Renewable energy transition – Emerging legal frameworks

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Overview

- Introduction
- Queensland Energy and Jobs Plan
- Clean Economy Jobs Act 2024
- Energy (Renewable Transformation and Jobs) Act 2024
- Gas Supply and Other Legislation (Hydrogen Industry Development) Amendment Act 2023
- Conclusion what's next?

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Introduction – net zero emissions target

- Australia, like the other parties to the Paris Agreement, has 'national determined contributions' (NDCs)
- Australia's original NDC was to reduce greenhouse gas emissions by 26% to 28% below 2005 levels by 2030
- In 2022, Australia updated its NDC:
 - committing to reducing greenhouse gas emissions 43% below 2005 levels by 2030; and
 - reaffirming its target to achieve net zero emissions by 2050.

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Introduction – net zero emissions target

- Australia's updated NDC is enshrined in s 10 of the Climate Change Act 2022 (Cth)
- Under s 12 of the Climate Change Act 2022 (Cth), the Minister must prepare an Annual Climate Change Statement within 6 months after the end of each financial year
- Annual Climate Change Statement must describe the progress made in the preceding year toward the target and other actions and risks associated with climate change.

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Queensland Energy and Jobs Plan

- The Queensland Energy and Jobs Plan (QEJP) was released in September 2022
- The QEJP has focus areas:
 - clean energy economy
 - empowered households and businesses
 - secure jobs and communities.

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Queensland Energy and Jobs Plan

Focus Area 1:

- 1.1 Begin building the SuperGrid
- 1.2 Develop two world-class pumped hydros
- 1.3 Invest in more batteries and storage
- 1.4 Build more renewable energy and connection an additional 22 GW by 2035
- 1.5 Ensure reliability with low to no emissions gas
- 1.6 Grow the future renewable hydrogen industry
- 1.7 Deliver sustainable biofuels
- 1.8 Switch to renewable energy with new targets
- 1.9 Advance Queensland's bioenergy future
- 1.10 Establish a new technical board for expert advice.

Queensland Energy and Jobs Plan

Focus Area 2:

- 2.1 Deliver a new household program
- 2.2 Support to reduce household bills
- 2.3 Drive savings for small business
- 2.4 Integrate Queensland's zero emissions vehicles
- 2.5 Enable savings for commercial buildings with Environmental Upgrade Agreements
- 2.6 Ensure affordable electricity in regional and south-east Queensland.

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Queensland Energy and Jobs Plan

Focus Area 3:

- 3.1 Support workers with a Job Security Guarantee
- 3.2 Prepare Queensland workforce and regions for growth
- 3.3 Grow the renewable energy supply chain in Queensland
- 3.4 Clean energy for remote First Nations communities
- 3.5 Partner with industries and communities to maximise benefits from the energy transformation and drive regional economic opportunities.

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Clean Economy Jobs Act

- Clean Economy Jobs Act 2024 received assent on 26 April 2024
- Section 5 of the Clean Economy Jobs Act provides that the emissions reduction targets are:

Target	Target date
30% below 2005 emissions	30 June 2030
75% below 2005 emissions	30 June 2035
Net zero emissions	30 June 2050

Clean Economy Jobs Act

- Minister must prepare an annual progress statement for each financial year and table it in Parliament
- Annual progress statement must:
 - state progress made toward achieving targets
 - state the methodology used to calculate progress
 - analyse emissions inventories data
 - describe measures by State to achieve targets.

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Clean Economy Jobs Act

- By 31 December 2024, Minister must prepare program stating:
 - sectors for which emissions reduction plans must be made
 - the Minister responsible for making the plans
 - the periods for which the plans are to have effect
 - when the plans must be published
- Minister must establish the Clean Expert Economy Panel.

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Clean Economy Jobs Act

- Minister must decide interim targets by:
 - for 2040 31 December 2030
 - for 2045 31 December 2035
- By 31 December 2040, Minister must decide methodology to calculate net zero.

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Clean Economy Jobs Act

- Policy certainty sends an important signal to investors, businesses and communities
- Credible targets demonstrate State's economic, social and government (ESG) credentials
- Coordinated planning will support emerging clean economy industries (e.g., hydrogen, critical minerals and advanced manufacturing) and create jobs especially in regions
- Coordinating planning also enables the government to help mitigate communities from the effects of climate change, including First Nations communities.

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Clean Economy Jobs Act

- How are the targets in the Clean Economy Jobs Act to be achieved?
- Two recent pieces of legislation are part of the process: Energy (Renewable Transformation and Jobs) Act 2024 and Gas and Other Legislation (Hydrogen Industry Development) Act 2023
- However, before considering these two Acts closely, it's helpful to understand the policy context and Queensland's participation in the national electricity and gas laws.

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Energy and Climate Change Ministerial Council

- The Energy and Climate Change Ministerial Council was established on 30 September 2022 (formerly COAG Energy Council and Energy National Cabinet Reform Committee)
- Provides forum for Commonwealth, State and Territories to collaborate on key energy and climate change reforms.

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Energy and Climate Change Ministerial Council

The Energy and Climate Change Ministerial Council's agreed priorities include:

- Transforming Australia's energy system to align with net zero while providing more affordable, secure, and reliable energy to Australians including:
 - improving regulatory certainty and efficiency for, and
 - accelerating delivery of dispatchable renewable energy, storage and nationally significant transmission projects
- Efficiently and effectively contributing to the achievement of all Australian emissions reduction targets.

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Energy and Climate Change Ministerial Council

- National Energy Transformation Partnership (NETP) created under the auspices of the Energy and Climate Change Ministerial Council
- NETP objectives:
 - coordinate gas and electricity planning
 - accelerate nationally significant transmission projects
 - plan for adequate generation and storage
 - understand demand evolution
 - enhance energy security
 - strengthen energy governance architecture.

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Energy and Climate Change Ministerial Council

- NETP current actions to achieve objectives:
 - establishing the Capacity Investment Scheme (CIS)
 - working with States a on the Rewiring the Nation initiative
 - developing a First Nations Clean Energy Strategy
 - developing a National Energy Workforce Strategy
 - incorporating an emissions reduction objective into the national energy objectives
 - collaborating on energy security management, including cyber security and fuel availability.

Energy and Climate Change Ministerial Council

- Note the alignment between the strategies and objectives of ECMC and NETP and the three focus areas in the QJEP
- Recall the following actions for Focus Area 1 (Clean Energy Economy) under the QJEP:
 - Begin building the SuperGrid
 - Build more renewable energy and connection an additional 22 GW by 2035
 - Ensure reliability with low to no emissions gas
 - Grow the future renewable hydrogen industry
 - Deliver sustainable biofuels.

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Energy and Climate Change Ministerial Council

- The Energy and Climate Change Ministerial Council has oversight of key entities in the national energy markets:
 - Energy Security Board
 - Australian Energy Market Commission
 - Australian Energy Market Operator
 - Australian Energy Regulator
- Queensland is a participant in the national energy markets under the National Electricity (Queensland) Law and the National Gas (Queensland) Law.

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Energy and Climate Change Ministerial Council

- In 2023, the objectives of the following national scheme legislation were amended to include the objective of setting targets that will, or are likely to, reduce Australia's greenhouse gas emissions:
 - National Electricity Law, s 7
 - National Energy Retail Law, s 13
 - National Gas Law, s 23.

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Energy Transformation Act - introduction

- The second of the two Queensland Acts we are examining today is the Electricity (Renewable Transformation and Jobs) Act 2024 (Energy Transformation Act)
- The Act received assent on 26 April 2024
- It will commence by proclamation on a date to be fixed
- The QEJP is reflected in Energy Transformation Act, which implements a number of the QEJP's action items, particularly for Focus Area 1 (Clean Energy Economy)
- However, to fully understand the Energy Transformation Act is also important to consider the National Electricity Market Integrated System Plan.

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Energy Transformation Act – Integrated System Plan

- The Australian Energy Market Operator has since 2020 being publishing the Integrated System Plan (ISP)
- The ISP is a plan to identify the 'lowest-cost pathway of essential generation, storage and transmission infrastructure to meet consumers' energy needs for secure, reliable and affordable energy, and to achieve net zero emissions targets'
- ISP refers to this as the optimal development path and considers that 'renewable energy connected with transmission, firmed with storage and backed up by gaspowered generation is the lowest cost way to supply electricity' through the transition to net zero.

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Energy Transformation Act – Integrated System Plan

- The ISP identifies the following generation and storage investments required for the optimal development path:
 - triple grid-scale variable renewable energy by 2030 and increase it 7 times by 2050
 - focus grid-scale general in renewable energy zones, selected to access quality renewable resources, existing and planned transmission and a skilled workface
 - quadruple firming capacity PHES, batteries and gas-powered generation
 - quadruple rooftop solar capacity
- The ISP also identifies the transmission investments required in the optimal development path.

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ansformation Act – purposes

- urpose of the Act is stated in s 3(a): he amount of electricity generated in Queensland vable energy sources
- e energy sources is defined in schedule 1 to the eans any of the following:
- er other than pumped hydro energy storage
- urce prescribed by regulation.



Energy Transformation Act - purposes

- The second purpose is stated in s 3(b) of the Act: to facilitate the augmentation of the national transmission grid in Queensland to accommodate the increased generation of electricity from renewable energy sources
- Schedule 1 provides that *national transmission grid* has the meaning given in the National Electricity (Queensland) Law: national transmission grid means the transmission systems that form part of the interconnected national electricity system
- ${\it interconnected\ national\ electricity\ system\ } means\ the$ interconnected transmission and distribution system used to convey and control the conveyance of electricity, to which generating systems and other facilities are connected and loads are settled through the wholesale exchange.

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Energy Transformation Act – purposes

- The third purpose of the Energy Transformation Act, stated in s 3(c) is:
 - to provide for support and advocacy for workers in the energy industry and communities affected by the increased generation of electricity from renewable energy sources.
- This third purpose is important and, as we will see, the Energy Transformation Act includes measures designed to ensure community 'buy in' for renewable energy transition and to assist workers whose livelihoods will be displaced when 'old energy' infrastructure, such as coal and gas-fired power stations, are retired or repurposed.

Energy Transformation Act — how purposes to be achieved • Section 4 of the Act provides: The main purposes of this Act are to be achieved primarily by— (a) setting renewable energy targets for Queensland; and (b) providing for the identification and construction of priority transmission investments; and (c) providing for the declaration of renewable energy zones, the development and operation of transmission networks in renewable energy zones and coordinated and streamlined connection and access to transmission networks in renewable energy zones; and (d) establishing the Job Security Guarantee Fund, including for the purpose of implementing the job security guarantee; and (e) establishing the Queensland Energy System Advisory Board, the Energy Industry Council and the Queensland Renewable Energy Jobs Advocate.

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Energy Transformation Act — RETs Section 9 of the Act establishes the Queensland renewable energy targets (RETs) Amount of energy generated from renewable energy sources 50% of electricity generated in Queensland 70% of electricity generated in Queensland 89 2032 80% of electricity generated in Queensland By 2035 Minister must decide methodology for calculating proportion of energy generated from the RETS (section 10) Minister must table an Annual Progress Statement for the RETS (section 11) Minister must review the RETs at least every 5 years (section 12).

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Energy Transformation Act — public ownership Part 3 of the Act requires the Minister to prepare a public ownership strategy for classes of energy assets. The strategy must explain how the State proposes to achieve and maintain: 54% public ownership of generation assets by 2035 100% public ownership of transmission and distribution assets 100% ownership of deep storage assets (HPES) The strategy must also explain how the State proposes to maintain ownership of each publicly owned coal and gasfired power stations existing when the Act commences.

Energy Transformation Act – public ownership

- The Explanatory Notes explain that the commitment to public ownership is part of the strategy to support consumers in managing energy costs
- The reporting periods for the public ownership strategy are:
 - 1 July 2025 to 30 June 2030
 - 1 July 2030 to 30 June 2025
- Public ownership is not only direct State ownership: it includes assets owned directly or indirectly by Commonwealth and local governments.

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Energy Transformation Act – infrastructure blueprint

- Minister must make the Queensland SuperGrid Infrastructure Blueprint (infrastructure blueprint): section 15(1)
- Section 15(2) provides that the infrastructure blueprint must:
 - (a) identify the particular significant electricity infrastructure projects that help to meet the optimal infrastructure pathway objectives; and
 - (b) describe how the projects help meet the optimal infrastructure pathway objectives.

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Energy Transformation Act – infrastructure blueprint

Section 7:

The optimal infrastructure pathway is-

- (a) the significant electricity infrastructure projects, including the sequencing and timing of delivery of the projects, identified in the infrastructure blueprint under s 15(2)(a); and
- (b) any project that is an eligible priority transmission investment if s 20(2)(b) applies in relation to the project; and
- (c) any REZ transmission network for REZ not mentioned in the infrastructure blueprint.

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Crown Law Energy Transformation Act - infrastructure blueprint Section 8: The optimal infrastructure pathway objectives are the following objectives— (a) the achievement of the renewable energy targets; (b) the provision of a safe, secure and reliable supply of electricity to Queensland consumers; (c) the long-term minimisation of the cost of electricity for Queensland consumers. Slide 34 34 Crown Law Energy Transformation Act - infrastructure blueprint Section 15(2) provides that the infrastructure blueprint (c) describe any proposed changes to operations of publicly owned coal-fired power stations intended to result in permanent cessation of generation from coal at the . station (d) identify parts of Queensland possibly suitable to be renewable energy zones (REZs). 35 Crown Law Energy Transformation Act - infrastructure blueprint Section 15(2)e) provides the infrastructure blueprint must include an estimate of: (i) the installed renewable generation capacity required to achieve the renewable energy targets

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[installed renewable generation capacity means the total nameplate rating of generating systems in Queensland that are capable of producing electricity from renewable energy sources: s 15(7)]

renewable energy targets and ensure a safe, secure and reliable

(ii) the capacity of energy storage required to achieve the

electricity supply to consumers

Energy Transformation Act – infrastructure blueprint

Section 15(2)e) provides the infrastructure blueprint must include an estimate of:

- (iii) the capacity of infrastructure connected to transmission systems in Queensland to generate electricity on demand that will be required to do both of the following—
 - (A) achieve the renewable energy targets;
 - (B) ensure the provision of a safe, secure and reliable supply of electricity to Queensland consumers
- (iv) the electricity to be generated in Queensland by 2035 from devices owned by Queensland consumers.

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Energy Transformation Act – infrastructure blueprint

- Section 16(1) provides the Minister must review the infrastructure blueprint:
 - by 31 May 2025; and
 - at further intervals of 2 years
- Section 16(3) provides that in reviewing the infrastructure blueprint, the Minister must have regard to various matters, including the optimal infrastructure pathway objectives and the Integrated System Plan.

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Energy Transformation Act – PTIs

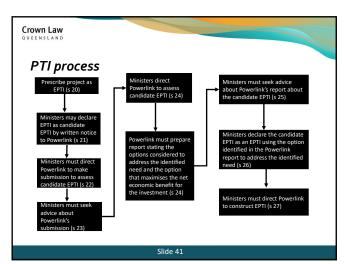
- The Explanatory Notes explain that:
 - high voltage backbone transmission is needed to connect areas and renewable energy and pumped hydros with areas of demand
 - the National Electricity (Queensland) Law (NEQL) and National Electricity Rules (NER) not sufficient to support scale and pace of delivery contemplated in the infrastructure blueprint.

Energy Transformation Act – PTIs

- Therefore, part 5 of the Act is intended to enable the State to assess transmission infrastructure projects (priority transmission investments or PTIs) that critical to the Queensland's needs to be assessed outside the national framework
- Part 5 establishes a process by which prospective PTIs are evaluated for their ability to meet an objective known as an 'identified need'
- The process is designed to identify the way of meeting the identified need in the most cost-effective way and within construction timeframes anticipated in the Blueprint.

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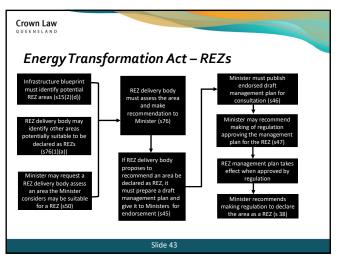
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Energy Transformation Act – REZs

- Part 6 of the Act provides for renewable electricity zones (REZs)
- This is a Queensland-specific regime and s 84 provides that it applies despite the national electricity laws
- Purpose is to augment the transmission grid near the sources of renewable energy generation or storage, so that electricity can be transmitted without undue strain on the network.

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Energy Transformation Act – REZs

- Section 41 provides that a management plan for a REZ must:
 - be consistent with achieving the purposes of the Act mentioned in s3(a) and (b)
 - state the objectives of the REZ
 - identify:
 - the geographic boundary of the REZ
 - the renewable energy sources in the REZ
 - · the REZ transmission network
 - the REZ controlled assets.

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Energy Transformation Act – REZs

- The REZ transmission network is the transmission network (or part) located in the REZ
- Under section 42(1), the management plan must include the following information about the REZ transmission network:
 - (a) timing of the development of, and connection and access to, the transmission network
 - (b) details about regulation of connection and access including:
 - (i) capacity
 - (ii) percentage of capacity intended to be derived from various renewable energy sources in the REZ
 - (iii) technical connection requirements.

Energy Transformation Act – REZs

- Under section 42(1)(b), the management plan must include information about:
 - (iv) the process to be used by the transmission network service provider to identify entities that may connect to and access the transmission network and the projects for which connection and access may be granted
 - (v) the process to be used by entities and the transmission network service provider to enter into connection and access agreements.

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Energy Transformation Act – REZs

- Under section 42(1), the management plan must also include:
 - (c) details for dispute resolution process for access and connection disputes between the transmission network service provider and participants in the REZ
 - (d) other arrangements for the operation of the REZ transmission network while the REZ declaration in force
 - (e) arrangements to apply to REZ transmission network when REZ declaration ends.

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Energy Transformation Act – REZs

- Section 42(2) provides that the process under s42(1)(b)(iv):
 - must have regard to:
 - the social licence criteria prescribed under the Electricity Act, s 180(2)
 - the capability and performance of entities to develop projects and connect them to the transmission network
 - the feasibility of projects to be developed and connected to the network within an appropriate timeframe
 - may include stated access and connection criteria.

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- Section 185 of the Act amends s180 of the Electricity Act. Section 180(2) of the Electricity Act states the matters about which the regulator **must** be satisfied to issue a generation authority
- The Act inserts a new s180(2)(f), which requires the regulator to consider:

the social licence criteria prescribed by regulation are satisfied for the generating plant to be connection to a transmission grid or supply network under the authority

• The Act also inserts a new s180(5), which provides:

A regulation may prescribe the matters the regulator must consider in deciding whether the social licence criteria prescribed by regulation are satisfied for generating plant, including, for example, whether the code of conduct under section 180A has been complied with.

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Energy Transformation Act - REZs

 Section 184A of the Energy Transformation Act also inserts a new Electricity Act s18o(8):

social licence criteria, for generating plant, means criteria about the conduct or proposed conduct of persons involved in the development, building or operation of the generating plant relating to—

- (a) community and stakeholder engagement for the development, building or operation of the generating plant; or
- (b) mitigating or addressing the impact of the development, building or operation of the generating plant on a community affected by the development, building or operation of the generating plant; or

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Energy Transformation Act – REZs

- New Electricity Act s180(8), definition social licence criteria:
 - (c) the delivery of benefits of the development, building or operation of the generating plant to a community affected by the development, building or operation of the generating plant.'
- Section 184B of the Act inserts new Electricity Act, s180A in the Electricity Act, giving the Minister power to make, for the purposes of the social licence criteria under s 180, a code of conduct for persons involved in the development, building or operating of a generating plant.

Energy Transformation Act – REZs

- Sections 184C, 184D and 184E of the Act also amend the Electricity Act to require the regulator to consider social licence criteria when assessing an application to:
 - transfer a generation authority (Electricity Act, s 184B)
 - grant a special approval (Electricity Act, s 210)
 - transfers a special approval (*Electricity Act*, s 212B).

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Energy Transformation Act – REZs

- Returning to the required content of a management plan for a REZ
- Section 41(1)(c)(iv) of the Act provides the plan must identify the REZ controlled assets
- The REZ controlled assets are the counterpart transmission assets to the REZ transmission network
- The REZ transmission network is the network located in the
- The REZ controlled assets are outside the REZ (or inside but not part of the REZ transmission network) and materially affect the capacity and function of the REZ transmission network (s 36).

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Energy Transformation Act – REZs

- The management plan for the REZ must include (s43):
 - Details of how the REZ controlled assets materially affect the capacity or functioning of the REZ transmission network
 - The process to be used by the relevant transmission network service provide to identify entities that may connect to and access the REZ controlled assets and the projects in relation to which connection and access may be granted
 - Other matters relating to the regulation of connection and access to the REZ controlled assets.

Energy Transformation Act - REZs

- If a REZ delivery body has recommended a part of Queensland be declared as a REZ and the Minister is satisfied the area is suitable to be a REZ, the Minister may recommend the making of regulation to declare the REZ (s 36)
- The regulation must:
 - identify the geographic boundary of the REZ
 - state the REZ objectives
 - identify the management plan, the REZ transmission network and the REZ controlled assets
 - state the term of the declaration (minimum 15 years).

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Energy Transformation Act – REZs

- Part 6, division 5 of the Act regulates connection and access to REZ transmission networks and REZ controlled assets?
- Connection and access must be under a connection agreement, as defined in the National Electricity Rules, between the transmission network service provider and the entity
- Transmission network service providers and proposed participants may negotiate an access standard, which becomes a negotiated access standard under the National Electricity Rules if agreed.

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Energy Transformation Act – REZs

- Section 70 of the Act provides that a transmission network service provider may decide fees and charges payable by a participant for connection to a REZ transmission network
- The fees and charges displace connection and access fees and charges under the national electricity laws
- Under s 71, the Minister may declare that shortfalls between establishment and operational costs and fees and charges under s 70 can be recovered through charges for prescribed network transmission services
- If a declaration is made under s 71, a transmission determination must be made under s 73.

Energy Transformation Act – REZs

- Part 6, division 5 also includes provisions dealing with:
 - pending transmission network connection applications to be managed where the transmission network becomes part of a REZ transmission network or REZ controlled assets
 - existing connection agreements and rights to receive DNA service
 - connection and access rights for the Macintyre wind farm project and the Wambo wind farm project.

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Energy Transformation Act – Job Security Guarantee

- Part 7 of the Act establishes the Job Security Guarantee
- The job security guarantee is a commitment to provide support to 'affected energy workers' i.e., individuals whose work involves a publicly owned coal-fired power stations
- The support may include training for, and access to other employment opportunities
- Payments may be made from the Job Security Guarantee Fund (Fund) to support affected workers.

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Energy Transformation Act – Energy Industry Council

- In addition, payments may be made from the Fund for the Energy Industry Council, established in part 9 of the Act
- Section 124 provides that the Council's functions are to advise the Minister on matters including:
 - how the implementation of the Blueprint will affect affected energy workers and their communities
 - opportunities for alternative employment or training in the renewable energy industry for affected energy workers and their communities
 - skills required to build future workforce capability
- Note also the Council's role in relation to the infrastructure blueprint reviews (section 16(3)(b)).

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Energy Transformation Act – Queensland Energy System Advisory Board

- Part 8 of the Act establishes the Queensland Energy System Advisory Board
- Section 94 provides that the Board's functions include:
 - preparing annual progress statements for the RETs and the optimal infrastructure pathway
 - advising the Minister in reviewing the Blueprint (see also section 16(3)(a))
 - advising the Minister about other matters relevant to achieving the objects of the Act.

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Energy Transformation Act – Jobs Advocate

- Part 10 of the Act establishes the position of the Queensland Renewable Energy Jobs Advocate
- The Jobs Advocate's functions under section 155 include:
 - advising the Minister how to increase employment opportunities in the energy industry;
 - consulting with Aboriginal peoples, Torres Strait
 Islander peoples, energy businesses and other persons
 - helping foster relations between persons carrying out electricity infrastructure projects and the local community
 - promoting the benefits of electricity infrastructure projects to the community.

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Crown Law

Hydrogen Industry Development Act

Gas Supply and Other Legislation (Hydrogen Industry Development) Act 2023 (**Hydrogen Industry Development Act**)

- Commenced on 4 April 2024
- Amended:
 - Gas Supply Act 2003
 - Petroleum and Gas (Production and Safety) Act 2004 (P&G Act)
- Creates a framework for assessment and approval of construction and operation of hydrogen pipelines.

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Hydrogen Industry Development Act

- Implements commitments made as part of the National Energy Transformation Partnership and ECMC to extend the National Gas Law and National Energy Retail Law to hydrogen and other renewable gases
- Supports the objective in Focus Area 1 of the QEJP:

Grow the future renewable hydrogen industry

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Hydrogen Industry Development Act

- Previously, the objectives in s 3 of the Gas Supply Act were confined to processed natural gas
- **Processed natural gas** was defined in s 11:

Processed natural gas is a substance that—

- (a) is in a gaseous state at standard temperature and pressure; and
- (b) consists of naturally occurring hydrocarbons and other substances; and
- (c) (c) is more than half methane; and
- (d) (d) has been processed to be suitable for consumption.

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Hydrogen Industry Development Act

- The amended objectives in s 3 of the Gas Supply Act are to:
 - promote efficient and economic covered gas supply; and
 - regulating the distribution of covered gases to protect the interests of consumers.

Crown Law QUEENSLAND Hydrogen Industry Development Act Covered gas is defined in the new s 9 of the Gas Supply Act: (1) A covered gas is a primary gas or a gas blend. (2) A primary gas is— (a) processed natural gas; or (b) hydrogen; or (c) biomethane; or (d) synthetic methane; or (e) a gas, prescribed by regulation, that is suitable for consumption.

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Hydrogen Industry Development Act

- Gas Supply Act, new s 9 (con't):
 - (3) **Processed natural gas** is a substance that—
 - (a) is in a gaseous state at standard temperature and pressure; and
 - (b) consists of hydrocarbons that occur naturally and other substances; and
 - (c) is more than half, by volume, methane; and
 - (d) has been processed to be suitable for consumption.
 - (4) In this section—

biogas means a gas derived or recovered from organic matter other than fossilised organic matter.

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Hydrogen Industry Development Act

- Gas Supply Act, new s 9(4) (con't):
 - **gas blend** means primary gases that have been blended together to be suitable for consumption.
 - synthetic methane means a substance—
 - (a) that is in a gaseous state at standard temperature and pressure; and
 - (b) the principal constituent of which is methane; and
 - (c) that is produced by the methanation of carbon dioxide; and
 - (d) that is suitable for consumption.

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Hydrogen Industry Development Act

Gas Supply Act, new s 9(4) (con't):

(4) In this section—
biogas means a gas derived or recovered from organic matter other than fossilised organic matter.
biomethane means a substance—

(a) that is in a gaseous state at standard temperature and pressure; and
(b) the principal constituent of which is methane; and
(c) that is produced by refining biogas; and
(d) that is suitable for consumption.

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Hydrogen Industry Development Act

- Section 3A of the P&G Act amended to include a new object: to facilitate and regulate, as a key authorised activity for pipeline licences, the construction and operation of pipelines for regulated hydrogen in a way that is safe, effective and efficient.
- The definition of *fuel gas* in s 11(2) has been expanded to include:
 - (c) hydrogen, or a hydrogen gas blend, used or intended to be used as a fuel to produce heat, light or power
- A new s 11(3) has been inserted:

A hydrogen gas blend is processed natural gas and hydrogen that have been blended together.

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Hydrogen Industry Development Act

- A new s 11A, which defines regulated hydrogen, has been inserted: Regulated hydrogen is—
 - (a) hydrogen; or
 - (b) a hydrogen gas blend; or
 - (c) another substance prescribed by regulation that is involved in, or produced for, a process related to the storage or transport of hydrogen.
- Section 16A of the P&G Act, which deals with distribution has been amended to recognise that hydrogen gas may now be carried in the pipelines
- Section 410, which deals with pipeline licence applications, had been amended to require safety considerations.

Conclusion - what's next?

- Land tenure issues for renewable energy generation and storage projects
- Hydrogen industry: land planning, production, transport and safety issues
- Biofuels: closer integration between waste and recycling legislation and
- Critical minerals, native title and cultural heritage
- New mineral and resources activities.

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References and further resources

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