



Queensland's 2035 Clean Economy Pathway: 75% by 2035

FEBRUARY 2024



Queensland
Government



Premier's message

Reducing emissions is crucial to creating a shared and prosperous future for all Queenslanders.

Legislating a 75% emissions reduction target by 2035 will secure blue-collar jobs in our regions, protect our agricultural industry and deliver a world leading response to climate change to safeguard the Great Barrier Reef.

Queensland's key trade and investment partners in North East Asia, the United States and the European Union are looking for clean and green energy resources, food and technologies.

Our Clean Economy Jobs legislation sets up Queensland's economy for the next century by securing jobs in our existing manufacturing, agriculture and resources industries and unlocking investment in new industries including renewables manufacturing, critical minerals, hydrogen and sustainable aviation fuel.

Queensland has led the way, reducing more tonnes of emissions than any other State or Territory in Australia and achieving a 29% reduction on 2005 levels. We have taken renewable energy from 7% to 26% with 52 large scale wind and solar farms built or committed including the largest solar farm in the nation.

Our government is setting out a responsible pathway to lead the nation on reducing tonnes of carbon emissions through to 2035 while developing sector-based plans to support our existing industries to grow even more jobs and export opportunities.

That includes our world leading Queensland Energy and Jobs Plan to deliver 24-hour renewable energy for manufacturing, working with agricultural producers on natural capital and carbon farming, support for our resources sector to lower emissions, developing a new critical minerals industry and delivering zero emission buses.

By establishing a Clean Economy Expert Panel in legislation, we will work with the private sector, community and NGO sector, unions, and the Federal Government to deliver on these sector-based plans.

For the world to reach net zero by 2050 Queensland needs to be a central part of that journey.

Queensland is the Sunshine State with some of the world's best solar resources, onshore wind resources and critical minerals reserves.

We have these natural resources combined with our regions and the skills for Queensland to become a manufacturing and renewable energy superpower.

By working together, we can create a golden age of opportunity for Queensland.

Let's make it happen together.

Steven Miles MP

Premier of Queensland

Deputy Premier and Minister's forewords



Queensland's 2035 Clean Economy Pathway means jobs.

The need to decarbonise our economy is a generational undertaking.

The legislation of our greenhouse gas emission reduction

targets will give clarity to industry, to Queenslanders, and the international community. Queensland's clean economy plan presents an incredible opportunity.

In addition to our responsibilities to protect the environment, as part of a global undertaking, we want to maximise the benefits for all of Queensland.

The actions that we are putting in place will create a new generation of jobs and encourage and attract significant, new global investment.

In addition to our Queensland Energy and Jobs Plan, currently supported with \$19 billion from the 2023–24 Budget, we have a suite of investment programs already in place where we are partnering with industry on significant projects.

Our \$520 million Low Emissions Investment Partnerships program will support our metallurgical coal industry, essential for producing the steel necessary for renewable technologies, to accelerate projects that lower emissions. It's an invaluable investment in the future of our coal mining communities.

By protecting, diversifying and supporting our regional economies, the resilience of our rural and regional communities right across the state will only grow stronger.

This is a plan for Queensland's future.

As Australia's most carbon-intensive economy, Queensland has a vital role to play in reducing emissions, and all levels of government will need to play their part.

The collective result of its implementation will ensure that Queensland's economy will be world-leading and will position the State to continue growing and thriving for decades to come.

Cameron Dick MP

Deputy Premier, Treasurer and Minister
for Trade and Investment



Decarbonising the Queensland economy is one of the most significant commitments our State has ever made.

It means more investment, bringing manufacturing back on shore, and creating more skilled jobs for Queenslanders.

It is about protecting existing jobs and communities right across Queensland and guaranteeing every worker and every family knows that they are supported, and their contribution is valued.

These commitments are underpinned by new laws which will ensure they are delivered in a way that is achievable, credible, and affordable for Queenslanders.

If you're a miner in Mackay, a boilermaker in Bundy, or a welder in Warwick, we are making the transition to renewables to secure your job and to create jobs for your kids. This is not ideology, it's common sense.

The people who buy what Queenslanders produce want this. Investors want this. The climate needs this.

And we can deliver it. Real action on climate change.

We are establishing the legal framework to get the pathway to decarbonising Queensland right; to ensure good jobs, that doesn't cost Queenslanders, and that actually works.

Our approach is based on collaboration with the Australian Government to identify a clear pathway for every sector with initiatives informed by robust models and real experts. We will work so all stakeholders have a voice in our shared future. We're committed to action, clear timeframes, and transparency.

We will work with unions, business, industry, communities, my ministerial colleagues, and all levels of government to realise the opportunities of this transition for Queenslanders.

The Miles Government has set a strong framework for growth. We intend to drive and deliver on that framework, ensuring we can make great things happen for Queenslanders.

Real action is needed for our Reef, Queensland's other special places, and our great way of life. And we will work every day to protect the Queensland experience – for our kids and theirs.

Mick de Brenni MP

Minister for Energy and Clean Economy Jobs



Why do we need to decarbonise Queensland's economy?

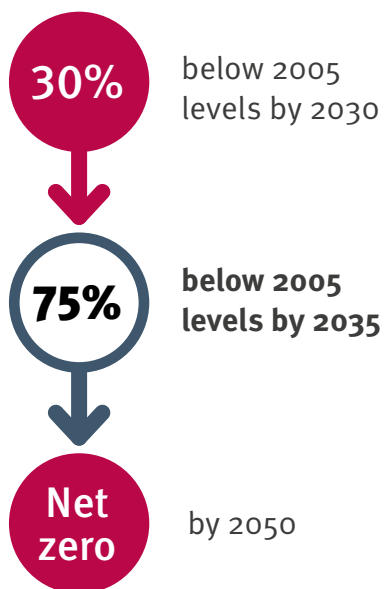
- Climate action is a jobs opportunity for all Queenslanders
- Decarbonisation generates investment throughout the economy
- Creating the jobs of the future economy
- Diversification and community resilience
- Protecting the environment

New ambitious targets to set Queensland up for the future

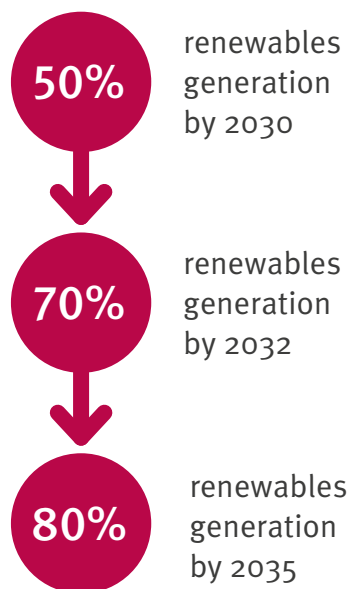
We are legislating our greenhouse gas emissions reduction targets, including a new target of reducing emissions 75% by 2035, based on 2005 levels.

Our targets work together to drive action.

Queensland's emissions reduction targets



Queensland's renewable energy targets





Decarbonising the Queensland economy brings jobs for Queenslanders, reduces cost of living pressures on families, and acts on climate change.

Employment will continue to grow as Queensland moves towards 75% by 2035

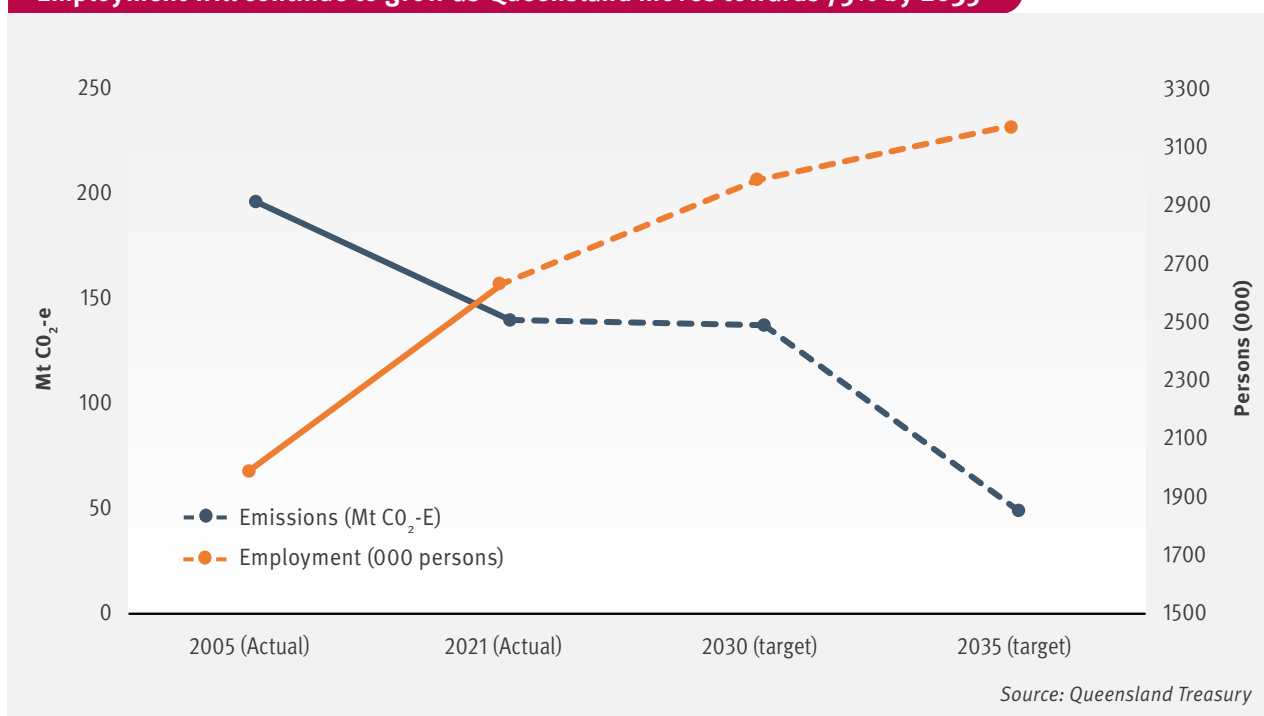


Figure 1

Additional economic activity by 2040 could support 36,000 direct and indirect jobs

Resource mining

\$5 billion

8,600 jobs



Green hydrogen

\$19 billion

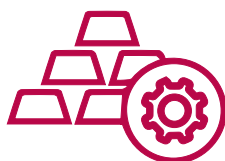
10,000 jobs



Metal refining

\$3 billion

5,500 jobs



Battery manufacturing

\$2 billion

12,000 jobs

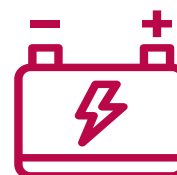


Figure 2

Source : Ernst & Young: The Queensland Energy and Jobs Plan: Summary Report, 2022

Climate action is a jobs opportunity for all Queenslanders

We know the world is moving towards a cleaner economy. If Queensland wants to maintain its place as an investment destination, a global tourism hotspot, and a world-class place to live and work, we need to decarbonise our economy. This means supporting traditional industries to adopt less carbon intensive methods of operation, and producing new economy industries that create Queensland's high-quality jobs of the future.

The Queensland Energy and Jobs Plan (QEJP) is creating jobs for Queenslanders. Modeling prepared by Ernst & Young identified the QEJP could create 100,000 jobs, including 28,500 direct jobs across construction, manufacturing, and operations, with almost 20,000 of these jobs located in regional Queensland. QEJP delivery is also expected to support more than 35,000 jobs across sectors like resources, refining, hydrogen and battery manufacturing (Figure 2).

Queensland can both increase jobs and decrease emissions (Figure 1). Securing these opportunities requires leadership.

Queensland is accelerating its decarbonisation ambitions with a new greenhouse gas emissions reduction target of 75% by 2035, based on 2005 levels.



Decarbonisation generates investment throughout the economy

Setting ambitious and considered targets gives local and international investors the confidence to invest in Queensland. Across the world, finance and capital providers are looking for proof that governments are committed to reducing their emissions.

Action is good for the economy. The 2023 Commonwealth Intergenerational Report shows that, should the world limit warming to 2 degrees compared to 3 degrees, Australia will deliver an additional \$155 billion in gross domestic product, generating strong economic growth and jobs.

A 75% emissions reduction target by 2035 positions Queensland as a global leader, supporting even more green industries right across Queensland, with investment to flow to small and medium businesses.

Development of new and innovative technologies will ensure Queensland businesses remain globally competitive and capture the local opportunities to participate in a decarbonising global economy.

Protecting the environment

Queensland's natural environment is internationally recognised for its beauty and biodiversity – it is the heart of what makes Queensland a special place to live, and is central to our social and economic wellbeing.

Due to climate change, Queensland is experiencing more frequent natural disasters including an extraordinary 2023-24 summer that included heatwaves, cyclones, storms, and floods impacting most of the state.

It is well known that the impact of climate change poses disproportionate risks to vulnerable groups and communities. Making sure Queensland remains the best place to live, work and raise a family for all Queenslanders means avoiding the worst outcomes of climate change.

Setting targets aligned to the Paris Agreement objectives protects our world-class environment for the next generation.

This is why we are taking action to preserve Queensland's natural assets and outdoor lifestyle, and support our land managers, including Traditional Owners and farmers to diversify their business models to include carbon farming and nature-based tourism.



[A \$435 billion green industrial economic opportunity for the nation.]

Deloitte, National Australia Bank, 2023:

'All systems go: Powering ahead - Australia's economic opportunity from trading in global decarbonisation'

Creating jobs in the future economy

As a clean energy powerhouse with ample space for renewable energy production and the associated green manufacturing that is enabled by this low-carbon, cheap electricity, Queensland's potential share of this opportunity is large. The benefits will be felt across many sectors including agriculture, transport, manufacturing, and resources.

The QEJP is already driving new investment in green industries right across the state. Regional Queensland is at the centre of this clean energy industrial revolution with the hydrogen, renewables manufacturing and critical minerals the world needs.

The QEJP will deliver 100,000 jobs for Queenslanders, with 95% investment expected in the regions. At the same time this renewable transformation of Queensland's SuperGrid will deliver lower electricity prices in the long term. Support for cost-of-living pressures and good jobs in a clean environment are the green dividend offered by this clean economy pathway for Queensland.

Across the clean economy pathway, developing skills and creating jobs are critical.

In traditional sectors like resources, agriculture and transport, and new industries, high-quality secure employment will underpin Queensland's decarbonisation.

Diversification and community resilience

Cleaner energy means cheaper energy. With lower energy costs and increased new economy opportunities, communities will continue to diversify and strengthen their connections to place in the future economy.

Households and businesses will be empowered to innovate in a low-carbon economy, live in sustainable and resilient neighbourhoods, and enjoy the benefits of cost-saving measures such as electric vehicles and low-cost renewable energy.

A decarbonised and resilient economy means that communities can continue to enjoy calling Queensland home, and be confident that they can continue to enjoy good jobs in an industry that is also working to lower Queensland's emissions.

Decarbonisation delivers opportunities for all Queensland

Communities, individuals, and businesses across Queensland are already benefiting from climate action, ranging from landmark clean energy infrastructure projects to energy saving initiatives aimed at businesses and households. These measures are already lowering emissions and creating clean economy job opportunities. Work will continue to build on this decarbonisation momentum.



North Queensland Natural Disasters Mitigation Program
The Queensland Reconstruction Authority has made \$10 million available to eligible councils for projects to reduce disaster risk in northern Queensland through the North Queensland Natural Disasters Mitigation Program. This project will improve community resilience to natural disasters and climate change, and reduce insurance costs by funding physical mitigation works.



Ark Energy H2 renewable hydrogen plant
The Queensland Government has committed up to \$8 million to support Ark Energy in establishing a renewable hydrogen production and refuelling facility at the Sun Metals refinery in Townsville. Hydrogen will be produced via electrolysis and used for a trial of up to five hydrogen fuel cell electric trucks in the Sun Metals fleet as well as a variety of other applications across the refinery operations. The project will showcase the application of locally produced hydrogen and facilitate capacity building in the local supply chain. Ark Energy have also been successful in obtaining ARENA funding to support the project.



Central Queensland (CQ) Hydrogen Hub
The CQ Hydrogen Hub will create over 8,900 jobs including roles in construction, trades and engineering. It could produce up to 292,000 tonnes of hydrogen a year by 2031. This is equivalent to fuelling more than double Australia's current heavy vehicle fleet. The Australian Government is providing a \$69.2 million grant to help develop the CQ Hydrogen Hub in Gladstone.



Fortescue Future Industries Green Energy Manufacturing Centre
The first stage of the project will establish Australia's first multi-gigawatt scale electrolyser manufacturing facility, with an initial capacity of two gigawatts (GW) per annum – more than doubling current global production. Hundreds of jobs will be delivered over the project lifetime.



Kogan Clean Energy Hub
CS Energy is adding a clean energy hub next to the Kogan Creek Power Station to support Queensland's renewable energy targets. The Hub will include the Chinchilla Battery and the Kogan Renewable Hydrogen Demonstration Plant, one of the state's first renewable hydrogen projects to come online, with \$28.9 million from the Queensland Renewable Energy and Hydrogen Jobs Fund allocated.



Australian Agricultural Company (AACo)
AACo is working with Sea Forest, Meat & Livestock Australia, the University of New England, and the University of Queensland to fast track the development of the red algae *Asparagopsis* as a feed additive to reduce methane emissions from long-fed cattle.



MacIntyre Wind Farm
Acciona, a global leader in renewable energy and infrastructure solutions, has partnered with the Queensland Government, through CleanCo, to deliver one of the largest onshore wind farms in the world. The project is expected to generate 1,026MW of wind power and will provide a massive boost to Queensland's economy with local spending expected to exceed \$500 million. Up to 400 local jobs are expected to be created during construction with an additional 240 jobs created for the construction of a 64 kilometer transmission line.



75% reduction by 2035

The Queensland Government has a clear pathway to achieving the 75% target using the best evidence and advice and working with industry.

The pathway

We now have the policy levers to take action to achieve our targets.

Queensland is already making great progress – our target for 2030 is a 30% reduction of emission from 2005 levels. We are currently at 29% – years ahead. Australian emissions routinely fall faster than expectations – targets drive action.

Figure 3 shows how Queensland will achieve its 75% target by 2035. The QEJP will do the heavy lifting and generate the renewable energy that secures existing jobs and creates new ones. The Queensland Government is collaborating with the Australian Government in developing a Renewable Energy Transformation Agreement to provide support to help deliver the QEJP.

Encouraging decarbonisation and attracting private investment will involve genuine partnerships and engagement. This includes Queensland working with the Australian Government as it develops national sectoral plans. The Queensland Government will work closely with industry and communities on its own sectoral plans and harness expert advice to position our industries for a future decarbonised global economy.

Coordinated action will be needed to decarbonise Queensland's hard-to-abate emissions. The Queensland Government will work with the Australian Government to attract the significant investment and initiatives required to achieve at least 10% of the targeted reduction in emissions. This will secure the future of these industries and the communities in which they are located, thereby managing economic growth and cost of living pressures.

Queensland's policy pathway to 75%

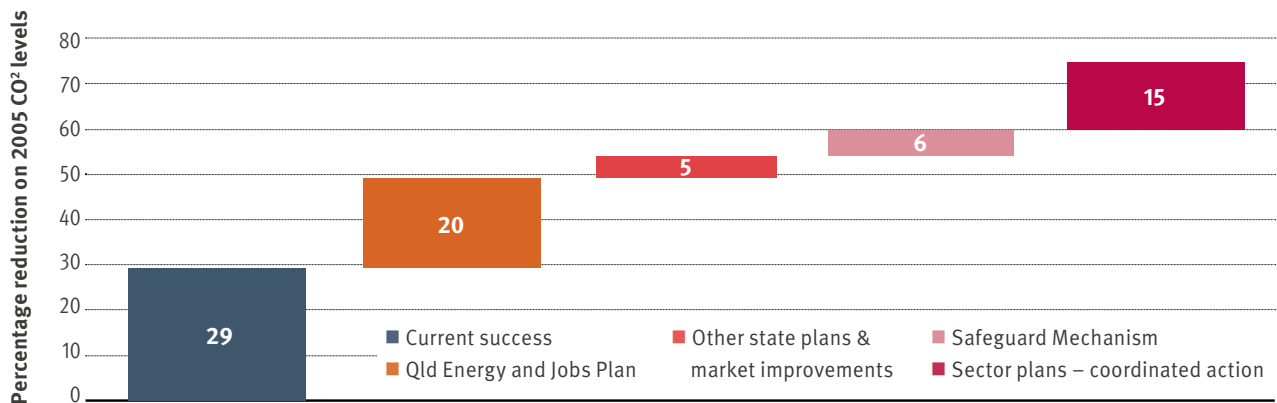


Figure 3

75% by 2035:

Current successes

Queensland has a credible plan to meet its ambitious but measured targets.



Latest data, 2021

Since 2005:

Emissions have **reduced by 29%**



Resident population has **increased from 3.9 million to 5.2 million** persons in 2021



The economy has **grown by more than 50%** in real terms over this period



Queensland has passed **1,000,000 solar unit installations***

**Clean Energy Regulator, 2024*



Combined, Queensland has more than **9,500MW of renewable energy capacity** — 27% of electricity used is produced from renewable energy sources (October 2023)



Electric vehicle uptake **increased by 135%** in the 12 months to 30 September 2023 — Queensland is predicted to have as many as **1.6 million EVs** on the road by 2035



75% by 2035: Existing policies can deliver 60%

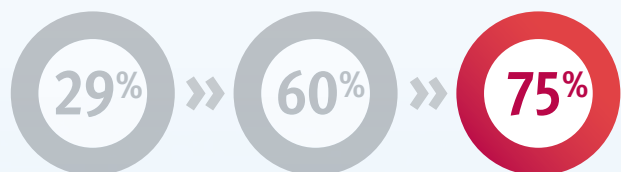


Queensland's pathway to a clean economy that creates opportunities for all Queenslanders is already locked-in, with plans in place across key sectors of the economy. Delivering these plans and working with the Commonwealth on key policies will deliver Queensland to 60% emission reductions.

Key work already underway:

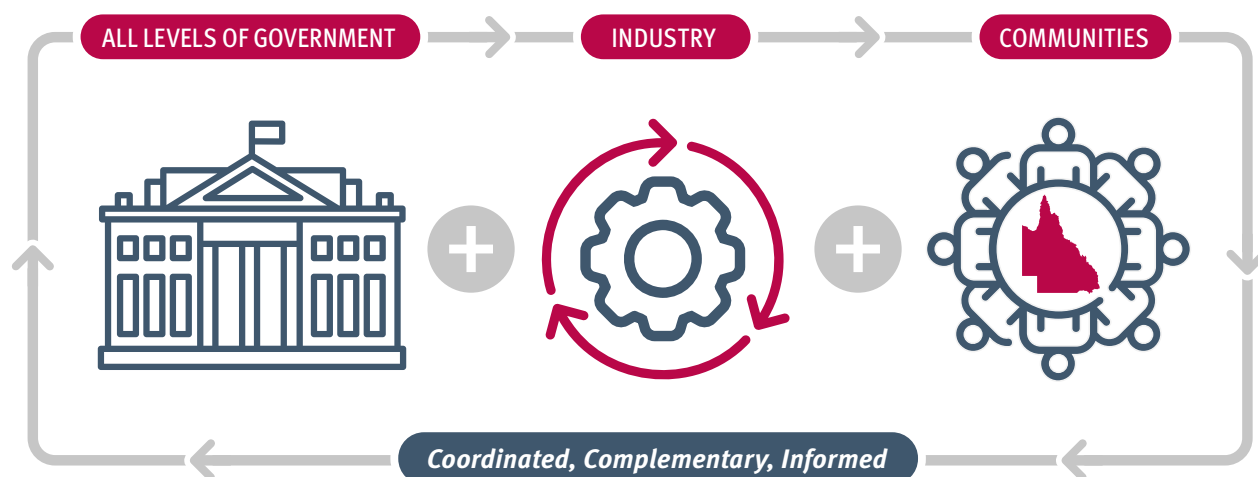
- **Queensland Climate Action Plan**
 - Climate adaptation, risk assessment, sectoral planning
- **Queensland Energy and Jobs Plan**
 - 90% reduction in electricity emissions and 100,000 jobs
- **Queensland Zero Emission Vehicles Strategy & Action Plan**
 - 100% of new passenger vehicle sales to be zero emission vehicles by 2036
- **Queensland Resources Industry Development Plan**
 - A resilient, responsible, and sustainable Queensland resources industry
- **Queensland Low Emissions Agriculture Roadmap**
 - Queensland agribusiness sector is a world leader in low-carbon production and supply chains
- **Queensland Biodiversity Conservation Strategy**
 - \$500 million Land Restoration Fund — expanding carbon farming in Queensland
- **Queensland New-Industry Development Strategy**
 - Local Economic Opportunities Network, Regional Economic Futures Fund
- **Commonwealth Safeguard Mechanism**
 - Australian Government's policy for reducing emissions at Australia's largest industrial facilities.

75% by 2035: Partnerships to share the prosperity of emissions reductions



Queensland has a wealth of natural and competitive advantages across all sectors that can support national ambitions, and will work with the Australian Government to ensure that there is coordinated action across all levels of government to bring decarbonisation investment to the State that delivers clean economy jobs.

Principles for delivering future action:



Emissions reduction targets support actions that support economic growth and jobs

The Australian Government has committed to developing a refreshed Net Zero plan for 2050 and an interim 2035 emission reduction target. To support this work, the Commonwealth will develop six sectoral decarbonisation plans covering major components of the economy. Upcoming Australian Government plans include: electricity and energy; industry; resources; the built environment; agriculture and land; and transport.

Each level of government and industry can work together to ensure that the optimal decisions are made.

The Queensland Government's role is to engage with local stakeholders, identify funding priorities that deliver outcomes for local communities and industries, and align state policies to facilitate a flow of support to Queensland.

The 2023–24 Queensland Budget included the \$520 million Low Emissions Investment Partnerships (LEIP) program to fast-track emissions reductions from the State's highest emitting facilities, with an initial focus on the metallurgical coal sector. This is an example of the Queensland Government implementing a complementary policy to the Australian Government's Safeguard Mechanism, ensuring Queensland's future as a high performing, low-carbon economy.

Establishing an expert panel

The Queensland Government is creating, in legislation, an expert panel to provide advice and direction on meeting our state's emissions reduction targets. Drawing on relevant expertise, the panel will advise on:

- progress towards achieving emissions reduction targets
- the impact of achieving emissions reduction targets for local communities, including employment opportunities in emerging industries
- data from the emissions inventories relating to greenhouse gas emissions in Queensland
- the impact of new technologies and market trends on achieving targets
- efficient and cost-effective ways to reduce greenhouse gas emissions by sector
- measures being taken by the Australian Government and other jurisdictions.

The Queensland Government will use the best available information, and broad consultation across industry and the community, to decide interim emissions reduction targets for 2040 and 2045.

The Queensland Government is already acting

Significant infrastructure investments are already working to drive down emissions and build our renewable energy future.

This work is bringing together all of Queensland, the cities and the regions, to ensure every Queenslander benefits from the job opportunities of decarbonisation and stronger climate action.

EXISTING INITIATIVES

\$19 billion over four years for Queensland Energy and Jobs Plan (QEJP)

The QEJP sets Queensland on the critical path to zero emissions electricity while supporting the creation of 100,000 new jobs across the state by 2040. It includes two targets:

- 70% renewable energy by 2032
- 80% by 2035.

This will be achieved by the:

- creation of a \$62 billion SuperGrid, an historic expansion of solar and wind power supported by two world-class pumped hydro facilities
- 90% reduction in electricity emissions by 2035–36.

Vegetation Management Framework and \$500 million Land Restoration Fund (LRF)

Queensland's responsible vegetation management framework has delivered the nation's biggest emissions reductions over the last decade with nation leading regulated protection of over 100,000km² of remnant regional ecosystems and high value regrowth vegetation, including riparian vegetation in all reef catchments.

The framework is supported by the \$500 million LRF which aims to expand carbon farming in the state and support land-sector carbon projects that deliver additional environmental, socio-economic and First Nations co-benefits, providing incentives to protect native vegetation.

In addition, the Natural Resources Investment Program has provided over \$60 million from 2018–2022 to improve the quality of the state's natural resources specifically land, vegetation, water, and the Great Barrier Reef.

\$520 million Low Emissions Investment Partnerships (LEIP)

Supporting Queensland's highest emitting facilities to bring forward investment in projects that will drive down emissions. LEIP has a focus on reducing emissions from Safeguard Mechanism facilities in the metallurgical coal sector and could extend to other facilities in the future.

EXISTING INITIATIVES

\$96 billion Big Build, four-year capital program	Delivering economic and social infrastructure to unlock development and investment, setting a strong foundation to embrace opportunities from global decarbonisation, delivering growth and good jobs. Includes \$19 billion from the QEJP.
Queensland New-Industry Development Strategy	■ \$200 million Regional Economic Futures Fund to deliver initiatives that help regional economic transformation in communities. ■ Regional Growth Framework harmonises economic, infrastructure, and land-use planning to accelerate action on policy priorities such as affordable, well-located housing and decarbonisation. ■ Local Economic Opportunities Network is our on-the-ground network across the state to identify opportunities for economic diversification and promote these for investment consideration.
\$150 million Job Security Guarantee	The Guarantee will support workers with access to reskilling, transfer to new opportunities and advice on future career pathways. It is backed by a Queensland Energy Workers' Charter and Energy Industry Council.
\$55 million Zero Emissions Vehicles Strategy and Action Plan	Accelerating Queensland toward a cleaner, greener transport future through a focus on zero emission technologies and vehicle modes, new and emerging technologies and alternative fuels.
\$30 million for actions under Queensland's Clean Energy Workforce Roadmap	Queensland's regions will be at the forefront of opportunities from the creation of the State's SuperGrid, with 95% of infrastructure investment and 70% of employment projected to be in regional areas. This will provide direction to further develop Queensland's highly skilled workforce and address future workforce needs.
\$9.25 million Local Energy Partnerships Initiative	This initiative will ensure energy providers work closely with councils and local communities to ensure local benefit.



Next steps to net zero by 2050

In line with leading global economies, both Queensland and Australia have committed to achieve net zero emissions by 2050.

The Queensland Government will:

- establish an expert panel to provide advice on achieving the emissions reduction targets and ways to reduce greenhouse gas emissions in Queensland
- assess current work and forward work program to deliver sectoral decarbonisation plans for Queensland's key economic sectors
- engage with industry, community, regions, and all levels of government

- deliver interim emissions reduction targets for 2040, and 2045.

Future targets will be supported by the creation and ongoing review of Queensland's sectoral plans, ensuring all sectors are engaged in the pathway at each critical step towards net zero.

Delivering this forward work program will ensure Queensland's climate agenda remains ambitious, but tethered to a robust and achievable clean economy pathway that supports workers, communities, and regions.

Queensland's 2035 Clean Economy Pathway: 75% by 2035

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February 2024