

QFF CEO FOREWORD



Queensland is set for a period of rapid growth in the renewable energy sector with the State Government's Queensland Energy and Jobs Plan setting targets and planning significant investments that aim to deliver clean, reliable, and affordable energy throughout the state.

The Energy and Jobs Plan identifies up to 95 per cent of new clean energy infrastructure will be developed in regional Queensland and the Queensland Energy and Jobs Plan has set targets for the state to reach 70 per cent renewable energy by 2032 and 80 per cent by 2035.

Many landholders across the state are now being approached to consider hosting renewable energy developments on their land. It is important that land sharing agreements are well thought through and understood by the landholder and that they result in stable, economically sound, and sustainable outcomes for all parties, including the landholder themselves, their neighbours and the broader community.

The Queensland Farmers' Federation (QFF) has developed the Queensland Renewable Energy Landholder Toolkit (the Toolkit) to provide information and practical guidance for landholders considering becoming a landholder host. The Toolkit has been developed through considerable consultation with stakeholders including landholders, developers, government bodies, and legal and financial professionals.

The Toolkit provides general background information and an extensive range of considerations for landholders who may be reviewing commercial agreements to host renewable energy infrastructure on their property as well as for those landholders who are at subsequent stages of development. It may also be a useful document for neighbours and communities seeking to understand the impacts and opportunities relating to a renewable development being built in their region.

QFF hopes that the Toolkit provides landholders with support to make more informed decisions when considering hosting renewable infrastructure. As outlined in the Toolkit, it is essential that landholders obtain sound legal and financial advice before entering into any agreement with a renewable proponent.

Whilst the Toolkit will be a valuable supporting document for farmers, it is the first step of many. QFF will continue to work across our membership to support Queensland farmers to successfully navigate the risks and the opportunities ahead to work towards a sustainable future for agriculture and regional communities.

I extend my sincere thanks to the project steering committee, the individual farmers, the Department of Energy and Public Works and all stakeholders who have given their time and expertise to help develop this resource for farmers. Your collective input, experience and contributions have been invaluable and are much appreciated.

Jo Sheppard

CHIEF EXECUTIVE OFFICER,
QUEENSLAND FARMERS' FEDERATION



INTRODUCTION

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Queensland is poised for strong growth in renewable energy over the next 10 years and beyond with an abundance of sunshine and wind across the state. Queensland plans to grow its renewable energy generation and storage with the Queensland Energy and Jobs Plan setting new targets to reach 70 per cent renewable energy by 2032 and 80 per cent by 2035.

With increasing interest in the development of mostly solar and wind projects, a growing number of landholders are considering the potential to host renewable energy generation on their property having been approached by renewable energy developers. It is important that farmers are supported to make informed decisions when assessing the associated opportunities and risks to ensure they are able to determine the direction they wish to take their farming enterprise into the future.

This Toolkit:

- a) provides information and guidance for landholders considering hosting renewable energy projects
- b) supports landholders to navigate the stages of renewable energy project development should they decide to proceed with negotiations or enter into an agreement with a renewable energy developer.

Through a period of consultation with numerous stakeholders including landholders, industry representatives, legal and financial advisors, and other representative bodies, a broad range of insights have informed the development of this Toolkit, providing you, the landholder, with a full spectrum of relevant considerations.

The Toolkit suggests what should be considered during negotiations and the preparation of agreements, but does not contain specific advice and as such, each landholder should seek suitable independent advice for their specific circumstances.

The toolkit also provides advice to the landholder to assist in achieving good project outcomes such as community consultation and benefit sharing.



Scope and objectives

The Toolkit has been prepared as an informative resource for Queensland landholders to understand:

- what makes sites attractive to renewable energy developers
- the potential impacts and benefits
- the relevant legislation and financial considerations
- the stages of project development
- any specific issues they may need to consider at each phase.

Network infrastructure: Transmission and distribution (poles and wires)

This toolkit recognises that there are regulated processes that govern how Network Service Providers (NSPs), or electricity network businesses such as Energy Queensland (Ergon and Energex) and Powerlink plan and develop routes for the construction and maintenance of regulated network infrastructure. This guide is not intended to overlap with this regulated process.

Links to details about *Electricity Network Planning* are available at [Useful Resources](#). There are also details of a number of initiatives to assist communities engage with network planning processes such as the Energy Charter.

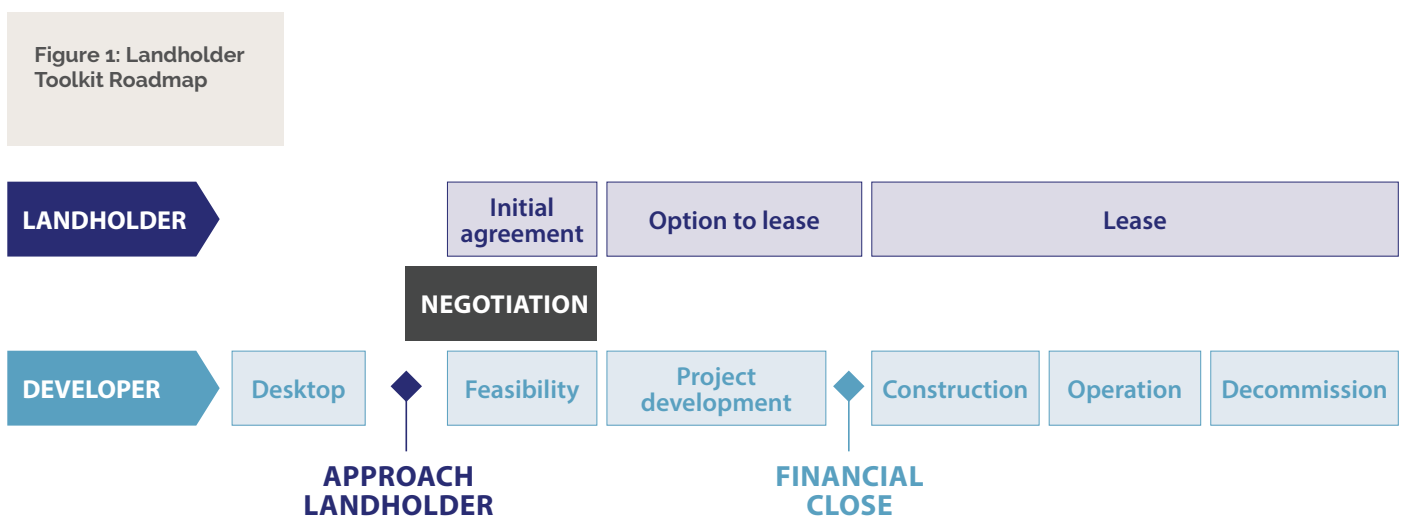
If you are a neighbour of a renewable energy project that may not host a generator but may host network infrastructure that is associated with the development, then refer to the section on [Hosting network connection infrastructure](#).

How to use this Toolkit

The Toolkit is structured around how the landholder may experience renewable energy projects, which is the sequence of engagement and agreements that are entered into during the project lifecycle.

The agreements are tied to the feasibility and development process which developers follow when proposing and delivering their projects. Each developer may have their own process, so a general version is shown based on consultation with a number of developers.

Figure 1 shows how the agreements generally relate to the development process.



The Project Development process includes all aspects of the project that the developer undertakes during the feasibility and development process such as resource assessments, network assessment and connection agreements, foreign investment approval, planning and environmental approvals, construction planning and pricing and the commercial aspects such as securing the revenue for the project by progressing a power purchase agreement with an electricity retailer. It is important for the landholder to understand that this work is being done by the developer at the same time. The development phases of the project are outlined in Section 6: Project Development Process.

The toolkit also provides resources for the use of the landholder during discussions with the developer including:

- **Checklists** for various stages of the discussion (section [Landholder checklist](#))
- **File Notes** or **Records of Discussion** for you to take notes as you discuss the project with industry (section [File Notes and Records of Conversation](#))
- **Useful Resources**, where more information is available on the topics covered in this Toolkit.



Western Downs Green Power Hub. Image Courtesy: Queensland Government

An aerial photograph of a wind turbine under construction. The white tower and nacelle are visible, with a red lattice crane positioned vertically next to it. The turbine is situated on a cleared dirt area surrounded by dense green forest. In the background, rolling hills and a cloudy sky are visible. A white rectangular box is overlaid on the upper portion of the image, containing the title text.

OVERVIEW OF RENEWABLE ENERGY IN QUEENSLAND

OVERVIEW OF RENEWABLE ENERGY IN QUEENSLAND

Queensland has set ambitious goals to become a major contributor to the renewable energy sector, with the aim of providing clean and affordable energy to boost economic growth, employment, and investment in the state, as part of the ongoing transition towards cleaner energy sources.

Queensland has a high penetration of rooftop solar systems and a rapidly growing portfolio of large-scale renewable energy projects throughout the state.

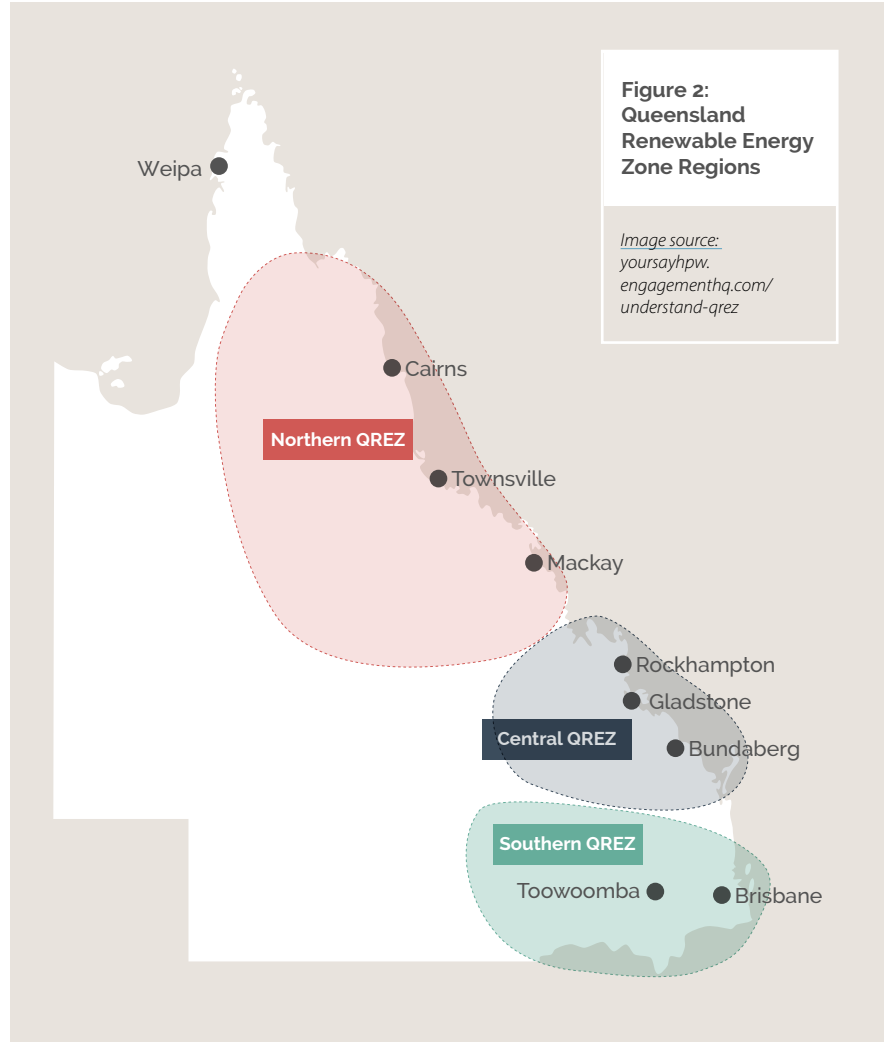
Queensland has three Renewable Energy Zones Regions which are considered to have high quality resources and where it is proposed that coordinated development may occur. The Zones are shown in *Figure 2*.

The Queensland Energy and Jobs Plan sets out actions for the state to achieve the target of 70 per cent renewable energy by 2032 and outlines a path for Queensland's energy system to evolve to deliver clean, reliable and affordable energy.

The Plan includes:

- a Supergrid Infrastructure Blueprint
- a Regional Energy Transformation Partnerships Framework.

Regional Queensland has a significant role in this transition which brings both opportunities and risks for communities and farming enterprises. Opportunities for regional development can only be maximised if community engagement and participation is included across the project development.



QLD renewable energy projects: Under construction and proposed

The QLD Electricity Generation Map shows the location of Queensland's existing power stations with greater than 1 megawatt (MW) installed capacity with information about fuel type, size (MW), ownership, and commissioning date. The map also displays proposed power generating facilities publicly announced by project developers. It is important to note that not all of these proposed facilities will necessarily progress to construction.

The Queensland SuperGrid Infrastructure Blueprint estimates that 540,000 hectares of land for wind turbines as well as up to 40,200 hectares for solar farms, will be needed to achieve a 25,000 MW renewable generation target by 2035.¹

1. Estimates from p26 of the *Queensland SuperGrid Infrastructure Blueprint* allowing for 4 hectares per MW for solar farms and 200 hectares for each wind turbine.

WHAT MAKES A SITE ATTRACTIVE TO PROJECT DEVELOPERS?

Longreach Solar Farm. Image Courtesy: James Walker

WHAT MAKES A SITE ATTRACTIVE TO PROJECT DEVELOPERS?

There are a number of factors that make a site appealing to renewable energy developers. Some are common to each technology and some of the factors are unique to the technology. For example, as energy projects need a suitable connection to the electricity network, one of the primary factors relates to having close access to a high capacity network connection point. Each technology then has siting characteristics relating to the availability of the resource, as well as different planning and environmental considerations.

The extent to which these factors are suitable may make a site more appealing for a developer. The developer must weigh up these different factors to determine whether a project may be suitable.

For example, a site may have a very close network connection point but be constrained by some planning and environmental considerations that might limit the capacity of the site, such as the presence of good quality agricultural land or sensitive habitat areas. In this case, the developer may progress a lower capacity project because of its easier network access.

Similarly, a developer may be considering a large, unconstrained site which is further from a network connection point. They may consider that the ability to build a larger generator may outweigh the additional costs of building a longer network connection.

A developer is constantly weighing these factors as they conduct their feasibility assessments and development phases to determine their most suitable project. Accordingly, the scale and footprint of the project is likely to change as these assessments are completed.

Table 1 highlights the factors that may make a site appealing for various renewable energy technologies.

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Usually land that is close to the electricity grid connection will be sought first.

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**RENEWABLE ENERGY
DEVELOPER**



Whitsunday Solar Farm. Image Courtesy: Edify Energy






	Wind	Solar	Battery Energy Storage Systems (BESS)	Hydropower	Bioenergy
					
Resource availability	Economically viable wind resource.	High solar irradiation <i>(Most areas of Queensland have sufficient solar resource availability).</i>	Not applicable.	Water availability and reliability, ability to construct required infrastructure.	Close to feedstocks.
Land characteristics	Flat or undulating land, or elevated land and ridge lines conducive to laminar wind flow.	Clear, flat or gently sloping land with low risk of weather hazards such as cyclones, floods and hailstorms.	Small flat sites preferable. Will generally seek to avoid areas of hazard such as flooding or bushfire.	Specific siting requirements for upper and lower reservoirs.	Small area of land.
Network access	Proximity to a suitable and strong network connection of suitable voltage and capacity to suit the scale of project. Detailed analysis to minimise the risk that export will be limited, or curtailed, based on other nearby developments or other grid constraints.				
General planning and environment	General issues relating to the establishment of renewable energy on rural lands including the presence of significant wildlife and ecosystems, agricultural land use, transport and access and amenity impacts along with issues that are specific to each technology below.				
Specific planning and environment	Impacts to nearby sensitive land uses such as noise, shadow flicker, electromagnetic and television reception. Protecting aviation services and safety and minimising construction impacts.	Visual impacts to nearby land uses and minimising construction impacts.	Potential Impacts to nearby sensitive land uses such as visual and noise.	Direct infrastructure impacts and flooding impacts of reservoirs. Hydrological impacts on river systems.	Impacts to nearby sensitive land uses (odour etc).

Table 1 Renewable energy siting considerations

Site constraints

Developers conduct a number of studies during the feasibility phases to identify any constraints that may impact the size and scale of the development. The significance of any constraints and the area affected may force a developer to change proposed layouts or incorporate other mitigation measures into project planning. The cumulative impact of a number of constraints may make the project unviable and the developer may cease work on the project.

More details about how the feasibility phase is available in [Section 6: Project Development Process](#)



Kaban Green Power Hub Farm. Image Courtesy: Neoen