Dear Chair and Committee,

**Submission to Review of Queensland Energy Legislation Issues Paper**

We welcome the opportunity to provide comments on the Review of Queensland Energy Legislation and the Issues Paper provided to guide this review.

**About EDO Qld**

EDO Qld is a non-profit community legal centre with clients from both rural and urban areas and backgrounds. Our solicitors provide legal advice to over a thousand individuals and groups every year, including through educational events we organise in partnership with community groups and in response to specific advice requests by clients. We run a small number of public interest court cases in state and federal courts to assist those who have good grounds to use their legal rights under our laws to defend the interests of the environment and their community. Our legal work covers a range of planning, environmental and resource law topics, including vegetation protection.

Overall, EDO Qld is disappointed that the review does not even mention the greatest environmental dilemma facing Queensland: climate change.

Any change to the energy sector must be designed to address and lessen the energy sector’s contribution to climate change and move Queensland toward carbon-free energy production and usage.

The Queensland Government has set a state target to reach zero net emissions by 2050. Along with the interim target for at least a 30% reduction in emissions on 2005 levels by 2030. Queensland will be unable to reach this target without implementing a transition from fossil-fuel energy generation to zero carbon, zero methane renewable generation; this transition needs to begin now. The Queensland Government has also set a renewable energy target of 50 percent renewable energy by 2030; this target was set to help our state meet our emissions reduction targets and therefore it cannot be seen separately from the target of emissions reductions.
The Issues Paper makes mention of our renewable energy target, but it does not mention our emissions reduction target at all; this is a serious and concerning omission from the review of our energy laws.

We strongly recommend this omission is rectified as the Department continues this review, as both of these targets will have significant impacts on our energy framework that should be the driving forces of this review.

Stationary energy is the biggest contributor to Queensland’s greenhouse gas emissions.\(^1\) Our move to meet our emissions reductions targets must therefore have significant impacts on our energy sources; the opportunities and challenges of this transition must be considered now as part of this review of our energy legislation.

Fossil fuels come with grave consequences for our health and our future. Burning these fossil fuels, particularly natural gas, causes climate change through the release of greenhouse gases. Greenhouse gases warm the Earth by absorbing energy and slowing the rate at which the energy escapes to space; they act like a blanket insulating the Earth. Methane is a component of natural gas and a powerful contributor to climate change. "While carbon dioxide is typically painted as the bad boy of greenhouse gases, methane is roughly 30 times more potent as a heat trapping gas."\(^2\) The direct effect of methane is about 84 times stronger than the same mass of carbon dioxide over a 20-year time frame.\(^3\) No credible plan to combat climate change can ignore methane emissions.

The path Queensland should choose is legislative changes that recognize the future of clean, sustainable energy generation and the harmful impacts of fossil-fuel generation. Technologies such as solar, wind and battery storage, combined with innovative energy efficiency programs and demand response should be incentivized and in many instances required to replace fossil-fueled power plants. Below are just some of the programs Queensland should adopt through legislation in order to ensure it achieves the desired goal of a 30% reduction in emissions.

In addition to these, the fundamental question of transitioning Queensland communities, particularly rural communities, from dependence on fossil fuels to a clean energy system needs significant attention by the Queensland Government as a whole, including the Department of Natural Resources, Mines and Energy (DNRME).

Gas is a serious threat to our emissions reductions targets, its use cannot be encouraged

In the Commonwealth Government’s most recent emissions data for Australia, the expansion of the LNG sector was the major contributor to our 1.5 percent rise in greenhouse gases for the year to December 2017.\(^4\)

The Issues Paper makes no mention of the risks of the gas industry to our emissions reductions targets, and instead makes statements that we should ‘recognise the potential for gas to supply a greater proportion of household energy needs’.

---

2 [https://www.sciencedaily.com/releases/2014/03/140327111724.htm](https://www.sciencedaily.com/releases/2014/03/140327111724.htm).
Queensland does not currently regulate the fugitive methane emissions from the gas sector; we therefore do not even have an accurate understanding of the quantities of emissions being released, nor any mandate on the gas sector to monitor leaks in their production and supply systems and to repair them to reduce and avoid emissions. This is unacceptable and cannot continue if we are to take our emissions reductions targets seriously; particularly where we are encouraging this sector to grow.

1. We strongly recommend that the Department ensures that the scope of this review of our energy laws is reframed to place the meeting of our emissions reductions targets, renewable energy targets and climate change risks and opportunities as the key factors of focus of the review. Without this focus for our energy framework, Queensland is unlikely to meet our emissions reductions targets. These factors impact energy security and affordability, for which there are exciting innovations renewable energy technology can provide.

Further submissions are provided in summary here and in detail in the Appendix to this submission.

Summary of further submissions

2. We strongly recommend that:

(a) the environmental criterion of the Electricity Act 1994 (Qld) are continued and strengthened through this review of our energy legislation to ensure that environmental impacts of our energy sources are a key decision making factor in what type of generation of energy is allowed;

(b) energy neutrality is only allowed within a context of emissions reductions potential, otherwise energy neutrality is not appropriate where we as a state are committed to meet our emissions reductions and renewable energy targets;

(c) the Energy Unit of DNRME, along with the whole of the Department, must be given strong briefings to implement the emissions reductions and renewable energy targets into their planning, daily operations and decision making. These targets have a serious impact across all units of DNRME, they are not the sole business of DES and if DNRME continues to operate on that basis, we will not meet our emissions reductions targets.

3. We recommend that the review of our energy laws considers the useful role of community energy projects to provide for more affordable and reliable energy and facilitates the easy and affordable uptake of community energy projects, particularly for lower income, vulnerable citizens who will most benefit from these projects. This will assist in ensuring that lower income, vulnerable citizens are not disadvantaged by the transition to clean energy.

4. We recommend that consideration is given to how our energy laws can better support energy storage on an industrial or grid scale in Queensland to maximize the numerous benefits energy storage provides
5. We recommend that the review of the energy laws is undertaken with a view to ensuring that micro-grids can be facilitated and encouraged in Queensland, particularly in rural areas where their benefits will be most felt. Where our national energy laws and rules inhibit in any way the uptake of micro-grids, we recommend that the Queensland Government advocates for changes to these national laws to remove these obstacles.

6. We recommend that consideration is given as part of this review of our energy laws to how we can better support the fast uptake of a functioning electric vehicle sector flourishing in our state and across Australia.

7. We recommend that our energy laws be revised to provide an express policy to require and promote energy efficiency, conservation and demand response programs and services, given the benefits of these matters for energy reliability, affordability and efficiency.

Please do not hesitate to contact us if you have any questions or would like to discuss this matter further.

Yours faithfully
Environmental Defenders Office (Qld) Inc

Revel Pointon
Senior Law Reform Solicitor
Environmental Defenders Office (Qld) Inc
APPENDIX

Environmental impacts of energy is a concern of DNRME that must be taken seriously

Climate change, our emissions reductions targets and our renewable energy targets are relevant factors for many (if not all) departments and portfolios across the Queensland Government, but particularly so for DNRME.

At the recent consumer stakeholder workshop where officers from DNRME and a solicitor from Minter Ellison presented the topics under consideration for the Issues Paper, we were surprised and disappointed to hear from an officer from the Energy Unit of DNRME that the Department considers climate change, the environment and emissions reductions were the concerns only of the Department of Environment and Science (DES).

This sentiment demonstrates a fundamental failure of the governance of DNRME; in both ensuring the Department is operating with an understanding of the risks to our energy sector from climate change impacts, as well as the significant risks and opportunities involved in meeting our commitment to transition to clean energy – both of these issues have direct and undeniable impact on the governance of our energy sector.

The current Electricity Act 1994 (Qld) (Electricity Act) requires decision makers under the Act to consider the impacts on our environment of the supply and use of electricity. For example, in section 3(a), the objects of the Electricity Act are to ‘set a framework for all electricity industry participants that promotes efficient, economical and environmentally sound electricity supply and use’ (our emphasis).

Section 180(5)(b) requires the decision maker in considering whether to grant a generation authority to consider ‘relevant government policies about environmental and energy issues and the likely environmental effects of building and operating the generating plant.’ This criteria is reflected under the Act also for the assessment of transmission authorities and distribution authorities.

We query how these criterion have been applied to date in the face of the comment from the officer of the Energy Unit cited above that climate change and environmental matters were a concern only of DES.

2. We recommend strongly that:

(a) the environmental criterion of the Electricity Act 1994 (Qld) are continued and strengthened through this review of our energy legislation to ensure that environmental impacts of our energy sources are a key decision making factor in what type of generation of energy is allowed;

(b) energy neutrality is only allowed within a context of emissions reductions potential, otherwise energy neutrality is not appropriate where we as a state are committed to meet our emissions reductions and renewable energy targets;

(c) the Energy Unit of DNRME, along with the whole of the Department, must be given strong briefings to implement the emissions reductions and renewable energy targets into
their planning, daily operations and decision making. These targets have a serious impact across all units of DNRME, they are not the sole business of DES and if DNRME continues to operate on that basis, we will not meet our emissions reductions targets.

Community solar should be better supported through our energy laws to reap the benefits of these initiatives

Solar and other renewable resources are delivering tremendous benefits across the country, but the traditional panels-on-your-roof approach to solar simply doesn't work for many people. Families and businesses that rent, those with low credit scores and those with shaded rooftops face barriers to participation. Specifically, many households are unable to host a PV system because:

(a) they do not own their building (i.e., renters);
(b) they do not have access to sufficient roof space (e.g., high-rise buildings, multi-unit housing); or
(c) they live in buildings with insufficient or shaded roof space.

Similarly, many businesses are unable to host a PV system because:

(a) they operate in buildings with too many establishments to have access to sufficient roof space (e.g., shopping malls),
(b) they rent their retail space;
(c) they have insufficient roof space to host a PV system capable of supplying a sufficient amount of their energy demand; or
(d) they cannot share energy between multiple buildings or sites.

For community energy projects, electricity benefits are typically allocated on a capacity or energy-production basis. Participants in capacity-based programs own, lease, or subscribe to a specified number of panels or a portion of the system and typically receive electricity or monetary credits in proportion to their interest in or share of the project. Energy-based programs offer participants the opportunity to purchase the output of an array via kilowatt-hour blocks of generation. Due to the potential for multiple, offsite electricity participants, community solar programs have the potential to be more flexible than onsite single-user PV business models. Depending on the regulatory framework, residential, commercial, nonprofit, and municipal entities may be able to participate. Programs may stipulate that a percentage of the project be allocated specifically for residential or commercial entities, or for low-income participants.

Community solar has unique potential to benefit low income communities. Unfortunately, the majority of low income households have not been able to participate in the growing solar PV market. Low income households face several barriers to rooftop solar access, including:

(a) difficulty meeting credit requirements to obtain long-term, low-cost financing or affordable leases for solar systems;
(b) not being able to benefit from tax credit or other incentive programs because of insufficient income;
(c) status as tenants, rather than homeowners, which means households do not control the roof-space necessary for installation of solar systems; and
(d) lack of information about rooftop solar.
Community solar has unique potential to benefit low income communities. First, low income families are more likely to rent or live in apartments than the average household. Second, community solar can be purchased in discrete amounts that are smaller than most multi-kilowatt rooftop solar systems, making the cost of entry more accessible. Third, because community solar programs are constructed on larger scales than most rooftop units, they can secure cheaper prices through bulk panel purchases. Finally, community solar projects can be installed on land that is otherwise unusable (such as brownfields) or has low property value. Use of this property can reduce the costs necessary for initial investment and support community redevelopment by increasing the productivity of unused or undeveloped land.

Community solar arrays can be hosted and administered by a variety of entities, including utilities, solar developers, residential or commercial landlords, community and nonprofit organizations, or a combination thereof.

If energy laws can institute a supportive regulatory environment, community solar presents an area of tremendous potential growth for solar photovoltaics (PV), expanding the potential customer base to 100% of homes and businesses. Well-designed shared renewable energy programs, often referred to as community solar, can connect these individuals with the clean energy they want. Whether or not they own a suitable rooftop themselves, consumers would be able to subscribe to a local clean energy project and receive credit on their utility bills for their portion of the clean power produced.

3. **We recommend that the review of our energy laws considers the useful role of community energy projects to provide for more affordable and reliable energy and facilitates the easy and affordable uptake of community energy projects, particularly for lower income, vulnerable citizens who will most benefit from these projects. This will assist in ensuring that lower income, vulnerable citizens are not disadvantaged by the transition to clean energy.**

Energy storage (batteries) needed on industrial or grid scale in Queensland

Energy storage fundamentally improves the way we generate, deliver, and consume electricity. Energy storage helps during emergencies like power outages from storms, equipment failures, or accidents. But the game-changing nature of energy storage is its ability to balance power supply and demand *instantaneously* - within milliseconds - which makes power networks more resilient, efficient, and cleaner than ever before.

Energy storage is needed on an industrial or grid scale for three main reasons. The first is to ‘balance load’ – to shift energy consumption into the future, often by several hours – so that more existing generating capacity is used efficiently. The second reason is to "bridge" power – in other words, to ensure there is no break in service during the seconds-to-minutes required to switch from one power generation source to another. Finally, power quality management – the control of voltage and frequency to avoid damaging sensitive equipment – is an increasing concern that storage can alleviate whenever needed, for a few seconds or less, many times each day.
Energy storage can lead to cost savings in two primary ways. The first is by lowering the overall cost of providing electricity. The second is by allowing customers to avoid premium pricing (or “peak demand”). But broader energy storage deployment can save consumers money in additional ways. Shorter outages for residents after a storm or an equipment failure can help save not only money but lives. Fewer outages overall lead to less economic losses.

Utilities, regulators, and private industry have begun exploring how battery-based energy storage can provide value to the electricity grid. Among other services, energy storage can provide:

(a) time-of-use bill management;
(b) increased PV self-consumption;
(c) back-up power;
(d) deferral of distribution and transmission construction;
(e) transmission congestion relief;
(f) frequency regulation;
(g) voltage support; and
(h) black start capability.

4. We recommend that consideration is given to how our energy laws can better support energy storage on an industrial or grid scale in Queensland to maximize the numerous benefits energy storage provides.

Distributed energy through micro-grids must be enabled in Queensland, to improve energy affordability and security in regional areas

Micro-grids are among the most obvious solutions to address the rising electricity costs and increasing needs for greater energy security through improved resilience, reliability and efficiency in Australia. The benefits are particularly prevalent in Queensland due to the large land mass of our state and the consequent significant costs and resources needed to connect and maintain this connection for our regional areas to the grid. Many states are consequently proposing to take small communities and towns off the grid, including Ravensthorpe in Western Australia, or even Byron Shire which is itself proposing to go off grid to meet its zero emissions goals.

5. We recommend that the review of the energy laws is undertaken with a view to ensuring that micro-grids can be facilitated and encouraged in Queensland, particularly in rural areas where their benefits will be most felt. Where our national energy laws and rules inhibit in any way the uptake of micro-grids, we recommend that the Queensland Government advocates for changes to these national laws to remove these obstacles.

Electric Vehicles

There is a clear case for electrifying transportation, which can provide benefits to all consumers, advance economic development, create jobs, provide grid services, integrate more renewable energy and cut air pollution and greenhouse gases.

The transition to zero-emission vehicle technology such as electric vehicles is necessary to achieve the goal of reducing global warming emissions. In addition, electric vehicles mean less local air pollution, reduced oil consumption, greater energy security and more jobs in Queensland. The
proposed investments in electric vehicle charging equipment are urgently required to address critical infrastructure needs to support this transition at a crucial time for the deployment of electric vehicles.

Cars are at least a third of our fossil burning pie. But 90% of our driving is local. EV’s are now better, faster, cleaner and cheaper to buy, to operate and to maintain than gas cars. There are now 28 EV’s of the 40 on the market that cost less than the average $35k gas car.

Accelerating an appropriate deployment of electric vehicle charging infrastructure based on market penetration projections along highway corridors, as well as throughout local cities and towns, is a critical element of electrifying transportation.

6. **We recommend that consideration is given as part of this review of our energy laws to how we can better support the fast uptake of a functioning electric vehicle sector flourishing in our state and across Australia.**

Energy efficiency and demand management are key ingredients to a more efficient, more affordable energy framework – must be integrated into new energy laws

The new energy law should establish an express policy that energy efficiency, conservation, and demand response programs and services have a critical role in ensuring that energy needs can be met safely and reliably, and that proper implantation of these programs can result in the costs of energy being reduced for all consumers, not just participants in the program.

Energy efficiency and demand management programs will result in lower bills, improved system reliability, less pollution, and the possibility of significant economic development. Moreover, all energy customers, whether participating in the programs or not, benefit from the implementation of these programs. For example, reduced electricity demand causes downward pressure on wholesale power costs for energy and capacity, thus reducing energy costs for everyone. Similarly, reducing the demand for electricity reduces or eliminates the need for expensive infrastructure, such as transmission lines.

Each company should be required to procure or provide for its customers cost-effective energy efficiency, conservation, and demand response programs and services with verifiable electricity savings to achieve the energy reduction goals set forth in the statute.

7. **We recommend that our energy laws be revised to provide an express policy to require and promote energy efficiency, conservation and demand response programs and services, given the benefits of these matters for energy reliability, affordability and efficiency.**