



AGL Energy Limited

ABN: 74 115 061 375
Level 24, 200 George St
Sydney NSW 2000
Locked Bag 1837
St Leonards NSW 2065
t: 02 9921 2999
f: 02 9921 2552
agl.com.au

Committee Secretary

Senate Standing Committees on Foreign Affairs, Defence and Trade

PO Box 6100

Parliament House

Canberra ACT 2600

Submitted online: <http://www.aph.gov.au/>

29 March 2018

Dear Committee Members,

Senate inquiry into the United Nations Sustainable Development Goals

AGL Energy (**AGL**) welcomes the opportunity to provide a submission to the Senate Standing Committees on Foreign Affairs, Defence and Trade inquiry into the United Nations Sustainable Development Goals (**Inquiry**).

As an essential service provider, AGL is well placed to provide comment on the issues presented. AGL is one of Australia's leading integrated energy companies and the largest ASX listed owner, operator and developer of renewable generation. AGL operates across the supply chain and has investments in coal-fired, gas-fired, renewable and embedded electricity generation, upstream gas production and provides energy solutions to over 3.6 million customers.

In addition, AGL is continually innovating our suite of distributed energy services and solutions for customers of all sizes. These behind-the-meter energy solutions involve new and emerging technologies such as energy storage, electric vehicles, solar PV systems, digital meters, and home energy management services delivered through digital applications.

We consider that the Inquiry presents a timely opportunity for the Commonwealth Parliament to consider the issues associated with Australia's implementation of the Sustainable Development Goals (**SDGs**). Indeed, this year Australia will also present its first National Voluntary Review (**VNR**) on national implementation of Agenda 2030 and the SDGs to the United Nations High Level Political Forum which will provide an important insight into Australia's progress.

We believe that the business case for sustainable development is strong. Indeed, achieving the SDGs is not only the right thing to do for the planet and its people, but also an opportunity for business, government and community to create shared value in the process. AGL appreciates the important relationship between continued business growth, long-term capital creation and the achievement of the SDGs. We are committed to playing a constructive role in partnership with governments to ensure their achievement.

We have given careful consideration to the Inquiry's terms of reference, which we elaborate in the Attachment to this submission.



Whilst the Inquiry's terms of reference encompass a broad range of matters, our submission addresses the following terms of reference in particular:

- a) *the understanding and awareness of the SDGs across the Australian Government and in the wider Australian community;*
- b) *the potential costs, benefits and opportunities for Australia in the domestic implementation of the SDGs;*
- c) *what governance structures and accountability measures are required at the national, state and local levels of government to ensure an integrated approach to implementing the SDG that is both meaningful and achieves real outcomes; and*
- d) *how can performance against the SDGs be monitored and communicated in a way that engages government, businesses and the public, and allows effective review of Australia's performance by civil society.*

AGL is making progress towards integrating the SDGs into our long-term strategy, as we elaborate in Section 1. We have committed to a broad range of policies and investments that will support Australia's contribution to the achievement of the SDGs.

We consider that the Australian Government will need to implement a range of policy reforms that appropriately leverage private sector investment and support to implement the SDGs. As we discuss in Section 2, progress on many of the SDGs will require significant investment, whilst other SDGs focused more on social change will still require careful coordination with the private sector to ensure substantial progress.

We believe that appropriate governance structures and accountability measures will be critical to ensuring that Australia implements the SDGs in an integrated and effective manner. As we discuss in Section 3, we would encourage the Australian Government to articulate clear targets and indicators with sufficiently long-term time horizons and would prefer consistent economy-wide metrics for market participants to report against. We would also encourage the Australian Government to take a progressive approach to the development of metrics, particularly in the context of SDGs that are focused on positive social change. Such an approach may prove more insightful in understanding Australia's performance.

Should you have any questions in relation to this submission, please contact Kurt Winter, Manager, Policy and Research, on 03 8633 7204 or myself on 02 9921 2516.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Tim Nelson'.

Dr Tim Nelson

Chief Economist



ATTACHMENT

1. AGL's approach to the SDGs

AGL is a signatory to the Ten Principles of the United Nations Global Compact (**UNGC**) derived from the Universal Declaration of Human Rights, the International Labour Organisation's Declaration on Fundamental Principles and Rights at Work, the Rio Declaration on Environment and Development, and the United Nations Convention Against Corruption.

Through the UNGC, AGL has committed to aligning our strategy, culture and day-to-day operations and engaging in collaborative projects to advance the broader goals of the United Nations, particularly the SDGs.¹ The UNGC principles are supported by AGL's Values and Code of Conduct, which set out our expectations of the behaviour of AGL's directors, employees and contractors. Additionally, we have embedded the principles of the UNGC in our Supplier Code of Conduct, which requires all suppliers that we engage under our standard contracts to comply with the UNGC principles.

AGL is also making progress towards integrating the SDGs into our long-term strategy. AGL recognises that the SDGs need to be addressed in a holistic manner. Nevertheless, we also take the view that the starting point should be to address those SDGs where our activities have the greatest impact. To inform our strategic approach, in early 2018 we conducted a materiality assessment of the issues where AGL has the greatest impact, and which affect AGL's ability to create value. Through this materiality assessment, AGL engaged internal and external stakeholders to identify those SDGs considered to be most material to AGL's business. AGL considers the most material SDGs to its business to be:

- SDG 13 – Climate action;
- SDG 7 – Affordable and clean energy;
- SDG 5 – Gender equality; and
- SDG 9 – Industry, innovation and infrastructure.

The results of our materiality assessment corroborated AGL's initial mapping results and will help to inform our annual corporate reporting as well as guide our future strategy.

SDG 13 Climate action

In the context of SDG 13, we note the underpinning targets to:

- *Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries;*
- *Integrate climate change measures in national policies, strategies and planning; and*
- *Improve education, awareness-raising and human and institutional capacity on climate mitigation, adaptation, impact reduction and early warning.*

AGL accepts the Intergovernmental Panel on Climate Change (**IPCC**) conclusion that the risks associated with climate change are reduced substantially if warming is limited to less than 2 degrees Celsius above

¹ See further AGL United Nations Global Compact 2017 Communication in Progress, Available at https://www.unglobalcompact.org/system/attachments/cop_2017/427001/original/FINAL_-_AGL_UNGC_COP_2017.pdf?1508139874.



pre-industrial levels. Achieving this outcome would require complete decarbonisation of the world economy by 2100 and emission reductions of up to 70 percent by 2050.

Beyond the projected physical impacts of climate change, AGL has also given serious consideration to the transitional risks and opportunities associated with the energy sector's transition towards a low-carbon economy. AGL believes that decarbonisation is a fundamental imperative that will drive the future of energy generation in Australia.

The electricity sector has an important role to play in meeting Australia's emission reduction targets and its long-term commitments under the Paris Agreement. Whilst electricity generation currently accounts for approximately one third of Australia's greenhouse gas emissions inventory and represents the single largest source of domestic emissions, technological substitutes to fossil fuels are available and increasingly cost effective. Electricity generation also has the potential to facilitate emission reduction in other sectors, notably transport with electrification powered by renewable energy.

As our Greenhouse Gas Policy elaborates², we have made a strong commitment to a range of measures that will drive the decarbonisation of the energy sector, including the closure of all of our existing coal-fired power stations by 2050 and continued investment in new renewable and near-zero emissions technologies. A clear example of the impact of this strategy and as a result of the policy is to place clear time limits on the operation of our fossil fuel plants, providing certainty to communities and the market as to our decarbonisation pathway.

AGL is also seeking to play a leading role in a just transition of the energy sector, consistent with Australia's commitment in the Paris Agreement.³ AGL has embarked upon its decarbonisation journey with a long term strategic intent – this is a transition that must be inclusive of all. We refer to our Rehabilitation Report⁴, which was released to the market in August 2017. The transition looks likely to have concentrated impacts on those communities where coal fired power stations and related mining activities are based. Working in partnership with local communities, governments and other parts of industry to plan for rehabilitation can act as a catalyst for the broader social, economic and environmental transition of these regions. We are committed to working with stakeholders to connect rehabilitation priorities with emerging technologies and industries, enabling the best pre-conditions for future growth, diversification, and regional prosperity.

AGL continues to take a market leading approach to our disclosure of climate risk in our annual sustainability reporting. In August 2016, AGL released to the market its report "Carbon Constrained Future"⁵, which provides an economic analysis of AGL's operations within a carbon constrained future. The modelling shows that AGL's power stations are likely to maintain much of their value in the shift to a carbon constrained world due to their relative low-cost and high efficiency, when compared to their peers. While the modelling is subject to significant uncertainty given the decadal timeframes involved, it is instructive for demonstrating the robustness of AGL's assets across a range of potential outcomes.

² For further information see https://content.agl.com.au/wp-content/uploads/2017/04/AGL_Greenhouse_Gas_Policy.pdf

³ See Paris Agreement recital, 'Taking into account the imperatives of a just transition of the workforce and the creation of decent work and quality jobs in accordance with nationally defined development priorities'.

⁴ See further <https://www.agl.com.au/-/media/AGL/About-AGL/Documents/Media-Center/ASX-and-Media-Releases/2017/170810-AGL-rehabilitation-report.pdf?la=en>.

⁵ See AGL, *Carbon Constrained Future: AGL's approach to climate change mitigation: a scenario analysis* (2016), Available at http://agl2016.sustainability-report.com.au/files/carbon_constrained_future.pdf.



In 2018, AGL intends to report in accordance with the recommendations of the Task Force on Climate-Related Financial Disclosures (**TCFD Recommendations**). The TCFD was mandated under the G20 Financial Stability Board and released the TCFD Recommendations in July 2017 as a voluntary, consistent climate-related financial risk disclosure framework to promote better disclosure of climate-related financial risks. AGL considers that reporting against the TCFD Recommendations will assist our stakeholders to better understand the ways in which we are managing this issue to ensure a sustainable business into the future.

In addition to embedded risk management procedures, AGL also employs a comprehensive scenario analysis approach. Using this framework, we analyse uncertainty in areas critical to our business and develop several possible 'future states' that could result from different combinations of events and outcomes. Our scenario analysis process enables AGL to maintain a constant and nuanced awareness of competitive pressures in the market, and to anticipate changes in our markets and respond in an agile fashion across our business.

SDG 7 Affordable and clean energy

In the context of SDG 7, we note the underpinning targets to:

- *by 2030, ensure universal access to affordable, reliable and modern energy services; and*
- *by 2030, increase substantially the share of renewable energy in the global energy mix.*

AGL recognises that energy, as an essential service, must be affordable for it to be sustainable. Guided by our corporate strategic imperative of building customer advocacy, we recognise the importance for all of our customers that we provide cost-effective energy and empower our customers with appropriate information and tools to enable them to make informed decisions about their energy usage.

We appreciate that for many Australian households that are impacted by increasing costs of living, energy prices can have an acute impact on their livelihoods. Over the last decade the price of electricity in Australia has increased at an annual growth rate of 8 percent, more than twice that of wages growth (3.1%) and nearly four times higher than inflation (2.4%). A number of commentators have observed that these increases have been driven predominantly by higher network costs but wholesale prices and other costs have also contributed.⁶

Nevertheless, as AGL's latest research paper underscores, the question of energy affordability is not limited to a consideration of price and has broader context, encompassing social safety nets, their interaction with wages alongside broader standard of living concerns. The energy efficiency rating of a home and the ability to improve this rating through capital upgrades and appliance replacements are also important factors that determine the cost of energy.⁷

Accordingly, AGL has been taking an active role in partnership with customer advocacy groups, governments and civil society to develop measures that will assist with energy affordability. In FY17, we launched our *A Fairer Way* package to deliver a fairer deal for households who rely on affordable and secure energy supplies as they deal with the full spectrum of cost of living pressures. We have also been working with community

⁶ See further Australian Competition and Consumer Commission: ACCC. (2017), *ACCC Retail Electricity Pricing Inquiry: Preliminary Report*, ACCC Publication, Canberra; Orton, F. and Nelson, T. (2015) 'Relief in sight: Why residential electricity costs in Eastern Australia may fall between 2015 and 2020', *Economic Analysis and Policy*, Vol. 48, pp. 57–70.

⁷ See T Nelson, E McCracken-Hewson, G Sundstrom and M Hawthorne, 'The drivers of energy related financial hardship in Australia – understanding the role of income, consumption and housing' (2018, currently under peer review).



organisations and state governments to develop targeted and integrated pilot programs to help vulnerable customers reduce energy consumption and costs.⁸

AGL has also sought to spotlight the increasing social and economic inequality in Australian society, to build effective public-private partnerships to deliver appropriate action. This inequality has impacts on AGL as a supplier of an essential service, as social and economic inclusion is a vital prerequisite for us to supply affordable and reliable energy to all our customers. As our *Social and Economic Inclusion report* of 2017 underscores,⁹ business and civil society must work together with government to ensure that evidence-based policy continues to deliver more equitable opportunities for all citizens to engage fully in the Australian economy and society. We consider there are two critical trends, indicating that increased effort may be required to achieve greater levels of inclusion in Australian society:

- *Workforce transformation*: Workers who do not have access to tools, training programs or environments which allow them to learn the skills to equip them to meet the challenges of the new economy are at risk of unemployment or underemployment; and
- *Inequality and disadvantage*: Recognising that vulnerability often stems from inequality and disadvantage, we explored three important spheres of growing inequality and disadvantage in Australia (notably income inequality and asset distribution, mental illness and family and domestic violence, and cultural diversity) and the implications this may have on wellbeing, resilience and an inclusive community.

Since releasing our *Social and Economic Inclusion report*, AGL has been developing our own Social and Economic Inclusion Policy. Much like our Greenhouse Gas Policy it will outline both the commitments we intend to make over the long-term to improve our business operations on behalf of our customers; and the key components of our approach to public policy advocacy.

More broadly, AGL is investing in a range of services available to all of our customers to help them gain more control over their energy usage. Further details on these initiatives are elaborated under the section on SDG 9 below.

AGL is also committed to playing a leading role in developing a pathway to a modern, decarbonised generation sector. We are a strong supporter of renewable energy and have invested over \$3 billion in renewables since 2005.

In February 2016, AGL announced the creation of the Powering Australian Renewables Fund (**PARF**), an innovative financing vehicle for renewable energy. The PARF was established to develop and own around 1,000 MW of large-scale renewable generation, which would require around \$2 to \$3 billion of total investment, and represent around 20 percent of the estimated 5,000 MW of new renewable generation capacity required by 2020 to meet the Federal Government's RET. In July 2016, the PARF was formally launched, with AGL agreeing to commit \$200 million in equity funding and QIC (via its clients the Future Fund and the QIC Global Infrastructure Fund) providing \$800 million of equity funding.

The PARF has achieved three major milestones since inception:

- In November 2016, AGL reached financial close on selling its existing 102 MW Nyngan and 53 MW Broken Hill solar plants into the fund.

⁸ <http://agl2017.reportonline.com.au/sustainabilityreport/customers/energy-prices-and-affordability>

⁹ http://agl2017.reportonline.com.au/sites/agl2017.reportonline.com.au/files/social_economic_inclusion_report.pdf



- In January 2017, AGL and the PARF reached financial close on the sale and subsequent construction of the 200 MW Silverton wind farm project in western New South Wales. This wind farm is targeted to be fully operational by the middle of 2018.
- In August 2017, AGL and PARF reached a final investment decision on construction of the 453 MW Coopers Gap Wind Farm project approximately 250 km west of Brisbane.

AGL also continues to invest in its New Energy business unit that aims to focus on the distributed generation and new technology space, increasing the presence of AGL in the distributed generation and associated technology field. The New Energy business includes a unit dedicated to energy efficiency for commercial and industrial customers, assisting them to improve their energy productivity and minimise their energy costs (and associated greenhouse gas emissions).

SDG 5 – Gender equality

In the context of SDG 5, we note the following underpinning targets and indicators in particular:

- *Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation;*
- *Ensure women’s full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life;*
- *Proportion of women in managerial positions; and*
- *Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels.*

AGL recognises the importance of gender equality as basic human right and as a value capable of improving business performance and economic growth. Gender equality is a central part of our Diversity and Inclusion Policy, which states our belief that diversity in the backgrounds and perspectives of our people enables our company to have a better understanding of our customers and a greater ability to engage genuinely in the communities in which we work.¹⁰ Reflecting this view, AGL has set a target to increase the number of women in our Senior Leadership Pipeline to 40 per cent by FY19.

In recognition that individuals, organisations and communities must play a role in supporting people impacted by domestic violence, in 2015 AGL introduced our Customer Domestic Violence Policy which provides support to our affected customers, encompassing continuation of supply via access to our Staying Connected program, additional privacy protections and debt relief.

Additionally, in 2017, AGL introduced our Family and Domestic Violence Support Policy. Endorsed by our CEO and Managing Director, and Male Champion of Change, Andy Vesey, our Policy provides affected AGL people with up to 10 days paid Domestic Violence Leave, along with flexible work arrangements and access to counselling services through AGL's Employee Assistance Program. Domestic violence can affect all genders, ages and socio-economic groups – however, women are over-represented in statistics regarding domestic violence¹¹. Accordingly, AGL considers that domestic violence is a major impediment to gender equality which must be addressed as a priority.

¹⁰See AGL, Diversity and Inclusion Policy, Available at <http://agl2017.reportonline.com.au/sites/agl2017.reportonline.com.au/files/20102014divinclusionpolicycover.pdf>.

¹¹ For example, one in three women have experienced physical and/or sexual violence perpetrated by someone known to them (White Ribbon Australia).



In 2017, AGL also established a working group to engender a safe and supportive workplace for our people affected by family and domestic violence. This year, AGL has been providing training to all AGL leaders and employees on this important issue.

SDG 9 – Industry, innovation and infrastructure

In the context of SDG 9, we note the following targets in particular:

- *Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries; and*
- *By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities*

AGL continues to take a market leading approach to Australia's energy market transformation, as is illustrated by our commitments to innovation and ongoing engagement in public policy at the State and Federal levels.

AGL has given considerable thought to the future of energy in Australia and believes that two fundamental imperatives will drive the future of the energy sector in Australia: decarbonisation and the centrality of customers' unique preferences and expectations.

Customers are playing an important role in the energy market transformation, driving a shift away from the traditional linear electricity supply chain, to a more decentralised and bi-directional market. In addition to one in four households across Australia with installed solar PV, a proliferation of more advanced distributed energy resources (**DER**) (digital metering, smart inverters, energy storage, energy management systems, household appliance with smart controls etc.) are now entering the consumer market. These distributed technologies offer new opportunities for customers to actively manage their energy use and to share in value beyond the home – whether by 'sharing' energy with peers or participating in programs which support the operation of the network or the wholesale market. These developments are affecting grid utilisation and fundamentally changing the way in which consumers interact with the electricity grid.

AGL anticipates that the needs of the wholesale energy market will increasingly be supplied through a proliferation of DER, and the extent of the uptake and utilisation of DER may affect the role of large scale assets within future markets. Accordingly, the wholesale market will increasingly need to accommodate a diverse portfolio of decentralised low-emissions generation assets, which may affect the development of industry scale investments as well as the accessibility of supportive ancillary services.

More broadly, AGL believes that the future of the grid will be as a gateway to multiple competitive platforms that enable a range of markets for customers. The distribution network will increasingly become the platform across which customers expect to be able to connect and transact. Rather than simply enabling the consumption of electricity delivered from centralised plant, the grid will have an increasingly important role facilitating a range of other service markets. These include markets for grid stability services (frequency and voltage), markets for services which support the network in constraint conditions, markets for wholesale demand response at times of tight supply, and 'peer-to-peer' energy trading.

In our view, there will not be a single business or delivery model to enable these mixed interactions and respond to the broad spectrum of customer needs and preferences. Reflective of the heterogeneity of customer needs and preferences, AGL expects product and service offerings from a broad mix of energy



service providers to be similarly heterogeneous. The grid should provide a two-way energy platform upon which competing energy service providers can build their product and service offerings. The distributed energy ecosystem of the future may involve multiple distributed markets and service platforms co-existing and interacting. Energy service providers will invest, test, learn and innovate their offerings, and bear the risks and rewards associated with these endeavours.

AGL sees competition and innovation in technology and business models as the primary means for meeting this challenge and aligning the interests of energy service providers with those of the customers they serve. To enable efficient 'value stacking' requires the need for (location, size) of grid support services and their value to the network to be made explicit, so that products and services can be designed by competing energy service providers to address these and build those values into the commercial model.

One of AGL's strategic objectives is to become an orchestrator of large and small assets. This is in recognition of the current transformation of the energy industry from the traditional centralised generation model to a more distributed and integrated energy supply chain. In our view, orchestration would enable customers to realise the full value of their DER. By modifying the overall volume and shape of demand, DER can be deployed and operated to avoid or delay more expensive augmentations to the network. Further, smart inverters and local sensing devices can enable the provision of voltage and frequency services back to the distribution network and is an associated benefit of DER.

AGL is embracing innovation in behind-the-meter technologies, partnering with government and peers in the energy sector.

AGL's virtual power plant (**AGL's VPP**), co-funded with the Australian Renewable Energy Agency (**ARENA**), seeks to demonstrate the value that grid-connected batteries can create for a range of stakeholders when managed as part of a coordinated virtual power plant. Once complete, AGL's VPP will include 1,000 smart, connected batteries installed behind-the-meter, with a combined nameplate output of 5 MW and an energy storage capacity of more than 9.8 MWh. The project seeks to enable the 'stacking' of multiple values and demonstrates at a commercial scale the value that distributed energy technologies (solar and batteries in particular) can provide. Importantly, all grid users stand to benefit from such an arrangement through the reduced spending on network infrastructure and improved grid stability.

AGL's VPP was featured in the final Finkel Blueprint as a case study for the effective orchestration of solar and storage to provide multiple services in Australia's evolving energy system. We also presented AGL's VPP to the Commonwealth Standing Committee on the Environment and Energy in the context of its Inquiry into modernising Australia's electricity grid.

AGL has also engaged in a range of other innovative initiatives, including:

- Energy Insights: Culminating in January 2018, AGL's 'Energy Insights' trial was successful in highlighting the potential for customers to eliminate waste and save money by turning appliances off rather than leaving them on stand-by mode. Using innovative technology which allowed AGL to analyse meter data and produce details of energy use by appliance categories, AGL was able to provide customer with tailored Energy Insights reports.
- Solar energy trading technology: To improve our customers' energy experience, we have been investigating ways that customers can derive more value from distributed energy resources, including solar panels and battery storage. In May 2017, we led a project to investigate how



'blockchain' technology could be used to enable households with solar panels, batteries and 'smart' air conditioning to trade or share the excess electricity they generate.

- Solar Smart Plan: We were the first major Australian electricity retailer to launch a solar power purchase agreement (**PPA**) offer in February 2015: the Solar Smart Plan. Under this plan, customers buy their power from a solar system which is installed on their roof and owned and maintained by AGL for a fixed term. The Solar Smart Plan has been key to our solar customer growth, especially in the commercial and industrial customer segment.
- Virtual Solar: AGL recognises that home ownership and access to capital (i.e. funds to purchase the technologies) are barriers to equitable adoption of solar and battery storage. With this in mind, AGL has launched an innovative product to its customers who would like the benefits of solar power but cannot install solar panels on their roofs. Customers can subscribe to receive credits from AGL's solar generation, which can be used to decrease costs on their electricity bills.
- AGL Solar Command: We developed AGL Solar Command in FY15 to enable monitoring of production from customers' systems. This subscription service can identify potential performance problems and help optimise solar energy generation, savings and energy use. In FY16, this monitoring was made accessible via the AGL Energy App, allowing our customers even greater insight into their energy usage. AGL Solar Command Check was also launched in FY17 (and made available to customer from mid-July 2017). This is a free service, that will enable customers with Active Stream digital meters to receive regular health check status updates giving guidance on the working efficiency of their solar systems.
- Business energy services: AGL offers a range of energy efficiency services designed to help businesses of all sizes reduce energy costs. Our specialists work with business customers to understand their requirements and budget, and design and deliver custom, engineered solutions with professionally project-managed installation. Product and service options include solar PV system installations lowering daytime energy costs, energy efficient LED lighting upgrades to reduce energy consumption, and the use of power factor correction technology to reduce peak power demand.
- Electric vehicles (EVs): AGL wants to improve access to EVs in Australia, by removing the obstacles to ownership and enhancing the ownership experience. Our Electric Car Plan allows customers to charge their electric car, whenever they like and as often as they like for \$1 per day. As part of our Electric Car Plan, we also offset emissions associated with our customers' EVs at home through our Future Forests Program. AGL is a member of the Electric Vehicle Council, that was launched in May 2017. We have also committed to transitioning 10 per cent of AGL's business vehicle fleet to EVs by mid-2018. AGL will also be trialling remote EV management during peak events for a number of AGL EVs in New South Wales (NSW) through our Managed for You program.¹²

¹² See further AGL's Managed for You program at <https://aglsolar.com.au/managedforyou/>. For further information about the national initiative see Dan Silkstone, 'Keeping the lights on in NSW, one smart meter at a time' (16 October 2017), Available at <https://arena.gov.au/blog/demand-response-agl/>.



2. The potential costs, benefits and opportunities for Australia in implementing the SDGs

AGL acknowledges that in order to achieve the SDGs, whilst the public sector's contribution will be pivotal, the private sector's contribution will also play an indispensable role. Indeed, as the United Nations Conference on Trade and Development (**UNCTAD**) emphasised in its report, *World Investment Report 2014: Investing in the SDGs: An Action Plan*¹³, the private sector's contribution "can take two main forms, good governance in business practices and investment in sustainable development. Policy coherence is essential in promoting the private sector's contribution to the SDGs"¹⁴.

As we have outlined in Section 1 above, AGL has committed to a range of policies and investments that will support Australia's contribution to the achievement of the SDGs domestically.

Nevertheless, given the scale of change that will be required for Australia to meet the SDGs across the full suite of targets and indicators¹⁵, we consider that the Australian Government will need to implement a range of policy reforms that appropriately leverage private sector investment and support. Indeed, progress on many of the SDGs will require substantial investment in infrastructure in a range of sectors, including energy, transport, agriculture and water. Moreover, other SDGs that are focused more on social change will still require careful coordination with the private sector to ensure substantial progress. In our view, establishing coherent policies that entail sufficiently long-term time horizons will be critical to engaging the requisite level of corporate and financial support.

Priority areas for the energy sector

AGL is committed to helping to shape a sustainable energy future for Australia. Having regard to those SDGs that are material to AGL's own business, AGL believes that energy policy reform should focus on enabling transformation, driving productivity and unlocking growth. These objectives will be best supported by the following four core policy pillars:

- 1. Driving customer centricity and choice:** public policy settings should enable customers to embed themselves within the broader energy ecosystem and act as participants in multifaceted energy communities such as virtual power plants, energy sharing programs & intelligent micro-grids and communities.
- 2. Promoting competitive platforms and innovation:** Competition and innovation in technology and business models are the primary means for aligning the interests of energy service providers with those of the customers they serve.
- 3. Ensuring power system security and reliability:** public policy should continue to drive the decarbonisation and modernisation of the power system to support adaptive and module low-emissions generation and related ancillary service markets.

¹³ UNCTAD, *World Investment Report 2014: Investing in the SDGs: An Action Plan*, Available at http://unctad.org/en/PublicationsLibrary/wir2014_en.pdf.

¹⁴ Above n 14, at page x.

¹⁵ We note in particular estimates that the achievement of the SDGs would require global investment in the order of \$5-7 trillion per year. See, for example, Valerie Smith, 'The money is there for fight climate change' (18 September 2017), *World Economic Forum*, Available at <https://www.weforum.org/agenda/2017/09/the-money-is-there-to-fight-climate-change>.

4. Integrating energy and emissions reduction: Long-term certainty on policy that integrates energy and climate change is needed to facilitate the smooth decarbonisation and modernisation of the energy sector.

AGL's approach to public policy is also guided by the following principles to ensure the sector's smooth transition and ongoing delivery of secure, affordable and sustainable energy into the future:

- where feasible, using **competitive markets** to deliver and value energy services;
- establishing policy, regulatory and market frameworks that are **technology neutral**;
- establishing **appropriate technology standards** that do not contradict broader policy objectives and are based, where possible, on international standards that encourage investments, ensure Australia keeps up with improving efficiencies and global best practices, promote customer choice, support competition, and encourage economies of scale;
- utilising **price signals** to encourage efficient investment and operational decisions;
- **allocating risks** to parties that are best able to manage them;
- introducing **regulation only where necessary** to address a market failure, including to ensure system safety, security and reliability.
- Ensuring an **equal playing field** where different providers of products and services, in markets, must compete openly on their merits.
- A customer protections framework that ensures all customers have the **basic right to access energy**.
- Ensure a framework that is **inclusive of all customers** including vulnerable customers the opportunity to participate and benefit from the energy market transformation.

Keeping these principles as a guidepost improves the predictability of modifications to existing regulatory and market frameworks when it becomes evident they are required. Open competitive markets and technology neutrality provide business with the impetus and latitude to pursue technology and service delivery innovations that meet system needs at efficient cost. We are already seeing evidence that holding to these principles promotes opportunities for addressing system impacts emerging from one set of technology innovations with technology innovations occurring elsewhere.

Climate action – SDG 13

AGL considers that the current and projected future impacts of climate change are inextricably linked to the effective design of Australia's energy and climate policies, which in turn provide the requisite certainty for investment necessary to meet the targets and indicators under SDG13 – climate action. All sectors of the Australian economy have an important role to play in meeting Australia's emission reduction targets and its long-term commitments under the Paris Agreement. As we have consistently advocated, public policy settings should establish investment certainty in a carbon constrained future.

As we observed in our recent submission in response to the Energy Security Board's National Energy Guarantee Consultation Paper,¹⁶ Australia remains in serious need of a long-term carbon policy that drives

¹⁶ See AGL, Submission to the Energy Security Board on the National Energy Guarantee Consultation Paper, (8 March 2018) Available at <http://aglblog.com.au/2018/03/submission-to-the-energy-security-board-on-the-national-energy-guarantee-consultation-paper/>.



investment in low-emissions sources and can steer the electricity sector smoothly through the process of replacing aging thermal plant with less emissions-intensive generation. While incentives under the current Renewable Energy Target (**RET**) and other State-based targets have delivered investment in new renewable generation, the absence of long-term policy certainty creates risks that Australia will not deliver on its long-term ambitions and magnifies uncertainties for investors looking to make long-term financial commitments in the National Electricity Market (**NEM**).

More than 80% of electricity generated in Australia is sourced from the combustion of fossil fuels, the majority of which is provided by coal-fired generation. In order to meet Australia's commitments under the Paris Agreement, investment will be best supported by emissions reduction policy that provides macro level certainty as to the timeframe and operating life of incumbent plant and reduced levels of uncertainty as to the market environment within which current investments will operate in post 2030. Greater certainty in these areas will support a more efficient transition, guiding decisions on new investments, management of existing capital stock, policy development, community transition and energy market development.

Integrated policies are required to ensure that these objectives can be jointly pursued over time. As the decarbonisation and modernisation of the electricity sector will span several decades, a long-term vision and trajectory for this transition is essential to provide investors with confidence to develop the long-lived and often capital-intensive projects that will enable Australia to reduce its emissions efficiently over time, and at least cost.

Affordable and clean energy – SDG 7

AGL considers that a long-term carbon policy that drives investment in low-emissions generation would also support Australia's domestic efforts to achieve the targets and indicators underpinning SDG 7 – affordable and clean energy.

Beyond implementing an appropriate investment trigger, we would urge the Australian Government, in partnership with the private sector and civil society, to consider developing more robust public policies to appropriately address the drivers of energy-related financial hardship in Australia. As we elaborate in our recent research paper¹⁷, consideration should go beyond electricity market dynamics and fundamentals incorporating matters such as income adequacy, consumption and housing. In particular, our working paper has revealed that:

- Australia urgently needs to review the income adequacy of low-paid and unemployed households. Without adequate income support payments, even the most well-designed energy rebate frameworks will be undermined.
- There is a strong case for expanding policy measures relating to energy efficiency in low-income homes and public housing. Our analysis shows that customers in hardship have significantly higher than average consumption.
- There is a continued need to focus on building standards to ensure the most optimal thermal efficiency design given that the energy efficiency rating of a home strongly influences household energy consumption, and consequently, the cost of living.

¹⁷ See T Nelson, E McCracken-Hewson, G Sundstrom and M Hawthorne, 'The drivers of energy related financial hardship in Australia – understanding the role of income, consumption and housing' (2018, currently under peer review).



Industry, Innovation and Infrastructure – SDG 9

As we have elaborated above, customer preferences are continuously evolving. The availability of distributed renewable generation and other digital technologies is enabling customers to exert greater control over their energy usage and demand improved services and a wider range of products from energy service providers. Although energy remains an essential service, customers now have far greater choice as to how that service is delivered.

A decade ago, the choice for customers was simply 'who' sold them energy. Now the choice is who and 'how' (and increasingly 'when') – how they will be supported by online services and flexible payment options, how they will combine grid supplied and distributed energy sources, how they expect to be able to monitor and control usage, and increasingly how and when they will share energy and participate in value streams available beyond the home (e.g. network and wholesale values).

To some extent, long-term carbon policy that drives investment in low-emissions generation would also support Australia's domestic efforts to achieve the targets and indicators underpinning SDG 9 – industry, innovation and infrastructure.

Nevertheless, we also consider that progress on SDG 9 would be best served by public policy reform that ensures fit-for purpose consumer protection and robust participation in a competitive market. It is also important that the retail regulatory and market framework does not seek to impose rigid price-setting frameworks that have the unintended consequences of limiting the ability of both old and new market players to innovate their offerings in response to new technology developments and changing consumer preferences.

In our view, the continued growth in distributed energy resources has implications for price dispersion. Distributed energy technologies with very substantially lower grid-drawn energy supply, will amplify the heterogeneity of customer needs and preferences, and are thus likely to increase the extent of price dispersion. It may also lessen the relevance of analyses which look only to unit price to determine value being delivered to customers by retail energy service providers. Some customers may begin to more heavily weight 'value-added' services over unit prices alone. These services might include an enhanced feed-in tariff, the ability to participate in peer-to-peer electricity trades, the availability of demand response products or the opportunity to be rewarded for provision of network and wholesale support services back to the system.

The consumer protection regulatory framework should also be reviewed to ensure it remains fit-for-purpose. The consumer protection framework should recognise that consumers are not homogenous but rather have their own distinct and unique preferences. The framework should be flexible enough to accommodate innovation in product and service provision (including the business or delivery model), and not constrain informed customer choice and participation. Importantly, it should promote competitive neutrality and allow existing and emerging business models to compete on their merits, enabling consumers to choose products and services that suit their circumstances.

AGL notes that the Council of Australian Government's Energy Council (**COAG EC**) and the Australian Energy Market Commission (**AEMC**) have recently implemented several market reforms in response to changing customer sentiment and interactions in the NEM. These changes, largely through the AEMC's Power of Choice reforms, place greater emphasis on increasing competition, customer choice, innovation and demand-side participation. We support these principles and their embodiment in the national energy rules.



The regulatory framework should facilitate digital engagement and service providers in their efforts to expeditiously bring to market new products and services and through channels that consumers value. It should promote competitive neutrality and allow existing and emerging business models to compete on their merits, enabling consumers to choose products and services that suit their circumstances. The price, product and service benefits that flow to customers from competitive markets are predicated on the ability of customers to participate effectively in those markets. Thus, attention should be paid to policy reforms that remove barriers to participation, including reviewing the impact of home tenure on access to products and services, tenancy law reform and improving community outreach to vulnerable parts of the community.

In an environment where customer heterogeneity is expanding, it is positive that the retail regulatory and market framework is allowing new entrants with novel business models to enter the market and offer newly designed services to customers. By ‘disrupting’ the retail energy services market, new entrants drive enhanced competition amongst all market players. It will be important that governments reviewing retail electricity prices keep sight of the fast-evolving consumer energy landscape and do not, in an attempt to protect consumers, propose a return to more rigid price-setting framework. Reducing price dispersion is likely to reduce competition and have a detrimental impact on low-income customers. AGL research shows that price dispersion provides significant benefits to the family formation household demographic where vulnerability is highest due to low income per person and higher than average energy consumption. It is highly likely that price dispersion will become more pronounced as electricity markets decarbonise. As more costs become sunk, uniform pricing set to marginal cost will become even more problematic as large capital costs would not be recovered. As such, it is important that policy makers continue the push towards deregulated retail electricity markets to facilitate, rather than obstruct, the goals of efficient pricing and decarbonisation.”



3. Governance and performance measurement

AGL believes that appropriate governance structures and accountability measures will be critical to ensuring that Australia implements the SDGs in an integrated and effective manner.

AGL encourages the Australian Government to articulate clear targets and indicators with sufficiently long-term time horizons to enable all participants in the Australian economy to understand Australia's policy ambition and work together in a collaborative manner. AGL also encourages the Australian Government to develop appropriately robust baseline reporting so that Australia is appropriately positioned to assess nation-wide progress and engage in constructive dialogue with all relevant stakeholders on areas for further action.

To the extent that reporting involves the private sector, AGL's preference would be for an economy-wide approach that establishes consistent metrics for market participants to report against, regardless of their individual sector or value proposition. This would enable the Australia Government to aggregate performance metrics in a comparable form to appropriately inform the development of appropriate policy settings. It would also assist investors, market intermediaries and other stakeholders to better understand the sustainability of individual businesses.

AGL would encourage the Australian Government to take a progressive approach to the development of metrics, particularly in the context of SDGs that are focused on positive social change. We note, for example, that a number of leading economists have advocated adapting economic measurement to better reflect structural changes that have characterised our modern economies so as to capture *quality changes*, themselves "vital to measuring real income and real consumption, some of the key determinants of people's material well-being".¹⁸ Whilst challenging to implement, metrics that aim to measure well-being rather than economic production may prove more insightful in understanding Australia's progress on a broad range of the SDGs.

The achievement of the SDGs will be contingent on the degree of successful partnerships between government, business, NGOs and society in general. To enable effective information sharing and partnership, AGL encourages the Australian Government to effectively communicate the specific roles and responsibilities of government departments relevant to specific SDGs.

¹⁸ See further Joseph Stiglitz, Amartya Sen and Jean-Paul Fitoussi, *Report by the Commission on the Measurement of Economic Performance and Social Progress*, 2014, Available at <http://ec.europa.eu/eurostat/documents/118025/118123/Fitoussi+Commission+report>.