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Energy White Paper Taskforce
EWP@industry.gov.au

RE: ENERGY WHITE PAPER – ISSUES PAPER

Thank you for the opportunity to provide input into the Energy White Paper – Issues Paper.

Sustain Northern Rivers is a collaboration of peak regional organisations working together to improve the sustainability of the Northern Rivers. There are four working groups within the collaboration including one which specifically addresses projects on energy. Over the past three years the energy working group has secured funding and produced the Future Energy Skills Report and the Bio Energy Scoping Study. We have also worked closely with the North Coast Energy Forum to deliver two highly successful events drawing together over 100 energy industry, government and community stakeholders.

In December 2013 we held an industry-based forum on bio-energy. Over fifty participants came together in Byron Bay to discuss and progress Northern Rivers projects in bio energy, bio fuel, bio char and bio gas. Attendees included representatives from the timber industry, meat and livestock industry, dairy industry, sugar industry, education sector, local and state government and the community. Over the course of the day all known "Bio" related projects were mapped for the Northern Rivers and number of small working groups were formed to progress projects throughout 2014.

We provide responses to the questions raised in the Issues Paper as follows:

The Security of Energy Supplies

Security of energy supplies must be considered on a long term basis if any such security is to be a reality for future generations. It is concerning that the Issues Paper seems to focus on short term security and an overall ongoing reliance on fossil fuel-derived energy rather than focussing on developing long term and sustainable energy supplies.

Community expectations need to be moderated by the reality of the need to develop more sustainable models of energy production and distribution. The key to this is increasing energy literacy levels across industry and the community in general, to empower people to contribute to a positive impact on reduced energy demand and smarter demand management. Over the past 5 years there has been a significant reduction in domestic energy consumption per capita in states such as New South Wales. This is attributable to rising electricity prices combined with increasing rooftop solar installations.

We are concerned that the Issues Paper does not make reference to renewable energy sources in relation to energy security. It is essential to move away from a reliance on fossil fuels in order to create a long term economically sustainable energy system and address carbon emissions. There are a number of examples around the world (e.g. Wildpoldsried - Germany) where energy derived from renewable sources has become equal to or surpassed that derived from fossil fuel, and is able to meet base load demands. In most of these examples, the key to the successful implementation of renewable energy industries has been government policies and pricing mechanisms which support and enable a competitive market environment for renewable energy.

Additionally, community opposition to new coal and other fossil fuel extraction and combustion is increasing and it is our view that in the long term the existing business model of centralised energy production will continue to deteriorate as storage technology and cogeneration continues to improve.

While falling costs for small scale generating systems is a problem for incumbent large generators, it is an asset to the economy as a whole because energy costs are embedded into every product, service and living expense for the entire economy.

A further benefit is that solar power systems in residential homes (and small businesses) can be supplemented with small capacity grid interactive battery banks, and these can be used to regulate the demand and supply spikes that occur in a changing energy market where everybody is becoming a generator. Solar panel costs are coming down faster than predicted and their cost curve has already reached grid parity.

If the incumbent generators and distributers try to protect their historical monopoly and business model in the face of cheaper and cheaper technological innovation by increasing charges, stand-alone (i.e. battery supported) systems will continue to become an economically viable option instead of a last resort for those unable to connect to the existing infrastructure. A circular problem would be created where rising energy costs create incentive for customers to disconnect from the grid which reduces members to cover the network costs which in turn increase energy costs. Thus those who can afford to purchase their own generation do so and those who can't continue experience higher living costs. This would have negative flow-on ramifications for other sectors of the economy and need not be the case with intelligent grid improvements.

It is not sustainable in our view for the future grid network to be dominated by thousands of domestic storage systems. It would be preferable for the grid to become much smarter and interactive and foster small to medium scale energy generation models which can feed into the grid at various locations. Current transmission infrastructure operators will need direction and support from the government to shift operations away from significant high voltage transmission line projects towards readying the local grids and substations to support this new influx of small and mid-scale distributed generation capacity.

The current regulatory framework governing the generation and distribution of energy favours large scale generators and presents significant barriers to small-medium scale projects such that their feasibility is severely compromised. There must be greater flexibility as well as consistency of policy and regulations to enable the ongoing growth of the renewable energy sector.

Regulatory reform and the Role of Government

In our view the primary role of government should be to foster innovation and investment in emerging energy technologies, especially those that facilitate strong growth in the renewable energy sector.

Overall, there is a need for a strategic, planned and collaborative approach to energy production, distribution and consumption across the nation. At present the approach has been ad hoc and inconsistent between States, with regular policy shifts and changes which makes it extremely challenging for the industry to progress with any confidence or commercial viability.

In NSW for example, the current difficulty in negotiating power pricing agreements and customer connection agreements for renewable energy projects is not conducive to encouraging investment in such projects. Sustain Northern Rivers' experience is that the wholesale purchase price and the retail price offered to proponents who are both generators and consumers can severely affect the economics of a project. Offering a much fairer and more realistic price at either the wholesale purchase or retail selling end would provide a better rate of return on large scale projects and encourage investment in new projects. As would simplifying the process for renewable energy generators to negotiate customer connection agreements and the acceptance of virtual net metering for grid transfer of excess energy to selected users over short distances.

The issue of moving electricity generated on one site to another site owned by the same account holder (even if the site is adjoining and is the one legal entity) has proven to be a barrier to use of renewable energy technologies by organisations in our region. To move the electricity, 'wheeling', would require 'virtual net metering' (VNM), and the advice from Essential Energy was that while they support the 'concept' of VNM the existing market rules, structure, and market data requirements do not support it. It would require a rule change, which can be a very long term process.

We support the need for a review of policy in relation to 'Virtual Net Metering' to resolve the barriers that are delaying the implementation of renewable energy technologies in our region. This would likely include implementing a new class of tariffs for virtual net metering.

Generators, including domestic solar systems, for example, need to be paid a fair price for energy they contribute to the national grid. In the absence of this, small scale generators are likely to disconnect from the grid. In our view the best way forward is to achieve price parity between energy consumed and energy produced whilst allowing for pro rata grid infrastructure maintenance costs.

Smart metering is a relatively new technology and already there are some concerns about the health effects of Smart Metering and the uptake of this technology is likely to be compromised as a result. In our view it would be more strategic and effective to develop a Smart Grid which is able to monitor and interact with energy production and consumption so as to moderate demand peaks and troughs and increase energy security.

Growth and Investment

As stated above, in our view the greatest and most sustainable potential for growth lies in the renewable energy sector.

The government needs to prioritise investment assistance and implement policies and commercially competitive approvals processes that encourage investment in projects that reduce the emissions intensity of grid-supplied electricity.

Community engagement does not, in itself, equate to a "Social Licence". As can be seen by the Northern Rivers experience, the issues of land use conflict will not be resolved by 'better informing the community'. The community needs to have confidence in Government to provide the regulatory framework that protects community assets but also requires the utmost transparency from industry. In the Northern Rivers experience, this has been lacking, particularly in relation to the CSG industry.

Engaging the community up-front on projects is of vital importance. For any social licence to be granted for a project, the community needs to be satisfied that the protection of the environment and community safety is assured. The Sustain Northern Rivers Energy Working Group is committed to the Precautionary Principle, that is:

> If an action or policy has a risk of causing harm to the public or to the environment, the burden of proof that it is *not* harmful falls on those taking the action.

To this end, it is the view of this working group that the precautionary principle is an integral part of the process in seeking a social licence to operate. This principle allows policy makers to make discretionary decisions in situations where there is the possibility of harm from taking a particular course or making a certain decision when extensive scientific knowledge on the matter is lacking. The principle implies that there is a social responsibility to protect the public from exposure to harm, when scientific investigation has found a plausible risk. These protections can be relaxed only if further scientific findings emerge that provide sound evidence that no harm will result.

Additionally, in order to genuinely engage communities effectively, Government policy must support the development of small-medium (between 10 and 1000kW) renewable energy projects in NSW as these are a manageable size for community groups. This can be done by;

- ensuring that regulations are adjusted according to the scale of the project so that the regulatory environment does not operate as barrier to smaller scale projects;
- optimising community access to resources and information;
- ensuring such projects can access a fair price for energy generated and distributed; and
- supporting genuine community participation in energy development proposals.

Significant work has already been undertaken in the Northern Rivers to develop small to medium scale renewable energy projects, some of which are already in operation, others of which have already attracted substantial financial investment from the community, but have stalled due to regulatory barriers, and still more which are currently under development. We have identified that bio-energy is an important component of the energy mix in our region and to the extent that the region can reduce its reliance on coal fired power imported from the Hunter Valley; this will increase energy security in both regions.

Workforce Productivity

The report, *"Skills for a Sustainable Energy Future",* commissioned by Sustain Northern Rivers Energy Working Group, sought to identify the current and future skills required to achieve a sustainable energy future in the NSW Northern Rivers and address the gaps in education and training. The report identified the following issues: a general lack of energy literacy amongst the public and in the workforce; a lack of understanding of career possibilities in renewable energy; that energy efficiency and solar will play a significant role in a sustainable energy future for the North Coast; the current number of skilled professionals will not be sufficient to meet the need; a lack of incentives for builders and electricians to implement sustainable solutions; and a lack of appropriate VET and University resources to address the future skills needs.

Some of the recommendations to address these issues were:

- Create bioenergy training programs at vocational and higher educational levels, which include placements in bioenergy facilities;

- Skills related to energy efficiency and solar technologies should be embedded into the base training for relevant professions such as builders, tradespeople, designers and facilities managers;
- Develop a 'smart' energy strategy, bringing together a broad range of relevant stakeholders, and liaise with NBN Co to ensure the NBN roll out and skills strategy is complementary;
- Establish a smart grid/ sustainable energy training centre to give learners hands-on access to smart appliances and other relevant technologies;
- Target training to meet the needs (and demand) generated by the introduction of mandatory disclosure of building energy performance;
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- Better articulate career pathways in the areas of key skills gaps.

Driving Energy Productivity

The SNR Energy Working Group has long identified that the most sustainable energy improvements lie in demand management and energy efficiency. Jobs are created through the investigation phase of energy improvements and then expanded on by the retrofitting of new fittings and systems. This in turn stimulates the manufacturing sector. Additionally, as businesses reduce their running costs they are able to reinvest the savings to improve the productively of their own enterprises thus creating a third stimulation. It is important not to see declining energy usage as a loss in productivity in the energy system but rather a strengthening of many interrelated parts of the system.

There is an urgent need to address building codes and regulations to facilitate energy efficient building design and modification, and to support projects which model sustainable building. Many of the existing regulations create barriers to implementing sustainable solutions. We recommend that energy efficiency standards required in buildings are strengthened and prioritised, and incentives provided to motivate sustainable building design. Building projects need to meet triple bottom line objectives, rather than being driven primarily by development costs and profits.

We also recommend the government continues to fund and provide energy efficiency consulting services including incentives for lighting, heating/cooling and solar hot water retrofits in homes and businesses.

Alternative and Emerging Energy Sources and Technology

Market distortion and increased electricity prices would be reduced or eliminated by a strategic approach which understands and facilitates the complexity of the energy mix that will be required. Different regions across the nation will have different energy capacities and potentials to participate in the suite of energy solutions on offer. A 'one size fits all' approach will add to market distortion and reduce real gains in terms of the nation's overall energy capacity. There is a need to develop carbon abatement cost models for each region which address specific consumption levels, the range of and best possible solutions, on a case-by-case basis.

For example, the sub-tropical conditions of our region dictate that solar offers only a part of our energy solution. The uptake of solar in our region, notwithstanding this, is the highest in

Australia, demonstrating the level of the commitment of the general community to renewable energy. Bio-energy has been identified as having significant potential, due to the capacity of the region to produce large quantities of sustainable biomass.

As mentioned above, unless price parity is achieved between energy fed into the grid by local producers via e.g. domestic solar arrays, there is a risk that the grid will increasingly be abandoned by many consumers, which will in turn reduce the viability of the grid. Similarly, reducing the benefit of local grid-backed-up distributed energy systems by imposing additional tariffs will only discourage investment and participation in the grid network and may have the reverse affect to 'proper distribution of costs'. It is unreasonable to expect people to invest in renewable energy on a purely altruistic basis. Unless there is a reasonable pay-back period on their investment and sufficient cost gains overall, the investment will not be made.

It is also recommended that the concept of a fair price be extended to *all* renewable energy types, and that any benchmarking and identification of opportunities must calculate cost effectiveness by accounting for the full costs including environmental, social and community costs, benefits and savings.

Barriers to the uptake of electric vehicles

- Unless the energy mix contains a greater mix of renewable energy, then electric vehicles will merely be switching from one fossil fuel to another, which will not resolve carbon emissions;
- Proof of concept in regional areas – Consumers are not yet convinced an electric vehicle will get them to where they need to go due to longer distances being traveled – there is a need to roll out pilot projects to demonstrate the capacity of electric vehicles;
- In our region where tourism is a primary industry, there is an opportunity to build electric vehicles into the industry – however initial funding support or investment will be needed;
- Lack of electric vehicle infrastructure such as charging stations;
- Lack of electric vehicle skills of mechanics who have the skills to service and repair electric vehicles.

Barriers to advanced bio-fuels

The fuel industry is a notoriously difficult sector for new companies to enter as it is impossible to compete with or even partner with multi-nationals who operate in this sector. Barriers include:

- Inability for small companies to gain a fuel production or distribution license due to costs and significant red tape;
- Taxation of fuel at all levels including production, storage and distribution significantly reduces the potential for a viable bio-fuel industry;
- Technology exists for bio-fuel production plants which are compact and highly mobile and which are being sold into markets overseas, but which cannot be sold here because there is no viable way to enter the industry due to the Australian regulations and licensing costs around fuel production and distribution.

Nuclear energy

Whether warranted or not, the ongoing Fukushima nuclear accident casts a long shadow over the prospect of a social and political climate that is welcoming of new nuclear reactors in Australia. The areas where energy is required are also where there is a high population density. These are also the areas that are most sensitive to new industrial infrastructure developments. There would be considerable community resistance near wherever these new reactors would be installed.

The issue of transporting and storing of nuclear waste is not addressed in the Issues Paper.

In conclusion, the Issues Paper shows a disappointing Federal Energy Policy direction which does not prioritise sustainable solutions for our national energy system but rather fossil-fuel based energy systems which will continue to contribute to carbon emissions and climate change.

A key driver in the terms of reference for the Energy White Paper is *'building community confidence in environmental safeguards'*. The emerging patterns of more frequent and severe weather events and increasing mean temperatures pose a significant threat to the natural environmental systems. The overwhelming evidence that links changing climatic conditions to emissions from the burning of fossil fuels for energy, highlights the importance of policy and action to cease these emissions as soon as possible.

It is not economically sustainable to continue to rely on fossil fuels and the priority must be on renewable energy sources. Our energy future will be secured by governments making decisions and developing policies which re far-sighted and focussed on the long term, rather than on short or medium term solutions. The current Federal Government pledged to replace the Carbon Tax scheme with a substantial renewable energy scheme which, it argued, would achieve far greater gains in terms of emissions reductions. We are concerned that the Issues Paper shows little evidence of any intention other to maintain business as usual and continue to rely on fossil fuels, in spite of growing community concern about the impacts of the coal and oil industries on public health and wellbeing, as well as the environment.

Yours Sincerely

Natalie Meyer
Convenor
Sustain Northern Rivers Energy Working Group