —(a) a system of pipelines, mains, and gas service pipes, designed to operate at a pressure of less than 1.9 megapascals, for the transportation of gas to customers; or(b) any other part of the gas distribution system (as defined in section 90 of the Gas Corporation Act 1994 repealed by section 93 of the Gas Corporation (Business Disposal) Act 1999) at the time when a distribution licence is first issued for all or any part of that system (regardless of the pressure at which it is designed to operate),and any associated apparatus, facilities, structures, plant, or equipment;**gas means** any gas or mixture of gases, whether naturally occurring or manufactured, intended for use — (a) as a fuel; or(b) in any chemical process;**supply**, in relation to gas, means — (a) the transportation of gas through a distribution system; or(b) the sale of gas transported through a distribution system; |
| WA – Department of Water and Environmental Regulation | *Water Services Act 2012* (WA) (Water Services Act) | The Water Services Act regulates water service providers and the provision of water services.The term 'water service' means a water supply, sewerage, irrigation or drainage service and may apply where water is supplied to or drained from the premises of hydrogen refuelling facilitiesThe definition of 'water supply service' is a "service principally constituted by the supply of water (whether or not potable) by means of reticulated conduits and other appropriate water supply work.The definition of 'drainage service' is:‘a service —(a) principally constituted by —(i) the management of the flow of stormwater, surface water or ground water by means of reticulated drainage assets; or(ii) the management of soil salinity by means of reticulated drainage assets; and(b) which may include the management of the quality of the water dealt with.’Providers of water services must:* be licensed
* comply with all duties under the Water Services Act
* provide services on reasonable terms (subject to certain exemptions)
* operate and maintain the works specified in the license
* provide various documents to the regulator, including an asset management system, yearly operational audits
* comply with any applicable codes of practice or codes of conduct and
* -comply with the conditions of their license.
 |

# Annexure 5B: Hydrogen Refuelling Legislation - Environment and Planning Legislation summaries

# Introduction

This Annexure 5 (Hydrogen legislation summaries) outlines the main environment, first nations and planning related legislation and regulators across Australia that are relevant to one or more activities in operating a hydrogen refuelling facility.

This should be read in conjunction with chapter 4 and annexure 4 of the Guidebook. Where chapter 4 focuses on providing regulatory transparency directly relevant to key compliance activities, this Annexure 5 provides greater context through an overview of legislation relevant to hydrogen refuelling facilities discussed in the Guidebook and identifies the appropriate regulators for these schemes.

The legislation summarise are separated by jurisdiction. Each jurisdiction then has legislation summaries separated into two sections: regulations with a high degree of relevance to hydrogen refuelling facilities and those regulations that are less directly relevant.

Regulations with a low degree of relevance are those regulations that:

* have less potentially specific application to hydrogen refuelling facilities, or
* are out of scope of the definition of hydrogen refuelling facilities for this Guidebook, or
* are unlikely to apply to hydrogen refuelling facilities but are included for transparency (e.g. because they apply to a similar industry such as natural gas supply chains).

This information is included for completeness, these are regulatory provisions proponents of hydrogen refuelling facilities should be aware of and consider their operation and legal application

# Commonwealth legislation summaries – Environment and Planning

This table outlines a list of existing regulations which go to environment and planning and applies to one or more activities anticipated to occur in developing or operating a hydrogen refuelling facility.

This list is current as at [date] and is limited to the facility scope outlined in chapters 1.6.2 and 2 of the Guidebook and the Regulatory obligations: First Nations, Planning and Environment addressed in chapter 4 of the Guidebook.

| **Regulator** | **Legislative Instrument** | **Summary** |
| --- | --- | --- |
| Cth – Department of Climate Change, Energy, the Environment and Water  | *Environment Protection and Biodiversity Conservation Act* (Cth) AndEnvironment Protection and Biodiversity Conservation Regulations 2000 (Cth) | The *Environment Protection and Biodiversity Act 1999* (EPBC Act) does not have any hydrogen specific obligations and will apply the same way it does to other projects. The EPBC Act protects matters of national environmental significance (MNES). If an activity will have or is likely to have a significant impact on MNES, the proponent must refer the project to the Commonwealth for a decision on whether assessment and approval is required under the EPBC Act. Projects that require assessment and approval are termed "controlled actions". Once an action is referred to the Commonwealth, it is a serious breach or offence to commence that action while waiting for a referral or approval decision. The EPBC Act is administered by the Commonwealth Minister for the Environment. Approvals are given by the Minister or their delegate.  The EPBC Act will be relevant to hydrogen projects that will have or could have a significant impact on MNES. MNES include World Heritage properties; National Heritage places, wetlands of international importance (Ramsar wetlands), listed threatened species and ecological communities, listed migratory species (protected under international agreements), Commonwealth marine areas, the Great Barrier Reef Marine Park, nuclear actions, water resources (in relation to coal seam gas development and large coal mining development), actions within or impacting on Commonwealth land, or actions undertaken by a Commonwealth agency.Environmental impacts relevant to the EPBC Act associated with the hydrogen industry could include (but are not limited to): habitat disturbance from land clearing, disturbance to aquatic ecosystems from changes to water quality or hydrological regimes, and risks of environmental contamination from leaks/spills of saline waste or toxic substances (such as during transport). Ancillary infrastructure associated with hydrogen production may also require approval, including pipelines and new or expanded port facilities. The Commonwealth expects all referred actions to demonstrate that they have followed the mitigation hierarchy of first avoiding, then mitigating, and finally offsetting to limit the amount of damage an action will have on the environment. Projects that are sited to avoid impacts to MNES may result in faster overall assessment and approval processes. ***Assessment pathways / Bilateral assessment by a state or territory government***Under the EPBC Act, the Commonwealth Minister for the Environment can make a written agreement with a state or territory government called a bilateral agreement. The Australian Government has established bilateral agreements with every state and territory since 2015.If a proposed action with impacts to MNES is also undergoing a state or territory assessment, it may undergo a bilateral assessment. A bilateral agreement allows a state or territory to assess the environmental impacts of a proposed action on behalf of the Commonwealth, reducing duplication. After their assessment, the state or territory gives the Commonwealth a report assessing the project’s likely impacts on MNES. The project still needs the Commonwealth Minister for the Environment’s approval before it can go ahead.   |
| Cth – Department of Climate Change, Energy, the Environment and Water  | *National Greenhouse and Energy Reporting Act 2007* (Cth)AndNational Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015 (Cth) | This Act has no hydrogen specific obligations, but will apply to hydrogen projects the same way as other projects that trigger emissions thresholds.Establishes 2 schemes which regulate greenhouse gas emissions from high emission facilities. The first requires these facilities to report their greenhouse gas emissions. The second requires these facilities to limit their emissions to a suitable level or pay monies. The *National Greenhouse and Energy Reporting Act 2007* (NGER Act) provides the framework for the operation of the NGER Reporting Scheme.The NGER Act is of general application including to hydrogen refuelling facilities. However, it is considered to be not sufficiently hydrogen specific for inclusion in the Guidebook.All identified H2 production methods are capture by the currently available h2 methods. The Act operates by measuring the type of fuel being used. Emissions intensity is set by reference to industry standard.  It has not been updated for the purposes of lower intensity technologies being adopted by industry.  This is a broader question beyond H2.  |
| Cth – Department of Prime Minister and Cabinet | *Aboriginal Land Rights Act 1976* (Cth)  | Regulates land granted or claimed by First Nations peoples under this legislation within the Northern Territory.  |
| Cth –Department of Climate Change, Energy, the Environment and Water | *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (Cth)  | Empowers the relevant Commonwealth Minister to make a declaration to protect areas and objects of significance to First Nations people from threats of injury or desecration. A declaration is a legislative instrument, and it is an offence to breach a declaration.Applications must be from a First Nations person or group of people (or representative of). The ATSIHP Act is an avenue of last resort and used where it appears that State or Territory laws have not provided effective protectionA declaration, once made, can stop activities and works from occurring and override other approvals if those activities contravene the declaration.. |
| Cth –The Attorney-General's Department National Indigenous Australians Agency (NIAA) | *Native Title Act 1993* (Cth)  | This Act has no hydrogen specific obligations, but will apply to hydrogen projects the same way as other projects that may interact with native title land. Native title rights and interests are the communal, group or individual rights and interests of First Nations peoples in relation to land and waters, possessed under traditional law and custom, by which those people have a connection with an area which is recognised under Australian law. These rights and interests may exist even if a native title claim has not yet been lodged, or a claim hasn't yet been determined by a court.Many large scale hydrogen projects are expected to be developed in regional and remote areas on land and sea country that have legally recognised rights for First Nations people, making them important partners in growing the hydrogen industry. Detailed mapping of native title claims and determinations and Native Title Representative Bodies (NTRBs - which have a role where there is no native title claim or determination) is available on the National Native Title Tribunal website: nntt.gov.au.Hydrogen refuelling facilities themselves have a comparatively small footprint compared to renewable energy. However, consideration should be given to whether each project will affect native title rights and interests and the appropriate compliance with processes under the *Native Title Act 1993* to ensure projects are validly undertaken.In order for a project to be validly done, it must comply with the provisions of the ‘future acts regime’ of the *Native Title Act 1993*. As these activities may constitute 'future acts', proponents may have legal obligations to native title holders and registered native title bodies corporate in relation to their activities. This may involve entering into an ‘Indigenous land use agreement’ (ILUA) with native title holders, which confirms the native title party consents to the project.  By embedding meaningful First Nations engagement into project development, design and implementation processes, communities will realise cultural, social and economic benefits through the growth of the hydrogen industry. Industry will also benefit from improved social licence outcomes and greater certainty. Unlike mining and traditional energy projects, the environmental impacts of hydrogen projects (and associated renewable energy generation) are less certain. Early engagement with Traditional Owners is key so that proponents can obtain advice about the specific country's landscape and areas of significance so the project can be developed with appropriate respect paid to those areas.   |
| Cth –Department of Infrastructure, Transport, Regional Development, Communications and the Arts | *Airports Act 1996* (Cth)  | The *Airports Act 1996* establishes a system for regulating leased federal airports, including: * a requirement for major development plans for significant developments at airports (developments over $25 million)
* most building activities on airport sites require approval (maintenance type activities may be exempt)
* buildings and structures on airport sites must be certified as complying with the relevant regulations and in some cases the jurisdictional codes and/or Australian Standards
* each airport must have an environmental strategy and the regulations may deal with environmental standards at airport sites
* regulations may control intrusions into prescribed airspace at and around airports.

Hydrogen production facilities near airports may require approvals if it causes emissions or turbulence above levels prescribed by regulations. The Act also provides for activities to be 'controlled activities' where the activity exceeds certain emissions of steam or gas but no levels have been prescribed at this time.  |
| Cth –Department of Infrastructure, Transport, Regional Development, Communications and the Arts | Airports (Environmental Protection) Regulations 1997 (Cth)  | The Airports (Environment Protection) Regulations 1997 establish a series of environmental requirements for airport land and operations on leased federal airports. Hydrogen refuelling facilities on airport land will need to comply with relevant environmental obligations.  |
| Cth –Department of Infrastructure, Transport, Regional Development, Communications and the Arts  | Airport (Building Control) Regulations 1996 (Cth)  | The Airport (Building Control) Regulations 1996 establish a system for regulating building activities on leased federal airports, including: * most activities will require approval under the Regulations (some maintenance type activities may be exempt).
* buildings, development, construction and structures on airport sites must go through an approval process, facilitated by the Airport Building Controller
* the Airport Building Controller will consider the regulations, and any applicable building laws (e.g. the National Construction Code).
* the Airport Building Controller issues certificates of compliance at the completion of the building activity.
* buildings and structures on airport sites must be certified as complying with the relevant regulations and in some cases the jurisdictional codes and/or Australian Standards.
 |
| Cth –Department of Infrastructure, Transport, Regional Development, Communications and the Arts  | Airports (Protection of Airspace) Regulations 1996 (Cth)  | The Airports (Protection of Airspace) Regulations 1996 establishes a system for the protection of airspace at, and around federal leased airports in the interests of the safety, efficiency or regularity of existing or future air transport operations into and out of airports. Relevantly, it provides details of what is prescribed airspace and threshold turbulence levels for activities controlled under the *Airports Act 1996*. |

## Commonwealth regulations with a low degree of relevance to hydrogen environment and planning

The legislative instruments set out in the table below:

* have less specific application to hydrogen environment and planning, or
* are out of scope of the definition of hydrogen environment and planning for this Guidebook,
* do not apply to hydrogen environment and planning but are included for transparency (e.g. because they apply to a similar industry such as natural gas supply chains).

| **Regulator** | **Legislative Instrument** | **Summary** |
| --- | --- | --- |
| Cth –Department of Climate Change, Energy, the Environment and Water | *Environment Protection (Sea Dumping) Act 1981* (Cth)Environment Protection (Sea Dumping) Regulation 1983 (Cth)   | This Act is not relevant to onshore hydrogen refuelling facilities but will be relevant to hydrogen or derivatives transported by ship. Waters surrounding Australia's coastlines are protected from waste and pollution dumped at sea by the *Environment Protection (Sea Dumping) Act 1981* (Sea Dumping Act).The Sea Dumping Act regulates the loading and dumping of waste at sea and the creation of artificial reefs in Australian waters. Australian waters stretch from the low-water mark of the Australian shoreline out to 200 nautical miles (nm). It does not include waters within the limits of a state or territory. The Sea Dumping Act: * prohibits the ocean disposal of material considered too harmful to be released into the marine environment
* regulates permitted ocean waste disposal to minimise its environmental impacts
* regulates the placement of artificial reefs for the purposes of enhancing the marine environment
* applies to all vessels, aircraft, and platforms in Australian waters, and to all Australian vessels and aircraft in any part of the sea.
* Sea dumping is any:
* deliberate disposal into the sea of wastes or other matter from vessels, aircraft, platforms, or other man-made structures at sea
* deliberate disposal into the sea of vessels, aircraft, platforms, or other man-made structures at sea
* storage of wastes or other matter in the seabed and the subsoil thereof from vessels, aircraft, platforms, or other man-made structures at sea
* abandonment or toppling at site of platforms or other man-made structures at sea, for the sole purpose of deliberate disposal.

Sea dumping does not include: * disposal derived from the normal operations of vessels, aircraft, platforms, or other man-made structures at sea such as sewage and galley scraps. For these discharges, you must comply with legislation administered by the Australian Maritime Safety Authority
* placing matter for a purpose other than disposal, provided that such placement is not contrary to the aims of the London Protocol
* scattering human ashes at sea (however, you need a permit to perform a sea burial).
 |
| Cth –Department of Climate Change, Energy, the Environment and Water  | *National Environment Protection Council Act 1994* (Cth) - National Environment Protection Measures  | This Act does not directly apply to hydrogen refuelling projects but creates obligations on jurisdictions that sign up to National Environment Protection Measures (NEPMs) which may be passed on under jurisdictional environmental protection legislation.The National Environment Protection Council (NEPC) comprises one Minister from each Australian state and territory. The NEPC is established by and has law making powers under the *National Environment Protection Council Act* and mirror legislation enacted in each jurisdiction.The NEPC has two primary functions:1. To make NEPMs
2. To assess and report on the implementation and effectiveness of NEPMs in participating jurisdictions.

NEPMs are made by NEPC Ministers and are implemented in each jurisdiction. Decisions about the way in which NEPMs are implemented are made by each jurisdiction individually. Jurisdictions choose which NEPMs to implement and not all jurisdictions adopt all NEPMs. As at March 2024, NEPMS include: * Air Toxics
* Ambient Air Quality
* Assessment of Site Contamination
* Diesel Vehicle Emissions
* Movement of Controlled Waste
* National Pollutant Inventory
* Used Packaging
 |
| Cth –Department of Climate Change, Energy, the Environment and Water  | National Environment Protection (Air Toxics) Measure (Cth) | This Act does not directly apply to hydrogen refuelling projects but creates obligations on jurisdictions that sign up to NEPMs which may be passed on under jurisdictional environmental protection legislation. The National Environment Protection (Air Toxics) Measure is designed to facilitate management of air toxics in ambient air that will allow for the equivalent protection of human health and well-being by: * providing for the generation of comparable, reliable information on the levels of toxic air pollutants at sites where significantly elevated concentrations of one or more of these air toxics are likely to occur and where the potential for significant population of air toxins exists
* establishing a consistent approach to the identification of such sites across Australia and a consistent frame of reference for assessing likely significance of levels of air toxics
* adopting a nationally consistent approach to monitoring air toxics at a range of locations (e.g. near major industrial sites, major roads, areas affected by wood smoke).

The measure requires jurisdictions to report on air toxics and corresponding reporting obligations are commonly passed onto projects under jurisdiction specific environment protection legislation. Air toxics are prescribed in schedule 1 to which the measure applies are: Benzene, Formaldehyde, Benzo(a)pyrene, Toluene, Xylenes. Technical advice is required to determine relevant of this measure to hydrogen and derivative production.  |
| Cth –Department of Climate Change, Energy, the Environment and Water | *Water Act 2007* (Cth) | This Act has no hydrogen specific obligations but will apply to hydrogen projects the same way as other projects that may interact with the Basin water resource.  The *Water Act 2007* enables the Commonwealth, in conjunction with the Australian Capital Territory, New South Wales, Queensland, South Australia and Victoria (the Murray Darling Basin States), to manage the Basin water resource (which includes ground water and surface water) in the national interest and to promote the use and management of the Basin water resources in a way that optimises economic, social and environmental outcomes. The MDBA is also the enforcement agency responsible for dealing with contraventions of the Act or its regulations. Offences include: * taking water when not permitted under State law--basic contravention
* water access right before water announcement made or generally available in contravention of the Basin Plan.
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# Australian Capital Territory legislation summaries – Environment and Planning

This table outlines a list of existing regulations which go to environment and planning which apply to one or more activities anticipated to occur in developing or operating a hydrogen refuelling facility.

This list is current as at [date] and is limited to the facility scope outlined in chapters 1.6.2 and 2 of the Guidebook and the Regulatory obligations: First Nations, Planning and Environment addressed in chapter 4 of the Guidebook.

| **Regulator** | **Legislative Instrument** | **Summary** |
| --- | --- | --- |
| ACT –Environment Planning and Sustainable Development Directorate | *Building Act 2004* (ACT)  | Most building projects in the ACT involving new builds, alterations, additions and demolition require building approval. Development approval under planning legislation is also required before a project can get building approval (refer to *Planning Act 2023*). The building approval is designed to ensure proposed building work complies with relevant building laws and regulations and the National Construction Code. For most new building work a certificate of occupancy or use is required before the building can be occupied and used. Certificates of occupancy and use are issued if the building work is complete and is either fully or substantially built in accordance with approved plans and building laws. This includes any associated electrical, gasfitting and plumbing. Hydrogen refuelling facilities will generally require a building approval and certificate of occupancy and use.  |
| ACT - Environment, Planning and Sustainable Development Directorate | *Environment Protection Act 1997* (ACT)  | The *Environment Protection Act 1997* creates a regulatory framework to help reduce and eliminate the discharge of pollutants into the air, land and water. Objectives of the Act include environmental protection and preventing environmental degradation and risk of harm to human health and the environment by promoting pollution prevention, clean production technology, recycling and waste minimisation. The Act establishes the Environment Protection Authority (EPA) as the statutory decision maker for environmental regulation and policy. The EPA administers legislation covering air and water quality, waste, contaminated land, noise, pesticides and hazardous waste. The Act includes a range of obligations relevant to hydrogen refuelling facilities: * section 22 establishes a general duty to take the steps that are practicable and reasonable to prevent or minimise environmental harm caused or likely to be caused by an activity.
* section 23 establishes a duty to notify actual or threatened environmental harm
* section 137 establishes offences for causing serious environmental harm or material environmental harm at section 138
* section 45 of the Environment Protection Regulations 2005 creates offences against soil, sand, building material or waste from development entering stormwater systems or waterways.

The Environment Protection Regulations 2005 provide for standards relating to air emissions, noise and pollution of waterways. Authorisations may be: * a standard environmental authorisation in relation to any prescribed activity; or
* an accredited environmental authorisation in relation to a prescribed activity in relation to which effect has been given or is being given to an environmental improvement initiative; or
* a special environmental authorisation in relation to a prescribed activity that is being conducted for the purposes of research and development, including for the purpose of trialling experimental equipment.
* It is an offence to conduct prescribed activities listed in Schedule 1 of the Act without an environmental authorisation issued under section 43. Schedule 1 does not specifically refer to hydrogen refuelling facilities.

Hydrogen production facilities will require an authorisation if: * the production site is on a site of 0.3 hectares or more; or
* in certain circumstances if the facility utilises wastewater treatment or reuse of more than 3ML per year.

Hydrogen refuelling facilities appear unlikely to require an authorisation.  However, in each case the Environmental Protection Authority (EPA) may require an environmental authorisation if the facilities are likely to cause serious or material environmental harm.   |
| ACT –Environment Protection Authority, Access Canberra, Chief Minister Treasure and Economic Development Directorate  | Environment Protection Regulations 2005 (ACT)  | These Regulations detail the standards for emissions to air, land and water.  |
| ACT –Environment, Planning and Sustainable Development Directorate  | *Heritage Act 2004* (ACT)  | This Act has no hydrogen specific obligations, but will apply to hydrogen projects the same way as other projects that may interact with heritage or Aboriginal places.  This Act regulates Aboriginal heritage, historic heritage and natural heritage. The Act provides for registration of sites of heritage significance, cultural heritage significance or natural heritage significance. The Act recognises that all Aboriginal places and objects have cultural value for Aboriginal people as part of their history and heritage. Some Aboriginal places and objectives have cultural and/or scientific/archaeological value which is beyond the ordinary and may also meet one or more the heritage significance criteria under the Act to warrant entry to the ACT Heritage Register. The Act requires a person to report the discovery of an Aboriginal place or object to the Heritage Council within 5 working days.  There are penalties that apply if a person damages any Aboriginal place or object in the ACT or engages in conduct that diminishes the heritage significance of a place or object. Unlike natural and historic heritage places and objectives which must be nominated and registered to be protected, all Aboriginal places and objects on Territory land and some places located within Designated Areas are protected under the Act.   |
| ACT –Community Services Directorate  | *Native Title Act 1994* (ACT)  | This Act has no hydrogen specific obligations, but will apply to hydrogen projects the same way as other projects that may interact with native title land. Native Title refers to the rights and interests First Nations people have in land and waters based on their traditional laws. Even if these rights haven't been officially recognised by a court, they may still exist. Many large scale hydrogen projects are expected to be developed in regional and remote areas on land and sea country that have legally recognised rights for First Nations people, making them important partners in growing the hydrogen industry.Hydrogen refuelling facilities themselves have a comparatively small footprint compared to renewable energy. However, any project can have potentially serious impacts on country. By embedding meaningful First Nations engagement into project development, design and implementation processes, communities will realise cultural, social and economic benefits through the growth of the hydrogen industry. Industry will also benefit from improved social licence outcomes and greater certainty. Unlike mining and traditional energy projects, the environmental impacts of hydrogen projects (and associated renewable energy generation) are less certain.  Early engagement with Traditional Owners is key so that proponents can obtain advice about the specific country's land scape and areas of significance so the project can be developed with appropriate respect paid to those areas.   |
| ACT –Environment, Planning and Sustainable Development Directorate  | *Planning Act 2023* (ACT) Planning (General) Regulations 2023 (ACT)  | The *Planning Act 2023* is the foundation of the planning system informing all elements of planning and development in the ACT. The Planning (General) Regulations provide for administrative details, including which government and non-government agencies to consult and timeframes relating to consultation. The Act prescribes the development assessment process to ensure development proposals meet desired planning outcomes, including applicants demonstrating how they meet the requirements of the ‘Territory Plan’.  Most hydrogen refuelling facilities would appear unlikely to meet the requirements of an exempt activity and will require development approval from the Territory Planning Authority. Where a project is declared to be a Territory Priority Project the decision-maker is the Minister for Planning. Certain development is considered to be "significant development". If the proposed development is "significant development" the planning approval pathway is described in Chapter 6 of the Planning Act and requires preparation of an Environmental Impact Statement (EIS).  Environmental impact assessment is typically in the form of an EIS, but in some cases a proponent may instead apply for an opinion indicating that the proposal is not likely to have a significant adverse environmental impact (an environmental significance opinion(ESO)). The kinds of development which require an EIS are: * prescribed in Part 1.2 of Schedule 1 of the Planning (General) Regulation 2023 (ACT)
* where the Minister makes a declaration in relation to the proposal
* the Commonwealth advises the Minister that the proposed development is a controlled action under the EPBC Act
* a declaration is made under the *Public Health Act 1997* (ACT) in relation to the development application where it is considered the proposed development would be likely to have a significant effect on public health.

An EIS will likely be required for hydrogen refuelling activities unless it receives an ESO from the Territory Planning Authority indicating that the proposal is not likely to have a significant adverse environmental impact. |
| ACT –Environment Planning and Sustainable Development Directorate  | The Territory Plan (ACT)  | The Territory Plan is prepared and administered by the Territory Planning Authority as a notifiable instrument as required by section 45 of the *Planning Act 2023*.The Plan sets out a statutory framework for the future development and conservation of land in the ACT—in effect, the Plan is a policy about how land can be used and what can be built where.  The Territory Plan is primarily used to decide development applications and to make other planning related decisions, such as about zoning and use of land. Development applications must demonstrate how they meet the requirements of the ‘Territory Plan’. The plan expressly provides for hydrogen production and refuelling (including hydrogen production and storage for on-site fuelling purposes) in allocating land use and development opportunities in the ‘zone policies’.  Where an EIS is required, development applications must be referred to environmental authorities and the emergency services authority. There does not appear to be any requirement to refer to safety authorities. Where an EIS is not required either because an ESO is given or the hydrogen facility will store less than 200L, no referrals are required.  |
| ACT –Environment Planning and Sustainable Development Directorate | *Utilities (Technical Regulation) Act* (2014) (ACT)  | This Act regulates the ACT's "regulated utility services" to ensure that they are safe, reliable and efficient. A 'Regulated utility service' is partially defined by reference to the definition of 'utility service' in the *Utilities Act 2000* (ACT), which includes sewerage services.  Hydrogen refuelling activities may involve the discharge of trade waste, and depending on its chemical constitution, may interfere with the receiving utility networks.   This Act has no hydrogen specific obligations but will apply to hydrogen projects the same way as other projects that involves the discharge of trade waste into water or sewerage networks. It is an offence where a person introduces a substance into a water or sewerage network and that person is reckless as to the substance's interference with the network and is not authorised by the responsible utility for the network (section 35). The water utility provider for ACT, Icon Water, is the entity that issues trade waste approvals. Icon Water has published various Acceptance Guidelines and Liquid Waste Acceptance Policy in respect of how they manage trade waste.  On the basis of Icon Water's guidelines and policy statements, hydrogen refuelling activities will likely require trade waste approval. Whether approval will be granted, and what conditions may apply, will be subject to the constitution and flow rates of the waste.  |

## Australian Capital Territory regulations with a low degree of relevance to hydrogen environment and planning

The legislative instruments set out in the table below:

* have less specific application to hydrogen environment and planning, or
* are out of scope of the definition of hydrogen environment and planning for this Guidebook,
* do not apply to hydrogen environment and planning but are included for transparency (e.g. because they apply to a similar industry such as natural gas supply chains).

|  |  |  |
| --- | --- | --- |
| **Regulator** | **Legislative Instrument** | **Summary** |
| ACT –Environment Planning and Sustainable Development Directorate  | *Water Resources Act 2007* (ACT)  | The *Water Resources Act 2007* contains obligations of a general nature relating to water extracting and licensing. It does not contain any hydrogen specific obligations. Water extracting and licensing is outside the scope of the Guidebooks and this Act is not discussed in the Guidebooks.This Act controls how water can be used directly from water bodies including surface water and ground water in the ACT.All water use from Territory water bodies including streams, dams or groundwater is controlled by the Act. This includes the allocation of surface water or ground water and the licensing of use, licensing of drillers and licenses for the construction of bores and waterway works (including farm dams and weirs). The Act sets out environmental flow guidelines, mechanisms for the Minister to determine amounts of water available for taking in each water management area and considerations when determining water access entitlement amounts that are relevant to the amount of water a licence holder will be authorised to take.  |

# New South Wales legislation summaries – Environment and Planning

This table outlines a list of existing regulations which go to environment and planning and applies to one or more activities anticipated to occur in developing or operating a hydrogen refuelling facility.

This list is current as at [date] and is limited to the facility scope outlined in chapters 1.6.2 and 2 of the Guidebook and the Regulatory obligations: First Nations, Planning and Environment addressed in chapter 4 of the Guidebook..

| **Regulator** | **Legislative Instrument** | **Summary** |
| --- | --- | --- |
| NSW Aboriginal Land CouncilAboriginal Affairs NSW | *Aboriginal Land Rights Act 1983* (NSW)  | This Act has no hydrogen specific obligations, but will apply to hydrogen projects the same way as other projects that may interact with Aboriginal land.  The *Aboriginal Land Rights Act 1983* (ALRA) provides for the establishment of Aboriginal Land Councils in NSW and sets out a process whereby Crown lands can be claimed by Aboriginal Land Councils. If satisfied that the whole or a part of the land claimed is “claimable Crown lands”, the Minister must grant the claim by transferring the whole or part to the claimant Aboriginal Land Council. A successful claim leads to the transfer of an estate in fee simple, but subject to any native title rights existing in relation to the land immediately before the transfer (section 36).In general, the rights of Aboriginal Land Councils in respect of the land are the same as other landowners: they may exercise rights and create obligations to the same extent as any natural person holding the same estate or interest. The rights include rights of improvement, and the right to explore for or exploit mineral and other resources on land vested in them.  |
| NSW - Department of Planning, Housing and Infrastructure  | *Crown Land Management Act 2016* (NSW) [Crown Land Management Regulation 2018](https://www.legislation.nsw.gov.au/#/view/regulation/2018/88/full) (NSW) | This Act has no hydrogen specific obligations, but will apply to hydrogen projects the same way as other projects that may interact with Crown land.  The *Crown Land Management Act 2016* (the Act) provides a framework for the ownership, use, and management of Crown land.The management of Crown land is primarily the responsibility of Crown land managers, who can be local councils, Local Aboriginal Land Councils, statutory bodies, or other qualified entities. Crown land managers are responsible for the care, control, and management of specified dedicated or reserved Crown land. The Act also provides for the issuance of native title certificates by the Minister, which can state that native title rights and interests in relation to Crown land have been extinguished or do not exist. |
| NSW - Department of Planning, Housing and Infrastructure | *Environmental Planning and Assessment Act 1979* (NSW) Environmental Planning and Assessment Regulation 2021 (NSW)  | Does include regulatory obligations that apply to hydrogen refuelling facility activities. The *Environment Planning and Assessment Act 1979* (EP&A Act) sets up the framework for the NSW planning system by providing for how rules affecting development are made and how developments are assessed against those rules. The planning framework designates where certain types of development may be carried out and sets an assessment process that is proportionate to the scale, importance, risk and impact of that development. The Act specifies the types of approvals that are required to undertake building work in NSW, and the matters that must be satisfied as part of those approvals including that building work complies with the relevant requirements of the Building Code of Australia, which forms a part of the National Construction Code. The Environmental Planning and Assessment Regulation 2021 (NSW) (EP&A Regulation) details, amongst other matters, certain processes that must be followed by consent authorities such as councils when assessing development applications.Hydrogen activities/developments are not explicitly defined in any legislation under the NSW planning framework. Relevant land uses will include: * production: heavy industries (including hazardous industry), heavy industrial storage establishment (including hazardous storage establishment)
* refuelling facility: service station, highway service centre.

It is likely that hydrogen refuelling activities will not meet the requirements for exempt or complying development and development approval will be required. The nature, scale and location of the refuelling facility will inform the necessary development approval pathway. Consent authorities must consider the likely impacts of a development on the natural and built environments, and social and economic impacts in a locality when considering whether to grant consent to a development. Applications for hydrogen refuelling facilities will generally need to be accompanied by an environmental assessment. Proposals that are large-scale and/or high-risk and/or of potentially high environmental impact will require an environmental impact statement. These proposals are categorised as SSD, SSI or designated development. Development applications which are not State significant development (SSD), State significant infrastructure (SSI) or designated development must be accompanied by a statement of environmental effects. A hydrogen refuelling facility with estimated development cost of more than $30 million will likely be classified as SSD and trigger specific approval requirements (including the need for an environmental impact statement). Schedule 3 to the EP&A Regulation identifies certain types of chemical industrial facilities and works (regulation 12) and chemical storage facilities (regulation 13) as designated development. These development types may be of relevance to either hydrogen refuelling facilities. This schedule prescribes both location and capacity thresholds for these developments to be identified as designated development.  |
| NSW - Department of Planning, Housing and Infrastructure  | Standard Instrument - Principal Local Environmental Plan (2006 EPI 155a)  | The Standard Instrument sets out standard definitions used for characterising development that are relevant to hydrogen activities. These definitions are usually adopted in both Local Environmental Plans (LEPs) and State Environmental Planning Policies (SEPPs). Relevantly, it includes definitions for heavy industry,hazardous industry, service stations and highway service centres.  |
| NSW - Department of Planning, Housing and Infrastructure  | State Environmental Planning Policy (Industry and Employment) 2021 (NSW)  | The State Environmental Planning Policy (Industry and Employment) 2021 contains planning provisions applying to employment land in western Sydney and could apply to hydrogen refuelling stations in that area.  |
| NSW - Department of Planning, Housing and Infrastructure | State Environmental Planning Policy (Planning Systems) 2021 (NSW)  | State Environmental Planning Policy (Planning Systems) 2021 (Planning Systems SEPP) identifies development which is State Significant Development (SSD) and so subject to the SSD assessment and approval process under Part 4 of the EP&A Act. Pursuant to section 2.6(1) of the Planning Systems SEPP, development is declared to be SSD for the purposes of the EP&A Act if: 1. the development on the land concerned is, by operation of an environmental planning instrument, not permissible without development consent under Part 4 of the EP&A Act and
2. the development is specified in Schedule 1 or 2 of the Planning Systems SEPP.

Section 10 of Schedule 1 specifies that development with an estimated development cost of more than $30 million for the purpose of manufacturing or reprocessing of fuels or gas, or is a liquid fuel depot, gas storage facility or chemical storage facility is SSD. Additionally, this section specifies that development for the purpose of manufacturing, storing or using dangerous goods in quantities that constitute a major hazards facility under Schedule 15 of the *Work Health and Safety Regulation 2017* is SSD and is not subject to any estimated development cost thresholds. |
| NSW - Department of Planning, Housing and Infrastructure | State Environmental Planning Policy (Resilience and Hazards) 2021 (NSW)  | State Environmental Planning Policy (Resilience and Hazards) 2021 (Resilience and Hazards SEPP) contains planning provisions to manage hazardous and offensive development which will include hydrogen refuelling. It also contains planning provisions: * for land use planning within the coastal zone, consistent with the *Coastal Management Act 2016*
* which provide a state-wide planning framework for the remediation of contaminated land and to minimise the risk of harm.

Chapter 3 of the Resilience and Hazards SEPP aims to regulate the determination of development for the purposes of carrying out a potentially hazardous industry or potentially offensive industry.  If a potentially hazardous or offensive industry is proposed to be carried out, a hazard and risk assessment must accompany the development application, subject to clause 3.11 of the Resilience and Hazards SEPP.  |
| NSW - Department of Planning, Housing and Infrastructure | State Environmental Planning Policy (Transport and Infrastructure) 2021 (NSW)  | State Environmental Planning Policy (Transport and Infrastructure) contains planning provisions: * for infrastructure in NSW, such as hospitals, roads, railways, emergency services, water supply and electricity delivery
* for child-care centres, schools, TAFEs and universities
* for the protection of three corridors (North South Rail Line, South West Rail Link extension and Western Sydney Freight Line)

the land use planning and assessment framework for appropriate development at Port Kembla, Port Botany and Port of Newcastle, including permissible uses based on land use zones and the mapped Leased Area of these ports. |
| NSW - Department of Planning, Housing and Infrastructure  | State Environmental Planning Policy (Resources and Energy) 2021 (NSW)  | This SEPP contains planning provisions: * for the assessment and development of mining, petroleum production and extractive material resource proposals in NSW
* which aim to facilitate the development of extractive resources near the population of the Sydney Metropolitan Area by identifying land which contains extractive material of regional significance.

It is not relevant to hydrogen hydrogen refuelling facilities. Note that naturally occurring hydrogen is outside the scope of these Guidebooks.  |
| NSW - Department of Planning, Housing and Infrastructure | State Environmental Planning Policy (Biodiversity and Conservation) 2021 (NSW)  | This SEPP addresses a number of environmental matters outside of the scope of Guidebooks, including: * planning rules and controls for the clearing of native vegetation in NSW on land zoned for urban and environmental purposes that is not linked to a development application
* the land use planning and assessment framework for koala habitat
* provisions seeking to protect and preserve bushland within public open space zones and reservations
* other site/region specific environmental matters
 |
| Heritage NSW NSW - Department of Climate Change, Energy the Environment and Water  | *Heritage Act 1977* (NSW)  | This Act has no hydrogen specific obligations, but will apply to hydrogen projects the same way as other projects that may interact with items and places of State and Local Heritage Significance. The *Heritage Act 1977* provides for the protection and conservation of heritage in NSW. It establishes the Heritage Council and State Heritage Register, which lists items and places of State and Local Heritage Significance.It is an offence under this Act to do any of the following, except in pursuance of an approval granted under the Act:* + demolish a building or work;
	+ damage or despoil a place, precinct or land;
	+ move, damage or destroy a relic or movable object;
	+ excavate any land for the purpose of exposing or moving a relic;
	+ carry out any development in relation to the land on which a building, work or relic is situated;
	+ alter the building, work, relic or movable object;
	+ display any notice or advertisement on the place, building, work, relic, movable object or land, or in the precinct; or
	+ damage or destroy any tree or other vegetation on or remove any tree or other vegetation from the place, precinct or land if the building, work, relic, or place is subject to an interim heritage order or listing on the State Heritage Register.
 |
| NSW - Natural Resources Access Regulator NSW Water NSW - Department of Climate Change, Energy the Environment and Water  | *Hunter Water Act 1991* (NSW)  | The Hunter Water Act establishes Hunter Water, a State owned corporation, for the supply of water, the provision of sewerage and drainage services and the disposal of waste water in the Hunter region. The Act also contains the necessary statutory basis for Hunter Water to perform its functions. This Act has no hydrogen specific obligations but will apply to hydrogen projects the same way as other projects that involves the discharge of trade waste into water or sewerage networks, if located within the Hunter region of NSW. It is an offence to discharge any substance into a work owned by Hunter Water, without written agreement (section 31). 'Work' is defined in the Act to mean 'water mains, sewer mains, drainage channels and any works ancillary to those works'.Hunter Water enters into trade waste deeds as the written agreement contemplated by the Act, which sets out the terms and conditions for trade waste discharge. Hunter Water's assessment of applications for trade waste deeds are made in accordance with its Trade Wastewater Standard and Trade Wastewater Policy.  The hydrogen refuelling activities will require trade wastewater deed in order to discharge any trade waste to infrastructure owned by Hunter Water. Whether Hunter Water will enter into a deed, and on what terms, will depend on the constitution of the trade waste, and whether it complies with the Standard and Policy.  |
| NSW - Department of Climate Change, Energy the Environment and Water  | *Local Government Act 1993* (NSW)  | The *Local Government Act 1993* establishes the legal framework for the system of local government for NSW.  This Act has no hydrogen specific obligations but will apply to hydrogen projects the same way as other projects that involves the discharge of trade waste into water or sewerage networks, if located within regional NSW (i.e. outside of Sydney and the Hunter Region). The Act details what activities require the approval of a local council, which includes the disposal of waste into a sewer of a Council (section 68). The failure to obtain, or comply with, an approval are each an offence under the Act (sections 626 and 627). Waste means:1. effluent, being any matter or thing, whether solid or liquid or a combination of solids and liquids, which is of a kind that may be removed from a human waste storage facility, sullage pit or grease trap, or from any holding tank or other container forming part of or used in connection with a human waste storage facility, sullage pit or grease trap, or
2. trade waste, being any matter or thing, whether solid, gaseous or liquid or a combination of solids, gases and liquids (or any of them), which is of a kind that comprises refuse from any industrial, chemical, trade or business process or operation, including any building or demolition work, or
3. garbage, being all refuse other than trade waste and effluent, and includes any other substance defined as waste for the purposes of the *Protection of the Environment Operations Act 1997*, and a substance is not precluded from being waste merely because it is capable of being refined or recycled.

In approving and imposing conditions for a trade waste approval, the local council is to have regard to the Liquid Trade Waste Management Guidelines. The Act does not apply to the Sydney metropolitan or Hunter regions, which are respectively regulated by the *Sydney Water Act 1994* and *Hunter Water Act 1991*. It is an offence under of those Acts to discharge any substance into a work owned by the Corporation (Sydney Water Corporation or Hunter Water) without written agreement. 'Work' is defined in the Act to mean ‘water mains, sewer mains, drainage channels and any works ancillary to those works'. The relevant Corporation enters into trade waste deeds as the written agreement, and which set out the terms and conditions for trade waste discharge. Hunter Water's assessment of applications for trade waste deeds are made in accordance with its Trade Wastewater Standard and Trade Wastewater Policy.  Sydney Water Corporation may issue an approval in the form of a Consent to Discharge Trade Wastewater, where proposed discharge meets its published 'Industrial customers – acceptance standards and charging rates'.  Hydrogen refuelling activities may involve the discharge of trade waste and if so, will require a trade wastewater approval in order to discharge any trade waste into a sewer. Whether an approval is granted will depend on the constitution of the trade waste and whether it complies with the applicable guidelines.  |
| Heritage NSW  | *National Parks and Wildlife Act 1974* (NSW) National Parks and Wildlife Regulation 2019   | This Act has no hydrogen specific obligations but will apply to hydrogen projects the same way as other projects that may interact with Aboriginal objects and places.  The *National Parks and Wildlife Act 1974* provides for the establishment and management of National Parks, reserves, historic sites etc., and for the protection of native fauna, flora and Aboriginal heritage.It is an offence to harm an Aboriginal object, or harm or desecrate an Aboriginal place. There are some defences (see sections 87 and 87A), including if a person holds an Aboriginal heritage impact permit (AHIP). However, it is also an offence not to comply with a condition of the AHIP.  |
| NSW Attorney General’s Department | *Native Title (New South Wales) Act 1994* (NSW)  | This Act has no hydrogen specific obligations but will apply to hydrogen projects the same way as other projects that may interact with native title land. Native Title refers to the rights and interests First Nations people have in land and waters based on their traditional laws. Even if these rights haven't been officially recognised by a court, they may still exist. Many large scale hydrogen projects are expected to be developed in regional and remote areas on land and sea country that have legally recognised rights for First Nations people, making them important partners in growing the hydrogen industry.  Hydrogen refuelling facilities themselves have a comparatively small footprint compared to renewable energy. However, any project can have potentially serious impacts on country. By embedding meaningful First Nations engagement into project development, design and implementation processes, communities will realise cultural, social and economic benefits through the growth of the hydrogen industry. Industry will also benefit from improved social licence outcomes and greater certainty. Unlike mining and traditional energy projects, the environmental impacts of hydrogen projects (and associated renewable energy generation) are less certain. Early engagement with Traditional Owners is key so that proponents can obtain advice about the specific country's land scape and areas of significance so the project can be developed with appropriate respect paid to those areas.   |
| NSW Environment Protection Authority  | *Protection of the Environment Operations Act 1997* (NSW) Protection of the Environment Operations (General) Regulation 2022 (NSW)  | Does include regulatory obligations that apply to hydrogen refuelling facility activities. The *Protection of the Environment Operations Act 1997* (NSW) (the POEO Act) is the key piece of environment protection legislation administered by the NSW Environment Protection Authority (EPA). The EPA, local councils and other regulatory authorities share responsibility for environmental regulation as set out in that Act.The POEO Act includes a number of pollution offences relevant to hydrogen refuelling activities including: * pollution of waters (section 120)
* illegal dumping of waste (section 144AE)
* pollution of land (section 142A)
* failure to comply with a clean-up notice (section 91B)
* failure to comply with a prevention notice (section 97)
* failure to comply with the duty to notify pollution incidents (section 152).

The POEO Act requires an environment protection licence to permit the carrying out of certain development work and activities. Schedule 1 of the POEO Act sets out those activities and the scale of activity for which a licence is required. The POEO Act refers to these activities as scheduled activities. It is an offence to carry on a scheduled activity or scheduled development work without a licence from the EPA.There are three types of licences: * carrying out scheduled development work at any premises
* carrying out scheduled activities at any premises
* carrying out scheduled activities not related to premises.

The POEO Act requires a licence for the storage or production of hazardous chemicals at a premises, which may capture hydrogen and ammonia projects. The threshold for requiring a licence at a premises storing hazardous chemicals is 20 tonnes (pressurised gases), 200 tonnes (liquefied gases) or 2,000 tonnes (chemicals in any other form). The threshold for requiring a licence at a premises for the production of hazardous chemicals will vary depending upon the chemical being used. For example, if a facility has capacity to produce 20,000 tonnes of ammonia nitrate per year, it will require a licence.A licence may also be required if the facilities intend to store, process or dispose of waste.If hydrogen projects reach any triggers in the POEO Act that mean they classify as scheduled activities, a licence will be required.  |
| New South Wales Environment Protection Authority  | Protection of the Environment Operations (Waste) Regulation 2014  | Does include regulatory obligations that apply to hydrogen refuelling facility activities. See also summary on the POEO Act above. This Regulation (in addition to the POEO Act) provides the regulatory framework for the monitoring of waste and wastewater recovery, transportation and disposal over the lifecycle of a proposed development such as for hydrogen production and could capture spent catalysts, residual byproducts, receipt of waste or waste liquids and other matters. If the hydrogen refuelling facilities are classified as a ‘scheduled waste facility’ under the Regulation, then they are required to hold a licence under the POEO Act because they are undertaking one or more of the following scheduled waste activities: * Waste storage (clause 42 of Schedule 1 of the POEO Act)
* Waste processing (non-thermal treatment) (clause 41 of Schedule 1 to the POEO Act)
* Waste disposal (thermal treatment) (clause 40 of Schedule 1 to the POEO Act)
* Waste disposal (application to land) (clause 39 of Schedule 1 to the POEO Act)
* Resource recovery (clause 34 of Schedule 1 to the POEO Act)
* Composting (clause 12 of Schedule 1 to the POEO Act).

Scheduled waste facilities have various obligations under this Regulation, including the requirements to install and use a weighbridge, record and report incoming and outgoing waste, and pay the waste levy if it is triggered. This Regulation is also likely to apply to hydrogen refuelling facilities if the facilities generate waste tyres, asbestos waste, or other waste materials that are classified as trackable wastes under Schedule 1 to this Regulation and are sent offsite. In this case the facilities would be required to comply with the tracking and transport requirements contained in Parts 4, 5, 6 and 7 of this Regulation.  |
| New South Wales Environment Protection Authority  | Protection of the Environment Operations(Clean Air) Regulation 2022 | Does include regulatory obligations that apply to industrial air emissions from point sources at a hydrogen refuelling facility. Maximum limits for point source emissions of air pollutants from industry in NSW are contained in Part 5 of the Protection of the Environment Operations (Clean Air) Regulation. Where monitoring is required, industries in NSW must use EPA-approved methods to measure air pollutant emissions from their premises. The emission limits in Part 5 are a minimum standard and do not account for site-specific features such as meteorology, terrain, and background air quality. For sources of air pollutants where a prescribed limit does not exist, or the emissions are not point source emissions, the occupier must prevent or minimise air pollution through practicable means. |
| NSW - Department of Climate Change, Energy the Environment and Water New South Wales Environment Protection Authority NSW Water  | *Sydney Water Act 1994* (NSW)  | Does include regulatory obligations that apply to hydrogen refuelling facility activities. The *Sydney Water Act 1994* establishes Sydney Water Corporation, a State owned corporation, for the supply of water, the provision of sewerage and drainage services and the disposal of waste water in Sydney. The Act also contains the necessary statutory basis for Sydney Water Corporation to perform its functions. This Act has no hydrogen specific obligations but will apply to hydrogen projects the same way as other projects that involves the discharge of trade waste into water or sewerage networks, if located within Sydney, It is an offence to discharge any substance into any water mains, sewer mains, drainage channels and any ancillary infrastructure owned by Sydney Water Corporation, without written agreement (section 49).   Sydney Water Corporation sets different requirements for commercial and industrial trade wastewater. Hydrogen refuelling activities may produce trade waste, which will likely be categorised as industrial trade wastewater. Sydney Water defines trade wastewater to mean 'wastewater produced at industrial or commercial premises that contains substances that could affect the environment or the health of the community'. Whether trade wastewater is industrial or commercial is dependent on the business producing it. Industrial trade wastewater comes from: * food processing and manufacture
* beverage manufacture
* textiles
* truck washes
* large commercial laundries
* petroleum-based activities
* pharmaceutical and cosmetic activities
* chemicals, plastics and surfactants
* metals and surface coatings
* paper and board
* cement, stone and abrasives
* waste and wastewater treatment
* sewer mining and decentralised wastewater treatment
* businesses not specifically listed as businesses that produce commercial trade wastewater or approved as deemed processes

Deemed processes are business processes that Sydney Water consider are low risk, and discharge small volumes of trade wastewater. Hydrogen refuelling facilities do not fit within the deemed processes.  Sydney Water Corporation may issue an approval in the form of a Consent to Discharge Trade Wastewater, where proposed discharge meets its published '[Industrial customers – acceptance standards and charging rates](https://www.sydneywater.com.au/content/dam/sydneywater/documents/industrial-customers-acceptance-standards-and-charges.pdf)'. Discharge of substances into sewers in accordance with this approval does not constitute a water pollution offence under the POEO Act.Whether the hydrogen refuelling activities will be approved will be subject to the constitution of the trade waste, and its compliance with the acceptance standards. |

## New South Wales regulations with a low degree of relevance to hydrogen environment and planning

The legislative instruments set out in the table below:

* have less specific application to hydrogen environment and planning, or
* are out of scope of the definition of hydrogen environment and planning for this Guidebook,
* do not apply to hydrogen environment and planning but are included for transparency (e.g. because they apply to a similar industry such as natural gas supply chains).

| **Regulator** | **Legislative Instrument** | **Summary** |
| --- | --- | --- |
| NSW Environment Protection Authority  | *Protection of the Environment Administration Act 1991* (NSW)  | The *Protection of the Environment Administration Act 1991* (NSW) establishes the NSW Environment Protection Authority (EPA), the EPA Board and the EPA’s objectives. It sets out the functions, powers and responsibilities of the EPA in meeting its objectives.   |
| NSW Environment Protection Authority  | Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2022 (NSW)  | The Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2022 aims to minimise the risk to human health and the environment by requiring best practice design, installation and monitoring of underground petroleum storage systems. This Regulation only applies to petroleum (any liquid fuel that consists predominantly of a mixture of hydrocarbons) and does not apply to hydrogen. This Regulation does not apply to petroleum storage systems where tanks are situated wholly above ground or liquid petroleum gas storage systems.  |
| NSW -Department of Climate Change, Energy the Environment and Water | *Water Management Act 2000* | The *Water* *Management Act 2000* contains obligations of a general nature relating to water extracting and licensing. It does not contain any hydrogen specific obligations. Water extracting and licensing is outside the scope of the Guidebook and this Act is not discussed in the Guidebook. The objects of the *Water Management Act 2000* are to provide for the sustainable and integrated management of water sources (which includes surface water and groundwater) of NSW for the benefit of both present and future generations. NSW DCCEEW Water Planning is responsible for water sharing plans which define the rules for the sharing of water resources between consumptive users and the environment. The majority of water access licences are issued under the *Water Management Act 2000* but some are still issued under the *Water Act 1912*.  Water Sharing Plans made under this Act may include specific rules that could impact hydrogen refuelling activities where they involve significant water usage. |

# Northern Territory legislation summaries – Environment and Planning

This table outlines a list of existing regulations which go to environment and planning and applies to one or more activities anticipated to occur in developing or operating a hydrogen refuelling facility.

This list is current as at [date] and is limited to the facility scope outlined in chapters 1.6.2 and 2 of the Guidebook and the Regulatory obligations: First Nations, Planning and Environment addressed in chapter 4 of the Guidebook..

| **Regulator** | **Legislative Instrument** | **Summary** |
| --- | --- | --- |
| NT - Attorney-General's Department NT - Department of the Prime Minister and CabinetNT - Aboriginal Land Councils  | *Aboriginal Land Rights (Northern Territory) Act 1976* (CTH)  | This Act has no hydrogen specific obligations but will apply to hydrogen projects the same way as other projects that may interact with Aboriginal land. Under the *Aboriginal Land Rights (Northern Territory) Act 1976* (ALRA), land is vested in Land Trusts created under the Act and the land is managed in accordance with the requirements of the traditional owners, as ascertained by Land Councils established under the Act. The Act provides for the allocation of areas of land to the traditional Aboriginal owners as identified in procedures specified in the Act. It is an offence to enter or remain on Aboriginal land without a permit under the ALRA. Permits are issued by Land Councils. A permit is not required for entry to a lease or interest in Aboriginal land where for a purpose necessary or related to the use of that lease or interest. A Land Council can only direct the grant of a lease or interest by an Aboriginal Land Trust if it has consulted with the traditional owners of the affected land and they understand and consent to the terms and conditions of grant. |
| NT – Department of the Chief MinisterLand Councils | *Aboriginal Land Act 1978 (NT)* | The *Aboriginal Land Act 1978* plays a crucial role in protecting Aboriginal land in the Northern Territory by regulating access and reinforcing the rights of Traditional Owners. It requires most visitors to get permits from Traditional Owners or Land Councils, and even allows coastal waters to be closed off. It’s about respecting ownership, safeguarding culture, and supporting Aboriginal self-determination. |
| NT - Department of Lands, Planning and Environment  | *Building Act 1993* (NT)Building Regulations 1993 (NT)   | The Building Act is the primary legislation regulating the building industry in the NT. It contains obligations of a general nature relating to certification and occupation of buildings. It does not contain any hydrogen specific obligations.  The construction of hydrogen refuelling facilities will likely be 'building work' for the purpose of the Act which will require proponents: * to obtain and comply with a building permit before undertaking any building work. All building work must have a valid building permit issued by a registered building certifier prior to the commencement of works;
* to obtain and comply with an occupancy certificate before occupying a building;
* adhere to the minimum requirements outlined in the National Construction Code (NCC) and the relevant Australian Standards it references; and
* comply with all other relevant requirements of the NT building Act and Regulations.

The Act also regulates building practitioners (including building certifiers, certifying architects, plumbers and engineers), and building contractors.    |
| NT - Department of Lands, Planning and Environment  | *Environment Protection Act 2019* (NT) Environmental Protection Regulations 2020 (NT)  | The *Environment Protection Act 2019* provides for the protection of the environment of the Northern Territory including establishing an environmental impact assessment process for certain projects, environmental approvals and environmental licensing. The environmental impact assessment and approval process is designed to ensure that project actions do not have an unacceptable impact on the environment and are assessed, planned and carried out in accordance with key environmental and ecologically sustainable development principles. The environmental impact assessment may be commenced by the proponent of an activity, another statutory decision-maker such as the decision-maker assessing a development application, or by the Environment Protection Authority (NT EPA) on its own motion.  Proponents are required to refer a hydrogen refuelling facility to the NT EPA for assessment under this Act if the project will have the potential to have a significant impact on the environment. Where a project has or needs to be referred to the NT EPA for environmental assessment, no other statutory approvals such as development approvals can be granted until the completion of the environmental assessment process. There is currently no ‘hydrogen production’ specific activity under the *Environmental Protection Act 2019* process. The legislation provides a broad trigger for activities that has the potential to have a significant impact on the environment which then require an environmental impact assessment and an environmental approval.  |
| NT - Aboriginal Areas Protection Authority Minister for Aboriginal Affairs. | *Northern Territory Aboriginal Sacred Sites Act 1989* (NT)  | This Act has no hydrogen specific obligations, but will apply to hydrogen projects the same way as other projects that may interact with registered Aboriginal sacred sites  The *Northern Territory Aboriginal Sacred Sites Act 1989* (the Act) creates a Register of Aboriginal sacred sites and an approval procedure for people who want to enter onto, use, or carry out works on, sacred sites. The Act also establishes criminal offences for entering onto or damaging sacred sites without approval.  |
| NT - Department of Lands, Planning and Environment  | *Planning Act 1999* (NT) Planning Regulations 2000 (NT) NT Planning Scheme 2020  | The Northern Territory planning system is set up through the *Planning Act 1999* (NT) and Planning Regulations 2000 (NT) which explains how planning rules are made and changed, who makes decisions and the penalties for breaking planning rules. In the NT, planning responsibility sits with the NT Government rather than local councils. While local councils don't make planning decisions, they are consulted on proposals within their areas. The NT Planning Scheme is made under *Planning Act 1999*. The Planning Scheme is the ‘rule book’ for land use and development in the NT, containing maps, rules policies and documents that guide what can be built where. For individual development proposals the planning scheme describes if planning permission is required, the assessment category and planning requirements. The owner of land or a person authorised by the owner may apply to the consent authority for consent to carry out a development on land. If approved, the owner will be issued with a development permit. Hydrogen refuelling facilities will likely be a 'development' for the purpose of the Planning Act and that a development permit will be required. Hydrogen production would likely be captured as industry-general in the NT Planning Scheme (NTPS) 2020 primarily due to the emission of waste products and the potential use of heavy vehicles. Within areas zoned as General Industry, 'industry-general' is typically a permitted use, provided it complies with relevant provisions of the NTPS 2020. In areas designated zone ‘Development’, the activity is considered impact assessable, requiring a development permit application to be submitted for assessment.A hydrogen refuelling facility would likely be captured as a fuel depot or service station. Both these land use classifications always require assessment and a development permit application.  |
| NT - Department of Lands, Planning and Environment  | Environment Protection (National Pollutant Inventory) Objective 2004 (NT)  | The National Environment Protection Council is established under the *National Environment Protection Council Act 1994* (Cth) with mirror legislation in states and Territories. The NEPC is responsible for making National Environment Protection Measures (NEPMs) and assessing and reporting on the implementation and effectiveness of NEPMs in participating jurisdictions. The National Environment Protection (National Pollutant Inventory) Measure was made by the NEPC in 1998. The National Pollutant Inventory (NPI) is an online database published by the Australian government containing information on the types and quantities of pollutants being emitted from a range of industrial, commercial, transport and household activities. An entity subject to NPI reporting must report on emissions for substances that may pose a health and/or environmental risk to the relevant jurisdiction in which it is operating. The Northern Territory implements the NPI as an Environment protection objective made under Part 4 of the *Waste Management and Pollution Control Act 1998* and captures the same substances listed in the NEPM NPI.  |
| NT - Department of Lands, Planning and Environment  | *Water Act 1992* (NT)  | This Act contains obligations of a general nature relating to discharging waste into or polluting water as well as water extraction and licensing. It does not contain any hydrogen specific obligations. Water extracting and licensing is outside the scope of the Guidebook and those aspects of this Act are not discussed in the Guidebook.The Controller of Water Resources is responsible for authorising water extraction and may grant licences and permits to explore for water, take or use surface or groundwater water, interfere with a waterway, construct or alter a bore to extract groundwater, dispose of waste underground or increase the volume of water in an aquifer.A waste discharge licence is required under the Water Act if an activity may cause waste (including wastewater) to come into contact with water or water to become polluted. A waste discharge licence is not required where an activity is carried out under an environment approval or licence granted under the Waste Management and Pollution Control Act.  |
| NT - Department of Lands, Planning and Environment  | *Water Supply and Sewerage Services Act 2000* (NT)  | The *Water Supply and Sewerage Services Act 2000* establishes the regulatory framework for water supply and sewerage services in NT. This Act has no hydrogen specific obligations but will apply to hydrogen projects the same way as others project that involves the discharge of trade waste into water or sewerage networks. It is an offence to discharge "trade waste" into sewerage service infrastructure unless it is done with written approval of the licensee (section 82). Trade waste means:* liquid or liquid-borne waste generated from any industry, business, trade, manufacturing process or similar that is approved for discharge to sewer but does not include wastewater from a toilet, shower, hand basin or similar fixture.

The Power and Water Corporation (NT's utility service provider and licensee under the Act) publishes a Trade Waste Code in accordance with the Act (section 83), which sets out the acceptance guidelines, form and content for approvals. Hydrogen refuelling activities that involve the discharge of trade waste will require a trade waste approval for its discharge. |

## Northern Territory regulations with a low degree of relevance to hydrogen environment and planning

The legislative instruments set out in the table below:

* have less specific application to hydrogen environment and planning, or
* are out of scope of the definition of hydrogen environment and planning for this Guidebook,

do not apply to hydrogen environment and planning but are included for transparency (e.g. because they apply to a similar industry such as natural gas supply chains).

| **Regulator** | **Legislative Instrument** | **Summary** |
| --- | --- | --- |
| NT - Department of Lands, Planning and Environment  | *Waste Management and Pollution Control Act 1998* (NT)  | The *Waste Management and Pollution Control Act 1988* (NT) is the principal Act that regulates most industry and individuals that conduct activities likely to cause pollution. However, there is interaction with the Environmental Protection Act where pollution has the potential to have a significant impact on the environment.The Act includes a general environmental duty requiring a person conducting an activity that causes or is likely to cause pollution resulting in environmental harm, or that is likely to generate waste must take reasonable and practicable measures to prevent or minimise the pollution or waste. The Act also lists certain activities (in Schedule 2) that require approval of the NT Environment Protection Authority (NT EPA). There are no activities directly related to hydrogen refuelling requiring approval under this Act.  However, depending on the method of production or if hydrogen derivatives are produced, approval is required for processing hydrocarbons to produce, store or despatch more than 500,000 tonnes annually of LNG or methanol.  |

# Queensland legislation summaries – Environment and Planning

This table outlines a list of existing regulations which go to environment and planning and applies to one or more activities anticipated to occur in developing or operating a hydrogen refuelling facility.

This list is current as at [date] and is limited to the facility scope outlined in chapters 1.6.2 and 2 of the Guidebook and the Regulatory obligations: First Nations, Planning and Environment addressed in chapter 4 of the Guidebook..

| **Regulator** | **Legislative Instrument** | **Summary** |
| --- | --- | --- |
| QLD - Department of Women, Aboriginal and Torres Strait Islander Partnerships and Multiculturalism  | *Aboriginal Cultural Heritage Act 2003* (QLD)  | This Act has no hydrogen specific obligations, but will apply to hydrogen projects the same way as other projects that may interact with Aboriginal cultural heritage. The *Aboriginal Cultural Heritage Act 2003* (ACHA) seeks to provide effective recognition, protection and conservation of Aboriginal Cultural Heritage in Queensland. Blanket protection of Aboriginal cultural heritage is provided irrespective of whether the items have been identified or registered.The ACHA establishes a general duty of care which requires persons carrying out an activity to take all reasonable and practical measures to ensure the activity does not harm Aboriginal cultural heritage.A person will be taken to have complied with the cultural heritage duty of care if they are acting in compliance with, and under, an approved Cultural Heritage Management Plan (CHMP) or Cultural Heritage Management Agreement (CHMA) or the cultural heritage Duty of Care Guidelines established under the ACHA.It is an offence for a person to harm, excavate, relocate or take away or possess Aboriginal cultural heritage unless the person is acting in compliance with and under an approved CHMP or CHMA, native title agreement or in compliance with the Duty of Care Guidelines.  |
| QLD - Department of JusticeQLD - Department of Natural Resources and Mines, Manufacturing and Regional and Rural Development Queensland TreasuryQLD -Department of the Environment, Tourism, Science and Innovation  | *Aboriginal Land Act 1991* (QLD)  | The *Aboriginal Land Act 1991* (ALA) provides a mechanism for land to become Aboriginal land that is a form of inalienable freehold title held on trust for Aboriginal people concerned with the land. Under the ALA, the Minister can make declarations to facilitate the granting of land and about the management of the land. The Minister can also make declarations regarding the reservation of forest products and quarry materials to the state. |
| QLDDepartment of Housing and Public Works  | *Building Act 1975* (QLD)Building Regulation 2021 (QLD) | The *Building Act 1975* regulates the approval and assessment of building work and provides for matters including codes and standards for building work, inspections, building classification and the use of buildings, licensing and functions of building certifiers: fire safety for budget accommodation buildings, swimming pool safety standards and inspections, and provisions to support sustainable housing. The *Building Act 1975* does not contain any hydrogen specific obligations but will apply hydrogen refuelling facility activities involving assessable building work. A building development approval (or building permit) is needed before construction can start on assessable building work unless the building work is accepted development for the Planning Act. A building development approval is obtained from a local government or private building certifier. The Act adopts the Building Code of Australia (BCA) as a building assessment provision, which building work must comply with. A building will require a certificate of occupancy in accordance with section 114 of the *Building Act 1975.* This is particularly relevant with combined use / class buildings where fuel storage is not isolated in a separate class 10 structure. A certificate of occupancy contains information about the building's class, how the building can be used, ongoing maintenance requirements, fire safety and other special requirements.The *National Construction Code 2022 (NCC)*, adopted in Queensland through the *Building Act 1975*, sets out standards for design and performance. Fuel and hydrogen storage tanks are typically classified as class 10 structures (non-habitable buildings or structures) under the NCC, but larger or more critical facilities may be assigned Importance Level 4 (structures that house hazardous materials), triggering more stringent design and safety requirements. Fuel storage tanks are often stand-alone structures and typically classified as class 10 structures under the NCC. Approval and referral requirements for such installations vary depending on factors such as the tank’s size, type of fuel, and site context.Queensland’s local governments may outline additional fuel storage requirements in their planning schemes. Each Local Government Area has the discretion to set its own provisions, which could necessitate multiple approvals based on local rules and the tank's specifications.Section 115 of the *Building Act 1975* requires compliance with the Building Code of Australia and the Queensland Development Code before a building may be occupied or used. In Queensland a building development approval is required from a building certifier if the work proposed is not accepted development as identified in Schedule 1 of the Building Regulation 2021. A building certifier is required to confirm any relevant requirements for the specific circumstances which will include any building and planning approval requirements.In Queensland, depending on the specific scenarios including volumes, fuel storage tanks may also fall into the Major Hazard Facilities (MHF) framework under the WHS laws (see chapter 3.5.1 of the Guidebook, and Table 3.1 of Annexure 3). MHFs have to submit safety cases to the regulator for assessment in order to get licensed.  |
| QLD - Department of State Development, Infrastructure and Planning | *Economic Development Act 2012* (QLD) Economic Development Regulation 2023 (Qld)  | Economic Development Queensland (EDQ) operates under *the Economic Development Act 2012* (Qld). EDQ is the Queensland Government’s specialist land use planning and property development unit. The Economic Development Act provides a framework for declaring a priority development area (PDA) which are tracts of land within Queensland identified for land development to deliver significant benefits for community and economic development purposes.  The Act establishes a streamlined planning and development assessment framework that applies to development within a declared PDA. Where a facility is to be located within the boundaries of a PDA, a PDA development permit is required where the hydrogen refuelling facility involves PDA assessable development under the development scheme for the PDA. Although this Act may apply to a hydrogen refuelling facility located within a PDA, the regulations are not specific and are general in nature. Individual applications should review the applicable planning instruments for the relevant PDA.  A PDA development permit is assessed by the Minister for Economic Development Queensland or a delegate and is assessed against the interim land use plan or development scheme for the PDA, as applicable. Where a project is subject to this assessment process in a Priority Development Area, the Planning Act does not apply.  |
| QLD - Department of the Environment, Tourism, Science and Innovation  | *Environmental Protection Act 1994* (QLD)  | The objective of the *Environment Protection Act 1994* (Qld) (EP Act) is to protect Queensland’s environment while allowing for development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends (ecologically sustainable development).  The EP Act and its subordinate Regulation provides for a licensing system for environmentally relevant activities (ERAs) - the licence being called an environmental authority. A person must not carry out an ERA unless the person holds an environmental authority for that activity. ERAs include resources activities, agricultural ERAs or prescribed ERAs. Prescribed ERAs include a number of activities that are generally carried out in an industrial setting (see below).  The EP Act also includes a general environmental duty that a person must not carry out any activity that causes, or is likely to cause, environmental harm unless the person takes all reasonably practicable measures to prevent or minimise the harm. A person commits an offence if the person contravenes the general environmental duty in relation to an activity and the contravention causes, or is likely to cause, serious or material environmental harm.  The EP Act also provides that it is an offence to undertake an activity that causes unlawful environmental harm (sections 437-440A), unlawfully contravenes a noise standard (s.440Q), or unlawfully deposits a prescribed water contaminant in waters, a roadside gutter or stormwater drainage etc (section 440ZG).  |
| QLD - Department of the Environment, Tourism, Science and Innovation  | Environmental Protection Regulation 2019 (QLD)  | Under the Environmental Protection Regulation 2019 (EP Reg), the following are environmentally relevant activities (ERAs) potentially applicable to hydrogen projects: * Chemical manufacturing: manufacturing more than 200t of chemicals in a year (ERA 7)
* Chemical storage: storing 50t or more of chemicals of dangerous goods class 1 or class 2, division 2.1 (ERA 7).

The EP Reg also implements the NPI NEPM in Chapter 7 (refer to Commonwealth section on the NEPM NPI for details).  |
| QLD - Department of Natural Resources and Mines, Manufacturing and Regional and Rural Development | *Native Title (Queensland) Act 1993* (QLD)  | The *Native Title (Queensland) Act 1993* does not contain specific obligations relating to hydrogen but will apply to hydrogen projects the same way and other projects that may interact with native title on land. This Act outlines the Queensland Government’s strategy for achieving the objectives of the Commonwealth *Native Title Act 1993* and has been developed to ensure that Queensland law is consistent with standards set by the Commonwealth Act for future dealings affecting native title.   |
| QLD - Department of State Development, Infrastructure and Planning  | *Planning Act 2016* (QLD) Planning Regulation 2017 (QLD)  | The *Planning Act 2016* (Qld) establishes the Queensland planning framework which consists of three main systems: plan-making, development assessment and dispute resolution. State and local governments share the responsibility for the delivery and operation of these systems. The *2016* (Qld) establishes the Queensland planning framework which consists of three main systems supports hydrogen production activities through its purpose and land-use definitions but there is no specific application of the planning framework to hydrogen activities. It will apply to hydrogen refuelling facility activities that involve 'assessable development' as defined in the Act. The development assessment system sets out if, and how development may occur. Generally, each local government carries out assessment through their own local planning scheme. The State Assessment and Referral Agency (SARA) becomes involved in assessing a development application where the development has the potential to impacts a state interest, which for hydrogen would be as a hazardous chemical facility.  SARA assessment criteria are outlined in the State Development Assessment Provisions (SDAP). A local government generally continues to assess all other aspects of the development against its local planning scheme. Where a development application is referred to SARA, if SARA directs that the application must be refused due to unacceptable impact on the state interest, the local government must refuse the application but generally, local government will determine if the application is approved or refused. SARA cannot direct that an application be approved. Hydrogen activities are not explicitly identified as a land use under the Queensland framework, but hydrogen refuelling activities could fall under a number of defined uses that may require development approval. Potentially relevant land use definitions include service station.If the development is assessable, it can be either code or impact assessable. Impact assessment generally applies to proposals that may impact on the amenity of adjoining land uses. These also require public notification seeking feedback from members of the community.  |
| QLD - Department of State Development, Infrastructure and Planning | *State Development and Public Works Organisation Act 1971* (QLD) State Development and Public Works Organisation Regulation 2020 (QLD)  | A proponent of a project may apply to have it declared a coordinated project under the *State Development and Public Works Organisation Act 1971* where there are at least 1 of the following: * complex approval requirements, involving local, state and federal governments
* significant environmental effects
* significant infrastructure requirements
* strategic significance to the locality, region or state, including for the infrastructure, economic and social benefits, capital investment or employment opportunities it may provide.

For coordinated projects, the Coordinator-General coordinates departments of the government and local bodies throughout the State to ensure proper account is taken of the environmental effects. A coordinated project declaration will require either an environmental impact statement (EIS) or impact assessment report (IAR). An IAR process may be used if the Coordinator-General is satisfied that the environmental effects are not so significant as to require an EIS. A coordinated project declaration does not exempt the project from the need to obtain a development approval from the local government or other relevant approvals from State government agencies (for example, an environmental authority).  However, the conditions identified by the Coordinator-General will attach to any development approval or environmental authority.   For projects located within a declared State Development Area (SDA), the Coordinator-General plans and regulates development in accordance with an approved development scheme. Development schemes identify development regulated by the Coordinator General, and outline the process and criteria for assessment. The Planning Act does not apply to development that is regulated by a SDA development scheme. Hydrogen refuelling facilities within an SDA (e.g. Gladstone SDA) may require an SDA approval under the relevant development scheme.  |
| QLD - Department of Women, Aboriginal and Torres Strait Islander Partnerships and Multiculturalism  | *Torres Strait Islander Cultural Heritage Act 2003* (QLD)  | This Act seeks to provide effective recognition, protection and conservation of Torres Strait Islander Cultural Heritage in Queensland.  The Act provides for a duty of care for all persons carrying out activities that may harm Torres Strait Islander Cultural Heritage. This Act does not contain any hydrogen specific obligations but will apply to hydrogen projects the same way as other projects.   |
| Queensland TreasuryDepartment of Natural Resources and Mines, Manufacturing and Regional and Rural DevelopmentQLD - Department of Justice  | *Torres Strait Islander Land Act 1991* (QLD)  | The *Torres Strait Islander Land Act 1991* (TSILA) provides a mechanism for land to become Torres Strait Islander land that is a form of inalienable freehold title held on trust for Aboriginal people concerned with the land. Under the TSILA, the Minister can make declarations to facilitate the granting of land and about the management of the land. The Minister can also make declarations regarding the reservation of forest products and quarry materials to the state. |
| QLD - Department of Local Government, Water and Volunteers AndQLD - Department of the Environment, Tourism. Science and Innovation  | *Water Act 2000* (QLD)  | This Act contains obligations of a general nature relating to water extraction and licensing. It does not contain any hydrogen specific obligations. Water extracting and licensing is outside the scope of the Guidebook and this Act is not discussed in the Guidebook.The objects of the *Water Act 2000* are to provide a framework for: * the sustainable management of Queensland's water resources including surface water and groundwater
* the sustainable and secure water supply and demand
* the management of impacts on underground water caused by the exercise of underground water rights the effective operation of water authorities.

  |
| QLD - Department of Regional Development, Manufacturing and Water | *Water Supply (Safety and Reliability) Act 2008* (QLD)  | The *Water Supply (Safety and Reliability) Act 2008* establishes the regulatory framework for providing water and sewerage services in QLD, including the functions and powers of service providers. It also regulates the supply of recycled and drinking water quality, referable dams, and flood mitigation responsibilities.This Act has no hydrogen specific obligations but will apply to hydrogen projects the same way as other projects that involves the discharge of trade waste into water or sewerage networks. It is an offence to discharge "trade waste" into the sewerage service provider's infrastructure without approval (section 193). A sewerage service provider may grant an approval if satisfied (section 180): 1. the discharge will not harm the sewerage or health and safety of anyone working on the sewerage
2. the sewage treatment plant to treat the discharge is capable of treating the discharge to an acceptable standard
3. if the sewerage service provider has a trade waste plan, that the discharge is consistent with the plan.

Trade waste means: water-borne waste from business, trade or manufacturing premises, other than— 1. waste that is a prohibited substance; or
2. human waste; or
3. stormwater.

The sewerage service provider is generally the local council of a local government area, except for parts of South East Queensland that are supplied by Urban Utilities or Unitywater. Hydrogen refuelling activities may involve the discharge of trade waste and if so, will require a trade waste approval for its discharge. Whether approval is granted will depend on the constitution of the trade waste, and its compliance with the above criteria.  |
| Department of Transport and Main Roads (QLD)Applicable Port Authority (QLD) | *Transport Infrastructure Act 1994* (QLD)  | This Act provides for the establishment of port authorities and requires the authorities to establish land use plans for its strategic port land. Port authorities can issue land use approvals under the land use plan for development on strategic port land where the plan makes that development assessable. |
| Department of Transport and Main Roads (QLD)Applicable Priority Port Authority (QLD) | *Sustainable Ports Development Act 2015* (QLD)  | Provides for the establishment of certain priority ports in Queensland and requires a port master plans and overlays to be prepared for these priority port areas which may influence development applications/assessments in these port areas.  |

## Queensland regulations with a low degree of relevance to hydrogen environment and planning

The legislative instruments set out in the table below:

* have less specific application to hydrogen environment and planning, or
* are out of scope of the definition of hydrogen environment and planning for this Guidebook,

do not apply to hydrogen environment and planning but are included for transparency (e.g. because they apply to a similar industry such as natural gas supply chains).

| **Regulator** | **Legislative Instrument** | **Summary** |
| --- | --- | --- |
| QLD -Department of State Development, Infrastructure and Planning  | *Strong and Sustainable Resource Communities Act 2017* (QLD)  | The *Strong and Sustainable Resource Communities Act 2017* ensures that the social impact assessment process is the same for all environmental impact statement processes under both the *Environmental Protection Act 1994* and the *State Development and Public Works Organisation Act 1971.* Under the *Strong and Sustainable Resource Communities Act 2017* large resource projects are those resource projects for which an environmental impact statement is required, or that hold a site-specific environmental authority and have 100 or more workers. The Act applies only to 'resource projects' which may apply to naturally occurring hydrogen extraction but will not apply to other hydrogen production facilities. Naturally occurring hydrogen is outside the scope of the Guidebook. |

# South Australia legislation summaries – Environment and Planning

This table outlines a list of existing regulations which go to environment and planning and applies to one or more activities anticipated to occur in developing or operating a hydrogen refuelling facility.

This list is current as at [date] and is limited to the facility scope outlined in chapters 1.6.2 and 2 of the Guidebook and the Regulatory obligations: First Nations, Planning and Environment addressed in chapter 4 of the Guidebook..

| **Regulator** | **Legislative Instrument** | **Summary** |
| --- | --- | --- |
| SA - Department for Energy & Mining | *Aboriginal Heritage Act 1988* (SA)  | This Act has no hydrogen specific obligations but will apply to hydrogen projects the same way as other projects that may interact with Aboriginal heritage.  The *Aboriginal Heritage Act 1988* (AHA) provides for protection and preservation of Aboriginal sites and objects in South Australia. It does so primarily through providing for a Register of Aboriginal Sites and Objects and including certain legislative prohibitions on damage to and interference with Aboriginal heritage without the consent of the Minister for Aboriginal Affairs and Reconciliation (Minister). Under the AHA, it is an offence to excavate land for the purpose of uncovering or damage, disturb or interfere with Aboriginal sites, objects or remains, without an authorisation.It is also an offence to fail to report the discovery of an Aboriginal site, object or remains to the Minister (the obligation to report applies to an owner or occupier of private land) or to fail to comply with directions of the Minister prohibiting or restricting access to Aboriginal sites, objects or remains. |
| SA - Department for Energy & Mining | *Aboriginal Lands Trust Act 2013* (SA)  | This Act has no hydrogen specific obligations but will apply to hydrogen projects the same way as other projects that may interact with places under Aboriginal Land Trusts.  Under the *Aboriginal Lands Trust Act 2013* (ALT Act), land is vested in the Aboriginal Lands Trust (the Trust) which holds landin trust for the benefit of all Aboriginal people of South Australia. The Governor can transfer land previously being Aboriginal reserve to the Aboriginal Lands Trust.The Trust may lease, sell, mortgage or otherwise deal with land or dispose of Trust Land by transfer or grant of the fee simple (section 44). The Trust must consult with all interested parties including native title holders before transferring any Trust Land outside of the Trust estate and both Houses of Parliament must approve any such transfer of Trust Land.  |
| SA - Department for Energy & Mining | *Anangu Pitjantjatjara Yankunytjatjara Land Rights Act 1981* (SA)  | This Act has no hydrogen specific obligations, but will apply to hydrogen projects the same way as other projects that may interact with Anangu Pitjantjatjara Yankunytjatjara land.Under the *Anangu Pitjantjatjara Yankunytjatjara Land Rights Act 1981* (APY Act), land is granted to Anangu Pitjantjatjara Yankunytjatjara (APY), a body corporate comprising all Pitjantjatjara, Yankunytjatjara or Ngaanyatjarra people (Anangu people). The lands is administered by APY executive board, which has, among its functions (section 6): * ascertaining the wishes and opinions of traditional owners in relation to the management, use and control of the lands and seeking, where practicable, to give effect to those wishes;
* protecting the interests of traditional owners in relation to the management, use and control of the lands; and
* negotiating with persons desiring to use, occupy or gain access to any part of the lands.

No estate or interest in the land may be alienated from the APY or be compulsorily acquired, resumed or forfeited under the law of South Australia. However, the APY has power to grant a lease or licence: * for any period it thinks fit, in respect of any part of the lands to an Anangu or an organisation comprised of Anangu;
* for a period not exceeding 50 years, in respect of any part of the lands to an agency or instrumentality of the Crown; or
* for a period not exceeding 10 years, in respect of any part of the lands to any other person or body of persons.
 |
| SA – Environment Protection Agency  | *Environment Protection Act 1993* (SA) Environment Protection (General ) Regulations 1994 (SA)  | The *Environment Protection Act 1993* provides the regulatory framework to protect SA’s environment, including land, air and water. The Act sets out a framework for policy development and a licensing regime for polluting or potentially polluting activities.The integration of pollution and waste regulation with development control under the Planning, Development and Infrastructure Act 2016 is managed through a system of referrals between development authorities and the Environment Protection Authority (EPA). The Act includes a general environmental duty that a person must not carry out any activity that might pollute the environment unless the person takes all reasonable and practicable measures to prevent or minimise environmental harm.  The Act and its subordinate Regulations provide for a licensing system for environmentally relevant activities. The EPA issues licences for businesses that undertakes a ‘Prescribed Activity of Environmental Significance’, which are those activities with the potential to pose an environmental risk. A business that constructs or alters a building or structure that is intended for an EPA licensed activity may also be required to obtain a works approval. Hydrogen activities may require a licence and works approval where: * there are works for the production of hydrogen with a production capacity of more than 100 tonnes per year
* there is chemical storage (which includes hydrogen) exceeding 200 litres at a facility with a total storage capacity exceeding 1 000 cubic metres
 |
| SA – Environment Protection Agency  | Environment Protection (Water Quality) Policy 2015  | The Water Quality Policy is made under the *Environment Protection Act* *1993*. It provides more detailed guidance on complying with the general environmental duty (section 25 of the Act) as it relates to polluting waters. The Water Quality Policy also makes it an offence to: * discharge a class 1 pollutant into any waters or onto land in a place from which it is reasonably likely to enter into water (including by seepage, or carried by wind, rain, stormwater, etc)
* discharge a class 2 pollutant into any waters or a cavity in land.

There are a range of class 1 pollutants that could be present on a hydrogen refuelling facility.  |
| SA - Department for Energy & Mining  | *Hydrogen and Renewable Energy Act 2023* (SA)  | The *Hydrogen and Renewable Energy Act 2023* (HRE Act) is a ‘one window to government’ licensing and regulatory system for the lifecycle of large-scale hydrogen and renewable energy projects in South Australia. The Act provides for a hydrogen generation licence to regulate the entire lifecycle of the generation of hydrogen. The HRE Act applies to hydrogen produced for international export, manufacturing chemicals, sale or supply of electricity to customers, or the wholesale distribution of hydrogen to customers. The HRE Act does not cover small-scale hydrogen production for on-site use or to hydrogen refuelling facilities or transportation of hydrogen. The HRE Act provides for a two-stage environmental impact assessment and activity approval process which replaces the assessment and authorisation process under the *Planning, Development and Infrastructure Act 2016* (SA). Under the HRE Act, a key document is the Statement of Environmental Objectives (SEO) which is developed on the basis of a detailed Environmental Impact Report (EIR) for each hydrogen project and brings together all the relevant approval conditions and objectives the proponent is required to achieve to address the environmental and safety risks associated with the project detailed in the relevant Environmental Impact Report. The SEO also details obligations under other relevant legislation and standards that the proponent will need to comply with in order to satisfy any of the relevant SEO objectives. This feature through the SEO instrument under the HRE Act provides the one-window-to-government mechanism. Other than as included in the environmental impact assessment process, the Act does not regulate healthy and safety aspects of hydrogen refuelling.  It also excludes licenses for hydrogen storage in geological formations, extraction of naturally occurring hydrogen or h2 pipelines which sit within *Petroleum and Geothermal Energy Act 2000* (SA).  |
| SA - Department of Environment and Water  | *Landscape South Australia Act 2019* (SA)  | Landscape SA is the name given to the system for managing South Australia's landscapes. The purpose of the Act is to: * support primary production and other industries
* provide for the protection of land, soil and water resources and native fauna and flora
* promote, protect and conserve biodiversity insofar as is reasonably practicable
* provide for the prevention or control of impacts caused by pest species
* promote the collaborative management of native animals that adversely affect the natural or built environments, people or industry.

All water taken and used from surface water and groundwater resources in South Australia is regulated under the Act. Rights in relation to the ability of a person to take and use water include:* water licences and water access entitlements;
* stock and domestic rights (in locations where these uses are not prescribed);
* notices of authorisation under the Act.

This Act contains obligations of a general nature relating to natural resources and biodiversity. It does not contain any hydrogen specific obligations. In general natural resources and biodiversity are outside the scope of the Guidebook and this Act is not discussed in the Guidebook.The Act includes a general obligation to act reasonably in relation to the management of natural resources within South Australia. Hydrogen projects may have impacts on the management of natural resources such as water and land use and best practice in undertaking hydrogen projects should have regard to environmental, social, cultural matters as contemplated by the Act. |
| SA – Energy & Mining | *Maralinga Tjarutja Land Rights Act 1984* (SA)  | This Act has no hydrogen specific obligations, but will apply to hydrogen projects the same way as other projects that may interact with Maralinga land.The *Maralinga Tjarutja Land Rights Act 1984* (MT Act) provides for the vesting of title to certain lands, known as Maralinga lands, in Maralinga Tjarutja, a body corporate comprising of all traditional owners with a council consisting of the leaders of the traditional owners.The lands is administered by Maralinga Tjarutja whose functions include: * ascertaining the wishes and opinions of traditional owners in relation to the management, use and control of the lands and seeking, where practicable, to give effect to those wishes and opinions;
* protecting the interests of traditional owners in relation to the management, use and control of the lands; and
* negotiating with persons desiring to use, occupy or gain access to any part of the lands.

No estate or interest in the land may be alienated from Maralinga Tjarutja, or may be compulsorily acquired, resumed or forfeited under the laws of South Australia. However, council of the Maralinga Tjarutja has power to grant a lease or licence:* for any period it thinks fit, in respect of any part of the lands to a traditional owner or an organisation comprised of traditional owners;
* for a period not exceeding 50 years, in respect of any part of the lands to an agency or instrumentality of the Crown; and
* for a period not exceeding 5 years, in respect of any part of the lands to any other person or body of persons.

Maralinga Tjarutja may grant permission to enter the lands unconditionally, conditionally, or refuse permission altogether. Where a group of persons is permitted to enter the lands, each member of the group is bound by any conditions on which the permission was granted. A person who contravenes or fails to comply with such a condition is liable to a penalty. |
| SA – Energy & Mining  | *Native Title (State Provisions) Act 1994* (SA)  | This Act has no hydrogen specific obligations, but will apply to hydrogen projects the same way as other projects that may interact with native title land. Native Title refers to the rights and interests First Nations people have in land and waters based on their traditional laws. Even if these rights haven't been officially recognised by a court, they may still exist. Many large scale hydrogen projects are expected to be developed in regional and remote areas on land and sea country that have legally recognised rights for First Nations people, making them important partners in growing the hydrogen industry.  Hydrogen refuelling facilities themselves have a comparatively small footprint compared to renewable energy. However, any project can have potentially serious impacts on country. By embedding meaningful First Nations engagement into project development, design and implementation processes, communities will realise cultural, social and economic benefits through the growth of the hydrogen industry. Industry will also benefit from improved social licence outcomes and greater certainty. Unlike mining and traditional energy projects, the environmental impacts of hydrogen projects (and associated renewable energy generation) are less certain.  Early engagement with Traditional Owners is key so that proponents can obtain advice about the specific country's land scape and areas of significance so the project can be developed with appropriate respect paid to those areas.   |
| SA – State Planning Commission | *Planning, Development and Infrastructure Act 2016* (SA)Planning, Development and Infrastructure (General) Regulations 2017 (SA) Planning and Design Code   | South Australia’s planning system is governed by the *Planning, Development and Infrastructure Act 2016*.  The Planning and Design Code is a statutory instrument under the *Planning, Development and Infrastructure Act 2016* for the purposes of development assessment within South Australia. The Code is used to determine the rules applying to land and the relevant assessment pathway for developments.  The Regulations set out certain types of ‘exempt’ development that do not require planning consent. Exempt development are minor projects that don’t require any approval such as a new fence or garden shed. If planning consent is required, development falls into three categories: accepted development, code assessed development and impact assessed development. For an accepted development, only building consent is required, but no planning consent. Accepted developments are minor projects that need to be structurally sound (e.g. a carport of shop fit-out).  It is likely that the construction of any hydrogen refuelling facility will require development approval and be either code assessed or impact assessed developments. Impact assessed developments are subject to an Environmental Impact Statement which will include a full analysis of a wide range of environmental, social or economic effects associated with the development and how those effects are to be managed. Hydrogen activities are not explicitly identified under the South Australian planning scheme, but hydrogen refuelling activities could fall under a number of classes requiring development approval. Potentially relevant land use definitions include: * hydrogen refuelling facility: retail fuel depot, retail fuel outlet

Hydrogen production facilities subject to licensing under the HRE Act will require development approval, but will follow the environmental assessment process set out in the HRE Act. At completion of building works, a Certificate of Compliance issued by a building certifier must be provided to the relevant authority. The Certificate of Compliance is proof that the building work complies with the Building Rules. A person must not occupy a building on which building work is carried out unless a certificate of occupancy has been issued for the building. A certificate of occupancy will be required for hydrogen refuelling facilities.  |
| SA - Department for Environment and Water  | *Water Industry Act 2012* (SA)  | This *Water Industry Act* establishes the framework for the regulation of the water and sewerage industry in SA. This Act has no hydrogen specific obligations but will apply to hydrogen projects the same way as other projects that involves the discharge of trade waste into water or sewerage networks. It is an offence to discharge into any sewerage infrastructure any solid, liquid or gaseous material, or any other item or thing that is likely to damage the infrastructure without proper authority (section 56).  The Act permits a water industry entity to: 1. on application, authorise a person to discharge waste material referred to in the authorisation into the infrastructure; or
2. as part of a contract in relation to the provision of a sewerage service, authorise a person to discharge waste material referred to in the contract into the infrastructure.

A water industry entity is generally the local council, or SA Water for Adelaide and surrounding metropolitan areas.  Hydrogen refuelling activities may involve the discharge of trade waste and if so, will require a trade waste approval for discharge. Whether approval is granted will depend on the constitution of the trade waste, and its compliance with any criteria or guidelines established by the relevant water industry entity, and its compliance with any criteria or guidelines established by the relevant water industry entity.  |

# Tasmania legislation summaries – Environment and Planning

This table outlines a list of existing regulations which go to environment and planning and applies to one or more activities anticipated to occur in developing or operating a hydrogen refuelling facility.

This list is current as at [date] and is limited to the facility scope outlined in chapters 1.6.2 and 2 of the Guidebook and the Regulatory obligations: First Nations, Planning and Environment addressed in chapter 4 of the Guidebook.

| **Regulator** | **Legislative Instrument** | **Summary** |
| --- | --- | --- |
| TAS -Department of Premier and Cabinet | *Aboriginal Heritage Act 1975* (TAS) | Does include regulatory obligations that apply to hydrogen refuelling facility activities. This Act has no hydrogen specific obligations, but will apply to hydrogen projects the same way as other projects that may interact with sites and objects of Aboriginal relics including sites and places. The *Aboriginal Heritage Act 1975* (AHA) establishes an Aboriginal Heritage Council and provides for the protection of Aboriginal cultural heritage in Tasmania and makes provision for the preservation of Aboriginal relics. The Aboriginal Heritage Council also provides advice and recommendations to the Director of National Parks and Wildlife and Minister administering the AHA.All relics are protected under the AHA. A person may only lawfully impact an Aboriginal relic if they have been granted a permit to do so by the Minister for Aboriginal Affairs and may only do so in accordance with the terms of any permit granted by the Minister. It is an offence to intentionally destroy, damage, disfigure, conceal, expose, excavate or otherwise interfere with relic without a permit under the AHA. There are also obligations relating to reporting the finding of relics, where person must inform the Director or authorised officer of the finding of a relic as soon as practicable after finding it). |
| TAS - Department of Justice  | *Aboriginal Lands Act 1995* (TAS)  | This Act has no hydrogen specific obligations but will apply to hydrogen projects the same way as other projects that may interact with Aboriginal land vested in the Aboriginal Land Council of Tasmania.  Parcels of land granted under the *Aboriginal Lands Act 1995* (ALA) are vested in the Aboriginal Land Council of Tasmania (ALCT). The ALCT has the following functions: * to use and sustainably manage Aboriginal land and its natural resources for the benefit of all Aboriginal persons;
* to exercise, for the benefit of all Aboriginal persons, the Council’s powers as owners of Aboriginal land;
* to prepare management plans in respect of Aboriginal land; and
* to use and sustainably manage any other land in which the Council acquires an interest.

Land vested in the ALCT is held in trust for Aboriginal persons in perpetuity. The land is vested to a depth of 50 m and includes minerals other than oil, atomic substances, and geothermal substances within the meaning of the *Mineral Resources Development Act 1995* (Tas). The Minister may not grant a lease or licence under the *Mineral Resources Development Act 1995* (Tas) in respect of Aboriginal land without the agreement of the ALCT. |
| TAS - State Planning Office | *Building Act 2016* (TAS)  | The *Building Act 2016* regulates the performance and standards of building, demolition and plumbing work in Tasmania, including work approval processes. All work must comply with the National Construction Code. The *Building Act 2016* requires: * permitting requirement for building work, plumbing work and demolition work
* A certificate of occupancy prior to occupation of use of a completed building.

A building permit and certificate of occupancy will be required for hydrogen refuelling facilities.  |
| TAS - Environment Protection Authority   | *Environmental Management and Pollution* *Control Act 1994* (TAS)  | Where an application has been made to a planning authority under the *Land Use Planning and Approvals Act 1993* for a land use permit that is classified as a level 2 activity, the planning authority must refer the application to the Environment Protection Authority.  The Environment Protection Authority assesses proposed activities that are classified as Level 2 activities under the *Environmental Management and Pollution* *Control Act 1994* (EMPC Act). Other activities that are not classified as Level 2 may also be assessed by the EPA in some circumstances.  The proponent is required to prepare a document describing the proposal and its environmental impacts. Depending on the size and potential impacts of the proposal this will be an Environmental Effects Report or an Environmental Impact Statement. The EMPC Act applies to chemical works with a total processing capacity of 200 tonnes or more per year (which would include hydrogen production).  |
| TAS - Department of Premier and Cabinet  | *Historic Cultural Heritage Act 1995* (TAS)  | This Act has no hydrogen specific obligations but will apply to hydrogen projects the same way as other projects that may interact with places of historic cultural heritage significance in Tasmania.  The *Historic Cultural Heritage Act 1995* promotes the identification, assessment, protection and conservation of places having historic cultural heritage significance and establishes the Tasmanian Heritage Council. The Act provides for a heritage register for recording heritage areas, places of cultural historical significance, heritage agreements and protection zones.The Act does not apply to a place of historic cultural heritage significance only on the grounds of its association with Aboriginal history, tradition or traditional use.Under the Heritage Act provides no heritage work can be carried out on a registered place or in a heritage area unless a certificate of exemption is issued or an approval is granted for the works. |
| TAS - Department of Premier and Cabinet | *Land Use Planning and Approvals Act 1993* (TAS) Land Use Planning and Approvals Regulations 2014 (Tas) Tasmanian Planning Scheme - State Planning Provision  | The *Land Use Planning and Approvals Act 1993* (Tas) is the key Act setting out planning processes and a system for regulating the use and development of land. A permit or major project permit is required for any use or development identified to require one in the Tasmanian Planning Scheme. The Tasmanian Planning Scheme sets out the requirements for use or development of land in accordance with the *Land Use Planning and Approvals Act 1993*. It comprises two parts:* The State Planning Provisions which includes the identification and purpose, the administrative requirements and processes and general provisions that apply to all use and development irrespective of zone. The SPPs provide a consistent set of planning rules that can be applied by local councils.
* The Local Provisions Schedules (LPSs) that apply to each municipal area and include zone specific requirements.

Hydrogen activities are not explicitly identified under the Tasmanian planning scheme, but hydrogen refuelling activities could fall under a number of classes requiring development approval. Potentially relevant land use definitions include: * hydrogen refuelling facility: vehicle fuel sales and service

Hydrogen refuelling facilities will likely require development approval.  |
| TAS - Department of Premier and Cabinet | *Native Title (Tasmania) Act 1994* (TAS)  | This Act has no hydrogen specific obligations, but will apply to hydrogen projects the same way as other projects that may interact with native title land. Native Title refers to the rights and interests First Nations people have in land and waters based on their traditional laws. Even if these rights haven't been officially recognised by a court, they may still exist. Many large scale hydrogen projects are expected to be developed in regional and remote areas on land and sea country that have legally recognised rights for First Nations people, making them important partners in growing the hydrogen industry.  Hydrogen refuelling facilities themselves have a comparatively small footprint compared to renewable energy. However, any project can have potentially serious impacts on country. By embedding meaningful First Nations engagement into project development, design and implementation processes, communities will realise cultural, social and economic benefits through the growth of the hydrogen industry. Industry will also benefit from improved social licence outcomes and greater certainty. Unlike mining and traditional energy projects, the environmental impacts of hydrogen projects (and associated renewable energy generation) are less certain. Early engagement with Traditional Owners is key so that proponents can obtain advice about the specific country's land scape and areas of significance so the project can be developed with appropriate respect paid to those areas.   |
| TAS - Department of Premier and Cabinet  | *State Policies and Projects Act 1993* | This Act provides for the assessment of Projects of State Significance, which are large complex projects. These projects are assessed by the Tasmanian Planning Commission and subject to bespoke assessment criteria. All elements of the project are assessed and the final permit encompasses all relevant approvals. The process cannot start or finish without approval form both houses of Parliament.  |
| Natural Resources and Environment Tasmania (TAS) | State Policies    | Relevant policies include the State Coastal Policy 1996, State Policy on Water Quality Management 1997, State Policy on Protection of Agricultural Land 2009 and NEPM (National Environment Protection Measures).  |
| TAS - Natural Resources and Environment Tasmania | *Water and Sewerage Industry Act 2008* (TAS)  | This Act has no hydrogen specific obligations but will apply to hydrogen projects the same way other projects that involves the discharge of trade waste into water or sewerage networks. The *Water and Sewerage Industry Act* *2008* aims to protect the interests of customers and provide for the safe, environmentally responsible, efficient and sustainable provision of water and sewerage services to the Tasmanian community.  This primarily involves the regulation and licensing of operators of water and sewerage operators.  It is an offence to discharge anything into water or sewerage infrastructure of a regulated entity without its consent (section 56ZI). 'Regulated entity' means: 1. a person holding a licence or an interim licence granted under this Act; or
2. a person deemed to hold a licence under section 32; or
3. a person who has surrendered his or her licence under this Act; or
4. a person whose licence has been cancelled or suspended; or
5. a person who has obligations under section 33; or
6. a person who, but for an exemption under section 90, would be required to hold a licence under section 30.

Under the Water and Sewerage Industry (General) Regulations 2019: 1. a person must not cause trade waste to be placed in a sewerage system if the waste contains a substance specified in schedule 2 of the Regulation; and
2. a sewerage infrastructure operator must not accept liquid trade wase that does not comply with the acceptance criteria in schedule 3 of the Regulation.

Hydrogen refuelling activities may involve the discharge of trade waste and if so, will require a trade waste approval for discharge. Whether approval is granted will depend on the constitution of the trade waste, and its compliance Schedules 2 and 3 of the Regulation.  |
| TAS - Water Management  | *Water Management Act 1999* (TAS)  | The *Water Management Act 1999* is part of Tasmania's integrated Resource Management and Planning System and provides for the management of Tasmania's freshwater resources. In particular, the Act is to provide for the use and management of freshwater resources in Tasmania having regard to the need to: * Promote sustainable use and facilitate economic development of water resources (which means a lake, watercourse, dispersed surface water, groundwater, or a declared tidal area);
* Recognise and foster the significant social and economic benefits resulting from the sustainable use and development of water resources for the generation of hydro-electricity and for the supply of water for human consumption and commercial activities dependent on water;
* Maintain ecological processes and genetic diversity for aquatic and riparian ecosystems;
* Provide for the fair, orderly and efficient allocation of water resources to meet the community's needs;
* Increase the community's understanding of aquatic ecosystems and the need to use and manage water in a sustainable and cost-efficient manner; and​
* Encourage community involvement in water resources management.

There are three regulations under the Act: * The Water Management Regulations 2019 set limits on the taking of water for specific uses and set fees for water licences. They also cover the requirements for well drillers licences, and set fines for contravention of, or failure to comply with, any regulations.
* The Water Management (Safety of Dams) Regulations 2015 set the level of competency required for construction teams to be authorised to work on dams of different hazard categories and dimensions.
* The Water Management (Electoral and Polling) Regulations 2019 set the requirements for elections and polling conducted by Trusts who administer a Water District under the *Water Management Act 1999*.
 |

## Tasmania regulations with a low degree of relevance to hydrogen environment and planning

The legislative instruments set out in the table below:

* have less specific application to hydrogen environment and planning, or
* are out of scope of the definition of hydrogen environment and planning for this Guidebook,

do not apply to hydrogen environment and planning but are included for transparency (e.g. because they apply to a similar industry such as natural gas supply chains).

| **Regulator** | **Legislative Instrument** | **Summary** |
| --- | --- | --- |
| State Planning Office (TAS) | *Major Infrastructure Development Approvals Act 1999* | The *Major Infrastructure Development Approvals Act 1999* provides a process to assess long linear projects, such as gas pipelines or transmission lines. The process cannot start without approval by both houses of Parliament. The project is assessed, as if it were a development application under the normal planning process, by either the Tasmanian Planning Commission or a combined planning authority (which consists of a member from each municipal area where the project is located). The process requires land use, heritage and environmental approvals and includes opportunity for public involvement through consultation and exhibition processes. The process may include land acquisition for the proposal to proceed. The final decision on the project is subject to appeal rights as it is deemed a discretionary application made under the Land Use Planning and Approvals Act 1993.  |

# Victoria legislation summaries – Environment and Planning

This table outlines a list of existing regulations which go to environment and planning and applies to one or more activities anticipated to occur in developing or operating a hydrogen refuelling facility.

This list is current as at [date] and is limited to the facility scope outlined in chapters 1.6.2 and 2 of the Guidebook and the Regulatory obligations: First Nations, Planning and Environment addressed in chapter 4 of the Guidebook.

| **Regulator** | **Legislative Instrument** | **Summary** |
| --- | --- | --- |
| Victorian Aboriginal Heritage Council  | *Aboriginal Heritage Act 2006* (VIC)  | This Act has no hydrogen specific obligations, but will apply to hydrogen projects the same way as other projects that may interact with Aboriginal cultural heritage in Victoria.  The *Aboriginal Heritage Act 2006* (AHA) is the principal Act for the protection of Aboriginal cultural heritage in Victoria. Pursuant to the AHA, it is an offence to knowingly or negligently take an action likely to harm Aboriginal cultural heritage, unless acting in accordance with an approved Cultural Heritage Management Plan (CHMP) or cultural heritage permit. Under the Act some activities which will require a CHMP are:* developments that require an Environment Effects Statement
* larger scale residential or industrial subdivisions on 'areas of cultural heritage sensitivity', which have not previously been subject to significant ground disturbance
* substantial infrastructure or resource development projects on 'areas of cultural heritage sensitivity', which have not previously been subject to significant ground disturbance.

Where a CHMP is required, a decision maker must not grant a statutory authorisation for an activity unless it has been approved under a CHMP in respect of the activity.Some activities that have the potential to harm Aboriginal cultural heritage may not warrant a CHMP and in these cases, an Aboriginal cultural heritage permit under Part 4 may be required instead.  |
| Victorian Aboriginal Heritage Council | *Aboriginal Lands Act 1970* (VIC)  | Under the *Aboriginal Lands Act 1970* (the Act), members of the Framlingham or Lake Tyers Aboriginal Trusts own: * the Framlingham reserve as set out in Schedule 1 in respect of the Framlingham Aboriginal Trust; and
* the Lake Tyers reserve as set out in Schedule 2 in respect of the Lake Tyers Aboriginal Trust.

The Act enables the Aboriginal Trusts to purchase, take, hold, sell, lease, exchange, mortgage or dispose of the personal property. However, it may not sell, give in exchange or otherwise dispose of any land to any person, except in accordance with a unanimous resolution and may not let any land for a period of more than 21 years.The powers and functions of the Aboriginal Trust may be exercised on its behalf by its committee of management, but a committee of management must comply with the terms and conditions of any resolution relating to the powers and functions of the trust passed at a general meeting of its members (sections 16 and 17). While there is no general legislative restriction on access to land owned by an Aboriginal Trust, no person other than the Aboriginal Trust, its members or any person authorised by the Aboriginal Trust is entitled to enter upon any land in respect of which a licence granted.The Act also details the issuance of Crown grants for the lands to the respective Aboriginal Trusts and the conditions under which these grants are made.  |
| VIC - Department of Transport and Planning  | *Building Act 1993* (VIC) Building Regulations 2018 (VIC)  | The objective of the *Building Act 1993* includes protecting the safety and health of people who use buildings. The Building Act and Regulations among other things, include requirements for: * building permits
* building inspections
* occupancy permits
* maintenance of buildings.

The Regulations adopt the Building Code Australia which is volumes 1 and 2 of the National Construction Code. A hydrogen refuelling facility will likely be a building for the purposes of the Act. Where this is the case, the Building Act requires: * a planning permit, building permit or both where building work is being undertaken on a property
* an occupancy permit.

It is an offence to commence construction without a building permit and an offence to occupy a building before receiving an occupancy permit. Hydrogen refuelling facilities will require a building permit and occupancy permit.  |
| VIC -Department of Transport and Planning  | *Environment Effects Act 1978* (VIC)  | An Environment Effects Statement (EES) under the *Environment Effects Act 1978* is Victoria's most rigorous level of environmental assessment. The Environment Effects Act will apply to projects declared to be public works by Order of the Minister. The Environment Effects Act relies on the referral of proposed projects to the Minister administering the Act for a decision on whether a project proponent is required to undertake an environment effects statement (EES). An assessment does not confer approval of a project, rather it informs decision makers when considering project approvals. Ministerial Guidelines made under section 10 of the Act provide details on the EES assessment process.  |
| VIC - Department of Transport and Planning  | Ministerial Guidelines for Assessment of Environmental Effects  | The Ministerial Guidelines for Assessment of Environmental Effects (Guidelines) set out the detail of processes and requirements for the referral and assessment of projects via an Environment Effects Statement under the *Environment Effects Act 1978*.The Guidelines accompany the *Environmental Effects Act 1978* (Vic). |
| VIC -Environment Protection Authority Victoria  | *Environment Protection Act 2017* (VIC) Environment Protection Regulations 2021 (VIC)  | The *Environment Protection Act 2017* is the primary statute in Victoria which governs environment protection and approvals. Under the Act, EPA Victoria's objective is to protect human health and the environment by reducing the harmful effects of pollution and waste. EPA Victoria is not responsible for managing natural resources, biodiversity, ecosystems and other aspects of the environment. The Act includes a general environmental duty which requires any person engaging in an activity that may give rise to risks of harm to human health or the environment from pollution or waste, to minimise those risks so far as reasonably practicable. This duty includes minimising pollution and waste risks in relation to use and maintenance of plant and equipment and ensuring that substances are handled, stored, used or transported in a manner that minimises risks of harm to human health and the environment from pollution and waste. The Act also contains waste duties which require waste generators to take all reasonable steps to ensure industrial waste is transported to and received at a premises authorised to receive industrial waste. Industrial waste is any waste that comes from trade, commerce or industry. Waste generators, transporters and receivers share the responsibility of making sure waste ends up at a premises authorised to receive industrial waste. That will usually mean a premises with an EPA licence, permit or registration, subject to a determination or in some cases, deemed to be authorised by the Environment Protection Regulations 2021 (Vic). An EPA issued licence, permit or registration is required to develop or perform a prescribed permission activity. The activities requiring a licence, permit or registration are prescribed in Schedule 1 to the Environment Protection Regulations 2021, these include:  * item 51 (G01 Chemical Works)
* item 54 (G04 bulk storage).
 |
| Department of Transport and Planning (VIC) | *Planning and Environment Act 1987* (VIC)Planning and Environment Regulations 2015 (Vic) Victoria Planning Provisions  | The purpose of the Act is to establish a framework for planning the use, development and protection of land in Victoria.  The Act sets out procedures for preparing and amending the Victoria Planning Provisions and planning schemes. It also sets out the process for obtaining permits under schemes, settling disputes, enforcing compliance with planning schemes and permits, and other administrative procedures.  Subordinate instruments under the Act include the VPP, planning schemes and Ministerial directions. Each council in Victoria has its own planning scheme based on the Victorian Planning Provisions (VPP).  The VPP are a standard set of policies, zones, overlays and other provisions written by the state government. It provides some rules and a consistent layout that planning schemes must use, and others that councils can choose to include or add additional information.   |
| VIC - Department of Energy, Environment and Climate Action  | *Traditional Owner Settlement Act 2010* (VIC)  | The *Traditional Owner Settlement Act 2010* (the Act) provides for an out-of-court settlement of native title. The Act allows the Victorian Government to recognise traditional owners and certain rights in Crown land. In return for entering into a settlement, traditional owners must agree to withdraw any native title claim, pursuant to the *Native Title Act 1993* (Cth) and not to make any future native title claims.The Act does not contain any hydrogen specific obligations. The Act also provides for:* Land Agreements allowing freehold title for cultural or economic purposes, or as aboriginal title which may be jointly managed in partnership with the State
* Land Use Activity Agreements regarding activities on public land
* Funding Agreements for economic development activities
* Natural Resource Agreements regarding use and management of natural resources and land.
 |
| VIC - Department of Energy, Environment and Climate Action And VIC - Environment Protection Authority | *Water Act 1989* (Vic)  | The *Water Act 1989* sets out the framework for managing Victoria's water resources. The main purpose of the *Water Act 1989* is to:* promote the orderly, equitable and efficient use of water resources
* ensure Victoria's water resources and waterways are managed in a way that considers: Aboriginal cultural values and uses of waterways; and the social and recreational uses of waterways and other matters
* increase community involvement in conserving and managing water resources.

The framework establishes water entitlements, annual processes to allocate water and the ability to trade. Under the Act, the Minister for Water issues entitlements including: bulk entitlements, environmental entitlements, water shares, and water licences. This Act is relevant to hydrogen production facilities to the extent that the project will take water from a watercourse, lake, well, dispersed surface water or water from a tidal area. Water supply is outside the scope of the Guidebooks.The Act is also relevant to the discharge of trade waste that may by required by the hydrogen refuelling facilities. It is an offence under section 178 of the Act to discharge into a sewer anything other than sewage or trade waste discharged in accordance with a trade waste agreement. The Act defines 'trade waste' to mean:1. any waterborne waste (other than sewage) which is suitable, according to the criteria of an Authority, for discharge into the Authority's sewerage system; or
2. any other matter that is prescribed by regulations made under this Act to be trade waste; or
3. any other matter which is declared by a by-law made under this Act to be trade waste.
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## Victoria regulations with a low degree of relevance to hydrogen environment and planning

The legislative instruments set out in the table below:

* have less specific application to hydrogen environment and planning, or
* are out of scope of the definition of hydrogen environment and planning for this Guidebook,
* do not apply to hydrogen environment and planning but are included for transparency (e.g. because they apply to a similar industry such as natural gas supply chains).

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| --- | --- | --- |
| **Regulator** | **Legislative Instrument** | **Summary** |
| VIC - Department of Energy, Environment and Climate Action  | *Water Industry Act 1994* (VIC)  | The *Water Industry Act 1994* provides the framework for the economic regulation of the water sector. It establishes the Essential Services Commission (ESC) as the independent economic regulator of pricing and service standards for Victoria’s water sector. The ESC requires each water corporation to provide it with a pricing submission before the start of a pricing regulatory period. At each price review, the ESC requires a water corporation to engage extensively with its customers to identify what they value most. It must then demonstrate how customer views have been considered in its proposals. The framework focuses on five elements: performance, risk, engagement, management and outcomes which form the ‘PREMO’ acronym. The ESC uses the PREMO water pricing framework to review prices submitted to it by water corporations. The regulatory framework that guides the ESC’s role and approach to price regulation is set out in the Essential Services Commission Act 2001 and Water Industry Act 1994. The details are set out in the latest Water Industry Regulatory Order.  |

# Western Australia legislation summaries – Environment and Planning

This table outlines a list of existing regulations which go to environment and planning and applies to one or more activities anticipated to occur in developing or operating a hydrogen refuelling facility.

This list is current as at [date] and is limited to the facility scope outlined in chapters 1.6.2 and 2 of the Guidebook and the Regulatory obligations: First Nations, Planning and Environment addressed in chapter 4 of the Guidebook.

| **Regulator** | **Legislative Instrument** | **Summary** |
| --- | --- | --- |
| WA - Department of Planning, Lands and Heritage | *Aboriginal Heritage Act 1972* (WA)  | This Act has no hydrogen specific obligations but will apply to hydrogen projects the same way as other projects that may interact with Aboriginal heritage. The *Aboriginal Heritage Act 1972* (the Act) provides for the protection of Aboriginal sites and Aboriginal objects. Under the Act, the Registrar of Aboriginal Sites maintains a register of all protected areas, all Aboriginal cultural material, and all other places and objects to which the Act applies.A person who excavates, destroys, damages or conceals or in any way alters any Aboriginal site commits an offence. It is also an offence to alter, damage, remove, destroy, conceal or deal with in a manner not sanctioned by relevant custom, or assume possession, custody or control of any object on or under an Aboriginal site. The Act also places an obligation on all persons to report anything that they believe may be a site or object to which the Act applies, unless they have reasonable cause to believe that the existence of the site or object in question is already known to the Registrar.The Act also protects and manages Aboriginal heritage by requiring approval for activities that may impact or cause harm.  |
| WA - Department of Mines, Industry Regulation and Safety Building and Energy  | *Building Act 2011* (WA)  | The *Building Act 2011* does not contain hydrogen specific obligations but will apply to hydrogen projects involving the construction and occupation of buildings requiring building approvals. The *Building Act* *2011* regulates permits for building work and demolition work, standards for the construction and demolition of buildings and incidental structures, the use and maintenance of, and requirements in relation to, existing buildings and incidental structures, work affecting land other than land on which the work is done and other related matters. Hydrogen refuelling facilities will generally require a building approval and certificate of occupancy.  |
| WA -Department of Water and Environmental Regulation | *Environmental Protection Act 1986* (WA) Environmental Protection Regulations 1987 (WA)  | The *Environment Protection Act 1986* (EP Act) is the main instrument in Western Australia that governs environment protection and approvals.  The Act provides for the prevention, control and abatement of pollution and environmental harm, for the conservation, preservation, protection, enhancement and management of the environment and for matters incidental to or connected with the foregoing. The Environmental Protection Authority (EPA) undertakes environmental impact assessment (EIA) of development proposals in accordance with Part IV Division 1 of the Act and the Environmental Impact Assessment (Part IV Divisions 1 and 2) Administrative Procedures 2021. A development approval needs to be referred to the EPA if it is a 'significant proposal' for the purpose of the Act. A proposal is significant if it is likely, if implemented, to have a significant effect on the environment. The Act includes obligations relating to restrictions on clearing native vegetation, dumping waste, discharging waste which causes pollution, and more general offences relating to polluting and causing environmental harm. The Department of Water and Environmental Regulation (DWER) regulates certain premises through a works approval and licensing process to prevent, control, abate and mitigate pollution or environmental harm, under Part V, Division 3 of the Act and regulates the clearing of native vegetation under Part V, Division 2 of the Act. Premises with potential to cause pollution or environmental harm to the environment, water resources, public health and/or amenity are known as ‘prescribed premises’. Prescribed premises categories are outlined in Schedule 1 of the Environmental Protection Regulations 1987. The Act requires a works approval to be obtained before constructing a prescribed premises and makes it an offence to cause an emission or discharge unless a licence or registration is held for the prescribed premises.  The EP Act does not specifically refer to hydrogen activities. Hydrogen production facilities will be a prescribed premises if they fall in any of the following categories: * commercial production of 5 000 tonnes or more of gas
* manufacturing 100 tonnes of more of hydrogen through a chemical process.

Hydrogen refuelling facilities will not require a licence under the Act.   |
| Department of Planning, Lands and Heritage (WA) | *Heritage Act 2018* (WA)  | This Act has no hydrogen specific obligations but will apply to hydrogen projects the same way as other projects that may interact with places and items of cultural heritage significance.  The *Heritage Act 2018* provides for the protection of items of cultural heritage significance. The Act requires the keeping of a Register of Heritage Places for places that are protected by the provisions of the Act. In relation to a registered place on the State Register of Heritage Places, a person must not do or authorise, cause or permit any of the following (unless authorised by a permit under the Act): * the alteration of the fabric of the place or any part of, or thing in, the place, so that the cultural heritage significance of the place is detrimentally affected;
* demolish, damage or despoil the place or any part of or thing in the place; or
* remove any thing from the place so that the cultural heritage significance of that place is detrimentally affected.
 |
| Department of Justice (WA) | *Native Title (State Provisions) Act 1999* (WA)  | The Act has no hydrogen specific obligations but will apply to hydrogen projects the same way as other projects that may interact with native title land. Native Title refers to the rights and interests First Nations people have in land and waters based on their traditional laws. Even if these rights haven't been officially recognised by a court, they may still exist. Many large-scale hydrogen projects are expected to be developed in regional and remote areas on land and sea country that have legally recognised rights for First Nations people, making them important partners in growing the hydrogen industry.  Hydrogen refuelling facilities themselves have a comparatively small footprint compared to renewable energy. However, any project can have potentially serious impacts on country. By embedding meaningful First Nations engagement into project development, design and implementation processes, communities will realise cultural, social and economic benefits through the growth of the hydrogen industry. Industry will also benefit from improved social licence outcomes and greater certainty. Unlike mining and traditional energy projects, the environmental impacts of hydrogen projects (and associated renewable energy generation) are less certain.  Early engagement with Traditional Owners is key so that proponents can obtain advice about the specific country's landscape and areas of significance so the project can be developed with appropriate respect paid to those areas.   |
| WA -Department of Planning, Lands and Heritage | *Planning and Development Act 2005* (WA)Planning and Development Regulations 2009 (WA) Planning and Development (Local Planning Schemes) Regulations 2015 Statement of Planning Policy No. 2 Environment and Natural Resources Policy  | The Western Australia State planning framework comprises: * the*Planning and Development Act 2005* (WA) which establishes the WA Planning Commission and provides for a land use planning system promoting the sustainable use and development of land in WA.
* State Planning Strategywhich identifies principles, strategic goals and directions for planning and development in WA.
* State Planning Policies are made under Part 3 of the Act and provide planning policy control and guidance.
* Regional and sub-regional strategies which provide for planning of regions, sub-regions or particular locations and are a basis for cooperative action between State and local government on land use development.
* Operational policies, position statements and guidelines which provide guidance on decision making or set out a policy position with respect to a particular matter.

The construction of hydrogen refuelling facilities will be 'development' for the purpose of the Act. Whether a development requires approval under the Act is determined by the planning schemes.  Hydrogen refuelling facilities will require development approval. In WA, there are three development approval pathways for decarbonisation projects: * Significant Development Pathway (also referred to as the Part 11B) – an opt-in pathway for developments to be determined by the WAPC (applies to applications valued at more than $20 million in Perth and Peel region, and more than $5 million in regional areas, or as referred by Premier).
* Development Assessment Panels - open to most proposals over $2 million
* Local Government - open to all proposals of any value

Hydrogen activities are not explicitly identified under the WA planning scheme, but hydrogen refuelling activities could fall under a number of classes requiring development approval. Potentially relevant land use definitions include: * hydrogen refuelling facility: freeway service centre, fuel depot, service station
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| WA -Department of Water and Environmental Regulation | *Rights in Water and Irrigation Act 1914* (WA)  | The Act contains obligations and requirements relating to water licensing and permits. It does not contain any hydrogen specific obligations. Water extracting and licensing is outside the scope of the Guidebooks and the Act is not discussed in the Guidebooks.The objects of the Act include:* to provide for the management and sustainable use of water resources and protection of their ecosystems and the environment in which water resources are situated
* to promote the orderly, equitable and efficient use of water resources
* to foster community engagement in administration of water resources.

The *Rights in Water and Irrigation Act* *1914* and associated Regulations establish the legislative framework for managing and allocating water resources in WA. The Act provides for several types of water licences and permits to authorise different activities. These include licences to take water, construct wells or the interference or obstruction of a watercourse (including surface water permits). Licences to take water specify the volume of water that may be taken, the authorised activities (which may include hydrogen production), and terms, conditions and restrictions associated with the taking of water. The volume of water that can be extracted is referred to as the 'annual water entitlement'. The Act allows for water entitlements and licences to be transferred, subject to relevant provisions of the Act.  |
| WA -Department of Water and Environmental Regulation | *Water Services Act 2012* (WA)  | The *Water Services Act 2012* establishes the framework for the provision of water services and regulation of water services providers in WA.  The Act has no hydrogen specific obligations but will apply to hydrogen projects the same way as other projects that involves the discharge of trade waste into water or sewerage networks. It is an offence to discharge "trade waste" into sewerage service infrastructure unless it is done with written approval of the licensee (s.102). The licensee is the Water Corporation for Perth, and otherwise the relevant local government. "Trade waste" is 'wastewater other than wastewater of the kind and volume ordinarily discharged from an ordinary dwelling used solely or primarily as the dwelling of the occupants'. Hydrogen refuelling facility activities that involve the discharge of trade waste will require a trade waste approval, subject to the constitution of the trade waste, and its compliance with the acceptance criteria of the relevant licensee.  |